VHF DIGITAL BASE-REPEATER

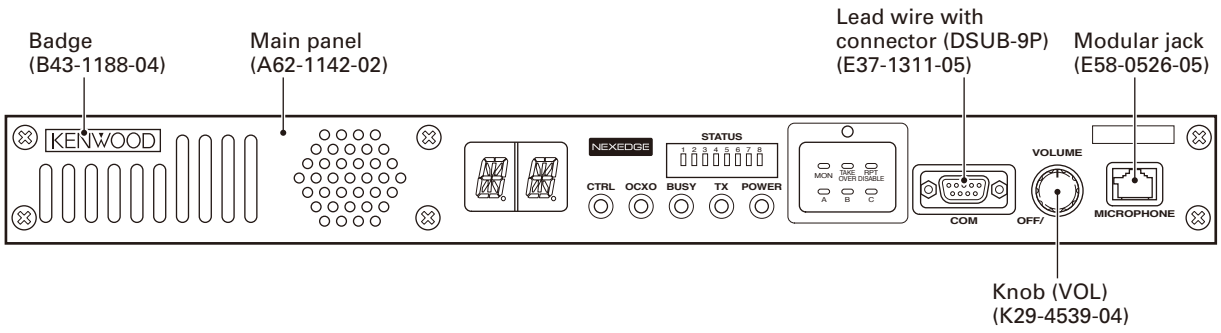
NXR-700

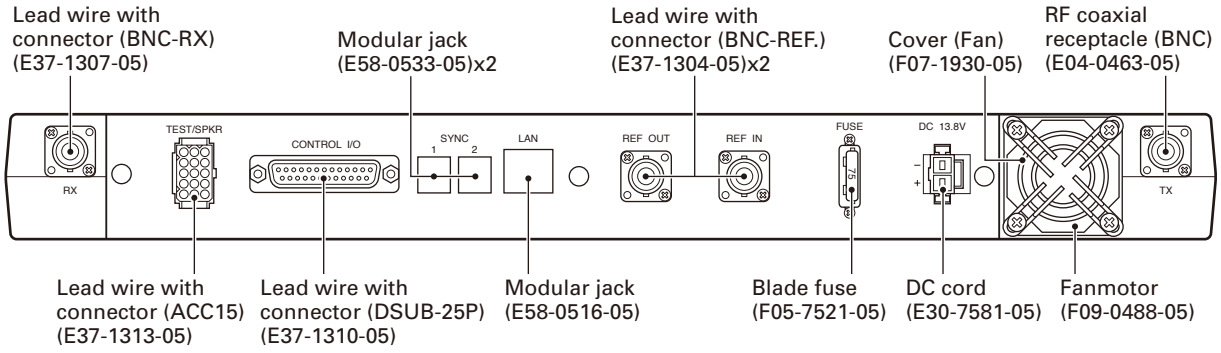
SERVICE MANUAL

KENWOOD

Kenwood Corporation

B51-8794-00 (N) 193





CONTENTS

This product complies with the **RoHS** directive for the European market.

LF

This product uses Lead Free solder.

GENERAL

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NXDN Transceivers:

The AMBE+2(TM) voice coding technology is embedded in the firmware under the license of Digital Voice Systems, Inc.

INTRODUCTION

SCOPE OF THIS MANUAL

This manual is intended for use by experienced technicians familiar with similar types of commercial grade communications equipment. It contains all required service information for the equipment and is current as of the publication date. Changes which may occur after publication are covered by either Service Bulletins or Manual Revisions. These are issued as required.

ORDERING REPLACEMENT PARTS

When ordering replacement parts or equipment information, the full part identification number should be included. This applies to all parts : components, kits, or chassis. If the part number is not known, include the chassis or kit number of which it is a part, and a sufficient description of the required component for proper identification.

PERSONAL SAFETY

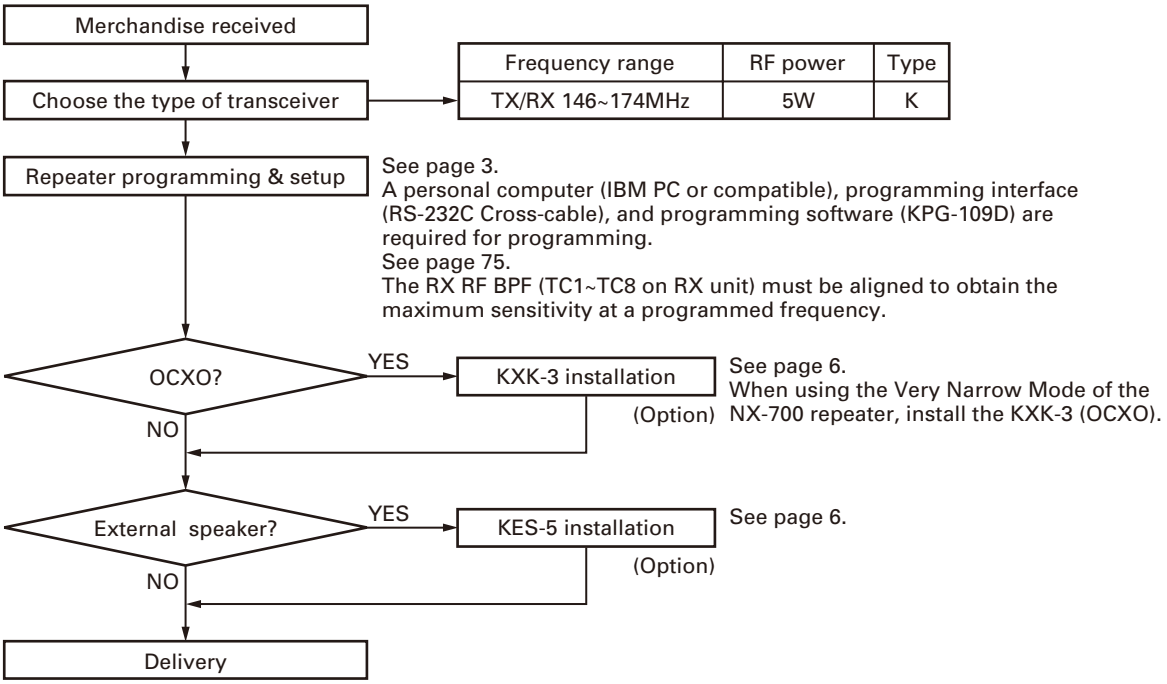
The following precautions are recommended for personal safety :

- DONOT transmit if someone is within two feet (0.6 meter) of the antenna.
- DONOT transmit until all RF connectors are secure and any open connectors are properly terminated.
- SHUT OFF this equipment when near electrical blasting caps or while in an explosive atmosphere.
- All equipment should be properly grounded before powerup for safe operation.
- This equipment should be serviced by only qualified technicians.

SERVICE

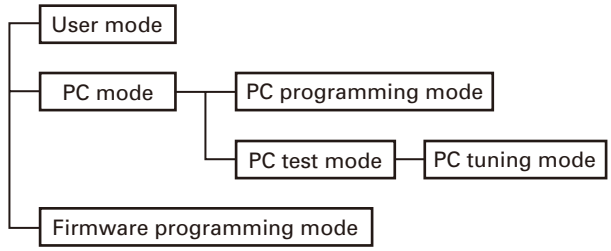
This transceiver is designed for easy servicing. Refer to the schematic diagrams, printed circuit board views, and alignment procedures contained within.

SYSTEM SET-UP



REALIGNMENT

1. Modes



Mode	Function
User mode	Use this mode for normal operation.
PC mode	Use this mode to make various settings by means of the FPU through the RS-232C port.
PC programming mode	Use to read and write frequency data and other features to and from the repeater.
PC test mode	Use to check the repeater using the PC. This feature is included in the FPU.
Firmware programming mode	Use when changing the firmware program of the flash memory.

2. How to Enter Each Mode

Mode	Operation
User mode	Power on.
PC mode	Received commands from PC.
Firmware programming mode	Received commands from PC.

3. PC Mode

3-1. Preface

The NXR-700 repeater is programmed by using a personal computer, programming interface and KPG-109D software.

3-2. Connection Procedure

1. Connect the NXR-700 to the personal computer with the interface cable.
2. When power is applied, the user mode is entered immediately. When the PC sends a command, the repeater enters the PC mode and displays "PC" on the 17-segment LED. When data is being transmitted to the PC from the repeater, the TX LED flashes. The BUSY LED flashes when data from the PC is being received by the repeater.

REALIGNMENT

Note:
- The data stored in the personal computer must match the model type, when it is written into the flash memory.
- Change the NXR-700 to PC mode, then attach the RS-232C Cross-cable.

3-3. KCT-53U Description (USB adapter: Option)

The KCT-53U is cable which connects the RS-232C Cross-cable to a USB port on a computer.

When using the KCT-53U, install the supplied CD-ROM (with driver software) in the computer. The KCT-53U driver runs under Windows 2000 or XP.

3-4. Programming Software Description

The KPG-109D is the programming software for NXR-700 supplied on a CD-ROM. This software runs under Windows 2000, XP or Vista on an IBM-PC or compatible machine.

The data can be input to or read from NXR-700 and edited on the screen. The programmed or edited data can be printed out. It is also possible to tune the transceiver.

3-5. Programming With IBM PC

Data can be programmed into the flash memory in RS-232C format via the COM connector.

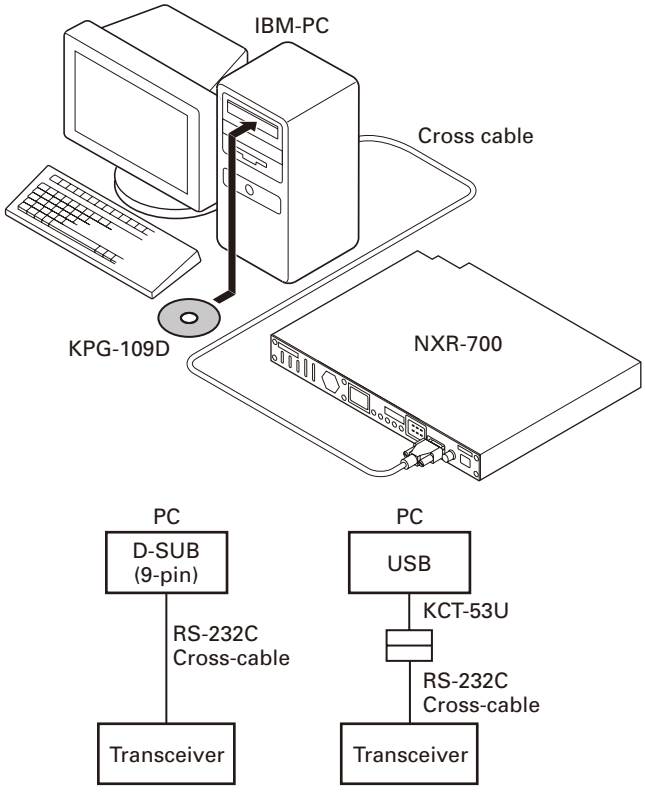


Fig. 1

4. Firmware Programming Mode

4-1. Preface

The NXR-700 uses flash memory to allow it to be easily upgraded when new features are released in the future.

4-2. Connection Procedure

Connect the NXR-700 to the personal computer (IBM PC or compatible) with the RS-232C Cross-cable. (Connection is the same as in the PC mode.)

Notes:

You can only program firmware from the DB-9 COM connector on the front panel. Using the 25-pin logic interface on the rear panel will not work.

4-3. Programming

1. Start up the programming software (Fpro. exe).
2. Set the communications speed (normally, 115200 bps) and communications port in the configuration item.
3. Set the firmware to be updated by file name item.
4. Turn the NXR-700 power on.
5. Check the connection between the NXR-700 and the personal computer, and make sure that the NXR-700 is in the program mode.
6. Press write button in the window. A window opens on the display to indicate progress of writing.
7. If writing ends successfully, the NXR-700 restarts.
8. If you want to continue programming other NXR-700s, repeat steps 3 to 6.

Notes:

It automatically enters the firmware program mode by the writing request from the programming software (KPG-109D).

4-4. Function

Baud rate is decided automatically with setting of programming software.

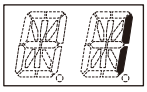
Note:

Normally, write in the high-speed mode (115200 bps).

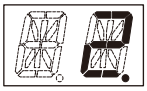
OPERATING FEATURES

1. Two 17-segment LED Displays

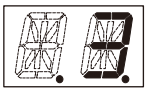
- Channel display (1~30): While operating normally in user mode.



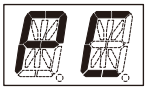

- When the displayed channel is contained in scan sequence, the right side decimal point is displayed.



- When the displayed channel is the priority channel, the left side decimal point is displayed.

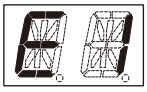


- "PC" is displayed while in PC mode.



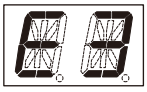
- "PG" is displayed while in firmware programming mode.

- "E1" is displayed when FPU data is not written.

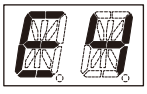


- "E2" is displayed when the channel data is not written.

- "E3" is displayed when PLL is unlocked.
  Receiver PLL unlocked = BUSY LED blinks.
  Transmitter PLL unlocked = TX LED blinks.



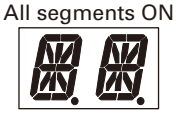
- "E4" is displayed when PTT is attempted on a channel number that has no frequency data programmed.

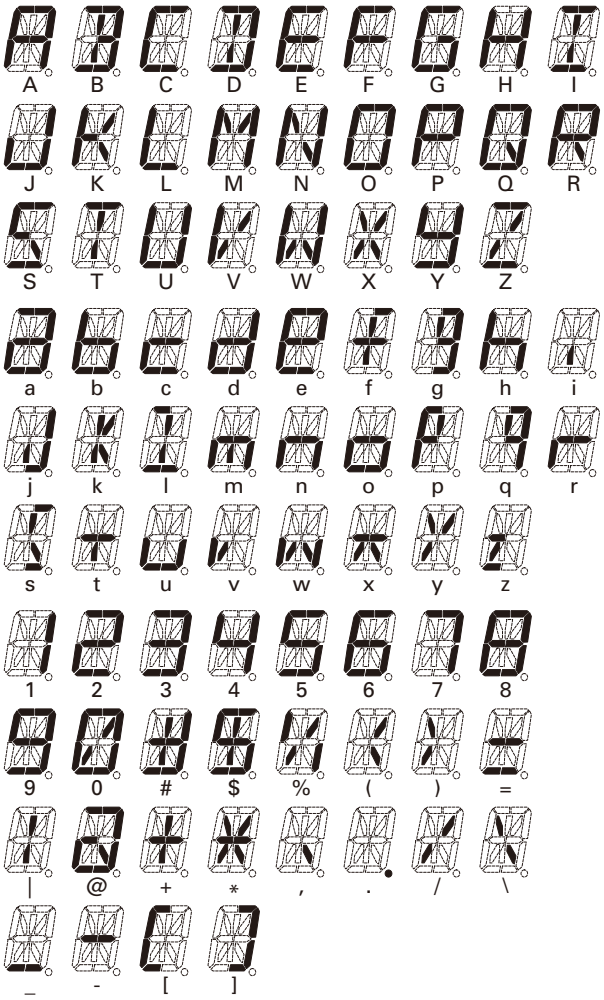


- "E5" is displayed when IP address configuration is error.

- "SC" is displayed while in scan mode.

All segments ON





INSTALLATION

1. OCXO (KXK-3)

1. Before installing the KXK-3, be sure to turn the power off.
2. Remove the top cover of the TX unit.
3. Mount the KXK-3 using the 5 screws.
4. Carefully connect and lock the flat cable to CN1 and CN803, with the conductor side facing in.
5. Connect the coaxial cable to CN2 and CN407.
6. Connect the 2-pin cable to CN3 and CN807.

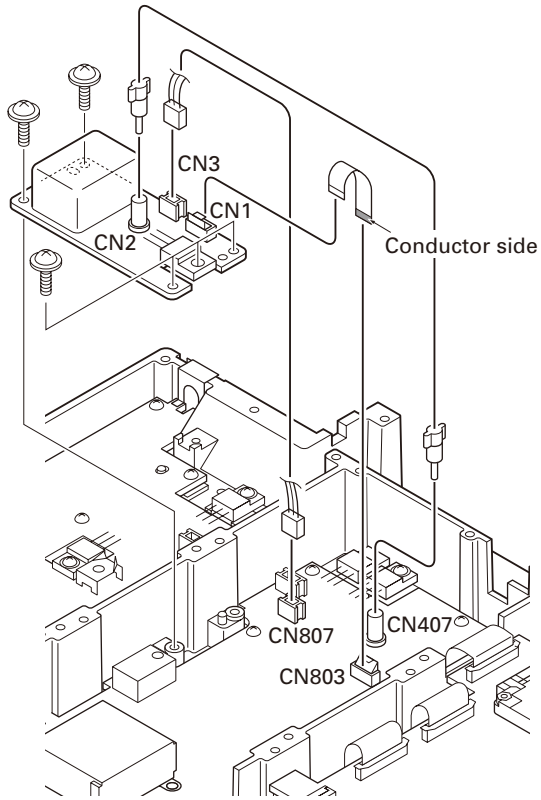


Fig. 1

2. External Speaker (KES-5)

The NXR-700 has a internal built-in speaker, and the external speaker output from the TEST/SPKR connector (15-pin) on the rear of the radio is 3W/4Ω. Use external speaker KES-5.

2-1. Connection for the KES-5 With the NXR-700

■ When taking the AF output from the TEST/SPKR connector (15-pin) on the rear of the radio

The following tools are required for changing the connector.

• Extracting tool

The following extracting tool is recommended:
Molex Inc. Order No.: 11-03-0002 (W05-0878-00)

1. Remove the connector with jumper from the external speaker connector on the rear panel of the radio. (Fig. 2-1)
   Note: Save the jumper, which is required when the radio is used without the external speaker.
2. Remove the terminals with the jumper from the connector housing holes number 9 and 12 using the extracting tool.
   Removing the jumper lead (Fig. 2-2)
   1) Insert the extracting tool (11-03-0002) into the connector while pushing the jumper lead in the direction of (a).
   2) Push the extracting tool into collapse the barbs of the crimp terminal.
   3) Pull out the lead while continuing to push the extracting tool in the direction (b).
3. Reinsert the terminal with the black and white stripe lead into hole number 12, and the terminal with the black lead into hole number 6. (Fig. 2-3)
4. Attach the connector to the external speaker connector on the radio.

Notes:

- Relationship between TEST/SPKR connector (15-pin) connection and speaker output.
- When pins 9 and 12 are shorted: Built-in internal speaker is used.
- When pins 9 and 12 are open and output is from pins 6 and 12: KES-5 is used.

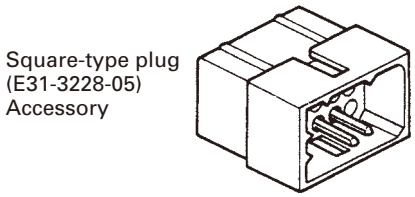


Fig. 2-1

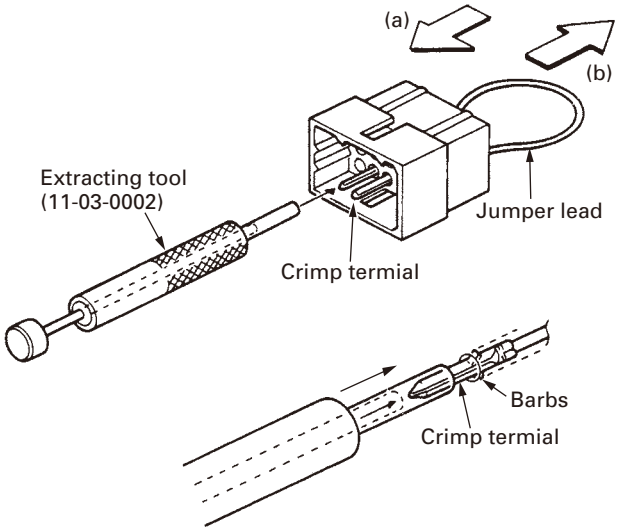


Fig. 2-2

INSTALLATION

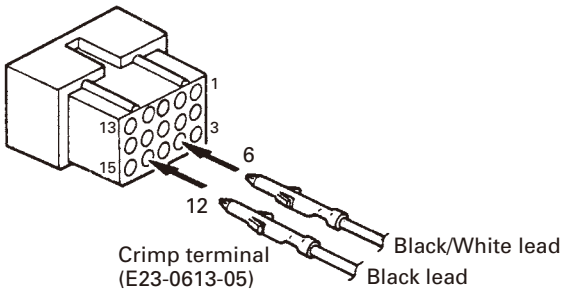


Fig. 2-3

3. How to Attach the Supplied Accessories

1. Attach the front glass to the front panel with the supplied screw. (①)
2. To attach the handles on the both sides of the chassis, refer to illustration. (②)

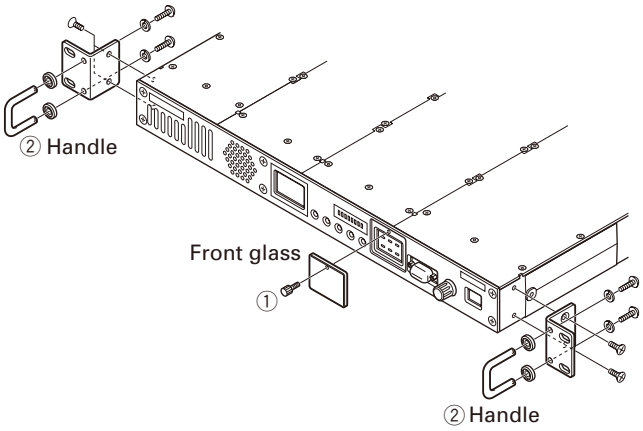


Fig. 3

CIRCUIT DESCRIPTION

1. Outline

The NXR-700 is a VHF repeater operating in the 146~174MHz frequency range.

2. Transmitter unit

The transmitter unit (X56-311 A/3) consists of the following circuit.

(1) Internal/external reference circuit
(2) Transmitter reference 19.2MHz PLL circuit
(3) Transmitter Modulation 19.2MHz PLL circuit
(4) Transmitter DDS circuit
(5) Transmitter main PLL circuit
(6) Driver circuit
(7) Modulation level adjustment circuit
(8) AVR circuit
(9) Other circuits

2-1. Internal/external reference circuit

The internal/external reference circuit automatically switches signals used as reference signals among the 5.99MHz internal DDS, the 10MHz external reference signal and the 10MHz OCXO unit.

If no OCXO unit is installed, and there is no external reference signal, the 5.99MHz internal DDS (IC601) is selected as the reference signal.

If the OCXO unit is installed and there is no external reference signal, the 10MHz OCXO unit is selected as the reference signal.

If an external reference signal (CN408/ 10MHz/ 0dBm or higher/ Zin=50Ω) is input, the external reference signal is selected as the reference signal irrespective of an existing OCXO unit.

The internal/external reference circuit consists of Q419, Q418, D401, D403, D404, Q430, Q422, D601 and IC407.

The DDS circuit consists of X601, IC602, IC601, Q606, CF601, Q603 and D602.

If either the OCXO 10MHz or external reference 10MHz is selected as the reference signal, the reference output terminal outputs the reference signal (CN403/ 10MHz/ +9dBm/ Zout=50Ω). This circuit consists of Q431, Q420 and Q425.

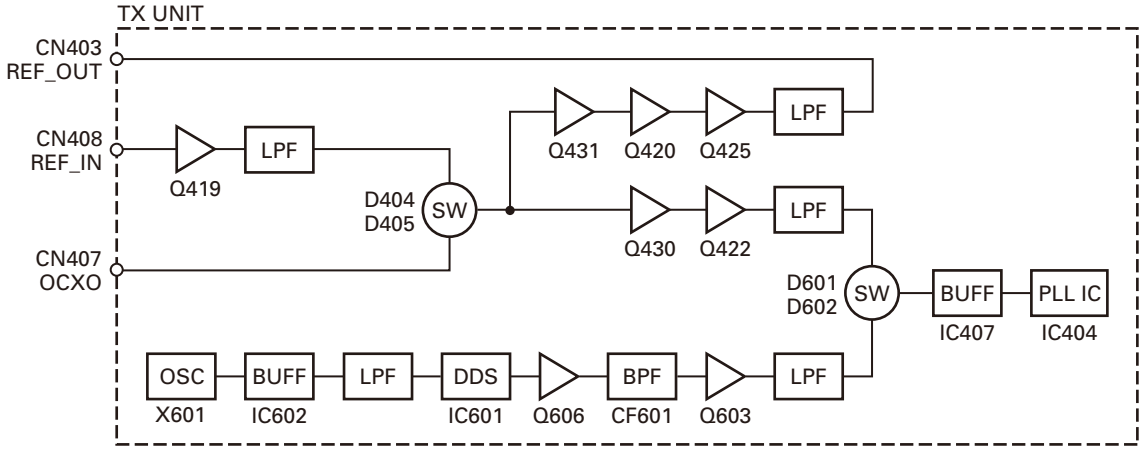


Fig. 1 Internal/external reference circuit

2-2. Transmitter reference 19.2MHz PLL circuit

The transmitter reference 19.2MHz PLL circuit produces a reference frequency signal for the transmitter modulation 19.2MHz PLL circuit, the Receiver unit (X55-309) Receiver DDS circuit and the Control Unit (X53-414) DSP IC.

This circuit consists of Q401, Q402, Q412, Q415, Q416, Q417, X401, IC404, and IC407.

The 5.99MHz or 10MHz signal produced by the internal/external reference circuit is amplified by IC407 and supplied to the PLL IC (IC404) reference signal pin.

The VCXO (X401) signal enters buffer amp Q417 and is amplified by Q415. The higher harmonic wave is attenuated by LPF and returns to IC404. Its phase is compared with that of the reference frequency 10kHz.

The phase difference signal produced by the comparing phase is converted to a DC voltage by a lag-lead type loop filter. This DC voltage is input to the X401 control voltage terminal for controlling the VCXO oscillating frequency.

The DC voltage passes through the IC401 operational amplifier, and is output as a voltage signal (CVT-REF) for monitoring the reference 19.2MHz PLL circuit lock voltage.

The stabilized 19.2MHz reference oscillating signal enters the Q417 buffer amplifier and is amplified by Q412 and Q416. The higher harmonic wave is attenuated by LPF, fed to IC302 and used as the reference frequency signal for the transmitter modulation 19.2MHz PLL circuit.

The 19.2MHz reference oscillating signal is also used as the reference signal for the receiver unit (X55-309) and control unit (X53-414).

It enters the Q417 buffer amplifier for the receiver unit (X55-309) and is amplified by Q401. The higher harmonic wave is attenuated by LPF and is output from CN406.

It enters the Q417 buffer amplifier for the control unit (X53-414) and is amplified by Q402. The higher harmonic wave is attenuated by LPF and is output from CN405.

CIRCUIT DESCRIPTION

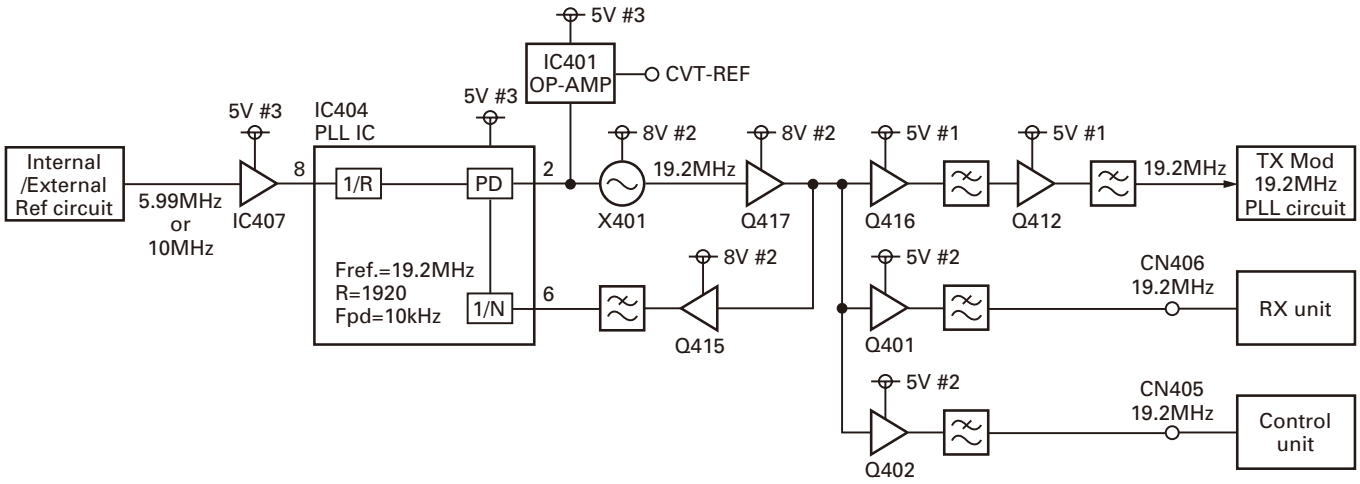


Fig. 2 Transmitter reference 19.2MHz PLL circuit

2-3. Transmitter modulation 19.2MHz PLL circuit

The transmitter modulation 19.2MHz PLL circuit produces the reference frequency signal for the Transmitter DDS circuit and modulates the low-frequency components.

The circuit consists of IC302, IC303, IC305, X301, Q304, Q305, and Q307.

The signal generated by the VCXO (X301) is fed to the buffer amplifier Q307.

The VCXO (X301) signal enters buffer amplifier Q307 and is amplified by Q305. The higher harmonic wave is attenuated by the LPF and returns to IC303. Its phase is compared with that of the reference frequency 5kHz.

The phase difference signal produced by the comparing phase is converted to a DC voltage by a lag-lead type loop filter. This DC voltage is input to the IC305 invert amplifier (B/2) and is synthesized with the modulating signal. This DC voltage is input to the X301 control voltage terminal for controlling the VCXO oscillating frequency 19.2MHz.

The DC voltage passes through the IC306 operational amplifier, and is output as a voltage signal (CVT-MOD) for monitoring the modulating 19.2MHz PLL circuit lock voltage.

The 19.2MHz oscillating signal is fed to the Q307 buffer amplifier and is amplified by Q304. The higher harmonic wave is attenuated by the LPF, fed to IC307, and is used as the reference frequency signal of the transmitter DDS circuit.

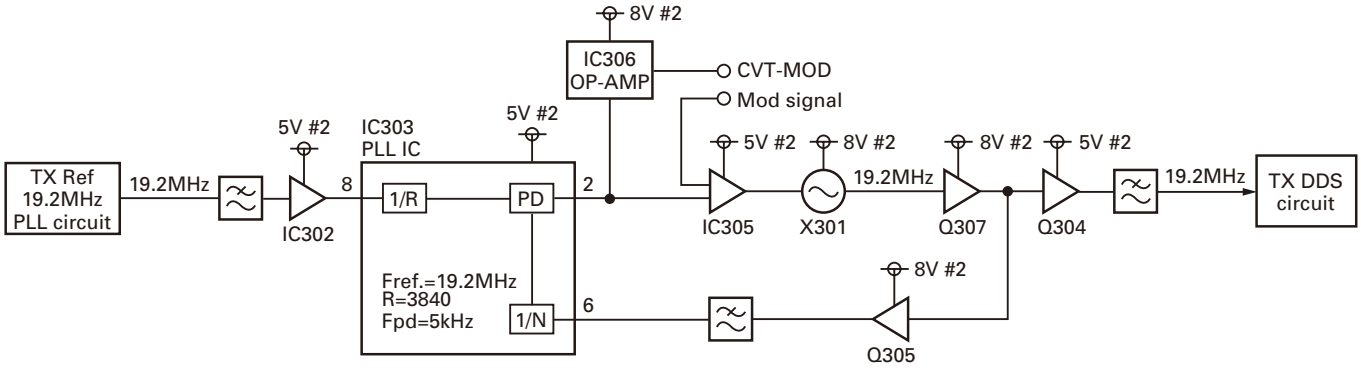


Fig. 3 Transmitter modulation 19.2MHz PLL circuit

CIRCUIT DESCRIPTION

2-4. Transmitter DDS circuit

The transmitter DDS circuit produces the transmitter main PLL reference frequency signal 4.5MHz.

This circuit consists of IC307, IC202, CF201, Q210, Q211, Q212 and Q213.

The 19.2MHz signal from the transmitter modulation 19.2MHz PLL circuit is amplified by IC307 and supplied to the IC202 reference signal pin.

IC202 produces the transmitter main PLL 4.5MHz reference frequency signal based on 19.2MHz on signal.

The spurious output by IC202 is attenuated by CF201 and LPF, 4.5MHz reference frequency signal is amplified by Q211, Q212, and Q213, and fed to the transmitter main PLL.

The comparison frequency of the transmitter main PLL is 100kHz and the PLL frequency step is 100kHz.

However, minute frequency step such as 2.5kHz and 3.125kHz because the DDS output frequency is variable.

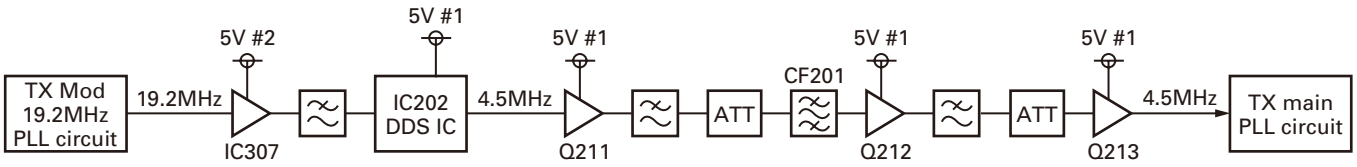


Fig. 4 Transmitter DDS circuit

2-5. Transmitter main PLL circuit

The transmitter main PLL circuit consists of the VCO (Q102 and Q103), PLL IC (IC101) and divide-by-2 circuit (IC811) and produces the transmitter frequency signal.

The VCO Q102 produces transmitter frequencies from 146.000MHz to 159.995MHz. (The transmitter frequency of the VCO is from 292.000MHz to 319.990MHz.)

The VCO Q103 produces transmitter frequencies from 160.000MHz to 174.000MHz. (The transmitter frequency of the VCO is from 320,000MHz to 348,000MHz.)

The signal produced by the VCO (Q102 or Q103) is fed to the buffer amplifier and is amplified by Q106. The higher harmonic wave is attenuated by LPF and returns to the PLL IC (IC101).

IC101 divides the VCO oscillating frequency signal and transmitter PLL reference signal (4.5MHz), and compares the phase with the 100kHz comparison frequency.

The phase difference signal produced by the comparing phase is converted to a DC voltage by a lag-lead type loop filter.

The DC signal is applied to varicaps D101, D102, D107, and D108 to lock the VCO oscillator frequency with the desired oscillator frequency.

At the same time, the DC signal passes through the IC102 operational amplifier for monitoring the transmitter main PLL lock voltage.

The output from the VCO passes through the buffer amplifier Q104. The divide-by-2 circuit (IC811) divides the frequency and produces the transmitter frequency. The output level of IC811 is about +6dBm (4mW).

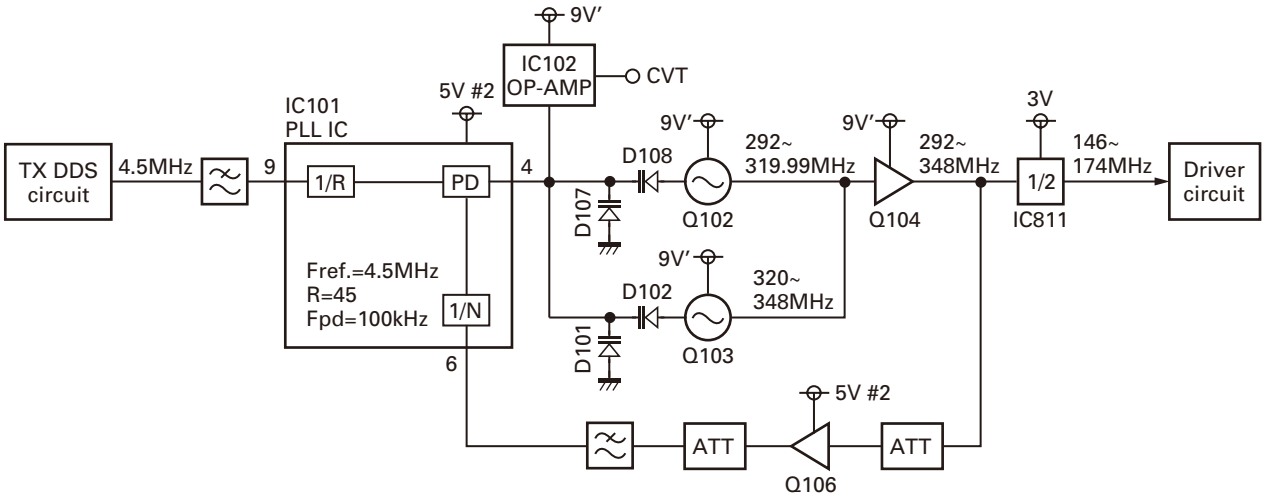


Fig. 5 Transmitter main PLL circuit

CIRCUIT DESCRIPTION

2-6. Driver circuit

The driver circuit amplifies the transmitter frequency signal to the level required for input to the Final Unit (X45-381 A/5).

This circuit consists of RF amplifiers Q202 and Q203, switches Q204, Q205 and Q206, and operating amplifier IC201.

DC switches Q204, Q205, and Q206 turns the power supply voltage of RF amplifiers Q202, and Q203 on and off.

The output of the divide-by-2 IC (IC811) is attenuated by attenuators R209, R210 and R211, by approximately 10dB. So, the transmitter signal input level to Q202 is approximately -4dBm (0.4mW).

Q202 amplifies it by approximately 15dB. So, the output level is approximately +11dBm (12.6mW).

The output from Q202 is attenuated by attenuators R217, R218 and R219, by approximately 3dB, and amplified by Q203 approximately by 12dB. So, the output from Q203 is approximately +20dBm (100mW). This output level is output from the driver output connector CN802 and connected to the Final Unit (X45-381 A/5).

Q203 has an AGC (Auto Gain Control) circuit. D201 rectifies a part of the Q203 output and converts it into DC voltage. It is compared with the control voltage (D_PC) by the operation amplifier IC201. The Q203 Gate terminal voltage is controlled for the stabilizing Q203 output (+20dBm).

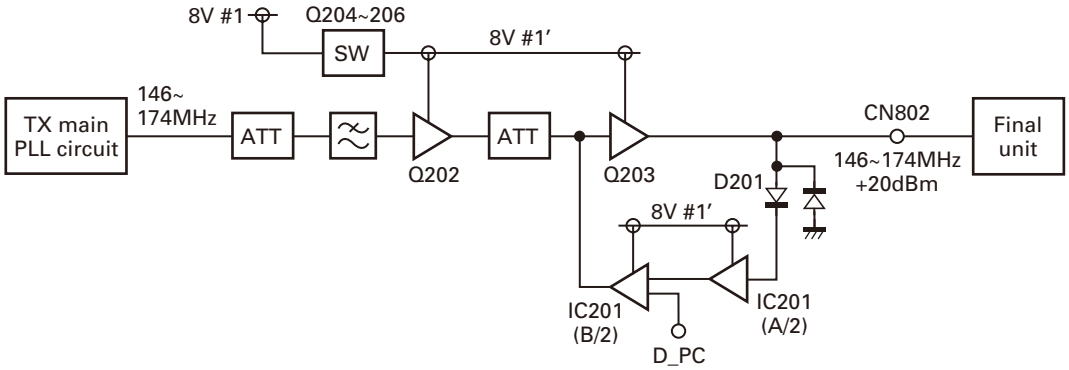


Fig. 6 Driver circuit

2-7. Modulation level adjustment circuit

The level adjustment circuit adjusts the modulation signal level to provide the required level of modulation. This circuit consists of IC301, IC304, IC305, and IC308.

The audio signal comes from the Control Unit (X53-413) through pin 4. The modulating signal is input to IC304 from this.

IC304 is an electronic volume control IC.

The modulation waveform balance adjustment, maximum AF Dev. change, and adjustment are performed according to data from the MPU using the FPU.

The modulation signal is produced by the modulating low-pitched tone to the transmitter modulation 19.2MHz PLL circuit and adds the high-pitched modulation to the transmitter main PLL.

IC305 is an inverting amplifier (B/2) for inverting the amplification (A/2) of the modulating signal and synthesizing the VCXO (X301) control voltage and modulating signal.

IC301 is a reference voltage generator (A/2) in modulating level adjusting circuit and non-inverting amplification of modulating signal with a cutoff signal of approximately 9kHz (B/2).

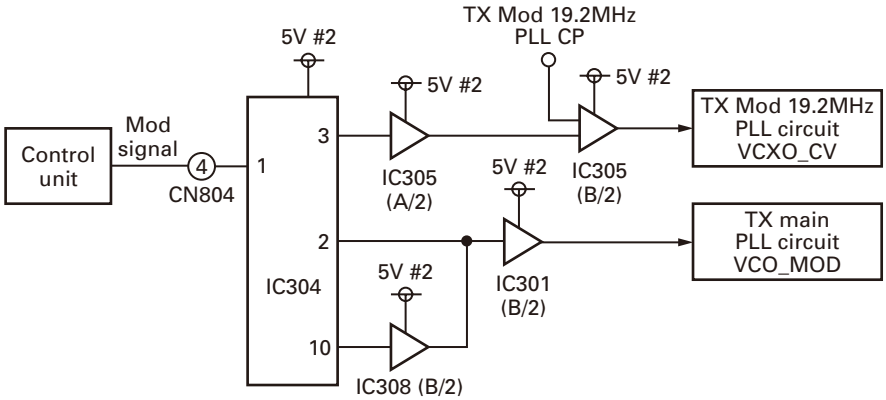


Fig. 7 Modulation level adjustment circuit

CIRCUIT DESCRIPTION

2-8. AVR circuit

IC104, IC603, IC704, IC705, IC706, IC807, IC808 and IC809 are AVR ICs.

Each circuit contains its own power regulator IC to maintain isolation between circuits.

2-9. Other circuits

In addition, IC702 is an EEPROM. The transmitter adjustment data adjusted for each unit is written into the EEPROM. If the unit is installed in another set, it is not necessary to adjust it again from the beginning, but only fine-tuning is necessary for each unit.

The temperature sensor (IC804) monitors the temperature of the transmitter unit (X56-311 A/3).

The D/A converters (IC701 and IC802) converts the AGC setting (D_PC) of the driver circuit and control voltage value (PWR_CONT, PWR_PRT) of the Final Unit (X45-381 A/5).

The A/D converter (IC803) converts the transmitter unit (X56-311 A/3) temperature, VCO & VCXO control voltage (CVT, CVT-REF and CVT-MOD), Final Unit (X45-381 A/5) PA current(PA_CURR), fan current (FAN_CURR), detection voltage (FWD_PWR, RFL_PWR), etc.

The shift register (IC703) controls each part of the transmitter unit (X56-311 A/3) based on serial data of the Control Unit (X53-413).

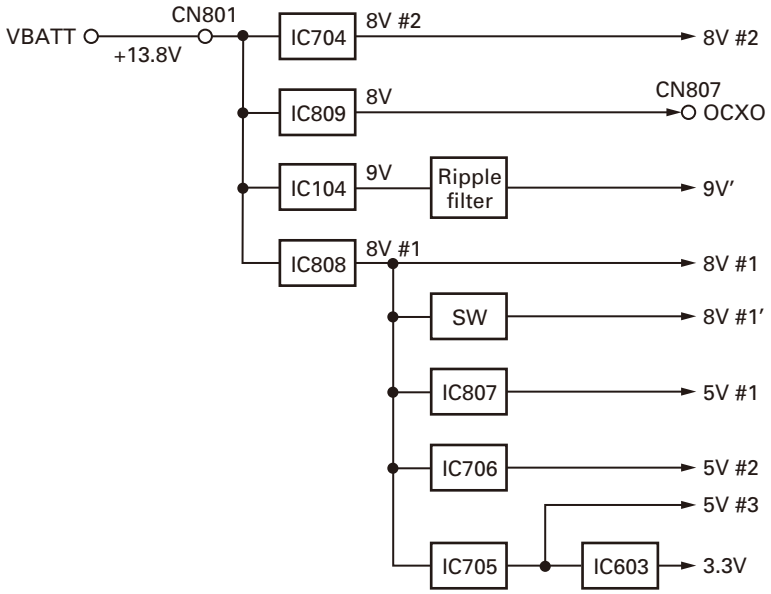


Fig. 8 AVR circuit

3. Final unit

The RF final amplifier unit (X45-381 A/5) amplifies the transmitter power to a specified level.

This unit consists of the following circuits:

(1) Transmitter power module
(2) High pass filter
(3) Forward/Reflect power detector circuit
(4) Antenna switch
(5) Harmonic filter circuit
(6) APC circuit
(7) High temperature detector circuit
(8) FAN action control circuit
(9) Current detector circuit
(10) AVR Circuit
(11) Other Circuits

3-1. Transmitter power module

The power module IC10 uses power module RA13H1317 M131 to improve its efficiency. The driver output of the transmitter unit passes through an attenuator and enters the power module IC10 pin 1. Power module IC10 amplifies the RF power according to the voltage at the amplification control pin 2 (VGG) and outputs it through pin 4 (Pout).

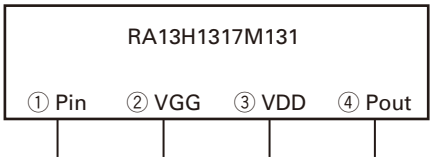


Fig. 9 Transmitter power module

3-2. High pass fileter

The T type single stage high pass filter prevents the Power Amplifier Module from being broken by static electricity.

CIRCUIT DESCRIPTION

3-3. Forward/Reflect power detector circuit

The forward / Reflect power detector circuit consists of a CM coupling type detection circuit formed by a Micro strip line and the differential amplifier IC4.

A part of the transmitter power is detected by diodes D9 and D10 and is converted into DC voltage.

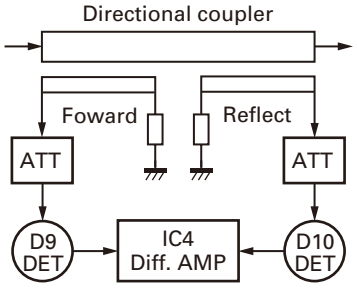


Fig. 10 Forward/Reflect power detector circuit

3-4. Antenna switch

If a common antenna is used for the transmitter signal and receiver signal, switch transmitter and receiver signals by connecting CN19 to the RX Unit.

If different antennas are used for the transmitter and receiver, it functions as an On/Off switch for the transmitter circuit.

3-5. Harmonic filter circuit

The harmonic filter circuit uses a three-stage "pi" type Chebyshev type LPF.

This circuit removes harmonics from the transmitter output and sends the filtered signal to the antenna connecter (CN22).

3-6. APC circuit

The APC circuit stabilizes the transmitter power so that the output power specified by the Control Voltage from the MPU is obtained. It consists of a Forward/Reflect power detector circuit and Differential amplifiers (IC2 and IC5).

It compares the voltage detected by the Forward/Reflect power detector circuit (voltage detected by the Forward Power) and the Control Voltage (PWR_CONT) from the MPU (IC802: X56-311 A/3). It stabilizes the output power by changing pin 2 (Vgg).

The voltage detected (that detected Reflect Power) by the Forward/Reflect power detector circuit is compared to the Control Voltage (PWR_PRT) from the MPU (IC802: X56-311 A/3). When a load V.S.W.R. is connected to the Antenna Connecter and is more than 1.5, it functions so that the output power gets smaller as the detection voltage (that detected Reflect Power) gets larger.

3-7. High temperature detector circuit

The high temperature detector circuit consists of a thermal switch IC (IC7) and a switching FET (Q2).

This circuit lowers the transmitter power when the final unit temperature is too high (83°C or higher).

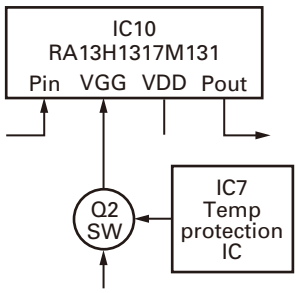


Fig. 12 High temperature detector circuit

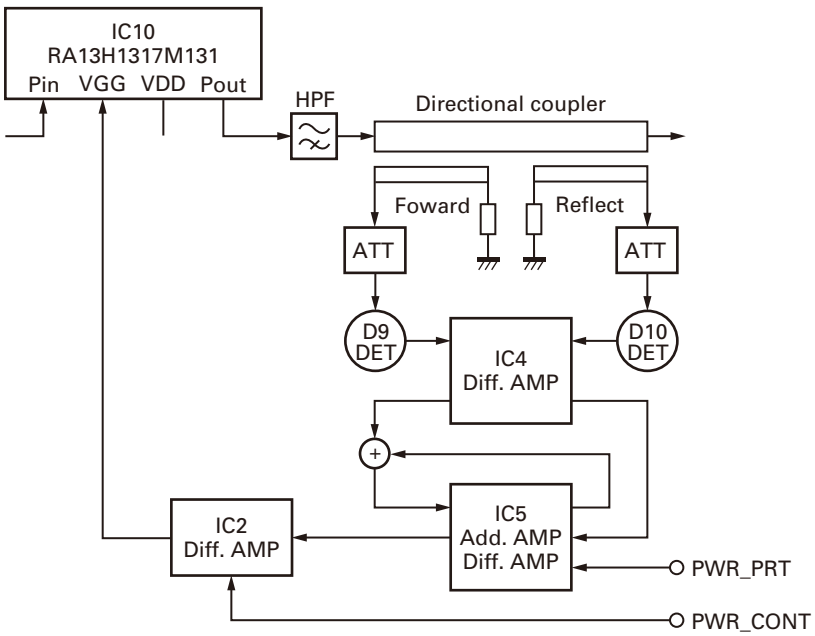


Fig. 11 APC circuit

CIRCUIT DESCRIPTION

3-8. FAN action control circuit

The FAN action control circuit consists of a FAN, a current detection resistance (R11), a Differential amplifier (IC15), a Switching FET (Q3), and a Switching FET (Q14). It detects the normal and abnormal state by monitoring the current flowing FAN motor, and stops operation when failure occurs.

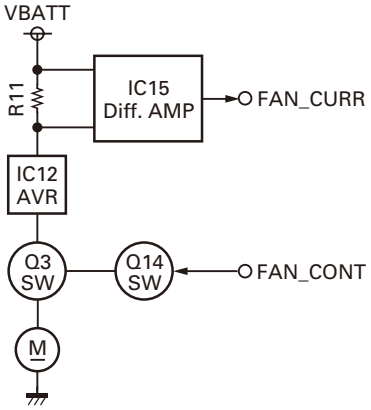


Fig. 13 FAN action control circuit

3-9. Current detector circuit

The current detector circuit monitors the current of the Power Amplifier Module. It consists of a current detection resistance (R4) and a current detection IC (IC1). It detects the normal and abnormal state of the Power Amplifier Module by monitoring the current of the Power Amplifier Module. If a failure occurs, it stops operation.

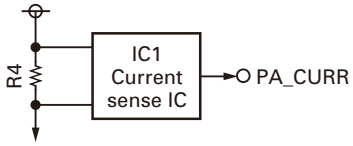


Fig. 14 Current detector circuit

3-10. AVR circuit

IC3, IC11 and IC12 are AVR ICs.
They maintain isolation of each power supply.

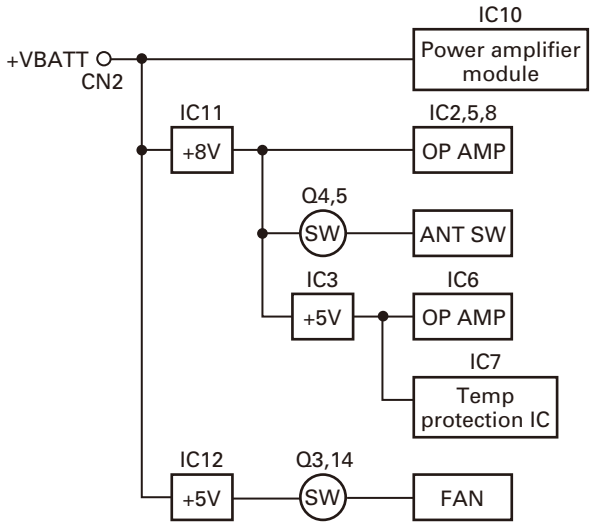


Fig. 15 AVR circuit

3-11. Other circuits

Circuit IC9 saves various adjustment values of the Final Unit in the EEPROM.

4. Receiver Unit

The receiver unit (X55-309) consists of the following circuits:

(1) Front-end circuit
(2) 1st-Mixer circuit
(3) 1st-IF circuits
(4) Demodulator circuits
(5) Squelch circuit
(6) Receiver DDS circuit
(7) Receiver PLL circuits
(8) AVR circuit
(9) Other circuits

There are four modulating modes that can receiver demodulate, including Analog_Wide, Analog_Narrow, Digital_Narrow, and Digital_Very-Narrow.

4-1. Front-end circuit

The front-end circuit consists of L132, L133, L134, and L135 coils, tetra polar BPF synchronizing TC1, TC2, TC3 and TC4 variable trimming capacitors, Q1 Low Noise Amplifier (LNA), L136, L137, L138, L139 coils, and tetra polar BPF synchronizing TC5, TC6, TC7, and TC8 variable trimming capacitors.

Adjusting eight variable trimming capacitors forms the BPF having a pass band width of 3MHz with a center frequency from 146 to 174MHz.

+9V is applied to the Q1 collector power supply. -3V produced by IC701, IC702 and IC703 mounted on a negative power unit (X45-381 D/5) is applied to the emitter power supply. The collector current is monitored by the IC4 current detection circuit. Detected DC voltage is input to pin 15 of IC30 (ADC).

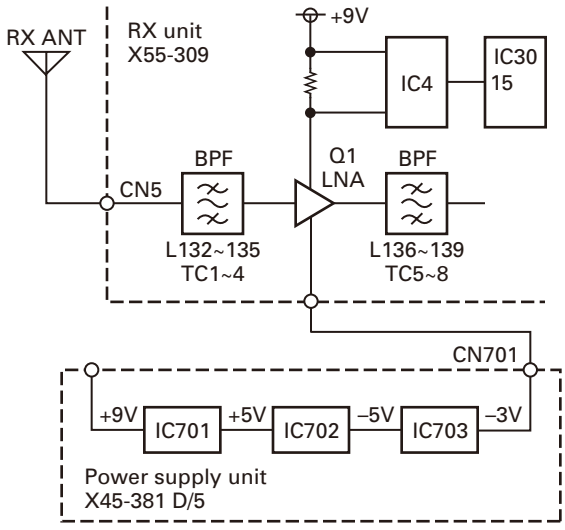


Fig. 16 Front-end circuit

CIRCUIT DESCRIPTION

4-2. 1st-Mixer circuit

The unwanted out-of-band RF components produced by Q1 are attenuated by the BPF. Only the desired signal is transmitted to the A1 Double Balanced Mixer (DBM). Here, the desired signal is mixed with the first hetero signal. 49.95MHz is produced as the 1st Intermediate Frequency (IF1).

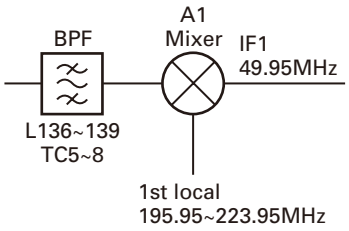


Fig. 17 1st-Mixer circuit

4-3. 1st-IF circuits

The IF1 signal produced by the 1st-Mixer circuit is transmitted through either one of two 1st-IF circuits with different bandwidth. The signal passes through the WIDE band consisting of D9, XF1, Q19, XF3, Q28 and D13 only in Analog_Wide mode. Meanwhile, the signal passes through the NARROW band consisting of D10, XF2, Q20, XF4, Q29, and D14 only in Analog_Narrow, NXDNl_Narrow or NXDN_Very-Narrow mode.

XF1 and XF2 is 2 pole and XF3 and XF4 are 4 pole Monolithic Crystal Filters (MCF). They are BPF for removing spurious noise occurring close to the desired signal. The DC switch consists of Q31, Q32, Q26 and Q25, switches the WIDE and NARROW bands of the 1st-IF circuits.

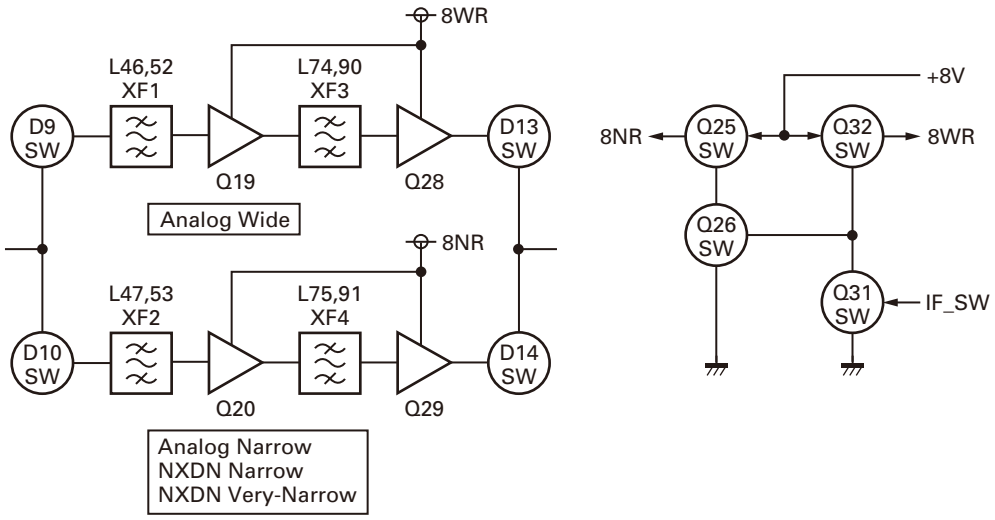


Fig. 18 1st-IF circuits

4-4. Demodulator circuits

The desired signal that passed through the 1st-IF circuits passes through the distributor consisting of LC parts and is fed to the IF system IC_IC12, IC13. The signal in Analog_Wide or Analog_Narrow mode is mixed with the second local oscillator hetero signal by the mixer in IC12. 450kHz is produced as the 2nd Intermediate Frequency (IF2).

It passes through D15, CF2, D16, D19, CF5 and D20 path if the modulation mode is Analog_Wide. It passes through D15, CF3, D16 and D19, CF7 and D20 path if the modulation mode is Analog_Narrow. The base band signal FM-detected by the quadrature detection circuit consisting of L128, Q57, and Q58 and is amplified to a signal level of approximately 100mVrms by IC20 and is then transmitted to the control unit (X53-413) from CN42 (pin12).

The signal in NXDN_Narrow or NXDN_Very-Narrow mode is mixed with the second local oscillator hetero signal by the mixer in IC13. 450kHz is produced as the 2nd Intermediate Frequency (IF2). Here, irrespective of modulation modes, it passes through the CF4 and CF6 path. It is transmitted as the base band signal via IC14 to the CN43 control unit, X53-414.

CF2, CF3, CF4, CF5, CF6 and CF7 are hexode Ceramic Filters. They are BPF for removing spurious noise occurring close to the desired signal.

CIRCUIT DESCRIPTION

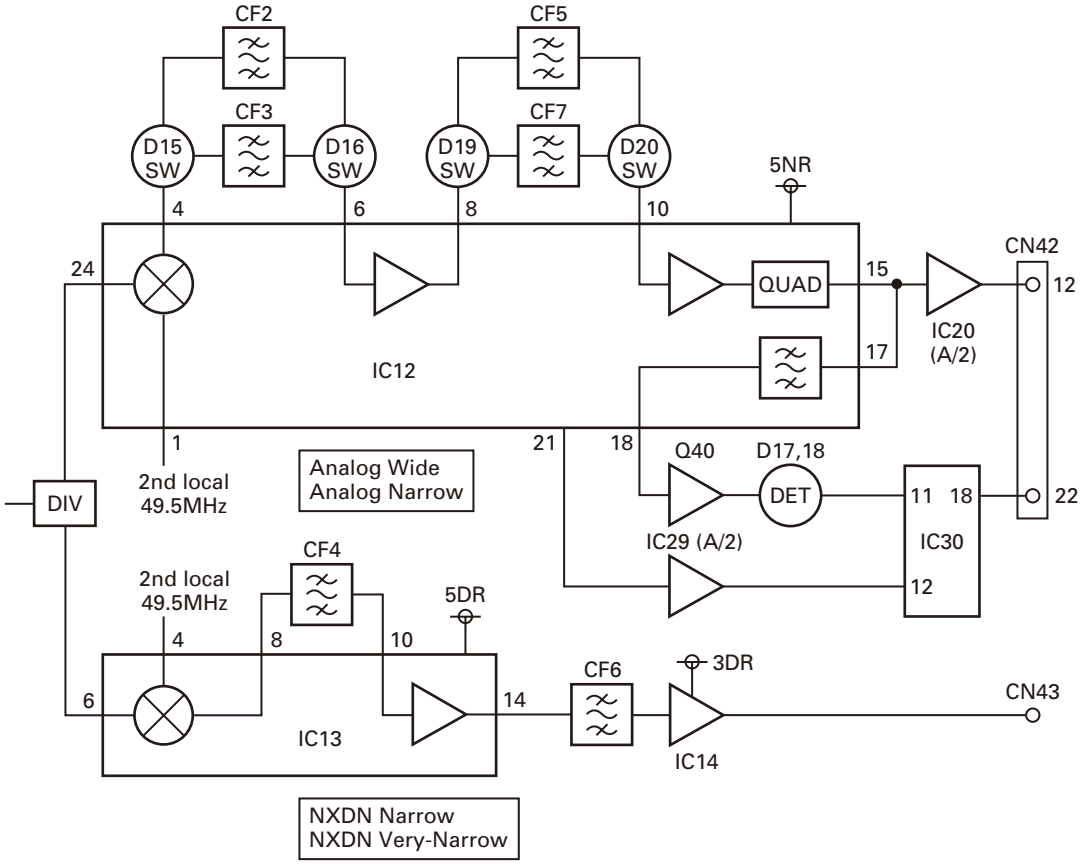


Fig. 19 Demodulator circuits

4-5. Squelch circuit

The desired noise of the noise component output from IF system IC_IC12 (pin18) is extracted by the BPF. After passing through Q40, it is DC-detected as the squelch voltage by D17, D18 and input to ADC_IC30 (pin11).

The MPU mounted in the control unit (X53-413) compares it with a predetermined reference voltage and turns the Audio signal on and off. The strength of the receiver signal input from CN5 is output as the RSSI voltage from IF system IC_IC12 (pin21), and is input to_IC30 (ADC) pin12 via IC29 A/2.

4-6. Receiver DDS circuit

The 19.2MHz Internal reference clock produced by transmitter unit (X56-311 A/3) is distributed to CN45 of the receiver unit (X55-309). It passes through Q39, Q30, and IC8, and is input to IC7 (DDS-IC) pin6 as the Master clock. Approximately 6MHz signal is generated as the 1st-PLL Reference clock.

IC7 has a resolution of 32 bits for realizing the frequency step minters than the 1st-PLL comparison frequency. The generated Reference clock is output via Q12, CF1, and Q5. CF1 is a Ceramic Filter. It is the BPF for removing unnecessary spurious noise included in the generated Reference clock.

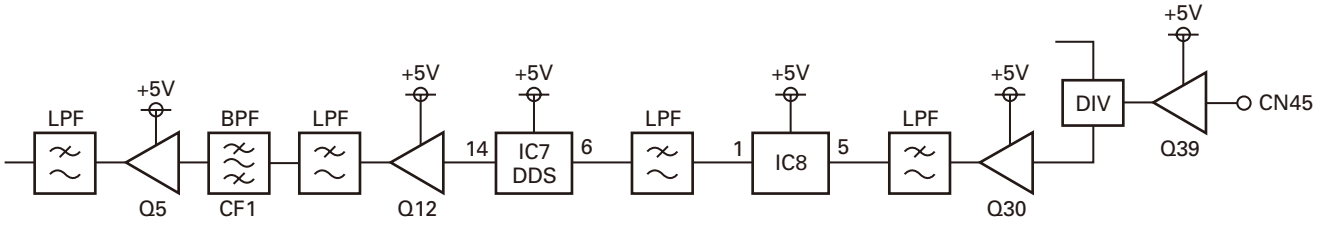


Fig. 20 Receiver DDS circuit

CIRCUIT DESCRIPTION

4-7. Receiver PLL circuits

The receiver unit (X55-309) has the 1st-PLL circuit for controlling the VCO that generates the hetero signal to the first local oscillator, and the 2nd-PLL circuit for controlling the VCO that generates the hetero signal to the second local oscillator.

The 1st-PLL circuit consists of the VCO (Q7 and Q8), the Buffer amplifier (Q17), the RF amplifiers (Q16 and Q3), the PLL-IC (IC5), the Active loop filters (Q2 and Q4) and the Band switches (Q14, Q10, Q11 and Q59). The signal in the195.95 through under 209.95MHz band generated by VCO Q7 and the 209.95 through 223.95MHz band generated by VCO Q8 is input to IC5 (pin5) via Q17 and Q16 as the Fin signal. The 6MHz reference signal generated by the DDS-IC (IC7) is input to IC5 (pin8) via Q3. Two signals, Fin and REFin, are phase-compared as the 100kHz comparison frequency by each frequency divider. The VCO output with the frequency synchronized is input to the 1st-Mixer as the first local oscillator Upper hetero signal approximately +17dBm via Q17, Q23, and Q18. The control voltage is input to IC30 (ADC) pin16 via IC6.

Meanwhile, the 2nd-PLL circuit consists of the VCO (Q24), the Buffer amplifier (Q33), the RF amplifier (Q38, Q22), and the PLL-IC (IC11). The 99.0MHz signal generated by Q24 is input to IC11 (pin5) as the Fin signal via Q38. The 19.2MHz Internal reference clock distributed by the transmitter unit (X56-311) is input as the REFin signal to IC11 (pin8) via Q22. Two signals, Fin and REFin, are phase-compared by each frequency divider as the comparison frequency of 200kHz. The VCO output with the frequency synchronized is input to IC9 (prescaler IC) pin2 via Q33 and Q21. The 49.5MHz signal is frequency-divided into halves by IC9 and is excited by Q53 and distributed. One is input to IC12 (pin1) via Buffer amplifier_Q35. The other is input to IC13 (pin4) via Buffer amplifier_Q36. Both are input as approximately -16dBm for the second local oscillator Lower hetero signal. The control voltage at this point is input to IC30 (ADC) pin10 via IC33.

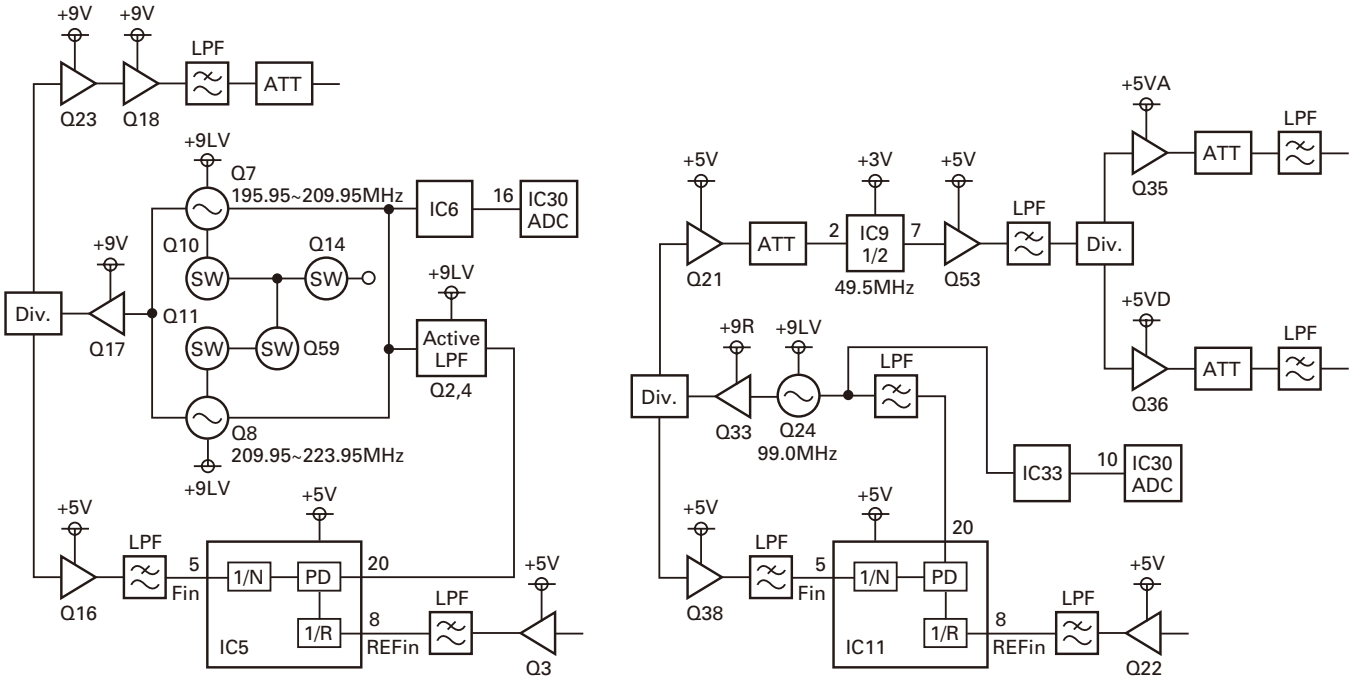


Fig. 21 Receiver PLL circuits

4-8. AVR circuit

The power supply voltage supplied from the power unit (X45-381 C/5) is distributed from the receiver unit (X55-309) CN44 to IC24 (8V), IC25 (8V), IC26 (9V), and IC27 (9V) via the Q52 DC switch. The output of IC24 is supplied to the 1st-IF circuits, the 1st-Local amplifiers and the IF system IC_IC12 via IC15 (5V). Further, the output of IC25 is distributed to IC16 (5V), IC17 (5V), IC18 (5V) and IC19 (5V). The output of IC16 is supplied to IF system IC_IC13. The output of IC17 is supplied to the 2nd-Local amplifiers. The output of IC18 is supplied to the 1st-PLL and the 2nd-PLL. The output of IC19 is supplied to the DDS circuit. The output of IC26 is supplied to LNA_Q1. The output of IC27 is supplied to the VCO buffer amplifiers_Q17, Q33, the 1st-VCO and the 2nd-VCO via Active ripple filters_Q9, Q27, and to the Active loop filter_Q2, Q4 via the Active ripple filters_Q6.

CIRCUIT DESCRIPTION

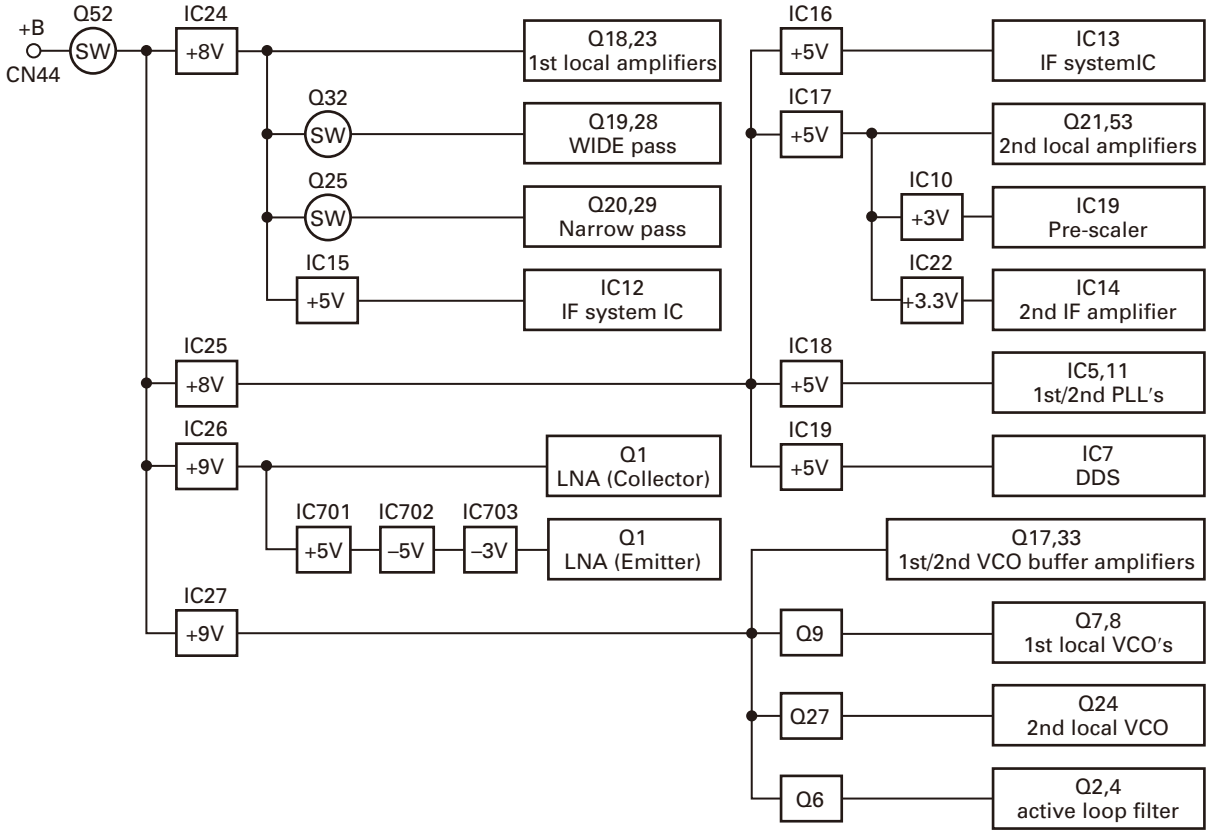


Fig. 22 AVR circuit

4-9. Other circuits

Other circuits include the EEPROM (IC31), the temperature sensor IC (IC35), the DAC (IC23) and the ADC (IC30). IC31 saves various adjustment values of the receiver unit. IC35 is built-in for detecting changes in temperature. IC23 offsets the RSSI voltage (pin1) (detected by the IF system IC (IC12)) and the 1st-VCO_A, VCO_B control voltage (pin2, pin3).

IC30 monitors the 1st-VCO control voltage (pin16), the LNA current detection value (pin15), the temperature detected by the temperature sensor IC (IC35 pin14), the RSSI voltage detected by the IF system IC (IC12 pin12), the squelch voltage detected by the IF system IC (IC12 pin11), and the control voltage of the 2nd-VCO (pin10), and outputs each state in serial data (IC30 pin18), sends the signal from CN42 (pin22) to the control unit (X53-413). The signal is processed by the MPU.

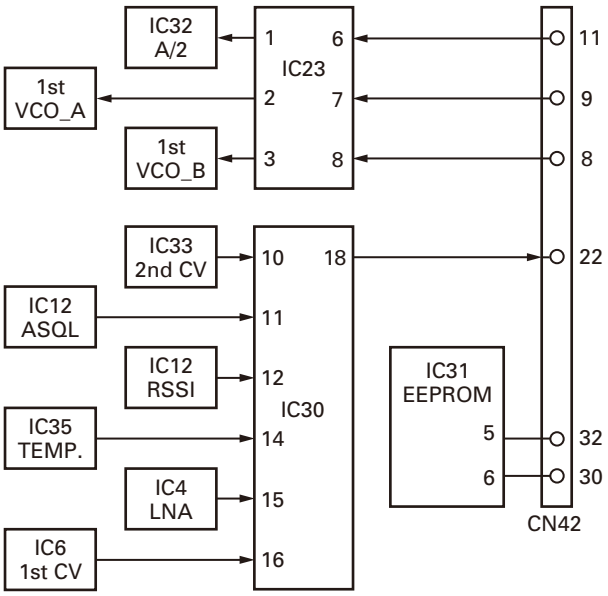


Fig. 23 Other circuits

CIRCUIT DESCRIPTION

5. Base-Band Signal Processing Part

The base-band circuit is located on unit X53-413. This circuit enables the selection of the Analog Signal Processing mode and the Digital Signal Processing mode, and adjusts the level of the base-band signals in each mode. This circuit consists of IC2, IC3, IC5, IC8, IC9, IC12, IC14, IC19, IC20 and IC21.

The type of input modulation signals are local microphone terminal, low-speed data (LSD), high-speed data (HSD), external audio input (TA), and external data input (TD), and also the type of output demodulation signals are receiving audio output (RA), and receiving data output (RD).

The multiplexer (IC2, IC3, IC14) selects the signal path, the electronic volume (IC8) adjusts the signal level, and the operational amplifiers (IC5, IC9, IC12, IC19, IC20, and IC21) amplify and sum various signals.

5-1. Demodulation circuit (Analog/NXDN signal processing)

In case of the Analog Signal Processing mode, the detected audio signal obtained from the IF SYSTEM IC (X55-307 IC8) is amplified by IC5 (A/2), input into the AINR terminal of CODEC IC (IC4), and then processed as an audio signal by the DSP (IC37). The processed audio signal from the AOUTR terminal of IC4 is amplified to a sufficient level by IC12 (A/2), and is then passed through the anti-aliasing filter at IC12 (B/2).

In case of the NXDN Signal Processing mode, the detected audio/data signal obtained from the IF SYSTEM IC (X55-307 IC7) is input into the ADC (X53-414 IC312). Receiving signal processing is performed by RX_DSP (X53-414 IC323), and voice decode processing is performed by TX_VOCODER DSP (X53-414 IC324). The processed audio signal from the AOUTL terminal of CODEC IC (X53-414 IC309) is amplified to a sufficient level by IC20 (D/4), and is then passed through the anti-aliasing filter at IC20 (C/4).

The audio signal path is selected by multiplexer (IC14) depending on the Analog mode (IC14 is setting Y=Y0) or the NXDN mode (IC14 is setting Y=Y1). The audio signal is then routed through an electronic volume (IC8) V3/V4 to multiplexer IC (IC25), and is amplified to a sufficient level to drive the loudspeaker using an audio power amplifier (IC29).

5-2. Audio amplifier aircuit

The audio amplifier circuit is located in the control section of the Control unit (X53-413).

The 3W output audio power is available from the pin15 test connector "SPO, SPG" on the rear panel to the external speaker in the case of a 13.8V power supply voltage and 4 ohm load.

5-3. Microphone circuit

The signal from the microphone is passed through the AGC circuit located in the DISPLAY circuit (X56-311 B/3) so that it may not saturate. This circuit consists of IC926, D933, D934 Q931, and Q932. The AGC controls the amplifier gains using the detected audio signal depending on the positive and negative peaks of the signal amplitude. The audio signal goes to the control section of the Control unit (X53-413) from the DISPLAY circuit (X56-311 B/3).

5-4. Modulation circuit (Analog/NXDN signal processing)

The transmitting audio signal goes to the input terminal of the multiplexer IC (IC3) for microphone muting.

In case of the Analog Signal Processing mode (multiplexer IC3 is setting X=X0), the audio signal is amplified by IC9 (A/4), input to the AINL terminal of the CODEC IC (IC4), and audio processed by the DSP (IC37). The processed audio signal from the the AOUTL terminal of IC4 is amplified to a sufficient level by IC9 (B/4), and is then passed through an anti-aliasing filter at IC9 (C/4), and amplified by the summing (TD) amplifier IC9 (D/4).

On the other hand, in the case of the NXDN Signal Processing mode (multiplexer IC3 is setting X=X1), the audio signal is amplified by IC20 (A/4), input to the AINL terminal of the CODEC IC (X53-414 IC309), and processed by the TX_VOCODER DSP (X53-414 IC324). The processed audio signal from the AOUTR terminal of IC309 passes through the anti-aliasing filter at IC19 (B/2).

6. Control Circuit

The control circuit consists of two units, X53-413 and X53-414.

Unit X53-413 mainly has the power supply circuit, baseband signal path selection circuit (level adjustment is included), analog mode voice codec circuit, and RF controller circuit.

Unit X53-414 has the mode selection (analog or NXDN) circuit, NXDN mode communication processing circuit, LAN interface circuit, and Compact Flash interface circuit.

6-1. X53-413

■ RF control MPU

The IC34 RF control MPU is a 16-bit single chip microprocessor incorporating 256Kbite of ROM and 20Kbite of RAM.

This MPU controls the Flash ROM, DSP, receiver unit, transmitter unit, and EEPROM of each unit, and the display circuit, and has communication I/F with external devices.

■ DSP

The DSP circuit is in charge of the filtering of transmitting and receiving signals, and the encoding and decoding of sub-audible signals (encode: QT, DQT, DTMF, decode: QT, DQT, DTMF).

This circuit consists of IC37, IC30, IC31, IC4, IC5, IC9, and IC12.

The receiving signal, DET is converted from analog to digital by IC4 with a sampling frequency of 16.128kHz. The digitized audio signal is sent to the DSP (IC37) to process the sub-audible signal and audio signal. The processed digital audio signal is applied to CODEC IC4, and is converted from digital to analog. The analog signal is output from pin16 (AOUTR). The audio signal is then amplified by IC12 (A/2), passes through the low-pass filter at IC12 (B/2), is selected by the multiplexer IC14 (Y0=Y) and is then input into an electronic volume IC8.

CIRCUIT DESCRIPTION

On the other hand, the transmitting audio signal output from IC3 is amplified by IC9 (A/4), applied to pin 3 (AINL) of CODEC IC4, and is then converted from analog to digital at a sampling frequency of 16.128kHz. The digitized transmitting audio signal is AGC-processed, pre-emphasized and filtered, except for the 300Hz to 3kHz range, by DSP IC37, and is then feed back to CODEC IC4, converted from digital to analog, and the analog signal is output from pin15 (AOUTL). The transmitting signal from the AOUTL is amplified by IC9 (B/4), passed through the IC9 (C/4) low-pass filter, and sent to the IC9 (D/4) summing amplifier.

IC31 is a counter IC. The clock required for the CODEC and DSP is generated by dividing the 16.515072MHz clock signal supplied by the DSP IC37.

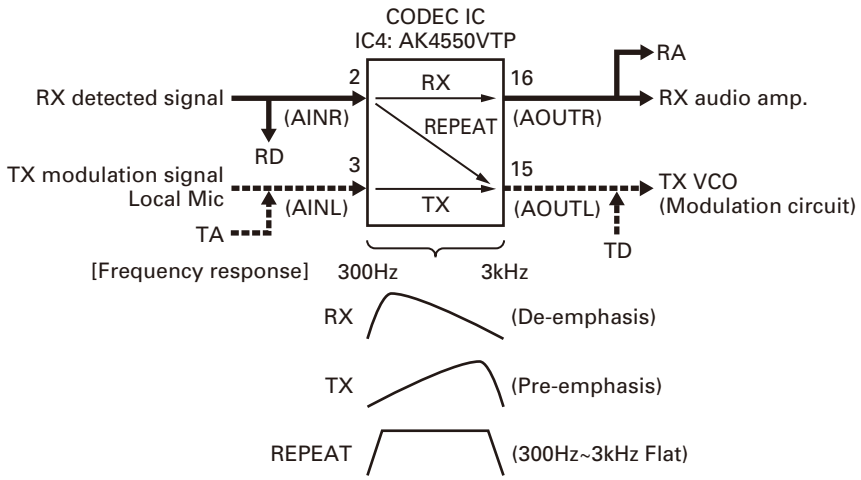


Fig. 24 An audio signal course and the frequency characteristic

■ Shift register circuit

The MPU (IC34) transmits serial data to shift registers IC923 from IC923 to IC960 and from IC960 to IC963 in the display circuit (X56-311 B/3, C/3).

Additionally, it transmit serial data to the control unit (X53-413) IC1 and IC22 and the transmitter unit (X56-311) IC703. This serial data can control various functions of each unit.

■ Power supply circuit

This circuit consists of X53-413 IC6, IC10, IC11, IC15, IC16 and 18, and X53-414 IC305, IC306, IC307 and IC329.

IC10 is a DC/DC converter that converts 13.8V to 5.0V. IC11 is a DC/DC converter that converts 13.8V to 8.0V. IC16 is the 5.0V AVR and connected to IC10. IC6, IC15, IC305 and IC329 is the 3.3V AVR. IC18 is the 1.8V AVR. IC306 is the 1.5V AVR. IC18 and IC306 is connected to IC329.

■ Flash ROM (RF control MPU)

IC17 is an 8M bit Flash ROM and contains MPU firmware for controlling the RF.

■ EEPROMs circuit

The EEPROM is a built in receiver unit (X55-309), transmitter unit (X56-311) and Final unit (X45-381).

The RF control MPU controls these EEPROMs by the IIC bus.

6-2. X53-414

■ Main MPU

The Main MPU (IC703) is a 32-bit RISC microprocessor incorporating a 16K bite cache memory.

The main MPU controls the Flash ROM, SDRAM, SRAM, LAN IC, RS-232C driver, receiver and real-time clock (RTC) IC besides RF control MPU and UART communication with modem control MPU.

■ LAN interface

NXR-700 is equipped with a 100Base-TX or 10Base-T LAN interface. This circuit consists of IC719, IC720 and J700. IC719 is a control IC. IC720 is a EEPROM, and saves the MAC address.

■ Real time clock (RTC) circuit

This circuit consists of IC710 and X701. IC710 is a Real Time Clock. X701 is a crystal oscillator. IC710 is connected to IC703 (Main_MPU) via the IIC bus. The oscillating frequency of X701 is 32.768kHz. It is backed up by a rechargeable lithium battery (BA300). The IC710 clock data is used after resetting the backup.

■ RS-232C circuit

NXR-700 is equipped with a RS-232C interface. It is connected to a PC with pin9 female RS-232C cross cable. It uses the FPU and writes the firmware. IC705 is a RS-232C driver receiver IC, and interfaces at the TTL232C level.

CIRCUIT DESCRIPTION

■ Modem control MPU

Modem control MPU (IC325) is 16-bit single chip microprocessor incorporating 256Kbites of ROM and 20Kbites of RAM.

This MPU controls the Flash Rom, two DSPs, the OCXO unit in the transmitter unit (X42-328) and the PLL circuit.

It also monitors the external power supply voltage. If the voltage is abnormal, it stops the system.

■ RX DSP (IC323)

In NXDN mode, the IF signal input from the ADC (IC312) to the RX DSP is limited to a narrow band or a very narrow band. So, it passes through the IF band limitation band.

This signal is demodulated by the wave detection processing part. The demodulated wave is made to pass through the base band limitation filter (root nyquist cosine filter and 1/sinc filter).

This signal is symbol-detected and bit-judged, and is then converted to NXDN data. Its frame timing is detected and decoded for CAI (Common Air Interface: NXDN format) data error correction.

Audio data is vocoder decode processed by the IC324 TX_Vocoder_DSP. It is then converted into the PCM signal. It is analog-output as an audio signal by the DAC part of the Audio codec IC (IC309 AOUTL terminal).

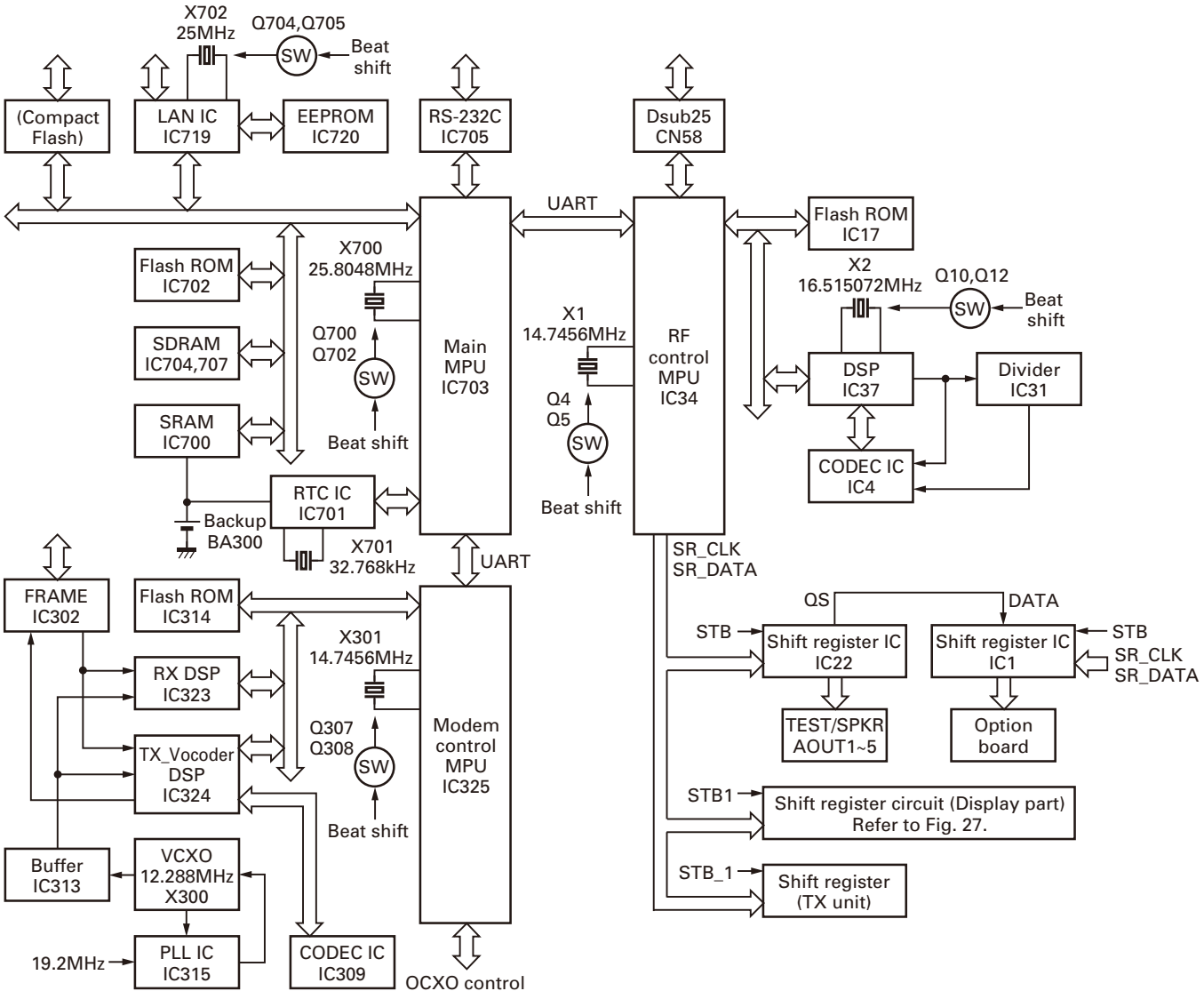


Fig. 25 Control circuit

CIRCUIT DESCRIPTION

■ TX_Vocoder DSP

In NXDN mode, the AMBE+2 (TM) vocoder processing is performed by the IC324 TX_Vocoder_DSP.

Audio signal input from the Audio codec IC ADC part (IC309 AINL) terminal is vocoder encode processed and converted to audio data.

CAI data is encoded for correcting errors and converted to transmitter data.

This data is framed, converted to symbol values and made to pass the base band limitation filter (root nyquist cosine filter and sinc filter). The passed signal turns into a modulating signal. It is output as an analog signal by the Audio codec IC DAC part (IC309 AOUTR terminal).

■ Power supply voltage monitoring circuit

This circuit always monitors the external power supply voltage assuming that the abnormal power supply voltage is applied. This circuit consists of X53-413 R67, R68, R71, and R79 and IC7, and X53-414 IC308. If the voltage is reduced, these circuits interrupt the Modem control MPU (IC325) and NXR-700 rapidly shift to the power down state. The IC325 A/D converter (pin124) monitors the voltage. It detects the voltage rises and returns to the normal voltage range.

■ Reset circuit

Reset system diagrams of each device of NXR-700 are attached. With regard to the priority of the reset signal of each device, IC303 that prepares the reset signal of IC325 has the highest priority. Software of IC325 can activate devices including IC323, IC324, IC703, IC700, IC702, IC719, IC34, and IC17. Software of IC703 can activate the reset of IC325.

■ Clock shift circuit

NXR-700 control unit has a crystal oscillation circuit shown below.

X53-4130-10:

14.7456MHz (IC34 and X1)

16.515072MHz (IC37 and X2)

X53-4140-10:

14.7456MHz (IC325 and X301)

25.8048MHz (IC37 and X2)

25MHz (IC719 and X702)

Each oscillation circuit turns on the NPN transistor "2SC4738(GR)F" and staggers the oscillating frequency by approximately -70ppm. This may prevent interference against transmitter and receiver frequencies. Each transistor is turned on and off by the FPU.

■ Flash ROM (Main MPU)

IC702 is a 128M bit Flash ROM and contains the firmware of the Main MPU.

■ Flash ROM (Modem control MPU)

IC314 is an 8M bit Flash ROM and contains the firmware of the Modem control MPU, RX DSP, and TX_Vocoder_DSP.

■ SDRAM

IC704 and IC707 are program execution 128M bit memory used by the Main MPU.

■ SRAM

IC700 is a memory backed up by a lithium battery (BA300).

The memory size is 16M bits. It contains data required for the system backup.

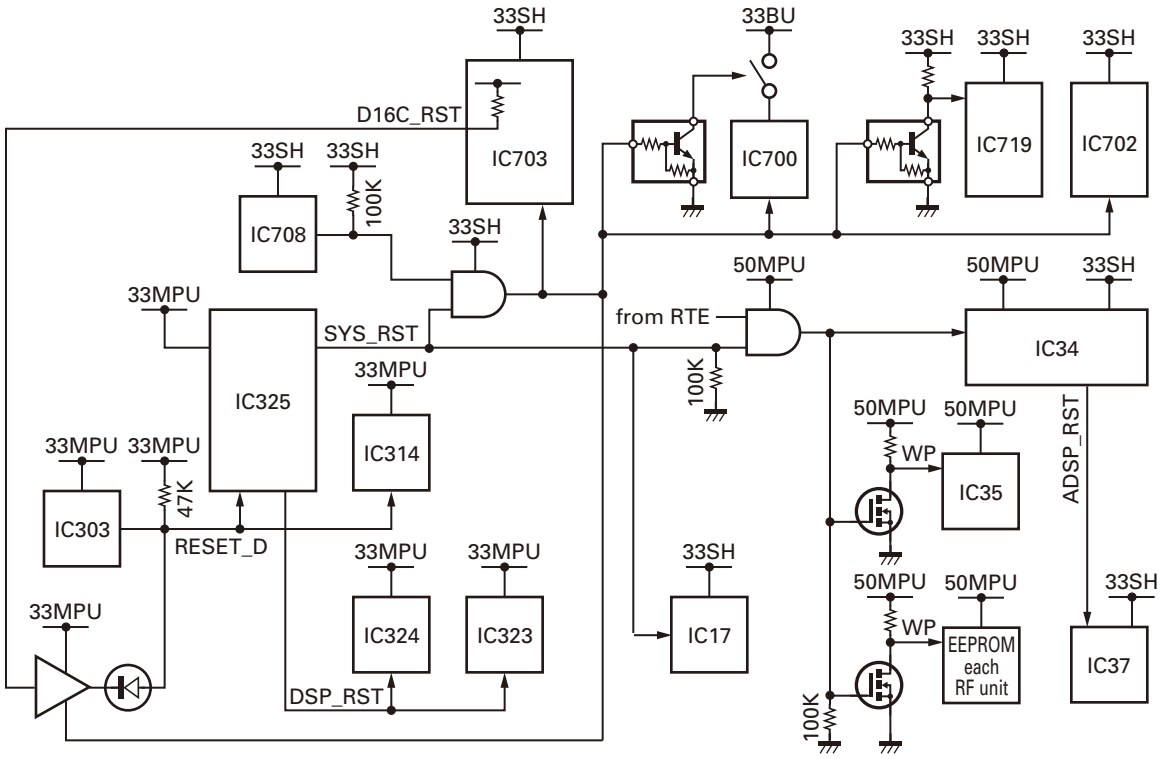


Fig. 26 Reset circuit

CIRCUIT DESCRIPTION

■ Frame synchronizing signal transmitter and receiver circuit

J702 and J703 are connectors for synchronizing with other repeaters in NXDN trunking mode. The differential rectangular wave that conforms to RS-485, 12.5Hz or 25Hz is input to and output from this connector for synchronizing multiple repeaters.

In the repeater system, any given repeater outputs a synchronizing signal and that synchronous signal is input to other remaining repeaters.

With regards to the output of the synchronous signal, the frame signal generated by TX_Vocoder_DSP (IC324) is differentially output by IC302.

With regards to the input of the synchronous signal, IC302 receives a differential signal, and is input to the interruption of the RX DSP (IC323) and TX_Vocoder_DSP (IC324).

■ 12.288MHz clock PLL circuit

The PLL circuit is installed in the control unit (X53-414) for operating the RX DSP and TX_Vocoder DSP.

The PLL circuit consists of X300 (12.288MHz VCXO), IC315 (PLL IC), Q300, Q304, Q305, and IC313.

The purpose of this PLL circuit is to synchronize with the 19.2MHz reference signal controlled by the 10MHz OCXO (deviation+/-0.4ppm) in the transmitter unit (X56-311).

So, two DSPs can be executed by a +/-0.4ppm clock deviation.

Q300 is a 19.2MHz buffer amp signal input from the transmitter unit (X56-311).

The signal from the transmitter unit is supplied to IC315 pin8 (reference signal input).

12.288MHz from X300 is amplified by Q304 and distributed to two routes. One is amplified by Q305 and input to IC315 pin6 (RF signal input). The other is amplified by IC313 and becomes a clock for the RX DSP and TX_Vocoder DSP.

IC315 compares the reference signal and RF signal and detects their phase errors.

This phase error signal is output from pin2 charge pump (CP), passed through the LPF and is supplied to X300 voltage control pin1.

7. Display Circuit

7-1. Display circuit

The display circuit (X56-311 B/3,C/3) consists of various types of LEDs, 17-segment type D960, D961 (red), D921 (red: transmission), two-color type D920 (green: busy), D922 (green: power on, red blinking: abnormal voltage), D923 (green: CTRL), two-color type D924 (red: OCXO error, green: OCXO normality, orange: external reference signal), 8-bit status LEDs D925 to D932, and LEDs with built in switches S920 to S925.

IC920 to IC925 and IC960 to IC963 are in charge of displaying present channels and states on the front panel. IC923 to IC925 and IC960 to IC963 are shift registers that convert the MPU serial data to parallel data and turn on LEDs.

7-2. Key switches circuit

The logic signals from the front panel key and channel switches (channel selector) are entered directly into the RF MPU (IC34).

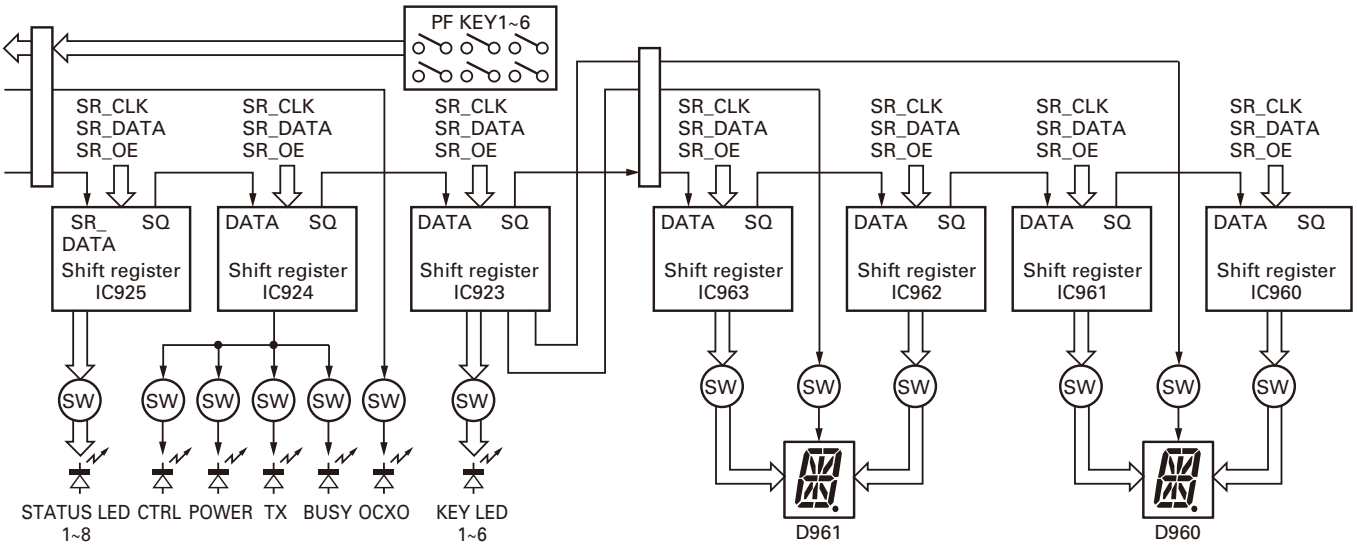


Fig. 27 Shift register circuit (Display part)

COMPONENTS DESCRIPTION

FINAL UNIT (X45-3810-10)

Ref. No.	Part Name	Description
IC1	Analogue IC	Current monitor
IC2	Analogue IC	OP AMP
IC3	MOS-IC	Voltage regulator
IC4~6	Analogue IC	OP AMP
IC7	MOS-IC	Temperature sensor
IC8	Analogue IC	OP AMP
IC9	ROM IC	E2PROM
IC10	MOS-IC	Power module
IC11,12	Bi-polar IC	Voltage regulator
IC15	Analogue IC	OP AMP
IC701	Bi-polar IC	Voltage regulator
IC702	MOS-IC	DC/DC converter
IC703	Bi-polar IC	Voltage regulator
Q2	FET	DC switch
Q3	Transistor	DC switch
Q4~6,8,14	FET	DC switch
D4	Surge absorber	Surge protection
D5,6	Diode	Surge protection
D7	Zener diode	Overvoltage protection
D9,10	Diode	Detector
D11,14~16	Diode	RF switch
D19	Zener diode	Overvoltage protection
D902	Varistor	Surge protection

CONTROL UNIT (X53-4130-10)

Ref. No.	Part Name	Description
IC1	MOS-IC	Shift register
IC2,3	MOS-IC	Multiplexer
IC4	MOS-IC	CODEC
IC5	Bi-polar IC	OP AMP
IC6	MOS-IC	Voltage regulator
IC7	MOS-IC	OP AMP
IC8	MOS-IC	D/A converter
IC9	Bi-polar IC	OP AMP
IC10,11	MOS-IC	DC/DC converter control
IC12	Bi-polar IC	OP AMP
IC14	MOS-IC	Multiplexer
IC15,16	MOS-IC	Voltage regulator
IC17	ROM IC	Flash memory
IC18	MOS-IC	Voltage regulator
IC19~21	Bi-polar IC	OP AMP
IC22	MOS-IC	Shift register
IC23	MOS-IC	Nand gate
IC25	MOS-IC	Analog switch
IC27,28	MOS-IC	Buffer
IC29	MOS-IC	AF PA
IC30	MOS-IC	Nand gate
IC31	MOS-IC	Divider
IC32,33	MOS-IC	Buffer
IC34	Microprocessor IC	MPU
IC35	ROM IC	ROM-IC
IC36	MOS-IC	Buffer
IC37	Microprocessor IC	DSP
IC38	MOS-IC	And gate
IC39,40	MOS-IC	Buffer
IC41,50	MOS-IC	And gate
Q1	Transistor	Inverter
Q2,3	FET	DC/DC converter
Q4,5	Transistor	Clock shift switch
Q6,7	Transistor	AF mute switch
Q8	Transistor	Power switch
Q9	FET	Power switch
Q10	Transistor	Clock shift switch
Q11	Transistor	Buffer AMPlifier
Q12	Transistor	Clock shift switch
Q13	Transistor	Buffer AMPlifier
Q14~17	Transistor	DC/DC converter
Q18	FET	Inverter
Q19	FET	Pull up switch
Q20~23	Transistor	Power switch
Q25	Transistor	OP CONT switch
Q26	Transistor	AF mute switch
Q27~29	Transistor	Buffer AMPlifier
D1,2	Diode	DC/DC converter
D3~5	Diode	Surge protector
D6	Zener diode	Surge protector
D7~12	Diode	Surge protector
D13	Zener diode	Surge protector
D14~18,20,23	Diode	Surge protector
D24,25	Varistor	Current protector
D26	Diode	Diode switch

COMPONENTS DESCRIPTION

Ref. No.	Part Name	Description
D28	Diode	Surge protector
D29	Zener diode	Surge protector
D30	Diode	Surge protector
D31	Zener diode	Surge protector
D32	Diode	Surge protector
D33	Zener diode	Surge protector
D36,37	Diode	Surge protector
D38,39	Diode	Diode switch

CONTROL UNIT (X53-4140-10)

Ref. No.	Part Name	Description
IC300,301	MOS-IC	Buffer
IC302	MOS-IC	RS-485 driver/reciever
IC303	MOS-IC	Voltage detector
IC304	MOS-IC	Buffer
IC305~307	MOS-IC	Voltage regulator
IC308	MOS-IC	Voltage detector
IC309	MOS-IC	CODEC
IC312	MOS-IC	A/D converter
IC313	MOS-IC	Inverter
IC314	ROM IC	Flash memory
IC315	MOS-IC	12.288MHz PLL
IC318~321	MOS-IC	Buffer
IC323,324	Microprocessor IC	DSP
IC325	Microprocessor IC	MPU
IC327	MOS-IC	And gate
IC329	MOS-IC	Voltage regulator
IC330	MOS-IC	Buffer
IC700	SRAM IC	SRAM
IC701	MOS-IC	RTC IC
IC702	ROM IC	Flash memory
IC703	Microprocessor IC	MPU
IC704	DRAM IC	SDRAM
IC705	MOS-IC	RS-232C driver/reciever
IC707	DRAM IC	SDRAM
IC708	MOS-IC	Voltage detector
IC709	MOS-IC	Buffer
IC710,711	MOS-IC	Nand gate
IC712,713	MOS-IC	Or gate
IC714~718	MOS-IC	Octal buffer
IC719	MOS-IC	LAN IC
IC720	ROM IC	EEPROM
IC721	MOS-IC	And gate
IC722	MOS-IC	Or gate
IC723	MOS-IC	Nand gate
IC724,725	MOS-IC	Buffer
IC726	MOS-IC	And gate
IC727,728	MOS-IC	Buffer
Q300	Transistor	Reference AMP
Q301	Transistor	DC switch
Q302	Transistor	Power switch
Q303	Transistor	Control switch
Q304,305	Transistor	Reference AMP
Q307,308	Transistor	Clock shift switch
Q309	FET	Switch
Q700,702 Q704,705	Transistor	Clock shift switch
Q706	Transistor	Control switch
Q707	Transistor	MIC switch
D300	Diode	DC Switch
D701	Diode	Switch
D702	Diode	Voltage protector

RX UNIT (X55-3090-10)

Ref. No.	Part Name	Description
IC4	MOS-IC	OP AMP
IC5	MOS-IC	Frequency PLL
IC6	MOS-IC	OP AMP
IC7	MOS-IC	DDS
IC8	MOS-IC	Buffer AMP
IC9	Bi-polar IC	1/2 divider
IC10	Bi-polar IC	Voltage regulator
IC11	MOS-IC	Frequency PLL
IC12	MOS-IC	IF system
IC13	Bi-polar IC	IF system
IC14	Analogue IC	OP AMP
IC15,16	Bi-polar IC	Voltage regulator
IC17~19	Analogue IC	Voltage regulator
IC20	Analogue IC	OP AMP
IC22	MOS-IC	Voltage regulator
IC23	Analogue IC	DAC
IC24,25	Bi-polar IC	Voltage regulator

COMPONENTS DESCRIPTION

Ref. No.	Part Name	Description
IC26~28	Analogue IC	Voltage regulator
IC29	Bi-polar IC	OP AMP
IC30	MOS-IC	ADC
IC31	ROM IC	EEPROM
IC32	Bi-polar IC	OP AMP
IC33	MOS-IC	OP AMP
IC35	MOS-IC	Temperature sensor
Q1	Transistor	LNA
Q2	Transistor	PLL active filter AMP
Q3	Transistor	RF AMP
Q4	Transistor	PLL active filter AMP
Q5	Transistor	RF AMP
Q6	Transistor	Ripple filter AMP
Q7,8	FET	Oscillator
Q9	Transistor	Ripple filter AMP
Q10,11	Transistor	DC switch
Q12	Transistor	RF AMP
Q13	Transistor	DC switch
Q14,15	FET	DC switch
Q16,17	Transistor	RF AMP
Q18~20	FET	RF AMP
Q21~23	Transistor	RF AMP
Q24	FET	Oscillator
Q25,26	FET	DC switch
Q27	Transistor	Ripple filter AMP
Q28,29	FET	RF AMP
Q30	Transistor	RF AMP
Q31,32	FET	DC switch
Q33	Transistor	RF AMP
Q34	Transistor	DC switch
Q35,36	Transistor	RF AMP
Q37	FET	DC switch
Q38~40	Transistor	RF AMP
Q50~52	FET	DC switch
Q53	Transistor	RF AMP
Q56	FET	DC switch
Q57	Transistor	DC switch
Q58~61	FET	DC switch
D1,2	Diode	Surge protection
D3~8	Variable capacitance diode	Frequency control
D9,10	Diode	RF switch
D11,12	Variable capacitance diode	Frequency control
D13~16	Diode	RF switch
D17,18	Diode	Detector
D19,20	Diode	RF switch
D21	LED	PLL indicator
D22,23	Variable capacitance diode	Frequency control

TX UNIT (X56-3110-10)

Ref. No.	Part Name	Description
IC101	Analogue IC	RF PLL
IC102	MOS-IC	OP AMP
IC104	Analogue IC	Voltage regulator
IC201	Analogue IC	APC AMP
IC202	MOS-IC	4.5MHz DDS
IC301	BI-POLAR IC	OP AMP
IC302	MOS-IC	Buffer AMP
IC303	MOS-IC	PLL
IC304	MOS-IC	Digital potentiometer
IC305	Bi-polar IC	Summing AMP
IC306	MOS-IC	OP AMP
IC307	MOS-IC	Buffer AMP
IC308	Bi-polar IC	OP AMP
IC401	MOS-IC	OP AMP
IC404	MOS-IC	19.2MHz PLL
IC405,406	MOS-IC	Comparator
IC407	MOS-IC	Buffer AMP
IC408,409	Bi-polar IC	OP AMP
IC601	MOS-IC	5.99MHz DDS
IC602	MOS-IC	Buffer AMP
IC603	MOS-IC	Voltage regulator
IC701	Analogue IC	DAC
IC702	ROM IC	EEPROM
IC703	MOS-IC	Shift register
IC704~706	Analogue IC	Voltage regulator
IC801	Analogue IC	Voltage reference
IC802	MOS-IC	DAC
IC803	MOS-IC	ADC
IC804	MOS-IC	Temperature sensor
IC805,806	MOS-IC	3-state buffer
IC807~810	Analogue IC	Voltage regulator

COMPONENTS DESCRIPTION

Ref. No.	Part Name	Description
IC811	MOS-IC	Prescaler
IC920~922	MOS-IC	3-state buffer
IC923~925	MOS-IC	Shift register
IC926	Bi-polar IC	OP AMP
IC960	MOS-IC	Shift register
IC961~963	MOS-IC	Shift register
Q101	FET	DC switch
Q102,103	FET	RF VCO
Q104	Transistor	RF AMP
Q105	Transistor	Ripple filter AMP
Q106	Transistor	RF AMP
Q107~109	Transistor	DC switch
Q110	FET	DC switch
Q202	Transistor	RF AMP
Q203	FET	RF driver AMP
Q204~206,210	FET	DC switch
Q211~213	Transistor	RF AMP
Q301,302	FET	DC switch
Q303	Transistor	DC switch
Q304,305,307 Q401,402	Transistor	RF AMP
Q405,407~409	FET	DC switch
Q410	Transistor	DC switch
Q412	Transistor	RF AMP
Q413,414	FET	DC switch
Q415~419	Transistor	RF AMP
Q420	FET	RF AMP
Q421	FET	DC switch
Q422	FET	RF AMP
Q423,424	FET	DC switch
Q425	FET	RF AMP
Q426,428,429	FET	DC switch
Q430,431	FET	RF AMP

Ref. No.	Part Name	Description
Q601,602	FET	DC switch
Q603	Transistor	RF AMP
Q604,605	FET	DC switch
Q606	Transistor	RF AMP
Q607~609 Q701,702	FET	DC switch
Q920~930	Transistor	DC switch
Q931,932	Transistor	Audio level limiter
Q960~976	Transistor	DC switch
D101,102	Variable Capacitance diode	Frequency control
D106	Variable Capacitance diode	Moduration control
D107,108	Variable Capacitance diode	Frequency control
D112	Variable Capacitance diode	Moduration control
D201	Diode	Detector
D202	LED	Output indicator
D301	LED	PLL indicator
D401~403	Diode	Detector
D404~407	Diode	RF switch
D408	Diode	Detector
D409	Surge absorber	Ref signal output
D601,602	Diode	RF switch
D603~606	Zener diode	Limiter
D920	LED	BUSY
D921	LED	TX
D922	LED	POWER
D923	LED	CTRL
D924	LED	OCXO
D925~932	LED	Status 8~Status 1
D933,934	Diode	Audio level limiter
D935,936	Diode	Surge protection
D960,961	LED	17-segment

TERMINAL FUNCTION

Final Unit (X45-3810-10) (A/5)

Pin No.	Name	I/O	Function
CN1 (To X56-311 A/3 CN802)			
1	TX SIGNAL	I	Tx driver input signal (Coaxial)
CN2 (To X45-381 C/5 CN29)			
1	SB	I	Power supply input
CN8			
1	-	O	5V supply output for FAN
2	-	-	Ground
CN19			
1	MONITOR	O	Receive signal input (Coaxial)
CN20 (To X56-311 A/3 CN806)			
1	GND	-	Ground
2	GND	-	Ground
3	NC	-	No connection
4	GND	-	Ground
5	PA_CURR	O	Power module current monitor
6	GND	-	Ground
7	FAN_CURR	O	FAN current monitor
8	GND	-	Ground
9	FWD_PWR	O	TX Forward power detection
10	GND	-	Ground
11	RFL_PWR	O	TX Reflect power detection
12	GND	-	Ground
13	PWR_PRT	I	TX power protection
14	GND	-	Ground
15	PWR_CONT	I	TX power control
16	GND	-	Ground
17	FAN_CONT	I	FAN1 control
18	GND	-	Ground
19	FAN_CONT2	I	FAN2 control
20	GND	-	Ground
21	TEMP_RST	I	Reset input for temperature detect IC
22	GND	-	Ground
23	ANT_SW	I	Antenna switch
24	GND	-	Ground
25	TEMP_PRT	O	High temperature detect
26	D_GND	-	Digital ground
27	CONT_5.0V	I	Switched 5V supply
28	D_GND	-	Digital ground
29	SCL	I	Clock input for E2PROM
30	D_GND	-	Digital ground
31	SDA	I/O	Data input/output for E2PROM
32	D_GND	-	Digital ground
33	GND	-	Ground
34	WP	I	Write protection input for E2PROM
35	GND	-	Ground
36	GND	-	Ground
CN21 (To X45-381 C/5 CN30)			
1	E	-	Ground

Final Unit (X45-3810-10) (C/5)

Pin No.	Name	I/O	Function
CN11 (To X53-413 CN4)			
1	E	-	Ground
2	-	-	No connection
3	SB	O	Power supply output
4	SB	O	Power supply output
CN12 (To X56-311 CN801)			
1	E	-	Ground
2	SB	O	Power supply output
3	SB	O	Power supply output
CN15 (To X55-309 CN44)			
1	E	-	Ground
2	SB	O	Power supply output
3	SB	O	Power supply output

Final Unit (X45-3810-10) (D/5)

Pin No.	Name	I/O	Function
CN701 (To X55-309 CN6/CN36)			
1	-	I	9V supply input
2	-	-	Ground
3	-	O	-3V supply output
4	-	-	Ground

Final Unit (X45-3810-10) (E/5)

Pin No.	Name	I/O	Function
CN905 (To X56-311 B/3 CN923)			
1	VOLUME_IN	O	Volume control output for AF signal
2	33MPU	I	3.3V constant voltage
3	GND	-	Ground
4	33AUD	I	3.3V constant voltage
5	SB	I	Power supply input
6	SCM_EN	-	No connection
7	GND	-	Ground

TERMINAL FUNCTION

Pin No.	Name	I/O	Function
8	PTT_TXD_SCM	O	PTT output
9	HOOK_RXD_SCM	O	Hook detection output
10	MIG	-	MIC ground
11	MIC	O	MIC signal output

Control Unit (X53-4130-10)

Pin No.	Name	I/O	Function
CN1 (To X53-414 CN401)			
1	PTT_TXD_SCM	-	No connection
2	GND	-	Ground
3	LO_VOL_DET	O	Low voltage detection signal
4	NC	-	No connection
5	TD_SW	I	TD terminal input signal mute switch
6	MICAD_SW	I	Microphone input signal switch, changed to analog modulation or NXDN modulation
7	MIC_SW	I	Microphone mute switch
8	RXAD_SW	I	Speaker signal switch, changed to analog reception signal or NXDN reception signal
9	PATH_SW	I	Analog or NXDN modulation route selector switch
10	BEEP_SW	I	Beep sound mute switch
11	TA_SW	I	TA input mute switch
12	TAAD_SW	I	TA input signal, changed to analog modulation or NXDN modulation
13	EVOL_LD	I	Load for electronic volume
14	GND	-	Ground
15	EVOL_CLK	I	Clock for electronic volume
16	PTT_AM16C	O	PTT signal
17	EVOL_DATA	I	Data for electronic volume
18	INSP_SW	-	No connection
19	AF_MUTE	I	Speaker output mute switch
20	SCM_EN	-	No connection
21	AMP_SW	I	Speaker amplifier power ON/OFF switch
22	HOOK_RXD_SCM	-	No connection
23	NC	-	No connection
24	INRA_SW	-	No connection
25	MIC_D_IN	O	NXDN transmission signal output
26	BEEP	I	Beep sound signal input
27	RX_AUDIO_D	I	NXDN reception signal input
28	GND	-	Ground
29	MOD_D_OUT	I	NXDN modulation signal input
30	PWR_ST_R	I	Switch for red LED (Power sourse)

Pin No.	Name	I/O	Function
31	VOLUME_IN	O	Volume control input for AF signal
32	OCXO_ST_G	I	Switch for green LED (OCXO)
33	OCXO_ST_R	I	Switch for red LED (OCXO)
34	RX_POWER_SAVE	I	RX unit power saving signal
35	GND	-	Ground
36	GND	-	Ground
CN2 (To X53-414 CN402)			
1	SYS_RST	I	System reset signal from modem control MPU
2	GND	-	Ground
3	BER_CLK	I	Serial clock for measurement bit error rate
4	BER_DAT	I	Serial data for measurement bit error rate
5	A16C_CK_SFT	I	"Frequency shift" signal to RF control MPU
6	TRUNKING	O	"Trunking mode" signal to Main MPU
7	ADSP_CK_SFT	I	"Frequency shift" signal to Analog mode DSP
8	GND	-	Ground
9	RADIO_ERR	O	"Detect accident of RF block" signal to Main MPU
10	QT_DQT	O	"Detect QT or DQT" signal to Main MPU
11	TX_STATE	O	"During the transmission" signal to Main MPU
12	RF_PTT	O	"Press-to-talk-switch" signal to Main MPU
13	GND	-	Ground
14	STXO_ARXO	I	UART signal from Main CPU to RF control MPU
15	SRXO_ATXO	O	UART signal from RF control MPU to Main MPU
16	GND	-	Ground
17	SC_SH	O	"Squelch control" signal to Main MPU
18	E_PTT_SH	O	"External press-to-talk-switch" signal to Main MPU
19	NC	-	No connection
20	50MPU_CONT	I	5V regurator control
21	33SH	I	3.3V constant voltage
22	33MPU_A	O	3.3V constant voltage
23	50MPU_A	O	5V constant voltage
24	33MPU_A_GND	-	Ground
25	33MPU	O	3.3V constant voltage
26	33MPU	O	3.3V constant voltage
27	33MPU_A_GND	-	Ground
28	DC50	O	5V constant voltage
29	DC50	O	5V constant voltage
30	DC50	O	5V constant voltage
31	DC50	O	5V constant voltage

TERMINAL FUNCTION

Pin No.	Name	I/O	Function
32	50MPU_A_GND	-	Ground
33	50MPU	O	5V constant voltage
34	50MPU_A_GND	-	Ground
35	GND	-	Ground
36	HI_VOL_DET	O	Voltage monitor
CN3 (To X56-311 B/3 CN921)			
1	DC8	O	8V constant voltage
2	GND	-	Ground
3	DC8	O	8V constant voltage
4	DC8	O	8V constant voltage
5	50MPU	O	5V constant voltage
6	50MPU	O	5V constant voltage
7	GND	-	Ground
8	DC8	O	8V constant voltage
9	K5	O	Key Scan
10	K4	O	Key Scan
11	K3	I	Key Scan
12	K2	I	Key Scan
13	K1	I	Key Scan
14	GND	-	Ground
15	STB1	O	Shift Register Strobe
16	GND	-	Ground
17	SR_DATA	O	Shift Register Data
18	GND	-	Ground
19	SR_CLK	O	Shift Register Clock
20	GND	-	Ground
21	SR_OE	O	Shift Register Output Enable
22	GND	-	Ground
23	PTT_TXD_SCM	I	MIC PTT
24	SCM_EN	-	No connection
25	HOOK_RXD_SCM	I	HOOK detect input
26	GND	-	Ground
27	OCXO_ST_G	O	OCXO Green LED Switch
28	PWR_ST_R	O	POWER Red LED Switch
29	OCXO_ST_R	O	OCXO Red LED Switch
30	SB	O	Power supply output
31	VOLUME_IN	I	Volume control input for AF signal
32	33AUD	O	3.3V constant voltage
33	33MPU	O	3.3V constant voltage
34	MIC	I	MIC Signal Input
35	GND	-	Ground
36	MIG	-	MIC Ground

Pin No.	Name	I/O	Function
CN4 (To X45-381 C/5 CN11)			
1	E	-	Earth
2	NC	-	No connection
3	SB	I	Power supply input
4	SB	I	Power supply input
CN56 (To X56-311 A/3 CN804)			
1	GND	-	Ground
2	GND	-	Ground
3	PAG	O	POCSAG Switch
4	GND	-	Ground
5	CONT_5.0V	O	5V constant voltage
6	D_GND	-	Ground
7	CONT_5.0V	O	5V constant voltage
8	D_GND	-	Ground
9	SDA	I/O	EEPROM Data
10	D_GND	-	Ground
11	SCK	O	EEPROM Clock
12	TEMP_PRT	I	Temperature Sensor Protection Signal
13	ANT_SW	O	Transmission antenna switch
14	DDS_EN	O	Enable for DDS
15	VR_EN	O	Enable for electronic volume
16	440_EN	O	Enable for PLL
17	132_EN	O	Enable for PLL
18	440_CE	O	PLL chip select
19	132_CE	O	PLL chip select
20	LDT	I	PLL lock detection
21	2DA_EN	O	Enable for 2ch DAC
22	3DA_EN	O	Enable for 3ch DAC
23	2DA_CE	O	Chip select for 2ch DAC
24	SR_OE	O	Shift Register Output Enable
25	8AD_EN	O	Enable for 8ch DC
26	SR_EN	O	Shift Register Strobe
27	SDI1	I	Analog data of 8ch ADC
28	SDO0	O	Data for 3 line serial
29	SCLK1	O	Clock 1 for 3 line serial
30	SCLK0	O	Clock for 3 line serial
31	SDO1	O	Data 1 for 3 line serial
32	GND	-	Ground
33	MOD	O	Modulating signal
34	WP	O	Write protection of EEPROM
35	GND	-	Ground
36	GND	-	Ground

TERMINAL FUNCTION

Pin No.	Name	I/O	Function
CN57 (To X55-309 CN42)			
1	GND	-	Ground
2	GND	-	Ground
3	WP	O	Write protection of EEPROM
4	D_GND	-	Digital Ground
5	E2PROM_SDA	I/O	Data of EEPROM
6	CONT_5.0V	-	5V constant voltage
7	E2PROM_SCL	O	Clock of EEPROM
8	D_GND	-	Digital Ground
9	AD_CS	O	Enable for 8ch DAC
10	IF_BW_SW	O	IF_ bandwidth switch
11	AD_DAT_WRITE	O	Data 0 for 3 line serial
12	NC (IF_NW_SW)	-	No connection
13	AD_CLK	O	Clock 0 for 3 line serial
14	GND	-	Ground
15	AD_DAT_READ	I	Analog data of 8ch ADC
16	NC	-	No connection
17	CONT_5.0V	-	5V constant voltage
18	PLL_LOCK_DET	I	PLL1,2 lock detection
19	AGC_RSSI	-	No connection
20	PLL2_EN	O	PLL 2 enabling signal
21	FM_RSSI	I	RSSI signal input
22	NC	-	No connection
23	GND	-	Ground
24	PLL_PWR_SAVE	O	PLL1,2 chip selection signal
25	RX_AUDIO	I	Reception audio signal
26	SIF_DAT	O	Data 0 for 3 line serial
27	GND	-	Ground
28	SIF_CLK	O	Clock 0 for 3 line serial
29	3DA_EN	O	Enable for 3ch DAC
30	PLL1_EN	O	PLL 1 enabling signal
31	VCO_BAND_SW	O	VCO bandwidth switch
32	DDS_EN	O	Enable for DDS
33	RX_POWER_SAVE	O	Power saving signal of RX unit
34	NC	-	No connection
35	GND	-	Ground
36	GND	-	Ground
CN58 (To CONTROL I/O 25pin D-sub Connector)			
1	NC	-	No connection
2	NC	-	No connection
3	NC	-	No connection
4	NC (RSSI)	-	No connection (RSSI)

Pin No.	Name	I/O	Function
5	BER_CLK	O	for Bit Error Rate Clock
6	NC	-	No connection
7	EMON	I	External monitor switch input "L"=Monitor on, "H"=Monitor off
8	NC	-	No connection
9	EPTT	I	External press-to-talk switch input "L"=PTT on, "H"=PTT off
10	AI1	I	Programmable function input 1
11	SC	O	Squelch control output "L"=Busy, "H"=Not busy
12	AI2	I	Programmable function input 2
13	BER_DAT	O	for Bit Error Rate Data
14	AI3	I	Programmable function input 3
15	TXG	-	TX siganal ground for TA,TD
16	DG	-	Control line ground
17	IO1	I/O	Programmable function input/output 1
18	TD	I	TX-DATA input (data or Signaling) Input impedance=600Ω Coupling=AC coupling Deviation=0.75kHz (Wide)/ 0.75kHz (Narrow) at 100Hz 0.5Vpp input
19	IO2		Programmable function input/output 2
20	TA	I	TX audio input (voice) Input impedance=600Ω Coupling=AC coupling Frequency response=Pre-emphasis curve Deviation=60% deviation at 1kHz 280mVrms±25mV input
21	IO3	I/O	Programmable function input/output 3
22	RD	O	RX-DATA output (data or Signaling) output impedance=1kΩ or less Coupling=AC coupling Non-squelched Frequency respones=±2.5dB at 10~3000Hz Output level=70~90mVrms (standard modulation)
23	IO4		Programmable function input/output 4
24	RA	O	RX-Audio output (voice) output impedance=1kΩ or less Coupling=AC coupling Squelched Frequency respones=De-emphasis curve Output level=360~440mVrms (standard modulation)
25	IO5	I/O	Programmable function input/output 5
26	RXG	-	RX siganal ground for RA, RD
27	IO6	I/O	Programmable function input/output 6
28	SPM	I	Speaker mute signal input. "L"=Mute on
29	NC	-	No connection

TERMINAL FUNCTION

Pin No.	Name	I/O	Function
30	NC	-	No connection
CN59 (To TEST/SPKR 15pin Connector)			
1	AO5	O	Auxiliary output 5
2	AO4	O	Auxiliary output 4
3	AO3	O	Auxiliary output 3
4	SPO	O	Speaker AF output
5	AO2	O	Auxiliary output 2
6	SPO	O	Speaker AF output
7	AO1	O	Auxiliary output 1
8	SPI	I	Internal speaker AF input
9	RSSI	O	RSSI output (Analog signal output)
10	RD	O	RX-DATA output (Equal to D-sub connector terminal No22)
11	GND	-	Ground
12	SPG	-	Speaker ground
13	GND	-	Ground
14	SPG	-	Speaker ground
15	NC	-	No connection
16	NC	-	No connection
17	SB	O	Power supply output
18	NC	-	No connection
19	SB	O	Power supply output
20	NC	-	No connection
CN60 (To Internal Speaker)			
1	SPO	O	Internal speaker AF output
2	SPG	-	Internal speaker ground

Control Unit (X53-4140-10)

Serial data inable signal to potentiometer of OCXO unit

Pin No.	Name	I/O	Function
CN300 (To X55-309 CN43)			
	RX_IF_VN	I	2nd IF signal (450 kHz) of NXDN mode
CN302 (To X56-311 A/3 CN405)			
	REF2 (19.2MHz)	I	19.2MHz reference clock input from TX unit
CN400 (To X56-311 A/3 CN805)			
1	GND	-	Ground
2	GND	-	Ground
3	REF_SW2	O	Control signal for reference clock change circuit
4	WP	O	Write protection signal to EEPROM
5	REF_SW	O	Control signal for reference clock change circuit
6	OX_SCL	O	ADC of OCXO unit (for electric current detection) to serial clock
7	EXT_EXIST	I	External reference clock detection signal
8	OX_SDA	I/O	ADC of OCXO unit (for electric current detection) to serial data input/output
9	REF_EXIST	I	Reference clock detection signal
10	IMP_H_L	-	No connection
11	REF_IN_OUT	O	Control signal for reference clock change circuit
12	GND	-	Ground
13	OX_SDI2	I	Serial data input from potentiometer of OCXO unit
14	GND	-	Ground
15	OCXO_VR_EN	O	Serial data enable signal to potentiometer of OCXO unit
16	GND	-	Ground
17	OCXO_ON	O	Power source control of OCXO unit
18	GND	-	Ground
19	OCXO_CURR	I	Monitor of the voltage which detects current of OCXO unit
20	GND	-	Ground
21	OCXO_EXIST	I	Detection signal of OCXO unit presence
22	GND	-	Ground
23	VCXO_DA_EN	O	DDS (5.99MHz) to serial data enabling signal
24	GND	-	Ground
25	REF_LDT	I	Lock detection signal from PLL (19.2MHz)
26	GND	-	Ground
27	PLL_19_EN	O	Serial data enabling signal to PLL (19.2MHz)
28	GND	-	Ground
29	PLL_19_CE	-	No connection
30	GND	-	Ground
31	OX_SDO2	O	DAC of OCXO unit to serial data output
32	GND	-	Ground
33	OX_SCLK2	O	DAC of OCXO unit to serial clock output
34	33MPU	O	3.3V constant voltage
35	GND	-	Ground
36	GND	-	Ground
CN401 (To X53-413 CN1)			
1	GND	-	Ground
2	GND	-	Ground
3	RX_POWER_SAVE	O	Power saving signal of RX unit
4	OCXO_ST_R	O	OCXO LED red control
5	OCXO_ST_G	O	OCXO LED green control
6	VOLUME_IN	I	Voltage monitor for audio level control
7	PWR_ST_R	O	POWER LED red control

TERMINAL FUNCTION

Pin No.	Name	I/O	Function
8	MOD_D_OUT	O	Transmission modulating signal of NXDN mode
9	GND	-	Ground
10	RX_AUDIO_D	O	Reception demodulating signal of NXDN mode
11	BEEP	O	Beep sound signal output
12	MIC_D_IN	I	Audio signal before the transmission compressing of the NXDN mode
13	INRA_SW	-	No connection
14	NC	-	No connection
15	HOOK_RXD_SCM	I	Hook detection input
16	AMP_SW	O	Power source control of audio power amplifier
17	SCM_EN	-	No connection
18	AF_MUTE	O	Audio mute control
19	INSP_SW	-	No connection
20	EVOL_DATA	O	Serial data to DAC (for audio level adjustment)
21	PTT_AM16C	I	"Press-to-talk-switch" signal to Main MPU
22	EVOL_CLK	O	Serial clock to DAC (for audio level adjustment)
23	GND	-	Ground
24	EVOL_LD	O	Serial load to DAC (for audio level adjustment)
25	TAAD_SW	O	Route formation signal of audio circuit
26	TA_SW	O	Route formation signal of audio circuit
27	BEEP_SW	O	Route formation signal of audio circuit
28	PATH_SW	O	Route formation signal of audio circuit
29	RXAD_SW	O	Route formation signal of audio circuit
30	MIC_SW	O	Route formation signal of audio circuit
31	MICAD_SW	O	Route formation signal of audio circuit
32	TD_SW	O	Route formation signal of audio circuit
33	NC	-	No connection
34	LO_VOL_DET	I	Detection of voltage for low voltage state
35	GND	-	Ground
36	PTT_TXD_SCM	-	No connection
CN402 (To X53-413 CN2)			
1	HI_VOL_DET	I	Voltage monitor
2	GND	-	Ground
3	50MPU_A_GND	-	Ground
4	50MPU	I	5V constant voltage
5	50MPU_A_GND	-	Ground
6	DC50	I	5V constant voltage
7	DC50	I	5V constant voltage
8	DC50	I	5V constant voltage

Pin No.	Name	I/O	Function
9	DC50	I	5V constant voltage
10	33MPU_A_GND	-	Ground
11	33MPU	I	3.3V constant voltage
12	33MPU	I	3.3V constant voltage
13	33MPU_A_GND	-	Ground
14	50MPU_A	I	5V constant voltage
15	33MPU_A	I	3.3V constant voltage
16	33SH	O	3.3V constant voltage
17	50MPU_CONT	O	5V regurator control
18	NC	-	No connection
19	E_PTT_SH	I	"External press-to-talk-switch" signal to Main MPU
20	SC_SH	I	"Squelch control" signal to Main MPU
21	GND	-	Ground
22	SRXD_ATXO	O	UART signal from RF control MPU to Main MPU
23	STXO_ARXO	I	UART signal from Main MPU to RF control MPU
24	GND	-	Ground
25	RF_PTT	I	"Press-to-talk-switch" signal to Main MPU
26	TX_STATE	I	"During the transmission" signal to Main MPU
27	QT_DQT	I	"Detect QT or DQT" signal to Main MPU
28	RADIO_EER	I	"Detect accident of RF block" signal to Main MPU
29	GND	-	Ground
30	ADSP_CK_SFT	O	"Frequency shift" signal to Analog mode DSP
31	TRUKING	I	"Trunking mode" signal to Main MPU
32	A16C_CK_SFT	O	"Frequency shift" signal to RF control MPU
33	BER_DAT	O	Serial data for measurement bit error rate
34	BER_CLK	O	Serial clock for measurement bit error rate
35	GND	-	Ground
36	SYS_RST	O	System reset signal from modem control MPU
CN713 (To COM DSUB9 connector)			
1	CD	-	No connection
2	DSR	I	Data Set Ready
3	RD	I	Receive Data
4	RTS	O	Request to Send
5	SD	O	Send Data
6	CTS	I	Clear to Send
7	DTR	O	Data Terminal Ready
8	RI	-	No connection
9	GND	-	Ground

TERMINAL FUNCTION

RX Unit (X55-3090-10)

Pin No.	Name	I/O	Function
CN5 (To RX ANT)			
1	RX_SIGNAL	I	Receive signal input (Coaxial)
CN6 (To X45-381 D/5 CN701)			
1	-	O	9V output
2	-	-	Ground
CN36 (To X45-381 D/5 CN701)			
1	-	I	-3V input
2	-	-	Ground
CN41			
1	MONITOR_PORT	O	Use for RX BPF tuning (Coaxial)
CN42 (To X53-413 CN57)			
1	GND	-	Ground
2	GND	-	Ground
3	NC	-	No connection
4	RX_POWER_SAVE	I	RX power save
5	DDS_EN	I	Enable input for DDS
6	VCO_BAND_SW	I	VCO band switch
7	PLL1_EN	I	Enable input for PLL1
8	DA_EN	I	Enable input for DA
9	SIF_CLK	I	Clock input for PLL1/PLL2/DDS/DA
10	GND	-	Ground
11	SIF_DAT	I	Data input for PLL1/PLL2/DDS/DA
12	RX_AUDIO	O	RX audio output
13	PLL_PWR_SAVE	I	Enable input for PLL1/PLL2
14	GND	-	Ground
15	NC	-	No connection
16	FM_RSSI	O	FM RSSI output
17	PLL2_EN	I	Enable input for PLL2
18	NC (AGC_RSSI)	-	No connection
19	PLL_LOCK_DET	O	PLL1/PLL2 lock detect output
20	CONT_5.0V	I	Switched 5V supply
21	NC	-	No connection
22	AD_CLK	O	AD logic data output
23	GND	-	Ground
24	AD_CLK	I	Clock input for AD
25	NC (IF_NW_SW)	-	No connection
26	AD_DAT_WRITE	I	Serial data input for AD
27	IF_BW_SW	I	IF bandwith switch input
28	AD_CS	I	Enable input for AD
29	D_GND	-	Ground
30	E2PROM_SCL	I	Clock input for E2PROM
31	CONT_5.0V	I	Switched 5V supply
32	E2PROM_SDA	I/O	Data input/output for E2PROM
33	D_GND	-	Digital ground
34	WP	I	Write protection input for E2PROM
35	GND	-	Ground
36	GND	-	Ground
CN43 (To X53-414 CN300)			
1	RX_IF_VN	O	RX NXDN detection output
CN44 (To X45-381 C/5 CN15)			
1	E	-	Ground
2	B	I	Power supply input
3	B	I	Power supply input
CN45 (To X56-311 A/3 CN406)			
1	REF1	I	Reference signal input
CN46			
1	-	I	Use for RX MCF tuning
2	GND	-	Ground
CN47			
1	-	O	Use for RX MCF tuning
2	-	-	Ground

TX Unit (X56-3110-10) (A/3)

Pin No.	Name	I/O	Function
CN403			
1	REF_OUT (10MHz)	O	Reference signal distribution (coaxial)
CN405 (To X53-414 CN302)			
1	REF2 (19.2MHz)	O	DSP reference signal output (coaxial)
CN406 (To X55-309 CN45)			
1	REF1 (19.2MHz)	O	Rx reference signal output (coaxial)
CN407 (To X42-328 CN2: OCXO Optional unit)			
1	OCXO	I	OCXO (Optional unit) reference signal input (coaxial)
CN408			
1	REF_IN (10MHz)	I	External reference signal input (coaxial)
CN801 (To X45-381 C/5 CN12)			
1	E	-	Ground
2	B	I	Power supply (Vcc)
3	B	I	Power supply (Vcc)
CN802 (To X45-381 A/5 CN1)			
1	TX OUT	O	Tx driver output signal (coaxial)
CN803 (To X42-328 CN1: OCXO Optional unit)			
1	33MPU	O	Switched 3.3V power supply

TERMINAL FUNCTION

Pin No.	Name	I/O	Function
2	GND	-	Ground
3	OX_SDA	I/O	OCXO EEPROM serial data
4	OX_SCL	O	OCXO EEPROM serial clock
5	OCXO_VR_EN	O	Enable output for OCXO IC3 (potentiometer)
6	OCXO_ON	O	OCXO power on signal
7	OX_SCLK2	O	Serial clock output for OCXO IC3 (potentiometer)
8	OCXO_CURR	I	OCXO current detection signal
9	OX_SDI2	I	Serial data input for OCXO IC3 (potentiometer)
10	OCXO_EXIST	I	OCXO detection signal
11	OX_SDO2	O	Serial data output for OCXO IC3 (potentiometer)
12	GND	-	Ground
13	REF_SW2	O	OCXO reference signal output switch
CN804 (To X53-413 CN56)			
1	GND	-	Ground
2	GND	-	Ground
3	WP	I	EEPROM write protect signal input
4	MOD	I	Moduration signal input
5	GND	-	Ground
6	SDO1	I	Serial data input for IC101, IC202, IC303, IC802, IC803
7	SCLK0	I	Serial clock input for IC703
8	SCLK1	I	Serial clock input for IC101, IC202, IC303, IC802, IC803
9	SDO0	I	Serial data input for IC701, IC703
10	SDI1	O	Serial data output for IC803
11	SR_EN	I	Enable input for IC701, IC703
12	8AD_EN	I	Enable input for IC803
13	SR_OE	I	Enable input for IC703
14	2DA_CE	I	Chip enable input for IC802
15	3DA_EN	I	Enable input for IC701
16	2DA_EN	I	Enable input for IC802
17	LDT	O	RF PLL lock detect output
18	132_CE	I	Chip enable input for IC303
19	440_CE	I	Chip enable input for IC101
20	132_EN	I	Load enable input for IC303
21	440_EN	I	Load enable input for IC101
22	VR_EN	I	Load enable input for IC304
23	DDS_EN	I	Load enable input for IC202
24	ANT_SW	I	TX antenna switch input
25	TEMP_PRT	O	Temp protection signal output
26	SCK	I	EEPROM Clock

Pin No.	Name	I/O	Function
27	D_GND	-	Ground
28	SDA	I/O	EEPROM Data
29	D_GND	-	Ground
30	CONT_5.0V	I	Switched 5V power supply
31	D_GND	-	Ground
32	CONT_5.0V	I	Switched 5V power supply
33	GND	-	Ground
34	PAG	I	POCSAG Switch
35	GND	-	Ground
36	GND	-	Ground
CN805 (To X53-414 CN400)			
1	GND	-	Ground
2	GND	-	Ground
3	33MPU	I	Switched 3.3V power supply
4	OX_SCLK2	I	Serial clock input for IC601, IC404
5	GND	-	Ground
6	OX_SDO2	I	Serial data input for IC601, IC404
7	GND	-	Ground
8	PLL_19_CE	I	100kohm load
9	GND	-	Ground
10	PLL_19_EN	I	Enable input for IC404
11	GND	-	Ground
12	REF_LDT	O	19.2MHz PLL lock detect output
13	GND	-	Ground
14	VCXO_DA_EN	I	Enable input for IC601
15	GND	-	Ground
16	OCXO_EXIST	O	OCXO detection signal
17	GND	-	Ground
18	OCXO_CURR	O	OCXO current detection signal
19	GND	-	Ground
20	OCXO_ON	I	OCXO power on signal
21	GND	-	Ground
22	OCXO_VR_EN	I	Enable input for OCXO IC3 (potentiometer)
23	GND	-	Ground
24	OX_SDI2	O	Serial data output for OCXO IC3 (potentiometer)
25	GND	-	Ground
26	REF_IN_OUT	I	Reference clock switched signal input
27	IMP_H_L	I	100kohm load
28	REF_EXIST	O	Reference detector signal output
29	OX_SDA	I/O	OCXO EEPROM serial data
30	EXT_EXIST	O	External reference detector signal output

TERMINAL FUNCTION

Pin No.	Name	I/O	Function
31	OX_SCL	I	OCXO EEPROM serial clock
32	REF_SW	I	Reference signal output switch
33	WP	I	EEPROM write protect signal input
34	REF_SW2	I	OCXO reference signal output switch
35	GND	-	Ground
36	GND	-	Ground
CN806 (To X45-381 A/5 CN20)			
1	GND	-	Ground
2	GND	-	Ground
3	WP	O	EEPROM write potect signal output
4	GND	-	Ground
5	D_GND	-	Ground
6	SDA	I/O	EEPROM Data
7	D_GND	-	Ground
8	SCK	O	EEPROM Clock
9	D_GND	-	Ground
10	CONT_5.0V	O	Switched 5V power supply
11	D_GND	-	Ground
12	TEMP_PRT	I	Temp protection signal input
13	GND	-	Ground
14	ANT_SW	O	TX anntena switch output
15	GND	-	Ground
16	TEMP_RST	O	Tempereture sensor reset signal output
17	GND	-	Ground
18	FAN_CONT2	O	FAN2 control signal output
19	GND	-	Ground
20	FAN_CONT	O	FAN1 control signal output
21	GND	-	Ground
22	PWR_CONT	O	Power control signal output
23	GND	-	Ground
24	PWR_PRT	O	Power protection signal output
25	GND	-	Ground
26	RFL_PWR	I	Reflect power signal input
27	GND	-	Ground
28	FWD_PWR	I	Forward power signal input
29	GND	-	Ground
30	FAN_CURR	I	Fan current monitor signal input
31	GND	-	Ground
32	PA_CURR	I	PA current monitor signal input
33	GND	-	Ground
34	NC	-	No connection
35	GND	-	Ground
36	GND	-	Ground
CN807 (To X42-328 CN3: OCXO Optional unit)			
1	8OCXO	O	OCXO power supply 8V
2	GND	-	Ground

TX Unit (X56-3110-10) (B/3)

Pin No.	Name	I/O	Function
CN920 (To X56-311 C/3 CN960)			
1	DC8	O	8V Power supply
2	GND	-	Ground
3	50MPU	O	Switched 5V power supply
4	STB	O	Shift Register Strobe
5	SR_OE	O	Shift Register Output Enable
6	SR_CLK	O	Shift Register Clock
7	SR_DATA	O	Shift Register Data
8	LED1	O	D960 segment “F” control
9	GND	-	Ground
10	LED10	O	D961 segment “F” control
CN921 (To X53-413 CN3)			
1	MIG	-	MIC Ground
2	GND	-	Ground
3	MIC	O	MIC Signal Input
4	33MPU	I	Switched 3.3V power supply
5	33AUD	I	Switched 3.3V power supply
6	VOLUME_IN	O	Volume control output for AF signal
7	SB	I	Power supply output
8	OCXO_ST_R	I	OCXO Red LED Switch
9	PWR_ST_R	I	POWER Red LED Switch
10	OCXO_ST_G	I	OCXO Green LED Switch
11	GND	-	Ground
12	HOOK_RXD_SCM	O	HOOK detect signal
13	SCM_EN	-	No connection
14	PTT_TXD_SCM	O	MIC PTT
15	GND	-	Ground
16	SR_OE	I	Shift Register Output Enable
17	GND	-	Ground
18	SR_CLK	I	Shift Register Clock
19	GND	-	Ground
20	SR_DATA	I	Shift Register Data
21	GND	-	Ground
22	STB1	I	Shift Register Strobe
23	GND	-	Ground

TERMINAL FUNCTION

Pin No.	Name	I/O	Function
24	K1	O	Key Scan
25	K2	O	Key Scan
26	K3	O	Key Scan
27	K4	I	Key Scan
28	K5	I	Key Scan
29	DC8	I	8V Power supply
30	GND	-	Ground
31	50MPU	I	Switched 5V power supply
32	50MPU	I	Switched 5V power supply
33	DC8	I	8V Power supply
34	DC8	I	8V Power supply
35	GND	-	Ground
36	DC8	I	8V Power supply
CN923 (To X45-381 E/5 CN905)			
1	VOLUME_IN	I	Volume control input for AF signal
2	33MPU	O	Switched 3.3V power supply
3	GND	-	Ground
4	33AUD	O	Switched 3.3V power supply
5	SB	O	Power supply output
6	SCM_EN	-	No connection
7	GND	-	Ground
8	PTT_TXD_SCM	I	MIC PTT
9	HOOK_RXD_SCM	I	HOOK detect signal
10	MIG	-	MIC ground
11	MIC	I	MIC signal input

TX Unit (X56-3110-10) (C/3)

Pin No.	Name	I/O	Function
CN960 (To X56-311 B/3 CN920)			
1	DC8	I	8V Power supply
2	GND	-	Ground
3	50MPU	I	Switched 5V power supply
4	STB	I	Shift Register Strobe
5	SR_OE	I	Shift Register Output Enable
6	SR_CLK	I	Shift Register Clock
7	SR_DATA	I	Shift Register Data
8	LED1	I	D960 segment “F” control
9	GND	-	Ground
10	LED10	I	D961 segment “F” control

CONTROL I/O 25 pin D-sub Connector

Pin No.	Pin Name	I/O	Signal Type	Modifi-cation	Description/ Port Type
1	NC	-	-	Default	-
		O	Digital	Land short	RSSI
2	NC	-	-	No	-
3	NC	-	-	No	-
4	AI1	I	Digital	No	Programmable Function Input 1/ CMOS
5	AI2	I	Digital	No	Programmable Function Input 2/ CMOS
6	AI3	I	Digital	No	Programmable Function Input 3/ CMOS
7	DG	-	GND	No	Digital GND
8	TD	I	Analog	No	TX Data Input (signaling)
9	TA	I	Analog	No	TX Audio Input (voice)
10	RD	O	Analog	No	RX Data Output (signaling)
11	RA	O	Analog	No	RX Audio Output (voice)
12	RXG	-	GND	No	RX Signal GND
13	SPM	I	Digital	No	Speaker Mute/ CMOS
14	BER_CLK	O	Digital	No	for Bit Error Rate Clock
15	EMON	I	Digital	No	External Monitor Switch
16	EPTT	I	Digital	No	External PTT Switch
17	SC	O	Digital	No	Squelch Control
18	BER_DAT	O	Digital	No	for Bit Error Rate Data
19	TXG	-	GND	No	TX Siganl GND
20	IO1	I/O	Digital	No	Programmable Function I/O 1
21	IO2	I/O	Digital	No	Programmable Function I/O 2
22	IO3	I/O	Digital	No	Programmable Function I/O 3
23	IO4	I/O	Digital	No	Programmable Function I/O 4
24	IO5	I/O	Digital	No	Programmable Function I/O 5
25	IO6	I/O	Digital	No	Programmable Function I/O 6

LAN

Pin No.	Pin Name	I/O	Signal Type	Modifi-cation	Description/ Port Type
1	TD+	O	Analog	No	TX Siganl +
2	TD-	O	Analog	No	TX Siganl -
3	RD+	I	Analog	No	RX Siganl +
4	NC	-	-	No	-
5	NC	-	-	No	-
6	RD-	I	Analog	No	RX Siganl -
7	NC	-	-	No	-
8	NC	-	-	No	-

TERMINAL FUNCTION

COM DSUB9 Connector

Pin No.	Pin Name	I/O	Signal Type	Modification	Description/ Port Type
1	CD	I	Digital	No	Carrier Detect
2	RD	I	Digital	No	Receive Data
3	SD	O	Digital	No	Send Data
4	DTR	O	Digital	No	Data Terminal Ready
5	SG	-	GND	No	Signal GND
6	DSR	I	Digital	No	Data Set Ready
7	RTS	O	Digital	No	Request to Send
8	CTS	I	Digital	No	Clear to Send
9	CI	I	Digital	No	Ringer DET

TEST/SPKR 15 pin Connector

Pin No.	Pin Name	I/O	Signal Type	Modification	Description/ Port Type
1	SB	-	Power	No	Power Supply
2	SB	-	Power	No	Power Supply
3	NC	-	-	No	-
4	GND	-	GND	No	Digital GND
5	GND	-	GND	No	Digital GND
6	SPG	-	GND	No	Speaker GND
7	RD	O	Analog	No	RX Data Output (Equal to D-sub CN.#10)
8	RSSI	O	Analog	No	RSSI Output
9	SPI	I	Analog	No	Internal Speaker Input
10	AO1	O	Digital	default	Auxiliary Output 1 Open collector
				$R520=47k D5=delete	Auxiliary Output 1 CMOS
11	AO2	O	Digital	default	Auxiliary Output 2 Open collector
				$R519=47k D5=delete	Auxiliary Output 2 CMOS
12	SPO	O	Analog	No	External Speaker Output
13	AO3	O	Digital	default	Auxiliary Output 3 Open collector
				$R518=47k D5=delete	Auxiliary Output 3 CMOS
14	AO4	O	Digital	default	Auxiliary Output 4 Open collector
				$R517=47k D5=delete	Auxiliary Output 4 CMOS
15	AO5	O	Digital	default	Auxiliary Output 5 Open collector
				$R516=47k D5=delete	Auxiliary Output 5 CMOS

Microphone Connector (Left =1…Right=8, Front Pannel View)

Pin No.	Pin Name	I/O	Signal Type	Modification	Description/ Port Type
1	NC	-	-	No	-
2	SB	-	Power	No	Power
3	GND	-	GND	No	Digital GND
4	PTT	I	Digital	No	PTT Signal/ CMOS Active Lo
5	MIG	-	-	No	MIC GND
6	MIC	I	Analog	No	MIC Input
7	HOOK	I	Digital	No	HOOK Detect Signal CMOS, Active Lo
8	NC	-	-	No	-

Frame Synchronous Connector (Left =1…Right=4, Rear Pannel View)

There are two connectors at the rear pannel, these are the same function.

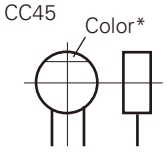
Pin No.	Pin Name	I/O	Signal Type	Modification	Description/ Port Type
1	FRMA	I/O	-	No	RS-485 Differential Signal A
2	NC	-	-	No	-
3	NC	-	-	No	-
4	FRMB	I/O	-	No	RS-485 Differential Signal B

PARTS LIST

CAPACITORS

CC	45	TH	1H	220	J
1	2	3	4	5	6

1 = Type ... ceramic, electrolytic, etc.
2 = Shape ... round, square, etc.
3 = Temp. coefficient
4 = Voltage rating
5 = Value
6 = Tolerance



• Capacitor value

010 = 1pF
100 = 10pF
101 = 100pF
102 = 1000pF = 0.001μF
103 = 0.01μF

2 2 0 = 22pF
0 = Multiplier
2 = 2nd number
2 = 1st number

• Temperature coefficient

1st Word	C	L	P	R	S	T	U
Color*	Black	Red	Orange	Yellow	Green	Blue	Violet
ppm/°C	0	–80	–150	–220	–330	–470	–750

2nd Word	G	H	J	K	L
ppm/°C	±30	±60	±120	±250	±500

Example : CC45TH = –470±60ppm/°C

• Tolerance (More than 10pF)

Code	C	D	G	J	K	M	X	Z	P	No code
(%)	±0.25	±0.5	±2	±5	±10	±20	+40 –20	+80 –20	+100 –0	More than 10μF : –10~+50 Less than 4.7μF : –10~+75

(Less than 10pF)

Code	B	C	D	F	G
(pF)	±0.1	±0.25	±0.5	±1	±2

• Voltage rating

2nd word / 1st word	A	B	C	D	E	F	G	H	J	K	V
0	1.0	1.25	1.6	2.0	2.5	3.15	4.0	5.0	6.3	8.0	–
1	10	12.5	16	20	25	31.5	40	50	63	80	35
2	100	125	160	200	250	315	400	500	630	800	–
3	1000	1250	1600	2000	2500	2150	4000	5000	6300	8000	–

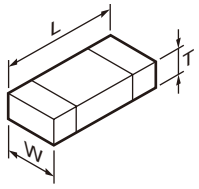
• Chip capacitors

(EX) CC 73 F SL 1H 000 J
1 2 3 4 5 6 7
(Chip) (CH, RH, UJ, SL)

(EX) CK 73 F F 1H 000 Z
1 2 3 4 5 6 7
(Chip) (B, F)

Refer to the table above.
1 = Type
2 = Shape
3 = Dimension
4 = Temp. coefficient
5 = Voltage rating
6 = Value
7 = Tolerance

• Dimension



Chip capacitor

Code	L	W	T
Empty	5.6±0.5	5.0±0.5	Less than 2.0
A	4.5±0.5	3.2±0.4	Less than 2.0
B	4.5±0.5	2.0±0.3	Less than 2.0
C	4.5±0.5	1.25±0.2	Less than 1.25
D	3.2±0.4	2.5±0.3	Less than 1.5
E	3.2±0.2	1.6±0.2	Less than 1.25
F	2.0±0.3	1.25±0.2	Less than 1.25
G	1.6±0.2	0.8±0.2	Less than 1.0
H	1.0±0.05	0.5±0.05	0.5±0.05

RESISTORS

• Chip resistor (Carbon)

(EX) RD 73 E B 2B 000 J
1 2 3 4 5 6 7
(Chip) (B, F)

• Carbon resistor (Normal type)

(EX) RD 14 B B 2C 000 J
1 2 3 4 5 6 7

1 = Type
2 = Shape
3 = Dimension
4 = Temp. coefficient
5 = Rating wattage
6 = Value
7 = Tolerance

Chip resistor

Code	L	W	T
E	3.2±0.2	1.6±0.2	1.0
F	2.0±0.3	1.25±0.2	1.0
G	1.6±0.2	0.8±0.2	0.5±0.1
H	1.0±0.05	0.5±0.05	0.35±0.05

• Rating wattage

Code	Wattage	Code	Wattage	Code	Wattage
1J	1/16W	2C	1/6W	3A	1W
2A	1/10W	2E	1/4W	3D	2W
2B	1/8W	2H	1/2W		

NXR-700

PARTS LIST

✻ New Parts. ⚠indicates safety critical components.
Parts without **Parts No.** are not supplied.
Les articles non mentionnes dans le **Parts No.** ne sont pas fournis.
Teile ohne **Parts No.** werden nicht geliefert.

L : Scandinavia **K** : USA **P** : Canada
Y : PX (Far East, Hawaii) **T** : England **E** : Europe
Y : AAFES (Europe) **X** : Australia **M** : Other Areas

NXR-700 (Y54-3240-10)
FINAL UNIT (X45-3810-10)

Ref. No.	Address	New parts	Parts No.	Description	Destination
NXR-700					
1	3A	✻	A62-1142-02	MAIN PANEL	
3	1E	✻	B10-2781-04	FRONT GLASS ACCESSORY	
4	3A	✻	B11-1841-04	FILTER	
5	3A	✻	B11-1842-04	FILTER	
6	3A	✻	B11-1843-04	FILTER	
7	3A	✻	B11-1844-04	FILTER	
8	3A	✻	B42-7296-04	STICKER (NEXEDGE)	
9	3A	✻	B43-1188-04	BADGE	
10	1F	✻	B62-1994-00	INSTRUCTION MANUAL	
12	2B	✻	E04-0463-05	RF COAXIAL RECEPTACLE (BNC)	
13	1F		E30-3344-25	DC CORD ACCESSORY	
14	1B	✻	E30-7581-05	DC CORD	
15	2C	✻	E30-7582-05	TRUNK CABLE	
16	1B,2C	✻	E30-7583-05	TRUNK CABLE	
17	1B,1C	✻	E37-1295-05	FLAT CABLE	
18	1B	✻	E37-1299-05	LEAD WIRE WITH TERMINAL (FUSE-DC +)	
19	1B	✻	E37-1300-05	LEAD WIRE WITH TERMINAL (FUSE-DC-)	
20	1B	✻	E37-1301-05	LEAD WIRE WITH TERMINAL (DC-PA +)	
21	1B	✻	E37-1302-05	LEAD WIRE WITH TERMINAL (DC-PA-)	
22	2C	✻	E37-1303-05	LEAD WIRE WITH CONNECTOR (BNC-RX)	
23	1D	✻	E37-1304-05	LEAD WIRE WITH CONNECTOR (BNC-REF.)	
24	1B	✻	E37-1305-05	LEAD WIRE WITH CONNECTOR (DC-TX)	
25	1C	✻	E37-1306-05	LEAD WIRE WITH CONNECTOR (DC-CONT)	
26	2C	✻	E37-1307-05	LEAD WIRE WITH CONNECTOR (DC-RX)	
27	2D	✻	E37-1308-05	LEAD WIRE WITH CONNECTOR (RX-DCDC)	
28	1D	✻	E37-1310-05	LEAD WIRE WITH CONNECTOR (DSUB-25P)	
29	3B	✻	E37-1311-05	LEAD WIRE WITH CONNECTOR (DSUB-9P)	
30	2D	✻	E37-1313-05	LEAD WIRE WITH CONNECTOR (ACC15)	
31	3B	✻	E37-1314-05	LEAD WIRE WITH CONNECTOR (DISP-MIC)	
32	3B	✻	E37-1315-05	LEAD WIRE WITH CONNECTOR (DISP-17SEG)	
33	2B	✻	E37-1316-05	LEAD WIRE WITH CONNECTOR (SP)	
34	1E		E37-1381-05	15P PLUG ACCESSORY	
35	1D,1E		F05-7521-05	BLADE FUSE (7.5A/32V) ACCESSORY	
37	2A	✻	F07-1930-05	COVER (FAN)	
38	1D		F09-0445-05	CAP	
39	3B	✻	F09-0484-05	CAP	
40	2A	✻	F09-0488-05	FANMOTOR	
42	3A		G10-1343-04	FIBROUS SHEET	
43	2B	✻	G11-4408-04	RUBBER SHEET	
44	3A	✻	G13-2163-04	CUSHION (PF)	
46	3B	✻	J19-5496-02	HOLDER (DISP)	
47	1C	✻	J19-5497-05	HOLDER (CF)	
48	1E	✻	J29-0725-04	BRACKET (SIDE)	
49	3A	✻	J39-0655-03	SPACER (SP)	
50	2D		J61-0307-05	BAND (DC)	
52	1E		K01-0421-05	HANDLE ACCESSORY	
53	3A		K29-4539-04	KNOB (VOLUME)	
55	1F		L79-1419-05	LINE FILTER (DC)	
A	1E	✻	N08-0563-04	DRESSED SCREW (RFONT GLASS)	
B	3B,1D		N09-2292-05	HEXAGON HEAD SCREW (DSUB)	
C	1C	✻	N30-2008-43	PAN HEAD MACHINE SCREW (CF)	
D	2C,1D		N30-2606-48	PAN HEAD MACHINE SCREW (BNC)	
E	2A	✻	N30-3016-43	PAN HEAD MACHINE SCREW (FAN)	
F	2D,3D	✻	N32-3006-43	FLAT HEAD MACHINE SCREW (TOP,REAR)	
G	3A,1E		N32-4008-43	FLAT HEAD MACHINE SCREW (PANEL)	
H	1B,1C		N67-3008-48	PAN HEAD SEMS SCREW (AVR)	
J	3B		N80-2006-43	PAN HEAD TAPTITE SCREW (DISP)	
K	1D		N80-2608-43	PAN HEAD TAPTITE SCREW (FESE)	
L	1B,2C		N87-2608-48	BRAZIER HEAD TAPTITE SCREW (PCB)	
57	3A	✻	T07-0347-15	SPEAKER	
FINAL UNIT (X45-3810-10)					
C1,2		✻	CD04BD1H101M	ELECTRO 100UF 50WV	
C7,8		✻	CE32BM1V220M	CHIP EL 22UF 35WV	
C10,11			CK73GB1H102K	CHIP C 1000PF K	
C15-17			CK73GB1H103K	CHIP C 0.010UF K	
C21			CK73GB1H102K	CHIP C 1000PF K	
C25,26			CK73GB1H103K	CHIP C 0.010UF K	
C29,30			CK73GB1H102K	CHIP C 1000PF K	
C32		✻	CE32BM1V220M	CHIP EL 22UF 35WV	
C33		✻	CE32AU1E100M	CHIP EL 10UF 25WV	
C36			CK73GB1H102K	CHIP C 1000PF K	
C37			CK73GB1H103K	CHIP C 0.010UF K	
C38		✻	CE32AU1E100M	CHIP EL 10UF 25WV	
C39			CK73GB1H102K	CHIP C 1000PF K	
C40			CK73GB1H103K	CHIP C 0.010UF K	
C41,42			CK73GB1H102K	CHIP C 1000PF K	
C44			CE32CL1V100M	CHIP EL 10UF 35WV	
C45,46			CK73GB1H102K	CHIP C 1000PF K	
C47			CK73GB1H103K	CHIP C 0.010UF K	
C49			CK73GB1H104K	CHIP C 0.10UF K	
C50-52			CK73GB1H102K	CHIP C 1000PF K	
C53			CK73GB1H103K	CHIP C 0.010UF K	
C54			CK73GB1H102K	CHIP C 1000PF K	
C58			CK73GB1H102K	CHIP C 1000PF K	
C59			CK73GB1H103K	CHIP C 0.010UF K	
C60			C93-0603-05	CHIP C 1000PF K	
C61			CK73GB1H102K	CHIP C 1000PF K	
C62			CK73GB1H103K	CHIP C 0.010UF K	
C63-65			CK73GB1H102K	CHIP C 1000PF K	
C67			CK73GB1H102K	CHIP C 1000PF K	
C68			CE32CL1V100M	CHIP EL 10UF 35WV	
C70			CK73GB1H103K	CHIP C 0.010UF K	
C71-75			CK73GB1H102K	CHIP C 1000PF K	
C77,78			CK73GB1H102K	CHIP C 1000PF K	
C80			CK73GB1H103K	CHIP C 0.010UF K	
C82			CK73GB1H104K	CHIP C 0.10UF K	
C83			CK73GB1H102K	CHIP C 1000PF K	
C85			CC73GCH1H330J	CHIP C 33PF J	
C86			CK73GB1H103K	CHIP C 0.010UF K	
C87			CC73GCH1H470J	CHIP C 47PF J	
C88-90			CK73GB1H102K	CHIP C 1000PF K	
C94,95			CK73GB1H104K	CHIP C 0.10UF K	
C96-102			CK73GB1H102K	CHIP C 1000PF K	

PARTS LIST

FINAL UNIT (X45-3810-10)

Ref. No.	Address	New parts	Parts No.	Description	Destination
C104			CK73GB1H102K	CHIP C 1000PF K	
C105			C93-0603-05	CHIP C 1000PF K	
C106			CK73GB1H102K	CHIP C 1000PF K	
C108,109			CK73GB1H102K	CHIP C 1000PF K	
C112			CK73GB1H102K	CHIP C 1000PF K	
C113,114			CK73GB1H472K	CHIP C 4700PF K	
C115			CK73GB1H102K	CHIP C 1000PF K	
C117			CK73GB1H103K	CHIP C 0.010UF K	
C122,123			C93-0569-05	CHIP C 56PF J	
C124			CK73GB1H102K	CHIP C 1000PF K	
C126			C93-0563-05	CHIP C 18PF J	
C127,128			CK73GB1H102K	CHIP C 1000PF K	
C131			C93-0566-05	CHIP C 33PF J	
C133,134			CK73GB1H102K	CHIP C 1000PF K	
C138			CE32CL1V100M	CHIP EL 10UF 35WV	
C141			C93-0603-05	CHIP C 1000PF K	
C147			C93-0566-05	CHIP C 33PF J	
C149			C93-0561-05	CHIP C 12PF J	
C150			CK73GB1H104K	CHIP C 0.10UF K	
C158			C93-0564-05	CHIP C 22PF J	
C159			C93-0553-05	CHIP C 3.0PF C	
C161			CC73GCH1H120J	CHIP C 12PF J	
C162			CK73GB1H104K	CHIP C 0.10UF K	
C167			CK73GB1H104K	CHIP C 0.10UF K	
C169,170			CK73GB1H102K	CHIP C 1000PF K	
C187,188		✻	C92-0905-05	OS-CON 47UF 35WV	
C189			CK73GB1H103K	CHIP C 0.010UF K	
C190			CK73GB1H102K	CHIP C 1000PF K	
C191			CK73GB1E105K	CHIP C 1.0UF K	
C192			CC73FCH1H820J	CHIP C 82PF J	
C701			CK73GB1E105K	CHIP C 1.0UF K	
C702,703			CK73GB1H102K	CHIP C 1000PF K	
C704		✻	CE32AU1E100M	CHIP EL 10UF 25WV	
C705			CK73GB1E105K	CHIP C 1.0UF K	
C706,707			CK73GB1H102K	CHIP C 1000PF K	
C708			CE32CL1V100M	CHIP EL 10UF 35WV	
C709		✻	CE32AU1C330M	CHIP EL 33UF 16WV	
C710			CK73GB1H104K	CHIP C 0.10UF K	
C711			CS77CB21C100M	CHIP TNTL 10UF 16WV	
C712		✻	CE32AU1C330M	CHIP EL 33UF 16WV	
C713,714			CK73GB1H104K	CHIP C 0.10UF K	
C715		✻	CE32AU1C330M	CHIP EL 33UF 16WV	
C716			CK73GB1H104K	CHIP C 0.10UF K	
C717,718			CK73GB1H102K	CHIP C 1000PF K	
C900			CK73GB1H104K	CHIP C 0.10UF K	
C901			CK73GB1H102K	CHIP C 1000PF K	
C902			CC73GCH1H101J	CHIP C 100PF J	
C904			CC73GCH1H101J	CHIP C 100PF J	
C905			CK73FB0J106K	CHIP C 10UF K	
C906-908			CK73GB1H102K	CHIP C 1000PF K	
C909,910			CC73GCH1H101J	CHIP C 100PF J	
C912,913			CC73GCH1H101J	CHIP C 100PF J	
C914			CK73GB1H104K	CHIP C 0.10UF K	
C915			CC73GCH1H101J	CHIP C 100PF J	
C916			CK73GB1H102K	CHIP C 1000PF K	
CN1			E04-0193-05	PIN SOCKET	
CN2			E23-0902-05	TERMINAL	
CN8			E41-2671-05	PIN ASSY	
CN11			E41-2673-05	PIN ASSY	
CN12			E41-2672-05	PIN ASSY	

Ref. No.	Address	New parts	Parts No.	Description	Destination
CN15			E41-2672-05	PIN ASSY	
CN19			E04-0193-05	PIN SOCKET	
CN20			E40-6656-05	PIN ASSY	
CN701		✻	E41-2741-05	PIN ASSY	
CN905		✻	E41-1483-05	PIN ASSY	
J901		✻	E58-0526-05	MODULAR JACK	
CN4			J13-0071-05	FUSE HOLDER	
L1			L92-0179-05	CHIP FERRITE	
L3			L79-0558-05	FILTER	
L4			L92-0131-05	CHIP FERRITE	
L9			L34-4638-05	AIR-CORE COIL	
L10		✻	L34-4614-05	AIR-CORE COIL	
L12		✻	L34-4522-05	AIR-CORE COIL	
L13-15		✻	L34-4521-05	AIR-CORE COIL	
L17			L34-4523-05	AIR-CORE COIL	
L18			L41-5668-14	SMALL FIXED INDUCTOR (5.6NH)	
L701,702			L41-4705-33	SMALL FIXED INDUCTOR (47UH)	
L703,704			L41-1095-33	SMALL FIXED INDUCTOR (1.0UH)	
L900		✻	L92-0447-05	BEADS CORE	
CP1			RK75GB1J103J	CHIP-COM 10K J 1/16W	
R1			RK73FB2B271J	CHIP R 270 J 1/8W	
R2			RK73FB2B180J	CHIP R 18 J 1/8W	
R3			RK73FB2B271J	CHIP R 270 J 1/8W	
R4		✻	R92-3604-05	CHIP R 0.047 D 1W	
R9			RK73GB2A101J	CHIP R 100 J 1/10W	
R11			RS14DB3A4R7J	FL-PROOF RS 4.7 J 1W	
R12,13			RK73GB2A103J	CHIP R 10K J 1/10W	
R15			RK73GB2A332J	CHIP R 3.3K J 1/10W	
R17			RK73GB2A103J	CHIP R 10K J 1/10W	
R18			RK73GB2A473J	CHIP R 47K J 1/10W	
R20			RK73GB2A104J	CHIP R 100K J 1/10W	
R21,22			RK73GB2A184J	CHIP R 180K J 1/10W	
R23			RK73FB2B000J	CHIP R 0.0 J 1/8W	
R25			RK73GB2A104J	CHIP R 100K J 1/10W	
R26			RK73EB2E820J	CHIP R 82 J 1/4W	
R27			RK73GB2A224J	CHIP R 220K J 1/10W	
R28			RK73GB2A474J	CHIP R 470K J 1/10W	
R29,30			RK73GB2A103J	CHIP R 10K J 1/10W	
R31-33			RK73GB2A104J	CHIP R 100K J 1/10W	
R34			RK73FB2B8R2J	CHIP R 8.2 J 1/8W	
R35,36			RK73GB2A823J	CHIP R 82K J 1/10W	
R37			RK73GB2A104J	CHIP R 100K J 1/10W	
R38			RK73FB2B151J	CHIP R 150 J 1/8W	
R39,40			RK73GB2A274J	CHIP R 270K J 1/10W	
R41			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R42			RK73FB2B8R2J	CHIP R 8.2 J 1/8W	
R44			RK73FB2B8R2J	CHIP R 8.2 J 1/8W	
R45,46			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R47			RK73FB2B151J	CHIP R 150 J 1/8W	
R49			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R50,51			RK73GB2A104J	CHIP R 100K J 1/10W	
R52			RK73FB2B8R2J	CHIP R 8.2 J 1/8W	
R53,54			RK73GB2A154J	CHIP R 150K J 1/10W	
R55-58			RK73GB2A104J	CHIP R 100K J 1/10W	
R59,60			RK73GB2A103J	CHIP R 10K J 1/10W	
R61			RK73EB2E680J	CHIP R 68 J 1/4W	
R62			RK73GH2A563D	CHIP R 56K D 1/10W	
R63			RK73GH2A333D	CHIP R 33K D 1/10W	

PARTS LIST

FINAL UNIT (X45-3810-10)
CONTROL UNIT (X53-4130-10)

Ref. No.	Address	New parts	Parts No.	Description				Destination
R64			RK73GB2A474J	CHIP R	470K	J	1/10W	
R65			RK73GB2A473J	CHIP R	47K	J	1/10W	
R66			RK73GB2A100J	CHIP R	10	J	1/10W	
R67			RS14DB3A121J	FL-PROOF RS	120	J	1W	
R68			RK73GB2A104J	CHIP R	100K	J	1/10W	
R69			RK73GB2A103J	CHIP R	10K	J	1/10W	
R70-72			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R75,76			RK73GB2A472J	CHIP R	4.7K	J	1/10W	
R78			RK73GB2A104J	CHIP R	100K	J	1/10W	
R89			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R92			RK73GB2A104J	CHIP R	100K	J	1/10W	
R102			RK73GH2A471D	CHIP R	470	D	1/10W	
R104			RK73GB2A393J	CHIP R	39K	J	1/10W	
R105			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R106			RK73GB2A474J	CHIP R	470K	J	1/10W	
R107			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R110			RK73GB2A394J	CHIP R	390K	J	1/10W	
R121			RK73GH2A103D	CHIP R	10K	D	1/10W	
R123			RK73GB2A103J	CHIP R	10K	J	1/10W	
R124			RK73FB2B100J	CHIP R	10	J	1/8W	
R125			R92-1061-05	JUMPER REST		0 OHM		
R133			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R136			RK73GB2A394J	CHIP R	390K	J	1/10W	
R137-140			RK73GB2A104J	CHIP R	100K	J	1/10W	
R142			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R144			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R900			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R901			RK73GB2A182J	CHIP R	1.8K	J	1/10W	
R902			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R903			RK73GB2A681J	CHIP R	680	J	1/10W	
R905,906			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R907			RK73GH2A153D	CHIP R	15K	D	1/10W	
R909			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R910			RK73GB2A182J	CHIP R	1.8K	J	1/10W	
R911,912			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R914			RK73GB2A222J	CHIP R	2.2K	J	1/10W	
VR1			R32-0744-05	SEMI FIXED VARIABLE RESISTOR				
VR2			R32-0754-05	SEMI FIXED VARIABLE RESISTOR				
VR902		✻	R31-0668-05	POTENTIOMETER (10K)				
D4			Z5W27V	SURGE ABSORBER				
D5			DSM3MA1-RPB	DIODE				
D6			1SS355	DIODE				
D7		✻	02CZ5.6(Y)F	ZENER DIODE				
D9,10			HSB88WS	DIODE				
D11			L7091CER	DIODE				
D14-16			L7091CER	DIODE				
D19		✻	02CZ4.7(Y)F	ZENER DIODE				
D902			AVRM16270MABB	VARISTOR				
IC1		✻	LTC6101BIS5-F	ANALOGUE IC				
IC2			NJM2904E-ZB	ANALOGUE IC				
IC3			TA78L05FF	MOS-IC				
IC4-6			NJM2904E-ZB	ANALOGUE IC				
IC7		✻	S-8130AC	MOS-IC				
IC8			NJM2904E-ZB	ANALOGUE IC				
IC9			S24CS02AFJTBG	ROM IC				
IC10	1A		RA13H1317M131	MOS-IC				
IC11	1B		NJM7808FA-ZB	BI-POLAR IC				
IC12	1B	✻	NJM7805FA-ZB	BI-POLAR IC				
IC15			NJM2904E-ZB	ANALOGUE IC				

Ref. No.	Address	New parts	Parts No.	Description				Destination
IC701			NJM78L05UA-ZB	BI-POLAR IC				
IC702		✻	LTC1046IS8	MOS-IC				
IC703		✻	TK72130CS	BI-POLAR IC				
Q2			SSM3K15TE(F)	FET				
Q3		✻	SSM3J01F	FET				
Q4			2SJ506-E(S)	FET				
Q5,6			SSM3K15TE(F)	FET				
Q8			SSM3K15TE(F)	FET				
Q14			SSM3K15TE(F)	FET				

CONTROL UNIT (X53-4130-10)

C1-5			CK73GB1H102K	CHIP C	1000PF	K		
C6			CC73GCH1H101J	CHIP C	100PF	J		
C7			CK73GB1H102K	CHIP C	1000PF	K		
C8			CC73GCH1H101J	CHIP C	100PF	J		
C9			CK73GB1H102K	CHIP C	1000PF	K		
C10			CC73GCH1H101J	CHIP C	100PF	J		
C12-16			CK73GB1H102K	CHIP C	1000PF	K		
C18-28			CK73GB1H102K	CHIP C	1000PF	K		
C29			CC73GCH1H101J	CHIP C	100PF	J		
C30-33			CK73GB1H102K	CHIP C	1000PF	K		
C34			CC73GCH1H101J	CHIP C	100PF	J		
C35			CK73GB1H102K	CHIP C	1000PF	K		
C36			CC73GCH1H101J	CHIP C	100PF	J		
C37			CK73GB1H104K	CHIP C	0.10UF	K		
C39-47			CK73GB1H102K	CHIP C	1000PF	K		
C49			CC73GCH1H101J	CHIP C	100PF	J		
C50-53			CK73GB1H102K	CHIP C	1000PF	K		
C54			CC73GCH1H101J	CHIP C	100PF	J		
C55			CK73GB1H102K	CHIP C	1000PF	K		
C56			CC73GCH1H101J	CHIP C	100PF	J		
C57			CK73GB1H102K	CHIP C	1000PF	K		
C58			CC73GCH1H101J	CHIP C	100PF	J		
C60-62			CK73GB1H102K	CHIP C	1000PF	K		
C63			CK73GB1H104K	CHIP C	0.10UF	K		
C64			CK73GB1H102K	CHIP C	1000PF	K		
C65			CK73FB0J106K	CHIP C	10UF	K		
C66			CK73GB1H102K	CHIP C	1000PF	K		
C67			CK73FB0J106K	CHIP C	10UF	K		
C68			CK73GB1H102K	CHIP C	1000PF	K		
C69			CK73GB1H104K	CHIP C	0.10UF	K		
C70			CK73GB1H102K	CHIP C	1000PF	K		
C71			CK73FB0J106K	CHIP C	10UF	K		
C72			CK73GB1E105K	CHIP C	1.0UF	K		
C73			CC73GCH1H101J	CHIP C	100PF	J		
C74			CK73GB1H104K	CHIP C	0.10UF	K		
C75			CC73GCH1H101J	CHIP C	100PF	J		
C76			CK73GB1H102K	CHIP C	1000PF	K		
C77		✻	C93-0912-05	CHIP C	100UF	M		
C78			CK73FB0J106K	CHIP C	10UF	K		
C79-82			CK73GB1H104K	CHIP C	0.10UF	K		
C83-86			CK73FB0J106K	CHIP C	10UF	K		
C87		✻	C93-0912-05	CHIP C	100UF	M		
C88			CK73GB1H103K	CHIP C	0.010UF	K		
C89,90			CC73GCH1H221J	CHIP C	220PF	J		
C92			CC73GCH1H100D	CHIP C	10PF	D		
C95		✻	C93-0912-05	CHIP C	100UF	M		
C96			CC73GCH1H101J	CHIP C	100PF	J		

If a part reference number is listed in a shaded box, that part does not come with the PCB.

PARTS LIST

CONTROL UNIT (X53-4130-10)

Ref. No.	Address	New parts	Parts No.	Description			Destination
C97			CK73GB1H104K	CHIP C	0.10UF	K	
C98			CK73FB0J106K	CHIP C	10UF	K	
C99			CK73GB1H102K	CHIP C	1000PF	K	
C102			CC73GCH1H150J	CHIP C	15PF	J	
C103			CC73GCH1H101J	CHIP C	100PF	J	
C104-106		✻	CD04BD1H221M	ELECTRO	220UF	50WV	
C107			CK73GB1H102K	CHIP C	1000PF	K	
C108			CK73GB1H104K	CHIP C	0.10UF	K	
C109			CK73GB1H102K	CHIP C	1000PF	K	
C110		✻	C93-0912-05	CHIP C	100UF	M	
C111			CK73GB1H104K	CHIP C	0.10UF	K	
C119			CC73GCH1H181J	CHIP C	180PF	J	
C120			CK73GB1H102K	CHIP C	1000PF	K	
C121			CK73FB0J106K	CHIP C	10UF	K	
C122			CC73GCH1H101J	CHIP C	100PF	J	
C123			CK73GB1H472K	CHIP C	4700PF	K	
C125			CK73GB1H472K	CHIP C	4700PF	K	
C127			CK73GB1H182K	CHIP C	1800PF	K	
C128			CC73GCH1H101J	CHIP C	100PF	J	
C130		✻	CD04BD1H221M	ELECTRO	220UF	50WV	
C131		✻	CE32AU1C330M	CHIP EL	33UF	16WV	
C133		✻	CD04BD1H221M	ELECTRO	220UF	50WV	
C134			CK73GB1H104K	CHIP C	0.10UF	K	
C137,138			CK73GB1H102K	CHIP C	1000PF	K	
C139,140		✻	CE32AU1C330M	CHIP EL	33UF	16WV	
C141			CK73GB1H102K	CHIP C	1000PF	K	
C144		✻	CE32AU1C330M	CHIP EL	33UF	16WV	
C145			CK73GB1H182K	CHIP C	1800PF	K	
C146			CK73GB1H104K	CHIP C	0.10UF	K	
C152			CK73GB1H102K	CHIP C	1000PF	K	
C155			CC73GCH1H181J	CHIP C	180PF	J	
C157		✻	CE32AU1C330M	CHIP EL	33UF	16WV	
C159			CK73GB1H102K	CHIP C	1000PF	K	
C161			CK73GB1H102K	CHIP C	1000PF	K	
C162		✻	CE32AU1C330M	CHIP EL	33UF	16WV	
C165			CK73GB1H102K	CHIP C	1000PF	K	
C166		✻	CE32AU1C330M	CHIP EL	33UF	16WV	
C169			CK73FB0J106K	CHIP C	10UF	K	
C170			CK73GB1H102K	CHIP C	1000PF	K	
C172			CK73FB0J106K	CHIP C	10UF	K	
C173			CC73GCH1H101J	CHIP C	100PF	J	
C174			CK73GB1H102K	CHIP C	1000PF	K	
C175			CC73GCH1H391J	CHIP C	390PF	J	
C177			CC73GCH1H101J	CHIP C	100PF	J	
C178			CK73FB0J106K	CHIP C	10UF	K	
C188,189			CK73GB1H104K	CHIP C	0.10UF	K	
C190			CK73GB1E105K	CHIP C	1.0UF	K	
C192,193			CK73GB1E105K	CHIP C	1.0UF	K	
C194			CC73GCH1H560J	CHIP C	56PF	J	
C195			CC73GCH1H181J	CHIP C	180PF	J	
C196			CC73GCH1H101J	CHIP C	100PF	J	
C197			CC73GCH1H330J	CHIP C	33PF	J	
C199		✻	C93-0912-05	CHIP C	100UF	M	
C200			CK73FB0J106K	CHIP C	10UF	K	
C202			CK73GB1E105K	CHIP C	1.0UF	K	
C203			CC73GCH1H101J	CHIP C	100PF	J	
C204			CC73GCH1H121J	CHIP C	120PF	J	
C205			CK73GB1H182K	CHIP C	1800PF	K	
C206		✻	C93-0912-05	CHIP C	100UF	M	
C207			CK73GB1H102K	CHIP C	1000PF	K	

Ref. No.	Address	New parts	Parts No.	Description			Destination
C208			CK73FB0J106K	CHIP C	10UF	K	
C209			CK73GB1H103K	CHIP C	0.010UF	K	
C212			CC73GCH1H120J	CHIP C	12PF	J	
C213			CK73GB1H103K	CHIP C	0.010UF	K	
C215			CK73GB1H104K	CHIP C	0.10UF	K	
C216			CC73GCH1H100D	CHIP C	10PF	D	
C219			CC73GCH1H100D	CHIP C	10PF	D	
C222			CC73GCH1H150J	CHIP C	15PF	J	
C223			CK73GB1H103K	CHIP C	0.010UF	K	
C224			CK73GB1E105K	CHIP C	1.0UF	K	
C225			CK73GB1H104K	CHIP C	0.10UF	K	
C226			CK73FB0J106K	CHIP C	10UF	K	
C227			CK73GB1H102K	CHIP C	1000PF	K	
C229			CC73GCH1H101J	CHIP C	100PF	J	
C230			CK73GB1E105K	CHIP C	1.0UF	K	
C234,235			CK73GB1H104K	CHIP C	0.10UF	K	
C236		✻	C90-4120-05	ELECTRO	470UF	35WV	
C237			CK73GB1H104K	CHIP C	0.10UF	K	
C239			C92-0777-05	ELECTRO	1000UF	25WV	
C244			CK73GB1H104K	CHIP C	0.10UF	K	
C245			CK73FB0J106K	CHIP C	10UF	K	
C246,247			CK73GB1H102K	CHIP C	1000PF	K	
C248,249			CK73GB1H104K	CHIP C	0.10UF	K	
C250			CK73FB0J106K	CHIP C	10UF	K	
C251			CK73GB1H102K	CHIP C	1000PF	K	
C252			CK73FB0J106K	CHIP C	10UF	K	
C253-255			CK73GB1H103K	CHIP C	0.010UF	K	
C256			CK73GB1H104K	CHIP C	0.10UF	K	
C257			CK73FB0J106K	CHIP C	10UF	K	
C258			CK73GB1H103K	CHIP C	0.010UF	K	
C262			CK73FB0J106K	CHIP C	10UF	K	
C263			CK73GB1H102K	CHIP C	1000PF	K	
C265			CK73GB1H104K	CHIP C	0.10UF	K	
C266-270			CK73GB1H103K	CHIP C	0.010UF	K	
C271			CK73FB0J106K	CHIP C	10UF	K	
C272,273			CK73GB1H103K	CHIP C	0.010UF	K	
C274			CK73GB1H472K	CHIP C	4700PF	K	
C275			CC73GCH1H120J	CHIP C	12PF	J	
C276			CC73GCH1H100D	CHIP C	10PF	D	
C277			CK73GB1H103K	CHIP C	0.010UF	K	
C278			CK73FB0J106K	CHIP C	10UF	K	
C279			CK73GB1H103K	CHIP C	0.010UF	K	
C280			CC73GCH1H100D	CHIP C	10PF	D	
C281			CC73GCH1H150J	CHIP C	15PF	J	
C282			CK73GB1H103K	CHIP C	0.010UF	K	
C283			CK73GB1H104K	CHIP C	0.10UF	K	
C284-288			CK73GB1H103K	CHIP C	0.010UF	K	
C289			CK73GB1H102K	CHIP C	1000PF	K	
C290-297			CK73GB1H103K	CHIP C	0.010UF	K	
C299,300			CK73GB1H103K	CHIP C	0.010UF	K	
C302			CK73GB1H103K	CHIP C	0.010UF	K	
C304			CC73GCH1H101J	CHIP C	100PF	J	
C305,306			CK73GB1H102K	CHIP C	1000PF	K	
C307-310			CC73GCH1H101J	CHIP C	100PF	J	
C311,312			CK73GB1H102K	CHIP C	1000PF	K	
C313			CC73GCH1H101J	CHIP C	100PF	J	
C314			CK73GB1H102K	CHIP C	1000PF	K	
C315			CC73GCH1H101J	CHIP C	100PF	J	
C316			CK73GB1H102K	CHIP C	1000PF	K	
C317			CK73GB1H103K	CHIP C	0.010UF	K	

PARTS LIST

CONTROL UNIT (X53-4130-10)

Ref. No.	Address	New parts	Parts No.	Description			Destination
C318			CC73GCH1H101J	CHIP C	100PF	J	
C319			CK73GB1H102K	CHIP C	1000PF	K	
C320			CK73GB1H103K	CHIP C	0.010UF	K	
C321			CC73GCH1H101J	CHIP C	100PF	J	
C322,323			CK73GB1H102K	CHIP C	1000PF	K	
C324			CK73GB1H103K	CHIP C	0.010UF	K	
C325			CC73GCH1H101J	CHIP C	100PF	J	
C326,327			CK73GB1H102K	CHIP C	1000PF	K	
C328			CK73GB1H103K	CHIP C	0.010UF	K	
C329-331			CK73GB1H102K	CHIP C	1000PF	K	
C332			CK73GB1H103K	CHIP C	0.010UF	K	
C333-339			CK73GB1H102K	CHIP C	1000PF	K	
C340			CK73GB1H103K	CHIP C	0.010UF	K	
C342,343			CK73GB1H102K	CHIP C	1000PF	K	
C344			CK73GB1H103K	CHIP C	0.010UF	K	
C345			CK73GB1H104K	CHIP C	0.10UF	K	
C346,347			CK73GB1H102K	CHIP C	1000PF	K	
C348			CK73GB1H103K	CHIP C	0.010UF	K	
C350			CK73GB1H102K	CHIP C	1000PF	K	
C351			CK73GB1H103K	CHIP C	0.010UF	K	
C352,353			CK73GB1H102K	CHIP C	1000PF	K	
C354			CK73GB1H103K	CHIP C	0.010UF	K	
C355			CC73GCH1H101J	CHIP C	100PF	J	
C356			CK73GB1H102K	CHIP C	1000PF	K	
C357			CK73GB1H103K	CHIP C	0.010UF	K	
C358			CK73GB1H102K	CHIP C	1000PF	K	
C359			CC73GCH1H101J	CHIP C	100PF	J	
C360			CK73GB1H102K	CHIP C	1000PF	K	
C361			CK73GB1H103K	CHIP C	0.010UF	K	
C362			CK73GB1H102K	CHIP C	1000PF	K	
C363			CC73GCH1H101J	CHIP C	100PF	J	
C364			CK73GB1H102K	CHIP C	1000PF	K	
C365			CK73GB1H103K	CHIP C	0.010UF	K	
C366-368			CK73GB1H102K	CHIP C	1000PF	K	
C369			CK73GB1H103K	CHIP C	0.010UF	K	
C370-372			CK73GB1H102K	CHIP C	1000PF	K	
C373			CC73GCH1H101J	CHIP C	100PF	J	
C374			CK73GB1H103K	CHIP C	0.010UF	K	
C375,376			CK73GB1H102K	CHIP C	1000PF	K	
C377			CC73GCH1H101J	CHIP C	100PF	J	
C379,380			CK73GB1H102K	CHIP C	1000PF	K	
C381			CC73GCH1H101J	CHIP C	100PF	J	
C382			CK73GB1H103K	CHIP C	0.010UF	K	
C383,384			CK73GB1H102K	CHIP C	1000PF	K	
C385			CC73GCH1H101J	CHIP C	100PF	J	
C386,387			CK73GB1H102K	CHIP C	1000PF	K	
C388			CC73GCH1H101J	CHIP C	100PF	J	
C389,390			CK73GB1H102K	CHIP C	1000PF	K	
C394		✻	C92-0905-05	OS-CON	47UF	35WV	
C395			CK73GB1H103K	CHIP C	0.010UF	K	
C396-399			CK73GB1H102K	CHIP C	1000PF	K	
C400,401		✻	CE32AU1C330M	CHIP EL	33UF	16WV	
C403			CK73GB1E105K	CHIP C	1.0UF	K	
C404			CK73FB0J106K	CHIP C	10UF	K	
C405,406			CC73GCH1H101J	CHIP C	100PF	J	
C407			CK73GB1H102K	CHIP C	1000PF	K	
C408-410			CK73GB1E105K	CHIP C	1.0UF	K	
C413			CK73GB1H104K	CHIP C	0.10UF	K	
C414			CK73GB1H103K	CHIP C	0.010UF	K	
C415			CK73GB1H104K	CHIP C	0.10UF	K	

Ref. No.	Address	New parts	Parts No.	Description			Destination
C416			CK73GB1H103K	CHIP C	0.010UF	K	
C417			CK73GB1E105K	CHIP C	1.0UF	K	
C418-420			CK73GB1H102K	CHIP C	1000PF	K	
C421			CC73GCH1H101J	CHIP C	100PF	J	
C422-424			CK73GB1H102K	CHIP C	1000PF	K	
C425,426			CC73GCH1H101J	CHIP C	100PF	J	
C427-435			CK73GB1H102K	CHIP C	1000PF	K	
C436			CK73GB1E105K	CHIP C	1.0UF	K	
C437,438			CC73GCH1H101J	CHIP C	100PF	J	
C440			CK73GB1H102K	CHIP C	1000PF	K	
C442			CC73GCH1H101J	CHIP C	100PF	J	
C444			CK73GB1H102K	CHIP C	1000PF	K	
C445			CK73GB1H104K	CHIP C	0.10UF	K	
C446			CC73GCH1H391J	CHIP C	390PF	J	
C447			CC73GCH1H101J	CHIP C	100PF	J	
C448,449			CK73GB1H102K	CHIP C	1000PF	K	
C450			CC73GCH1H101J	CHIP C	100PF	J	
C452,453			CK73GB1H102K	CHIP C	1000PF	K	
C456,457			CK73GB1H102K	CHIP C	1000PF	K	
C463			CK73GB1H104K	CHIP C	0.10UF	K	
C467,468			CK73GB1H102K	CHIP C	1000PF	K	
C469,470			CC73GCH1H101J	CHIP C	100PF	J	
C471			CK73GB1H102K	CHIP C	1000PF	K	
C473-475			CK73GB1H102K	CHIP C	1000PF	K	
C477			CK73GB1E105K	CHIP C	1.0UF	K	
C499		✻	C92-0905-05	OS-CON	47UF	35WV	
C500			CK73GB1H104K	CHIP C	0.10UF	K	
C510			CK73FB0J106K	CHIP C	10UF	K	
CN1-3			E40-6656-05	PIN ASSY			
CN4			E41-2673-05	PIN ASSY			
CN56,57			E40-6656-05	PIN ASSY			
CN58			E40-5960-05	PIN ASSY			
CN59			E40-6102-05	PIN ASSY			
CN60			E41-2735-05	PIN ASSY			
F1,2			F53-0315-05	FUSE			
L3-14		✻	L92-0447-05	BEADS CORE			
L15		✻	L33-1476-05	SMALL FIXED INDUCTOR			
L16		✻	L33-1475-05	SMALL FIXED INDUCTOR			
L17,18		✻	L92-0447-05	BEADS CORE			
L19		✻	L33-1475-05	SMALL FIXED INDUCTOR			
L20-22		✻	L92-0447-05	BEADS CORE			
L32-40		✻	L92-0447-05	BEADS CORE			
L43		✻	L92-0447-05	BEADS CORE			
L44-49			L92-0467-05	CHIP FERRITE			
X1		✻	L77-1984-05	CRYSTAL RESONATOR (14.7456MHZ)			
X2		✻	L77-1987-05	CRYSTAL RESONATOR (16.515072MHZ)			
CP8			RK75GB1JR00	CHIP-COM	0.00	1/16W	
CP10			RK75GB1JR00	CHIP-COM	0.00	1/16W	
CP13			RK75GB1JR00	CHIP-COM	0.00	1/16W	
CP19			RK75GB1JR00	CHIP-COM	0.00	1/16W	
CP24-26			RK75GB1JR00	CHIP-COM	0.00	1/16W	
R1,2			RK73GB2A000J	CHIP R	0.0	J 1/10W	
R4			RK73GB2A000J	CHIP R	0.0	J 1/10W	
R6			RK73GB2A101J	CHIP R	100	J 1/10W	
R7-17			RK73GB2A000J	CHIP R	0.0	J 1/10W	
R18,19			RK73GB2A101J	CHIP R	100	J 1/10W	
R21-45			RK73GB2A000J	CHIP R	0.0	J 1/10W	

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CONTROL UNIT (X53-4130-10)

Ref. No.	Address	New parts	Parts No.	Description				Destination
R47-49			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R51-61			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R62			RK73GB2A101J	CHIP R	100	J	1/10W	
R63,64			RK73GB2A332J	CHIP R	3.3K	J	1/10W	
R65			RK73GB2A183J	CHIP R	18K	J	1/10W	
R66			RK73GB2A823J	CHIP R	82K	J	1/10W	
R67			RK73GH2A822D	CHIP R	8.2K	D	1/10W	
R68			RK73GH2A332D	CHIP R	3.3K	D	1/10W	
R69,70			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R71			RK73GH2A473D	CHIP R	47K	D	1/10W	
R72-76			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R77			RK73GH2A104D	CHIP R	100K	D	1/10W	
R78			RK73GB2A104J	CHIP R	100K	J	1/10W	
R79			RK73GH2A332D	CHIP R	3.3K	D	1/10W	
R80			RK73GB2A123J	CHIP R	12K	J	1/10W	
R81,82			RK73GB2A563J	CHIP R	56K	J	1/10W	
R83			RK73GB2A124J	CHIP R	120K	J	1/10W	
R84			RK73GB2A473J	CHIP R	47K	J	1/10W	
R85			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R86			RK73GB2A473J	CHIP R	47K	J	1/10W	
R87			RK73GB2A223J	CHIP R	22K	J	1/10W	
R88			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R89			RK73GB2A103J	CHIP R	10K	J	1/10W	
R90			RK73GB2A153J	CHIP R	15K	J	1/10W	
R91			RK73GB2A472J	CHIP R	4.7K	J	1/10W	
R92			RK73GB2A562J	CHIP R	5.6K	J	1/10W	
R93,94			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R95			RK73GB2A470J	CHIP R	47	J	1/10W	
R96			RK73GB2A223J	CHIP R	22K	J	1/10W	
R98			RK73GB2A103J	CHIP R	10K	J	1/10W	
R100			RK73GB2A473J	CHIP R	47K	J	1/10W	
R101			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R102			RK73GB2A123J	CHIP R	12K	J	1/10W	
R103-105			RK73GB2A473J	CHIP R	47K	J	1/10W	
R106-108			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R109			RK73GB2A153J	CHIP R	15K	J	1/10W	
R111			RK73GB2A823J	CHIP R	82K	J	1/10W	
R112			RK73GB2A123J	CHIP R	12K	J	1/10W	
R113			RK73GB2A823J	CHIP R	82K	J	1/10W	
R114			RK73GB2A223J	CHIP R	22K	J	1/10W	
R115			RK73GB2A154J	CHIP R	150K	J	1/10W	
R116			RK73GB2A223J	CHIP R	22K	J	1/10W	
R127			RK73GB2A473J	CHIP R	47K	J	1/10W	
R128-130			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R131-133			RK73GB2A473J	CHIP R	47K	J	1/10W	
R135			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R137			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R138			RK73GB2A473J	CHIP R	47K	J	1/10W	
R141-144			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R145			RK73GB2A104J	CHIP R	100K	J	1/10W	
R146-148			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R149			RK73GB2A333J	CHIP R	33K	J	1/10W	
R150			RK73GB2A563J	CHIP R	56K	J	1/10W	
R151			RK73GB2A124J	CHIP R	120K	J	1/10W	
R152			RK73GB2A104J	CHIP R	100K	J	1/10W	
R153			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R154,155			RK73GB2A333J	CHIP R	33K	J	1/10W	
R156,157			RK73GH2A104D	CHIP R	100K	D	1/10W	
R158			RK73GB2A333J	CHIP R	33K	J	1/10W	
R159			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R160,161			RK73GB2A563J	CHIP R	56K	J	1/10W	
R162			RK73GB2A224J	CHIP R	220K	J	1/10W	
R163			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R165			RK73GB2A104J	CHIP R	100K	J	1/10W	
R166			RK73GB2A333J	CHIP R	33K	J	1/10W	
R167			RK73GB2A473J	CHIP R	47K	J	1/10W	
R168			RK73GB2A563J	CHIP R	56K	J	1/10W	
R169			RK73GB2A333J	CHIP R	33K	J	1/10W	
R171			RK73GB2A183J	CHIP R	18K	J	1/10W	
R172,173			RK73GB2A473J	CHIP R	47K	J	1/10W	
R174			RK73GB2A683J	CHIP R	68K	J	1/10W	
R175			RK73GB2A393J	CHIP R	39K	J	1/10W	
R176			RK73GB2A473J	CHIP R	47K	J	1/10W	
R177,178			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R179			RK73GB2A473J	CHIP R	47K	J	1/10W	
R181,182			RK73GB2A103J	CHIP R	10K	J	1/10W	
R183			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R184			RK73GB2A473J	CHIP R	47K	J	1/10W	
R188			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R191			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R193			RK73GB2A103J	CHIP R	10K	J	1/10W	
R194			RK73GB2A473J	CHIP R	47K	J	1/10W	
R195,196			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R197			RK73GB2A103J	CHIP R	10K	J	1/10W	
R198			RK73GB2A473J	CHIP R	47K	J	1/10W	
R199			RK73GB2A103J	CHIP R	10K	J	1/10W	
R200,201			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R202			RK73GB2A473J	CHIP R	47K	J	1/10W	
R203			RK73GB2A104J	CHIP R	100K	J	1/10W	
R204			RK73GB2A473J	CHIP R	47K	J	1/10W	
R205			RK73GB2A104J	CHIP R	100K	J	1/10W	
R206			RK73GB2A122J	CHIP R	1.2K	J	1/10W	
R207,208			RK73GB2A473J	CHIP R	47K	J	1/10W	
R210			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R211,212			RK73GB2A473J	CHIP R	47K	J	1/10W	
R215			RK73GB2A473J	CHIP R	47K	J	1/10W	
R216,217			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R218,219			RK73GB2A473J	CHIP R	47K	J	1/10W	
R220,221			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R222			RK73GB2A473J	CHIP R	47K	J	1/10W	
R230,231			RK73GB2A473J	CHIP R	47K	J	1/10W	
R232			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R233			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R234,235			RK73GB2A473J	CHIP R	47K	J	1/10W	
R237			RK73GB2A473J	CHIP R	47K	J	1/10W	
R240-243			RK73GB2A473J	CHIP R	47K	J	1/10W	
R245,246			RK73GB2A472J	CHIP R	4.7K	J	1/10W	
R247			RK73GB2A473J	CHIP R	47K	J	1/10W	
R249,250			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R251			RK73GB2A473J	CHIP R	47K	J	1/10W	
R254			RK73GB2A473J	CHIP R	47K	J	1/10W	
R261,262			RK73GB2A473J	CHIP R	47K	J	1/10W	
R267-271			RK73GB2A473J	CHIP R	47K	J	1/10W	
R273			RK73GB2A473J	CHIP R	47K	J	1/10W	
R275			RK73GB2A473J	CHIP R	47K	J	1/10W	
R277			RK73GB2A473J	CHIP R	47K	J	1/10W	
R279			RK73GB2A103J	CHIP R	10K	J	1/10W	
R281			RK73GB2A103J	CHIP R	10K	J	1/10W	
R283			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R286-288			RK73GB2A000J	CHIP R	0.0	J	1/10W	

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CONTROL UNIT (X53-4130-10)

Ref. No.	Address	New parts	Parts No.	Description				Destination
R289			RK73GB2A473J	CHIP R	47K	J	1/10W	
R290			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R292-294			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R296,297			RK73GB2A473J	CHIP R	47K	J	1/10W	
R299,300			RK73GB2A103J	CHIP R	10K	J	1/10W	
R301,302			RK73GB2A104J	CHIP R	100K	J	1/10W	
R303-315			RK73GB2A473J	CHIP R	47K	J	1/10W	
R316-338			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R340			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R342-351			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R352			RK73GB2A471J	CHIP R	470	J	1/10W	
R353-357			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R358			RK73GB2A122J	CHIP R	1.2K	J	1/10W	
R359			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R360			RK73GB2A122J	CHIP R	1.2K	J	1/10W	
R361-377			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R378,379			RK73GB2A122J	CHIP R	1.2K	J	1/10W	
R380			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R389-396			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R398-409			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R410			RK73GB2A684J	CHIP R	680K	J	1/10W	
R411			RK73GB2A224J	CHIP R	220K	J	1/10W	
R412			RK73GB2A103J	CHIP R	10K	J	1/10W	
R413			RK73GB2A104J	CHIP R	100K	J	1/10W	
R414			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R415-418			RK73GB2A104J	CHIP R	100K	J	1/10W	
R419,420			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R426			RS14KB3D220J	FL-PROOF RS	22	J	2W	
R428-430			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R432			RK73GB2A470J	CHIP R	47	J	1/10W	
R433			RK73GB2A473J	CHIP R	47K	J	1/10W	
R434			RK73GB2A470J	CHIP R	47	J	1/10W	
R435			RK73GB2A473J	CHIP R	47K	J	1/10W	
R436-446			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R448-454			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R455			RK73GB2A104J	CHIP R	100K	J	1/10W	
R457			RK73GB2A473J	CHIP R	47K	J	1/10W	
R458,459			RK73GB2A104J	CHIP R	100K	J	1/10W	
R460,461			RK73GB2A103J	CHIP R	10K	J	1/10W	
R467,468			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R469			RK73GB2A103J	CHIP R	10K	J	1/10W	
R470			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R471-473			RK73GB2A104J	CHIP R	100K	J	1/10W	
R474			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R475			RK73GB2A104J	CHIP R	100K	J	1/10W	
R477			RK73GB2A104J	CHIP R	100K	J	1/10W	
R478			RK73GB2A103J	CHIP R	10K	J	1/10W	
R479			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R482			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R484			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R491-495			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R501			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R502			RK73GB2A183J	CHIP R	18K	J	1/10W	
R507-510			RK73GB2A183J	CHIP R	18K	J	1/10W	
R511-515			RK73GB2A123J	CHIP R	12K	J	1/10W	
R522,523			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R524,525			RK73GB2A473J	CHIP R	47K	J	1/10W	
R526,527			RK73GB2A121J	CHIP R	120	J	1/10W	
R528-535			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R536			RK73GB2A104J	CHIP R	100K	J	1/10W	

Ref. No.	Address	New parts	Parts No.	Description				Destination
R540			RK73GB2A222J	CHIP R	2.2K	J	1/10W	
R541			RK73GB2A123J	CHIP R	12K	J	1/10W	
R550			RK73GB2A000J	CHIP R	0.0	J	1/10W	
D1,2		✻	CMS05-Q	DIODE				
D3,4			DA204U	DIODE				
D5			1SS355	DIODE				
D6		✻	02DZ18F-X	ZENER DIODE				
D7-11			DA204U	DIODE				
D12			1SS355	DIODE				
D13		✻	02DZ18F-X	ZENER DIODE				
D14-18			DA204U	DIODE				
D20			DA204U	DIODE				
D23			DA204U	DIODE				
D24		✻	SMD185F-2	VARISTOR				
D25			MINISMDC020F	VARISTOR				
D26			1SS388F	DIODE				
D28			1SS355	DIODE				
D29		✻	02DZ18F-X	ZENER DIODE				
D30			1SS355	DIODE				
D31		✻	02DZ18F-X	ZENER DIODE				
D32			1SS355	DIODE				
D33		✻	02DZ18F-X	ZENER DIODE				
D36,37			DA204U	DIODE				
D38,39			1SS388F	DIODE				
IC1			BU4094BCFV	MOS-IC				
IC2,3			BU4053BCFV	MOS-IC				
IC4			AK4550VTP	MOS-IC				
IC5		✻	NJM2732V	BI-POLAR IC				
IC6		✻	XC6209B332PR	MOS-IC				
IC7			TA75S01F-F	MOS-IC				
IC8			M62364FP-F	MOS-IC				
IC9		✻	NJM2734V	BI-POLAR IC				
IC10,11		✻	NJM2340RB1	MOS-IC				
IC12		✻	NJM2732V	BI-POLAR IC				
IC14			BU4053BCFV	MOS-IC				
IC15		✻	BA33BC0FP	MOS-IC				
IC16		✻	XC6209B502PR	MOS-IC				
IC17		✻	Note 1 (BGA)	ROM IC				
IC18		✻	XC6201P182MR	MOS-IC				
IC19		✻	NJM2732V	BI-POLAR IC				
IC20,21		✻	NJM2734V	BI-POLAR IC				
IC22			BU4094BCFV	MOS-IC				
IC23			TC7SH00FU-F	MOS-IC				
IC25			TC7S66FUF	MOS-IC				
IC27		✻	TC7SET126FU-F	MOS-IC				
IC28		✻	TC7SH126FU-F	MOS-IC				
IC29	2C		LA4425A	MOS-IC				
IC30			TC7SH00FU-F	MOS-IC				
IC31		✻	TC7MH4040FK-F	MOS-IC				
IC32,33		✻	TC7SH126FU-F	MOS-IC				
IC34		✻	3625MGP396GP	MICROPROCESSOR IC				
IC35			S24CS02AFJTBG	ROM IC				
IC36			TC7MET541AFK	MOS-IC				
IC37			320VC5402PGE	MICROPROCESSOR IC				
IC38			TC7SET08FU-F	MOS-IC				
IC39		✻	TC7SH125FU-F	MOS-IC				
IC40		✻	TC7SH126FU-F	MOS-IC				
IC41			TC7SH08FU-F	MOS-IC				
IC50			TC7SH08FU-F	MOS-IC				

If a part reference number is listed in a shaded box, that part does not come with the PCB.
Note 1 : This part cannot be replaced. Therefore, this part is not supplied as a service part.

PARTS LIST

CONTROL UNIT (X53-4130-10)
CONTROL UNIT (X53-4140-10)

Ref. No.	Address	New parts	Parts No.	Description	Destination
Q1			DTC114EUA	DIGITAL TRANSISTOR	
Q2,3			2SJ506-E(S)	FET	
Q4,5		✻	2SC4738F	TRANSISTOR	
Q6			DTC363EU	DIGITAL TRANSISTOR	
Q7,8			DTC114EUA	DIGITAL TRANSISTOR	
Q9			2SJ506-E(S)	FET	
Q10		✻	2SC4738F	TRANSISTOR	
Q11			2SD2114K(W)	TRANSISTOR	
Q12		✻	2SC4738F	TRANSISTOR	
Q13			2SD2114K(W)	TRANSISTOR	
Q14			2SC4116(Y)F	TRANSISTOR	
Q15		✻	2SA1586(Y)F	TRANSISTOR	
Q16			2SC4116(Y)F	TRANSISTOR	
Q17		✻	2SA1586(Y)F	TRANSISTOR	
Q18			2SK1830F	FET	
Q19			HN1L02FU(F)	FET	
Q20			2SA1955A-F	TRANSISTOR	
Q21			DTC144EUA	DIGITAL TRANSISTOR	
Q22			2SA1955A-F	TRANSISTOR	
Q23			DTC144EUA	DIGITAL TRANSISTOR	
Q25,26			DTC144EUA	DIGITAL TRANSISTOR	
Q27-29			2SD2114K(W)	TRANSISTOR	

CONTROL UNIT (X53-4140-10)

Ref. No.	Address	New parts	Parts No.	Description	Destination
C302			CC73HCH1H101J	CHIP C 100PF J	
C303			CK73HB1H102K	CHIP C 1000PF K	
C305			CK73HB1A104K	CHIP C 0.10UF K	
C306			CK73HB1H102K	CHIP C 1000PF K	
C308,309			CK73HB1H102K	CHIP C 1000PF K	
C311			CK73HB1A104K	CHIP C 0.10UF K	
C312-317			CK73HB1H102K	CHIP C 1000PF K	
C320			CC73HCH1H101J	CHIP C 100PF J	
C322,323			CK73HB1H102K	CHIP C 1000PF K	
C324			CC73HCH1H101J	CHIP C 100PF J	
C326-329			CK73HB1H102K	CHIP C 1000PF K	
C331			CK73HB1H102K	CHIP C 1000PF K	
C333-335			CK73HB1H102K	CHIP C 1000PF K	
C337			CK73HB1H102K	CHIP C 1000PF K	
C339			CC73HCH1H101J	CHIP C 100PF J	
C341,342			CK73HB1H102K	CHIP C 1000PF K	
C343			CC73HCH1H101J	CHIP C 100PF J	
C344			CK73HB1H102K	CHIP C 1000PF K	
C345			CC73HCH1H101J	CHIP C 100PF J	
C346-348			CK73HB1H102K	CHIP C 1000PF K	
C349			CC73HCH1H101J	CHIP C 100PF J	
C350			CK73HB1H102K	CHIP C 1000PF K	
C352			CK73HB1H102K	CHIP C 1000PF K	
C353			CC73HCH1H101J	CHIP C 100PF J	
C354			CK73HB1H102K	CHIP C 1000PF K	
C355			CK73HB1E103K	CHIP C 0.010UF K	
C356			CC73HCH1H101J	CHIP C 100PF J	
C357,358			CK73HB1H102K	CHIP C 1000PF K	
C359,360			CK73HB1A104K	CHIP C 0.10UF K	
C361			CK73HB1H102K	CHIP C 1000PF K	
C362			CK73HB1E103K	CHIP C 0.010UF K	
C364-366			CK73HB1H102K	CHIP C 1000PF K	
C369,370			CK73HB1H102K	CHIP C 1000PF K	
C371			CK73HB1A104K	CHIP C 0.10UF K	
C373,374			CK73HB1H102K	CHIP C 1000PF K	
C376-378			CK73HB1H102K	CHIP C 1000PF K	
C379			CK73HB1A104K	CHIP C 0.10UF K	
C380,381			CK73HB1H102K	CHIP C 1000PF K	
C383-386			CK73HB1H102K	CHIP C 1000PF K	
C387			CK73GB1H103K	CHIP C 0.010UF K	
C388-390			CK73HB1H102K	CHIP C 1000PF K	
C391			CK73GB1E105K	CHIP C 1.0UF K	
C393-395			CK73HB1H102K	CHIP C 1000PF K	
C396			CK73GB1H103K	CHIP C 0.010UF K	
C397,398			CK73HB1H102K	CHIP C 1000PF K	
C399			CK73GB1H104K	CHIP C 0.10UF K	
C401			CC73HCH1H101J	CHIP C 100PF J	
C402			CK73HB1H102K	CHIP C 1000PF K	
C403			CC73HCH1H101J	CHIP C 100PF J	
C405,406			CK73HB1H102K	CHIP C 1000PF K	
C409			CK73HB1H102K	CHIP C 1000PF K	
C410			CC73HCH1H101J	CHIP C 100PF J	
C412-415			CK73HB1H102K	CHIP C 1000PF K	
C416			CC73HCH1H101J	CHIP C 100PF J	
C417,418		✻	CE32AU1C330M	CHIP EL 33UF 16WV	
C419			CC73HCH1H101J	CHIP C 100PF J	
C420			CK73HB1A104K	CHIP C 0.10UF K	
C421			CK73HB1H102K	CHIP C 1000PF K	
C422		✻	CE32AU1C330M	CHIP EL 33UF 16WV	
C423			CC73HCH1H101J	CHIP C 100PF J	
C424			CK73HB1H102K	CHIP C 1000PF K	
C426-430			CK73HB1H102K	CHIP C 1000PF K	
C432			CC73HCH1H101J	CHIP C 100PF J	
C433			CK73HB1H102K	CHIP C 1000PF K	
C435-437			CK73HB1H102K	CHIP C 1000PF K	
C438			CK73GB1H103K	CHIP C 0.010UF K	
C439		✻	CE32AU1C330M	CHIP EL 33UF 16WV	
C440-442			CK73HB1H102K	CHIP C 1000PF K	
C443,444		✻	CE32AU1C330M	CHIP EL 33UF 16WV	
C445			CK73HB1A104K	CHIP C 0.10UF K	
C446			CK73FB1H102K	CHIP C 1000PF K	
C447			CK73HB1A104K	CHIP C 0.10UF K	
C448		✻	CE32AU1C330M	CHIP EL 33UF 16WV	
C449,450			CK73HB1A104K	CHIP C 0.10UF K	
C453			CK73GB1H103K	CHIP C 0.010UF K	
C461			CK73GB1H103K	CHIP C 0.010UF K	
C462			CK73HB1E103K	CHIP C 0.010UF K	
C463			CC73HCH1H100D	CHIP C 10PF D	
C465			CK73GB1H103K	CHIP C 0.010UF K	
C466			CK73GB1H104K	CHIP C 0.10UF K	
C467			CK73GB1H103K	CHIP C 0.010UF K	
C468			CK73GB1H104K	CHIP C 0.10UF K	
C469			CC73GCH1H121J	CHIP C 120PF J	
C471			CK73HB1H102K	CHIP C 1000PF K	
C474			CK73HB1H392K	CHIP C 3900PF K	
C475			CK73FB0J106K	CHIP C 10UF K	
C476			CK73HB1A104K	CHIP C 0.10UF K	
C477			CC73GCH1H121J	CHIP C 120PF J	
C478			CK73HB1H102K	CHIP C 1000PF K	
C479			CC73GCH1H121J	CHIP C 120PF J	
C480			CK73FB0J106K	CHIP C 10UF K	
C482			CK73HB1A104K	CHIP C 0.10UF K	
C484			CS77BA1C010M	CHIP TNTL 1UF 16WV	
C485			CK73GB1H103K	CHIP C 0.010UF K	

PARTS LIST

CONTROL UNIT (X53-4140-10)

Ref. No.	Address	New parts	Parts No.	Description			Destination
C486			CC73GCH1H121J	CHIP C	120PF	J	
C487			CK73HB1H102K	CHIP C	1000PF	K	
C491			CK73FB0J106K	CHIP C	10UF	K	
C493,494			CK73HB1A104K	CHIP C	0.10UF	K	
C495			CK73GB1E105K	CHIP C	1.0UF	K	
C496			CK73HB1C822K	CHIP C	8200PF	K	
C501			CK73HB1A104K	CHIP C	0.10UF	K	
C504			CK73HB1A104K	CHIP C	0.10UF	K	
C506			CK73HB1H472K	CHIP C	4700PF	K	
C507			CK73HB1E103K	CHIP C	0.010UF	K	
C508			CK73HB1A104K	CHIP C	0.10UF	K	
C509			CK73GB1E105K	CHIP C	1.0UF	K	
C515			CK73GB1E105K	CHIP C	1.0UF	K	
C516			CK73HB1H102K	CHIP C	1000PF	K	
C517			CK73HB1A104K	CHIP C	0.10UF	K	
C519			CK73HB1C473K	CHIP C	0.047UF	K	
C520			CK73GB1E105K	CHIP C	1.0UF	K	
C521			CK73HB1E103K	CHIP C	0.010UF	K	
C522-525			CK73HB1A104K	CHIP C	0.10UF	K	
C526-529			CK73FB0J106K	CHIP C	10UF	K	
C531			CK73HB1H102K	CHIP C	1000PF	K	
C532			CK73HB1A104K	CHIP C	0.10UF	K	
C533-536			CK73HB1H102K	CHIP C	1000PF	K	
C537			CK73FB0J106K	CHIP C	10UF	K	
C538,539			CK73HB1H102K	CHIP C	1000PF	K	
C543			CK73FB0J106K	CHIP C	10UF	K	
C544-546			CK73HB1H102K	CHIP C	1000PF	K	
C547			CK73FB0J106K	CHIP C	10UF	K	
C548			CK73HB1E103K	CHIP C	0.010UF	K	
C549			CC73HCH1H120G	CHIP C	12PF	G	
C550,551			CC73HCH1H100D	CHIP C	10PF	D	
C552			CC73HCH1H150J	CHIP C	15PF	J	
C553			CK73HB1E103K	CHIP C	0.010UF	K	
C557			CK73HB1H102K	CHIP C	1000PF	K	
C565			CK73FB0J106K	CHIP C	10UF	K	
C566			CK73HB1H102K	CHIP C	1000PF	K	
C567			CK73HB1E103K	CHIP C	0.010UF	K	
C569		*	CE32AU1C330M	CHIP EL	33UF	16WV	
C570,571			CK73HB1H102K	CHIP C	1000PF	K	
C572			CE32BM1E470M	CHIP EL	47UF	25WV	
C574			CK73HB1H102K	CHIP C	1000PF	K	
C575-588			CK73HB1E103K	CHIP C	0.010UF	K	
C590-601			CK73HB1E103K	CHIP C	0.010UF	K	
C700			CK73HB1E103K	CHIP C	0.010UF	K	
C701			CK73HB1A104K	CHIP C	0.10UF	K	
C702			CK73HB1H102K	CHIP C	1000PF	K	
C703			CC73HCH1H150J	CHIP C	15PF	J	
C704,705			CK73FB0J106K	CHIP C	10UF	K	
C706			CK73HB1H102K	CHIP C	1000PF	K	
C707			CC73HCH1H070D	CHIP C	7.0PF	D	
C708			CK73HB1A104K	CHIP C	0.10UF	K	
C709			CK73FB0J106K	CHIP C	10UF	K	
C710			CK73HB1E103K	CHIP C	0.010UF	K	
C711			CK73FB0J106K	CHIP C	10UF	K	
C712			CK73HB1H102K	CHIP C	1000PF	K	
C713			CK73HB1A104K	CHIP C	0.10UF	K	
C714			CK73FB0J106K	CHIP C	10UF	K	
C715			CK73HB1A104K	CHIP C	0.10UF	K	
C716			CK73HB1H102K	CHIP C	1000PF	K	
C717			CK73HB1A104K	CHIP C	0.10UF	K	

Ref. No.	Address	New parts	Parts No.	Description			Destination
C718			CC73HCH1H070D	CHIP C	7.0PF	D	
C719			CK73FB0J106K	CHIP C	10UF	K	
C720			CK73HB1A104K	CHIP C	0.10UF	K	
C721			CC73HCH1H100D	CHIP C	10PF	D	
C722,723			CK73HB1H102K	CHIP C	1000PF	K	
C724			CK73HB1A104K	CHIP C	0.10UF	K	
C725			CK73HB1H102K	CHIP C	1000PF	K	
C726			CK73FB0J106K	CHIP C	10UF	K	
C727			CC73HCH1H020B	CHIP C	2.0PF	B	
C728			CK73HB1E103K	CHIP C	0.010UF	K	
C729			CC73HCH1H020B	CHIP C	2.0PF	B	
C730			CK73HB1A104K	CHIP C	0.10UF	K	
C732			CK73HB1H102K	CHIP C	1000PF	K	
C733-741			CK73HB1A104K	CHIP C	0.10UF	K	
C742			CK73FB0J106K	CHIP C	10UF	K	
C743,744			CK73HB1A104K	CHIP C	0.10UF	K	
C746-750			CK73GB1E105K	CHIP C	1.0UF	K	
C751			CK73HB1E103K	CHIP C	0.010UF	K	
C754-758			CK73HB1A104K	CHIP C	0.10UF	K	
C767,768			CK73HB1H102K	CHIP C	1000PF	K	
C769			CK73FB0J106K	CHIP C	10UF	K	
C770-773			CK73HB1A104K	CHIP C	0.10UF	K	
C775			CK73HB1H102K	CHIP C	1000PF	K	
C776-780			CK73HB1E103K	CHIP C	0.010UF	K	
C781			CK73HB1A104K	CHIP C	0.10UF	K	
C782			CC73HCH1H120G	CHIP C	12PF	G	
C783			CC73HCH1H100D	CHIP C	10PF	D	
C784,785			CK73HB1A104K	CHIP C	0.10UF	K	
C786			CC73HCH1H150J	CHIP C	15PF	J	
C787			CC73HCH1H100D	CHIP C	10PF	D	
C788			CK73FB0J106K	CHIP C	10UF	K	
C789-793			CK73HB1A104K	CHIP C	0.10UF	K	
C794			CK73FB0J106K	CHIP C	10UF	K	
C795			CK73HB1A104K	CHIP C	0.10UF	K	
C796,797			CK73HB1E103K	CHIP C	0.010UF	K	
C798			CK73HB1A104K	CHIP C	0.10UF	K	
C801			CK73HB1H102K	CHIP C	1000PF	K	
C802,803			CK73HB1A104K	CHIP C	0.10UF	K	
C804			CK73FB0J106K	CHIP C	10UF	K	
C808			CK73HB1H102K	CHIP C	1000PF	K	
C809			CK73HB1A104K	CHIP C	0.10UF	K	
C812			CK73HB1A104K	CHIP C	0.10UF	K	
C813-815			CK73HB1H102K	CHIP C	1000PF	K	
C816-818			CK73HB1A104K	CHIP C	0.10UF	K	
C819			CK73HB1H102K	CHIP C	1000PF	K	
C820,821			CK73HB1A104K	CHIP C	0.10UF	K	
C822			CK73HB1H102K	CHIP C	1000PF	K	
C825			CK73HB1H102K	CHIP C	1000PF	K	
C826,827			CC73HCH1H101J	CHIP C	100PF	J	
C828			CK73HB1H102K	CHIP C	1000PF	K	
C829			CC73HCH1H101J	CHIP C	100PF	J	
C830			CK73HB1H102K	CHIP C	1000PF	K	
C831			CC73HCH1H101J	CHIP C	100PF	J	
C832			CK73HB1H102K	CHIP C	1000PF	K	
C833,834			CK73HB1A104K	CHIP C	0.10UF	K	
C835-837			CK73HB1H102K	CHIP C	1000PF	K	
C838,839			CC73HCH1H101J	CHIP C	100PF	J	
C841-848			CC73GCH1H470J	CHIP C	47PF	J	
C850			CC73GCH1H470J	CHIP C	47PF	J	
C851-869			CC73HCH1H470J	CHIP C	47PF	J	

PARTS LIST

CONTROL UNIT (X53-4140-10)

Ref. No.	Address	New parts	Parts No.	Description	Destination
C870-873			CK73HB1H102K	CHIP C 1000PF K	
CN300			E04-0193-05	PIN SOCKET	
CN302			E04-0193-05	PIN SOCKET	
CN400-402			E40-6656-05	PIN ASSY	
CN713			E41-2263-05	PIN ASSY	
J700		✻	E58-0516-05	MODULAR JACK	
J701		✻	E58-0515-05	RECTANGULAR RECEPTACLE	
J702,703		✻	E58-0533-05	MODULAR JACK	
L300-307		✻	L92-0447-05	BEADS CORE	
L308,309			L41-8285-33	SMALL FIXED INDUCTOR (0.82UH)	
L310			L41-1005-33	SMALL FIXED INDUCTOR (10UH)	
L311,312			L41-1595-33	SMALL FIXED INDUCTOR (1.5UH)	
L313-316		✻	L92-0447-05	BEADS CORE	
L317,318		✻	L33-1500-05	CHOKE COIL	
L319-325		✻	L92-0447-05	BEADS CORE	
L326-329			L92-0467-05	CHIP FERRITE	
X300		✻	L77-1988-05	VCXO (12.288MHZ)	
X301		✻	L77-1984-05	CRYSTAL RESONATOR (14.7456MHZ)	
X700		✻	L77-1985-05	CRYSTAL RESONATOR (25.8048MHZ)	
X701			L77-1802-05	CRYSTAL RESONATOR (32768HZ)	
X702		✻	L77-1986-05	CRYSTAL RESONATOR (25MHZ)	
CP716		✻	RK75HA1JR00J	CHIP-COM 0.00 J 1/16W	
CP718		✻	RK75HA1JR00J	CHIP-COM 0.00 J 1/16W	
CP720		✻	RK75HA1JR00J	CHIP-COM 0.00 J 1/16W	
CP737		✻	RK75HA1JR00J	CHIP-COM 0.00 J 1/16W	
CP739		✻	RK75HA1JR00J	CHIP-COM 0.00 J 1/16W	
CP743		✻	RK75HA1JR00J	CHIP-COM 0.00 J 1/16W	
CP747		✻	RK75HA1JR00J	CHIP-COM 0.00 J 1/16W	
CP750		✻	RK75HA1JR00J	CHIP-COM 0.00 J 1/16W	
CP760		✻	RK75HA1JR00J	CHIP-COM 0.00 J 1/16W	
CP762		✻	RK75HA1JR00J	CHIP-COM 0.00 J 1/16W	
CP768		✻	RK75HA1JR00J	CHIP-COM 0.00 J 1/16W	
CP775-778		✻	RK75HA1JR00J	CHIP-COM 0.00 J 1/16W	
CP783-798		✻	RK75HA1J390J	CHIP-COM 39 J 1/16W	
CP807-811		✻	RK75HA1J104J	CHIP-COM 100K J 1/16W	
CP813		✻	RK75HA1J104J	CHIP-COM 100K J 1/16W	
CP814,815		✻	RK75HA1JR00J	CHIP-COM 0.00 J 1/16W	
R300,301			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R302			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R303			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R309			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R311-317			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R318,319			RK73HB1J101J	CHIP R 100 J 1/16W	
R320-337			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R339			RK73HB1J473J	CHIP R 47K J 1/16W	
R340-350			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R352-354			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R356-360			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R361			RK73GB2A104J	CHIP R 100K J 1/10W	
R362			RK73GB2A681J	CHIP R 680 J 1/10W	
R363-386			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R387			RK73HB1J104J	CHIP R 100K J 1/16W	
R388-390			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R391			RK73GB2A100J	CHIP R 10 J 1/10W	
R392			RK73HB1J103J	CHIP R 10K J 1/16W	
R393-397			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R398			RK73HB1J104J	CHIP R 100K J 1/16W	
R399			RK73HB1J151J	CHIP R 150 J 1/16W	

Ref. No.	Address	New parts	Parts No.	Description	Destination
R401			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R403			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R404,405			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R406			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R408,409			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R410			RK73GB2A103J	CHIP R 10K J 1/10W	
R411			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R413			RK73GB2A103J	CHIP R 10K J 1/10W	
R414			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R415			RK73HB1J100J	CHIP R 10 J 1/16W	
R416			RK73HB1J104J	CHIP R 100K J 1/16W	
R417			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R418,419			RK73GB2A104J	CHIP R 100K J 1/10W	
R420			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R421			RK73HB1J100J	CHIP R 10 J 1/16W	
R423			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R424			RK73GB2A681J	CHIP R 680 J 1/10W	
R425			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R428			RK73GB2A100J	CHIP R 10 J 1/10W	
R429			RK73GB2A471J	CHIP R 470 J 1/10W	
R431			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R432			RK73GB2A220J	CHIP R 22 J 1/10W	
R433			RK73HB1J105J	CHIP R 1.0M J 1/16W	
R438			RK73GB2A100J	CHIP R 10 J 1/10W	
R439,440			RK73GB2A220J	CHIP R 22 J 1/10W	
R441			RK73HB1J823J	CHIP R 82K J 1/16W	
R442			RK73HB1J683J	CHIP R 68K J 1/16W	
R445			RK73HB1J393J	CHIP R 39K J 1/16W	
R446,447			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R448			RK73GB2A221J	CHIP R 220 J 1/10W	
R449			RK73HB1J683J	CHIP R 68K J 1/16W	
R451			RK73HB1J473J	CHIP R 47K J 1/16W	
R452-454			RK73HB1J100J	CHIP R 10 J 1/16W	
R457-461			RK73HB1J473J	CHIP R 47K J 1/16W	
R464			RK73HB1J472J	CHIP R 4.7K J 1/16W	
R469			RK73HB1J470J	CHIP R 47 J 1/16W	
R470			RK73HB1J102J	CHIP R 1.0K J 1/16W	
R474			RK73HB1J100J	CHIP R 10 J 1/16W	
R478			RK73HB1J100J	CHIP R 10 J 1/16W	
R479			RK73HB1J102J	CHIP R 1.0K J 1/16W	
R480			RK73HB1J100J	CHIP R 10 J 1/16W	
R481			RK73HB1J473J	CHIP R 47K J 1/16W	
R483			RK73HB1J104J	CHIP R 100K J 1/16W	
R484			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R485			RK73HB1J100J	CHIP R 10 J 1/16W	
R486-489			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R491-505			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R516-518			RK73HB1J473J	CHIP R 47K J 1/16W	
R521			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R522			RK73HB1J473J	CHIP R 47K J 1/16W	
R526			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R527			RK73HB1J473J	CHIP R 47K J 1/16W	
R528,529			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R530			RK73HB1J473J	CHIP R 47K J 1/16W	
R531,532			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R533,534			RK73HB1J473J	CHIP R 47K J 1/16W	
R535-539			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R540-542			RK73HB1J473J	CHIP R 47K J 1/16W	
R543			RK73HB1J000J	CHIP R 0.0 J 1/16W	
R546			RK73HB1J000J	CHIP R 0.0 J 1/16W	

PARTS LIST

CONTROL UNIT (X53-4140-10)

Ref. No.	Address	New parts	Parts No.	Description				Destination
R547,548			RK73HB1J473J	CHIP R	47K	J	1/16W	
R549			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R550			RK73HB1J473J	CHIP R	47K	J	1/16W	
R551,552			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R553-555			RK73HB1J473J	CHIP R	47K	J	1/16W	
R556,557			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R559			RK73HB1J102J	CHIP R	1.0K	J	1/16W	
R560			RK73HB1J103J	CHIP R	10K	J	1/16W	
R561			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R562			RK73HB1J103J	CHIP R	10K	J	1/16W	
R564-566			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R567			RK73HB1J473J	CHIP R	47K	J	1/16W	
R568			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R569			RK73HB1J224J	CHIP R	220K	J	1/16W	
R570			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R573-576			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R577,578			RK73HB1J473J	CHIP R	47K	J	1/16W	
R579			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R581			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R582			RK73HB1J473J	CHIP R	47K	J	1/16W	
R583			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R584			RK73HB1J473J	CHIP R	47K	J	1/16W	
R585,586			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R587			RK73HB1J473J	CHIP R	47K	J	1/16W	
R588			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R589			RK73HB1J473J	CHIP R	47K	J	1/16W	
R590			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R591			RK73HB1J223J	CHIP R	22K	J	1/16W	
R592-600			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R602			RK73HB1J103J	CHIP R	10K	J	1/16W	
R604			RK73HB1J103J	CHIP R	10K	J	1/16W	
R605-610			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R612-616			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R620-623			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R624			RK73HB1J473J	CHIP R	47K	J	1/16W	
R626			RK73HB1J473J	CHIP R	47K	J	1/16W	
R627			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R629-631			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R632			RK73HB1J101J	CHIP R	100	J	1/16W	
R634			RK73HB1J473J	CHIP R	47K	J	1/16W	
R635,636			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R637-640			RK73HB1J473J	CHIP R	47K	J	1/16W	
R641			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R642			RK73HB1J101J	CHIP R	100	J	1/16W	
R643			RK73HB1J473J	CHIP R	47K	J	1/16W	
R644			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R646			RK73HB1J473J	CHIP R	47K	J	1/16W	
R648			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R649			RK73HB1J101J	CHIP R	100	J	1/16W	
R650			RK73HB1J473J	CHIP R	47K	J	1/16W	
R651-653			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R656,657			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R660-664			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R667,668			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R672-674			RK73HB1J473J	CHIP R	47K	J	1/16W	
R678,679			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R680			RK73HB1J473J	CHIP R	47K	J	1/16W	
R685-687			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R690			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R700,701			RK73HB1J103J	CHIP R	10K	J	1/16W	

Ref. No.	Address	New parts	Parts No.	Description				Destination
R702,703			RK73HB1J473J	CHIP R	47K	J	1/16W	
R709,710			RK73HB1J104J	CHIP R	100K	J	1/16W	
R711			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R712-714			RK73HB1J100J	CHIP R	10	J	1/16W	
R715			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R716			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R718			RK73HB1J104J	CHIP R	100K	J	1/16W	
R719			RK73HB1J472J	CHIP R	4.7K	J	1/16W	
R720			RK73HB1J100J	CHIP R	10	J	1/16W	
R721			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R722			RK73HB1J472J	CHIP R	4.7K	J	1/16W	
R725,726			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R727			RK73HB1J103J	CHIP R	10K	J	1/16W	
R729,730			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R731			RK73HB1J103J	CHIP R	10K	J	1/16W	
R732			RK73HB1J390J	CHIP R	39	J	1/16W	
R733			RK73HB1J104J	CHIP R	100K	J	1/16W	
R734			RK73HB1J102J	CHIP R	1.0K	J	1/16W	
R735,736			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R738			RK73HB1J104J	CHIP R	100K	J	1/16W	
R742			RK73HB1J104J	CHIP R	100K	J	1/16W	
R743,744			RK73HB1J153J	CHIP R	15K	J	1/16W	
R745			RK73HB1J104J	CHIP R	100K	J	1/16W	
R751			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R754			RK73HB1J103J	CHIP R	10K	J	1/16W	
R756			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R758			RK73HB1J103J	CHIP R	10K	J	1/16W	
R759			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R760			RK73HB1J103J	CHIP R	10K	J	1/16W	
R761-765			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R766			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R767			RK73HB1J102J	CHIP R	1.0K	J	1/16W	
R768-770			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R772-777			RK73HB1J104J	CHIP R	100K	J	1/16W	
R778			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R779			RK73HB1J104J	CHIP R	100K	J	1/16W	
R780			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R781-784			RK73HB1J104J	CHIP R	100K	J	1/16W	
R785			RK73HB1J272J	CHIP R	2.7K	J	1/16W	
R786-788			RK73HB1J104J	CHIP R	100K	J	1/16W	
R794			RK73HB1J104J	CHIP R	100K	J	1/16W	
R796			RK73HB1J104J	CHIP R	100K	J	1/16W	
R799-803			RK73HB1J104J	CHIP R	100K	J	1/16W	
R805-808			RK73HB1J103J	CHIP R	10K	J	1/16W	
R816			RK73HB1J105J	CHIP R	1.0M	J	1/16W	
R817			RK73HB1J821J	CHIP R	820	J	1/16W	
R818			RK73HB1J104J	CHIP R	100K	J	1/16W	
R819			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R820			RK73HB1J103J	CHIP R	10K	J	1/16W	
R821			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R822			RK73HB1J103J	CHIP R	10K	J	1/16W	
R824			RK73HB1J103J	CHIP R	10K	J	1/16W	
R826			RK73HB1J103J	CHIP R	10K	J	1/16W	
R827			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R828			RK73HB1J104J	CHIP R	100K	J	1/16W	
R829		✻	RK73HH1J113D	CHIP R	11K	D	1/16W	
R830			RK73HB1J104J	CHIP R	100K	J	1/16W	
R832			RK73HB1J104J	CHIP R	100K	J	1/16W	
R833			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R834			RK73HB1J104J	CHIP R	100K	J	1/16W	

PARTS LIST

CONTROL UNIT (X53-4140-10)
RX UNIT (X55-3090-10)

Ref. No.	Address	New parts	Parts No.	Description				Destination
R835			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R837		✻	RK73GH2A49R9D	CHIP R	49.9	D	1/10W	
R839			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R840		✻	RK73GH2A49R9D	CHIP R	49.9	D	1/10W	
R842-845			RK73HB1J104J	CHIP R	100K	J	1/16W	
R867,868		✻	RK73GH2A24R9D	CHIP R	24.9	D	1/10W	
R869			RK73HB1J331J	CHIP R	330	J	1/16W	
R870			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R871-873			RK73HB1J103J	CHIP R	10K	J	1/16W	
R874			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R875,876		✻	RK73GH2A24R9D	CHIP R	24.9	D	1/10W	
R877,878			RK73HB1J103J	CHIP R	10K	J	1/16W	
R879			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R880,881			RK73HB1J104J	CHIP R	100K	J	1/16W	
R883-885			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R886			RK73HB1J221J	CHIP R	220	J	1/16W	
R887			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R888			RK73HB1J221J	CHIP R	220	J	1/16W	
R889			RK73HB1J103J	CHIP R	10K	J	1/16W	
R890			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R891			RK73HB1J104J	CHIP R	100K	J	1/16W	
R892,893			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R894			RK73HB1J103J	CHIP R	10K	J	1/16W	
R895			RK73HB1J151J	CHIP R	150	J	1/16W	
R896			RK73HB1J101J	CHIP R	100	J	1/16W	
R897			RK73HB1J104J	CHIP R	100K	J	1/16W	
R902,903			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R907			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R909			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R910			RK73HB1J473J	CHIP R	47K	J	1/16W	
R911			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R912			RK73HB1J473J	CHIP R	47K	J	1/16W	
R913,914			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R915			RK73HB1J473J	CHIP R	47K	J	1/16W	
R916-923			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R924			RK73HB1J104J	CHIP R	100K	J	1/16W	
R926			RK73HB1J473J	CHIP R	47K	J	1/16W	
R927-933			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R934,935			RK73HB1J474J	CHIP R	470K	J	1/16W	
R936			RK73HB1J104J	CHIP R	100K	J	1/16W	
R942			RK73HB1J104J	CHIP R	100K	J	1/16W	
R943			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R945-950			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R951			RK73HB1J104J	CHIP R	100K	J	1/16W	
R952,953			RK73HB1J000J	CHIP R	0.0	J	1/16W	
R954-957			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R960			RK73GB2A000J	CHIP R	0.0	J	1/10W	
S700		✻	S79-0473-05	DIP SWITCHES				
D300			1SS388F	DIODE				
D701			1SS388F	DIODE				
D702			1SS355	DIODE				
IC300,301		✻	TC7SET126FU-F	MOS-IC				
IC302		✻	SN65HVD485EDR	MOS-IC				
IC303			BU4829FVE	MOS-IC				
IC304		✻	TC7SH125FU-F	MOS-IC				
IC305		✻	XC6209B332PR	MOS-IC				
IC306		✻	BA15BC0FP	MOS-IC				
IC307		✻	XC6201P152PR	MOS-IC				

Ref. No.	Address	New parts	Parts No.	Description				Destination
IC308			XC61CN2702N	MOS-IC				
IC309			AK4550VTP	MOS-IC				
IC312		✻	ADCS7476AIMF	MOS-IC				
IC313			TC7WU04FK-F	MOS-IC				
IC314		✻	Note 1 (BGA)	ROM IC				
IC315		✻	ADF4001BRUZ	MOS-IC				
IC318		✻	TC7SH126FU-F	MOS-IC				
IC319-321		✻	TC7SET126FU-F	MOS-IC				
IC323,324			Note 1 (BGA)	MICROPROCESSOR IC				
IC325		✻	3625MGP396GP	MICROPROCESSOR IC				
IC327			TC7SH08FU-F	MOS-IC				
IC329	1C	✻	BA33DD0WT	MOS-IC				
IC330		✻	TC7SH126FU-F	MOS-IC				
IC700		✻	62167DV30LL55	SRAM IC				
IC701			RV5C386A	MOS-IC				
IC702		✻	29PL127JKCDB	ROM IC				
IC703		✻	Note 1 (BGA)	MICROPROCESSOR IC				
IC704		✻	48LC8M16A2P75I	DRAM IC				
IC705		✻	ADM3202ARUZ	MOS-IC				
IC707		✻	48LC8M16A2P75I	DRAM IC				
IC708			BU4829FVE	MOS-IC				
IC709		✻	TC7SH126FU-F	MOS-IC				
IC710,711			TC7SH00FU-F	MOS-IC				
IC712,713			TC7SH32FU-F	MOS-IC				
IC714-716		✻	TC7MA244FK	MOS-IC				
IC717,718		✻	TC7MA245FK	MOS-IC				
IC719		✻	LAN91C111I-NU	MOS-IC				
IC720			AT93C4610SU1.8	ROM IC				
IC721			TC7SH08FU-F	MOS-IC				
IC722			TC7SH32FU-F	MOS-IC				
IC723			TC7SH00FU-F	MOS-IC				
IC724		✻	TC7SH125FU-F	MOS-IC				
IC725		✻	TC7SH126FU-F	MOS-IC				
IC726			TC7SH08FU-F	MOS-IC				
IC727,728		✻	TC7SH126FU-F	MOS-IC				
Q300			2SC4738(GR)F	TRANSISTOR				
Q301			DTC114EUA	DIGITAL TRANSISTOR				
Q302			2SA1955A-F	TRANSISTOR				
Q303			DTA144EUA	DIGITAL TRANSISTOR				
Q304,305			2SC4738(GR)F	TRANSISTOR				
Q307,308			2SC4738(GR)F	TRANSISTOR				
Q309			SSM6N16FE-F	FET				
Q700			2SC4738(GR)F	TRANSISTOR				
Q702			2SC4738(GR)F	TRANSISTOR				
Q704,705			2SC4738(GR)F	TRANSISTOR				
Q706			DTC114EUA	DIGITAL TRANSISTOR				
Q707			DTC144EUA	DIGITAL TRANSISTOR				
BA300		✻	W09-1004-05	LITHIUM CELL				

RX UNIT (X55-3090-10)

D21			B30-2230-05	LED (1608/YG/8)				
C10			CK73GB1H102K	CHIP C	1000PF	K		
C12			CC73GCH1H080D	CHIP C	8.0PF	D		
C14			CK73GB1H102K	CHIP C	1000PF	K		
C15			CK73GB1H104K	CHIP C	0.10UF	K		
C17			CK73GB1H102K	CHIP C	1000PF	K		

If a part reference number is listed in a shaded box, that part does not come with the PCB.
Note 1 : This part cannot be replaced. Therefore, this part is not supplied as a service part.

PARTS LIST

RX UNIT (X55-3090-10)

Ref. No.	Address	New parts	Parts No.	Description			Destination
C18			CK73GB1H104K	CHIP C	0.10UF	K	
C19			CK73GB1H102K	CHIP C	1000PF	K	
C25			CK73GB1H104K	CHIP C	0.10UF	K	
C26			CK73GB1H471K	CHIP C	470PF	K	
C27			CK73GB1H102K	CHIP C	1000PF	K	
C31			CS77BA1E010M	CHIP TNTL	1UF	25WV	
C32			CC73GCH1H151J	CHIP C	150PF	J	
C33			CC73GCH1H271J	CHIP C	270PF	J	
C35			CK73GB1H471K	CHIP C	470PF	K	
C36			CK73GB1H102K	CHIP C	1000PF	K	
C37			CK73FB1E224K	CHIP C	0.22UF	K	
C38			CS77CA1VR33M	CHIP TNTL	0.33UF	35WV	
C39			CC73GCH1H271J	CHIP C	270PF	J	
C41,42			CK73GB1H102K	CHIP C	1000PF	K	
C43			CC73GCH1H561J	CHIP C	560PF	J	
C44			CK73GB1H103K	CHIP C	0.010UF	K	
C45			CK73GB1H104K	CHIP C	0.10UF	K	
C46			CC73GCH1H561J	CHIP C	560PF	J	
C47			CK73GB1H102K	CHIP C	1000PF	K	
C48			CK73GB1H104K	CHIP C	0.10UF	K	
C50			CE32BM1E470M	CHIP EL	47UF	25WV	
C51			CK73GB1H104K	CHIP C	0.10UF	K	
C53			CC73GCH1H271J	CHIP C	270PF	J	
C54			CC73GCH1H101J	CHIP C	100PF	J	
C55			CC73GCH1H120J	CHIP C	12PF	J	
C56			CC73GCH1H271J	CHIP C	270PF	J	
C58		✻	CS77CB21A470M	CHIP TNTL	47UF	10WV	
C59			CK73GB1H104K	CHIP C	0.10UF	K	
C60,61			CK73GB1H102K	CHIP C	1000PF	K	
C62-66			CK73GB1H104K	CHIP C	0.10UF	K	
C67		✻	CS77CB21A470M	CHIP TNTL	47UF	10WV	
C68			CC73GCH1H101J	CHIP C	100PF	J	
C69			CK73GB1H102K	CHIP C	1000PF	K	
C70		✻	CS77CC1C330M	CHIP TNTL	33UF	16WV	
C71			CC73GCH1H271J	CHIP C	270PF	J	
C74			CC73GCH1H271J	CHIP C	270PF	J	
C75		✻	CS77CC1C330M	CHIP TNTL	33UF	16WV	
C76			CC73GCH1H561J	CHIP C	560PF	J	
C77			CK73GB1H104K	CHIP C	0.10UF	K	
C79			CS77BA1E010M	CHIP TNTL	1UF	25WV	
C80			CC73GCH1H561J	CHIP C	560PF	J	
C81			CK73GB1H104K	CHIP C	0.10UF	K	
C82			CC73GCH1H271J	CHIP C	270PF	J	
C83-85			CK73GB1H102K	CHIP C	1000PF	K	
C86			CC73GCH1H271J	CHIP C	270PF	J	
C87			CK73GB1H104K	CHIP C	0.10UF	K	
C88			CK73GB1H103K	CHIP C	0.010UF	K	
C89			CC73GCH1H070B	CHIP C	7.0PF	B	
C90			CK73GB1H103K	CHIP C	0.010UF	K	
C91			CC73GCH1H050B	CHIP C	5.0PF	B	
C92			CC73GCH1H070B	CHIP C	7.0PF	B	
C93			CC73GCH1H060B	CHIP C	6.0PF	B	
C94			CC73GCH1H050B	CHIP C	5.0PF	B	
C95			CC73GCH1H080B	CHIP C	8.0PF	B	
C96			CE32BM1E470M	CHIP EL	47UF	25WV	
C97			CK73GB1H104K	CHIP C	0.10UF	K	
C98,99			CK73GB1H102K	CHIP C	1000PF	K	
C100			CK73GB1H103K	CHIP C	0.010UF	K	
C102			CK73GB1H102K	CHIP C	1000PF	K	
C103			CC73GCH1H120J	CHIP C	12PF	J	

Ref. No.	Address	New parts	Parts No.	Description			Destination
C104			CK73GB1H102K	CHIP C	1000PF	K	
C105			CC73GCH1H060B	CHIP C	6.0PF	B	
C106			CC73GCH1H050B	CHIP C	5.0PF	B	
C107			CC73GCH1H330J	CHIP C	33PF	J	
C108			CC73GCH1H560J	CHIP C	56PF	J	
C109,110			CK73GB1H103K	CHIP C	0.010UF	K	
C112			CC73GCH1H220J	CHIP C	22PF	J	
C113			CC73GCH1H070B	CHIP C	7.0PF	B	
C114			CC73GCH1H060B	CHIP C	6.0PF	B	
C115			CC73GCH1H150J	CHIP C	15PF	J	
C116			CC73GCH1H560J	CHIP C	56PF	J	
C117			CC73GCH1H121J	CHIP C	120PF	J	
C118-120			CK73GB1H102K	CHIP C	1000PF	K	
C122			CC73GCH1H150J	CHIP C	15PF	J	
C123			CC73GCH1H080B	CHIP C	8.0PF	B	
C124			CC73GCH1H070B	CHIP C	7.0PF	B	
C125			CC73GCH1H150J	CHIP C	15PF	J	
C126			CK73GB1H104K	CHIP C	0.10UF	K	
C128			CC73GCH1H560J	CHIP C	56PF	J	
C129,130			CK73GB1H103K	CHIP C	0.010UF	K	
C131		✻	CS77CC1C330M	CHIP TNTL	33UF	16WV	
C132-134			CK73GB1H102K	CHIP C	1000PF	K	
C137			CC73GCH1H120J	CHIP C	12PF	J	
C138			CC73GCH1H330J	CHIP C	33PF	J	
C139			CE32BM1E470M	CHIP EL	47UF	25WV	
C140,141			CK73GB1H103K	CHIP C	0.010UF	K	
C142,143			CC73FCH1H0R5B	CHIP C	0.5PF	B	
C144-146			CK73GB1H104K	CHIP C	0.10UF	K	
C147		✻	CS77CC1C330M	CHIP TNTL	33UF	16WV	
C149,150			CC73GCH1H180J	CHIP C	18PF	J	
C151			CC73GCH1H150J	CHIP C	15PF	J	
C152			CC73GCH1H030C	CHIP C	3.0PF	C	
C153			CC73GCH1H060D	CHIP C	6.0PF	D	
C154,155			CK73GB1H104K	CHIP C	0.10UF	K	
C156			CC73GCH1H150J	CHIP C	15PF	J	
C157,158			CK73GB1H102K	CHIP C	1000PF	K	
C159,160			CK73GB1H104K	CHIP C	0.10UF	K	
C161			CC73GCH1H030C	CHIP C	3.0PF	C	
C162			CC73GCH1H060D	CHIP C	6.0PF	D	
C164			CK73GB1H104K	CHIP C	0.10UF	K	
C165			CS77CB21C100M	CHIP TNTL	10UF	16WV	
C166,167			CC73GCH1H180J	CHIP C	18PF	J	
C168			CK73GB1H102K	CHIP C	1000PF	K	
C169			CC73GCH1H270J	CHIP C	27PF	J	
C170,171			CK73GB1H104K	CHIP C	0.10UF	K	
C172			CK73GB1H473K	CHIP C	0.047UF	K	
C173,174			CK73GB1H103K	CHIP C	0.010UF	K	
C175			CC73GCH1H101J	CHIP C	100PF	J	
C176			CK73GB1H104K	CHIP C	0.10UF	K	
C177-179			CK73GB1H102K	CHIP C	1000PF	K	
C180			CK73GB1H104K	CHIP C	0.10UF	K	
C183		✻	CE32AU1E100M	CHIP EL	10UF	25WV	
C185,186			CK73GB1H102K	CHIP C	1000PF	K	
C187			CC73GCH1H150J	CHIP C	15PF	J	
C188			CK73GB1H103K	CHIP C	0.010UF	K	
C192			CK73GB1H102K	CHIP C	1000PF	K	
C193			CK73GB1H104K	CHIP C	0.10UF	K	
C194			CC73GCH1H270J	CHIP C	27PF	J	
C195			CK73GB1H102K	CHIP C	1000PF	K	
C196,197			CK73GB1H103K	CHIP C	0.010UF	K	

PARTS LIST

RX UNIT (X55-3090-10)

Ref. No.	Address	New parts	Parts No.	Description			Destination
C198			CK73GB1H102K	CHIP C	1000PF	K	
C199			CK73GB1H103K	CHIP C	0.010UF	K	
C203,204			CK73GB1H102K	CHIP C	1000PF	K	
C206			CC73GCH1H150J	CHIP C	15PF	J	
C211,212			CK73GB1H103K	CHIP C	0.010UF	K	
C213			CK73GB1H473K	CHIP C	0.047UF	K	
C214			CC73GCH1H150J	CHIP C	15PF	J	
C215			CK73GB1H103K	CHIP C	0.010UF	K	
C216			CK73GB1H473K	CHIP C	0.047UF	K	
C217			CK73GB1H104K	CHIP C	0.10UF	K	
C218			CK73GB1H473K	CHIP C	0.047UF	K	
C220			CC73GCH1H150J	CHIP C	15PF	J	
C221,222			CK73GB1H104K	CHIP C	0.10UF	K	
C223			CK73GB1H103K	CHIP C	0.010UF	K	
C224			CK73GB1H104K	CHIP C	0.10UF	K	
C225			CK73GB1H473K	CHIP C	0.047UF	K	
C227			CK73GB1H102K	CHIP C	1000PF	K	
C228,229			CK73FB1E474K	CHIP C	0.47UF	K	
C230			CC73GCH1H820J	CHIP C	82PF	J	
C231			CK73GB1H473K	CHIP C	0.047UF	K	
C232			CC73GCH1H101J	CHIP C	100PF	J	
C233			CK73GB1H473K	CHIP C	0.047UF	K	
C234,235			CC73GCH1H270J	CHIP C	27PF	J	
C236			CK73GB1H104K	CHIP C	0.10UF	K	
C237			CK73GB1H102K	CHIP C	1000PF	K	
C239		✻	CE32AU1C330M	CHIP EL	33UF	16WV	
C240			CS77CB21C100M	CHIP TNTL	10UF	16WV	
C241,242			CC73GCH1H150J	CHIP C	15PF	J	
C243			CC73GCH1H820J	CHIP C	82PF	J	
C244			CC73GCH1H330J	CHIP C	33PF	J	
C245			CK73GB1H102K	CHIP C	1000PF	K	
C248			CK73GB1H102K	CHIP C	1000PF	K	
C249			CC73GCH1H150J	CHIP C	15PF	J	
C250,251			CK73GB1H104K	CHIP C	0.10UF	K	
C252			CC73GCH1H151J	CHIP C	150PF	J	
C253			CC73GCH1H010C	CHIP C	1.0PF	C	
C254			CC73GCH1H030C	CHIP C	3.0PF	C	
C255			CK73GB1H104K	CHIP C	0.10UF	K	
C256			CK73GB1H102K	CHIP C	1000PF	K	
C257			CK73GB1H103K	CHIP C	0.010UF	K	
C258			CK73GB1H473K	CHIP C	0.047UF	K	
C260			CK73GB1H102K	CHIP C	1000PF	K	
C261			CK73GB1H103K	CHIP C	0.010UF	K	
C262,263			CK73GB1H102K	CHIP C	1000PF	K	
C264			CS77CA1ER47M	CHIP TNTL	0.47UF	25WV	
C265			CC73GCH1H470J	CHIP C	47PF	J	
C266,267			CK73GB1H102K	CHIP C	1000PF	K	
C268,269			CK73GB1H473K	CHIP C	0.047UF	K	
C270		✻	CS77CA1DR68M	CHIP TNTL	0.68UF	20WV	
C271			CK73GB1H102K	CHIP C	1000PF	K	
C272			CK73GB1H104K	CHIP C	0.10UF	K	
C273			CC73GCH1H220J	CHIP C	22PF	J	
C274			CK73GB1H473K	CHIP C	0.047UF	K	
C277			CK73GB1H102K	CHIP C	1000PF	K	
C278			CC73GCH1H151J	CHIP C	150PF	J	
C279			CK73GB1H473K	CHIP C	0.047UF	K	
C280			CC73GCH1H080B	CHIP C	8.0PF	B	
C281			CC73GCH1H030B	CHIP C	3.0PF	B	
C282		✻	CS77CB21C150M	CHIP TNTL	15UF	16WV	
C284			CK73GB1H473K	CHIP C	0.047UF	K	

Ref. No.	Address	New parts	Parts No.	Description			Destination
C285			CC73GCH1H470J	CHIP C	47PF	J	
C287			CC73GCH1H390J	CHIP C	39PF	J	
C288,289			CC73GCH1H150J	CHIP C	15PF	J	
C290,291			CK73GB1H473K	CHIP C	0.047UF	K	
C292			CE32CL1V100M	CHIP EL	10UF	35WV	
C293			CC73GCH1H151J	CHIP C	150PF	J	
C295			CK73GB1H102K	CHIP C	1000PF	K	
C296		✻	CS77CA1DR68M	CHIP TNTL	0.68UF	20WV	
C297			CC73GCH1H151J	CHIP C	150PF	J	
C298			CK73GB1H102K	CHIP C	1000PF	K	
C300			CC73GCH1H220G	CHIP C	22PF	G	
C301			CK73GB1H473K	CHIP C	0.047UF	K	
C303,304			CK73GB1H473K	CHIP C	0.047UF	K	
C305			CC73GCH1H151J	CHIP C	150PF	J	
C306			CK73GB1H102K	CHIP C	1000PF	K	
C307,308			CK73GB1H103K	CHIP C	0.010UF	K	
C309			CK73GB1H471K	CHIP C	470PF	K	
C310			CK73GB1H102K	CHIP C	1000PF	K	
C314			CK73GB1H104K	CHIP C	0.10UF	K	
C315			CC73GCH1H270G	CHIP C	27PF	G	
C316			CK73GB1H473K	CHIP C	0.047UF	K	
C317			CC73GCH1H151J	CHIP C	150PF	J	
C318,319			CK73GB1H103K	CHIP C	0.010UF	K	
C320			CE32BM1E470M	CHIP EL	47UF	25WV	
C324			CK73GB1H102K	CHIP C	1000PF	K	
C325			CC73GCH1H270G	CHIP C	27PF	G	
C326			CC73GCH1H151J	CHIP C	150PF	J	
C327			CK73GB1H102K	CHIP C	1000PF	K	
C329			CK73GB1H103K	CHIP C	0.010UF	K	
C330			CK73GB1H102K	CHIP C	1000PF	K	
C331			CC73GCH1H020B	CHIP C	2.0PF	B	
C332			CK73GB1H104K	CHIP C	0.10UF	K	
C333			CC73GCH1H151J	CHIP C	150PF	J	
C334,335			CK73GB1H103K	CHIP C	0.010UF	K	
C336			CK73GB1H102K	CHIP C	1000PF	K	
C337			CC73GCH1H560J	CHIP C	56PF	J	
C340		✻	CS77CC1C330M	CHIP TNTL	33UF	16WV	
C341,342			CK73GB1H473K	CHIP C	0.047UF	K	
C343			CC73GCH1H220J	CHIP C	22PF	J	
C347,348			CK73GB1H103K	CHIP C	0.010UF	K	
C349			CC73GCH1H121J	CHIP C	120PF	J	
C350		✻	CS77CC1C330M	CHIP TNTL	33UF	16WV	
C351			CK73GB1H102K	CHIP C	1000PF	K	
C352			CK73GB1H473K	CHIP C	0.047UF	K	
C353			CK73GB1H102K	CHIP C	1000PF	K	
C355			CK73GB1H103K	CHIP C	0.010UF	K	
C356			CK73GB1H473K	CHIP C	0.047UF	K	
C357			CK73GB1H103K	CHIP C	0.010UF	K	
C358			CK73GB1H473K	CHIP C	0.047UF	K	
C359-361			CK73GB1H102K	CHIP C	1000PF	K	
C362			CC73GCH1H270J	CHIP C	27PF	J	
C363			CK73GB1H473K	CHIP C	0.047UF	K	
C365,366			CK73GB1H104K	CHIP C	0.10UF	K	
C367			CC73GCH1H560J	CHIP C	56PF	J	
C368			CC73GCH1H330J	CHIP C	33PF	J	
C369,370			CK73FB1E474K	CHIP C	0.47UF	K	
C371			CK73GB1H102K	CHIP C	1000PF	K	
C372			CK73GB1H473K	CHIP C	0.047UF	K	
C373			CK73GB1H103K	CHIP C	0.010UF	K	
C375			CK73GB1H103K	CHIP C	0.010UF	K	

PARTS LIST

RX UNIT (X55-3090-10)

Ref. No.	Address	New parts	Parts No.	Description			Destination
C377			CK73GB1H103K	CHIP C	0.010UF	K	
C379			CC73GCH1H121J	CHIP C	120PF	J	
C380			CC73GCH1H560J	CHIP C	56PF	J	
C381			CE32BM1E470M	CHIP EL	47UF	25WV	
C382,383			CK73GB1H104K	CHIP C	0.10UF	K	
C385,386			CK73GB1H104K	CHIP C	0.10UF	K	
C387			CC73GCH1H270J	CHIP C	27PF	J	
C388			CC73GCH1H820J	CHIP C	82PF	J	
C389			CK73GB1H473K	CHIP C	0.047UF	K	
C390			CK73GB1H104K	CHIP C	0.10UF	K	
C391,392			CK73GB1H103K	CHIP C	0.010UF	K	
C394,395			CK73GB1H102K	CHIP C	1000PF	K	
C396-398			CK73GB1H104K	CHIP C	0.10UF	K	
C400			CC73GCH1H220J	CHIP C	22PF	J	
C401			CK73GB1H473K	CHIP C	0.047UF	K	
C402			CC73GCH1H560J	CHIP C	56PF	J	
C403			CK73GB1H104K	CHIP C	0.10UF	K	
C405			CK73GB1H102K	CHIP C	1000PF	K	
C406			CK73GB1H103K	CHIP C	0.010UF	K	
C407			CC73GCH1H560J	CHIP C	56PF	J	
C408			CC73GCH1H220J	CHIP C	22PF	J	
C409			CK73GB1H102K	CHIP C	1000PF	K	
C410			CK73GB1H104K	CHIP C	0.10UF	K	
C411			CC73GCH1H121J	CHIP C	120PF	J	
C412			CK73GB1H104K	CHIP C	0.10UF	K	
C413			CK73GB1H103K	CHIP C	0.010UF	K	
C414			CK73GB1H104K	CHIP C	0.10UF	K	
C415,416			CK73GB1H103K	CHIP C	0.010UF	K	
C417			CK73GB1H104K	CHIP C	0.10UF	K	
C418,419			CK73GB1H103K	CHIP C	0.010UF	K	
C420			CK73GB1H102K	CHIP C	1000PF	K	
C421,422			CK73GB1H473K	CHIP C	0.047UF	K	
C423,424			CK73GB1H103K	CHIP C	0.010UF	K	
C425			CK73GB1H104K	CHIP C	0.10UF	K	
C427			CK73FB1E474K	CHIP C	0.47UF	K	
C428,429			CC73GCH1H560J	CHIP C	56PF	J	
C430			CK73GB1H102K	CHIP C	1000PF	K	
C431			CK73GB1H473K	CHIP C	0.047UF	K	
C432			CK73GB1H102K	CHIP C	1000PF	K	
C434,435			CK73GB1H473K	CHIP C	0.047UF	K	
C437			CK73GB1H102K	CHIP C	1000PF	K	
C438			CK73GB1H473K	CHIP C	0.047UF	K	
C439			CK73GB1H104K	CHIP C	0.10UF	K	
C440-442			CK73FB1E474K	CHIP C	0.47UF	K	
C443,444			CK73GB1H473K	CHIP C	0.047UF	K	
C446		✻	CE32AU1E100M	CHIP EL	10UF	25WV	
C447			CK73FB1E474K	CHIP C	0.47UF	K	
C448			CK73GB1H104K	CHIP C	0.10UF	K	
C449			CK73GB1H473K	CHIP C	0.047UF	K	
C450,451			CK73FB1E474K	CHIP C	0.47UF	K	
C452,453			CK73GB1H104K	CHIP C	0.10UF	K	
C454,455			CK73FB1E474K	CHIP C	0.47UF	K	
C456			CK73GB1H473K	CHIP C	0.047UF	K	
C458			CK73GB1H104K	CHIP C	0.10UF	K	
C459			CC73GCH1H221J	CHIP C	220PF	J	
C460			CK73FB1E474K	CHIP C	0.47UF	K	
C461			CC73GCH1H221J	CHIP C	220PF	J	
C462			CK73GB1H104K	CHIP C	0.10UF	K	
C463-465			CK73FB1E474K	CHIP C	0.47UF	K	
C466			CK73GB1H473K	CHIP C	0.047UF	K	

Ref. No.	Address	New parts	Parts No.	Description			Destination
C467			CK73GB1H102K	CHIP C	1000PF	K	
C468			CK73GB1H104K	CHIP C	0.10UF	K	
C469			CK73GB1H473K	CHIP C	0.047UF	K	
C470			CK73GB1H471K	CHIP C	470PF	K	
C471,472			CK73GB1H104K	CHIP C	0.10UF	K	
C473			CC73GCH1H270J	CHIP C	27PF	J	
C474			CK73FB1E474K	CHIP C	0.47UF	K	
C476		✻	CE32AU1E100M	CHIP EL	10UF	25WV	
C477			CK73GB1H104K	CHIP C	0.10UF	K	
C478			CK73FB1E474K	CHIP C	0.47UF	K	
C480-482			CE32CL1V100M	CHIP EL	10UF	35WV	
C484-489			CK73GB1H102K	CHIP C	1000PF	K	
C491			CK73GB1H104K	CHIP C	0.10UF	K	
C492		✻	C93-0912-05	CERAMIC CAP			
C493			CK73GB1H473K	CHIP C	0.047UF	K	
C494			CK73FB0J106K	CHIP C	10UF	K	
C495			CK73GB1H104K	CHIP C	0.10UF	K	
C498			CC73GCH1H470J	CHIP C	47PF	J	
C499			CK73FB0J106K	CHIP C	10UF	K	
C500-504			CK73GB1H102K	CHIP C	1000PF	K	
C505			CK73FB0J106K	CHIP C	10UF	K	
C506			CK73GB1H102K	CHIP C	1000PF	K	
C507			CK73GB1H104K	CHIP C	0.10UF	K	
C508			CK73FB0J106K	CHIP C	10UF	K	
C509			CC73GCH1H101J	CHIP C	100PF	J	
C510			CK73GB1H104K	CHIP C	0.10UF	K	
C516			CK73GB1H473K	CHIP C	0.047UF	K	
C517			CK73FB0J106K	CHIP C	10UF	K	
C518			CK73GB1H104K	CHIP C	0.10UF	K	
C519			CK73GB1H102K	CHIP C	1000PF	K	
C520			CK73GB1H103K	CHIP C	0.010UF	K	
C521			CK73GB1H104K	CHIP C	0.10UF	K	
C522			CK73GB1H103K	CHIP C	0.010UF	K	
C523			CK73GB1H104K	CHIP C	0.10UF	K	
C524			CK73FB1H333K	CHIP C	0.033UF	K	
C527			CK73GB1H104K	CHIP C	0.10UF	K	
C532			CK73GB1H104K	CHIP C	0.10UF	K	
C533-536			CE32CL1V100M	CHIP EL	10UF	35WV	
C537-540			CK73GB1H102K	CHIP C	1000PF	K	
C541,542			CK73GB1H104K	CHIP C	0.10UF	K	
C543			CK73GB1H473K	CHIP C	0.047UF	K	
C544			CC73GCH1H470J	CHIP C	47PF	J	
C545-548			CK73GB1H102K	CHIP C	1000PF	K	
C549			CC73GCH1H470J	CHIP C	47PF	J	
C550-553			CK73GB1H103K	CHIP C	0.010UF	K	
C554			CK73GB1H473K	CHIP C	0.047UF	K	
C555		✻	CE32BM1V220M	CHIP EL	22UF	35WV	
C556			CK73GB1H102K	CHIP C	1000PF	K	
C557			CK73GB1H473K	CHIP C	0.047UF	K	
C558			CK73GB1H102K	CHIP C	1000PF	K	
C559			CK73GB1H104K	CHIP C	0.10UF	K	
C560,561			CK73GB1H102K	CHIP C	1000PF	K	
C562			CK73GB1H473K	CHIP C	0.047UF	K	
C563			CK73GB1H102K	CHIP C	1000PF	K	
C564			CK73GB1H103K	CHIP C	0.010UF	K	
C565			CK73GB1H102K	CHIP C	1000PF	K	
C566			CK73GB1H473K	CHIP C	0.047UF	K	
C567			CE32CL1V100M	CHIP EL	10UF	35WV	
C568			CC73GCH1H470J	CHIP C	47PF	J	
C569			CK73GB1H102K	CHIP C	1000PF	K	

PARTS LIST

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Ref. No.	Address	New parts	Parts No.	Description			Destination
C570			CC73GCH1H470J	CHIP C	47PF	J	
C571		✻	C92-0904-05	OS-CON			
C572,573			CK73GB1H103K	CHIP C	0.010UF	K	
C574-576			CK73GB1H104K	CHIP C	0.10UF	K	
C577			CK73GB1H103K	CHIP C	0.010UF	K	
C578			CC73GCH1H151J	CHIP C	150PF	J	
C579			CC73GCH1H560J	CHIP C	56PF	J	
C580-582			CK73GB1H103K	CHIP C	0.010UF	K	
C583			CK73GB1H102K	CHIP C	1000PF	K	
C584			CK73GB1H103K	CHIP C	0.010UF	K	
C585			CC73GCH1H470J	CHIP C	47PF	J	
C586			CK73GB1H102K	CHIP C	1000PF	K	
C587-590			CK73FB1E474K	CHIP C	0.47UF	K	
C591			CK73GB1H102K	CHIP C	1000PF	K	
C618			CC73GCH1H101J	CHIP C	100PF	J	
C619			CK73GB1H104K	CHIP C	0.10UF	K	
C620			CK73GB1H102K	CHIP C	1000PF	K	
C621,622			CK73GB1H104K	CHIP C	0.10UF	K	
C624			CC73GCH1H390J	CHIP C	39PF	J	
C625,626			CC73GCH1H050C	CHIP C	5.0PF	C	
C627			CC73GCH1H060D	CHIP C	6.0PF	D	
C628			CC73GCH1H390J	CHIP C	39PF	J	
C629			CC73GCH1H060D	CHIP C	6.0PF	D	
C631,632			CC73GCH1H050C	CHIP C	5.0PF	C	
C633			CC73GCH1H060D	CHIP C	6.0PF	D	
C634			CC73GCH1H390J	CHIP C	39PF	J	
C635-646			CC73GCH1HR75B	CHIP C	0.75PF	B	
C647			CK73GB1H102K	CHIP C	1000PF	K	
C648,649			CC73GCH1H120J	CHIP C	12PF	J	
C650			CC73GCH1H390J	CHIP C	39PF	J	
C651			CE32BM1E470M	CHIP EL	47UF	25WV	
C652-654			CK73GB1H104K	CHIP C	0.10UF	K	
C655			CK73FB0J106K	CHIP C	10UF	K	
C657			CC73GCH1H270J	CHIP C	27PF	J	
C658			CK73FB1E474K	CHIP C	0.47UF	K	
C659			CC73GCH1H060D	CHIP C	6.0PF	D	
C660			CC73GCH1H050C	CHIP C	5.0PF	C	
C661			CK73GB1H104K	CHIP C	0.10UF	K	
C662			CC73GCH1H070B	CHIP C	7.0PF	B	
C663			CC73GCH1H080B	CHIP C	8.0PF	B	
C664			CC73GCH1H060B	CHIP C	6.0PF	B	
C665			CC73GCH1H080B	CHIP C	8.0PF	B	
C666,667			CK73GB1H102K	CHIP C	1000PF	K	
C668			CC73GCH1H080B	CHIP C	8.0PF	B	
C669			CC73GCH1H070B	CHIP C	7.0PF	B	
C670			CC73GCH1H050B	CHIP C	5.0PF	B	
C671			CK73GB1H104K	CHIP C	0.10UF	K	
C673-675			CE32BM1E470M	CHIP EL	47UF	25WV	
C677			CK73GB1H104K	CHIP C	0.10UF	K	
TC1-8			C05-0301-05	CERAMIC TRIMMER CAPACITOR (7PF)			
CN1-4		✻	E23-1280-05	TERMINAL			
CN5		✻	E04-0460-05	RF COAXIAL RECEPTACLE (SMB)			
CN6			E41-2735-05	PIN ASSY			
CN8-35		✻	E23-1280-05	TERMINAL			
CN36			E41-2735-05	PIN ASSY			
CN38,39		✻	E23-1280-05	TERMINAL			
CN41			E04-0154-05	PIN SOCKET			
CN42			E40-6656-05	PIN ASSY			
CN43			E04-0193-05	PIN SOCKET			
CN44			E41-2672-05	PIN ASSY			

Ref. No.	Address	New parts	Parts No.	Description	Destination
CN45			E04-0193-05	PIN SOCKET	
CN46,47			E41-2735-05	PIN ASSY	
CN61,62		✻	E23-1280-05	TERMINAL	
E1			F10-2379-04	SHIELDING CASE	
E2			F10-2409-04	SHIELDING CASE	
E3		✻	F10-3080-04	SHIELDING CASE	
CF1		✻	L72-1019-05	CERAMIC FILTER	
CF2		✻	L72-1028-05	CERAMIC FILTER	
CF3,4		✻	L72-1027-05	CERAMIC FILTER	
CF5,6		✻	L72-1028-05	CERAMIC FILTER	
CF7		✻	L72-1027-05	CERAMIC FILTER	
L2			L34-4616-05	AIR-CORE COIL	
L5			L41-2275-33	SMALL FIXED INDUCTOR (0.022UH)	
L8,9			L41-1875-33	SMALL FIXED INDUCTOR (0.018UH)	
L10			L41-6885-33	SMALL FIXED INDUCTOR (0.68UH)	
L11			L41-1295-33	SMALL FIXED INDUCTOR (1.2UH)	
L12			L41-6875-33	SMALL FIXED INDUCTOR (0.068UH)	
L13			L41-1295-33	SMALL FIXED INDUCTOR (1.2UH)	
L14			L41-1805-33	SMALL FIXED INDUCTOR (18UH)	
L16			L41-2705-33	SMALL FIXED INDUCTOR (27UH)	
L17,18			L41-1005-33	SMALL FIXED INDUCTOR (10UH)	
L20			L41-1295-33	SMALL FIXED INDUCTOR (1.2UH)	
L21,22			L41-1005-33	SMALL FIXED INDUCTOR (10UH)	
L23			L41-1295-33	SMALL FIXED INDUCTOR (1.2UH)	
L24,25			L41-1005-33	SMALL FIXED INDUCTOR (10UH)	
L26			L41-1095-33	SMALL FIXED INDUCTOR (1.0UH)	
L27			L41-1005-33	SMALL FIXED INDUCTOR (10UH)	
L28		✻	L34-4586-05	AIR-CORE COIL	
L29			L41-1005-33	SMALL FIXED INDUCTOR (10UH)	
L30		✻	L34-4586-05	AIR-CORE COIL	
L31			L41-3375-33	SMALL FIXED INDUCTOR (0.033UH)	
L32			L41-8275-33	SMALL FIXED INDUCTOR (0.082UH)	
L33			L41-2785-33	SMALL FIXED INDUCTOR (0.27UH)	
L34		✻	L41-1205-33	SMALL FIXED INDUCTOR (12UH)	
L35			L41-3395-33	SMALL FIXED INDUCTOR (3.3UH)	
L36			L41-3375-33	SMALL FIXED INDUCTOR (0.033UH)	
L37		✻	L41-1205-33	SMALL FIXED INDUCTOR (12UH)	
L38			L41-1095-33	SMALL FIXED INDUCTOR (1.0UH)	
L39			L41-3375-33	SMALL FIXED INDUCTOR (0.033UH)	
L40,41			L41-1005-33	SMALL FIXED INDUCTOR (10UH)	
L42			L41-3375-33	SMALL FIXED INDUCTOR (0.033UH)	
L43,44			L41-3395-33	SMALL FIXED INDUCTOR (3.3UH)	
L45			L41-3375-33	SMALL FIXED INDUCTOR (0.033UH)	
L46,47			L34-4749-05	COIL	
L48			L41-1095-33	SMALL FIXED INDUCTOR (1.0UH)	
L49			L41-2705-33	SMALL FIXED INDUCTOR (27UH)	
L50			L41-1085-33	SMALL FIXED INDUCTOR (0.1UH)	
L51			L92-0140-05	CHIP FERRITE	
L52,53			L34-4749-05	COIL	
L54			L41-1075-33	SMALL FIXED INDUCTOR (0.01UH)	
L55			L41-1085-33	SMALL FIXED INDUCTOR (0.1UH)	
L56		✻	L41-8295-33	SMALL FIXED INDUCTOR (8.2UH)	
L57			L41-4775-33	SMALL FIXED INDUCTOR (0.047UH)	
L58,59			L41-1885-33	SMALL FIXED INDUCTOR (0.18UH)	
L60,61			L41-3375-33	SMALL FIXED INDUCTOR (0.033UH)	
L62			L41-1075-33	SMALL FIXED INDUCTOR (0.01UH)	
L66,67			L41-8275-33	SMALL FIXED INDUCTOR (0.082UH)	
L68		✻	L41-8295-33	SMALL FIXED INDUCTOR (8.2UH)	
L69			L41-1595-33	SMALL FIXED INDUCTOR (1.5UH)	

PARTS LIST

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Ref. No.	Address	New parts	Parts No.	Description	Destination
L70			L41-3985-33	SMALL FIXED INDUCTOR (0.39UH)	
L71			L41-1595-33	SMALL FIXED INDUCTOR (1.5UH)	
L72			L41-3985-33	SMALL FIXED INDUCTOR (0.39UH)	
L73			L41-2285-33	SMALL FIXED INDUCTOR (0.22UH)	
L74,75			L34-4748-05	COIL	
L76			L41-3975-33	SMALL FIXED INDUCTOR (0.039UH)	
L77			L92-0140-05	CHIP FERRITE	
L78			L41-1005-33	SMALL FIXED INDUCTOR (10UH)	
L79			L41-1095-33	SMALL FIXED INDUCTOR (1.0UH)	
L80			L41-3975-33	SMALL FIXED INDUCTOR (0.039UH)	
L81			L41-8285-33	SMALL FIXED INDUCTOR (0.82UH)	
L82			L41-1005-33	SMALL FIXED INDUCTOR (10UH)	
L83			L41-6895-33	SMALL FIXED INDUCTOR (6.8UH)	
L86			L41-1585-33	SMALL FIXED INDUCTOR (0.15UH)	
L87			L41-1005-33	SMALL FIXED INDUCTOR (10UH)	
L88		✻	L41-8295-33	SMALL FIXED INDUCTOR (8.2UH)	
L89			L41-3985-33	SMALL FIXED INDUCTOR (0.39UH)	
L90,91			L34-4748-05	COIL	
L92			L41-3975-33	SMALL FIXED INDUCTOR (0.039UH)	
L93			L41-1085-33	SMALL FIXED INDUCTOR (0.1UH)	
L94,95			L39-1476-05	TOROIDAL COIL	
L96			L41-3985-33	SMALL FIXED INDUCTOR (0.39UH)	
L97			L41-1005-33	SMALL FIXED INDUCTOR (10UH)	
L98,99		✻	L41-1895-33	SMALL FIXED INDUCTOR (1.8UH)	
L100			L41-3985-33	SMALL FIXED INDUCTOR (0.39UH)	
L101			L41-1595-33	SMALL FIXED INDUCTOR (1.5UH)	
L102			L41-1005-33	SMALL FIXED INDUCTOR (10UH)	
L103			L41-3985-33	SMALL FIXED INDUCTOR (0.39UH)	
L106			L41-1585-33	SMALL FIXED INDUCTOR (0.15UH)	
L107			L41-6895-33	SMALL FIXED INDUCTOR (6.8UH)	
L108,109			L41-4775-33	SMALL FIXED INDUCTOR (0.047UH)	
L110			L41-1585-33	SMALL FIXED INDUCTOR (0.15UH)	
L111			L41-1595-33	SMALL FIXED INDUCTOR (1.5UH)	
L112,113			L39-1476-05	TOROIDAL COIL	
L114			L41-6875-33	SMALL FIXED INDUCTOR (0.068UH)	
L115			L41-8275-33	SMALL FIXED INDUCTOR (0.082UH)	
L116,117			L41-1585-33	SMALL FIXED INDUCTOR (0.15UH)	
L118			L41-6875-33	SMALL FIXED INDUCTOR (0.068UH)	
L119			L41-2285-33	SMALL FIXED INDUCTOR (0.22UH)	
L120		✻	L41-8295-33	SMALL FIXED INDUCTOR (8.2UH)	
L121			L41-1595-33	SMALL FIXED INDUCTOR (1.5UH)	
L122			L41-1585-33	SMALL FIXED INDUCTOR (0.15UH)	
L123			L41-3395-33	SMALL FIXED INDUCTOR (3.3UH)	
L124-126			L41-1585-33	SMALL FIXED INDUCTOR (0.15UH)	
L127		✻	L41-8295-33	SMALL FIXED INDUCTOR (8.2UH)	
L128			L34-4725-05	COIL	
L129,130			L41-1005-33	SMALL FIXED INDUCTOR (10UH)	
L131			L41-1585-33	SMALL FIXED INDUCTOR (0.15UH)	
L132-139		✻	L34-4614-05	AIR-CORE COIL	
L140,141			L41-3985-33	SMALL FIXED INDUCTOR (0.39UH)	
XF1		✻	L71-0646-05	MCF (49.95M/WIDE)	
XF2		✻	L71-0645-05	MCF (49.95M/NARROW)	
XF3		✻	L71-0648-05	MCF (49.95M/WIDE)	
XF4		✻	L71-0647-05	MCF (49.95M/NARROW)	
R1			RK73GB2A332J	CHIP R 3.3K J 1/10W	
R2			RK73GB2A182J	CHIP R 1.8K J 1/10W	
R4			RK73FB2B121J	CHIP R 120 J 1/8W	
R8			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R9			RK73GB2A332J	CHIP R 3.3K J 1/10W	

Ref. No.	Address	New parts	Parts No.	Description	Destination
R11,12			RK73GB2A681J	CHIP R 680 J 1/10W	
R13			RK73GB2A682J	CHIP R 6.8K J 1/10W	
R14			RK73FB2B100J	CHIP R 10 J 1/8W	
R15,16			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R17			RK73GB2A181J	CHIP R 180 J 1/10W	
R19,20			RK73GB2A104J	CHIP R 100K J 1/10W	
R21			RK73GB2A684J	CHIP R 680K J 1/10W	
R22			RK73GB2A474J	CHIP R 470K J 1/10W	
R23			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R24			RK73GB2A100J	CHIP R 10 J 1/10W	
R26,27			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R28			RK73GB2A100J	CHIP R 10 J 1/10W	
R29			RK73GB2A152J	CHIP R 1.5K J 1/10W	
R30			RK73GB2A684J	CHIP R 680K J 1/10W	
R31			RK73GB2A181J	CHIP R 180 J 1/10W	
R32			RK73GB2A104J	CHIP R 100K J 1/10W	
R33			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R34			RK73GB2A471J	CHIP R 470 J 1/10W	
R36			RK73GB2A103J	CHIP R 10K J 1/10W	
R37			RK73GB2A123J	CHIP R 12K J 1/10W	
R38			RK73GB2A470J	CHIP R 47 J 1/10W	
R39			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R40			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R42,43			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R44			RK73GB2A220J	CHIP R 22 J 1/10W	
R45			RK73GB2A471J	CHIP R 470 J 1/10W	
R46			RK73GB2A330J	CHIP R 33 J 1/10W	
R48			RK73FB2B221J	CHIP R 220 J 1/8W	
R50			RK73FB2B220J	CHIP R 22 J 1/8W	
R52			RK73GB2A100J	CHIP R 10 J 1/10W	
R53,54			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R55			RK73FB2B221J	CHIP R 220 J 1/8W	
R56			RK73GB2A100J	CHIP R 10 J 1/10W	
R57			RK73GB2A470J	CHIP R 47 J 1/10W	
R60			RK73GB2A100J	CHIP R 10 J 1/10W	
R61			RK73GB2A470J	CHIP R 47 J 1/10W	
R62,63			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R64			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R65			RK73GB2A682J	CHIP R 6.8K J 1/10W	
R66,67			RK73GB2A391J	CHIP R 390 J 1/10W	
R68			RK73GB2A392J	CHIP R 3.9K J 1/10W	
R69-71			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R72			RK73GB2A2R2J	CHIP R 2.2 J 1/10W	
R73			RK73GB2A104J	CHIP R 100K J 1/10W	
R75,76			RK73GB2A103J	CHIP R 10K J 1/10W	
R77,78			RK73FB2B470J	CHIP R 47 J 1/8W	
R79			RK73GB2A100J	CHIP R 10 J 1/10W	
R80			RK73GB2A271J	CHIP R 270 J 1/10W	
R81			RK73FB2B000J	CHIP R 0.0 J 1/8W	
R82			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R83,84			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R85			RK73GB2A333J	CHIP R 33K J 1/10W	
R86			RK73GB2A104J	CHIP R 100K J 1/10W	
R88			RK73GB2A103J	CHIP R 10K J 1/10W	
R89			RK73GB2A100J	CHIP R 10 J 1/10W	
R90			RK73GB2A330J	CHIP R 33 J 1/10W	
R91			RK73GB2A101J	CHIP R 100 J 1/10W	
R92			RK73GB2A104J	CHIP R 100K J 1/10W	
R93			RK73GB2A105J	CHIP R 1.0M J 1/10W	
R94			RK73GB2A682J	CHIP R 6.8K J 1/10W	

PARTS LIST

RX UNIT (X55-3090-10)

Ref. No.	Address	New parts	Parts No.	Description				Destination
R95			RK73GB2A152J	CHIP R	1.5K	J	1/10W	
R96,97			RK73GB2A100J	CHIP R	10	J	1/10W	
R98			RK73GB2A181J	CHIP R	180	J	1/10W	
R99			RK73GB2A331J	CHIP R	330	J	1/10W	
R100			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R101			RK73FB2B100J	CHIP R	10	J	1/8W	
R102			RK73GB2A181J	CHIP R	180	J	1/10W	
R103			RK73GB2A682J	CHIP R	6.8K	J	1/10W	
R104,105			RK73GB2A123J	CHIP R	12K	J	1/10W	
R106			RK73GB2A105J	CHIP R	1.0M	J	1/10W	
R107,108			RK73GB2A103J	CHIP R	10K	J	1/10W	
R110			RK73GB2A332J	CHIP R	3.3K	J	1/10W	
R112			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R114			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R115			RK73FB2B220J	CHIP R	22	J	1/8W	
R116			RK73GB2A101J	CHIP R	100	J	1/10W	
R117,118			RK73FB2B220J	CHIP R	22	J	1/8W	
R119,120			RK73GB2A103J	CHIP R	10K	J	1/10W	
R122			RK73GB2A101J	CHIP R	100	J	1/10W	
R123			RK73GB2A153J	CHIP R	15K	J	1/10W	
R124			RK73GB2A392J	CHIP R	3.9K	J	1/10W	
R125			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R128			RK73GB2A101J	CHIP R	100	J	1/10W	
R129			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R130,131			RK73FB2B100J	CHIP R	10	J	1/8W	
R132			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R133			RK73GB2A153J	CHIP R	15K	J	1/10W	
R134			RK73GB2A104J	CHIP R	100K	J	1/10W	
R135,136			RK73GB2A332J	CHIP R	3.3K	J	1/10W	
R137			RK73GB2A101J	CHIP R	100	J	1/10W	
R138,139			RK73GB2A682J	CHIP R	6.8K	J	1/10W	
R140,141			RK73GB2A181J	CHIP R	180	J	1/10W	
R142			RK73FB2B100J	CHIP R	10	J	1/8W	
R145			RK73GB2A100J	CHIP R	10	J	1/10W	
R146			RK73GB2A101J	CHIP R	100	J	1/10W	
R147			RK73GB2A271J	CHIP R	270	J	1/10W	
R149			RK73GB2A821J	CHIP R	820	J	1/10W	
R150			RK73FB2B101J	CHIP R	100	J	1/8W	
R151			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R152			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R153			RK73GB2A101J	CHIP R	100	J	1/10W	
R154			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R155			RK73GB2A472J	CHIP R	4.7K	J	1/10W	
R156			RK73GB2A680J	CHIP R	68	J	1/10W	
R157			RK73GB2A151J	CHIP R	150	J	1/10W	
R158			RK73GB2A101J	CHIP R	100	J	1/10W	
R159			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R160			RK73GB2A3R3J	CHIP R	3.3	J	1/10W	
R161			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R164			RK73GB2A104J	CHIP R	100K	J	1/10W	
R165,166			RK73GB2A273J	CHIP R	27K	J	1/10W	
R167			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R169			RK73GB2A103J	CHIP R	10K	J	1/10W	
R171			RK73GB2A103J	CHIP R	10K	J	1/10W	
R172			RK73GB2A100J	CHIP R	10	J	1/10W	
R173			RK73GB2A271J	CHIP R	270	J	1/10W	
R174,175			RK73GB2A153J	CHIP R	15K	J	1/10W	
R176			RK73GB2A100J	CHIP R	10	J	1/10W	
R177			RK73GB2A470J	CHIP R	47	J	1/10W	
R178,179			RK73GB2A103J	CHIP R	10K	J	1/10W	

Ref. No.	Address	New parts	Parts No.	Description				Destination
R180			RK73GB2A100J	CHIP R	10	J	1/10W	
R181			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R183			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R184			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R185			RK73GB2A100J	CHIP R	10	J	1/10W	
R186,187			RK73GB2A104J	CHIP R	100K	J	1/10W	
R189,190			RK73FB2B101J	CHIP R	100	J	1/8W	
R191,192			RK73FB2B271J	CHIP R	270	J	1/8W	
R193			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R194			RK73GB2A472J	CHIP R	4.7K	J	1/10W	
R195			RK73GB2A181J	CHIP R	180	J	1/10W	
R196,197			RK73FB2B100J	CHIP R	10	J	1/8W	
R198,199			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R200			RK73GB2A682J	CHIP R	6.8K	J	1/10W	
R201			RK73GB2A330J	CHIP R	33	J	1/10W	
R202			RK73GB2A2R2J	CHIP R	2.2	J	1/10W	
R203			RK73GB2A104J	CHIP R	100K	J	1/10W	
R204			RK73GB2A332J	CHIP R	3.3K	J	1/10W	
R205			RK73GB2A682J	CHIP R	6.8K	J	1/10W	
R206			RK73GB2A152J	CHIP R	1.5K	J	1/10W	
R207,208			RK73GB2A470J	CHIP R	47	J	1/10W	
R209			RK73GB2A101J	CHIP R	100	J	1/10W	
R210			RK73GB2A100J	CHIP R	10	J	1/10W	
R211			RK73GB2A104J	CHIP R	100K	J	1/10W	
R212			RK73GB2A100J	CHIP R	10	J	1/10W	
R213,214			RK73GB2A563J	CHIP R	56K	J	1/10W	
R215			RK73GB2A181J	CHIP R	180	J	1/10W	
R217			RK73GB2A104J	CHIP R	100K	J	1/10W	
R218,219			RK73GB2A180J	CHIP R	18	J	1/10W	
R220			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R221,222			RK73GB2A471J	CHIP R	470	J	1/10W	
R223			RK73GB2A180J	CHIP R	18	J	1/10W	
R224			RK73GB2A100J	CHIP R	10	J	1/10W	
R225			RK73GB2A180J	CHIP R	18	J	1/10W	
R226,227			RK73GB2A101J	CHIP R	100	J	1/10W	
R229			RK73GB2A101J	CHIP R	100	J	1/10W	
R230			RK73GB2A100J	CHIP R	10	J	1/10W	
R231			RK73GB2A680J	CHIP R	68	J	1/10W	
R232			RK73GB2A100J	CHIP R	10	J	1/10W	
R233			RK73GB2A680J	CHIP R	68	J	1/10W	
R234,235			RK73GB2A101J	CHIP R	100	J	1/10W	
R236,237			RK73GB2A180J	CHIP R	18	J	1/10W	
R238			RK73GB2A181J	CHIP R	180	J	1/10W	
R239			RK73GB2A100J	CHIP R	10	J	1/10W	
R240			RK73GB2A471J	CHIP R	470	J	1/10W	
R241			RK73GB2A103J	CHIP R	10K	J	1/10W	
R242,243			RK73GB2A470J	CHIP R	47	J	1/10W	
R244			RK73GB2A682J	CHIP R	6.8K	J	1/10W	
R245			RK73GB2A473J	CHIP R	47K	J	1/10W	
R248			RK73GB2A332J	CHIP R	3.3K	J	1/10W	
R249			RK73GB2A222J	CHIP R	2.2K	J	1/10W	
R250			RK73GB2A103J	CHIP R	10K	J	1/10W	
R254,255			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R256			RK73GB2A152J	CHIP R	1.5K	J	1/10W	
R257,258			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R259			RK73GB2A222J	CHIP R	2.2K	J	1/10W	
R260			RK73GB2A103J	CHIP R	10K	J	1/10W	
R261			RK73GB2A123J	CHIP R	12K	J	1/10W	
R262			RK73GB2A472J	CHIP R	4.7K	J	1/10W	
R263			RK73GB2A183J	CHIP R	18K	J	1/10W	

PARTS LIST

RX UNIT (X55-3090-10)

Ref. No.	Address	New parts	Parts No.	Description	Destination
R264			RK73GB2A152J	CHIP R 1.5K J 1/10W	
R265			RK73GB2A181J	CHIP R 180 J 1/10W	
R266			RK73GB2A332J	CHIP R 3.3K J 1/10W	
R267			RK73GB2A103J	CHIP R 10K J 1/10W	
R268			RK73GB2A154J	CHIP R 150K J 1/10W	
R269			RK73GB2A470J	CHIP R 47 J 1/10W	
R270,271			RK73GB2A103J	CHIP R 10K J 1/10W	
R272			RK73GB2A104J	CHIP R 100K J 1/10W	
R273			RK73GB2A152J	CHIP R 1.5K J 1/10W	
R274			RK73GB2A103J	CHIP R 10K J 1/10W	
R275			RK73GB2A223J	CHIP R 22K J 1/10W	
R276			RK73GB2A183J	CHIP R 18K J 1/10W	
R277			RK73GB2A103J	CHIP R 10K J 1/10W	
R278,279			RK73GB2A152J	CHIP R 1.5K J 1/10W	
R280,281			RK73GB2A103J	CHIP R 10K J 1/10W	
R284			RK73GB2A471J	CHIP R 470 J 1/10W	
R285			RK73GB2A334J	CHIP R 330K J 1/10W	
R286			RK73GB2A103J	CHIP R 10K J 1/10W	
R287			RK73GB2A273J	CHIP R 27K J 1/10W	
R288			RK73GB2A560J	CHIP R 56 J 1/10W	
R290			RK73GB2A332J	CHIP R 3.3K J 1/10W	
R291			RK73GB2A122J	CHIP R 1.2K J 1/10W	
R292			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R293			RK73GB2A183J	CHIP R 18K J 1/10W	
R294			RK73GB2A273J	CHIP R 27K J 1/10W	
R295			RK73GB2A104J	CHIP R 100K J 1/10W	
R296-298			RK73GB2A473J	CHIP R 47K J 1/10W	
R300			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R306			RK73GB2A473J	CHIP R 47K J 1/10W	
R307-310			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R311			RK73GB2A474J	CHIP R 470K J 1/10W	
R317-319			RK73GB2A100J	CHIP R 10 J 1/10W	
R321			RK73GB2A104J	CHIP R 100K J 1/10W	
R323			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R324,325			RK73GB2A104J	CHIP R 100K J 1/10W	
R326			RK73GB2A100J	CHIP R 10 J 1/10W	
R328			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R330			RK73GB2A104J	CHIP R 100K J 1/10W	
R332			RK73GB2A101J	CHIP R 100 J 1/10W	
R333			RK73GB2A104J	CHIP R 100K J 1/10W	
R334			RK73GB2A101J	CHIP R 100 J 1/10W	
R335			RK73GB2A104J	CHIP R 100K J 1/10W	
R337			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R338			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R340-342			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R343			RK73GB2A104J	CHIP R 100K J 1/10W	
R344			RK73GB2A473J	CHIP R 47K J 1/10W	
R345,346			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R347,348			RK73GB2A101J	CHIP R 100 J 1/10W	
R349			RK73GB2A470J	CHIP R 47 J 1/10W	
R350,351			RK73GB2A221J	CHIP R 220 J 1/10W	
R352			RK73GB2A473J	CHIP R 47K J 1/10W	
R353			RK73GB2A470J	CHIP R 47 J 1/10W	
R357			RK73GB2A471J	CHIP R 470 J 1/10W	
R358			RK73GB2A100J	CHIP R 10 J 1/10W	
R359			RK73GB2A221J	CHIP R 220 J 1/10W	
R360			RK73GB2A682J	CHIP R 6.8K J 1/10W	
R361			RK73GB2A332J	CHIP R 3.3K J 1/10W	
R362			RK73GB2A181J	CHIP R 180 J 1/10W	
R363			RK73GB2A100J	CHIP R 10 J 1/10W	

Ref. No.	Address	New parts	Parts No.	Description	Destination
R364			RK73GB2A470J	CHIP R 47 J 1/10W	
R366,367			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R368-370			RK73GB2A103J	CHIP R 10K J 1/10W	
R371,372			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R373			RK73GB2A103J	CHIP R 10K J 1/10W	
R375,376			RK73GB2A105J	CHIP R 1.0M J 1/10W	
R377			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R379			RK73GB2A101J	CHIP R 100 J 1/10W	
R380			RK73GB2A104J	CHIP R 100K J 1/10W	
R381			RK73GB2A223J	CHIP R 22K J 1/10W	
R382-384			RK73GB2A104J	CHIP R 100K J 1/10W	
R385			RK73GB2A101J	CHIP R 100 J 1/10W	
R388			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R390			RK73GB2A471J	CHIP R 470 J 1/10W	
R391,392			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R395			RK73GB2A101J	CHIP R 100 J 1/10W	
R400,401			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R403			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R405			RK73GB2A153J	CHIP R 15K J 1/10W	
R406			RK73GB2A682J	CHIP R 6.8K J 1/10W	
R417			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R432			RK73GB2A103J	CHIP R 10K J 1/10W	
R433,434			RK73GB2A151J	CHIP R 150 J 1/10W	
R435			RK73GB2A473J	CHIP R 47K J 1/10W	
R436			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R437			RK73GB2A183J	CHIP R 18K J 1/10W	
R438			RK73GB2A273J	CHIP R 27K J 1/10W	
R450			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R455			RK73GB2A104J	CHIP R 100K J 1/10W	
R456			RK73GB2A101J	CHIP R 100 J 1/10W	
D1,2			HSC119	DIODE	
D3-8			1SV283F	VARIABLE CAPACITANCE DIODE	
D9,10		✻	JDP4P02U	DIODE	
D11			KV1470-G	VARIABLE CAPACITANCE DIODE	
D12			1SV283F	VARIABLE CAPACITANCE DIODE	
D13,14		✻	JDP4P02U	DIODE	
D15,16			DAN235E	DIODE	
D17,18			MA3J742	DIODE	
D19,20			DAN235E	DIODE	
D22,23			1SV283F	VARIABLE CAPACITANCE DIODE	
IC4			TA75S01F-F	MOS-IC	
IC5			ADF4111BCP7	MOS-IC	
IC6			LMC7101BIM5	MOS-IC	
IC7			AD9835BRUZ	MOS-IC	
IC8		✻	NJU6368PF1	MOS-IC	
IC9			UPB1509GV	BI-POLAR IC	
IC10			TK11230CMCL-G	BI-POLAR IC	
IC11			ADF4111BCP7	MOS-IC	
IC12			TA31137FNG	MOS-IC	
IC13		✻	AD607Z	BI-POLAR IC	
IC14		✻	AD8051ART	ANALOGUE IC	
IC15,16			NJM78L05UA-ZB	BI-POLAR IC	
IC17-19		✻	NJM78M05DL1AZB	ANALOGUE IC	
IC20			NJM4558E-ZB	ANALOGUE IC	
IC22			XC6204B332M	MOS-IC	
IC23			BH2220FVM	ANALOGUE IC	
IC24,25	2D		NJM7808FA-ZB	BI-POLAR IC	
IC26,27		✻	NJM2386ADL3-09	ANALOGUE IC	
IC28		✻	AD1582	ANALOGUE IC	
IC29		✻	NJM2732V	BI-POLAR IC	

If a part reference number is listed in a shaded box, that part does not come with the PCB.

PARTS LIST

RX UNIT (X55-3090-10)
TX UNIT (X56-3110-10)

Ref. No.	Address	New parts	Parts No.	Description	Destination
IC30		✻	AD7908BRU	MOS-IC	
IC31			S24CS02AFJTBG	ROM IC	
IC32		✻	NJM2732V	BI-POLAR IC	
IC33			LMC7101BIM5	MOS-IC	
IC35		✻	LM50BIM3/NOPB	MOS-IC	
Q1		✻	2SC5337	TRANSISTOR	
Q2			2SC4116(BL)F	TRANSISTOR	
Q3			2SC4617(R)	TRANSISTOR	
Q4			2SC4116(BL)F	TRANSISTOR	
Q5			2SC4617(R)	TRANSISTOR	
Q6			2SC4116(BL)F	TRANSISTOR	
Q7,8			2SK508NV(K53)	FET	
Q9-11			2SC4116(BL)F	TRANSISTOR	
Q12			2SC4617(R)	TRANSISTOR	
Q13		✻	2SA1832F	TRANSISTOR	
Q14,15			SSM3K15TE(F)	FET	
Q16,17			2SC3356-A(R24)	TRANSISTOR	
Q18-20			RD01MUS1-T113	FET	
Q21			2SC4725	TRANSISTOR	
Q22			2SC4617(R)	TRANSISTOR	
Q23			2SC3356-A(R24)	TRANSISTOR	
Q24			2SK508NV(K52)	FET	
Q25		✻	SSM3J01F	FET	
Q26			SSM3K15TE(F)	FET	
Q27			2SC4116(BL)F	TRANSISTOR	
Q28,29			3SK317-E	FET	
Q30			2SC4617(R)	TRANSISTOR	
Q31			SSM3K15TE(F)	FET	
Q32		✻	SSM3J01F	FET	
Q33			2SC4725	TRANSISTOR	
Q34		✻	2SA1832F	TRANSISTOR	
Q35,36			2SC4725	TRANSISTOR	
Q37			SSM3K15TE(F)	FET	
Q38			2SC4725	TRANSISTOR	
Q39			2SC4617(R)	TRANSISTOR	
Q40			2SC4617(S)	TRANSISTOR	
Q50,51			SSM3K15TE(F)	FET	
Q52			2SJ484	FET	
Q53			2SC4725	TRANSISTOR	
Q56			SSM3K15TE(F)	FET	
Q57			DTA144EE	DIGITAL TRANSISTOR	
Q58-61			SSM3K15TE(F)	FET	
A1			W02-1940-05	DBM	

TX UNIT (X56-3110-10)

D202			B30-2230-05	LED (YG)			
D301			B30-2230-05	LED (YG)			
D920-924		✻	B30-2265-05	LED (BR/PG)			
D925-932			B30-2171-05	LED (D)			
C102			CK73GB1E105K	CHIP C	1.0UF	K	
C103-105			CC73GCH1H471J	CHIP C	470PF	J	
C106,107			CK73GB1H103K	CHIP C	0.010UF	K	
C108			CC73GCH1H471J	CHIP C	470PF	J	
C109			CK73GB1H104K	CHIP C	0.10UF	K	
C110			CC73GCH1H471J	CHIP C	470PF	J	
C111,112			CK73GB1H104K	CHIP C	0.10UF	K	
C113			CC73GCH1H471J	CHIP C	470PF	J	
C114			CK73GB1H104K	CHIP C	0.10UF	K	
C115-117			CC73GCH1H471J	CHIP C	470PF	J	
C120			CK73GB1H103K	CHIP C	0.010UF	K	
C122			CC73GCH1H471J	CHIP C	470PF	J	
C123			CS77CA1ER47M	CHIP TNTL	0.47UF	25WV	
C126			CC73GCH1H471J	CHIP C	470PF	J	
C133			CC73GCH1H120J	CHIP C	12PF	J	
C135			CC73GCH1H471J	CHIP C	470PF	J	
C136			CC73GCH1H070B	CHIP C	7.0PF	B	
C137			CK73GB1H103K	CHIP C	0.010UF	K	
C138,139			CC73GCH1H020B	CHIP C	2.0PF	B	
C140,141			CC73GCH1H471J	CHIP C	470PF	J	
C142			CC73GCH1H080B	CHIP C	8.0PF	B	
C143			CC73GCH1H090D	CHIP C	9.0PF	D	
C145			CC73GCH1H080B	CHIP C	8.0PF	B	
C146			CC73GCH1H471J	CHIP C	470PF	J	
C147			CC73GCH1HR75B	CHIP C	0.75PF	B	
C148			CC73GCH1H150J	CHIP C	15PF	J	
C149			CK73GB1H103K	CHIP C	0.010UF	K	
C151			CE32CL1V100M	CHIP EL	10UF	35WV	
C152			CC73GCH1H471J	CHIP C	470PF	J	
C153			CC73GCH1H090D	CHIP C	9.0PF	D	
C154		✻	CS77CC1C330M	CHIP TNTL	33UF	16WV	
C156,157			CC73GCH1H471J	CHIP C	470PF	J	
C158		✻	CS77CC1C330M	CHIP TNTL	33UF	16WV	
C160			CC73GCH1H471J	CHIP C	470PF	J	
C161			CE32BM1E470M	CHIP EL	47UF	25WV	
C162,163			CC73GCH1H471J	CHIP C	470PF	J	
C164			CC73GCH1H470J	CHIP C	47PF	J	
C166			CC73GCH1H120J	CHIP C	12PF	J	
C167			CC73GCH1H100D	CHIP C	10PF	D	
C168			CC73GCH1H120J	CHIP C	12PF	J	
C169,170			CC73GCH1H471J	CHIP C	470PF	J	
C171			CK73GB1H103K	CHIP C	0.010UF	K	
C172-174			CC73GCH1H471J	CHIP C	470PF	J	
C175			CC73GCH1H100D	CHIP C	10PF	D	
C176			CC73GCH1H471J	CHIP C	470PF	J	
C177-180			CK73GB1H104K	CHIP C	0.10UF	K	
C181			CC73GCH1H471J	CHIP C	470PF	J	
C182			CC73GCH1H180J	CHIP C	18PF	J	
C183			CC73GCH1H020B	CHIP C	2.0PF	B	
C186			CC73GCH1H1R5B	CHIP C	1.5PF	B	
C187		✻	C93-0912-05	CHIP C	100UF	M	
C188			CC73GCH1H471J	CHIP C	470PF	J	
C189			CC73GCH1H080B	CHIP C	8.0PF	B	
C190,191			CC73GCH1H020B	CHIP C	2.0PF	B	
C192			CC73GCH1H471J	CHIP C	470PF	J	
C193,194			CC73GCH1H100C	CHIP C	10PF	C	
C195			CC73GCH1HR75B	CHIP C	0.75PF	B	
C196-198			CC73GCH1H471J	CHIP C	470PF	J	
C201			CC73GCH1H471J	CHIP C	470PF	J	
C209			CK73GB1H102K	CHIP C	1000PF	K	
C210			CC73GCH1H180J	CHIP C	18PF	J	
C211			CC73GCH1H100C	CHIP C	10PF	C	
C212,213			CK73GB1H102K	CHIP C	1000PF	K	
C214			CC73GCH1H330J	CHIP C	33PF	J	
C215			CK73GB1H102K	CHIP C	1000PF	K	
C216			CK73GB1H103K	CHIP C	0.010UF	K	
C217			CC73GCH1H102J	CHIP C	1000PF	J	
C218			CC73GCH1H180J	CHIP C	18PF	J	
C219			CK73GB1H102K	CHIP C	1000PF	K	

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Ref. No.	Address	New parts	Parts No.	Description			Destination
C220			CK73GB1H104K	CHIP C	0.10UF	K	
C221			CK73GB1H102K	CHIP C	1000PF	K	
C223			CK73GB1H102K	CHIP C	1000PF	K	
C224			CK73GB1H473K	CHIP C	0.047UF	K	
C225,226			CK73GB1H102K	CHIP C	1000PF	K	
C227			CK73GB1H103K	CHIP C	0.010UF	K	
C228			CK73GB1H102K	CHIP C	1000PF	K	
C229			CC73GCH1H020C	CHIP C	2.0PF	C	
C230			CC73GCH1H120J	CHIP C	12PF	J	
C231			CK73GB1H103K	CHIP C	0.010UF	K	
C233			CC73GCH1H010C	CHIP C	1.0PF	C	
C234			CK73GB1H102K	CHIP C	1000PF	K	
C235			CK73GB1H103K	CHIP C	0.010UF	K	
C237			CK73GB1H102K	CHIP C	1000PF	K	
C240			CC73GCH1H221J	CHIP C	220PF	J	
C241			CC73GCH1H820J	CHIP C	82PF	J	
C242			CC73GCH1H330J	CHIP C	33PF	J	
C243,244			CC73GCH1H471J	CHIP C	470PF	J	
C245			CC73GCH1H470J	CHIP C	47PF	J	
C246,247			CC73GCH1H471J	CHIP C	470PF	J	
C248			CC73GCH1H151J	CHIP C	150PF	J	
C249			CE32CL1V100M	CHIP EL	10UF	35WV	
C250			CK73GB1H104K	CHIP C	0.10UF	K	
C251,252			CK73GB1H103K	CHIP C	0.010UF	K	
C253			CE32CL1V100M	CHIP EL	10UF	35WV	
C254			CK73GB1H104K	CHIP C	0.10UF	K	
C255,256			CK73GB1H103K	CHIP C	0.010UF	K	
C257-260			CK73GB1H104K	CHIP C	0.10UF	K	
C263			CC73GCH1H390J	CHIP C	39PF	J	
C265			CC73GCH1H680J	CHIP C	68PF	J	
C267			CC73GCH1H390J	CHIP C	39PF	J	
C269-272			CK73GB1H104K	CHIP C	0.10UF	K	
C275			CC73GCH1H471J	CHIP C	470PF	J	
C276			CC73GCH1H271J	CHIP C	270PF	J	
C277			CC73GCH1H471J	CHIP C	470PF	J	
C278			CC73GCH1H391J	CHIP C	390PF	J	
C279			CC73GCH1H471J	CHIP C	470PF	J	
C280			CC73GCH1H271J	CHIP C	270PF	J	
C281			CC73GCH1H471J	CHIP C	470PF	J	
C282-285			CK73GB1H104K	CHIP C	0.10UF	K	
C286			CK73GB1H103K	CHIP C	0.010UF	K	
C287			CK73GB1H104K	CHIP C	0.10UF	K	
C288			CS77CA1C2R2M	CHIP TNTL	2.2UF	16WV	
C290		✻	CS77CB21A470M	CHIP TNTL	47UF	10WV	
C292			CS77BA1C4R7M	CHIP TNTL	4.7UF	16WV	
C301			CS77CA1C2R2M	CHIP TNTL	2.2UF	16WV	
C302			CC73GCH1H100D	CHIP C	10PF	D	
C303			CK73GB1H103K	CHIP C	0.010UF	K	
C304			CC73GCH1H331J	CHIP C	330PF	J	
C305			CC73GCH1H180J	CHIP C	18PF	J	
C306			CK73FB0J106K	CHIP C	10UF	K	
C307			CK73GB1H104K	CHIP C	0.10UF	K	
C308			CC73GCH1H471J	CHIP C	470PF	J	
C309			CC73GCH1H331J	CHIP C	330PF	J	
C310			CK73FB0J106K	CHIP C	10UF	K	
C311		✻	C93-0912-05	CHIP C	100UF	M	
C312			CK73GB1H103K	CHIP C	0.010UF	K	
C313			CC73GCH1H121J	CHIP C	120PF	J	
C314,315			CK73GB1H103K	CHIP C	0.010UF	K	
C316			CC73GCH1H100D	CHIP C	10PF	D	

Ref. No.	Address	New parts	Parts No.	Description			Destination
C317			CK73GB1H104K	CHIP C	0.10UF	K	
C318			CE32BM1E470M	CHIP EL	47UF	25WV	
C319			CK73GB1H104K	CHIP C	0.10UF	K	
C320			CK73GB1H103K	CHIP C	0.010UF	K	
C321			CC73GCH1H471J	CHIP C	470PF	J	
C323-326			CK73GB1H103K	CHIP C	0.010UF	K	
C327			CC73GCH1H181J	CHIP C	180PF	J	
C328,329		✻	C93-0912-05	CHIP C	100UF	M	
C330			CC73GCH1H470J	CHIP C	47PF	J	
C331			CK73GB1H104K	CHIP C	0.10UF	K	
C332			CC73GCH1H331J	CHIP C	330PF	J	
C333		✻	CS77CC1C100M	CHIP TNTL	10UF	16WV	
C334			CK73GB1H103K	CHIP C	0.010UF	K	
C335			CK73GB1H102K	CHIP C	1000PF	K	
C336			CC73GCH1H180J	CHIP C	18PF	J	
C337			CK73GB1H103K	CHIP C	0.010UF	K	
C338		✻	CS77CB21A470M	CHIP TNTL	47UF	10WV	
C339			CC73GCH1H221J	CHIP C	220PF	J	
C340			CK73GB1H103K	CHIP C	0.010UF	K	
C341			CK73GB1H104K	CHIP C	0.10UF	K	
C342		✻	CS77CB21A470M	CHIP TNTL	47UF	10WV	
C343,344			CK73GB1H103K	CHIP C	0.010UF	K	
C345			CK73GB1H104K	CHIP C	0.10UF	K	
C346,347			CK73GB1H103K	CHIP C	0.010UF	K	
C348			CC73GCH1H221J	CHIP C	220PF	J	
C349,350			CC73GCH1H100D	CHIP C	10PF	D	
C351		✻	CS77CC1C100M	CHIP TNTL	10UF	16WV	
C352			CC73GCH1H180J	CHIP C	18PF	J	
C353			CK73GB1H103K	CHIP C	0.010UF	K	
C354			CC73GCH1H331J	CHIP C	330PF	J	
C355			CC73GCH1H470J	CHIP C	47PF	J	
C356			CK73GB1H103K	CHIP C	0.010UF	K	
C357			CC73GCH1H181J	CHIP C	180PF	J	
C358			CK73GB1H104K	CHIP C	0.10UF	K	
C359			CC73GCH1H100D	CHIP C	10PF	D	
C360			CK73GB1H103K	CHIP C	0.010UF	K	
C361			CK73GB1H104K	CHIP C	0.10UF	K	
C362			CC73GCH1H471J	CHIP C	470PF	J	
C363,364			CK73GB1H103K	CHIP C	0.010UF	K	
C365			CC73GCH1H471J	CHIP C	470PF	J	
C366			CC73GCH1H100D	CHIP C	10PF	D	
C367			CK73GB1H103K	CHIP C	0.010UF	K	
C369,370			CK73GB1H103K	CHIP C	0.010UF	K	
C372			CC73GCH1H180J	CHIP C	18PF	J	
C373			CC73GCH1H470J	CHIP C	47PF	J	
C375			CK73GB1H103K	CHIP C	0.010UF	K	
C376			CC73GCH1H471J	CHIP C	470PF	J	
C378			CK73FB1C105K	CHIP C	1.0UF	K	
C379			CK73GB1H103K	CHIP C	0.010UF	K	
C381			CK73GB1H103K	CHIP C	0.010UF	K	
C382			CC73GCH1H221J	CHIP C	220PF	J	
C383			CC73GCH1H331J	CHIP C	330PF	J	
C384			CC73GCH1H181J	CHIP C	180PF	J	
C386			CE32CL1V100M	CHIP EL	10UF	35WV	
C387			CK73GB1H104K	CHIP C	0.10UF	K	
C388			CC73GCH1H471J	CHIP C	470PF	J	
C389			CK73GB1H102K	CHIP C	1000PF	K	
C390			CK73GB1H222K	CHIP C	2200PF	K	
C391		✻	C93-0912-05	CHIP C	100UF	M	
C392,393			CC73GCH1H100D	CHIP C	10PF	D	

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Ref. No.	Address	New parts	Parts No.	Description			Destination
C401			CK73GB1H103K	CHIP C	0.010UF	K	
C402,403			CK73GB1H104K	CHIP C	0.10UF	K	
C404			CK73GB1H103K	CHIP C	0.010UF	K	
C405			CC73GCH1H471J	CHIP C	470PF	J	
C406-412			CK73GB1H103K	CHIP C	0.010UF	K	
C413			CC73GCH1H471J	CHIP C	470PF	J	
C414-416			CK73GB1H103K	CHIP C	0.010UF	K	
C419			CK73FB0J106K	CHIP C	10UF	K	
C420			CK73GB1H103K	CHIP C	0.010UF	K	
C422			CK73GB1H103K	CHIP C	0.010UF	K	
C423			CE32BM1E470M	CHIP EL	47UF	25WV	
C425			CC73GCH1H181J	CHIP C	180PF	J	
C427			CC73GCH1H470J	CHIP C	47PF	J	
C429			CC73GCH1H331J	CHIP C	330PF	J	
C430			CC73GCH1H180J	CHIP C	18PF	J	
C433			CC73GCH1H221J	CHIP C	220PF	J	
C435			CK73GB1H104K	CHIP C	0.10UF	K	
C436			CS77BA1E010M	CHIP TNTL	1UF	25WV	
C437			CK73GB1H103K	CHIP C	0.010UF	K	
C439-443			CK73GB1H103K	CHIP C	0.010UF	K	
C445			CS77CA1V0R1M	CHIP TNTL	0.1UF	35WV	
C446			CK73FB1E473K	CHIP C	0.047UF	K	
C447			CK73FB0J106K	CHIP C	10UF	K	
C448			CK73GB1H104K	CHIP C	0.10UF	K	
C449			CK73GB1H103K	CHIP C	0.010UF	K	
C451			CK73GB1H104K	CHIP C	0.10UF	K	
C452			CK73FB0J106K	CHIP C	10UF	K	
C453			CC73GCH1H181J	CHIP C	180PF	J	
C454			CC73GCH1H470J	CHIP C	47PF	J	
C455			CK73GB1H103K	CHIP C	0.010UF	K	
C456			CC73GCH1H331J	CHIP C	330PF	J	
C457			CC73GCH1H181J	CHIP C	180PF	J	
C458			CC73GCH1H470J	CHIP C	47PF	J	
C459			CC73GCH1H180J	CHIP C	18PF	J	
C460			CC73GCH1H331J	CHIP C	330PF	J	
C461			CC73GCH1H221J	CHIP C	220PF	J	
C462			CC73GCH1H180J	CHIP C	18PF	J	
C463			CK73GB1H104K	CHIP C	0.10UF	K	
C464,465			CK73GB1H103K	CHIP C	0.010UF	K	
C466			CC73GCH1H221J	CHIP C	220PF	J	
C467			CK73FB1C105K	CHIP C	1.0UF	K	
C468,469			CK73GB1H103K	CHIP C	0.010UF	K	
C470			CK73GB1H104K	CHIP C	0.10UF	K	
C471-482			CK73GB1H103K	CHIP C	0.010UF	K	
C483-486			CK73GB1H104K	CHIP C	0.10UF	K	
C487			CK73GB1H103K	CHIP C	0.010UF	K	
C488-490			CK73GB1H104K	CHIP C	0.10UF	K	
C491			CC73GCH1H470J	CHIP C	47PF	J	
C492-495			CK73GB1H104K	CHIP C	0.10UF	K	
C496			CC73GCH1H221J	CHIP C	220PF	J	
C497			CK73GB1H104K	CHIP C	0.10UF	K	
C498			CC73GCH1H121J	CHIP C	120PF	J	
C499			CK73GB1H104K	CHIP C	0.10UF	K	
C500			CC73GCH1H471J	CHIP C	470PF	J	
C501,502			CK73GB1H104K	CHIP C	0.10UF	K	
C503			CC73GCH1H470J	CHIP C	47PF	J	
C504			CC73GCH1H010C	CHIP C	1.0PF	C	
C505,506			CK73GB1H104K	CHIP C	0.10UF	K	
C507,508			CC73GCH1H331J	CHIP C	330PF	J	
C509,510			CK73GB1H104K	CHIP C	0.10UF	K	

Ref. No.	Address	New parts	Parts No.	Description			Destination
C511			CC73GCH1H470J	CHIP C	47PF	J	
C512			CC73GCH1H471J	CHIP C	470PF	J	
C513			CC73GCH1H010C	CHIP C	1.0PF	C	
C514			CC73GCH1H121J	CHIP C	120PF	J	
C515			CC73GCH1H030C	CHIP C	3.0PF	C	
C516,517			CK73GB1H104K	CHIP C	0.10UF	K	
C519			CK73GB1H104K	CHIP C	0.10UF	K	
C520			CC73GCH1H221J	CHIP C	220PF	J	
C521-527			CK73GB1H104K	CHIP C	0.10UF	K	
C529-532			CK73GB1H104K	CHIP C	0.10UF	K	
C533			CC73GCH1H471J	CHIP C	470PF	J	
C534-537			CK73GB1H104K	CHIP C	0.10UF	K	
C538			CC73GCH1H471J	CHIP C	470PF	J	
C539			CK73GB1H104K	CHIP C	0.10UF	K	
C541,542			CC73GCH1H100D	CHIP C	10PF	D	
C543-547			CK73GB1H104K	CHIP C	0.10UF	K	
C548			CC73GCH1H471J	CHIP C	470PF	J	
C549-552			CK73GB1H104K	CHIP C	0.10UF	K	
C554-556			CK73GB1H104K	CHIP C	0.10UF	K	
C557			CC73GCH1H030C	CHIP C	3.0PF	C	
C558,559			CK73GB1H104K	CHIP C	0.10UF	K	
C562			CK73GB1H104K	CHIP C	0.10UF	K	
C563			CC73GCH1H121J	CHIP C	120PF	J	
C564			CC73GCH1H470J	CHIP C	47PF	J	
C565			CK73GB1H104K	CHIP C	0.10UF	K	
C568			CC73GCH1H221J	CHIP C	220PF	J	
C569			CC73GCH1H471J	CHIP C	470PF	J	
C570			CC73GCH1H010C	CHIP C	1.0PF	C	
C571			CC73GCH1H331J	CHIP C	330PF	J	
C573,574			CC73GCH1H331J	CHIP C	330PF	J	
C575,576			CC73GCH1H180J	CHIP C	18PF	J	
C577,578			CC73GCH1H331J	CHIP C	330PF	J	
C601-605			CK73GB1H104K	CHIP C	0.10UF	K	
C610			CK73GB1H104K	CHIP C	0.10UF	K	
C612,613			CK73GB1H104K	CHIP C	0.10UF	K	
C614			CC73GCH1H100D	CHIP C	10PF	D	
C616			CC73GCH1H270J	CHIP C	27PF	J	
C619			CC73GCH1H100D	CHIP C	10PF	D	
C620-623			CK73GB1H104K	CHIP C	0.10UF	K	
C624-627			CC73GCH1H560J	CHIP C	56PF	J	
C628-631			CK73GB1H104K	CHIP C	0.10UF	K	
C632-634			CK73GB1H103K	CHIP C	0.010UF	K	
C635,636			CK73GB1H104K	CHIP C	0.10UF	K	
C637			CK73GB1H103K	CHIP C	0.010UF	K	
C638			CC73GCH1H470J	CHIP C	47PF	J	
C639			CC73GCH1H180J	CHIP C	18PF	J	
C640			CC73GCH1H181J	CHIP C	180PF	J	
C641			CC73GCH1H331J	CHIP C	330PF	J	
C642			CC73GCH1H221J	CHIP C	220PF	J	
C643			CC73GCH1H471J	CHIP C	470PF	J	
C645			CC73GCH1H471J	CHIP C	470PF	J	
C656,657			CK73GB1H103K	CHIP C	0.010UF	K	
C658			CK73GB1H104K	CHIP C	0.10UF	K	
C659,660			CK73GB1H103K	CHIP C	0.010UF	K	
C661			CK73FB0J106K	CHIP C	10UF	K	
C662,663			CK73GB1H104K	CHIP C	0.10UF	K	
C703			CK73GB1H104K	CHIP C	0.10UF	K	
C704			CK73FB0J106K	CHIP C	10UF	K	
C707			CK73GB1H102K	CHIP C	1000PF	K	
C708			CK73GB1H104K	CHIP C	0.10UF	K	

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Ref. No.	Address	New parts	Parts No.	Description			Destination
C709			CE32CL1V100M	CHIP EL	10UF	35WV	
C710			CK73GB1H104K	CHIP C	0.10UF	K	
C711			CK73GB1H103K	CHIP C	0.010UF	K	
C712,713			CC73GCH1H471J	CHIP C	470PF	J	
C714			CK73GB1H103K	CHIP C	0.010UF	K	
C715			CE32CL1V100M	CHIP EL	10UF	35WV	
C716			CK73GB1H103K	CHIP C	0.010UF	K	
C717,718			CC73GCH1H471J	CHIP C	470PF	J	
C719			CK73GB1H103K	CHIP C	0.010UF	K	
C720,721			CE32CL1V100M	CHIP EL	10UF	35WV	
C722			CK73GB1H103K	CHIP C	0.010UF	K	
C723,724			CC73GCH1H471J	CHIP C	470PF	J	
C725			CK73GB1H103K	CHIP C	0.010UF	K	
C801-803			CK73GB1H104K	CHIP C	0.10UF	K	
C804			CC73GCH1H471J	CHIP C	470PF	J	
C805			CK73GB1H104K	CHIP C	0.10UF	K	
C806			CE32CL1V100M	CHIP EL	10UF	35WV	
C807			CK73FB1C105K	CHIP C	1.0UF	K	
C808,809			CK73GB1H104K	CHIP C	0.10UF	K	
C810			CC73GCH1H471J	CHIP C	470PF	J	
C811			CK73GB1H104K	CHIP C	0.10UF	K	
C812			CK73GB1H103K	CHIP C	0.010UF	K	
C813			CC73GCH1H471J	CHIP C	470PF	J	
C814			CK73GB1H104K	CHIP C	0.10UF	K	
C816			CE32CL1V100M	CHIP EL	10UF	35WV	
C817			CK73GB1H103K	CHIP C	0.010UF	K	
C818			CE32CL1V100M	CHIP EL	10UF	35WV	
C819			CK73GB1H102K	CHIP C	1000PF	K	
C820,821			CK73GB1H104K	CHIP C	0.10UF	K	
C822			CK73GB1H103K	CHIP C	0.010UF	K	
C823,824			CC73GCH1H471J	CHIP C	470PF	J	
C825			CK73GB1H103K	CHIP C	0.010UF	K	
C826			CC73GCH1H471J	CHIP C	470PF	J	
C827			CK73GB1H103K	CHIP C	0.010UF	K	
C848		✻	C92-0904-05	OS-CON	22UF	35WV	
C850			CK73GB1H103K	CHIP C	0.010UF	K	
C856		✻	CE32AU1E100M	CHIP EL	10UF	25WV	
C857			CK73GB1H103K	CHIP C	0.010UF	K	
C858,859			CC73GCH1H471J	CHIP C	470PF	J	
C860			CK73GB1H103K	CHIP C	0.010UF	K	
C871-873			CK73GB1H102K	CHIP C	1000PF	K	
C874			CK73GB1H103K	CHIP C	0.010UF	K	
C875			CK73GB1H104K	CHIP C	0.10UF	K	
C876-878			CC73GCH1H471J	CHIP C	470PF	J	
C879			CE32CL1V100M	CHIP EL	10UF	35WV	
C882			CC73GCH1H180J	CHIP C	18PF	J	
C883			CC73GCH1H330J	CHIP C	33PF	J	
C884			CC73GCH1H180J	CHIP C	18PF	J	
C885			CK73GB1H104K	CHIP C	0.10UF	K	
C886			CC73GCH1H270J	CHIP C	27PF	J	
C887			CC73GCH1H100D	CHIP C	10PF	D	
C888			CC73GCH1H270J	CHIP C	27PF	J	
C889			CK73GB1H104K	CHIP C	0.10UF	K	
C894,895			CK73GB1H103K	CHIP C	0.010UF	K	
C896			CC73GCH1H100D	CHIP C	10PF	D	
C920-925			CK73GB1H104K	CHIP C	0.10UF	K	
C926			CK73GB1H102K	CHIP C	1000PF	K	
C928,929			CK73GB1H104K	CHIP C	0.10UF	K	
C930,931			CK73GB1E105K	CHIP C	1.0UF	K	
C932			CC73GCH1H470J	CHIP C	47PF	J	

Ref. No.	Address	New parts	Parts No.	Description			Destination
C933,934		✻	CS77CA1A1R5M	CHIP TNTL	1.5UF	10WV	
C935,936			CK73GB1H104K	CHIP C	0.10UF	K	
C937			CK73GB1H103K	CHIP C	0.010UF	K	
C938			CK73FB0J106K	CHIP C	10UF	K	
C939			CK73GB1H102K	CHIP C	1000PF	K	
C941			CK73GB1H102K	CHIP C	1000PF	K	
C943			CK73GB1H104K	CHIP C	0.10UF	K	
C960-965			CK73GB1H104K	CHIP C	0.10UF	K	
CN102-121		✻	E23-1280-05	TERMINAL			
CN403			E04-0193-05	PIN SOCKET			
CN405,406			E04-0193-05	PIN SOCKET			
CN407			E04-0154-05	PIN SOCKET			
CN408			E04-0193-05	PIN SOCKET			
CN801			E41-2672-05	PIN ASSY			
CN802			E04-0193-05	PIN SOCKET			
CN803		✻	E40-6822-05	FLAT CABLE CONNECTOR			
CN804-806			E40-6656-05	PIN ASSY			
CN807			E41-2671-05	PIN ASSY			
CN920		✻	E41-1493-05	PIN ASSY			
CN921			E40-6656-05	PIN ASSY			
CN923		✻	E41-1483-05	PIN ASSY			
CN960		✻	E41-1493-05	PIN ASSY			
E100		✻	F10-3081-04	SHIELDING CASE			
CF201		✻	L72-1029-05	CERAMIC FILTER			
CF601		✻	L72-1019-05	CERAMIC FILTER			
L105,106			L41-1595-33	SMALL FIXED INDUCTOR (1.5UH)			
L108		✻	L34-4871-05	AIR-CORE COIL			
L109-111			L41-1595-33	SMALL FIXED INDUCTOR (1.5UH)			
L112,113			L41-2775-33	SMALL FIXED INDUCTOR (0.027UH)			
L116-118			L41-2775-33	SMALL FIXED INDUCTOR (0.027UH)			
L119			L41-1575-33	SMALL FIXED INDUCTOR (0.015UH)			
L120			L41-2275-33	SMALL FIXED INDUCTOR (0.022UH)			
L121-124			L41-1005-33	SMALL FIXED INDUCTOR (10UH)			
L125,126			L41-1595-33	SMALL FIXED INDUCTOR (1.5UH)			
L128		✻	L34-4871-05	AIR-CORE COIL			
L129-131			L41-1595-33	SMALL FIXED INDUCTOR (1.5UH)			
L203			L41-3375-33	SMALL FIXED INDUCTOR (0.033UH)			
L204,205			L41-5675-33	SMALL FIXED INDUCTOR (0.056UH)			
L207			L41-1085-33	SMALL FIXED INDUCTOR (0.1UH)			
L208			L41-6875-33	SMALL FIXED INDUCTOR (0.068UH)			
L210			L41-1595-33	SMALL FIXED INDUCTOR (1.5UH)			
L211		✻	L41-1895-33	SMALL FIXED INDUCTOR (1.8UH)			
L212,213			L41-1005-33	SMALL FIXED INDUCTOR (10UH)			
L214,215			L41-4705-33	SMALL FIXED INDUCTOR (47UH)			
L216,217			L41-2295-33	SMALL FIXED INDUCTOR (2.2UH)			
L218			L41-6885-33	SMALL FIXED INDUCTOR (0.68UH)			
L219			L41-6895-33	SMALL FIXED INDUCTOR (6.8UH)			
L301			L41-3985-33	SMALL FIXED INDUCTOR (0.39UH)			
L302			L41-1005-33	SMALL FIXED INDUCTOR (10UH)			
L303			L41-1095-33	SMALL FIXED INDUCTOR (1.0UH)			
L304			L41-1005-33	SMALL FIXED INDUCTOR (10UH)			
L305			L41-3385-33	SMALL FIXED INDUCTOR (0.33UH)			
L306			L41-1095-33	SMALL FIXED INDUCTOR (1.0UH)			
L307,308			L41-3985-33	SMALL FIXED INDUCTOR (0.39UH)			
L309			L41-1095-33	SMALL FIXED INDUCTOR (1.0UH)			
L310			L41-3385-33	SMALL FIXED INDUCTOR (0.33UH)			
L311			L41-3985-33	SMALL FIXED INDUCTOR (0.39UH)			
L312			L41-3385-33	SMALL FIXED INDUCTOR (0.33UH)			

PARTS LIST

TX UNIT (X56-3110-10)

Ref. No.	Address	New parts	Parts No.	Description	Destination
L313			L41-1095-33	SMALL FIXED INDUCTOR (1.0UH)	
L314			L41-1005-33	SMALL FIXED INDUCTOR (10UH)	
L401-403			L41-1095-33	SMALL FIXED INDUCTOR (1.0UH)	
L404			L41-1005-33	SMALL FIXED INDUCTOR (10UH)	
L405			L41-3385-33	SMALL FIXED INDUCTOR (0.33UH)	
L406			L41-1005-33	SMALL FIXED INDUCTOR (10UH)	
L407			L41-3985-33	SMALL FIXED INDUCTOR (0.39UH)	
L408			L41-1095-33	SMALL FIXED INDUCTOR (1.0UH)	
L409,410			L41-3385-33	SMALL FIXED INDUCTOR (0.33UH)	
L411			L41-3985-33	SMALL FIXED INDUCTOR (0.39UH)	
L412			L41-1095-33	SMALL FIXED INDUCTOR (1.0UH)	
L413			L41-3985-33	SMALL FIXED INDUCTOR (0.39UH)	
L414,415			L41-1095-33	SMALL FIXED INDUCTOR (1.0UH)	
L416,417			L41-1005-33	SMALL FIXED INDUCTOR (10UH)	
L418			L41-5685-33	SMALL FIXED INDUCTOR (0.56UH)	
L419,420			L41-6885-33	SMALL FIXED INDUCTOR (0.68UH)	
L421			L41-5685-33	SMALL FIXED INDUCTOR (0.56UH)	
L422		✻	L39-1517-05	TOROIDAL COIL	
L423			L41-3305-33	SMALL FIXED INDUCTOR (33UH)	
L424		✻	L39-1517-05	TOROIDAL COIL	
L425			L41-3305-33	SMALL FIXED INDUCTOR (33UH)	
L426,427		✻	L39-1517-05	TOROIDAL COIL	
L430			L41-5685-33	SMALL FIXED INDUCTOR (0.56UH)	
L431			L41-6885-33	SMALL FIXED INDUCTOR (0.68UH)	
L433,434			L41-3985-33	SMALL FIXED INDUCTOR (0.39UH)	
L435			L41-2205-33	SMALL FIXED INDUCTOR (22UH)	
L601,602			L41-3305-33	SMALL FIXED INDUCTOR (33UH)	
L603,604			L41-4705-33	SMALL FIXED INDUCTOR (47UH)	
L605			L41-2205-33	SMALL FIXED INDUCTOR (22UH)	
L606,607		✻	L41-1205-33	SMALL FIXED INDUCTOR (12UH)	
L608			L41-1005-33	SMALL FIXED INDUCTOR (10UH)	
L609			L92-0140-05	CHIP FERRITE	
L610			L41-1005-33	SMALL FIXED INDUCTOR (10UH)	
L611			L92-0140-05	CHIP FERRITE	
L612			L41-3385-33	SMALL FIXED INDUCTOR (0.33UH)	
L613			L41-3985-33	SMALL FIXED INDUCTOR (0.39UH)	
L614			L41-1005-33	SMALL FIXED INDUCTOR (10UH)	
L801			L41-1095-33	SMALL FIXED INDUCTOR (1.0UH)	
L810,811			L41-5675-33	SMALL FIXED INDUCTOR (0.056UH)	
L812			L41-1005-33	SMALL FIXED INDUCTOR (10UH)	
X301		✻	L77-1981-05	VCXO (19.2MHZ)	
X401		✻	L77-1981-05	VCXO (19.2MHZ)	
X601		✻	L77-3034-05	TCXO (19.2MHZ)	
CP920			RK74GB1J102J	CHIP-COM 1.0K J 1/16W	
CP923			RK74GB1J102J	CHIP-COM 1.0K J 1/16W	
CP924			RK75GB1JR00	CHIP-COM 0.00 1/16W	
CP926		✻	RK74GB1J681J	CHIP-COM 680 J 1/16W	
CP928		✻	RK74GB1J681J	CHIP-COM 680 J 1/16W	
CP961,962		✻	RK74GB1J681J	CHIP-COM 680 J 1/16W	
CP965,966		✻	RK74GB1J681J	CHIP-COM 680 J 1/16W	
CP970,971		✻	RK74GB1J681J	CHIP-COM 680 J 1/16W	
CP973,974		✻	RK74GB1J681J	CHIP-COM 680 J 1/16W	
R101			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R118			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R120			RK73GB2A100J	CHIP R 10 J 1/10W	
R123			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R124,125			RK73GB2A105J	CHIP R 1.0M J 1/10W	
R129			RK73GB2A101J	CHIP R 100 J 1/10W	
R131			RK73GB2A101J	CHIP R 100 J 1/10W	

Ref. No.	Address	New parts	Parts No.	Description	Destination
R132			RK73GB2A271J	CHIP R 270 J 1/10W	
R133			RK73GB2A470J	CHIP R 47 J 1/10W	
R134			RK73GB2A220J	CHIP R 22 J 1/10W	
R135			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R137			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R138			RK73GB2A103J	CHIP R 10K J 1/10W	
R139			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R141			RK73GB2A101J	CHIP R 100 J 1/10W	
R142			RK73GB2A221J	CHIP R 220 J 1/10W	
R144,145			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R146			RK73GB2A121J	CHIP R 120 J 1/10W	
R147			RK73GB2A470J	CHIP R 47 J 1/10W	
R148			RK73GB2A121J	CHIP R 120 J 1/10W	
R149			RK73GB2A221J	CHIP R 220 J 1/10W	
R150			RK73GB2A820J	CHIP R 82 J 1/10W	
R151			RK73GB2A101J	CHIP R 100 J 1/10W	
R152			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R153			RK73GB2A271J	CHIP R 270 J 1/10W	
R154			RK73GB2A180J	CHIP R 18 J 1/10W	
R155			RK73GB2A682J	CHIP R 6.8K J 1/10W	
R156			RK73GB2A332J	CHIP R 3.3K J 1/10W	
R157			RK73GB2A271J	CHIP R 270 J 1/10W	
R158			RK73GB2A103J	CHIP R 10K J 1/10W	
R159-161			RK73GB2A104J	CHIP R 100K J 1/10W	
R164			RK73GB2A104J	CHIP R 100K J 1/10W	
R165-168			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R170			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R171,172			RK73GB2A470J	CHIP R 47 J 1/10W	
R173,174			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R176			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R178			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R179			RK73GB2A224J	CHIP R 220K J 1/10W	
R180			RK73GB2A101J	CHIP R 100 J 1/10W	
R181			RK73GB2A104J	CHIP R 100K J 1/10W	
R182			RK73GB2A101J	CHIP R 100 J 1/10W	
R183			RK73GB2A271J	CHIP R 270 J 1/10W	
R184			RK73GB2A470J	CHIP R 47 J 1/10W	
R185,186			RK73GB2A103J	CHIP R 10K J 1/10W	
R187,188			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R189-191			RK73GB2A103J	CHIP R 10K J 1/10W	
R202			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R209			RK73GB2A101J	CHIP R 100 J 1/10W	
R210			RK73GB2A680J	CHIP R 68 J 1/10W	
R211			RK73GB2A101J	CHIP R 100 J 1/10W	
R212			RK73GB2A562J	CHIP R 5.6K J 1/10W	
R213			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R214			RK73GB2A221J	CHIP R 220 J 1/10W	
R215			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R216			RK73GB2A470J	CHIP R 47 J 1/10W	
R217			RK73GB2A271J	CHIP R 270 J 1/10W	
R218			RK73GB2A180J	CHIP R 18 J 1/10W	
R219			RK73GB2A271J	CHIP R 270 J 1/10W	
R220			RK73GB2A560J	CHIP R 56 J 1/10W	
R221			RK73GB2A103J	CHIP R 10K J 1/10W	
R222			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R223			RK73GB2A123J	CHIP R 12K J 1/10W	
R224			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R225			RK73GB2A474J	CHIP R 470K J 1/10W	
R226,227			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R229			RK73GB2A563J	CHIP R 56K J 1/10W	

PARTS LIST

TX UNIT (X56-3110-10)

Ref. No.	Address	New parts	Parts No.	Description				Destination
R230			RK73FB2B4R7J	CHIP R	4.7	J	1/8W	
R231,232			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R233			RK73GB2A104J	CHIP R	100K	J	1/10W	
R234,235			RK73GB2A474J	CHIP R	470K	J	1/10W	
R236			RK73GB2A821J	CHIP R	820	J	1/10W	
R241			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R242			RK73GB2A474J	CHIP R	470K	J	1/10W	
R243			RK73GB2A392J	CHIP R	3.9K	J	1/10W	
R244-246			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R247-249			RK73GB2A104J	CHIP R	100K	J	1/10W	
R250			RK73GB2A473J	CHIP R	47K	J	1/10W	
R251			RK73GB2A100J	CHIP R	10	J	1/10W	
R252			RK73GB2A104J	CHIP R	100K	J	1/10W	
R253			RK73GB2A331J	CHIP R	330	J	1/10W	
R254			RK73GB2A100J	CHIP R	10	J	1/10W	
R255			RK73GB2A274J	CHIP R	270K	J	1/10W	
R256			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R257,258			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R259			RK73GB2A562J	CHIP R	5.6K	J	1/10W	
R260			RK73GB2A331J	CHIP R	330	J	1/10W	
R261			RK73GB2A562J	CHIP R	5.6K	J	1/10W	
R262			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R263			RK73GB2A563J	CHIP R	56K	J	1/10W	
R264			RK73GB2A100J	CHIP R	10	J	1/10W	
R265			RK73GB2A471J	CHIP R	470	J	1/10W	
R266			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R267			RK73GB2A271J	CHIP R	270	J	1/10W	
R268			RK73GB2A180J	CHIP R	18	J	1/10W	
R269			RK73GB2A271J	CHIP R	270	J	1/10W	
R270,271			RK73GB2A472J	CHIP R	4.7K	J	1/10W	
R272			RK73GB2A100J	CHIP R	10	J	1/10W	
R274			RK73GB2A331J	CHIP R	330	J	1/10W	
R276			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R301,302			RK73GB2A473J	CHIP R	47K	J	1/10W	
R303			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R304			RK73GB2A471J	CHIP R	470	J	1/10W	
R305			RK73GB2A104J	CHIP R	100K	J	1/10W	
R306-309			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R310,311			RK73GB2A104J	CHIP R	100K	J	1/10W	
R312			RK73GB2A154J	CHIP R	150K	J	1/10W	
R313			RK73GB2A2R2J	CHIP R	2.2	J	1/10W	
R314			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R316			RK73GB2A683J	CHIP R	68K	J	1/10W	
R317			RK73GB2A104J	CHIP R	100K	J	1/10W	
R318			RK73GB2A472J	CHIP R	4.7K	J	1/10W	
R319			RK73GB2A104J	CHIP R	100K	J	1/10W	
R320			RK73GB2A470J	CHIP R	47	J	1/10W	
R321-323			RK73GB2A100J	CHIP R	10	J	1/10W	
R324			RK73GB2A682J	CHIP R	6.8K	J	1/10W	
R325			RK73GB2A332J	CHIP R	3.3K	J	1/10W	
R326			RK73GB2A100J	CHIP R	10	J	1/10W	
R327,328			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R329,330			RK73GB2A104J	CHIP R	100K	J	1/10W	
R331,332			RK73GB2A471J	CHIP R	470	J	1/10W	
R333			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R334			RK73GB2A473J	CHIP R	47K	J	1/10W	
R335			RK73GB2A223J	CHIP R	22K	J	1/10W	
R336			RK73GB2A334J	CHIP R	330K	J	1/10W	
R337			RK73GB2A273J	CHIP R	27K	J	1/10W	
R338			RK73GB2A105J	CHIP R	1.0M	J	1/10W	

Ref. No.	Address	New parts	Parts No.	Description				Destination
R339			RK73GB2A104J	CHIP R	100K	J	1/10W	
R340			RK73GB2A101J	CHIP R	100	J	1/10W	
R341			RK73GB2A221J	CHIP R	220	J	1/10W	
R342			RK73GB2A470J	CHIP R	47	J	1/10W	
R343			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R344-351			RK73GB2A104J	CHIP R	100K	J	1/10W	
R352			RK73GB2A123J	CHIP R	12K	J	1/10W	
R353			RK73GB2A332J	CHIP R	3.3K	J	1/10W	
R355			RK73GB2A221J	CHIP R	220	J	1/10W	
R356			RK73GB2A100J	CHIP R	10	J	1/10W	
R357			RK73GB2A101J	CHIP R	100	J	1/10W	
R358			RK73GB2A105J	CHIP R	1.0M	J	1/10W	
R360			RK73GB2A104J	CHIP R	100K	J	1/10W	
R362			RK73GB2A100J	CHIP R	10	J	1/10W	
R363			RK73GB2A471J	CHIP R	470	J	1/10W	
R364			RK73GB2A104J	CHIP R	100K	J	1/10W	
R367			RK73GB2A104J	CHIP R	100K	J	1/10W	
R368			RK73GB2A822J	CHIP R	8.2K	J	1/10W	
R369			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R370			RK73GB2A182J	CHIP R	1.8K	J	1/10W	
R371			RK73GB2A2R2J	CHIP R	2.2	J	1/10W	
R374			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R375,376			RK73GB2A563J	CHIP R	56K	J	1/10W	
R377,378			RK73GB2A104J	CHIP R	100K	J	1/10W	
R379			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R380			RK73GB2A470J	CHIP R	47	J	1/10W	
R381			RK73GB2A104J	CHIP R	100K	J	1/10W	
R401			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R402			RK73GB2A474J	CHIP R	470K	J	1/10W	
R403,404			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R406-408			RK73GB2A100J	CHIP R	10	J	1/10W	
R409			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R410			RK73GB2A331J	CHIP R	330	J	1/10W	
R411			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R412			RK73GB2A331J	CHIP R	330	J	1/10W	
R413			RK73GB2A123J	CHIP R	12K	J	1/10W	
R414			RK73GB2A562J	CHIP R	5.6K	J	1/10W	
R415			RK73GB2A123J	CHIP R	12K	J	1/10W	
R416			RK73GB2A562J	CHIP R	5.6K	J	1/10W	
R417,418			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R422-424			RK73GB2A474J	CHIP R	470K	J	1/10W	
R425			RK73GB2A104J	CHIP R	100K	J	1/10W	
R427			RK73GB2A100J	CHIP R	10	J	1/10W	
R430,431			RK73GB2A100J	CHIP R	10	J	1/10W	
R433			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R434			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R435			RK73GB2A104J	CHIP R	100K	J	1/10W	
R436,437			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R438			RK73GB2A104J	CHIP R	100K	J	1/10W	
R439			RK73GB2A2R2J	CHIP R	2.2	J	1/10W	
R440			RK73GB2A103J	CHIP R	10K	J	1/10W	
R442			RK73GB2A470J	CHIP R	47	J	1/10W	
R447			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R452,453			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R454,455			RK73GB2A105J	CHIP R	1.0M	J	1/10W	
R457			RK73GB2A333J	CHIP R	33K	J	1/10W	
R458			RK73GB2A104J	CHIP R	100K	J	1/10W	
R459			RK73GB2A472J	CHIP R	4.7K	J	1/10W	
R460			RK73GB2A183J	CHIP R	18K	J	1/10W	
R461			RK73GB2A000J	CHIP R	0.0	J	1/10W	

PARTS LIST

TX UNIT (X56-3110-10)

Ref. No.	Address	New parts	Parts No.	Description	Destination
R463			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R464			RK73GB2A221J	CHIP R 220 J 1/10W	
R465			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R466			RK73GB2A470J	CHIP R 47 J 1/10W	
R469,470			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R471			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R474			RK73GB2A682J	CHIP R 6.8K J 1/10W	
R475			RK73GB2A332J	CHIP R 3.3K J 1/10W	
R476,477			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R478			RK73GB2A153J	CHIP R 15K J 1/10W	
R479			RK73GB2A2R2J	CHIP R 2.2 J 1/10W	
R480			RK73GB2A682J	CHIP R 6.8K J 1/10W	
R481			RK73GB2A182J	CHIP R 1.8K J 1/10W	
R482			RK73GB2A103J	CHIP R 10K J 1/10W	
R483			RK73GB2A562J	CHIP R 5.6K J 1/10W	
R484			RK73GB2A101J	CHIP R 100 J 1/10W	
R485			RK73GB2A392J	CHIP R 3.9K J 1/10W	
R486			RK73GB2A221J	CHIP R 220 J 1/10W	
R487			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R488			RK73GB2A822J	CHIP R 8.2K J 1/10W	
R489			RK73GB2A272J	CHIP R 2.7K J 1/10W	
R490			RK73GB2A470J	CHIP R 47 J 1/10W	
R492			RK73GB2A471J	CHIP R 470 J 1/10W	
R493			RK73GB2A104J	CHIP R 100K J 1/10W	
R494			RK73GB2A123J	CHIP R 12K J 1/10W	
R495			RK73GB2A332J	CHIP R 3.3K J 1/10W	
R496,497			RK73GB2A100J	CHIP R 10 J 1/10W	
R498			RK73GB2A471J	CHIP R 470 J 1/10W	
R499			RK73GB2A682J	CHIP R 6.8K J 1/10W	
R500			RK73GB2A332J	CHIP R 3.3K J 1/10W	
R501			RK73GB2A221J	CHIP R 220 J 1/10W	
R502			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R503			RK73GB2A100J	CHIP R 10 J 1/10W	
R504			RK73GB2A104J	CHIP R 100K J 1/10W	
R505			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R506			RK73GB2A101J	CHIP R 100 J 1/10W	
R507			RK73GB2A100J	CHIP R 10 J 1/10W	
R508-510			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R511			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R512			RK73GB2A181J	CHIP R 180 J 1/10W	
R513			RK73GB2A471J	CHIP R 470 J 1/10W	
R514			RK73GB2A100J	CHIP R 10 J 1/10W	
R515			RK73GB2A470J	CHIP R 47 J 1/10W	
R518			RK73GB2A104J	CHIP R 100K J 1/10W	
R519			RK73GB2A124J	CHIP R 120K J 1/10W	
R521			RK73GB2A223J	CHIP R 22K J 1/10W	
R522			RK73GB2A822J	CHIP R 8.2K J 1/10W	
R523,524			RK73GB2A221J	CHIP R 220 J 1/10W	
R525			RK73GB2A471J	CHIP R 470 J 1/10W	
R526			RK73GB2A473J	CHIP R 47K J 1/10W	
R527			RK73GB2A271J	CHIP R 270 J 1/10W	
R528			RK73GB2A152J	CHIP R 1.5K J 1/10W	
R529			RK73GB2A153J	CHIP R 15K J 1/10W	
R530			RK73GB2A120J	CHIP R 12 J 1/10W	
R531			RK73GB2A474J	CHIP R 470K J 1/10W	
R532			RK73GB2A271J	CHIP R 270 J 1/10W	
R533			RK73GB2A104J	CHIP R 100K J 1/10W	
R534			RK73GB2A221J	CHIP R 220 J 1/10W	
R535			RK73GB2A104J	CHIP R 100K J 1/10W	
R536			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R538			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R539			RK73GB2A100J	CHIP R 10 J 1/10W	
R540			RK73GB2A474J	CHIP R 470K J 1/10W	
R541			RK73FB2B1R0J	CHIP R 1.0 J 1/8W	
R542			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R543			RK73GB2A220J	CHIP R 22 J 1/10W	
R544			RK73GB2A104J	CHIP R 100K J 1/10W	
R545			RK73GB2A470J	CHIP R 47 J 1/10W	
R547			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R548			RK73GB2A473J	CHIP R 47K J 1/10W	
R549			RK73GB2A331J	CHIP R 330 J 1/10W	
R550			RK73GB2A104J	CHIP R 100K J 1/10W	
R551			RK73GB2A473J	CHIP R 47K J 1/10W	
R552			RK73GB2A104J	CHIP R 100K J 1/10W	
R553			RK73GB2A223J	CHIP R 22K J 1/10W	
R554			RK73GB2A180J	CHIP R 18 J 1/10W	
R555			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R556			RK73GB2A122J	CHIP R 1.2K J 1/10W	
R557			RK73GB2A473J	CHIP R 47K J 1/10W	
R558			RK73GB2A331J	CHIP R 330 J 1/10W	
R560			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R561			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R562			RK73GB2A104J	CHIP R 100K J 1/10W	
R563			RK73GB2A473J	CHIP R 47K J 1/10W	
R564			RK73GB2A223J	CHIP R 22K J 1/10W	
R566			RK73GB2A473J	CHIP R 47K J 1/10W	
R567			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R568			RK73GB2A224J	CHIP R 220K J 1/10W	
R569			RK73GB2A561J	CHIP R 560 J 1/10W	
R570			RK73GB2A473J	CHIP R 47K J 1/10W	
R571			RK73GB2A100J	CHIP R 10 J 1/10W	
R573			RK73GB2A104J	CHIP R 100K J 1/10W	
R575			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R576			RK73FB2B1R0J	CHIP R 1.0 J 1/8W	
R577			RK73GB2A104J	CHIP R 100K J 1/10W	
R578			RK73GB2A000J	CHIP R 0.0 J 1/10W	
R580			RK73GB2A220J	CHIP R 22 J 1/10W	
R581			RK73GB2A104J	CHIP R 100K J 1/10W	
R582			RK73GB2A474J	CHIP R 470K J 1/10W	
R583			RK73GB2A221J	CHIP R 220 J 1/10W	
R586			RK73GB2A104J	CHIP R 100K J 1/10W	
R588			RK73GB2A103J	CHIP R 10K J 1/10W	
R591			RK73FB2B271J	CHIP R 270 J 1/8W	
R592			RK73GB2A273J	CHIP R 27K J 1/10W	
R593			RK73FB2B120J	CHIP R 12 J 1/8W	
R594			RK73FB2B271J	CHIP R 270 J 1/8W	
R595			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R601			RK73GB2A103J	CHIP R 10K J 1/10W	
R602			RK73GB2A104J	CHIP R 100K J 1/10W	
R603			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R604			RK73GB2A473J	CHIP R 47K J 1/10W	
R605			RK73GB2A153J	CHIP R 15K J 1/10W	
R606			RK73GB2A181J	CHIP R 180 J 1/10W	
R607			RK73GB2A470J	CHIP R 47 J 1/10W	
R608			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R610			RK73GB2A104J	CHIP R 100K J 1/10W	
R611			RK73GB2A100J	CHIP R 10 J 1/10W	
R612			RK73GB2A471J	CHIP R 470 J 1/10W	
R613			RK73GB2A682J	CHIP R 6.8K J 1/10W	
R614			RK73GB2A332J	CHIP R 3.3K J 1/10W	

PARTS LIST

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Ref. No.	Address	New parts	Parts No.	Description				Destination
R615			RK73GB2A471J	CHIP R	470	J	1/10W	
R616			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R617			RK73GB2A471J	CHIP R	470	J	1/10W	
R618			RK73GB2A104J	CHIP R	100K	J	1/10W	
R619			RK73GB2A100J	CHIP R	10	J	1/10W	
R620			RK73GB2A104J	CHIP R	100K	J	1/10W	
R621			RK73GB2A471J	CHIP R	470	J	1/10W	
R622			RK73GB2A331J	CHIP R	330	J	1/10W	
R623			RK73GB2A392J	CHIP R	3.9K	J	1/10W	
R624			RK73GB2A474J	CHIP R	470K	J	1/10W	
R625			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R626-628			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R629			RK73GB2A101J	CHIP R	100	J	1/10W	
R630			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R631			RK73GB2A561J	CHIP R	560	J	1/10W	
R637,638			RK73GB2A472J	CHIP R	4.7K	J	1/10W	
R639,640			RK73GH2A104D	CHIP R	100K	D	1/10W	
R705			RK73GB2A2R2J	CHIP R	2.2	J	1/10W	
R706-708			RK73GB2A100J	CHIP R	10	J	1/10W	
R709			RK73GB2A474J	CHIP R	470K	J	1/10W	
R711			RK73GB2A104J	CHIP R	100K	J	1/10W	
R712,713			RK73GB2A472J	CHIP R	4.7K	J	1/10W	
R714			RK73GB2A104J	CHIP R	100K	J	1/10W	
R715			RK73GB2A474J	CHIP R	470K	J	1/10W	
R716-718			RK73GB2A100J	CHIP R	10	J	1/10W	
R719,720			RK73GB2A104J	CHIP R	100K	J	1/10W	
R721			RK73GB2A100J	CHIP R	10	J	1/10W	
R722			RK73GB2A474J	CHIP R	470K	J	1/10W	
R801			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R802,803			RK73GB2A104J	CHIP R	100K	J	1/10W	
R804-807			RK73GB2A100J	CHIP R	10	J	1/10W	
R812-824			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R830-837			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R840			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R845			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R855			RK73GB2A560J	CHIP R	56	J	1/10W	
R856			RK73GB2A220J	CHIP R	22	J	1/10W	
R865			RK73GB2A104J	CHIP R	100K	J	1/10W	
R866,867			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R869			RK73GB2A104J	CHIP R	100K	J	1/10W	
R870			RK73GB2A101J	CHIP R	100	J	1/10W	
R871,872			RK73GB2A104J	CHIP R	100K	J	1/10W	
R873			RK73GB2A103J	CHIP R	10K	J	1/10W	
R877			RK73GB2A104J	CHIP R	100K	J	1/10W	
R878			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R879			RK73GB2A104J	CHIP R	100K	J	1/10W	
R881			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R887-889			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R891			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R920-932			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R933			RK73GB2A821J	CHIP R	820	J	1/10W	
R934,935			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R936,937			RK73GB2A122J	CHIP R	1.2K	J	1/10W	
R938,939			RK73GB2A821J	CHIP R	820	J	1/10W	
R940			RK73GB2A122J	CHIP R	1.2K	J	1/10W	
R941			RK73GB2A821J	CHIP R	820	J	1/10W	
R942			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R943			RK73GH2A224D	CHIP R	220K	D	1/10W	
R944,945			RK73GB2A102J	CHIP R	1.0K	J	1/10W	
R946			RK73GB2A103J	CHIP R	10K	J	1/10W	
R947			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R948,949			RK73GH2A104D	CHIP R	100K	D	1/10W	
R950			RK73GH2A822D	CHIP R	8.2K	D	1/10W	
R951			RK73GB2A122J	CHIP R	1.2K	J	1/10W	
R960-965			RK73GB2A000J	CHIP R	0.0	J	1/10W	
R966,967			RK73GB2A681J	CHIP R	680	J	1/10W	
VR401,402			R32-0754-05	SEMI FIXED VARIABLE RESISTOR				
S920-925			S70-0502-05	TACT SWITCH				
D101,102			1SV283F	VARIABLE CAPACITANCE DIODE				
D106			1SV278F	VARIABLE CAPACITANCE DIODE				
D107,108			1SV283F	VARIABLE CAPACITANCE DIODE				
D112			1SV278F	VARIABLE CAPACITANCE DIODE				
D201			HSM88AS-E	DIODE				
D401-403			HSM88AS-E	DIODE				
D404,405		✻	JDP4P02U	DIODE				
D406,407			HSC119	DIODE				
D408			HSM88AS-E	DIODE				
D409			CSA70-401L	SURGE ABSORBER				
D601,602		✻	JDP4P02U	DIODE				
D603-606		✻	UDZS3.0B	ZENER DIODE				
D933,934			HSM88AS-E	DIODE				
D935,936			1SS355	DIODE				
D960,961		✻	PSA0511EWA-FG1	LED				
IC101			LMX2352TMX/NP	ANALOGUE IC				
IC102			LMC7101BIM5	MOS-IC				
IC104		✻	NJM2386ADL3-09	ANALOGUE IC				
IC201			NJM2904E-ZB	ANALOGUE IC				
IC202			AD9835BRUZ	MOS-IC				
IC301		✻	NJM2732V	BI-POLAR IC				
IC302		✻	NJU6368PF1	MOS-IC				
IC303		✻	ADF4001BRUZ	MOS-IC				
IC304			M62364FP-F	MOS-IC				
IC305		✻	NJM2732V	BI-POLAR IC				
IC306			LMC7101BIM5	MOS-IC				
IC307		✻	NJU6368PF1	MOS-IC				
IC308		✻	NJM2732V	BI-POLAR IC				
IC401			LMC7101BIM5	MOS-IC				
IC404		✻	ADF4001BRUZ	MOS-IC				
IC405,406		✻	TC75S59F-F	MOS-IC				
IC407		✻	NJU6368PF1	MOS-IC				
IC408,409			TA75S01F-F	MOS-IC				
IC601			AD9835BRUZ	MOS-IC				
IC602		✻	NJU6368PF1	MOS-IC				
IC603			XC6204B332M	MOS-IC				
IC701			BH2220FVM	ANALOGUE IC				
IC702			S24CS02AFJTBG	ROM IC				
IC703			BU4094BCFV	MOS-IC				
IC704		✻	NJM78M08DL1AZB	ANALOGUE IC				
IC705,706			NJM78M05DL1AZB	ANALOGUE IC				
IC801		✻	AD1582	ANALOGUE IC				
IC802		✻	AD5312BRM	MOS-IC				
IC803		✻	AD7908BRU	MOS-IC				
IC804		✻	LM50BIM3/NOPB	MOS-IC				
IC805,806		✻	TC7SET126FU-F	MOS-IC				
IC807			NJM78M05DL1AZB	ANALOGUE IC				
IC808,809	1B		NJM7808FA-ZB	BI-POLAR IC				
IC810			TK11230CMCL-G	BI-POLAR IC				
IC811		✻	PE3511-52	MOS-IC				

If a part reference number is listed in a shaded box, that part does not come with the PCB.

PARTS LIST

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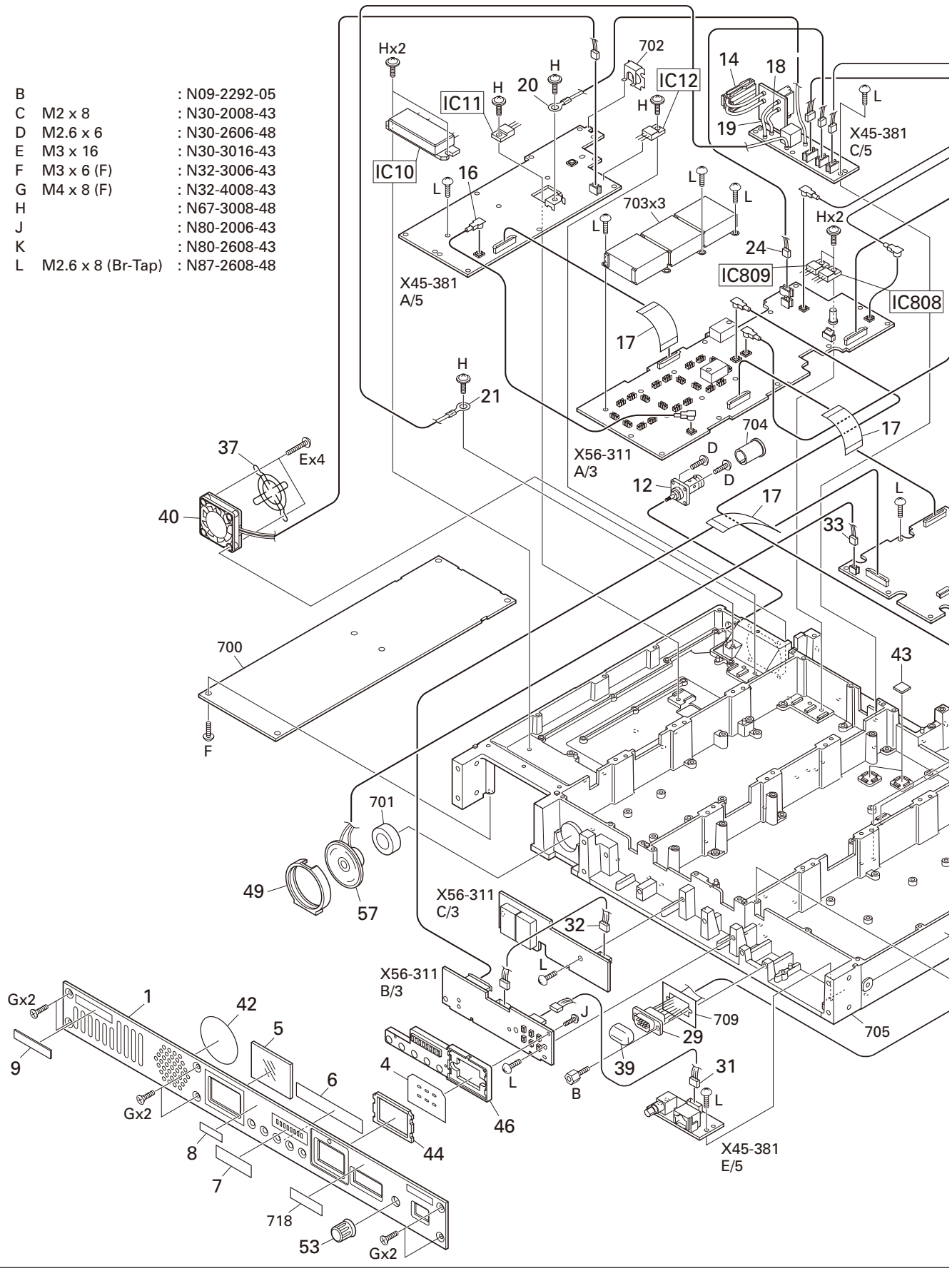
Ref. No.	Address	New parts	Parts No.	Description	Destination
IC920-922		✻	TC7SET126FU-F	MOS-IC	
IC923-925			BU4094BCFV	MOS-IC	
IC926		✻	NJM2732V	BI-POLAR IC	
IC960-963			BU4094BCFV	MOS-IC	
Q101			SSM3K15TE(F)	FET	
Q102,103			2SK508NV(K52)	FET	
Q104			2SC3356-A(R24)	TRANSISTOR	
Q105			2SC4116(BL)F	TRANSISTOR	
Q106			2SC3356-A(R24)	TRANSISTOR	
Q107,108			2SC4116(BL)F	TRANSISTOR	
Q109		✻	2SA1832F	TRANSISTOR	
Q110			SSM3K15TE(F)	FET	
Q202		✻	2SC5337	TRANSISTOR	
Q203			RD01MUS1-T113	FET	
Q204			SSM3K15TE(F)	FET	
Q205		✻	SSM3J01F	FET	
Q206			SSM3K15TE(F)	FET	
Q210			SSM3K15TE(F)	FET	
Q211-213			2SC4617(R)	TRANSISTOR	
Q301,302			SSM3K15TE(F)	FET	
Q303		✻	2SA1832F	TRANSISTOR	
Q304,305			2SC4617(R)	TRANSISTOR	
Q307			2SC4617(R)	TRANSISTOR	
Q401,402			2SC4617(R)	TRANSISTOR	
Q405			SSM3K15TE(F)	FET	
Q407-409			SSM3K15TE(F)	FET	
Q410		✻	2SA1832F	TRANSISTOR	
Q412			2SC4617(R)	TRANSISTOR	
Q413,414			SSM3K15TE(F)	FET	
Q415-419			2SC4617(R)	TRANSISTOR	
Q420			3SK317-E	FET	
Q421			SSM6L05FU-F	FET	
Q422			RD01MUS1-T113	FET	
Q423			SSM6L05FU-F	FET	
Q424			SSM3K15TE(F)	FET	
Q425			RD01MUS1-T113	FET	
Q426		✻	SSM3J01F	FET	
Q428,429			SSM3K15TE(F)	FET	
Q430,431			3SK317-E	FET	
Q601		✻	SSM3J01F	FET	
Q602			SSM3K15TE(F)	FET	
Q603			2SC4617(R)	TRANSISTOR	
Q604			SSM3K15TE(F)	FET	
Q605		✻	SSM3J01F	FET	
Q606			2SC4617(R)	TRANSISTOR	
Q607-609			SSM3K15TE(F)	FET	
Q701,702			SSM3K15TE(F)	FET	
Q920-930			UMG1N	TRANSISTOR	
Q931			2SC4116(Y)F	TRANSISTOR	
Q932		✻	2SA1586(Y)F	TRANSISTOR	
Q960-976			UMG1N	TRANSISTOR	
TH101,102			157-302-65801	THERMISTOR	

Ref. No.	Address	New parts	Parts No.	Description	Destination

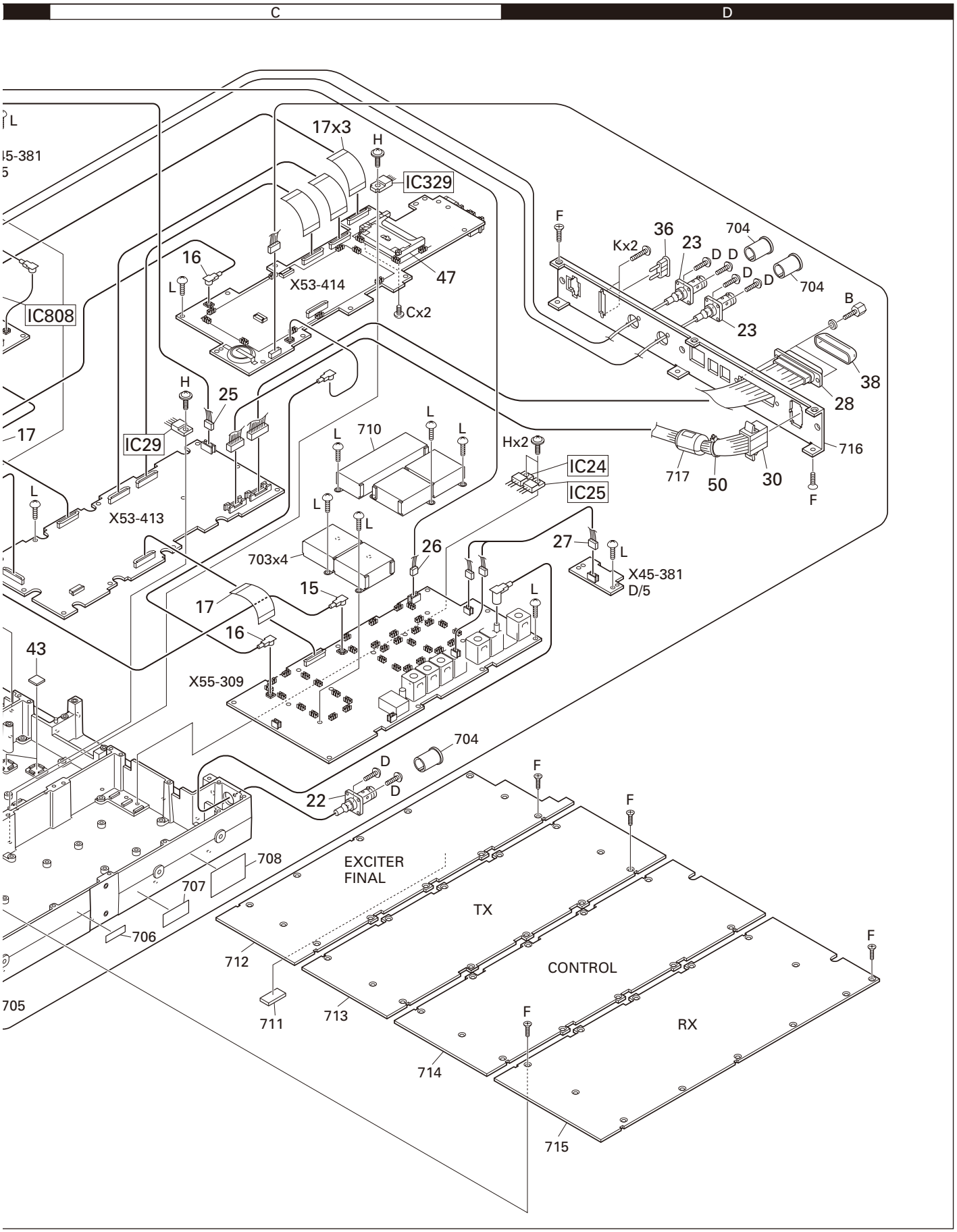
EXPLODED VIEW

B		: N09-2292-05
C	M2 x 8	: N30-2008-43
D	M2.6 x 6	: N30-2606-48
E	M3 x 16	: N30-3016-43
F	M3 x 6 (F)	: N32-3006-43
G	M4 x 8 (F)	: N32-4008-43
H		: N67-3008-48
J		: N80-2006-43
K		: N80-2608-43
L	M2.6 x 8 (Br-Tap)	: N87-2608-48



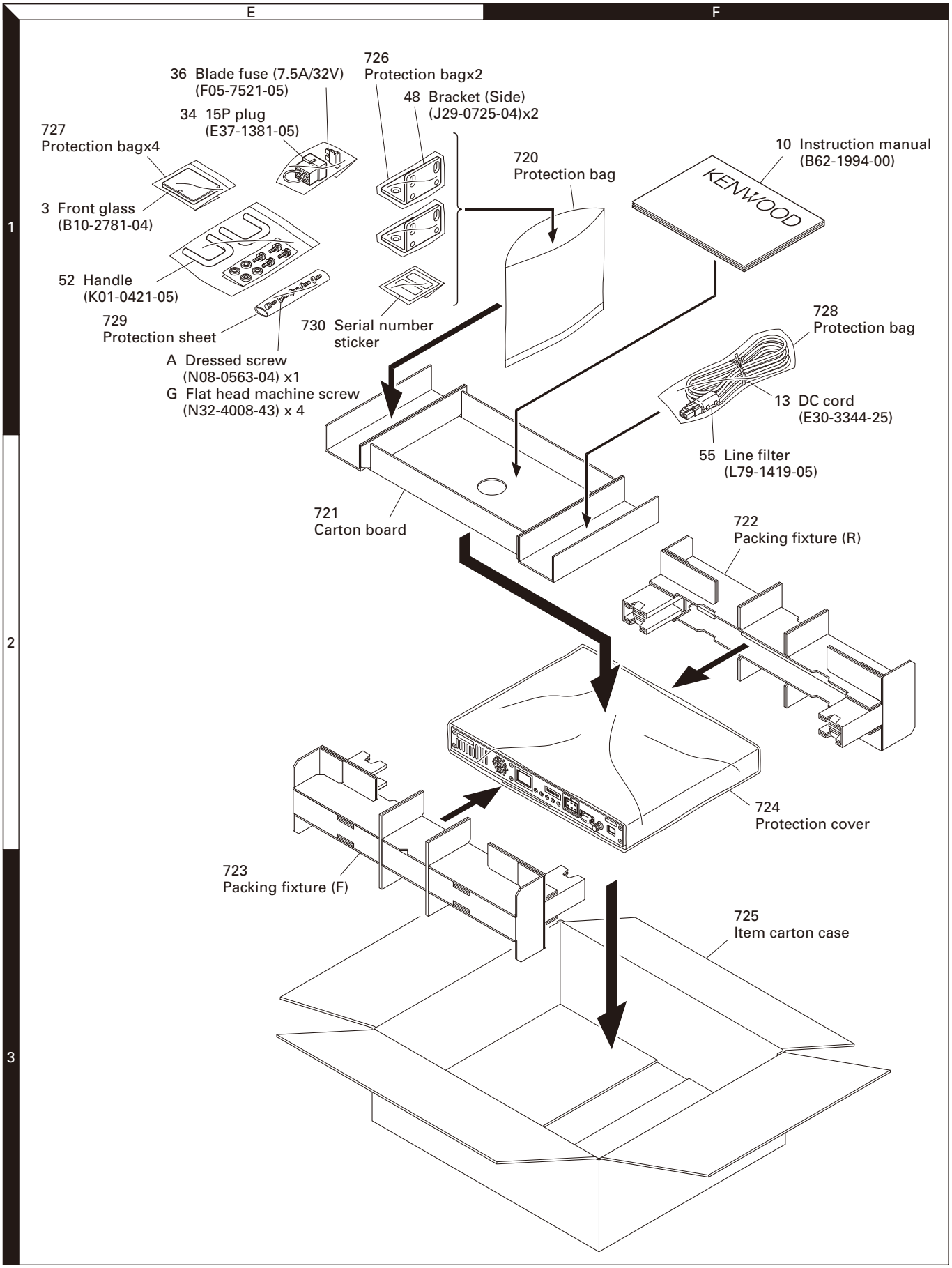
Parts with the exploded numbers larger than 700 are not supplied.
If a part reference number is listed in a box on the exploded view of the PCB, that part does not come with the PCB.
These parts must be ordered separately.

EXPLODED VIEW



Parts with the exploded numbers larger than 700 are not supplied.
If a part reference number is listed in a box on the exploded view of the PCB, that part does not come with the PCB. These parts must be ordered separately.

PACKING



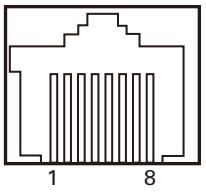
Parts with the exploded numbers larger than 700 are not supplied.

ADJUSTMENT

Test Equipment Required for Alignment

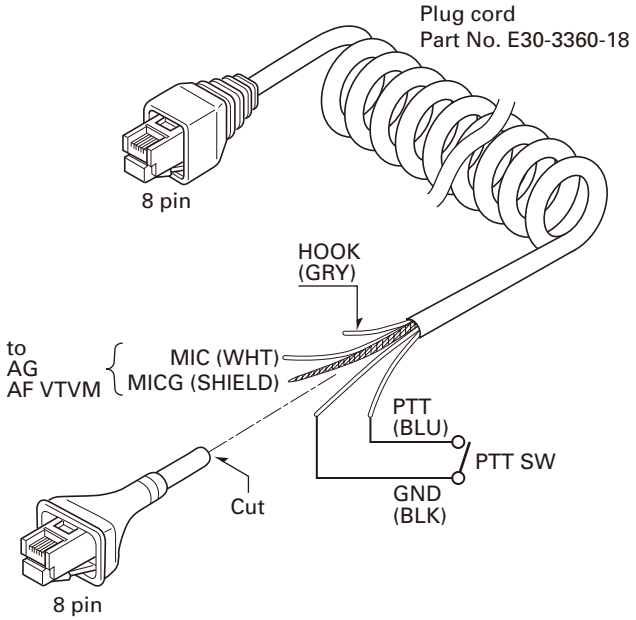
Test Equipment	Major Specifications	
1. Standard Signal Generator (SSG)	Frequency Range Modulation Output	136 to 174MHz Frequency modulation and external modulation 0.1μV to greater than 1mV
2. Power Meter	Input Impedance Operation Frequency Measurement Capability	50Ω 136 to 174MHz or more Vicinity of 100W
3. Deviation Meter	Frequency Range	136 to 174MHz
4. Digital Volt Meter (DVM)	Measuring Range Input Impedance	1V to 20V DC High input impedance for minimum circuit loading
5. Oscilloscope		DC through 30MHz
6. High Sensitivity Frequency Counter	Frequency Range Frequency Stability	10Hz to 600MHz 0.2ppm or less
7. Ammeter		15A or more
8. AF Volt Meter (AF V.M)	Frequency Range Voltage Range	50Hz to 10kHz 3mV to 3V
9. Audio Generator (AG)	Frequency Range Output	50Hz to 5kHz 0 to 1V
10. Distortion Meter	Capability Input Level	1% or less at 1kHz 50mV to 10Vrms
11. Voltmeter	Measuring Rnage Input Impedance	10V to 1.5V DC or less 50kΩ/V or greater
12. 4Ω Dummy Load		Approx. 4Ω, 5W

MIC connector (Front panel view)

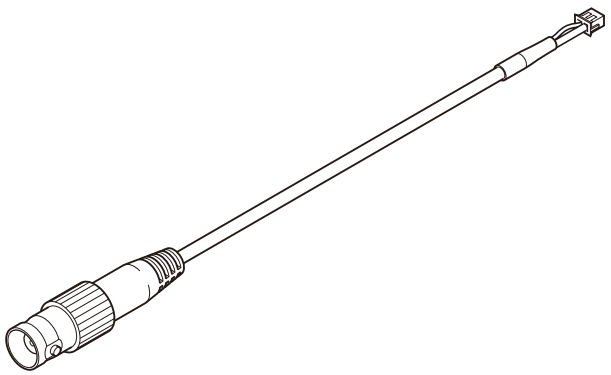


1: NC
2: SB
3: GND
4: PTT
5: MIG
6: MIC
7: HOOK
8: NC

Test cable for microphone input (E30-3360-18)

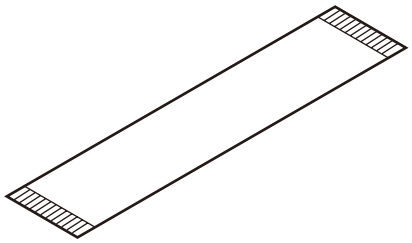


Jig for MCF adjustment (W05-1000-00)

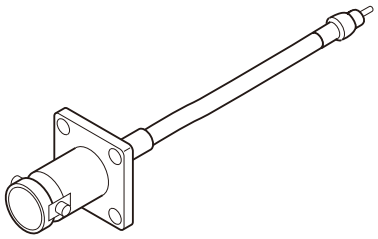


ADJUSTMENT

Flat cable (36-pin) about 256mm (E37-0979-05)



ANT Jig for BPF adjustment (E30-3418-08)



Test Signaling

■ Analog

No.	Decode tone	Encode tone
1	None	None
2	None	100Hz square wave
3	QT 67.0Hz	QT 67.0Hz
4	QT 151.4Hz	QT 151.4Hz
5	QT 210.7Hz	QT 210.7Hz
6	QT 254.1Hz	1QT 254.1Hz
7	DQT D023N	DQT D023N
8	DQT D754I	DQT D754I
9	None	CWID encode (ID: VVV)
10	None	Single tone
11	DTMF decode (Code: 159D)	DTMF encode (Code: 159D)
12	None	DTMF encode (Code: 9)
13	None	Courtesy tone

■ NXDN

No.	Decode tone	Encode tone
1	RAN1	RAN1
2	RAN1	PN9
3	RAN1	Maximum deviation pattern

- Signaling number 1 is used for link test with voice.
- Signaling number 2 is used for TX modulation signal quality test. i.e, TX adjacent channel power, FSK error, Occupied bandwidth, Emission mask, etc.
- Signaling number 3 is used for TX deviation test. If the modulation mode is very narrow, the modulation frequency is 600Hz. If the modulation mode is narrow, the modulation frequency is 1200Hz.

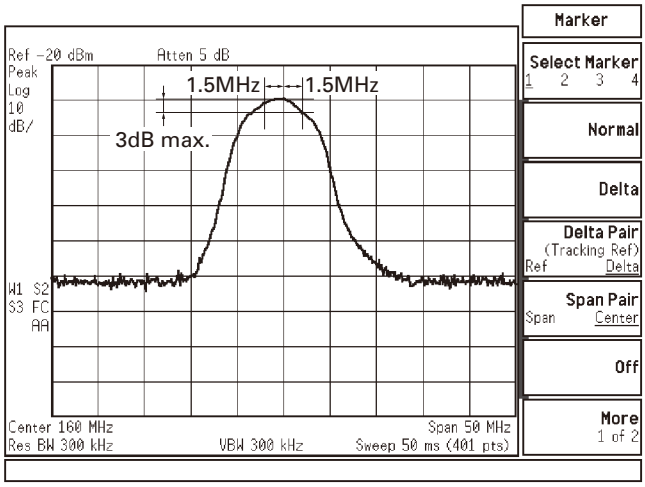


Fig. 1

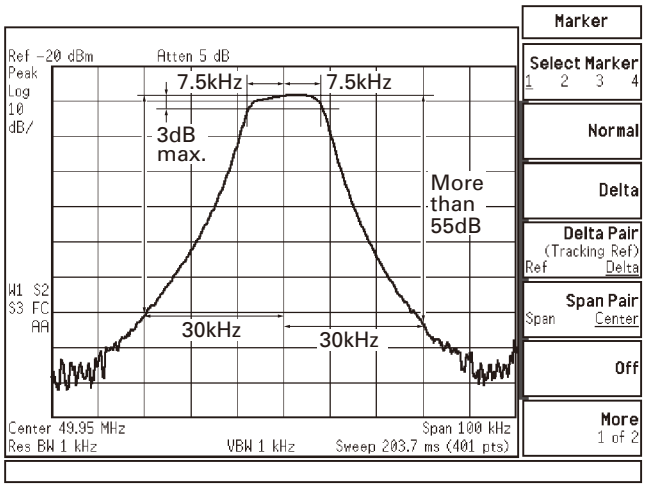


Fig. 2

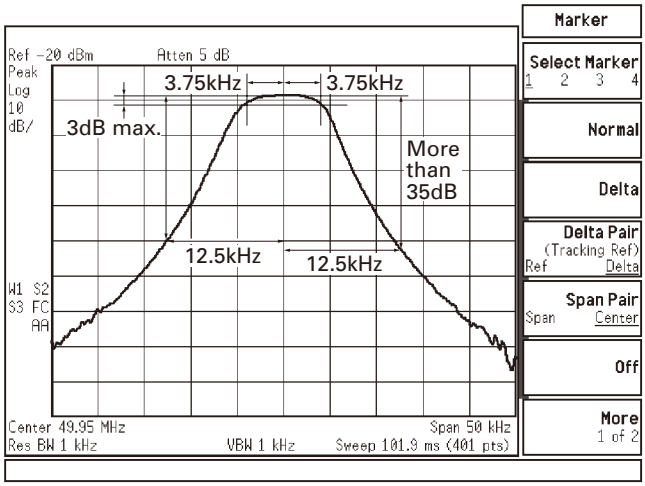
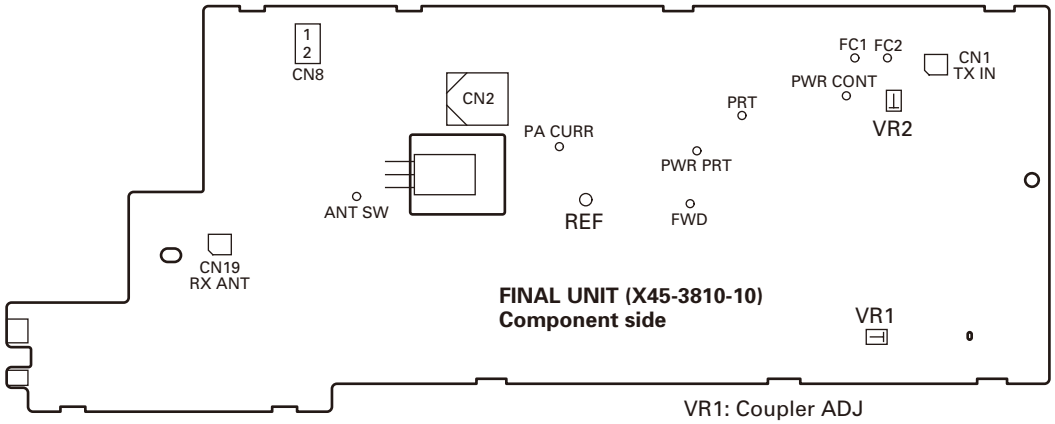


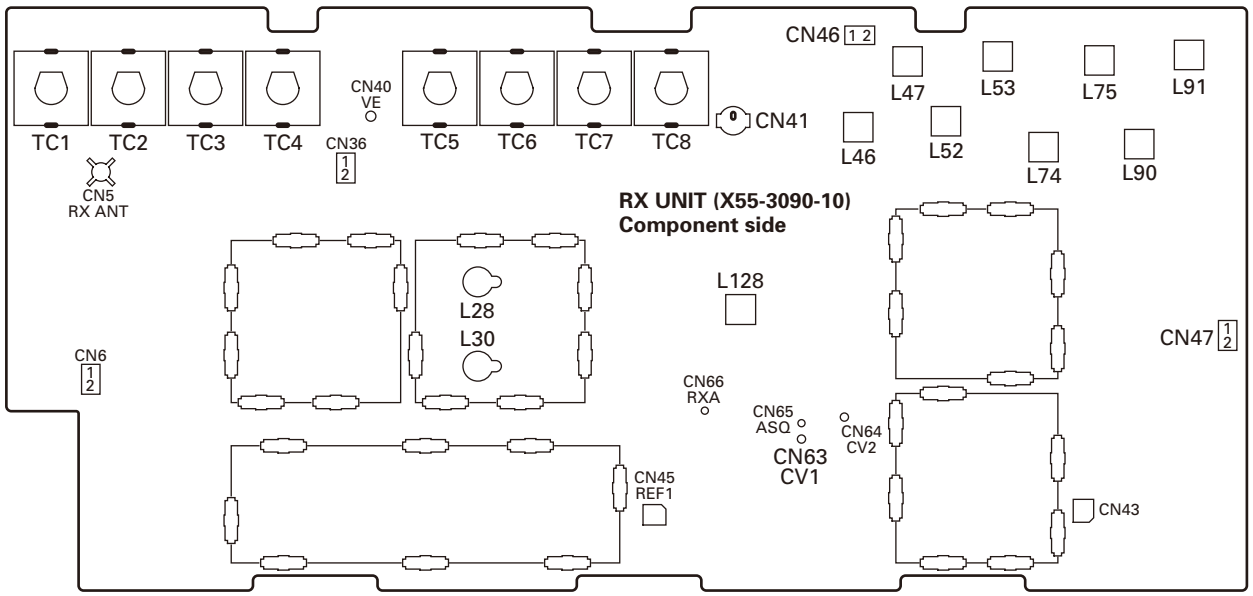
Fig. 3

ADJUSTMENT

Adjustment Points

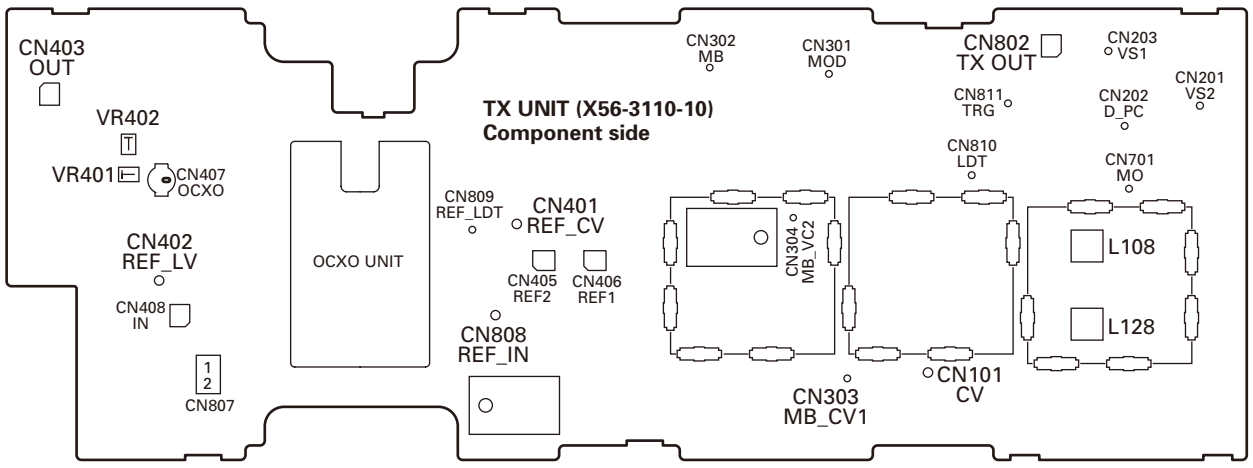


VR1: Coupler ADJ
VR2: High Transmit Power (Pre ADJ)



L28,30: Receive VCO Lock Voltage (Adjustment)
TC1~8: BPF

L46,52,74,90: MCF WIDE
L47,53,75,91: MCF NARROW
L128: Discriminator



L108,128: Transmit VCO Lock Voltage (Adjustment)
VR401,402: Reference Signal

ADJUSTMENT

Alignment

Item	Condition	Measurement			Adjustment			Specifications / Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
1. Setting	1) Connect the DC power output to the rear panel DC terminal (13.8V). 2) Connect the front panel COM port (D-sub 9 connector) to the PC serial port with a cross cable. 3) Activate the FPU to go to the test mode.							
2. Temperature Sensor	1) Receive unit (Celsius or Fahrenheit)	Ther-mometer					Measuring room temperature, write the value with PC.	
	2) Transmit unit (Celsius or Fahrenheit)							
3. Driver Amplifier Power (Pre ADJ)	1) Low 2) Center 3) High					PC ADJ	Value: 1	Fixed value writing
4. RF Power Down Detection	1) High 2) Low					PC ADJ	Value: 1	Fixed value writing
5. Maximum Deviation (NXDN)	1) NXDN Narrow					PC ADJ	Value: 22800	Fixed value writing
	2) NXDN Very Narrow						Value: 10000	
6. VCO Lock Voltage	1) REF Low SSG frequency : 10MHz SSG output: –10dBm (70.7mV)	SSG DVM	TX	REF IN REF CV			Check	1.5V or more
	2) REF High SSG frequency: 10MHz SSG output: +10dBm (708mV)							3.5V or less
	3) MOD Low SSG frequency: 10MHz SSG output: –10dBm (70.7mV)			REF IN MB_CV1				1.5V or more
	4) MOD High SSG frequency: 10MHz SSG output: +10dBm (708mV)							3.5V or less
7. Transmit VCO Lock Voltage (Adjustment)	1) A: Low	DVM	TX	CV	TX	L128	Adjust the interval of the L128. 1.30V	±0.05V
	2) B: Low					L108	Adjust the interval of the L108. 1.30V	±0.05V
8. Receive VCO Lock Voltage (Adjustment) Pre ADJ	1) A: Low	DVM	RX	CV1	RX	L28	Adjust the interval of the L28. 1.1V	±0.05V
	2) B: Low					L30	Adjust the interval of the L30. 1.1V	±0.05V
9. Fixation of Oscillation Coil	1) Apply the high-frequency varnish to the adjusted Transmit VCO coil (L128, L108) and cover it with a shield cover. 2) Apply the high-frequency varnish to the adjusted Receive VCO coil (L28, L30) and cover it with a shield cover.							
10. Transmit VCO Lock Voltage (Check)	1) A: High	DVM	TX	CV			Check	3.6~4.4V
	2) B: High							

ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications / Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
11. Receive VCO Lock Voltage (Adjustment & Check)	1) A: Low	DVM PC	RX	CV1		PC ADJ	0.8V	±0.05V
	2) A: High						Check	4.0V or less
	3) B: Low					PC ADJ	0.8V	±0.05V
	4) B: High						Check	4.0V or less
12. Reference Signal The switching circuit to switch the OCXO and the internal reference oscillation	1) Connecting 50Ω load to SSG parallel. SSG frequency: 10MHz SSG output: +0dBm (224mV)	SSG Spectrum analyzer	Rear TX	REF IN REF OUT	TX	VR402	+8~+9dBm	The OCXO LED (orange) lights.
	2) SSG frequency: 10MHz SSG output: +0dBm (224mV)	SSG Oscilloscope	Rear TX	REF IN REV_LV		VR401	2.0Vp-p	
	3) SSG frequency: 10MHz SSG output: +10dBm (708mV)	SSG Spectrum analyzer	Rear TX	REF IN REF OUT			Check	REF OUT: +10dBm or less The OCXO LED (orange) lights.
	4) SSG frequency: 10MHz SSG output: –10dBm (70.7mV)							REF OUT: –50dBm or less The OCXO LED goes off.
13. VCXO	1) Confirm that there is no OCXO and external reference input.	F. counter PC	TX	REF_IN		PC ADJ	5.99MHz+0.3ppm	±0.15ppm (5.99000270~5.99000090MHz)
14. BPF	1) Tracking generator Output: –20dBm Spectrum analyzer Frequency: Desired frequency Span: 50MHz	Tracking generator Spectrum analyzer	Rear RX	RX ANT CN41	RX	TC1~ TC8	Center frequency you are using, then adjust it to look like the wave in figure 1.	Refer to Fig. 1. (Page 72)
15. MCF	1) Wide Tracking generator Output: –20dBm Spectrum analyzer Frequency: 49.95MHz Span: 100kHz	Tracking generator Spectrum analyzer	Rear RX	CN46 CN47	RX	L46 L52 L74 L90	Adjust it to look like the wave in figure 2.	Refer to Fig. 2. (Page 72)
	2) Narrow Spectrum analyzer Span: 50kHz					L47 L53 L75 L91	Adjust it to look like the wave in figure 3.	Refer to Fig. 3. (Page 72)
16. Discriminator	1) Narrow Frequency: Desired frequency SSG output: –53dBm (501µV) SSG MOD: 1kHz SSG DEV: 1.5kHz AF output: 2V/4Ω	SSG AF V.M	Rear	RX ANT TEST/ SPKR jack SPO (pin 12) 4Ω load	RX	L128	Adjust AF output max.	
17. Driver Amplifier Power	Disconnect the cable from TX OUT and insert a cable from power meter. After the adjustment, connect the cable to TX OUT. 1) Low 2) Center 3) High	Power meter	TX	TX OUT (CN802)		PC ADJ	+20.0dBm	±0.1dBm

ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications / Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
18. High Transmit Power (Pre ADJ)	1) Low	Power meter PC	Rear	TX ANT		PC ADJ	Value: 1024	Fixed value writing
					Final	VR2	5.0W	±0.1W
19. Coupler ADJ	1) Low	DVM Power meter	Final	REF	Final	VR1	0.09~0.14V (Adjust to the minimum value if it is not reduced to 0.14V.)	
20. High Transmit Power (Max power limit ADJ)	1) Low	Power meter PC	Rear	TX ANT		PC ADJ	Value: 1024	Fixed value writing
					Final	VR2	8.0W	±0.2W
	2) High					PC ADJ	Value: 1024	Fixed value writing
							Check	7.0W or more
21. High Transmit Power	Frequency 1) Low 2) Center 3) High Attach the EXCITER/FINAL shield cover.	Power meter Ammeter	Rear	TX ANT		PC ADJ	5.0W	±0.1W 4.4A or less
22. Low Transmit Power	Frequency 1) Low 2) Center 3) High Attach the EXCITER/FINAL shield cover.						0.50W	±0.01W 3.3A or less
23. Deviation (The transmission VCO band is separated into A and B. 3-points for each, i.e., total of 6-points shall be adjusted.)	NXDN Very Narrow Connect the deviation meter to the TX ANT end via the ATT. Deviation meter setting HPF: OFF LPF: 15kHz De-emp: OFF Detector: (p-p)/2 1) 100Hz Square Signal/A: Low 2) 100Hz Square Signal/A: Center 3) 100Hz Square Signal/A: High 4) 100Hz Square Signal/B: Low 5) 100Hz Square Signal/B: Center 6) 100Hz Square Signal/B: High	Deviation meter Oscilloscope PC	Rear	TX ANT		PC ADJ	±1.10kHz Adjust it into clean square wave with changing "Sub-audible Gain" and "Audible Gain".	±0.05kHz
	NXDN Narrow Connect the deviation meter to the TX ANT end via the ATT. Deviation meter setting HPF: OFF LPF: 15kHz De-emp: OFF Detector: +peak, –peak 1) Max Deviation Pattern/ Frequency channel: 1 (Low) 2) Max Deviation Pattern/ Frequency channel: 2 (High) 3) Max Deviation Pattern/ Frequency channel: 3 (Center) (**Note:** PC test mode)						Check	±3.06kHz±0.10kHz Clean sine wave.

ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications / Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
24. RD Level	1) Analog Wide Connect the SSG to the RX ANT. SSG setting Frequency: Desired frequency Output: –53dBm (501µV) MOD: 1kHz DEV: ±3.0kHz	SSG AF V.M	Rear	RX ANT CONTROL I/O jack RD (pin 10)		PC ADJ	80mV	±5mV
	2) Analog Narrow SSG setting DEV: ±1.5kHz							
25. RA Level	1) Analog Wide Connect the SSG to the RX ANT. SSG setting Frequency: Desired frequency Output: –53dBm (501µV) MOD: 1kHz DEV: ±3.0kHz	SSG AF V.M	Rear	RX ANT CONTROL I/O jack RA (pin 11)		PC ADJ	400mV	±20mV
	2) Analog Narrow SSG setting DEV: ±1.5kHz							
26. Receiver Sensitivity Check	1) Wide Connect the SSG to the RX ANT. SSG setting Frequency: Desired frequency MOD: 1kHz DEV: ±3.0kHz AF: 0.45V/4Ω	SSG Distortion meter	Rear	RX ANT TEST/ SPKR jack SPO (pin 12) 4Ω load			Check	–115dBm (0.4µV) or less
	2) Narrow SSG setting DEV: ±1.5kHz							
27. Tight Squelch	1) Analog Wide Connect the SSG to the RX ANT. SSG setting Frequency: Desired frequency Output: 12dB SINAD level +7dB MOD: 1kHz DEV: ±3.0kHz	SSG Oscilloscope	Rear	RX ANT TEST/ SPKR jack SPO (pin 12) 4Ω load		PC ADJ	Adjust it to the level to open the squelch.	
	2) SSG output: OFF						Check	The squelch shall be closed.
	3) Analog Narrow SSG setting DEV: ±1.5kHz					PC ADJ	Adjust it to the level to open the squelch.	
	4) SSG output: OFF						Check	The squelch shall be closed.
28. Open Squelch	1) Analog Wide Connect the SSG to the RX ANT. SSG setting Frequency: Desired frequency Output: 12dB SINAD level –2dB MOD: 1kHz DEV: ±3.0kHz	SSG Oscilloscope	Rear	RX ANT TEST/ SPKR jack SPO (pin 12) 4Ω load		PC ADJ	Adjust it to the level to open the squelch.	

ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications / Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
	2) SSG output: OFF	SSG Audio analyzer	Rear	RX ANT TEST/ SPKR jack SPO (pin 12) 4Ω load			Check	The squelch shall be closed.
	3) Analog Narrow SSG setting DEV: ±1.5kHz					PC ADJ	Adjust it to the level to open the squelch.	
	4) SSG output: OFF						Check	The squelch shall be closed.
29. RSSI	Connect the SSG to the RX ANT. SSG setting Frequency: Desired frequency MOD: 1kHz DEV: ±1.5kHz Narrow 1) SSG output: –53dBm (501µV)	SSG AF V.M	Rear	RX ANT TEST/ SPKR jack RSSI (pin 8)		PC ADJ	3.5V	±0.1V
	2) High Level SSG output : 12dB SINAD level +7dB						Import the value to a PC.	
	3) Low Level SSG output : 12dB SINAD level –2dB							
30. Maximum Deviation (Analog)	1) Analog Wide Connect the deviation meter to the TX ANT end via the ATT. Deviation meter setting HPF: OFF LPF: 15kHz De-emp: OFF Detector: +peak, –peak AG setting : 1kHz/45mVrms (Sine wave, Terminal load)	Deviation meter AG DVM	Rear Front	TX ANT MIC		PC ADJ	±4.1kHz	±0.2kHz
	2) Analog Narrow Connect the deviation meter to the TX ANT end via the ATT. AG setting : 1kHz/55mVrms (Sine wave, Terminal load)						±1.7kHz	±0.1kHz
31. Standard Modulation Check	1) Analog Wide Connect the deviation meter to the TX ANT end via the ATT. Deviation meter setting HPF: OFF LPF: 15kHz De-emp: OFF Detector: (p-p)/2 AG setting : 1kHz/±3kHz DEV (Sine wave, Terminal load)	Deviation meter AG DVM	Rear Front	TX ANT MIC			Check	4.5mV±1.5mV
	2) Analog Narrow Connect the deviation meter to the TX ANT end via the ATT. AG setting : 1kHz/±1.5kHz DEV (Sine wave, Terminal load)							5.5mV±1.5mV

ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications / Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
32. QT Deviation	1) Analog Wide Connect the deviation meter to the TX ANT end via the ATT. Deviation meter setting HPF: OFF LPF: 3kHz De-emp: OFF Detector: p-p/2	Deviation meter	Rear	TX ANT		PC ADJ	±0.75kHz	±0.05kHz
	2) Analog Narrow						±0.35kHz	±0.05kHz
33. DQT Deviation	1) Analog Wide Connect the deviation meter to the TX ANT end via the ATT. Deviation meter setting HPF: OFF LPF: 3kHz De-emp: OFF Detector: Peak hold	Deviation meter	Rear	TX ANT		PC ADJ	±0.75kHz	±0.05kHz
	2) Analog Narrow						±0.35kHz	±0.05kHz
34. CW ID Deviation	1) Analog Wide Connect the deviation meter to the TX ANT end via the ATT. Deviation meter setting HPF: OFF LPF: 15kHz De-emp: OFF Detector: +peak, –peak	Deviation meter	Rear	TX ANT		PC ADJ	±2.00kHz	±0.05kHz
	2) Analog Narrow						±1.00kHz	±0.05kHz
35. Test Tone Deviation	1) Analog Wide Connect the deviation meter to the TX ANT end via the ATT. Deviation meter setting HPF: OFF LPF: 15kHz De-emp: OFF Detector: (p-p)/2	Deviation meter	Rear	TX ANT		PC ADJ	±3.00kHz	±0.05kHz
	2) Analog Narrow						±1.50kHz	±0.05kHz
36. DTMF Deviation	1) Analog Wide Connect the deviation meter to the TX ANT end via the ATT. Deviation meter setting HPF: OFF LPF: 15kHz De-emp: OFF Detector: (p-p)/2	Deviation meter	Rear	TX ANT		PC ADJ	±2.85kHz	±0.05kHz
	2) Analog Narrow						±1.50kHz	±0.05kHz

ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications / Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
37. Courtesy Tone Deviation	1) Analog Wide Connect the deviation meter to the TX ANT end via the ATT. Deviation meter setting HPF: OFF LPF: 15kHz De-emp: OFF Detector: (p-p)/2	Deviation meter	Rear	TX ANT		PC ADJ	±1.00kHz	±0.05kHz
	2) Analog Narrow						±0.50kHz	±0.05kHz
38. TD Deviation	1) Analog Wide Connect the deviation meter to the TX ANT end via the ATT. Deviation meter setting HPF: OFF LPF: 3kHz De-emp: OFF Detector: +peak, –peak AG setting : 0.1kHz/0.5Vp-p (177mVrms)	Deviation meter AG DVM	Rear	TX ANT CONTROL I/O jack TD (pin 8)		PC ADJ	±0.75kHz	±0.02kHz
	2) Analog Narrow						±0.75kHz	±0.02kHz
39. Transmit Audio Input (TA)	1) Analog Wide Connect the deviation meter to the TX ANT end via the ATT. Deviation meter setting HPF: off LPF: 15kHz De-emp: off Detector: +peak, –peak AG setting : 1kHz/280mVrms	Deviation meter AG DVM	Rear	TX ANT CONTROL I/O jack TA (pin 9)		PC ADJ	±3.00kHz	±0.03kHz
	2) Analog Narrow						±1.50kHz	±0.02kHz
40. Repeater Gain	1) Analog Wide Connect the SSG to the RX ANT. SSG setting Frequency: Desired frequency Output: –53dBm (501µV) MOD: 1.0kHz DEV: ±1.0kHz Connect the deviation meter to the TX ANT end via the ATT. Deviation meter setting HPF: OFF LPF: 15kHz De-emp: OFF Detector: +peak, –peak	SSG Deviation meter	Rear	RX ANT TX ANT		PC ADJ	±1.00kHz	±0.10kHz
	2) Analog Narrow						±1.00kHz	±0.10kHz

ADJUSTMENT

Adjustment for KXK-3 (OCXO unit)

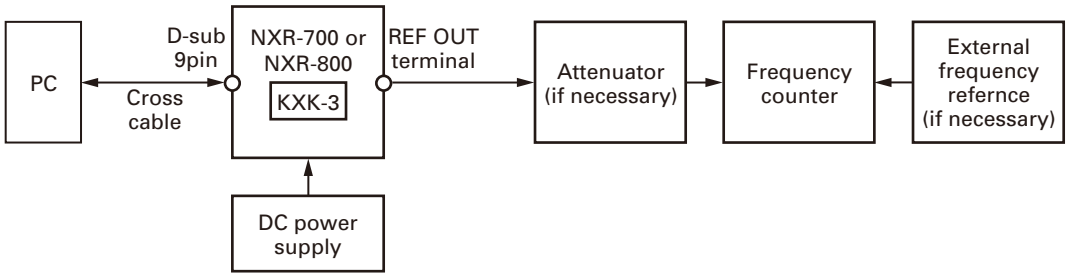
We recommend that the frequency adjustment be checked each time the radio is serviced, or at least once per year. Maintenance should only be performed under normal temperatures.

■ Test Equipment Required for Alignment

Test Equipment	Major Specifications	
1. Frequency Counter	Frequency Range	Up to 50MHz
	Resolution	9 digits
	Reference Frequency Accuracy	Smaller than 0.01ppm
	Input level	Up to 5Vpp

■ Adjustment Setup

The KXK-3 OCXO unit must be mounted on the NXR-700 or NXR-800 repeater. Adjustment setup is shown as follows.



To adjust the KXK-3 OCXO unit, some preparations are required.

1. The NXR-700 or NXR-800 with the KXK-3 OCXO unit must be warmed up at least 24 hours before the adjustment is made. The environment temperature must be stable.
2. The frequency counter (or reference oscillator) must be warmed up as defined by the equipment manufacturer.

■ Adjustment

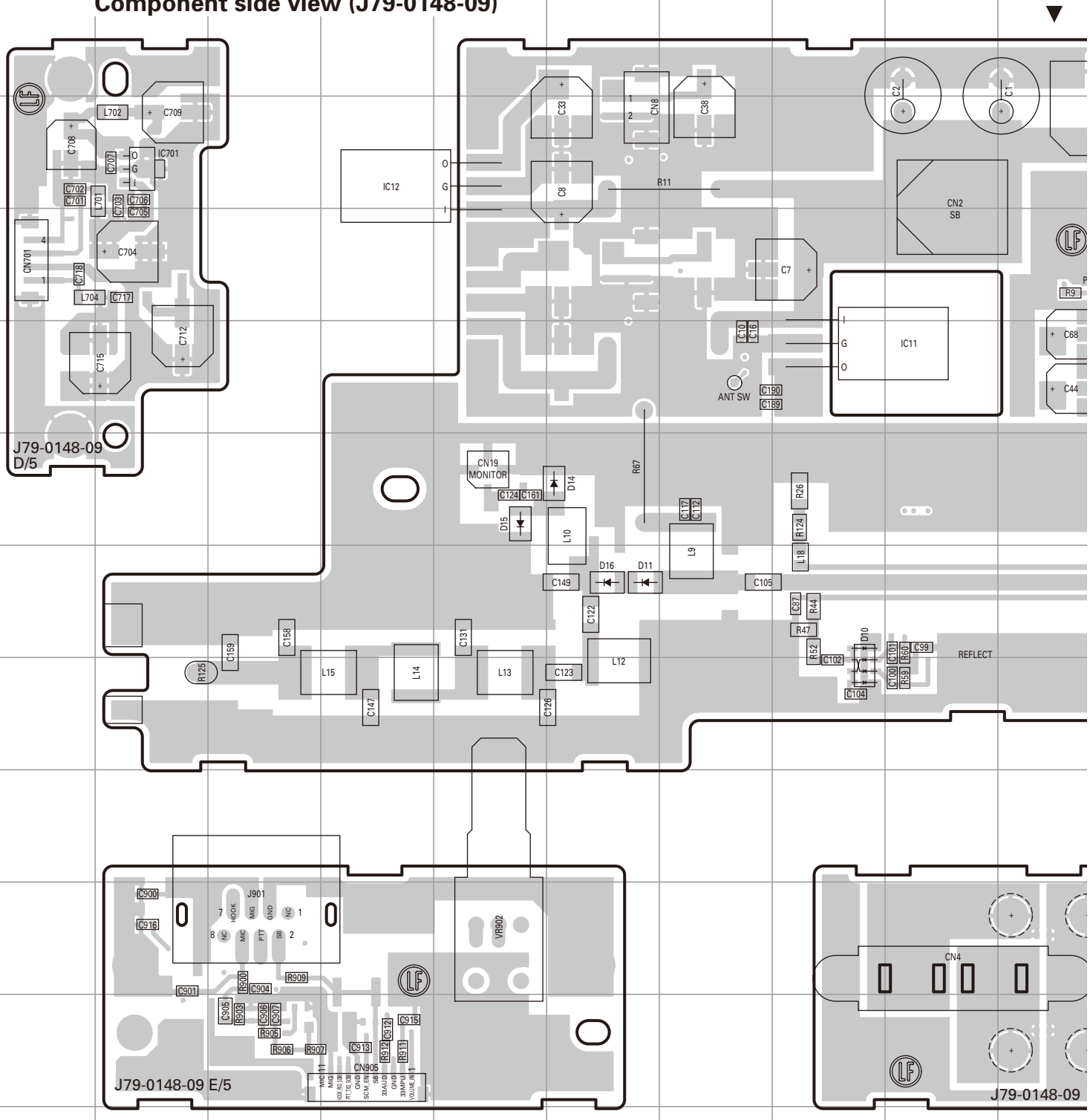
Item	Condition	Measurement			Adjustment			Specifications / Remarks
		Test-equipment	Unit	Terminal	Unit	Parts	Method	
1. Setting	1) Connect the DC power output to the rear panel DC terminal (13.8V). 2) Connect the "REF OUT" terminal to the frequency counter. 3) Warm-up the equipment and KXK-3 properly. 4) Connect the front panel COM port (D-sub 9 connector) to the PC serial port with a cross cable. 5) Activate the FPU to go to the test mode.							
2. OCXO frequency adjustment		f. counter	Rear	REF OUT		PC ADJ		±0.15ppm 9.99999850MHz~ 10.00000150MHz

Note:

Adjusted data is stored in the KXK-3 internal memory, therefore no re-adjustment is required when the adjusted KXK-3 is moved to another NXR-700 or NXR-800.

NXR-700 PC BOARD

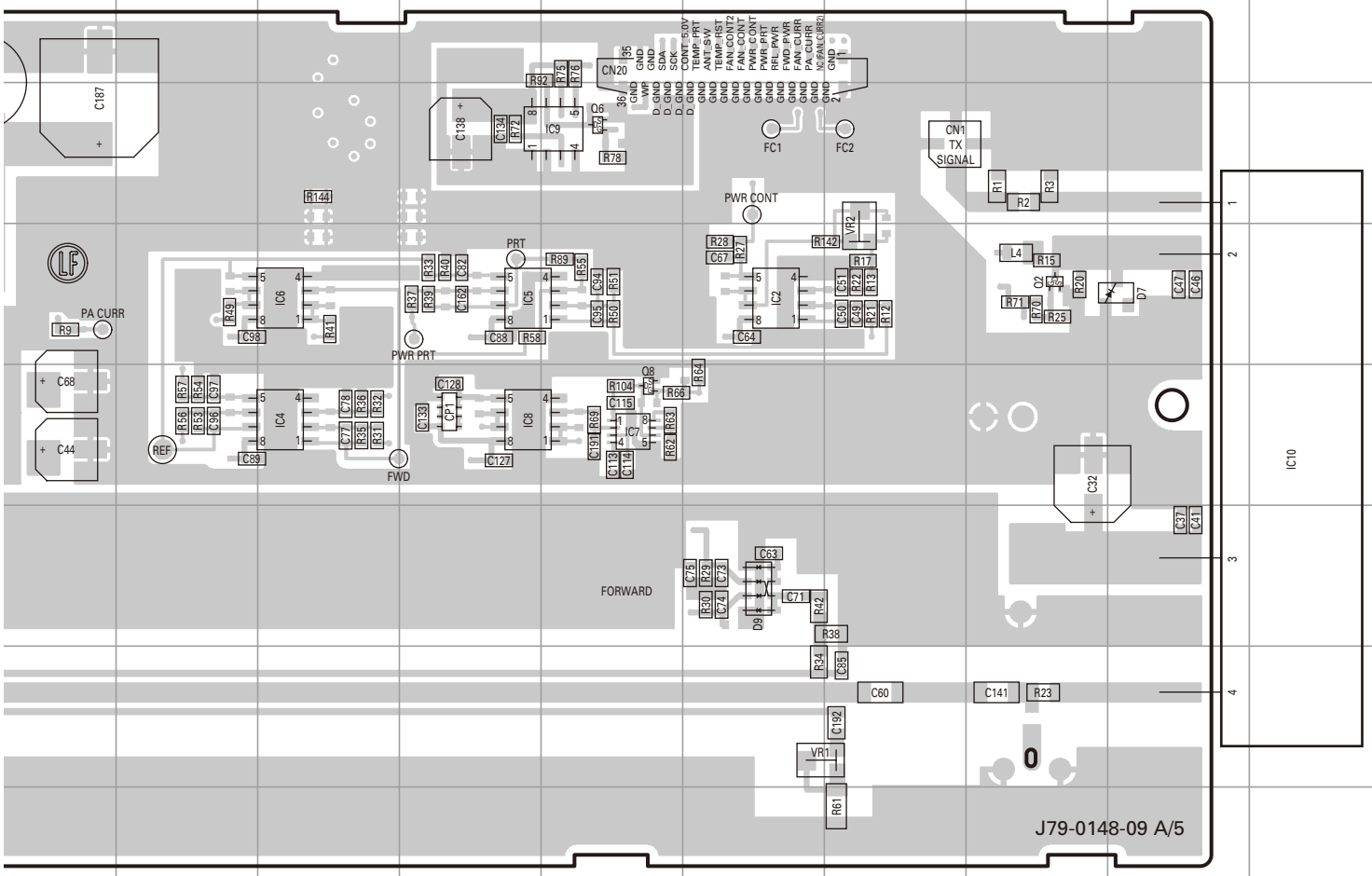
FINAL UNIT (X45-3810-10)
Component side view (J79-0148-09)



Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC2	4O	IC8	5M	IC701	3B	D7	4R	D15	6E
IC4	5L	IC9	3N	Q2	4Q	D9	6O	D16	7F
IC5	4M	IC10	5S	Q6	3N	D10	8H		
IC6	4L	IC11	5I	Q8	5N	D11	7F		
IC7	5N	IC12	3D	D4	10P	D14	6F		

PC BOARD NXR-700

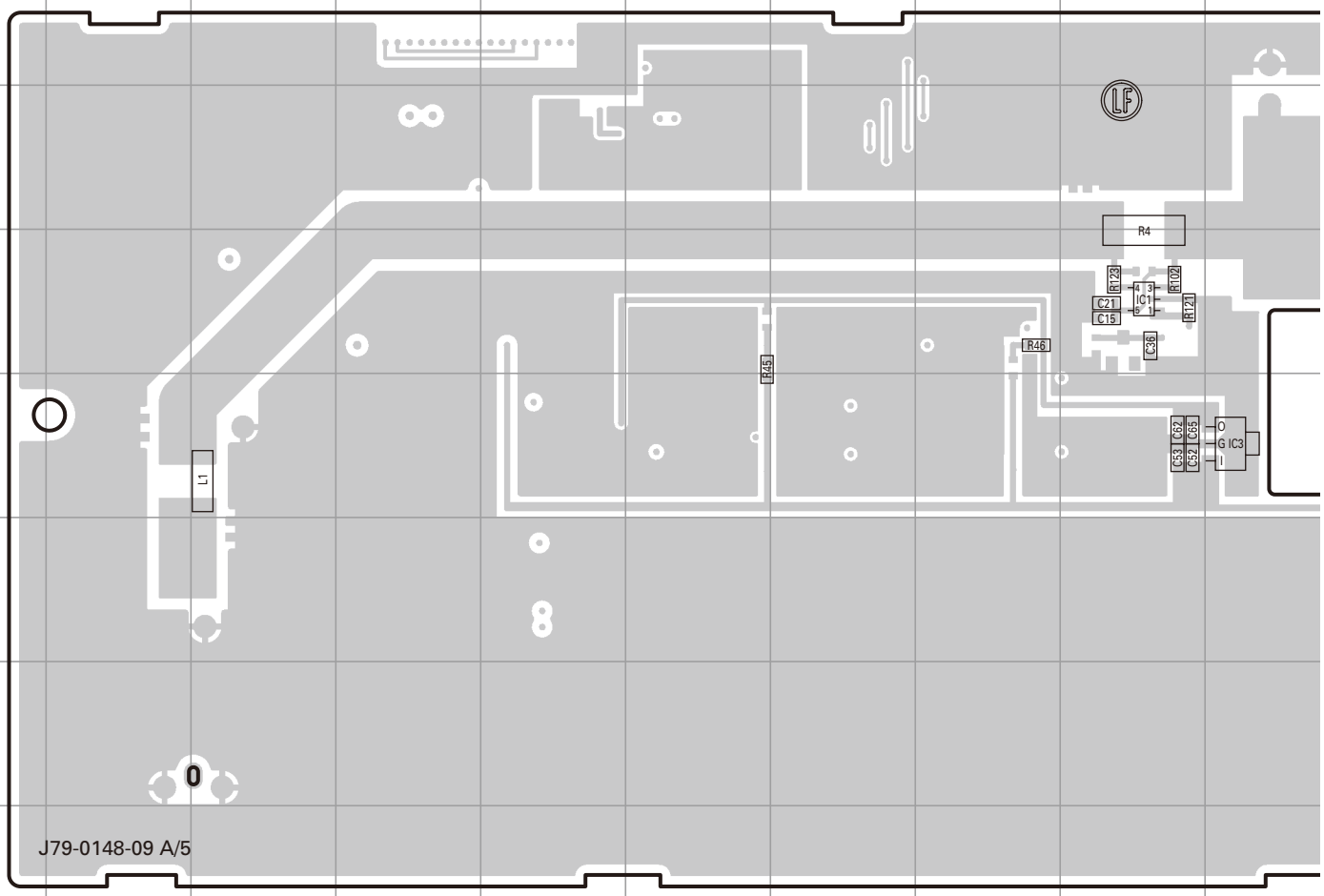
FINAL UNIT (X45-3810-10)
Component side view (J79-0148-09)

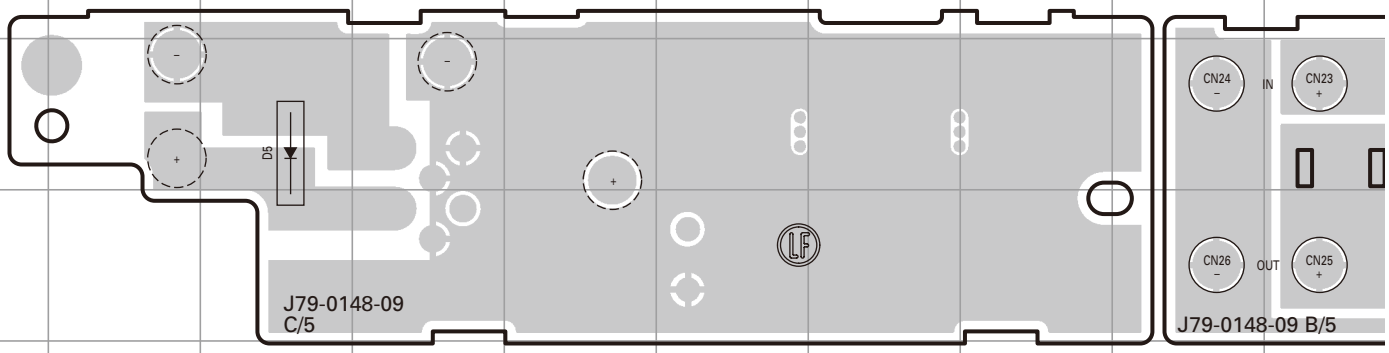


Component side
Layer 1
Layer 2
Layer 3
Layer 4
Foil side

NXR-700 PC BOARD

FINAL UNIT (X45-3810-10)
Foil side view (J79-0148-09)

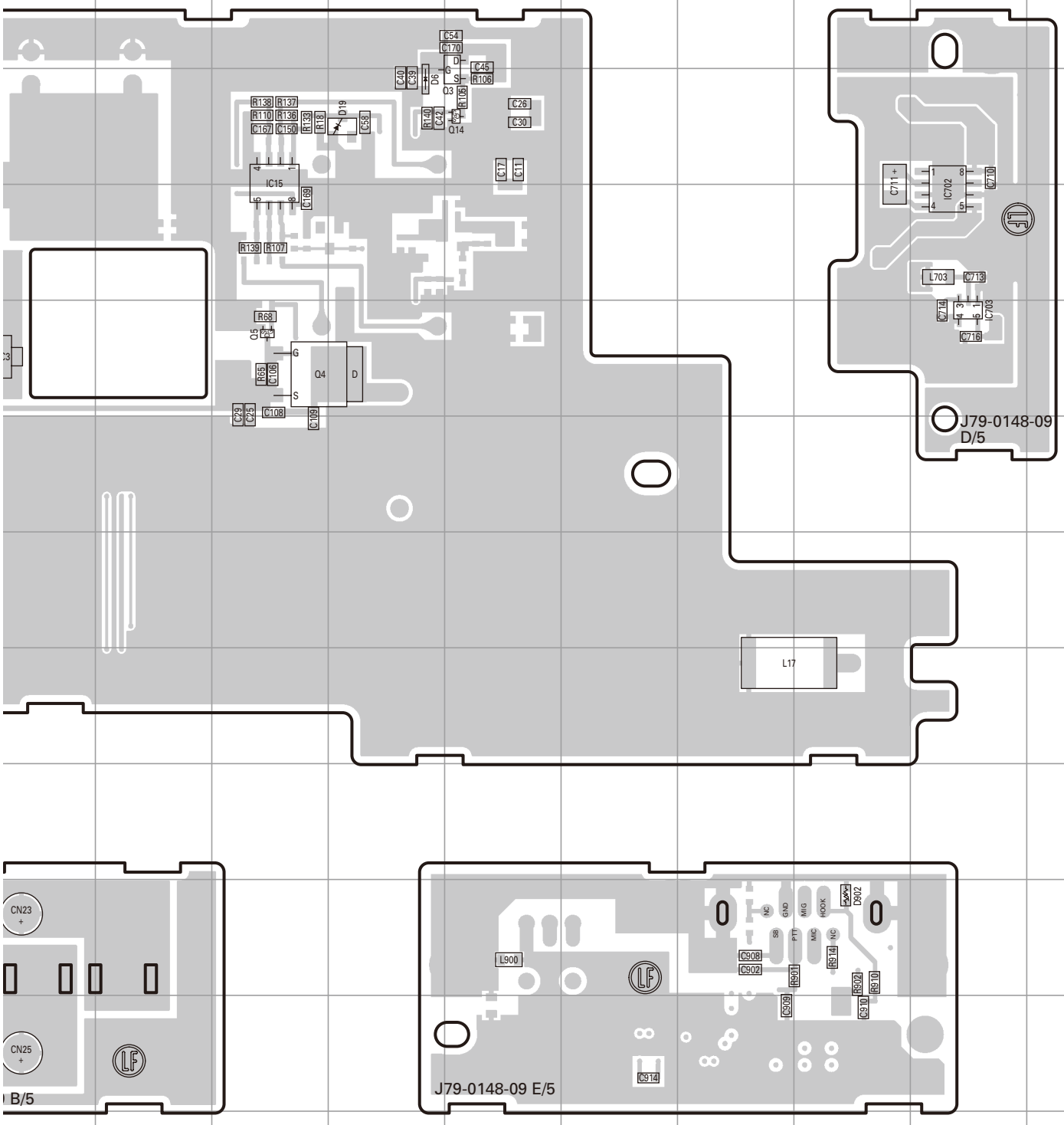




Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC1	4I	Q3	3N	D6	3M
IC3	5J	Q4	5L	D19	3M
IC15	3L	Q5	5L	D902	10Q
IC702	4R	Q14	3N		
IC703	5R	D5	10C		

PC BOARD NXR-700

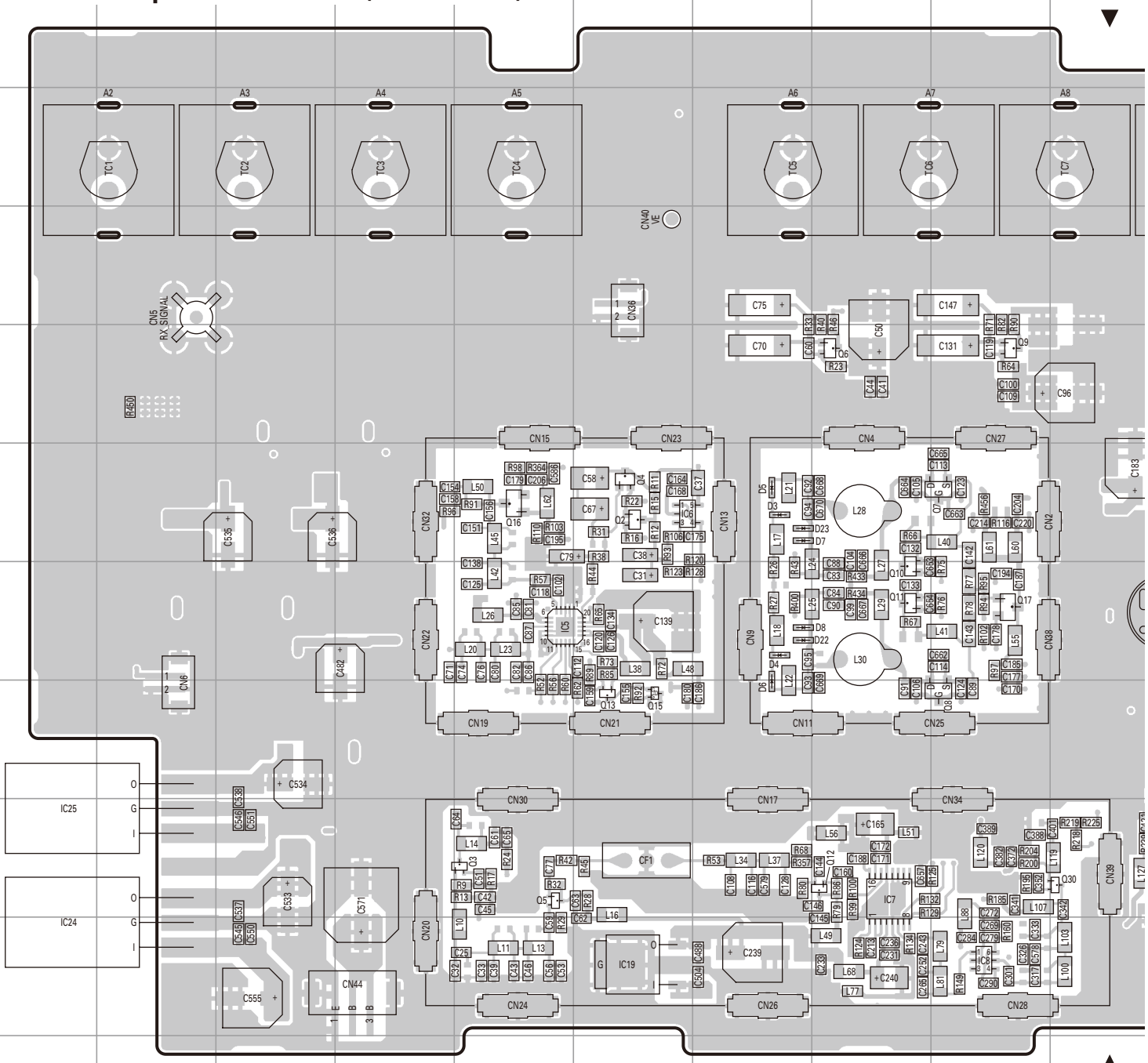
FINAL UNIT (X45-3810-10)
Foil side view (J79-0148-09)



Component side
Layer 1
Layer 2
Layer 3
Layer 4
Foil side

NXR-700 PC BOARD

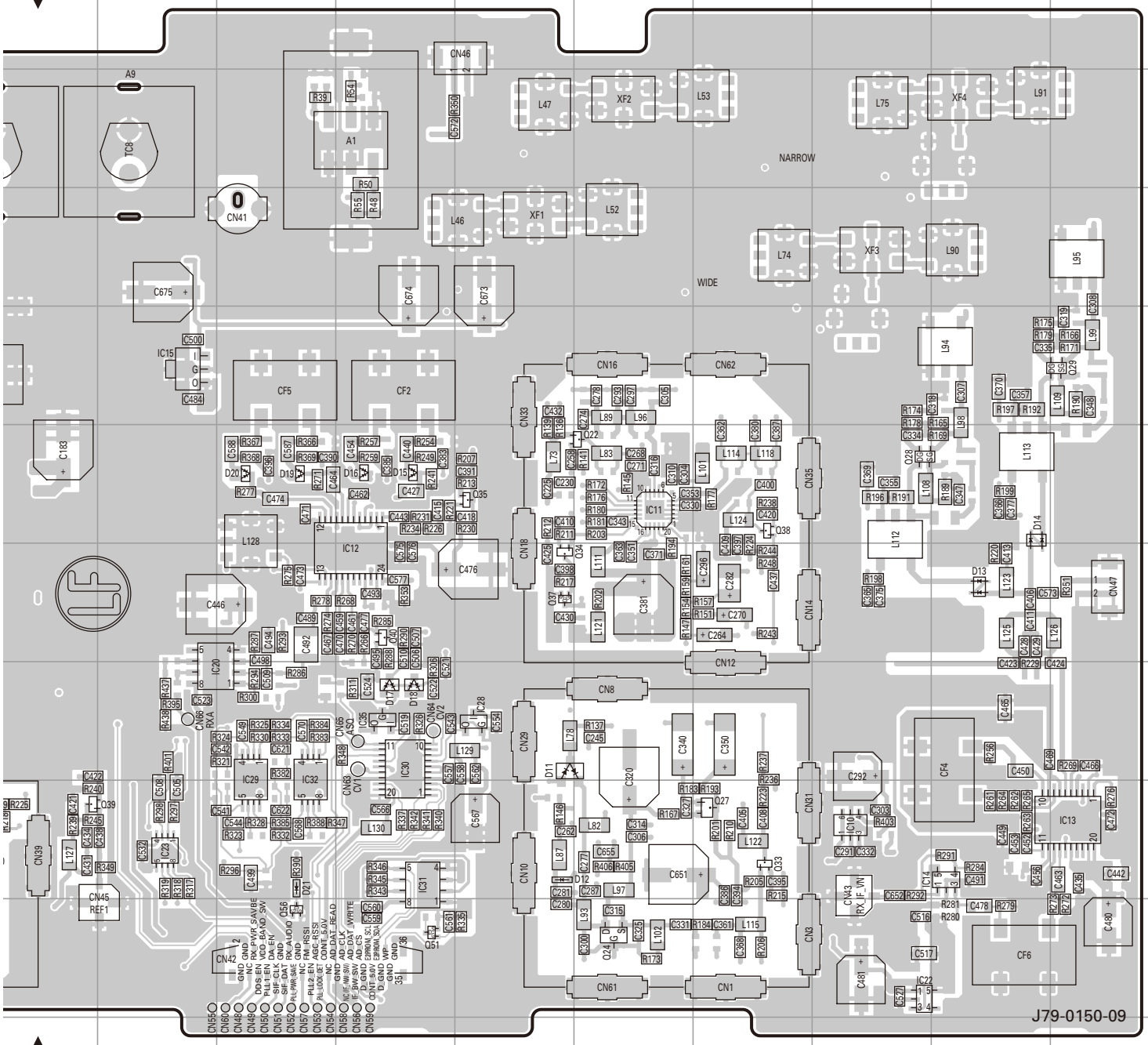
RX UNIT (X55-3090-10)
Component side view (J79-0150-09)



Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC5	7E	IC15	5K	IC30	8M	Q7	6I	Q17	7I	Q35	6N	D5	6G	D16	6M
IC6	6F	IC19	10F	IC31	9M	Q8	8I	Q22	6O	Q37	7N	D6	8G	D17	8M
IC7	9H	IC20	8K	IC32	8L	Q9	5I	Q24	10O	Q38	6P	D7	6G	D18	8M
IC8	10I	IC22	10Q	IC35	8M	Q10	7H	Q27	9P	Q39	9J	D8	7G	D19	6L
IC10	9Q	IC23	9K	Q2	6F	Q11	7H	Q28	6Q	Q40	7M	D11	8N	D20	6L
IC11	6O	IC24	10A	Q3	9E	Q12	9H	Q29	5S	Q51	10M	D12	9N	D21	9L
IC12	7M	IC25	9A	Q4	6F	Q13	8F	Q30	9J	Q56	10L	D13	7R	D22	7G
IC13	9S	IC28	8N	Q5	9E	Q15	8F	Q33	9P	D3	6G	D14	6R	D23	6G
IC14	9R	IC29	8L	Q6	5H	Q16	6E	Q34	7N	D4	7G	D15	6M		

PC BOARD NXR-700

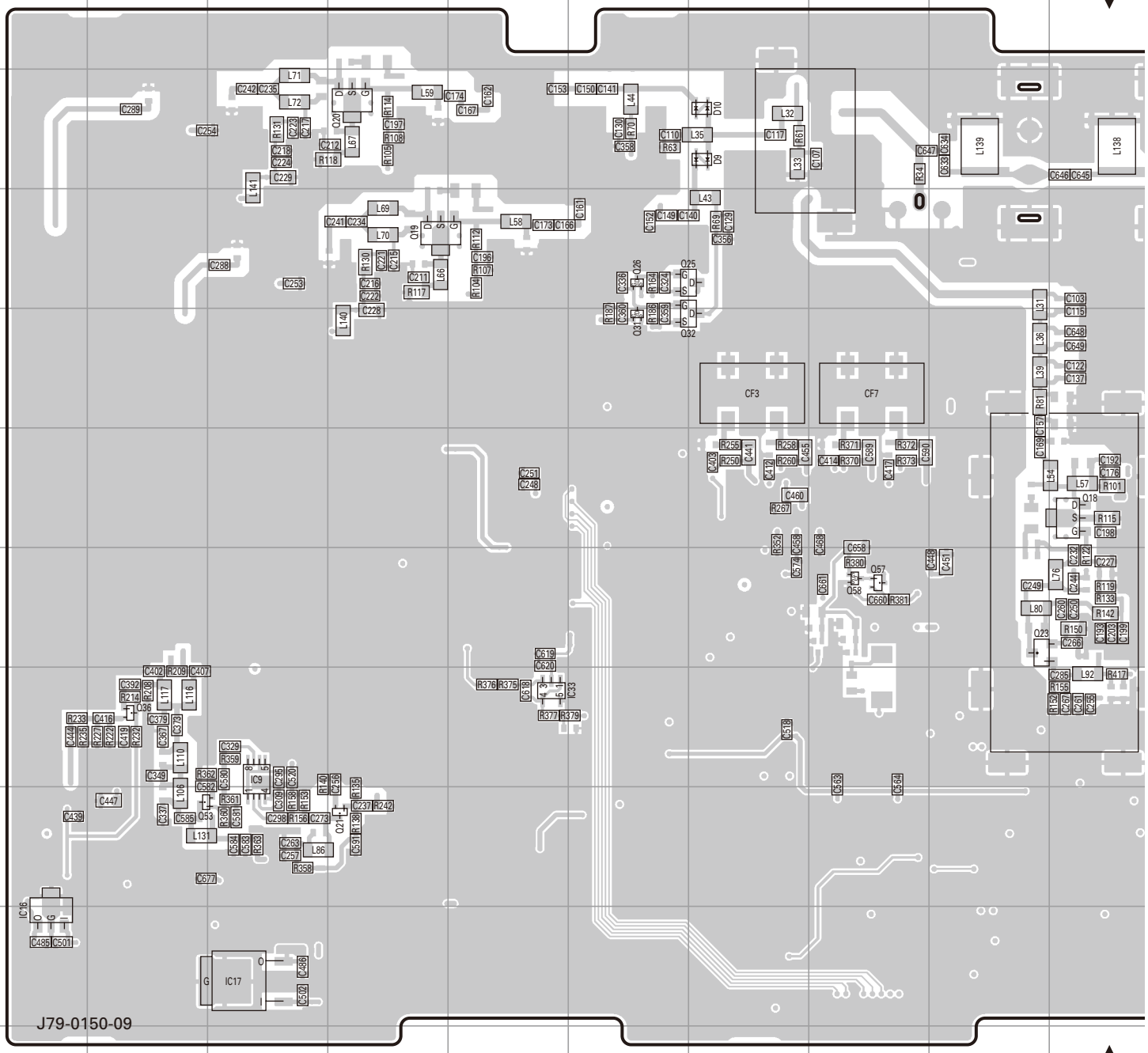
RX UNIT (X55-3090-10)
Component side view (J79-0150-09)



Component side
Layer 1
Layer 2
Layer 3
Layer 4
Foil side

NXR-700 PC BOARD

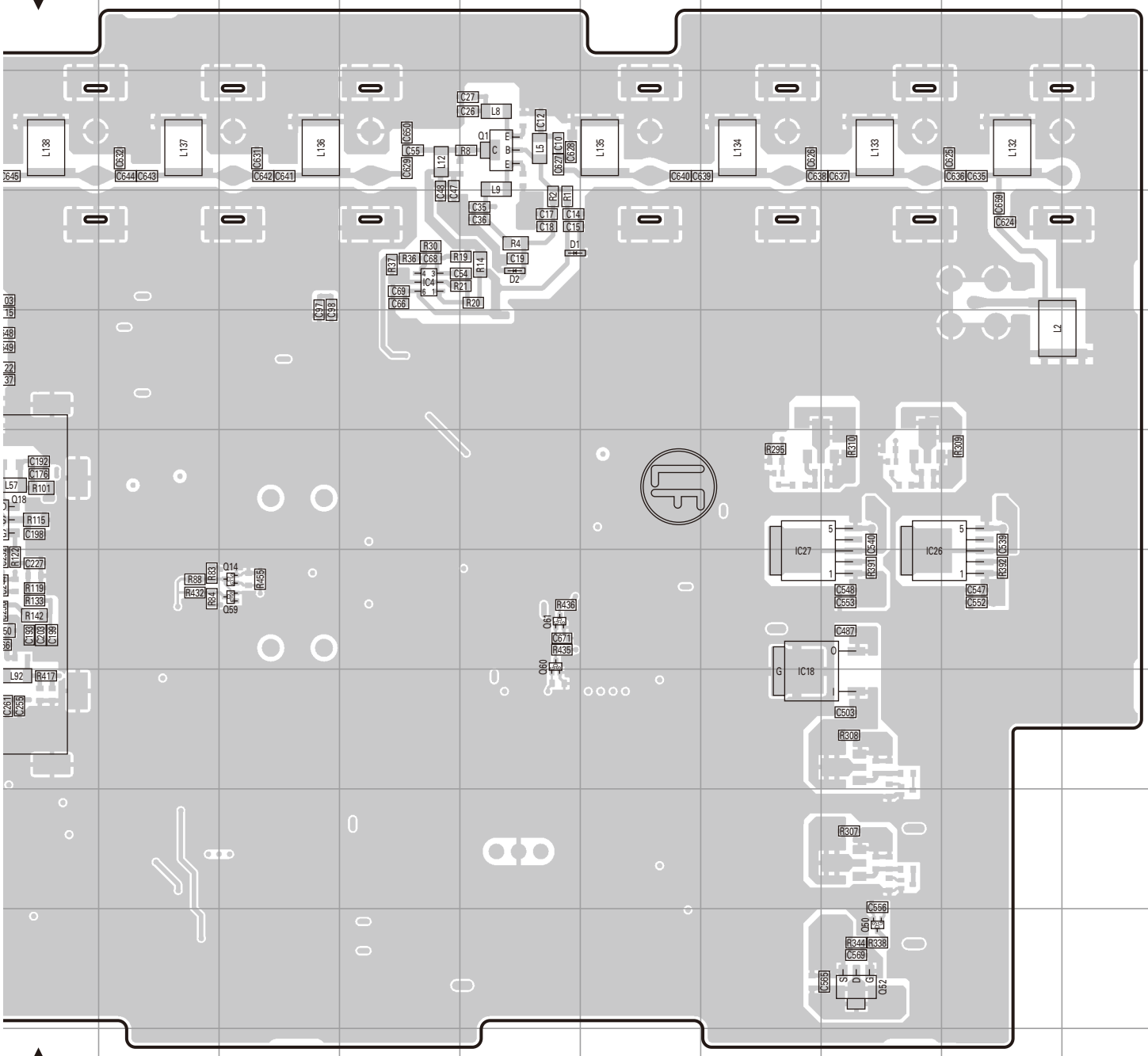
RX UNIT (X55-3090-10)
Foil side view (J79-0150-09)



Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC4	4M	Q14	7L	Q32	5G	Q61	7N
IC9	8C	Q18	6J	Q36	8B	D1	4N
IC16	10A	Q19	4D	Q50	10Q	D2	4N
IC17	10C	Q20	3D	Q52	10Q	D9	3G
IC18	8P	Q21	9D	Q53	9B	D10	3G
IC26	7Q	Q23	7I	Q57	7H		
IC27	7P	Q25	4G	Q58	7H		
IC33	8E	Q26	4F	Q59	7L		
Q1	3N	Q31	5F	Q60	7N		

PC BOARD NXR-700

RX UNIT (X55-3090-10)
Foil side view (J79-0150-09)



Component side

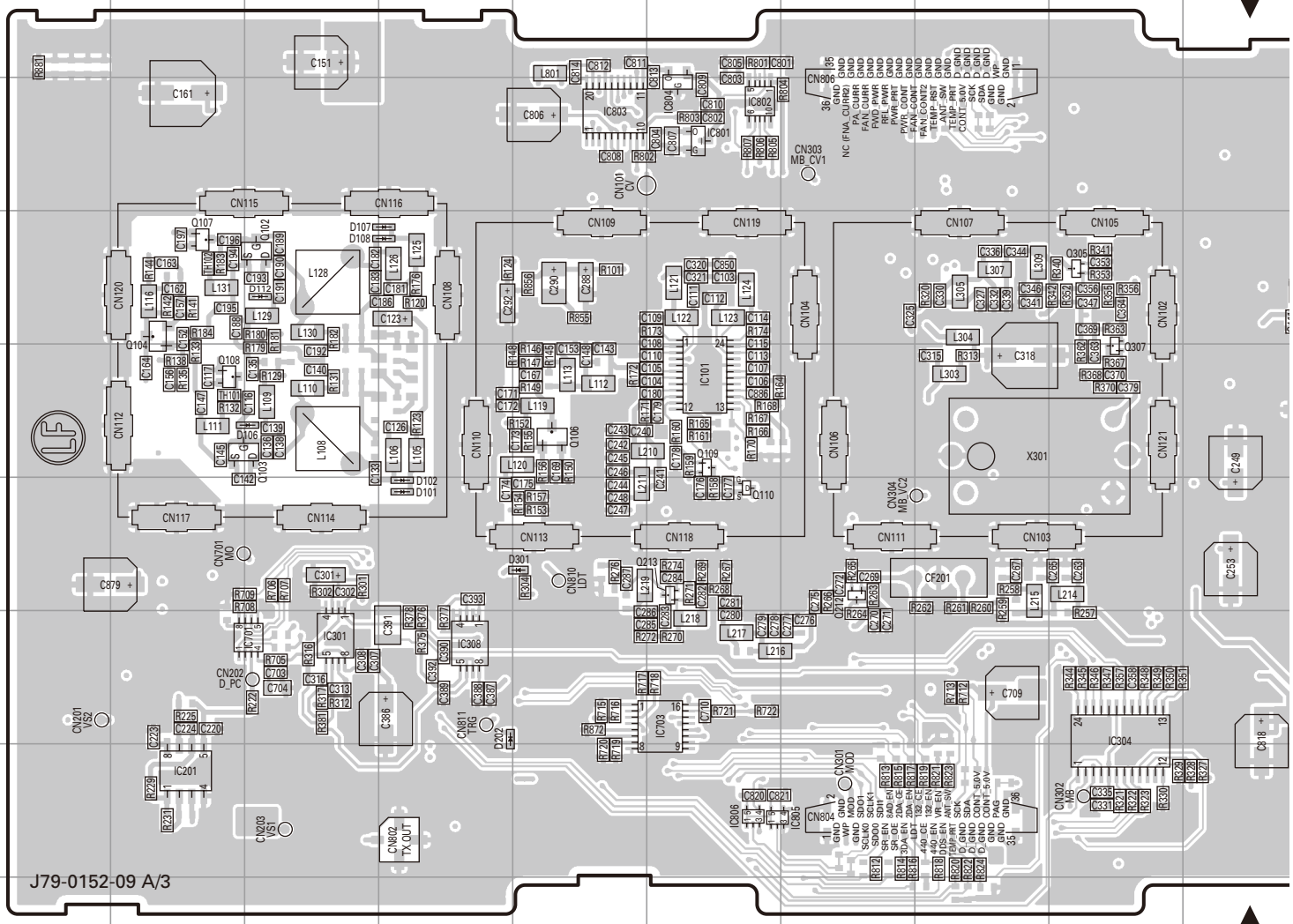
Layer 1	
Layer 2	
Layer 3	
Layer 4	

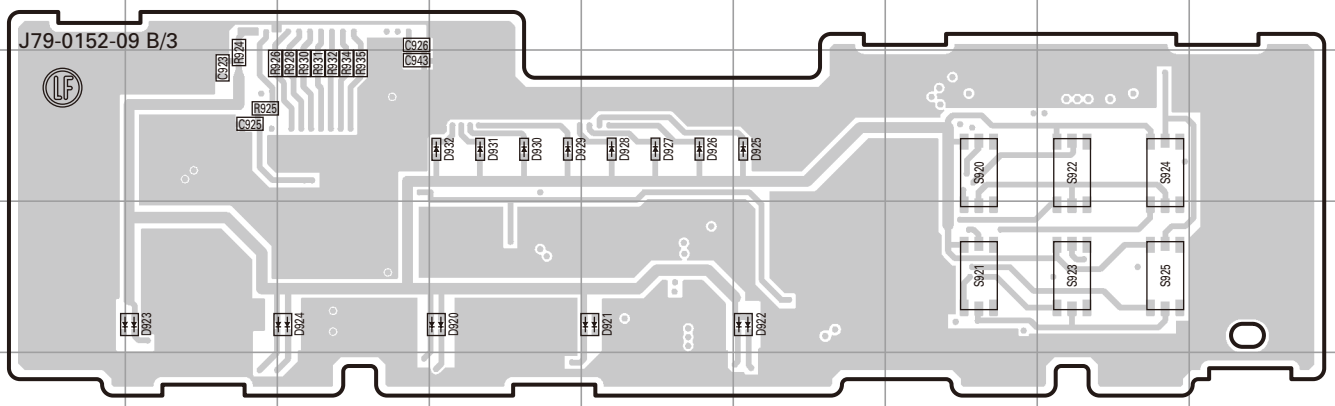
Foil side

NXR-700 PC BOARD

TX UNIT (X56-3110-10)

Component side view (J79-0152-09)

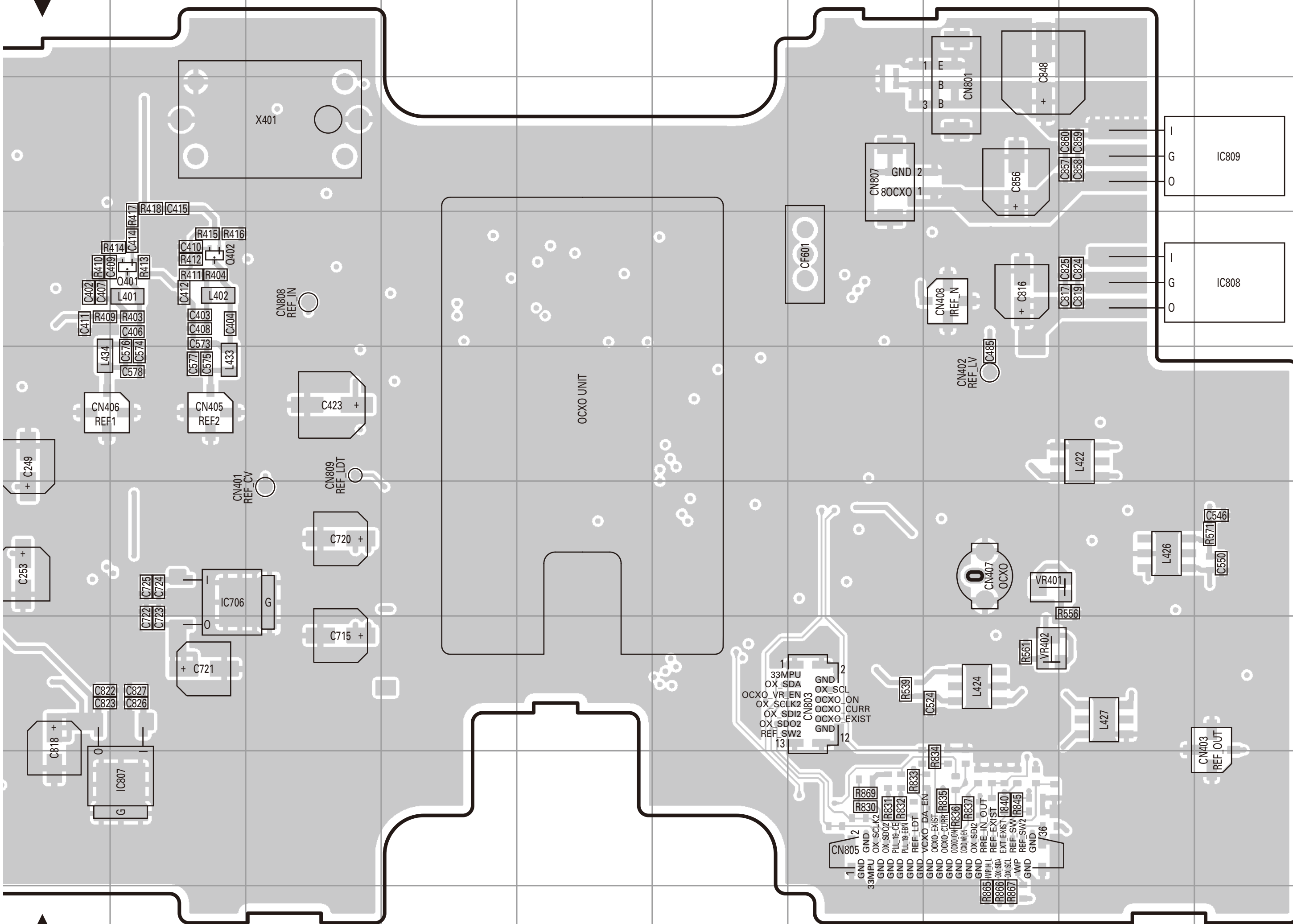


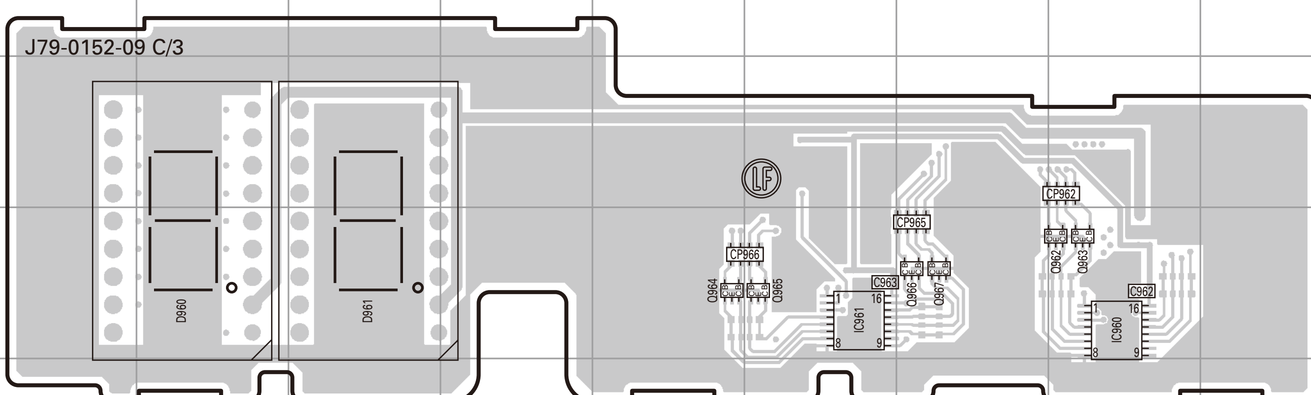


Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Addre
IC101	5F	IC706	6K	IC807	8K	Q104	4B	Q213	6F	Q964	11O	D107	4D	D922	11F	D929	10D
IC201	8B	IC801	3F	IC808	4S	Q106	5E	Q305	4I	Q965	11P	D108	4D	D923	11B	D930	10D
IC301	7C	IC802	3F	IC809	3S	Q107	4B	Q307	5I	Q966	11Q	D112	4C	D924	11C	D931	10D
IC304	7I	IC803	3E	IC960	11R	Q108	5B	Q401	4K	Q967	11Q	D202	7D	D925	10F	D932	10D
IC308	7D	IC804	3F	IC961	11P	Q109	5F	Q402	4K	D101	6D	D301	6E	D926	10E	D960	11L
IC701	7C	IC805	8F	Q102	4C	Q110	6F	Q962	11R	D102	6D	D920	11D	D927	10E	D961	11M
IC703	7F	IC806	8F	Q103	5C	Q212	6G	Q963	11R	D106	5C	D921	11E	D928	10E		

PC BOARD NXR-700

TX UNIT (X56-3110-10)
Component side view (J79-0152-09)





No.	Address
29	10D
30	10D
31	10D
32	10D
60	11L
61	11M

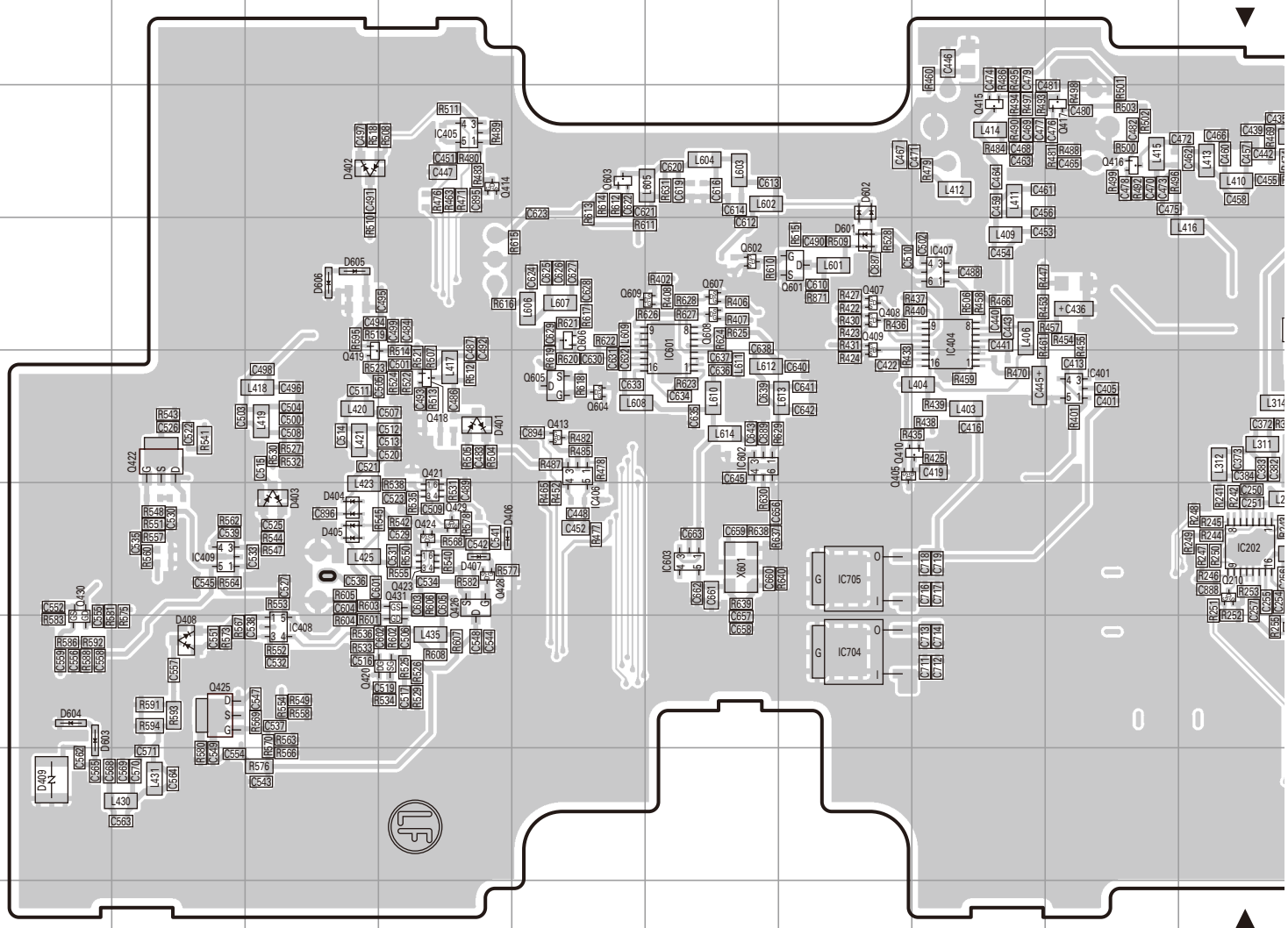
Component side

Layer 1
Layer 2
Layer 3
Layer 4

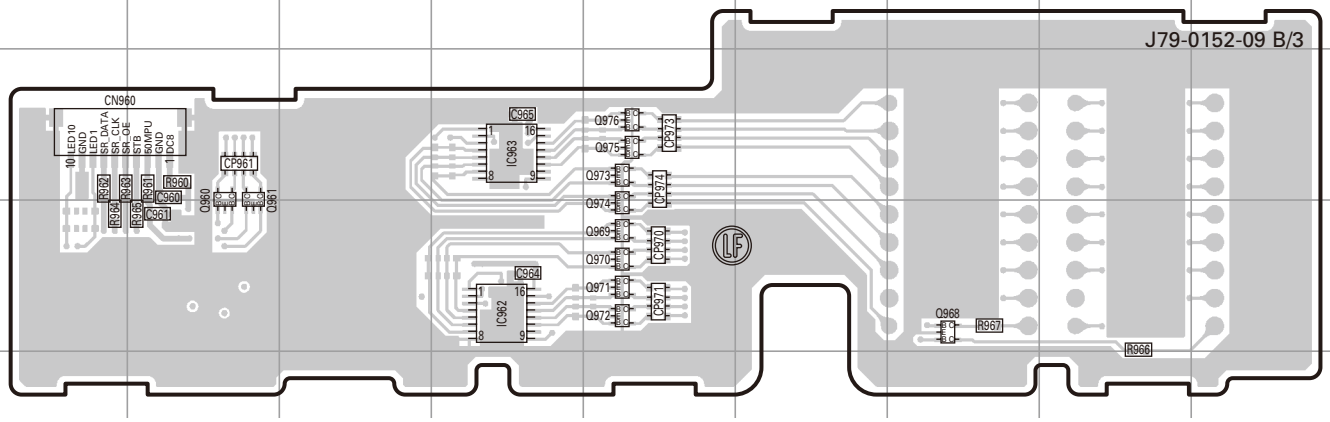
Foil side

NXR-700 PC BOARD

TX UNIT (X56-3110-10)
Foil side view (J79-0152-09)



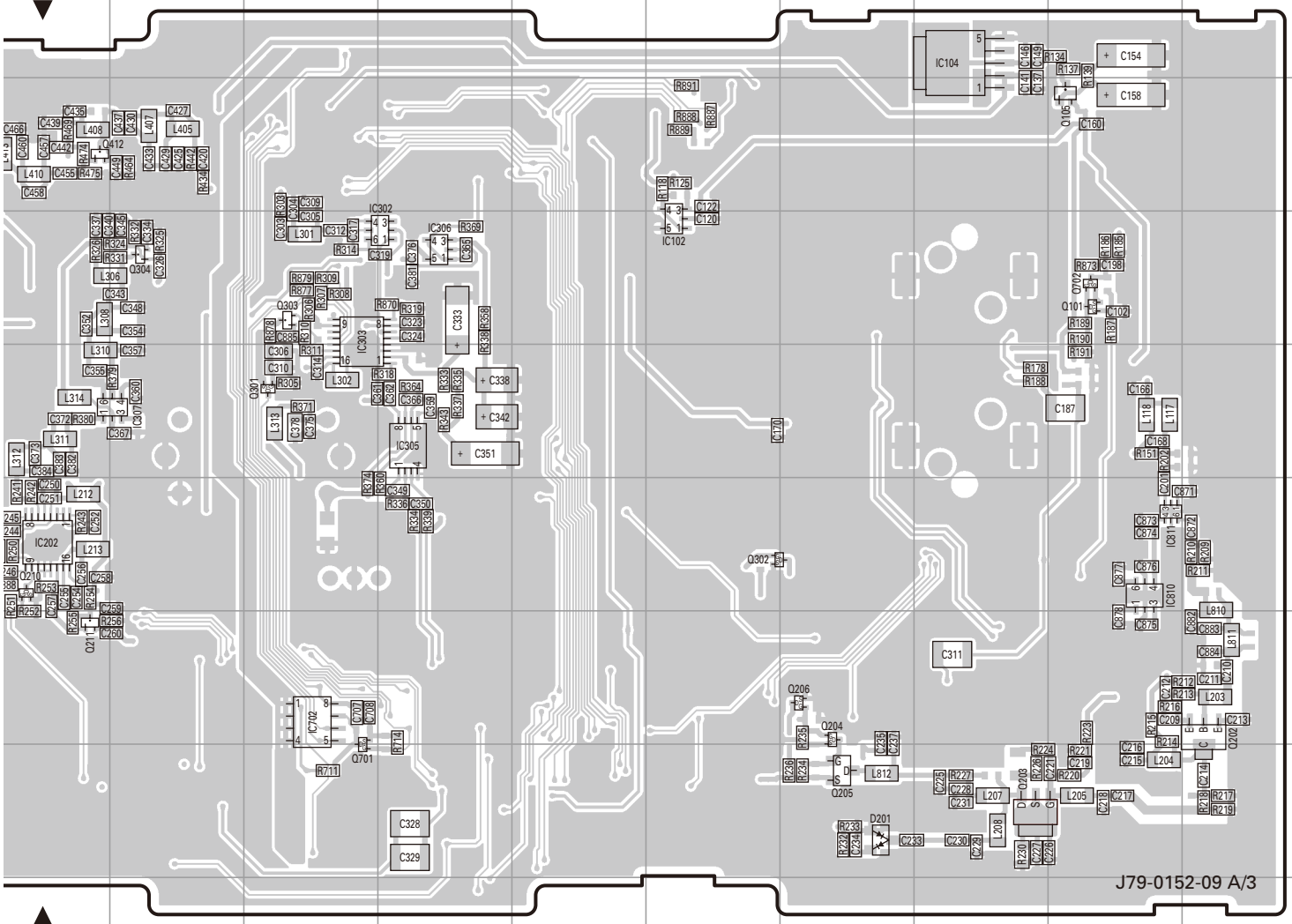
J79-0152-09 B/3

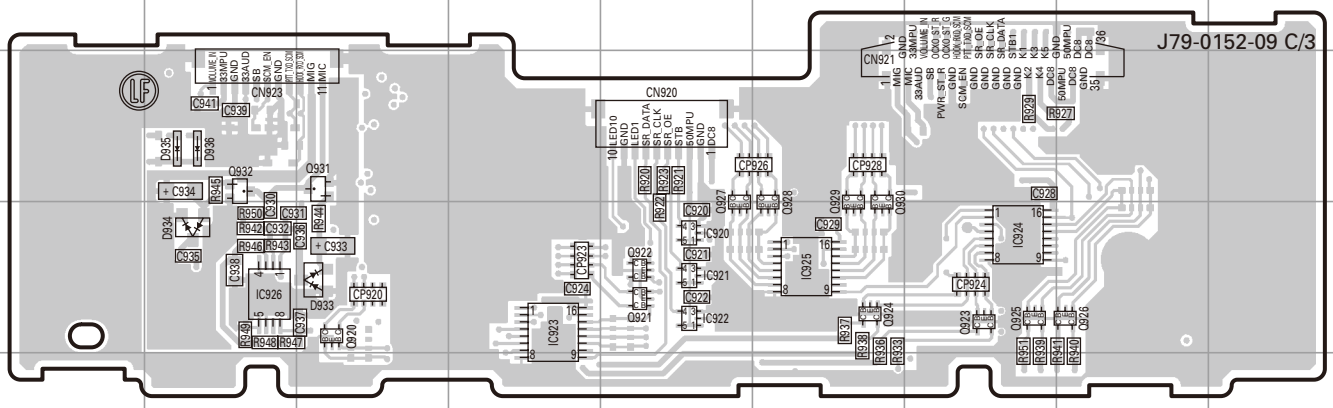


Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Addre
IC102	4O	IC404	4H	IC702	7L	IC924	11Q	Q204	7P	Q405	5G	Q416	3I	Q425	7B	Q604	5E
IC104	2Q	IC405	3D	IC704	7G	IC925	11P	Q205	8P	Q407	4G	Q417	3I	Q426	6D	Q605	5E
IC202	6J	IC406	5E	IC705	6G	IC926	11L	Q206	7P	Q408	4G	Q418	5D	Q428	6D	Q606	4E
IC302	4M	IC407	4H	IC810	6R	IC962	11D	Q210	6J	Q409	4G	Q419	5C	Q429	6D	Q607	4F
IC303	4L	IC408	7C	IC811	6R	IC963	10D	Q211	7J	Q410	5H	Q420	7D	Q430	6A	Q608	4F
IC305	5M	IC409	6B	IC920	11O	Q101	4R	Q301	5L	Q412	3J	Q421	6D	Q431	6D	Q609	4F
IC306	4M	IC601	4F	IC921	11O	Q105	3R	Q302	6O	Q413	5E	Q422	5B	Q601	4G	Q701	8L
IC307	5K	IC602	5F	IC922	11O	Q202	7S	Q303	4L	Q414	3D	Q423	6D	Q602	4F	Q702	4R
IC401	5H	IC603	6F	IC923	11N	Q203	8Q	Q304	4K	Q415	3H	Q424	6D	Q603	3E	Q920	11M

PC BOARD NXR-700

TX UNIT (X56-3110-10)
Foil side view (J79-0152-09)





No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
04	5E	Q921	11O	Q930	11P	Q972	11E	D404	6C	D604	7A
05	5E	Q922	11O	Q931	10M	Q973	10E	D405	6C	D605	4C
06	4E	Q923	11Q	Q932	10L	Q974	11E	D406	6D	D606	4C
07	4F	Q924	11P	Q960	10B	Q975	10E	D407	6D	D933	11M
08	4F	Q925	11Q	Q961	10B	Q976	10E	D408	7B	D934	11L
09	4F	Q926	11R	Q968	11G	D201	8P	D409	8A	D935	10L
01	8L	Q927	11O	Q969	11E	D401	5D	D601	4G	D936	10L
02	4R	Q928	11P	Q970	11E	D402	3C	D602	3G		
20	11M	Q929	11P	Q971	11E	D403	6C	D603	7A		

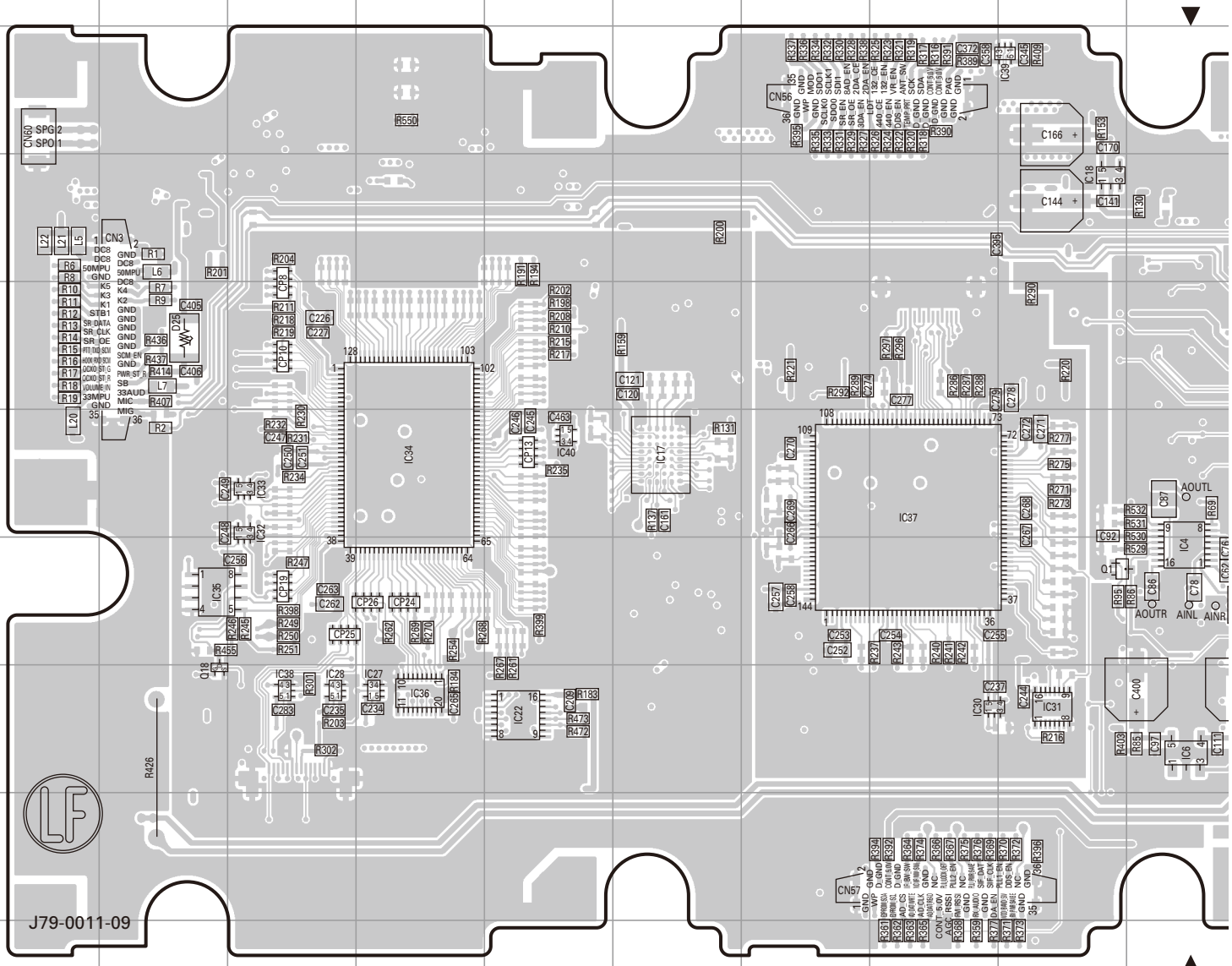
Component side

Layer 1	
Layer 2	
Layer 3	
Layer 4	

Foil side

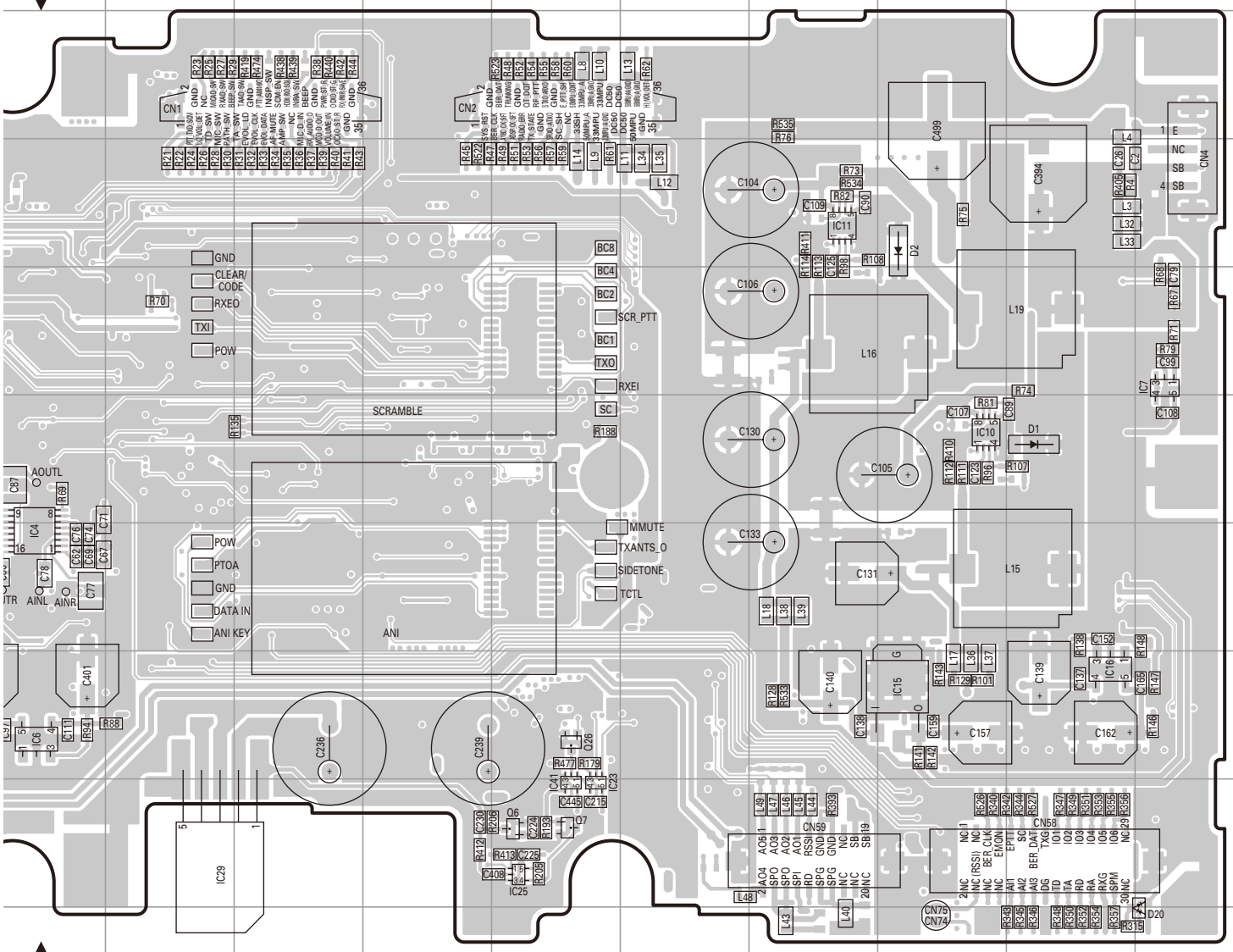
NXR-700 PC BOARD

CONTROL UNIT (X53-4130-10)
Component side view (J79-0011-09)



Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC4	7J	IC22	8E	IC33	6C	Q1	7I
IC6	8J	IC23	9N	IC34	6D	Q6	9N
IC7	5S	IC25	9N	IC35	7B	Q7	9N
IC10	6Q	IC27	8D	IC36	8D	Q18	8B
IC11	4P	IC28	8C	IC37	6H	Q26	8N
IC15	8Q	IC29	9K	IC38	8C	D1	6R
IC16	8R	IC30	8H	IC39	3I	D2	4Q
IC17	6F	IC31	8I	IC40	6E	D20	10S
IC18	4I	IC32	6C	IC41	9N	D25	5B

CONTROL UNIT (X53-4130-10)
Component side view (J79-0011-09)



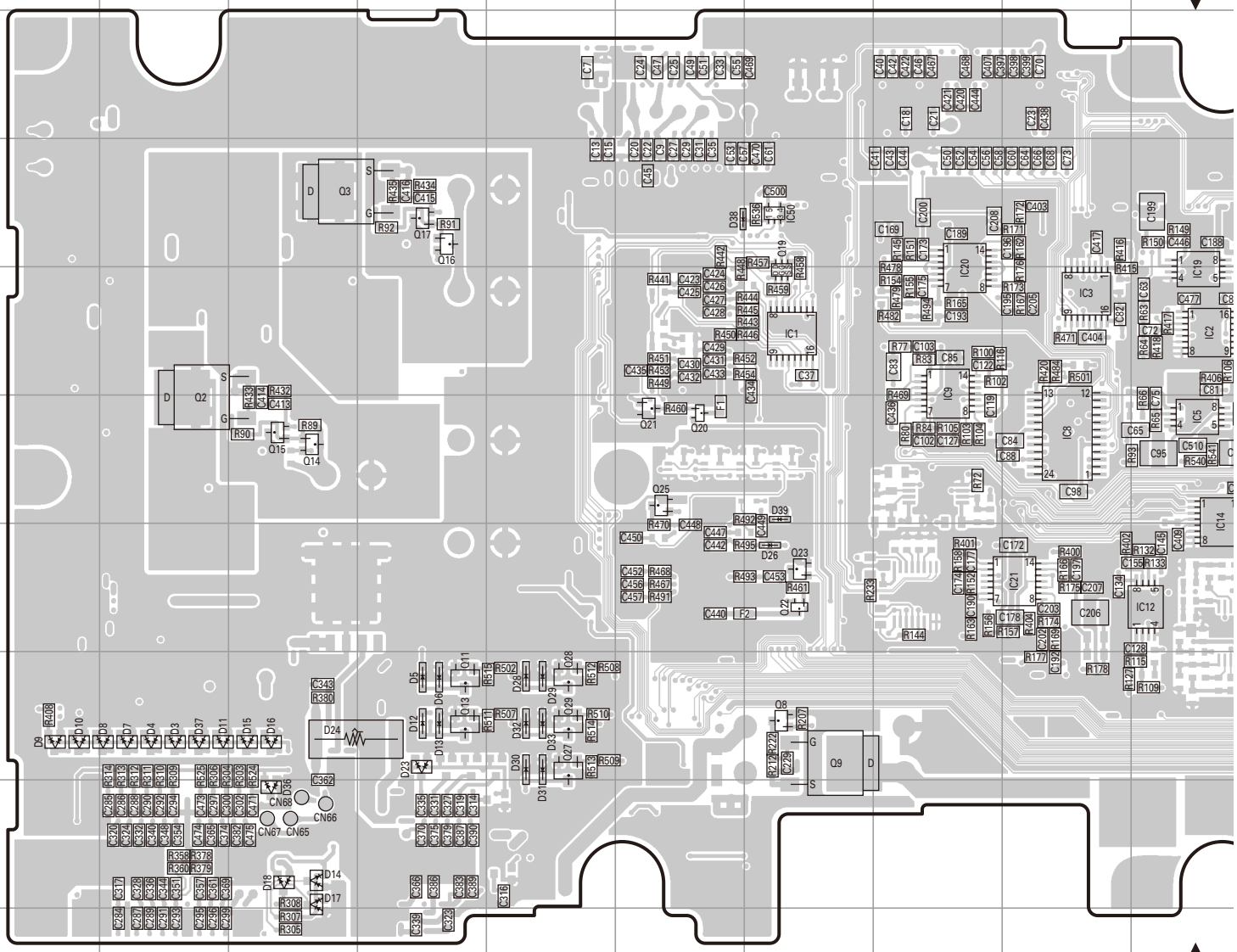
Component side

Layer 1	
Layer 2	
Layer 3	
Layer 4	

Foil side

NXR-700 PC BOARD

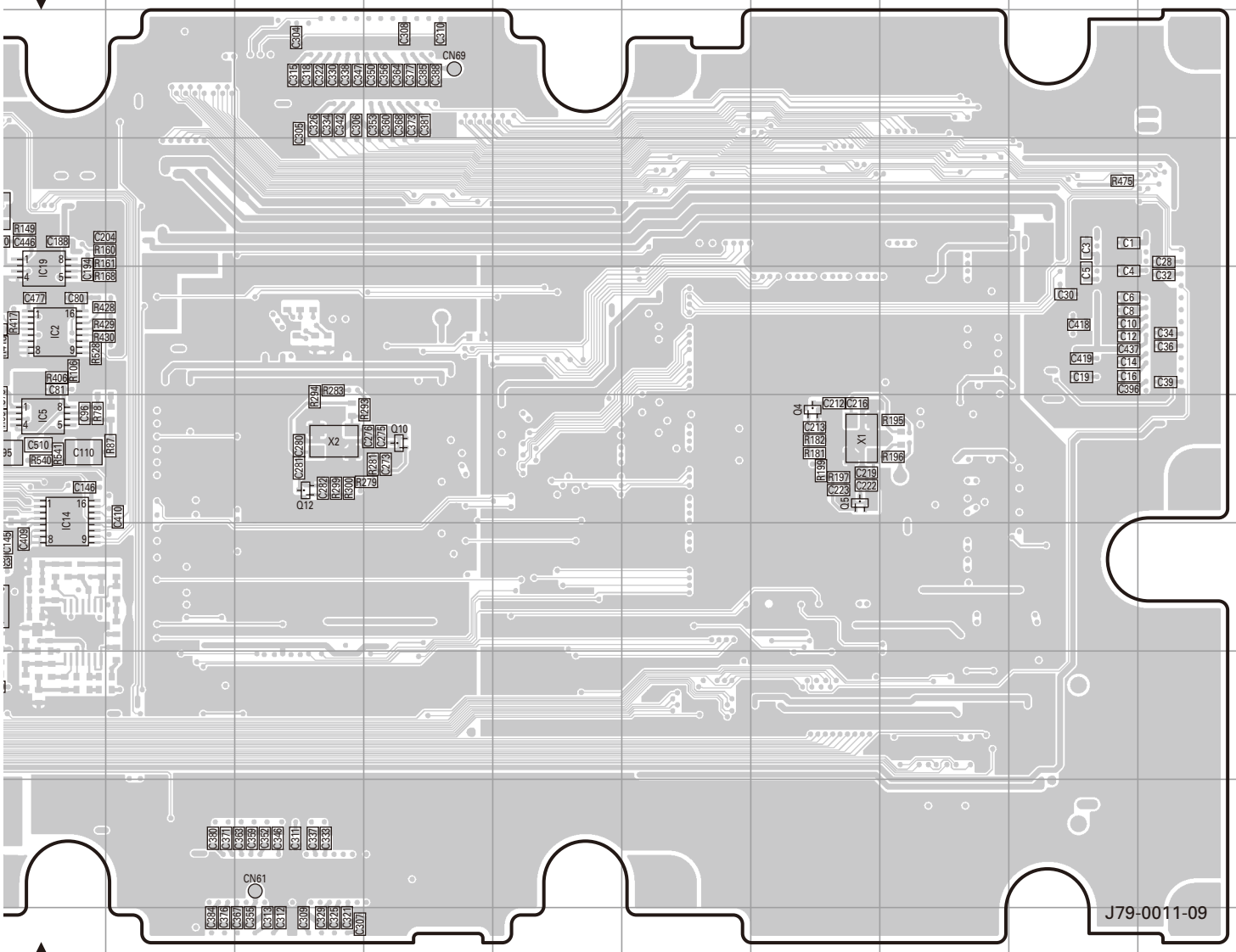
CONTROL UNIT (X53-4130-10)
Foil side view (J79-0011-09)



Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC1	5G	Q3	4C	Q19	5G	D7	8B	D24	8C
IC2	5J	Q4	6P	Q20	6F	D8	8B	D26	7G
IC3	5I	Q5	6P	Q21	6F	D9	8A	D28	8E
IC5	6J	Q8	8G	Q22	7G	D10	8A	D29	8E
IC8	6I	Q9	8G	Q23	7G	D11	8B	D30	8E
IC9	5H	Q10	6M	Q25	6F	D12	8D	D31	8E
IC12	7J	Q11	8D	Q27	8E	D13	8D	D32	8E
IC14	6J	Q12	6L	Q28	8E	D14	9C	D33	8E
IC19	5J	Q13	8D	Q29	8E	D15	8C	D36	9C
IC20	5H	Q14	6C	D3	8B	D16	8C	D37	8B
IC21	7I	Q15	6C	D4	8B	D17	9C	D38	4F
IC50	4G	Q16	4D	D5	8D	D18	9C	D39	6G
Q2	6B	Q17	4D	D6	8D	D23	8D		

PC BOARD NXR-700

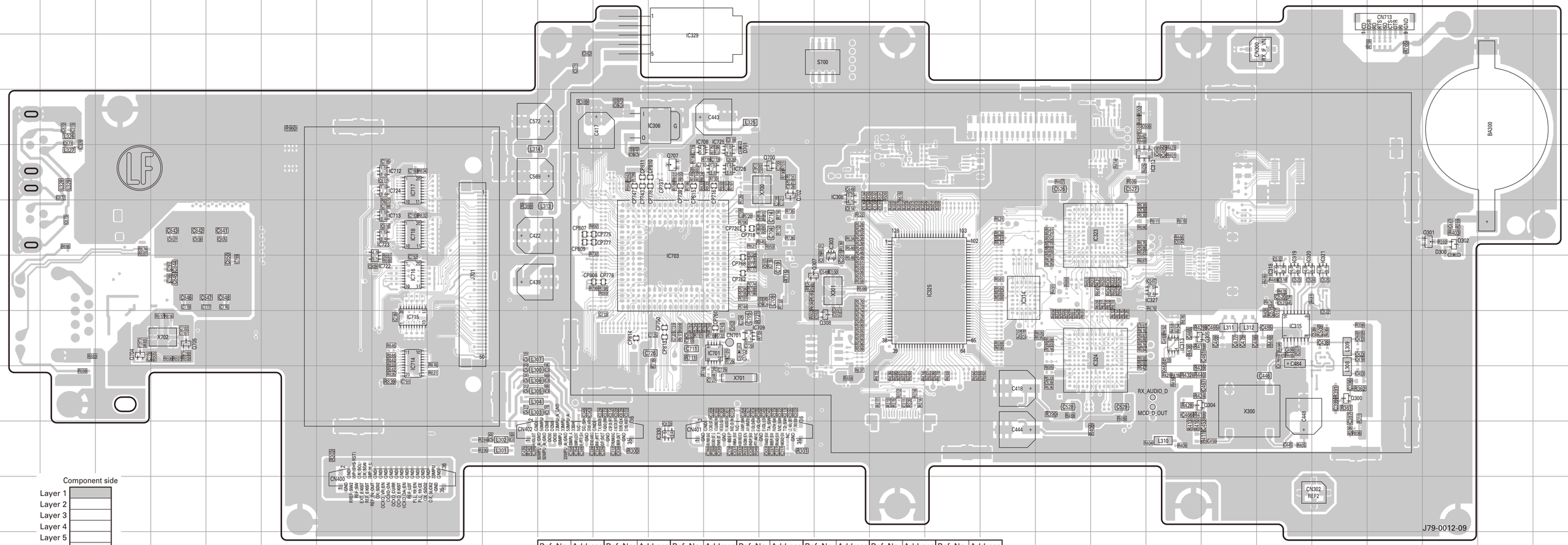
CONTROL UNIT (X53-4130-10)
Foil side view (J79-0011-09)



Component side
Layer 1
Layer 2
Layer 3
Layer 4
Foil side

CONTROL UNIT (X53-4140-10)
Component side view (J79-0012-09)

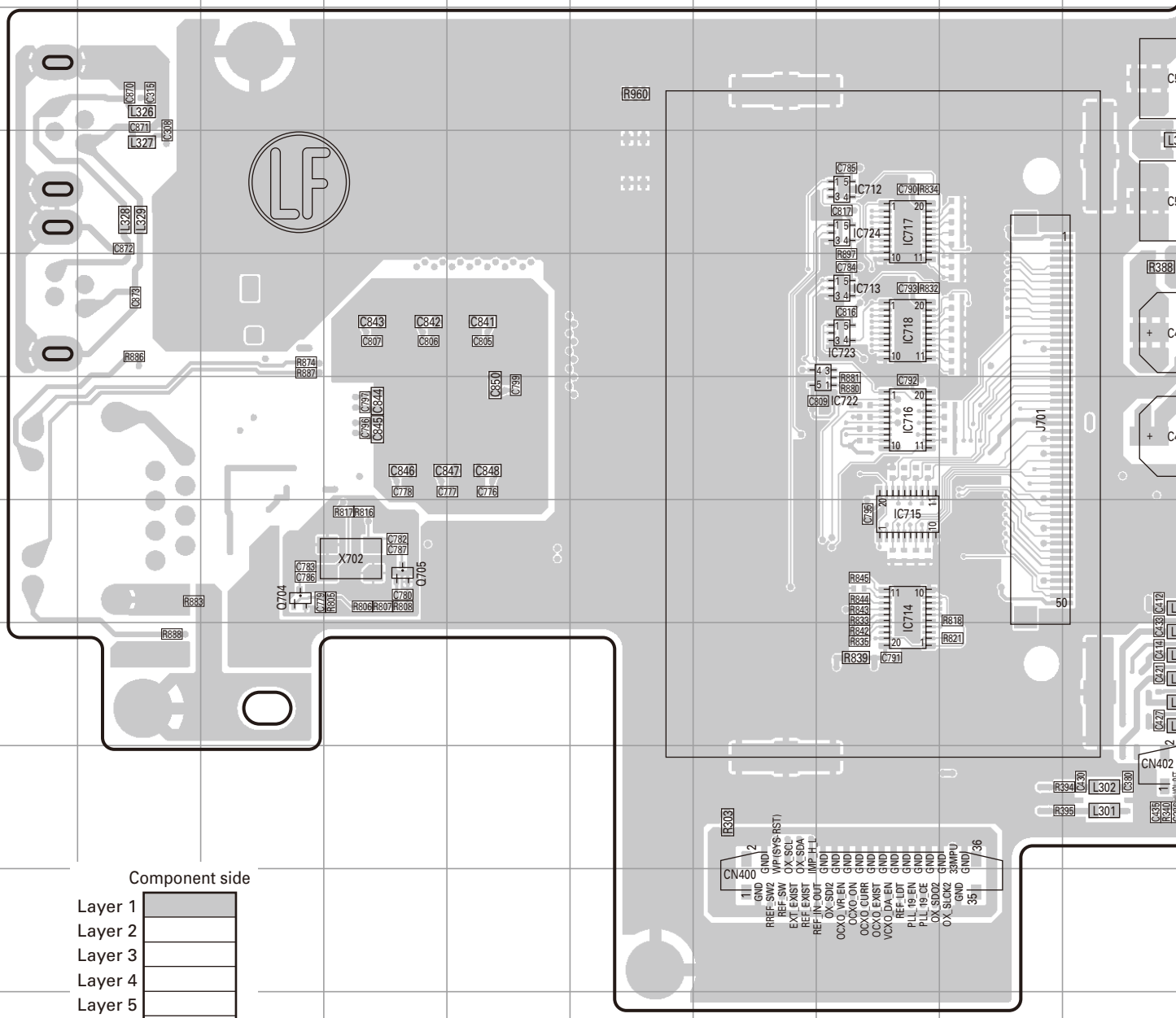
CONTROL UNIT (X53-4140-10)
Component side view (J79-0012-09)



Component side
Layer 1
Layer 2
Layer 3
Layer 4
Layer 5
Layer 6
Foil side

Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC303	7P	IC318	7X	IC327	7V	IC710	5N	IC718	6H	Q301	6AA	Q702	5O
IC306	4M	IC319	7X	IC329	3M	IC712	5H	IC722	7H	Q302	6AA	Q704	8C
IC308	5P	IC320	7X	IC330	10M	IC713	6H	IC723	6H	Q304	9V	Q705	8D
IC312	5U	IC321	7Y	IC701	8N	IC714	8H	IC724	5H	Q305	8V	Q707	5M
IC313	8V	IC323	6U	IC703	7M	IC715	8H	IC725	5N	Q307	7O	D300	6AA
IC314	7S	IC324	8U	IC708	5M	IC716	7H	IC726	5N	Q308	8P	D701	5N
IC315	8X	IC325	7R	IC709	8N	IC717	5H	Q300	9Y	Q700	5O	D702	8N

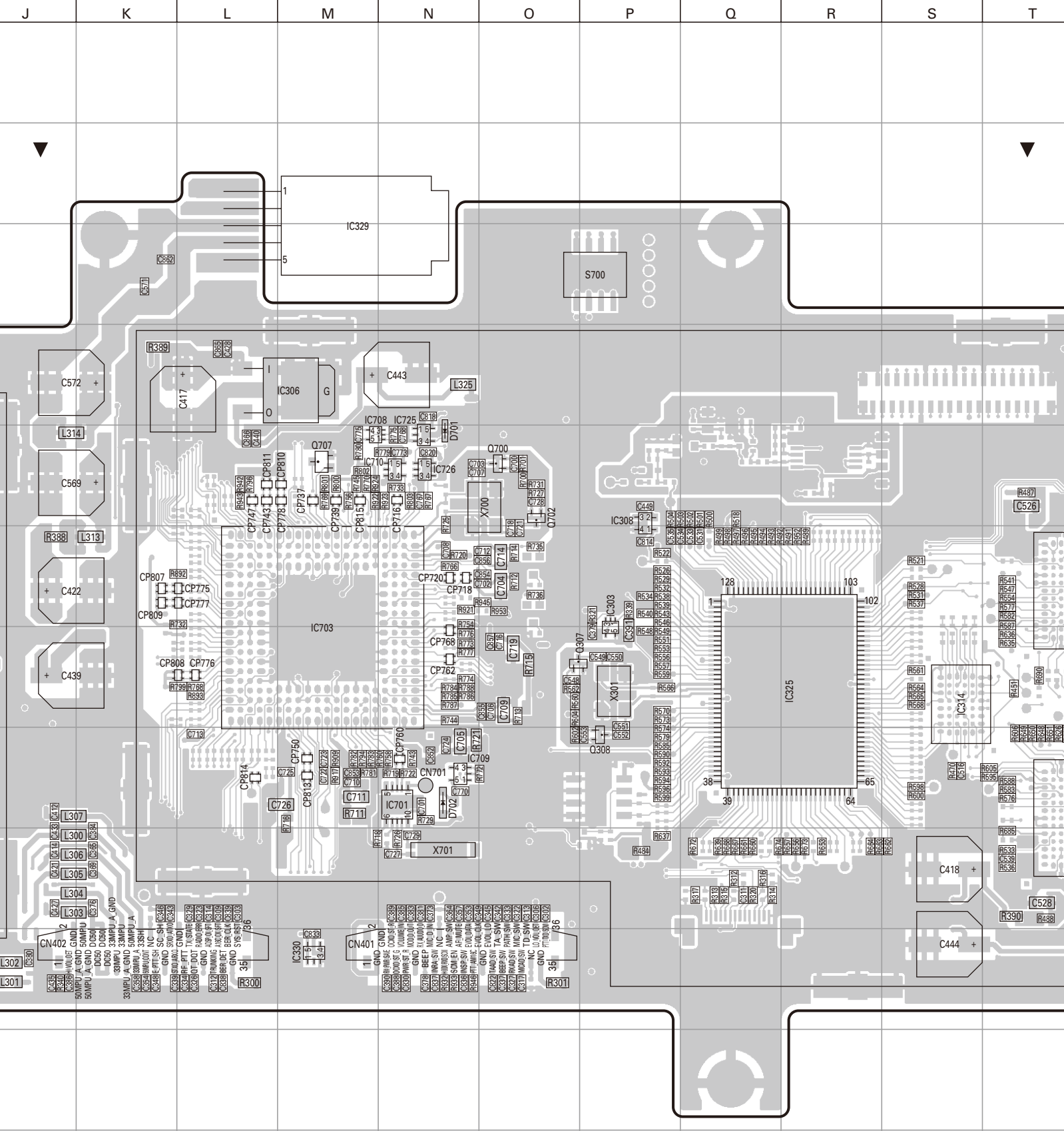
CONTROL UNIT (X53-4140-10)
Component side view (J79-0012-09)



Component side

Layer 1	
Layer 2	
Layer 3	
Layer 4	
Layer 5	
Layer 6	

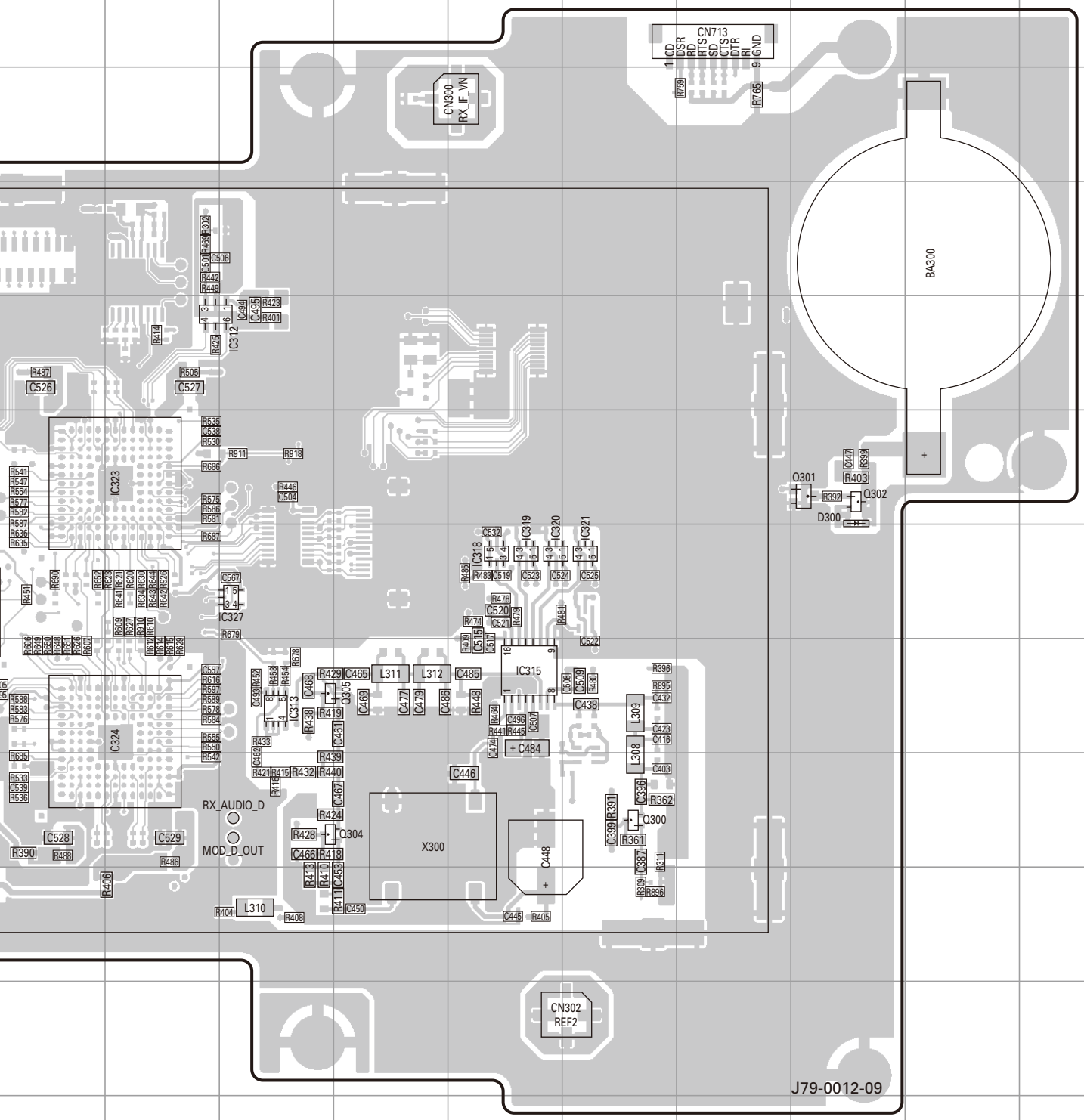
Foil side



Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC303	7P	IC318	7X	IC327	7V	IC710	5N	IC718	6H	Q301	6AA	Q702	5O
IC306	4M	IC319	7X	IC329	3M	IC712	5H	IC722	7H	Q302	6AA	Q704	8C
IC308	5P	IC320	7X	IC330	10M	IC713	6H	IC723	6H	Q304	9V	Q705	8D
IC312	5U	IC321	7Y	IC701	8N	IC714	8H	IC724	5H	Q305	8V	Q707	5M
IC313	8V	IC323	6U	IC703	7M	IC715	8H	IC725	5N	Q307	7O	D300	6AA
IC314	7S	IC324	8U	IC708	5M	IC716	7H	IC726	5N	Q308	8P	D701	5N
IC315	8X	IC325	7R	IC709	8N	IC717	5H	Q300	9Y	Q700	5O	D702	8N

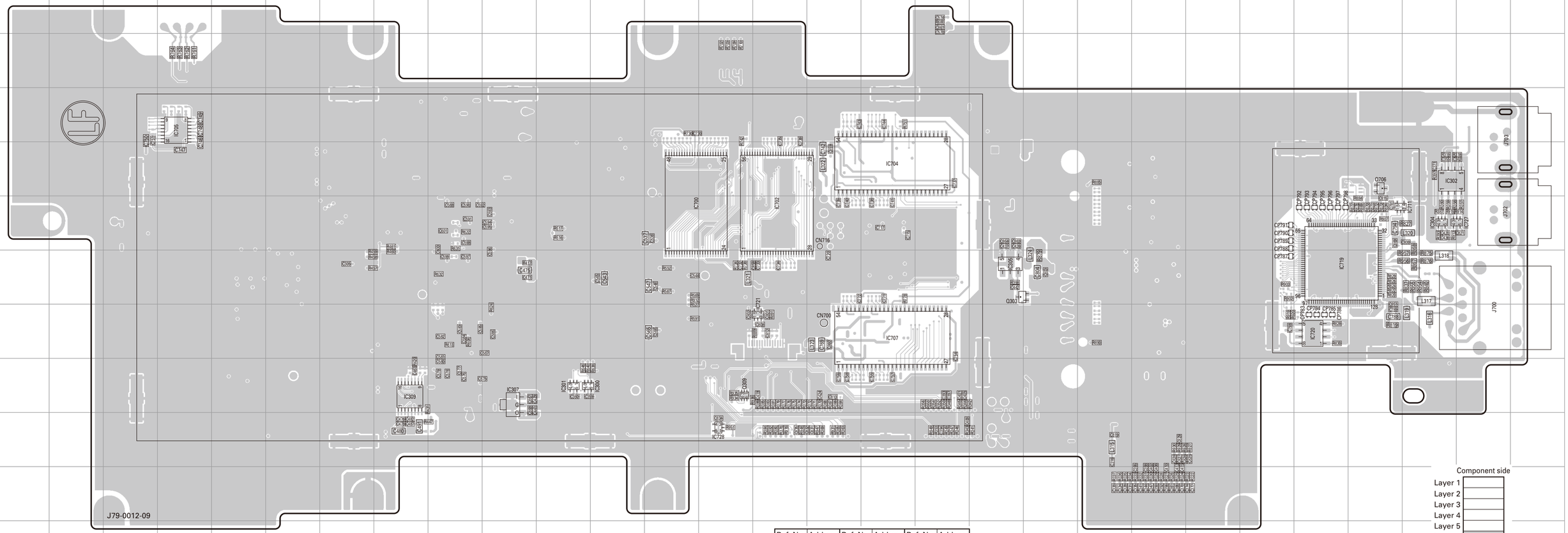
PC BOARD NXR-700

CONTROL UNIT (X53-4140-10)
Component side view (J79-0012-09)



NXR-700 PC BOARD

CONTROL UNIT (X53-4140-10)
Foil side view (J79-0012-09)



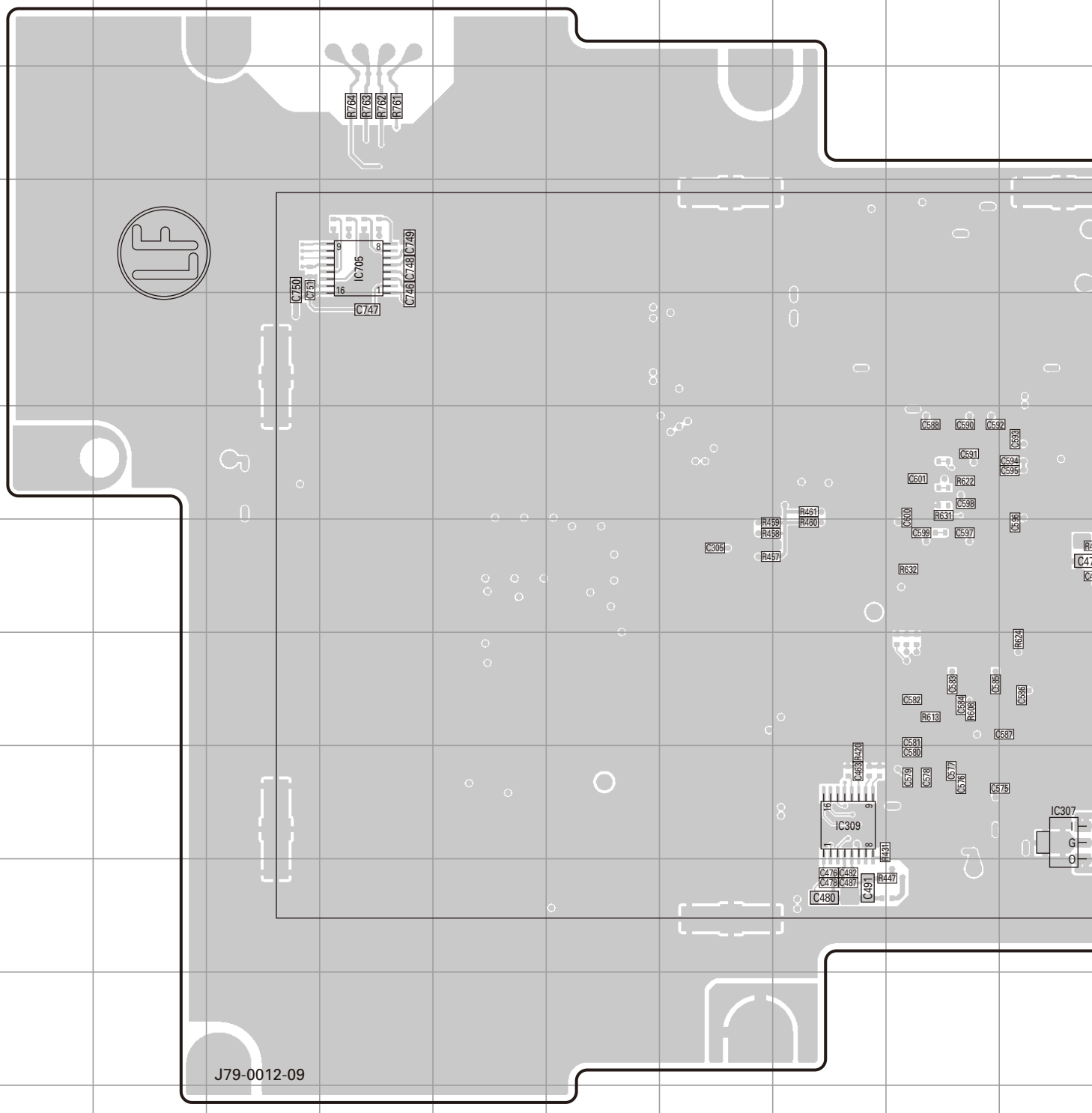
CONTROL UNIT (X53-4140-10)
Foil side view (J79-0012-09)

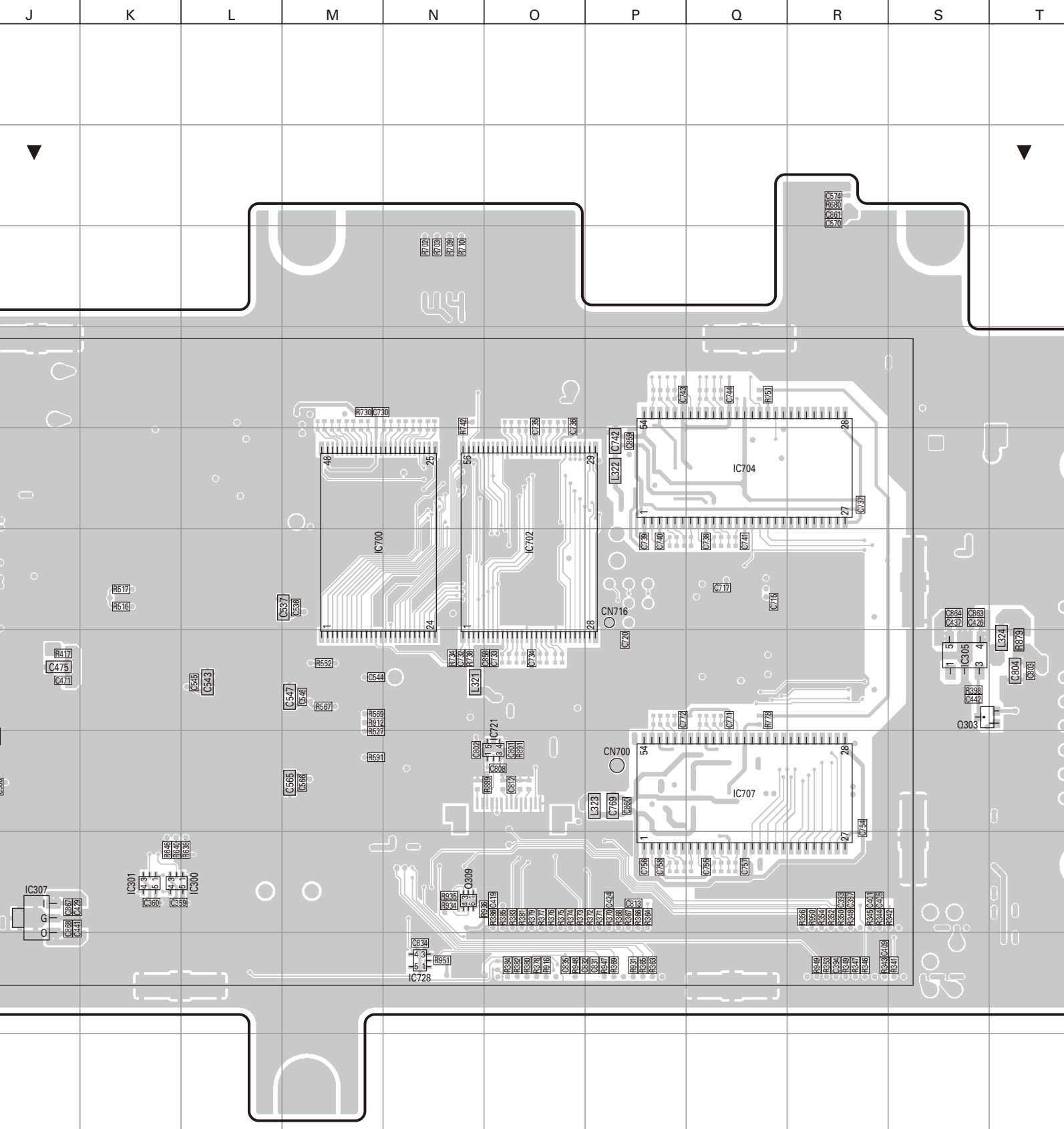
Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC300	9K	IC700	6M	IC720	8Y
IC301	9K	IC702	6O	IC721	8O
IC302	5AA	IC704	5Q	IC727	6AB
IC304	6AA	IC705	4D	IC728	10N
IC305	7S	IC707	8Q	Q303	7S
IC307	9J	IC711	6Z	Q309	9N
IC309	9H	IC719	7Y	Q706	5Z

Component side
Layer 1
Layer 2
Layer 3
Layer 4
Layer 5
Layer 6
Foil side

NXR-700 PC BOARD

CONTROL UNIT (X53-4140-10)
Foil side view (J79-0012-09)

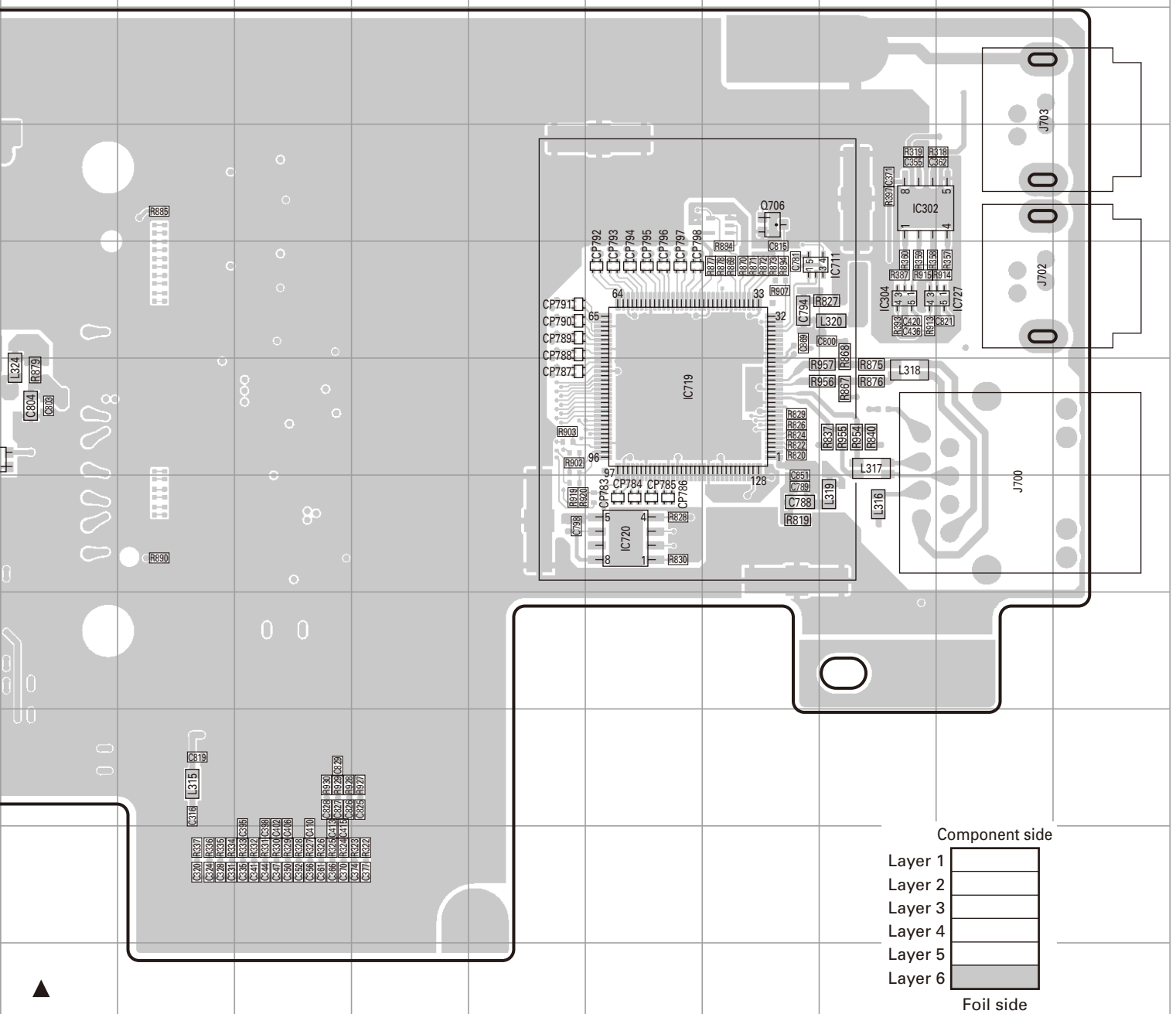




Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC300	9K	IC700	6M	IC720	8Y
IC301	9K	IC702	6O	IC721	8O
IC302	5AA	IC704	5Q	IC727	6AB
IC304	6AA	IC705	4D	IC728	10N
IC305	7S	IC707	8Q	Q303	7S
IC307	9J	IC711	6Z	Q309	9N
IC309	9H	IC719	7Y	Q706	5Z

T	U	V	W	X	Y	Z	AA	AB	AC

CONTROL UNIT (X53-4140-10)
Foil side view (J79-0012-09)

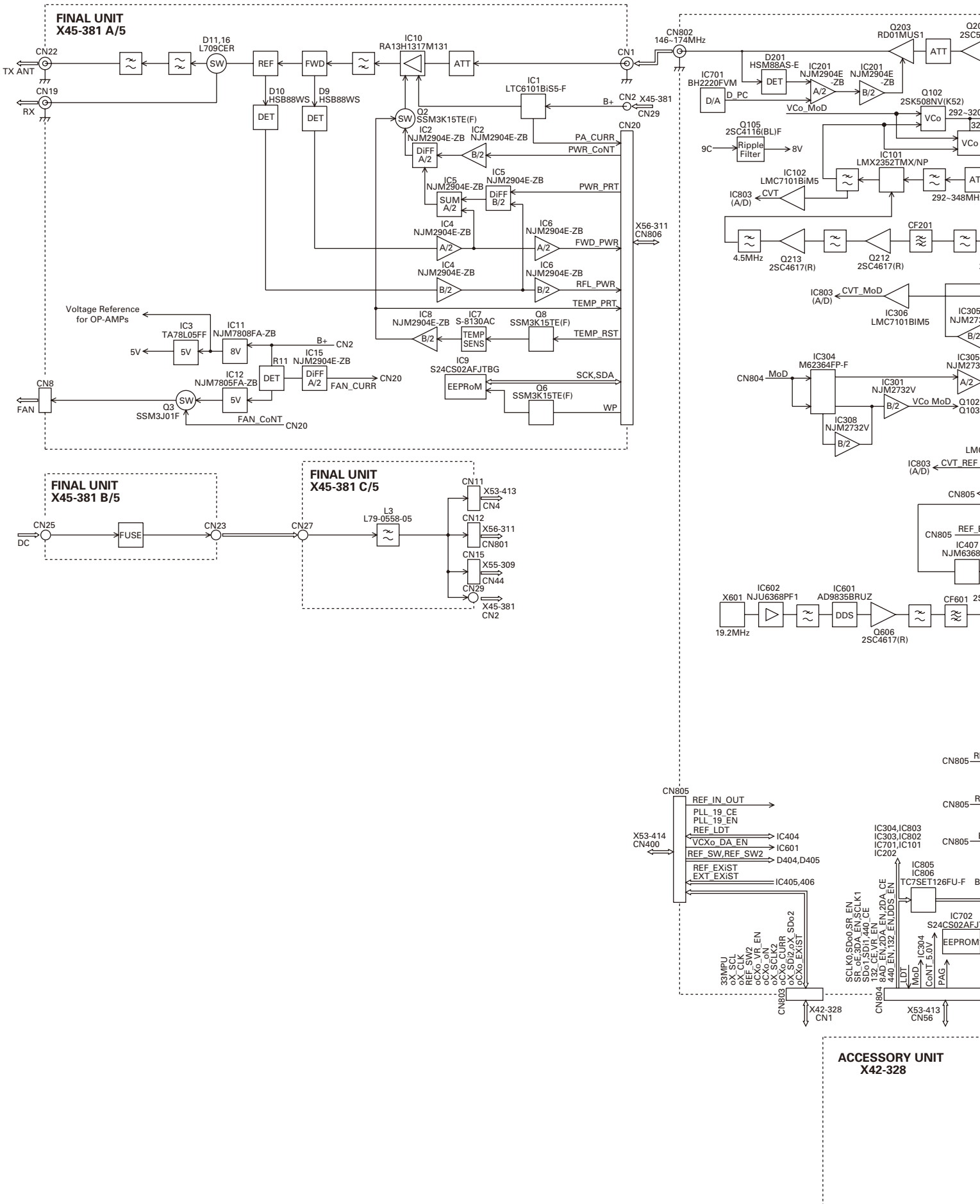


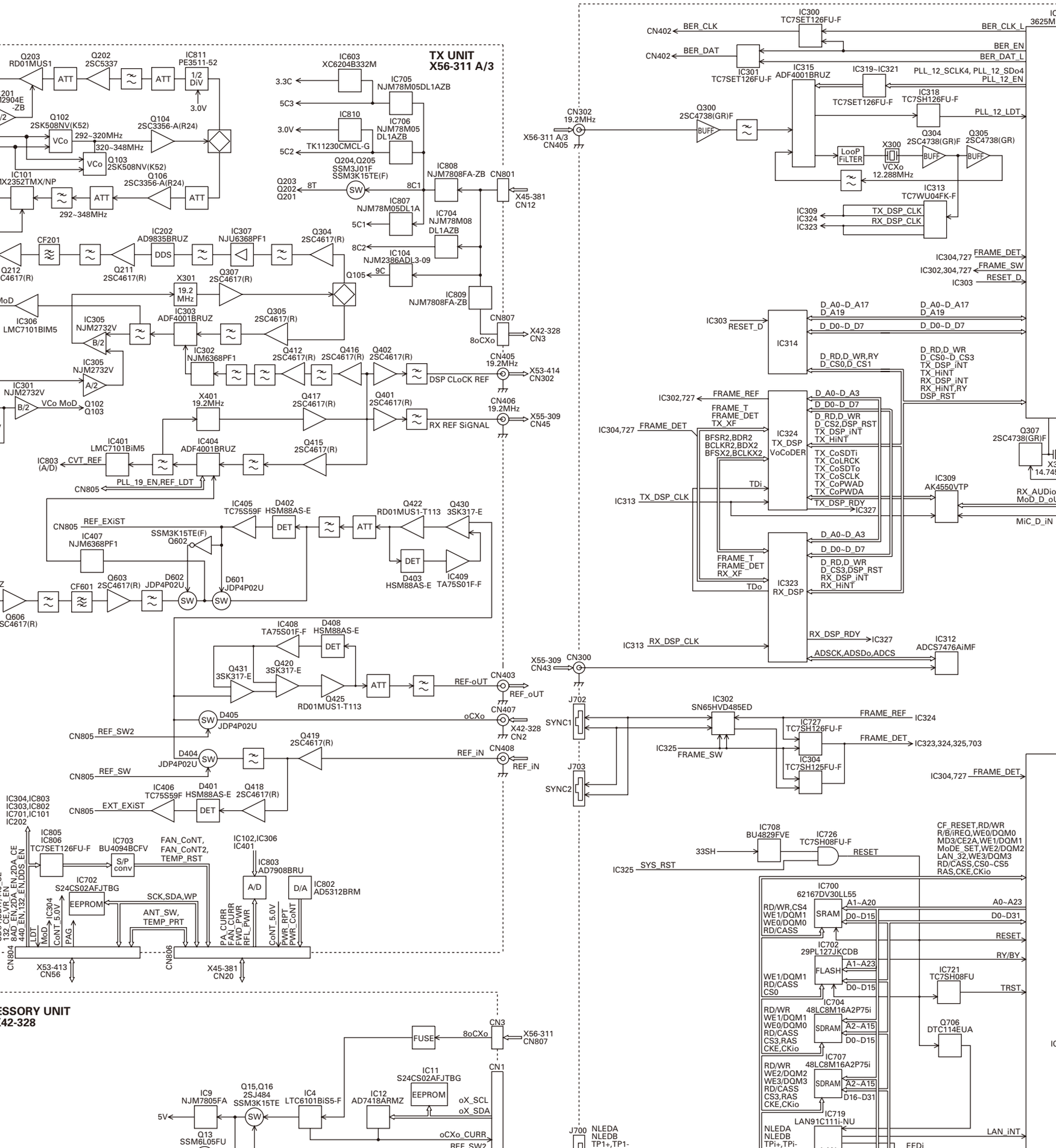
Component side

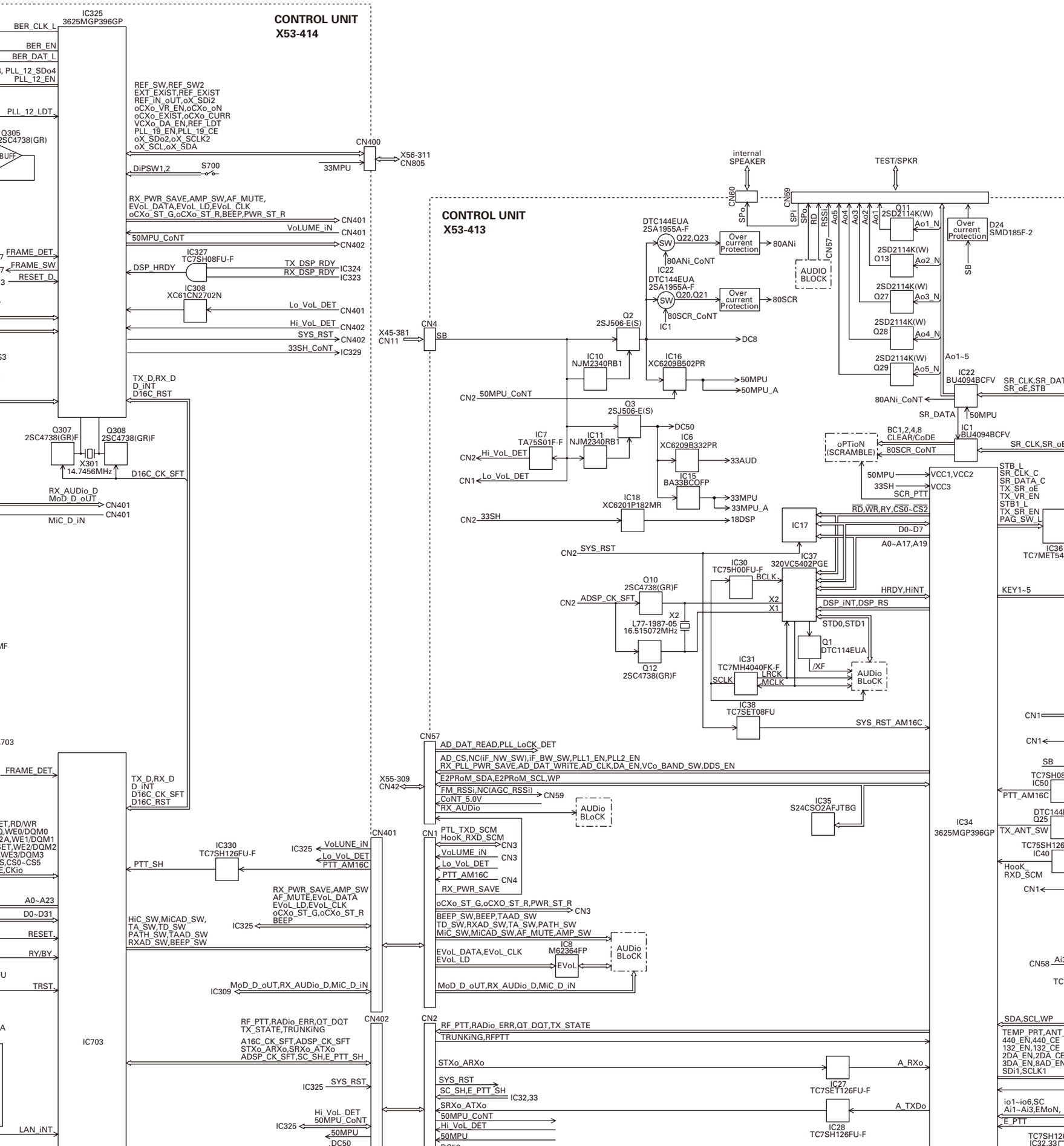
Layer 1	
Layer 2	
Layer 3	
Layer 4	
Layer 5	
Layer 6	

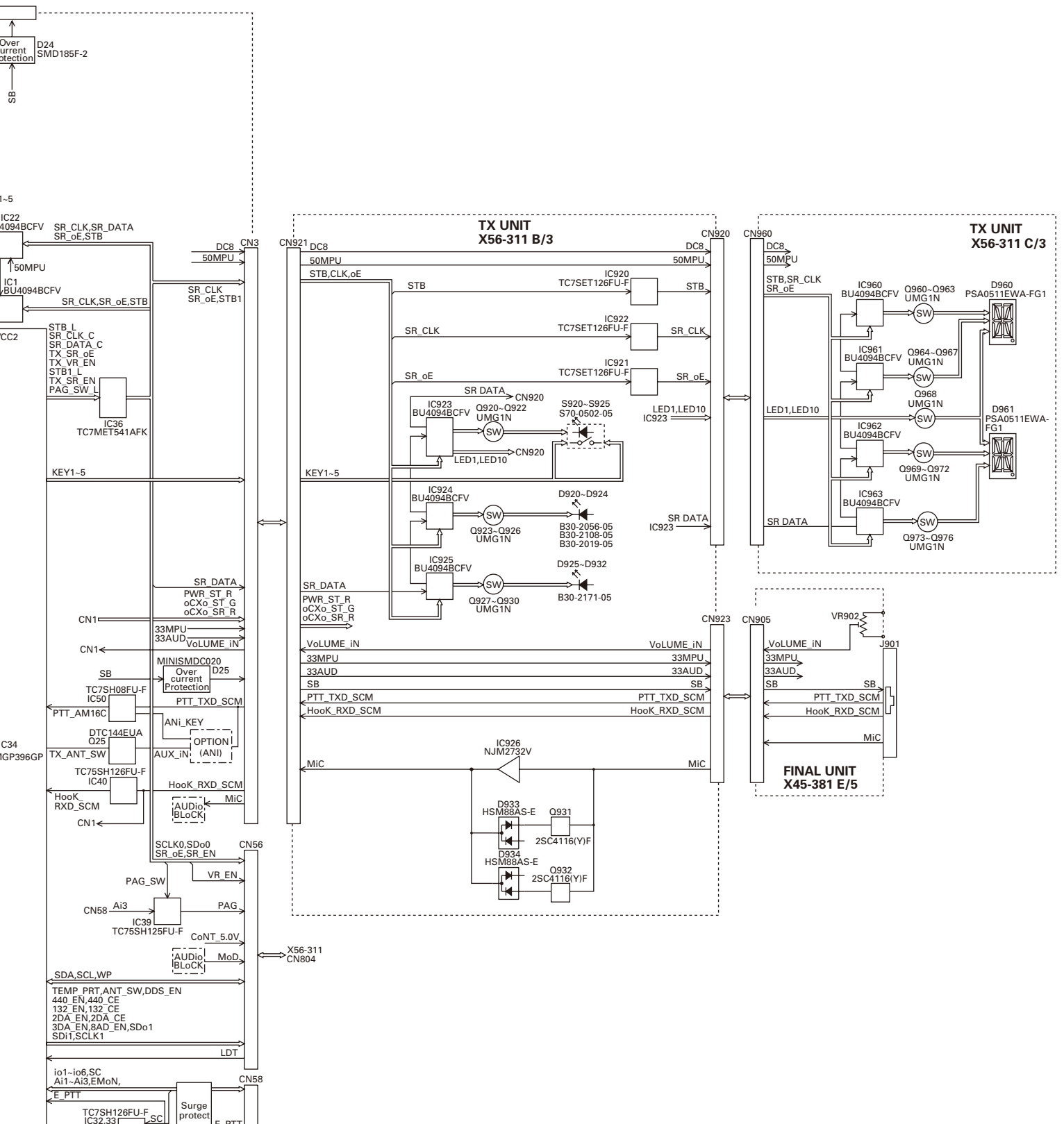
Foil side

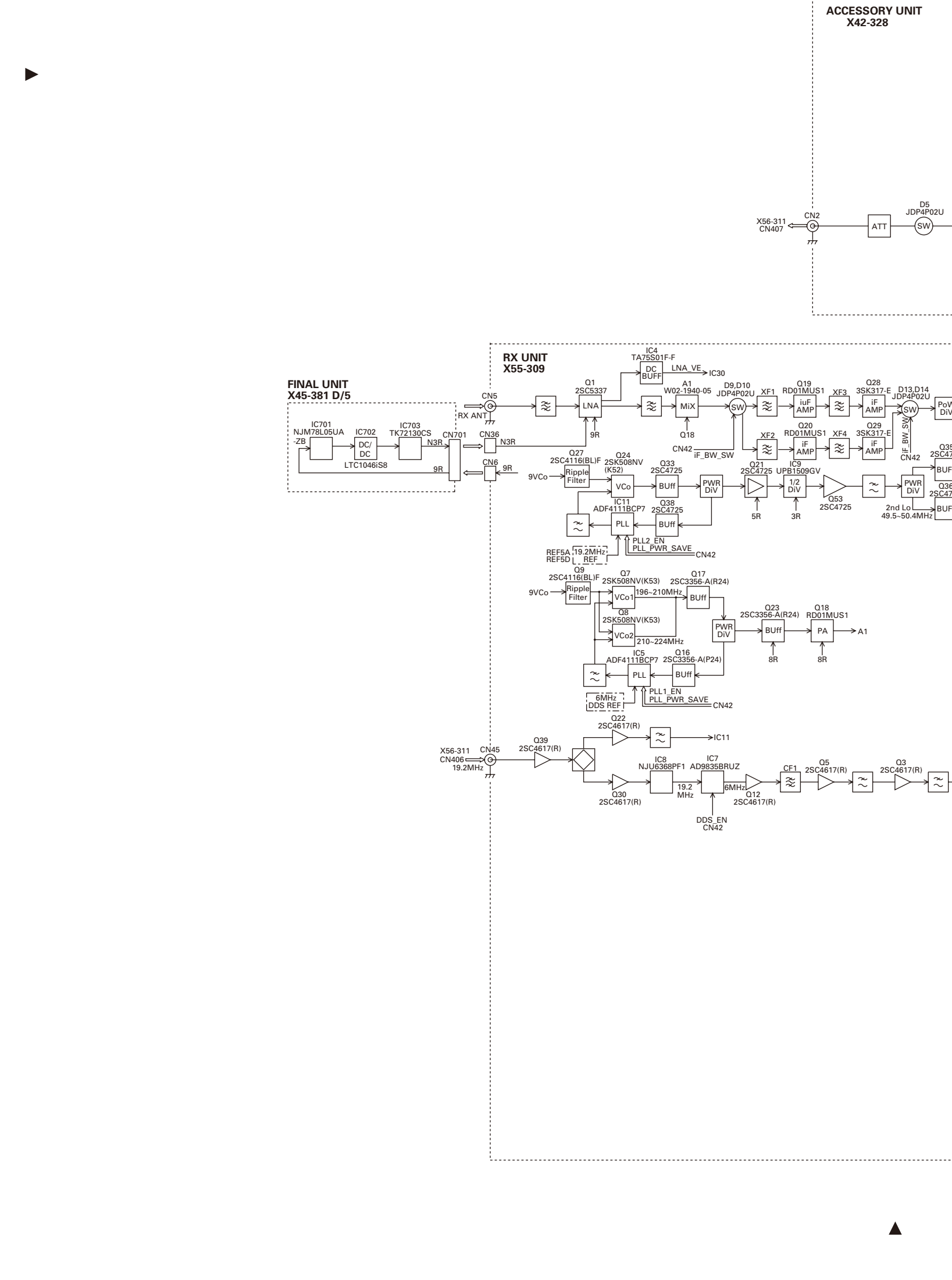
33H: IC702~IC705,IC707~IC724,IC726,IC17,IC34,IC37,IC28,IC30~IC33,IC40
33BU: IC700,IC701
33MPU: IC7,IC303,IC304,IC313,IC314,IC316,IC318,IC323,IC324,IC325,IC327,IC725,IC727
33MPU_A: IC309,IC312
33AUD: IC2~IC5,IC8,IC9,IC12,IC14,IC19,IC20,IC21,IC23,IC25,IC41,IC926
33CF: J701
50MPU: IC300~IC302,IC319~IC321,IC315,IC22,IC27,IC35,IC36,IC38,IC39,IC1,IC150,IC920~IC925,IC960~IC963
50MPU_A: IC315
18DSP: IC37
15SH: IC703
15DSP: IC323,IC324
80ANI: oPTIoN (ANi)
80SCR: oPTIoN (SCRAMBLE)


FINAL UNIT
X45-381 A/5
CN22
TX ANT
CN19
RX
D11,16
L709CER
SW
REF
FWD
IC10
RA13H1317M131
ATT
CN1
CN802
146~174MHz
D10
HSB88WS
D9
HSB88WS
DET
IC1
LTC6101BiS5-F
B+
CN2
X45-381
CN29
Q2
SSM3K15TE(F)
IC2
NJM2904E-ZB
DiFF
A/2
B/2
CN20
PA_CURR
PWR_CoNT
IC5
NJM2904E-ZB
SUM
A/2
DiFF
B/2
PWR_PRT
IC4
NJM2904E-ZB
IC6
NJM2904E-ZB
FWD_PWR
RFL_PWR
X56-311
CN806
TEMP_PRT
Voltage Reference
for OP-AMPs
IC3
TA78L05FF
5V
IC11
NJM7808FA-ZB
8V
IC8
NJM2904E-ZB
IC7
S-8130AC
TEMP
SENS
Q8
SSM3K15TE(F)
TEMP_RST
R11
IC15
NJM2904E-ZB
IC12
NJM7805FA-ZB
IC9
S24CS02AFJTBG
EEPRoM
SCK,SDA
Q6
SSM3K15TE(F)
WP
CN8
FAN
Q3
SSM3J01F
FAN_CoNT
FAN_CURR
FINAL UNIT
X45-381 B/5
CN25
DC
FUSE
CN23
CN27
FINAL UNIT
X45-381 C/5
L3
L79-0558-05
CN11
X53-413
CN4
CN12
X56-311
CN801
CN15
X55-309
CN44
CN29
X45-381
CN2
Q203
RD01MUS1
ATT
D201
HSM88AS-E
IC701
BH2220FVM
DET
IC201
NJM2904E
-ZB
D/A
D_PC
VCo_MoD
Q102
2SK508NV(K52)
VCo
Q105
2SC4116(BL)F
9C
Ripple
Filter
8V
IC101
LMX2352TMX/NP
IC102
LMC7101BiM5
IC803
(A/D)
CVT
292~348MH
CF201
4.5MHz
Q213
2SC4617(R)
Q212
2SC4617(R)
CVT_MoD
IC306
LMC7101BIM5
IC304
M62364FP-F
CN804
MoD
IC301
NJM2732V
VCo MoD
IC308
NJM2732V
CVT_REF
CN805
REF_IN_OUT
PLL_19_CE
PLL_19_EN
REF_LDT
VCXo_DA_EN
REF_SW,REF_SW2
REF_EXiST
EXT_EXiST
X53-414
CN400
IC404
IC601
D404,D405
IC405,406
IC602
X601
NJU6368PF1
19.2MHz
IC601
AD9835BRUZ
DDS
Q606
2SC4617(R)
CF601
IC304,IC803
IC303,IC802
IC701,IC101
IC202
IC805
IC806
TC7SET126FU-F
IC702
S24CS02AFJ
EEPROM
33MPU
oX_SCL
oX_CLK
REF_SW2
oCXo_VR_EN
oCXo_oN
oX_SCLK2
oX_CURR
oX_SDI2,oX_SDo2
oCXo_EXiST
CN803
X42-328
CN1
SCLK0,SDo0,SR_EN
SR_oE,3DA_EN,SCLK1
SDo1,SDI1,440_CE
132_CE,VR_EN
8AD_EN,132_EN,DDS_EN
LDT
MoD
IC304
CoNT 5.0V
PAG
CN804
X53-413
CN56
ACCESSORY UNIT
X42-328

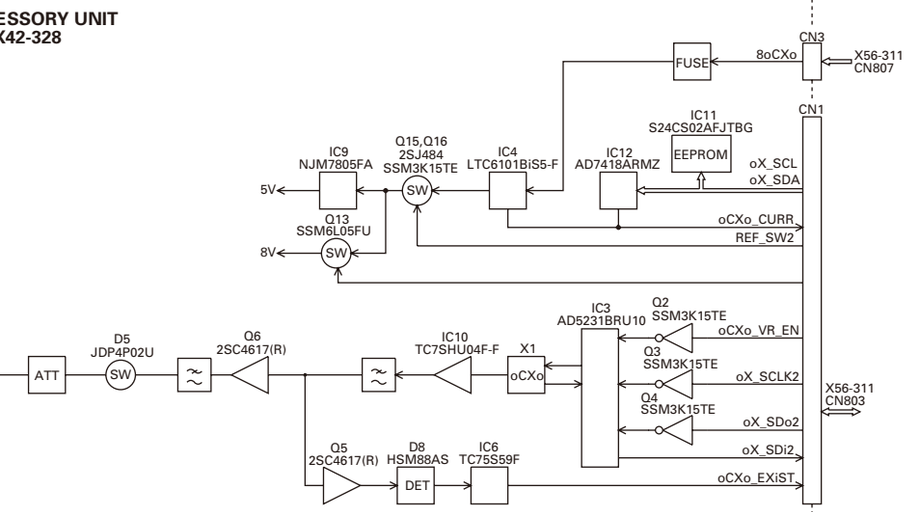

TX UNIT
X56-311 A/3
ESSORY UNIT
42-328
IC300
TC7SET126FU-F
IC301
TC7SET126FU-F
IC315
ADF4001BRUZ
IC319~IC321
IC318
TC7SH126FU-F
IC313
TC7WU04FK-F
IC314
IC324
TX_DSP
VoCoDER
IC323
RX_DSP
IC309
AK4550VTP
IC312
ADCS7476AiMF
IC302
SN65HVD485ED
IC727
TC7SH126FU-F
IC304
TC7SH125FU-F
IC708
BU4829FVE
IC726
TC7SH08FU-F
IC700
62167DV30LL55
SRAM
IC702
29PL127JKCDB
FLASH
IC704
48LC8M16A2P75i
SDRAM
IC707
48LC8M16A2P75i
SDRAM
IC719
LAN91C111i-NU
IC721
TC7SH08FU
Q706
DTC114EUA
IC203
RD01MUS1
IC202
2SC5337
IC811
PE3511-52
ATT
1/2
DiV
3.0V
Q102
2SK508NV(K52)
Q104
2SC3356-A(R24)
VCo
292~320MHz
320~348MHz
Q103
2SK508NV(K52)
Q106
2SC3356-A(R24)
292~348MHz
IC603
XC6204B332M
IC705
NJM78M05DL1AZB
IC706
NJM78M05
DL1AZB
IC810
TK11230CMCL-G
3.3C
5C3
5C2
IC808
NJM7808FA-ZB
CN801
X45-381
CN12
IC807
NJM78M05DL1A
IC704
NJM78M08
DL1AZB
IC809
NJM7808FA-ZB
CN807
8oCXo
X42-328
CN3
Q204,Q205
SSM3J01F
SSM3K15TE(F)
Q203
Q202
Q201
8T
8C1
5C1
8C2
9C
Q105
IC104
NJM2386ADL3-09
CF201
IC202
AD9835BRUZ
DDS
IC307
NJU6368PF1
Q304
2SC4617(R)
Q212
Q211
2SC4617(R)
Q307
2SC4617(R)
X301
19.2
MHz
IC306
LMC7101BIM5
IC305
NJM2732V
B/2
A/2
IC303
ADF4001BRUZ
Q305
2SC4617(R)
IC302
NJM6368PF1
Q412
2SC4617(R)
Q416
2SC4617(R)
Q402
2SC4617(R)
CN405
19.2MHz
X53-414
CN302
DSP CLoCK REF
VCo MoD
Q102
Q103
X401
19.2MHz
Q417
2SC4617(R)
Q401
2SC4617(R)
CN406
19.2MHz
X55-309
CN45
RX REF SiGNAL
IC401
LMC7101BiM5
IC404
ADF4001BRUZ
Q415
2SC4617(R)
IC803
(A/D)
CVT_REF
CN805
PLL_19_EN,REF_LDT
IC405
TC75S59F
D402
HSM88AS-E
Q422
RD01MUS1-T113
Q430
3SK317-E
REF_EXiST
SSM3K15TE(F)
Q602
IC407
NJM6368PF1
D403
HSM88AS-E
IC409
TA75S01F-F
CF601
Q603
2SC4617(R)
D602
JDP4P02U
D601
JDP4P02U
Q606
2SC4617(R)
IC408
TA75S01F-F
D408
HSM88AS-E
Q431
3SK317-E
Q420
3SK317-E
Q425
RD01MUS1-T113
REF-oUT
CN403
REF_oUT
D405
JDP4P02U
oCXo
CN407
X42-328
CN2
REF_SW2
D404
JDP4P02U
Q419
2SC4617(R)
REF_iN
CN408
REF_iN
REF_SW
IC406
TC75S59F
D401
HSM88AS-E
Q418
2SC4617(R)
EXT_EXiST
IC304,IC803
IC303,IC802
IC701,IC101
IC202
IC805
IC806
TC7SET126FU-F
IC703
BU4094BCFV
S/P
conv
FAN_CoNT,
FAN_CoNT2,
TEMP_RST
IC102,IC306
IC401
IC803
AD7908BRU
A/D
D/A
IC802
AD5312BRM
IC702
S24CS02AFJTBG
EEPROM
SCK,SDA,WP
ANT_SW,
TEMP_PRT
IC304
5.0V
LDT
MoD
CoNT
PAG
PA_CURR
FAN_CURR
FWD_PWR
RFL_PWR
CoNT_5.0V
PWR_RPT
PWR_CoNT
CN804
CN806
X53-413
CN56
X45-381
CN20
CN302
19.2MHz
X56-311 A/3
CN405
Q300
2SC4738(GR)F
BUFF
LooP
FiLTER
X300
VCXo
12.288MHz
Q304
2SC4738(GR)F
Q305
2SC4738(GR)
IC309
TX_DSP_CLK
RX_DSP_CLK
IC324
IC323
BER_CLK
BER_DAT
CN402
BER_CLK_L
BER_EN
BER_DAT_L
PLL_12_SCLK4, PLL_12_SDo4
PLL_12_EN
PLL_12_LDT
IC303
RESET_D
IC304,727
IC302,304,727
IC303
FRAME_DET
FRAME_SW
RESET_D
D_A0~D_A17
D_A19
D_D0~D_D7
D_RD,D_WR,RY
D_CS0,D_CS1
D_RD,D_WR
D_CS0~D_CS3
TX_DSP_iNT
TX_HiNT
RX_DSP_iNT
RX_HiNT,RY
DSP_RST
IC302,727
FRAME_REF
IC304,727
FRAME_DET
FRAME_T
FRAME_DET
TX_XF
BFSR2,BDR2
BCLKR2,BDX2
BFSX2,BCLKX2
TDi
IC313
TX_DSP_CLK
TX_CoSDTi
TX_CoLRCK
TX_CoSDTo
TX_CoSCLK
TX_CoPWAD
TX_CoPWDA
TX_DSP_RDY
D_A0~D_A3
D_D0~D_D7
D_RD,D_WR
D_CS2,DSP_RST
TX_DSP_iNT
TX_HiNT
FRAME_T
FRAME_DET
RX_XF
TDo
D_CS3,DSP_RST
RX_DSP_iNT
RX_HiNT
RX_DSP_RDY
IC327
ADSCK,ADSDo,ADCS
X55-309
CN43
CN300
J702
J703
SYNC1
SYNC2
IC325
FRAME_SW
FRAME_REF
IC324
FRAME_DET
IC323,324,325,703
IC304,727
33SH
SYS_RST
RESET
CF_RESET,RD/WR
R/B/iREQ,WE0/DQM0
MD3/CE2A,WE1/DQM1
MoDE_SET,WE2/DQM2
LAN_32,WE3/DQM3
RD/CASS,CS0~CS5
RAS,CKE,CKio
A0~A23
D0~D31
RESET
RY/BY
TRST
RD/WR
WE1/DQM1
WE0/DQM0
RD/CASS
CS3,RAS
CKE,CKio
A1~A20
D0~D15
A1~A23
A2~A15
D16~D31
NLEDA
NLEDB
TP1+,TP1-
TPi+,TPi-
LAN_iNT
FEDi
FUSE
8oCXo
X56-311
CN807
CN3
CN1
IC11
S24CS02AFJTBG
EEPROM
IC12
AD7418ARMZ
oX_SCL
oX_SDA
IC9
NJM7805FA
Q15,Q16
2SJ484
SSM3K15TE
IC4
LTC6101BiS5-F
5V
Q13
SSM6L05FU
oCXo_CURR
REF_SW2
J700
NLEDA
NLEDB
TP1+,TP1-
TPi+,TPi-

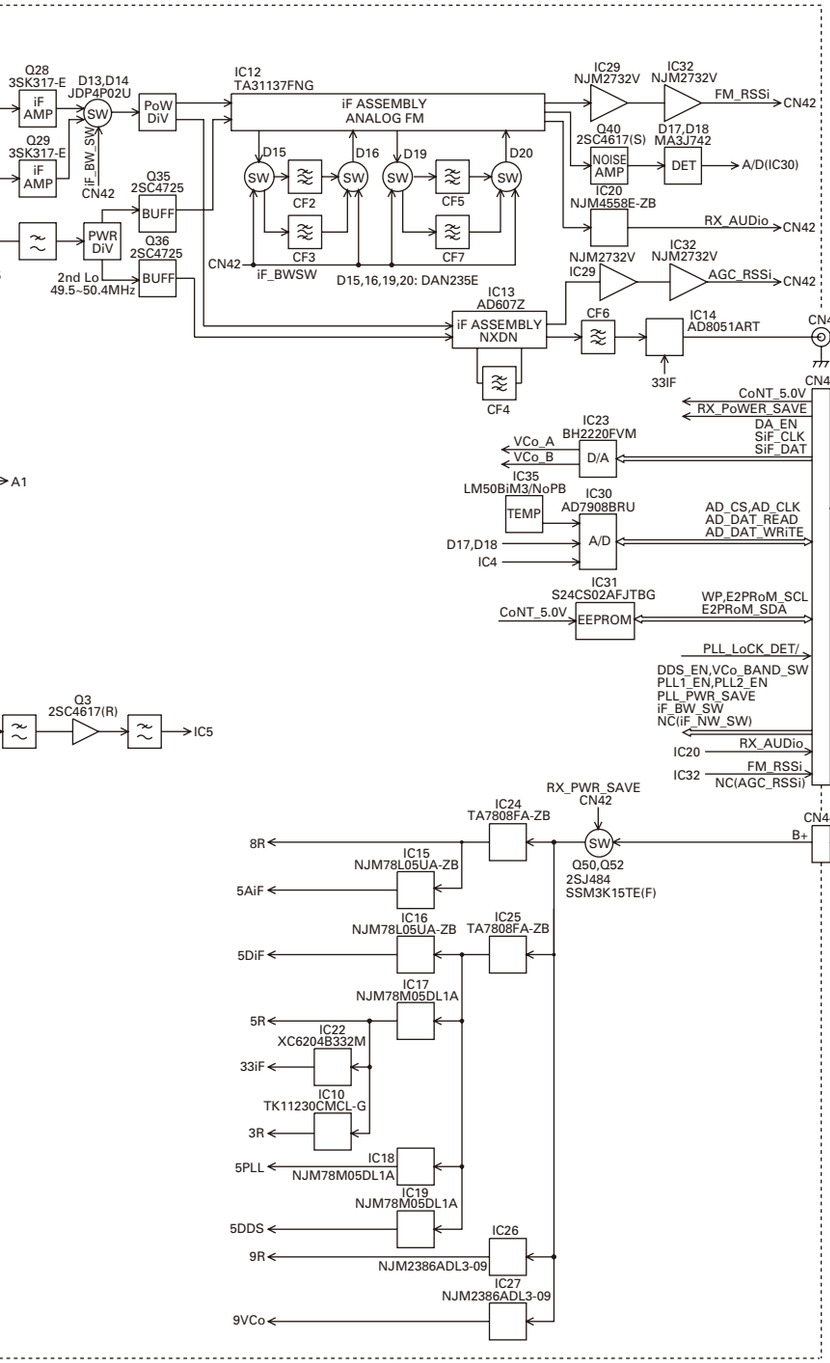

CONTROL UNIT
X53-414
CONTROL UNIT
X53-413
IC325
3625MGP396GP
BER_CLK_L
BER_EN
BER_DAT_L
PLL_12_SDo4
PLL_12_EN
PLL_12_LDT
REF_SW,REF_SW2
EXT_EXiST,REF_EXiST
REF_iN_oUT,oX_SDi2
oCXo_VR_EN,oCXo_oN
oCXo_EXIST,oCXo_CURR
VCXo_DA_EN,REF_LDT
PLL_19_EN,PLL_19_CE
oX_SDo2,oX_SCLK2
oX_SCL,oX_SDA
CN400
X56-311
CN805
33MPU
DiPSW1,2
S700
RX_PWR_SAVE,AMP_SW,AF_MUTE,
EVoL_DATA,EVoL_LD,EVoL_CLK
oCXo_ST_G,oCXo_ST_R,BEEP,PWR_ST_R
CN401
VoLUME_iN
CN401
50MPU_CoNT
CN402
FRAME_DET
FRAME_SW
RESET_D
IC327
TC7SH08FU-F
DSP_HRDY
TX_DSP_RDY
RX_DSP_RDY
IC324
IC323
IC308
XC61CN2702N
Lo_VoL_DET
CN401
Hi_VoL_DET
CN402
SYS_RST
CN402
33SH_CoNT
IC329
TX_D,RX_D
D_iNT
D16C_RST
Q307
2SC4738(GR)F
Q308
2SC4738(GR)F
X301
14.7456MHz
D16C_CK_SFT
RX_AUDio_D
MoD_D_oUT
CN401
CN401
MiC_D_iN
internal
SPEAKER
CN60
TEST/SPKR
CN69
SPo
SPi
RD
RSSi
CN57
Ao5
Ao4
Ao3
Ao2
Ao1
Q11
2SD2114K(W)
Ao1_N
Over
current
Protection
D24
SMD185F-2
SB
DTC144EUA
2SA1955A-F
SW
Q22,Q23
80ANi
80ANi_CoNT
IC22
DTC144EUA
2SA1955A-F
Q20,Q21
80SCR
80SCR_CoNT
IC1
AUDIO
BLOCK
2SD2114K(W)
Q13
Ao2_N
2SD2114K(W)
Q27
Ao3_N
2SD2114K(W)
Q28
Ao4_N
2SD2114K(W)
Q29
Ao5_N
Ao1~5
IC22
BU4094BCFV
SR_CLK,SR_DAT
SR_oE,STB
80ANi_CoNT
SR_DATA
50MPU
IC1
BU4094BCFV
SR_CLK,SR_oE
CN4
X45-381
CN11
SB
Q2
2SJ506-E(S)
DC8
IC10
NJM2340RB1
IC16
XC6209B502PR
50MPU
50MPU_A
CN2
50MPU_CoNT
Q3
2SJ506-E(S)
DC50
IC7
TA75S01F-F
IC11
NJM2340RB1
IC6
XC6209B332PR
33AUD
CN2
Hi_VoL_DET
CN1
Lo_VoL_DET
IC15
BA33BCOFP
33MPU
33MPU_A
IC18
XC6201P182MR
18DSP
CN2
33SH
BC1,2,4,8
CLEAR/CoDE
oPTioN
(SCRAMBLE)
80SCR_CoNT
50MPU
33SH
SCR_PTT
VCC1,VCC2
VCC3
STB_L
SR_CLK_C
SR_DATA_C
TX_SR_oE
TX_VR_EN
STB1_L
TX_SR_EN
PAG_SW_L
IC36
TC7MET54
IC17
RD,WR,RY,CS0~CS2
D0~D7
A0~A17,A19
CN2
SYS_RST
IC37
320VC5402PGE
IC30
TC75H00FU-F
BCLK
Q10
2SC4738(GR)F
CN2
ADSP_CK_SFT
X2
X1
HRDY,HiNT
DSP_iNT,DSP_RS
STD0,STD1
X2
L77-1987-05
16.515072MHz
Q12
2SC4738(GR)F
Q1
DTC114EUA
/XF
IC31
TC7MH4040FK-F
LRCK
SCLK
MCLK
AUDio
BLoCK
IC38
TC7SET08FU
SYS_RST_AM16C
KEY1~5
CN1
SB
TC7SH08
IC50
PTT_AM16C
DTC144
Q25
TX_ANT_SW
IC34
3625MGP396GP
TC75SH126
IC40
HooK_
RXD_SCM
CN1
CN58
TC
SDA,SCL,WP
TEMP_PRT,ANT_
440_EN,440_CE
132_EN,132_CE
2DA_EN,2DA_CE
3DA_EN,8AD_EN
SDi1,SCLK1
io1~io6,SC
Ai1~Ai3,EMoN,
E_PTT
TC7SH126
IC32,33
IC703
FRAME_DET
TX_D,RX_D
D_iNT
D16C_CK_SFT
D16C_RST
ET,RD/WR
Q,WE0/DQM0
2A,WE1/DQM1
ET,WE2/DQM2
WE3/DQM3
S,CS0~CS5
E,CKio
A0~A23
D0~D31
RESET
RY/BY
TRST
LAN_iNT
IC330
TC7SH126FU-F
IC325
VoLUNE_iN
Lo_VoL_DET
PTT_AM16C
PTT_SH
RX_PWR_SAVE,AMP_SW
AF_MUTE,EVoL_DATA
EVoL_LD,EVoL_CLK
oCXo_ST_G,oCXo_ST_R
BEEP
IC325
HiC_SW,MiCAD_SW,
TA_SW,TD_SW
PATH_SW,TAAD_SW
RXAD_SW,BEEP_SW
IC309
MoD_D_oUT,RX_AUDio_D,MiC_D_iN
CN401
CN1
PTL_TXD_SCM
HooK_RXD_SCM
CN3
VoLUME_iN
CN3
Lo_VoL_DET
PTT_AM16C
CN4
RX_PWR_SAVE
oCXo_ST_G,oCXO_ST_R,PWR_ST_R
CN3
BEEP_SW,BEEP,TAAD_SW
TD_SW,RXAD_SW,TA_SW,PATH_SW
MiC_SW,MiCAD_SW,AF_MUTE,AMP_SW
IC8
M62364FP
EVoL_DATA,EVoL_CLK
EVoL_LD
EVoL
AUDio
BLoCK
MoD_D_oUT,RX_AUDio_D,MiC_D_iN
CN402
RF_PTT,RADio_ERR,QT_DQT
TX_STATE,TRUNKiNG
A16C_CK_SFT,ADSP_CK_SFT
STXo_ARXo,SRXo_ATXo
ADSP_CK_SFT,SC_SH,E_PTT_SH
SYS_RST
IC325
Hi_VoL_DET
50MPU_CoNT
IC325
50MPU
DC50
CN2
RF_PTT,RADio_ERR,QT_DQT,TX_STATE
TRUNKiNG,RFPTT
STXo_ARXo
A_RXo
IC27
TC7SET126FU-F
SYS_RST
SC_SH,E_PTT_SH
IC32,33
SRXo_ATXo
A_TXDo
50MPU_CoNT
Hi_VoL_DET
50MPU
IC28
TC7SH126FU-F
X55-309
CN42
AD_DAT_READ,PLL_LoCK_DET
AD_CS,NC(iF_NW_SW),iF_BW_SW,PLL1_EN,PLL2_EN
RX_PLL_PWR_SAVE,AD_DAT_WRiTE,AD_CLK,DA_EN,VCo_BAND_SW,DDS_EN
E2PRoM_SDA,E2PRoM_SCL,WP
FM_RSSi,NC(AGC_RSSi)
CN59
CoNT_5.0V
RX_AUDio
AUDio
BLoCK
IC35
S24CSO2AFJTBG

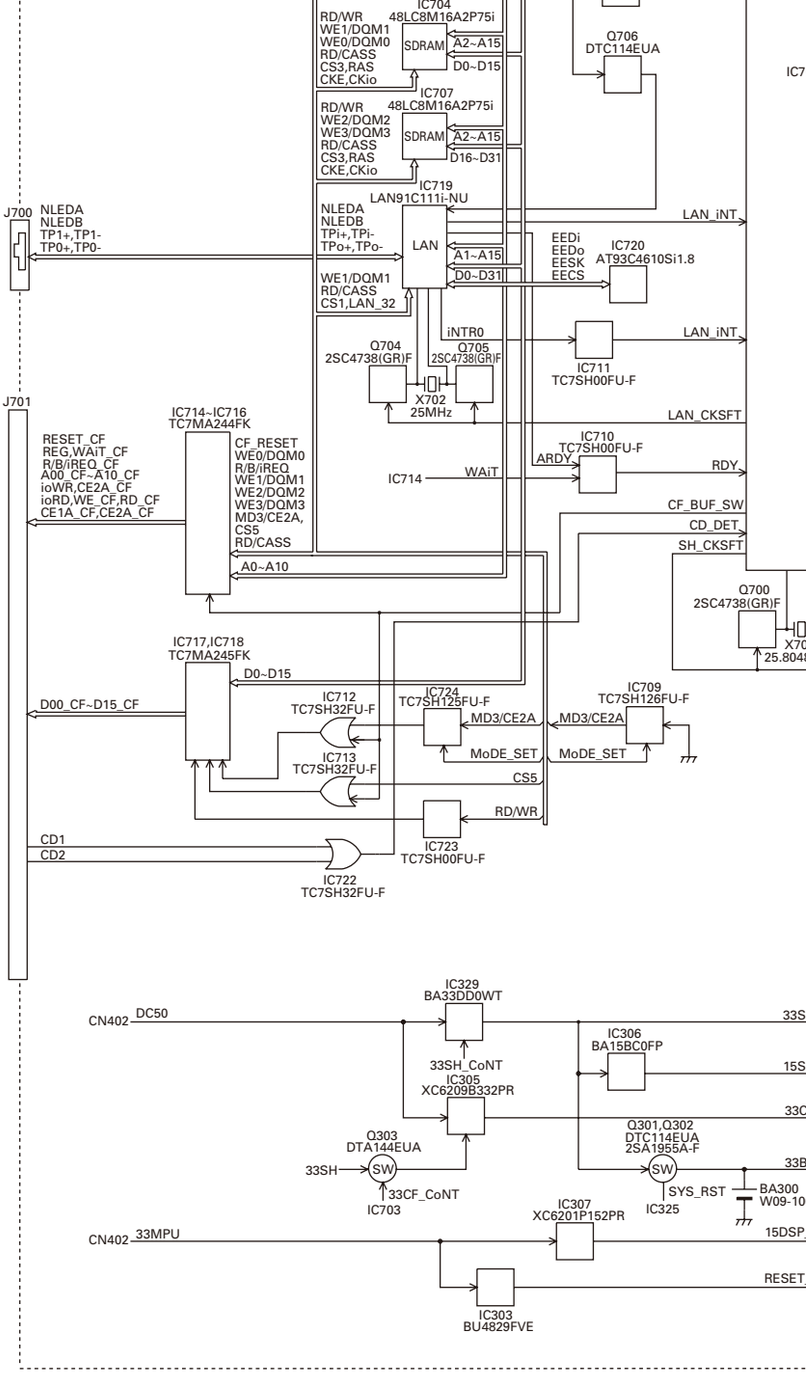

TX UNIT
X56-311 B/3
TX UNIT
X56-311 C/3
FINAL UNIT
X45-381 E/5
Over current protection
D24
SMD185F-2
SB
IC22
4094BCFV
SR_CLK,SR_DATA
SR_oE,STB
50MPU
IC1
BU4094BCFV
SR_CLK,SR_oE,STB
STB_L
SR_CLK_C
SR_DATA_C
TX_SR_oE
TX_VR_EN
STB1_L
TX_SR_EN
PAG_SW_L
IC36
TC7MET541AFK
KEY1~5
SR_DATA
PWR_ST_R
oCXo_ST_G
oCXo_SR_R
CN1
33MPU
33AUD
VoLUME_iN
MINISMDC020
Over current Protection
D25
SB
TC7SH08FU-F
IC50
PTT_AM16C
PTT_TXD_SCM
ANi_KEY
DTC144EUA
Q25
OPTION (ANI)
TX_ANT_SW
AUX_iN
TC75SH126FU-F
IC40
HooK_RXD_SCM
MiC
HooK_
RXD_SCM
AUDio BLoCK
SCLK0,SDo0
SR_oE,SR_EN
CN56
VR_EN
PAG_SW
CN58
Ai3
IC39
TC75SH125FU-F
PAG
CoNT_5.0V
MoD
X56-311
CN804
SDA,SCL,WP
TEMP_PRT,ANT_SW,DDS_EN
440_EN,440_CE
132_EN,132_CE
2DA_EN,2DA_CE
3DA_EN,8AD_EN,SDo1
SDi1,SCLK1
LDT
io1~io6,SC
Ai1~Ai3,EMoN,
E_PTT
Surge protect
TC7SH126FU-F
IC32,33
SC
E_PTT
CN921
CN920
CN960
CN923
CN905
DC8
50MPU
STB,CLK,oE
STB
SR_CLK
SR_oE
IC920
TC7SET126FU-F
IC922
TC7SET126FU-F
IC921
TC7SET126FU-F
SR DATA
IC923
BU4094BCFV
Q920~Q922
UMG1N
S920~S925
S70-0502-05
LED1,LED10
IC924
Q923~Q926
D920~D924
B30-2056-05
B30-2108-05
B30-2019-05
IC925
Q927~Q930
D925~D932
B30-2171-05
VoLUME_iN
PTT_TXD_SCM
HooK_RXD_SCM
IC926
NJM2732V
D933
HSM88AS-E
Q931
2SC4116(Y)F
D934
Q932
IC960
Q960~Q963
D960
PSA0511EWA-FG1
IC961
Q964~Q967
Q968
IC962
Q969~Q972
D961
IC963
Q973~Q976
VR902
J901

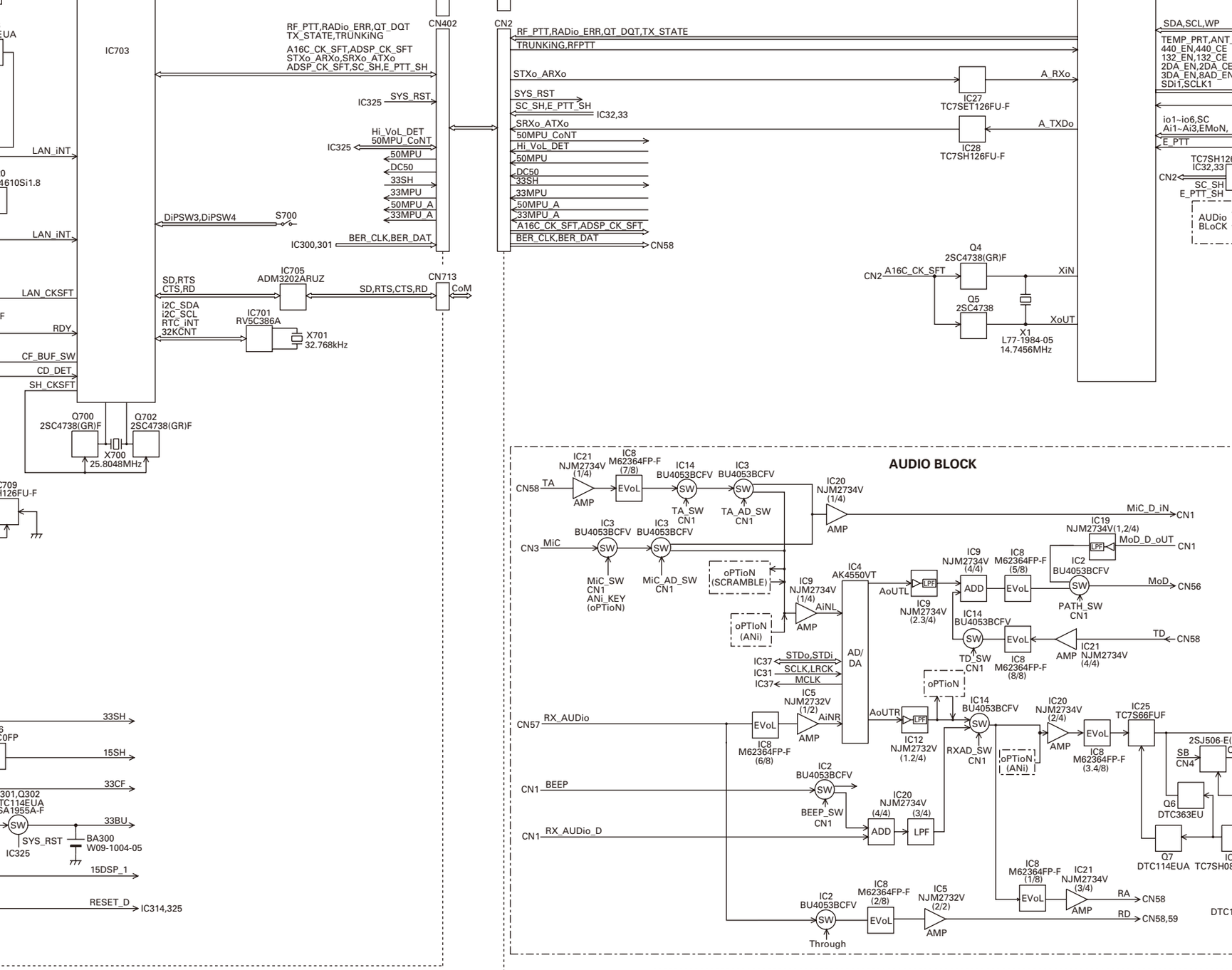

ACCESSORY UNIT
X42-328
X56-311
CN407
CN2
ATT
D5
JDP4P02U
SW
FINAL UNIT
X45-381 D/5
RX UNIT
X55-309
IC4
TA75S01F-F
DC
BUFF
LNA_VE
IC30
CN5
RX ANT
Q1
2SC5337
LNA
A1
W02-1940-05
MiX
Q18
D9,D10
JDP4P02U
SW
XF1
Q19
RD01MUS1
iuF
AMP
XF3
Q28
3SK317-E
iF
AMP
D13,D14
JDP4P02U
SW
PoW
DiV
IC701
NJM78L05UA
-ZB
IC702
DC/
DC
LTC1046iS8
IC703
TK72130CS
CN701
CN36
N3R
CN6
9R
CN42
iF_BW_SW
XF2
Q20
RD01MUS1
XF4
Q29
3SK317-E
Q27
2SC4116(BL)F
Ripple
Filter
9VCo
Q24
2SK508NV
(K52)
VCo
Q33
2SC4725
BUff
PWR
DiV
Q21
2SC4725
IC9
UPB1509GV
1/2
DiV
Q53
2SC4725
2nd Lo
49.5~50.4MHz
5R
3R
IC11
ADF4111BCP7
PLL
Q38
2SC4725
BUff
REF5A
REF5D
19.2MHz
REF
PLL2_EN
PLL_PWR_SAVE
Q9
2SC4116(BL)F
Q7
2SK508NV(K53)
VCo1
196~210MHz
Q8
2SK508NV(K53)
VCo2
210~224MHz
Q17
2SC3356-A(R24)
Q23
2SC3356-A(R24)
Q18
RD01MUS1
PA
A1
8R
IC5
ADF4111BCP7
Q16
2SC3356-A(P24)
6MHz
DDS REF
PLL1_EN
Q22
2SC4617(R)
Q39
2SC4617(R)
X56-311
CN406
19.2MHz
CN45
IC11
IC8
NJU6368PF1
IC7
AD9835BRUZ
19.2
MHz
6MHz
DDS_EN
Q30
2SC4617(R)
Q12
2SC4617(R)
CF1
Q5
2SC4617(R)
Q3
2SC4617(R)

ESSORY UNIT
X42-328

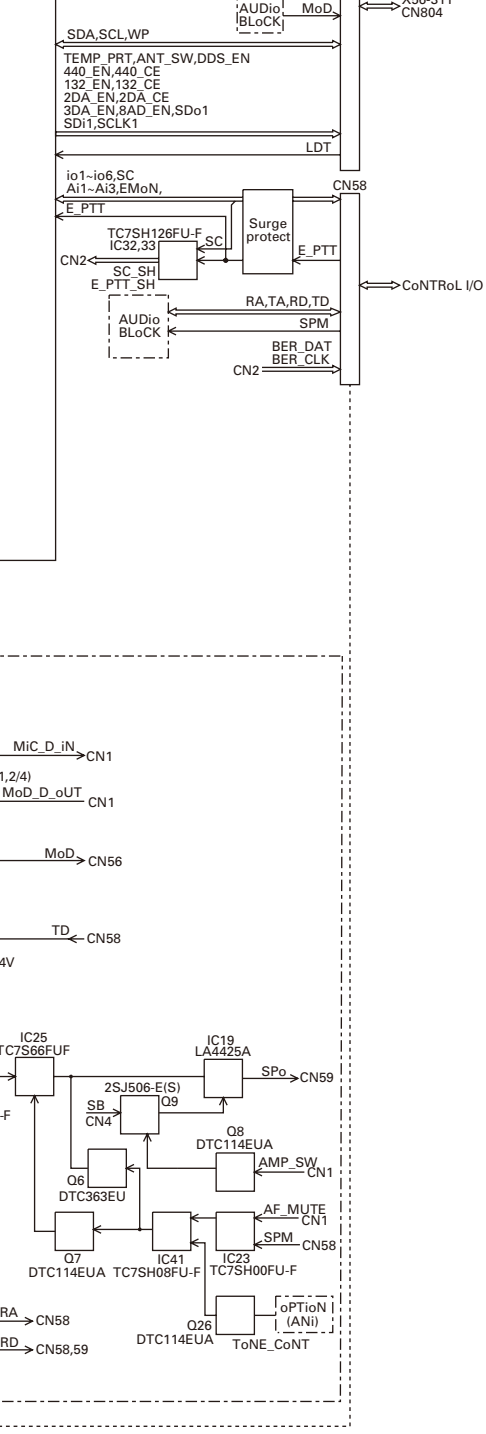




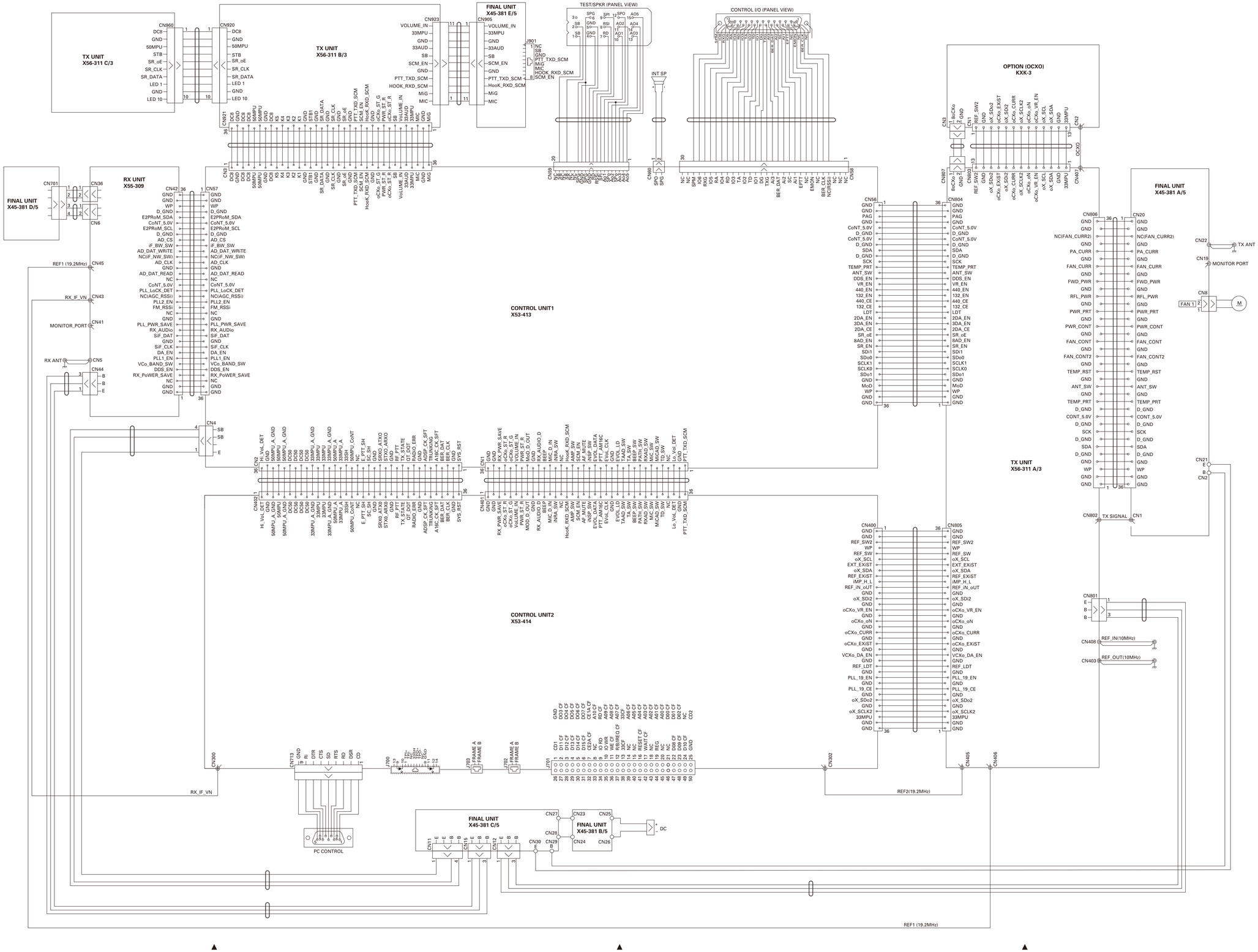




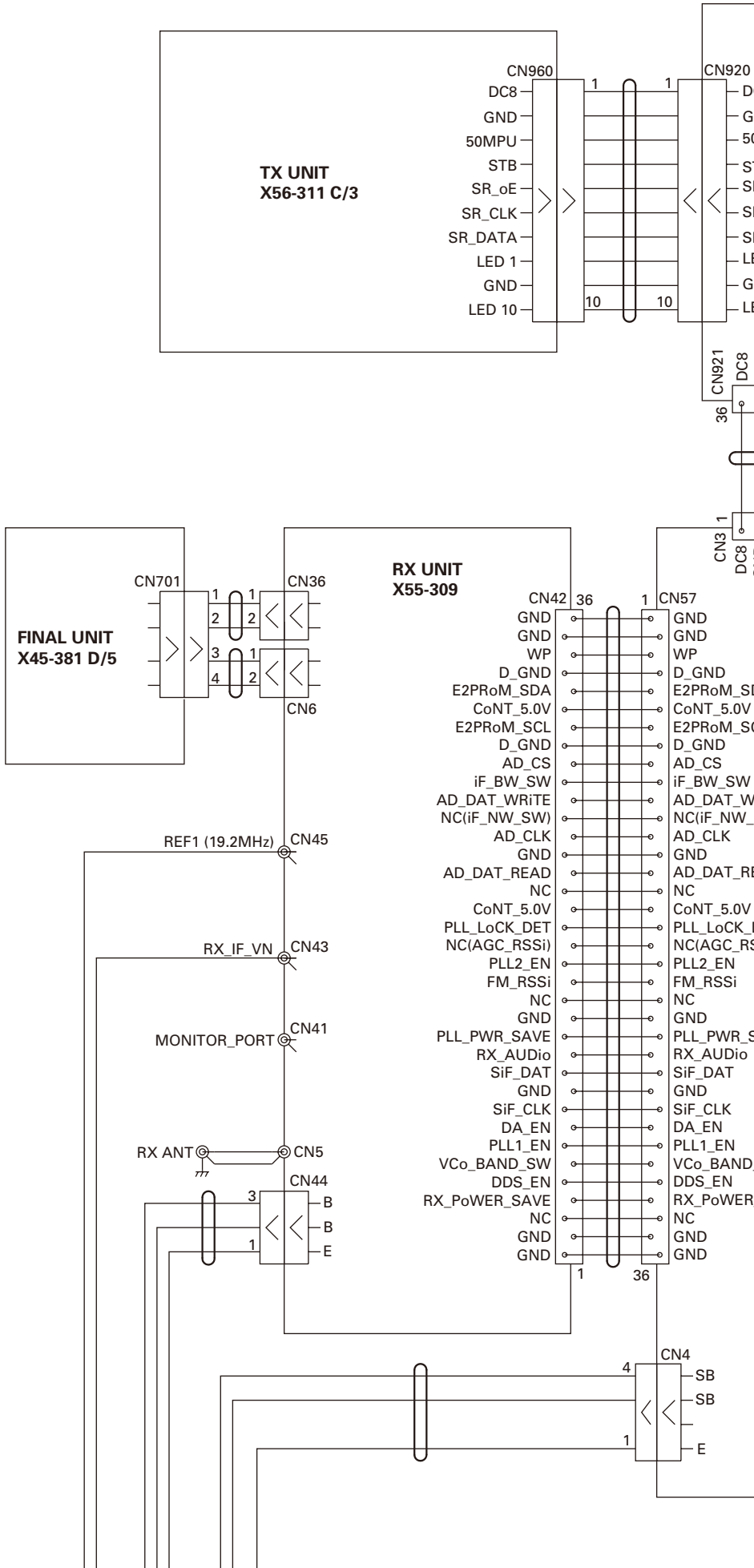
33H: IC702~IC705,IC707~IC724,IC726,IC17,IC34,IC37,IC28,IC30~IC33,IC40
33BU: IC700,IC701
33MPU: IC7,IC303,IC304,IC313,IC314,IC316,IC318,IC323,IC324,IC325,IC327,IC725,IC727
33MPU_A: IC309,IC312
33AUD: IC2~IC5,IC8,IC9,IC12,IC14,IC19,IC20,IC21,IC23,IC25,IC41,IC926
33CF: J701
50MPU: IC300~IC302,IC319~IC321,IC315,IC22,IC27,IC35,IC36,IC38,IC39,IC1,IC150,IC920~IC925,IC960~IC963
50MPU_A: IC315
18DSP: IC37
15SH: IC703
15DSP: IC323,IC324
80ANI: oPTioN (ANi)
80SCR: oPTioN (SCRAMBLE)

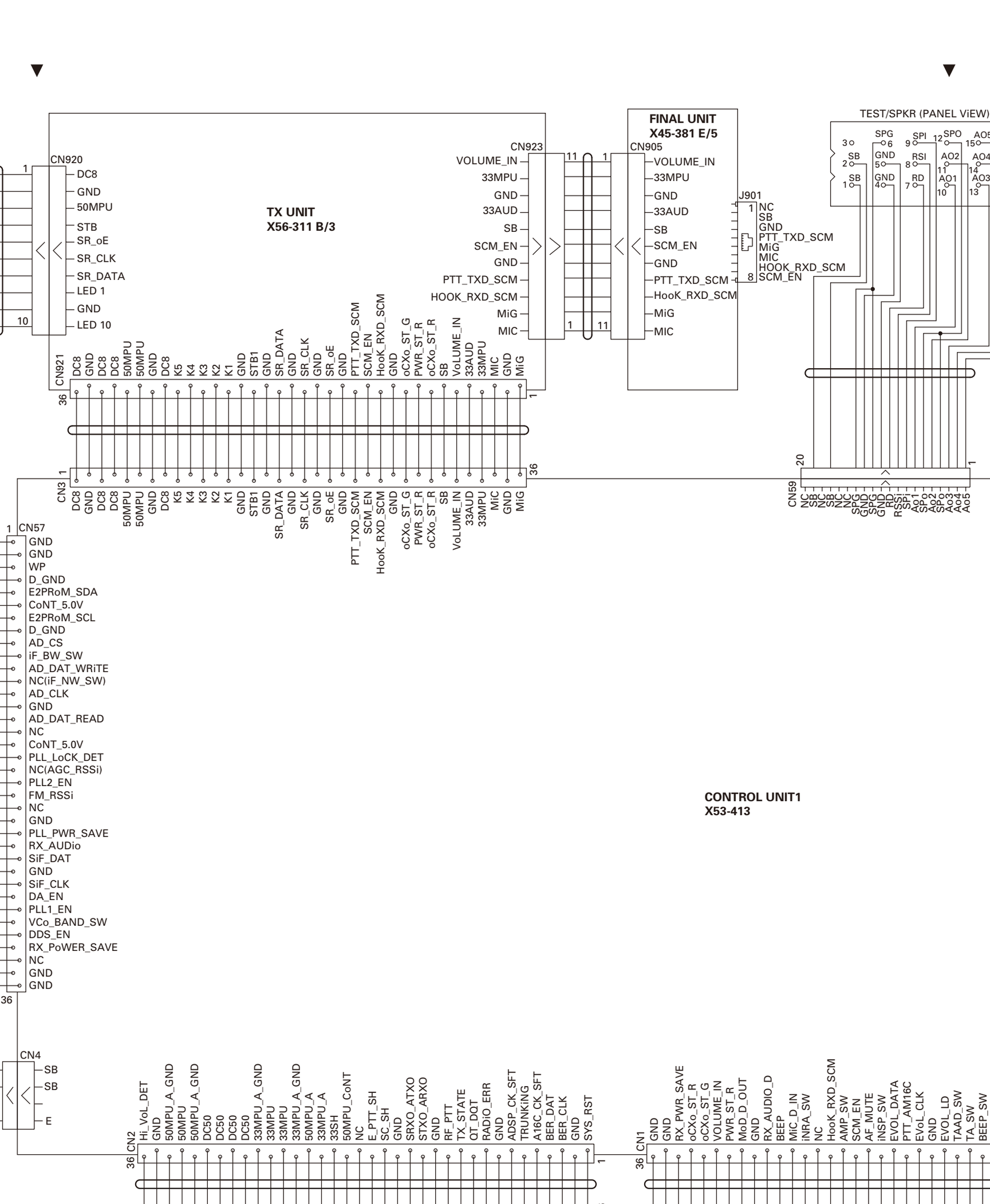

AUDio BLoCK
MoD
CN804
SDA,SCL,WP
TEMP_PRT,ANT_SW,DDS_EN
440_EN,440_CE
132_EN,132_CE
2DA_EN,2DA_CE
3DA_EN,8AD_EN,SDo1
SDi1,SCLK1
LDT
io1~io6,SC
Ai1~Ai3,EMoN,
E_PTT
CN58
Surge protect
TC7SH126FU-F
IC32,33
SC
CN2
SC_SH
E_PTT_SH
E_PTT
CoNTRoL I/O
AUDio BLoCK
RA,TA,RD,TD
SPM
BER_DAT
BER_CLK
CN2

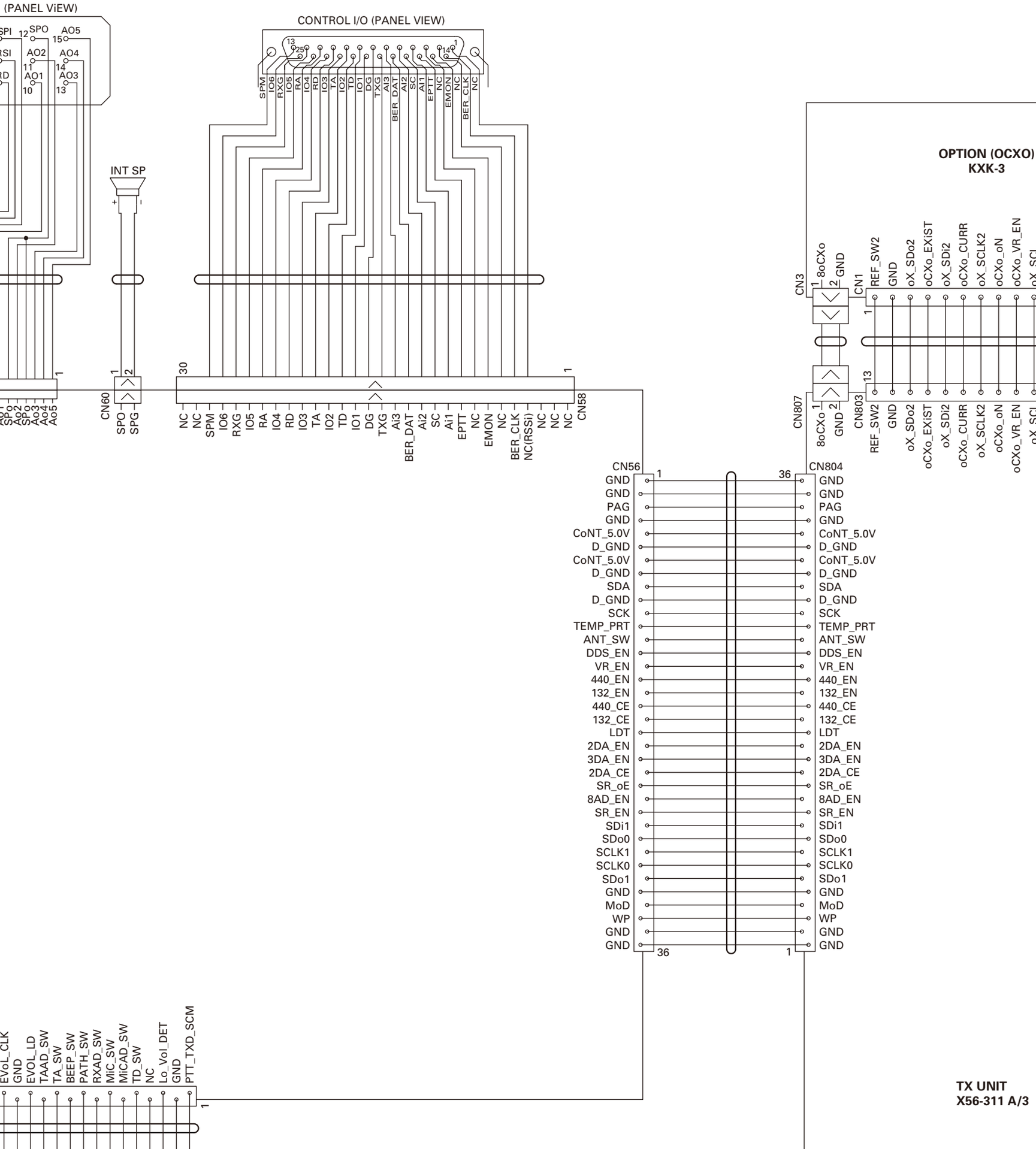
MiC_D_iN
CN1
MoD_D_oUT
CN1
MoD
CN56
TD
CN58
IC25
TC7S66FUF
IC19
LA4425A
SPo
CN59
2SJ506-E(S)
Q9
SB
CN4
Q8
DTC114EUA
AMP_SW
CN1
Q6
DTC363EU
AF_MUTE
CN1
SPM
CN58
Q7
DTC114EUA
IC41
TC7SH08FU-F
IC23
TC7SH00FU-F
Q26
DTC114EUA
oPTioN (ANi)
ToNE_CoNT
CN58
CN58,59

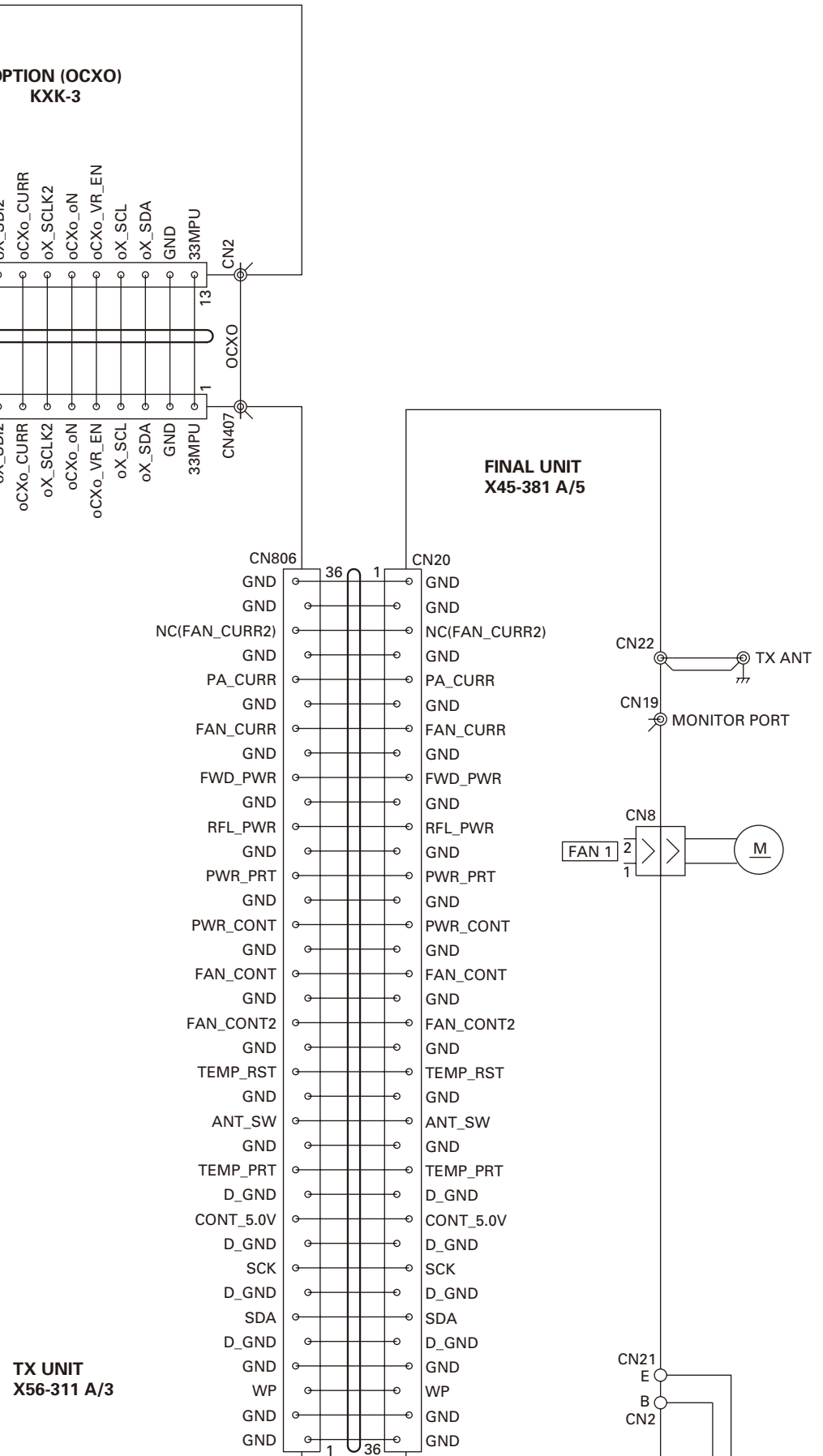

TX UNIT
X56-311 C/3
TX UNIT
X56-311 B/3
FINAL UNIT
X45-381 E/5
TEST/SPKR (PANEL VIEW)
CONTROL I/O (PANEL VIEW)
INT SP
OPTION (OCXO)
KXK-3
FINAL UNIT
X45-381 D/5
RX UNIT
X55-309
FINAL UNIT
X45-381 A/5
CONTROL UNIT1
X53-413
CONTROL UNIT2
X53-414
TX UNIT
X56-311 A/3
FINAL UNIT
X45-381 C/5
FINAL UNIT
X45-381 B/5
PC CONTROL
REF1 (19.2MHz)
RX_IF_VN
REF2(19.2MHz)
TX ANT
MONITOR PORT
REF_IN(10MHz)
REF_OUT(10MHz)

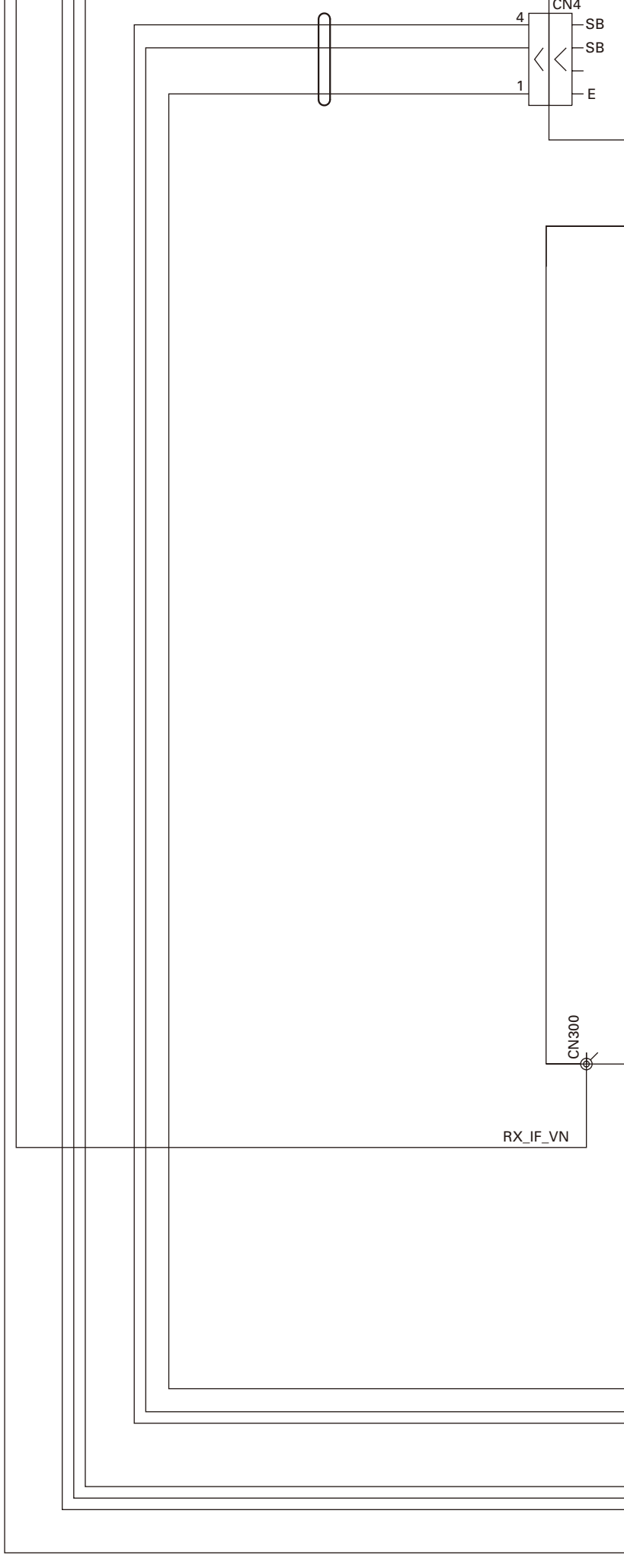
NXR-700 INTERCONNECTION DIAGRAM

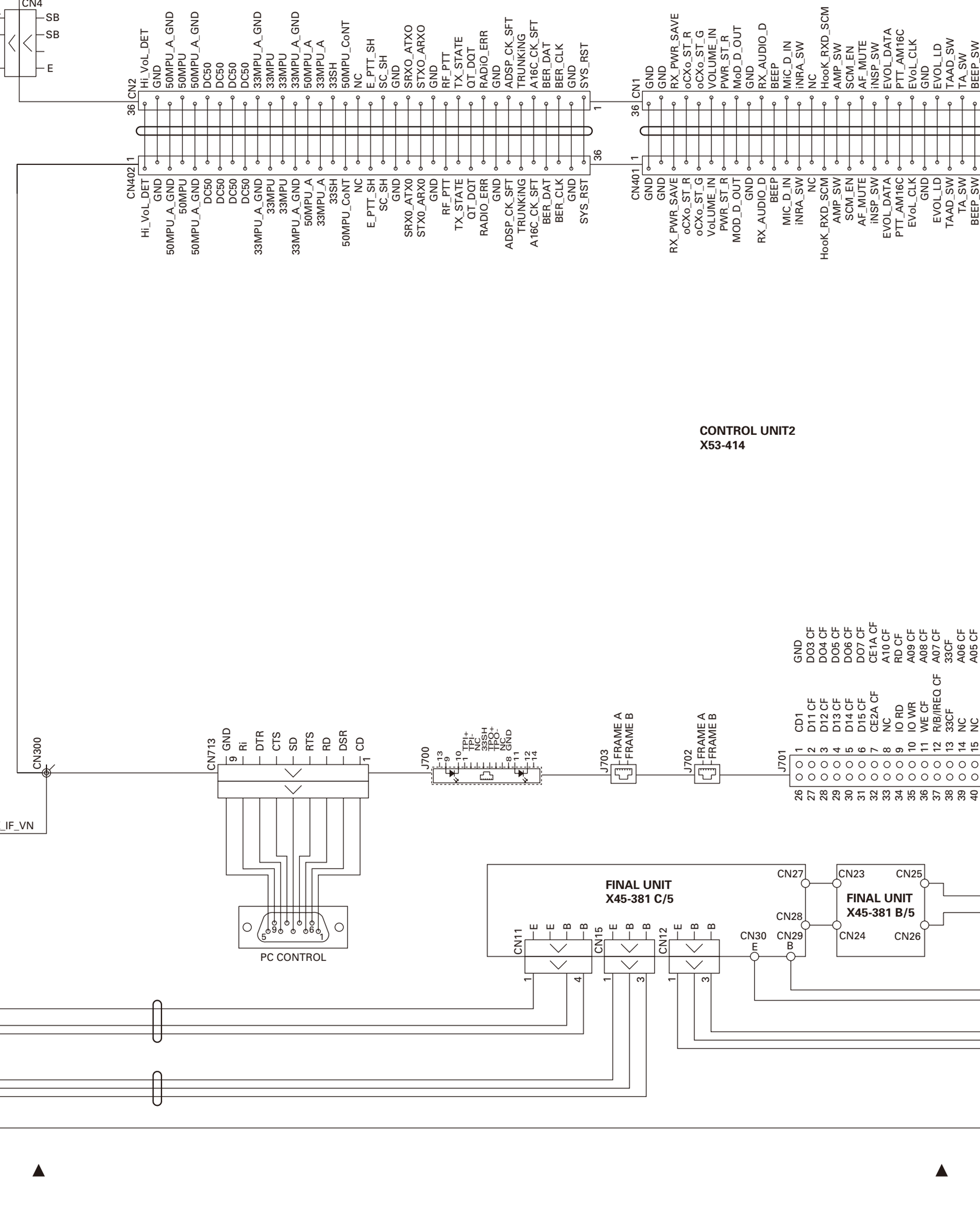



TX UNIT
X56-311 B/3
FINAL UNIT
X45-381 E/5
CONTROL UNIT1
X53-413
TEST/SPKR (PANEL ViEW)
CN920
DC8
GND
50MPU
STB
SR_oE
SR_CLK
SR_DATA
LED 1
GND
LED 10
CN923
CN905
VOLUME_IN
33MPU
GND
33AUD
SB
SCM_EN
GND
PTT_TXD_SCM
HOOK_RXD_SCM
MiG
MIC
J901
NC
SB
GND
PTT_TXD_SCM
MiG
MIC
HOOK_RXD_SCM
SCM_EN
CN921
CN3
CN59
CN57
GND
GND
WP
D_GND
E2PRoM_SDA
CoNT_5.0V
E2PRoM_SCL
D_GND
AD_CS
iF_BW_SW
AD_DAT_WRiTE
NC(iF_NW_SW)
AD_CLK
GND
AD_DAT_READ
NC
CoNT_5.0V
PLL_LoCK_DET
NC(AGC_RSSi)
PLL2_EN
FM_RSSi
NC
GND
PLL_PWR_SAVE
RX_AUDio
SiF_DAT
GND
SiF_CLK
DA_EN
PLL1_EN
VCo_BAND_SW
DDS_EN
RX_PoWER_SAVE
NC
GND
GND
CN4
SB
SB
E
CN2
Hi_VoL_DET
GND
50MPU_A_GND
50MPU
50MPU_A_GND
DC50
DC50
DC50
DC50
33MPU_A_GND
33MPU
33MPU
33MPU_A_GND
50MPU_A
33MPU_A
33SH
50MPU_CoNT
NC
E_PTT_SH
SC_SH
GND
SRXO_ATXO
STXO_ARXO
GND
RF_PTT
TX_STATE
QT_DQT
RADiO_ERR
GND
ADSP_CK_SFT
TRUNKiNG
A16C_CK_SFT
BER_DAT
BER_CLK
GND
SYS_RST
CN1
GND
GND
RX_PWR_SAVE
oCXo_ST_R
oCXo_ST_G
VOLUME_IN
PWR_ST_R
MoD_D_OUT
GND
RX_AUDIO_D
BEEP
MIC_D_IN
iNRA_SW
NC
HooK_RXD_SCM
AMP_SW
SCM_EN
AF_MUTE
iNSP_SW
EVOL_DATA
PTT_AM16C
EVoL_CLK
GND
EVOL_LD
TAAD_SW
TA_SW
BEEP_SW

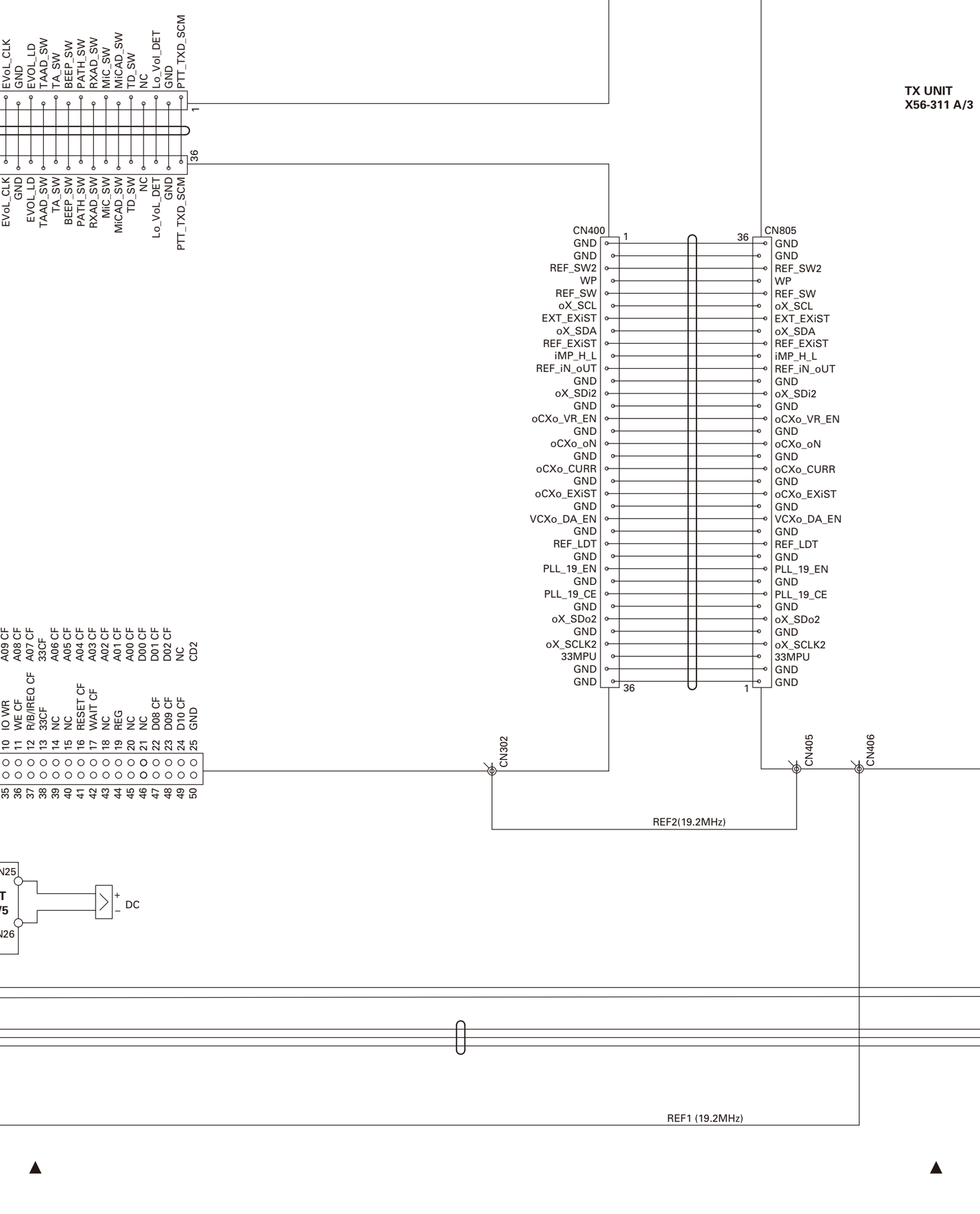

(PANEL ViEW)
SPI
SPO
AO5
RSI
AO2
AO4
RD
AO1
AO3
CONTROL I/O (PANEL VIEW)
INT SP
CN60
SPO
SPG
NC
SPM
IO6
RXG
IO5
RA
IO4
RD
IO3
TA
IO2
TD
IO1
DG
TXG
Ai3
BER_DAT
Ai2
SC
Ai1
EPTT
EMON
BER_CLK
NC(RSSI)
CN58
OPTION (OCXO)
KXK-3
CN3
8oCXo
GND
CN1
REF_SW2
oX_SDo2
oCXo_EXiST
oX_SDi2
oCXo_CURR
oX_SCLK2
oCXo_oN
oCXo_VR_EN
CN807
CN803
CN56
CN804
CoNT_5.0V
D_GND
SDA
SCK
TEMP_PRT
ANT_SW
DDS_EN
VR_EN
440_EN
132_EN
440_CE
132_CE
LDT
2DA_EN
3DA_EN
2DA_CE
SR_oE
8AD_EN
SR_EN
SDi1
SDo0
SCLK1
SCLK0
SDo1
MoD
WP
EVoL_CLK
EVOL_LD
TAAD_SW
TA_SW
BEEP_SW
PATH_SW
RXAD_SW
MIC_SW
MiCAD_SW
TD_SW
Lo_Vol_DET
PTT_TXD_SCM
TX UNIT
X56-311 A/3


OPTION (OCXO)
KXK-3
oCXo_CURR
oX_SCLK2
oCXo_oN
oCXo_VR_EN
oX_SCL
oX_SDA
GND
33MPU
CN2
13
OCXO
1
CN407
FINAL UNIT
X45-381 A/5
CN806
36
1
CN20
GND
NC(FAN_CURR2)
PA_CURR
FAN_CURR
FWD_PWR
RFL_PWR
PWR_PRT
PWR_CONT
FAN_CONT
FAN_CONT2
TEMP_RST
ANT_SW
TEMP_PRT
D_GND
CONT_5.0V
SCK
SDA
WP
CN22
TX ANT
CN19
MONITOR PORT
CN8
FAN 1
2
1
M
CN21
E
B
CN2
TX UNIT
X56-311 A/3

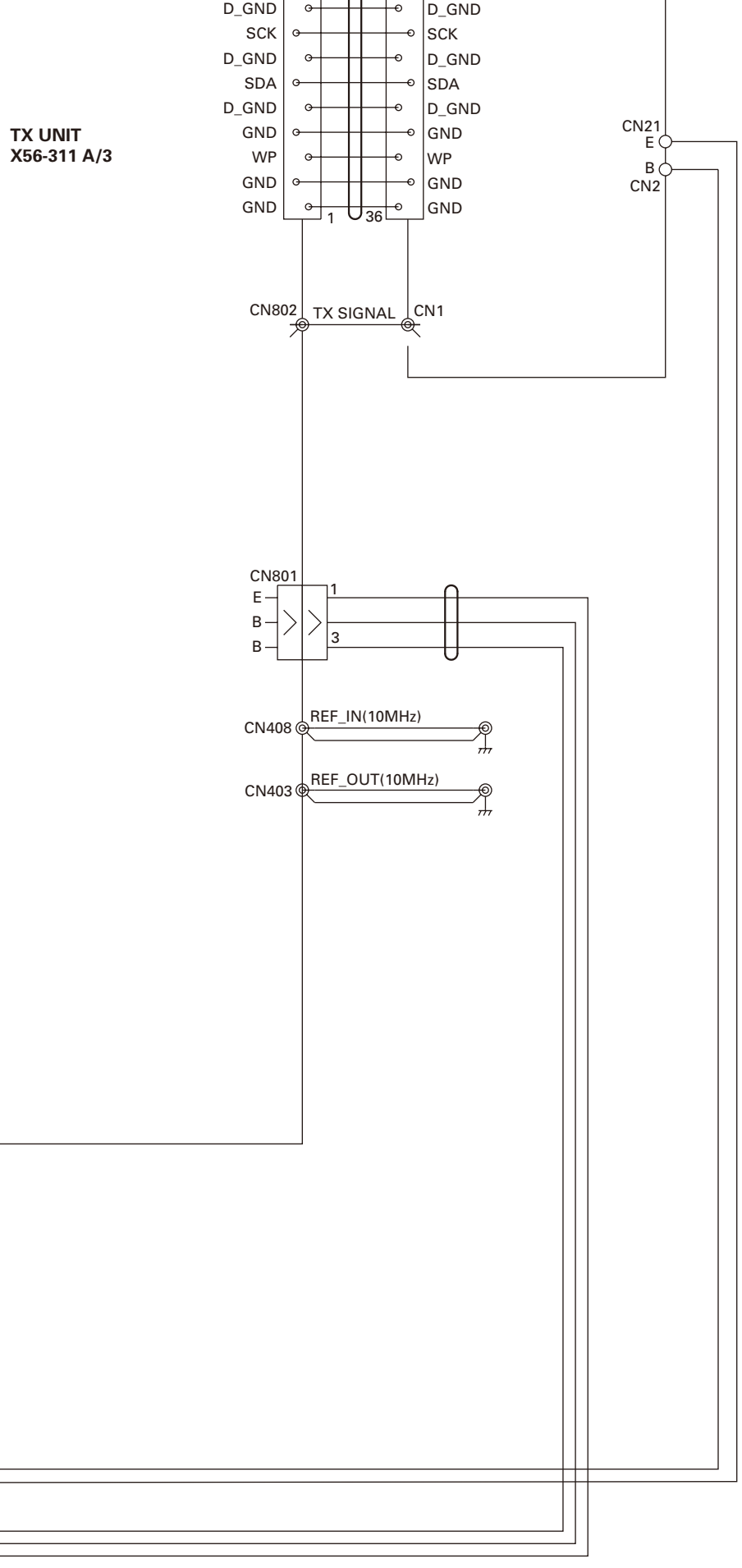

CN4
4
SB
SB
1
E
CN300
RX_IF_VN


CONTROL UNIT2
X53-414
CN4
SB
SB
E
CN2
CN1
CN402
CN401
Hi_VoL_DET
GND
50MPU_A_GND
50MPU
50MPU_A_GND
DC50
DC50
DC50
DC50
33MPU_A_GND
33MPU
33MPU
33MPU_A_GND
50MPU_A
33MPU_A
33SH
50MPU_CoNT
NC
E_PTT_SH
SC_SH
GND
SRX0_ATX0
STX0_ARX0
GND
RF_PTT
TX_STATE
QT_DQT
RADIO_ERR
GND
ADSP_CK_SFT
TRUNKiNG
A16C_CK_SFT
BER_DAT
BER_CLK
GND
SYS_RST
RX_PWR_SAVE
oCXo_ST_R
oCXo_ST_G
VoLUME_IN
PWR_ST_R
MoD_D_OUT
GND
RX_AUDIO_D
BEEP
MIC_D_IN
iNRA_SW
NC
HooK_RXD_SCM
AMP_SW
SCM_EN
AF_MUTE
iNSP_SW
EVOL_DATA
PTT_AM16C
EVoL_CLK
GND
EVOL_LD
TAAD_SW
TA_SW
BEEP_SW
CN300
_IF_VN
CN713
GND
Ri
DTR
CTS
SD
RTS
RD
DSR
CD
PC CONTROL
J700
TPI+
TPI-
NC
SSSH
TPO+
TPO-
NC
GND
J703
FRAME A
FRAME B
J702
FRAME A
FRAME B
J701
CD1
D11 CF
D12 CF
D13 CF
D14 CF
D15 CF
CE2A CF
NC
IO RD
IO WR
WE CF
R/B/IREQ CF
33CF
NC
NC
GND
DO3 CF
DO4 CF
DO5 CF
DO6 CF
DO7 CF
CE1A CF
A10 CF
RD CF
A09 CF
A08 CF
A07 CF
33CF
A06 CF
A05 CF
FINAL UNIT
X45-381 C/5
CN11
CN15
CN12
E
B
FINAL UNIT
X45-381 B/5
CN27
CN23
CN25
CN28
CN24
CN26
CN30
CN29

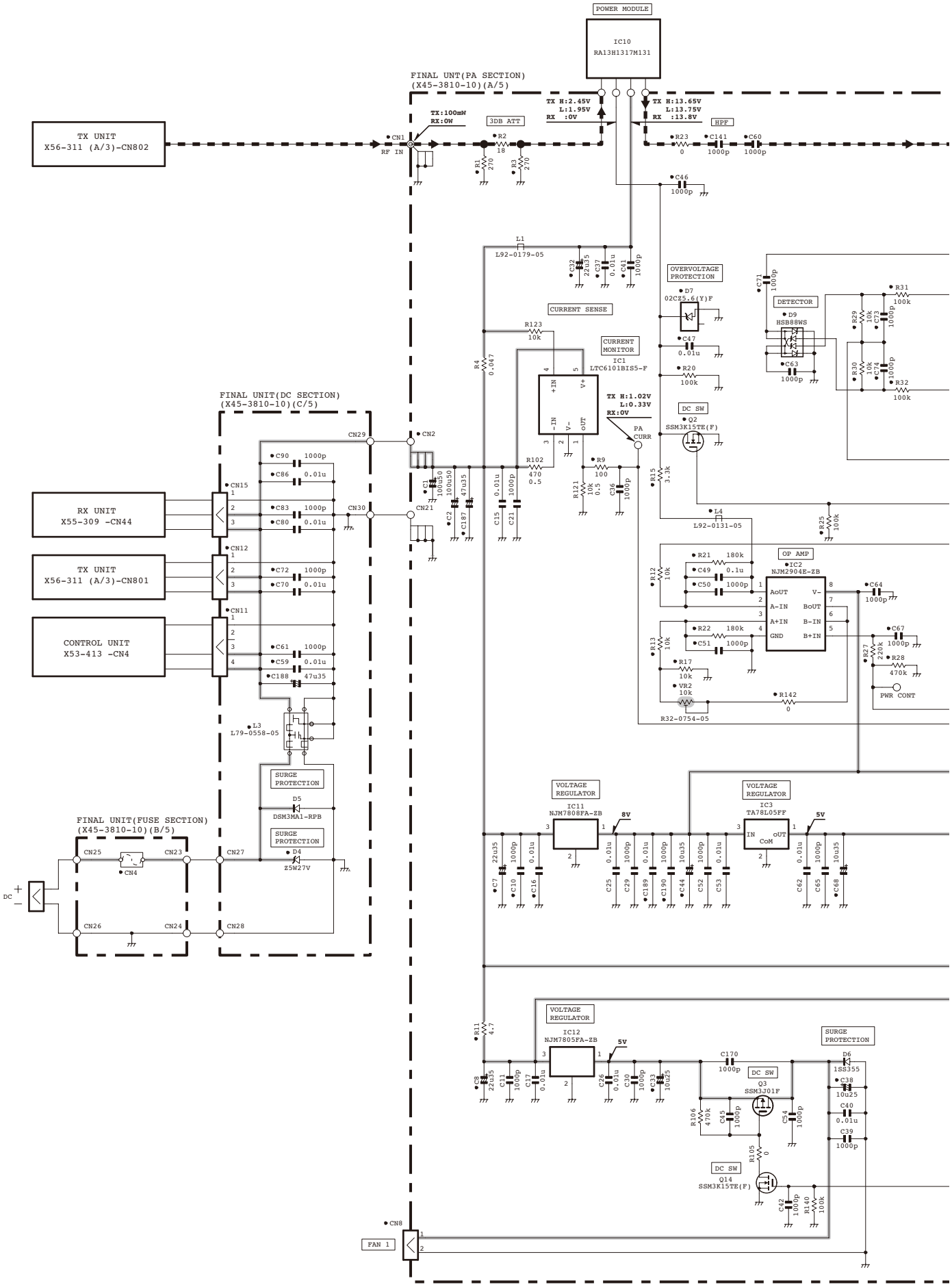
TX UNIT
X56-311 A/3



TX UNIT
X56-311 A/3

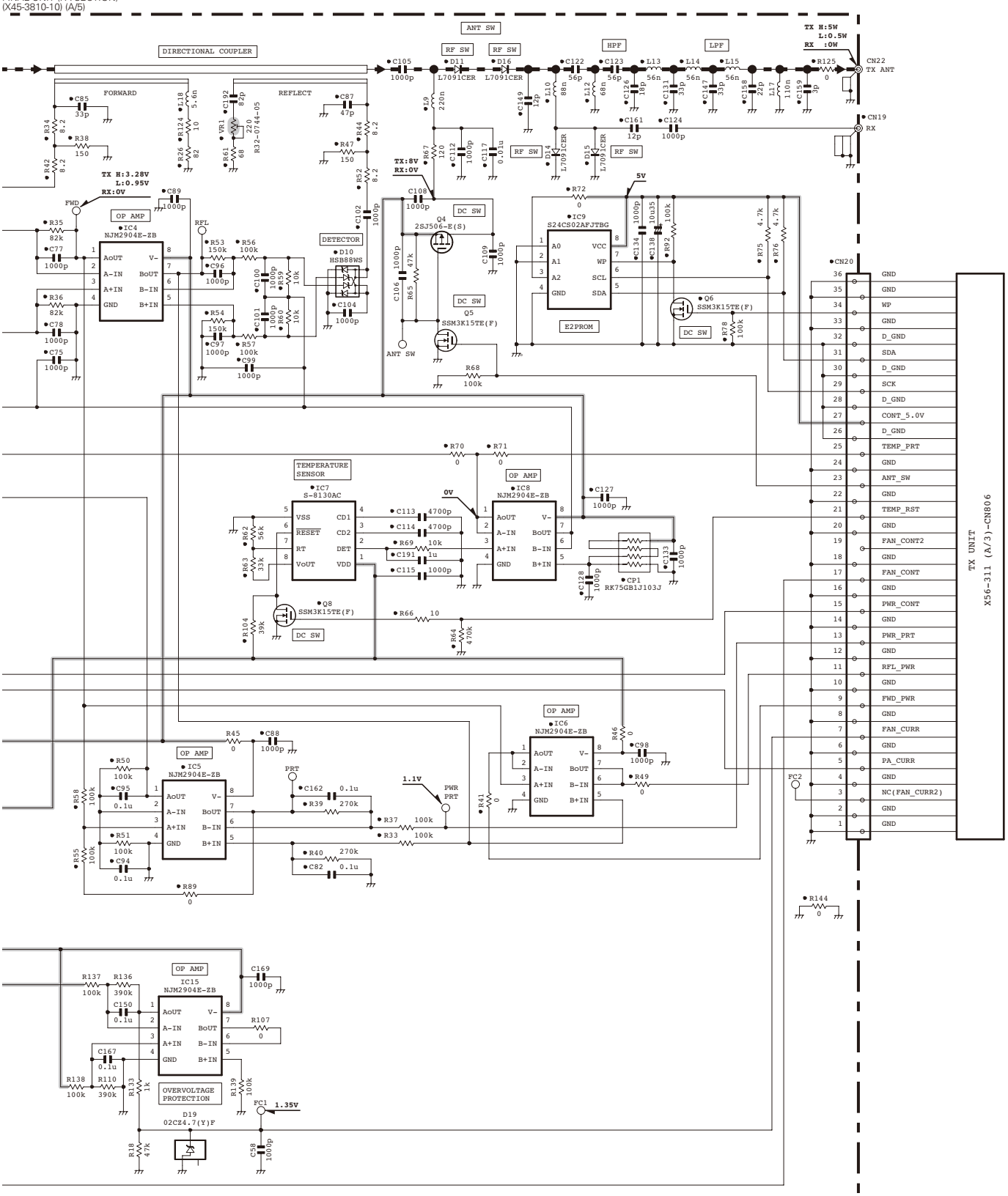


NXR-700 SCHEMATIC DIAGRAM



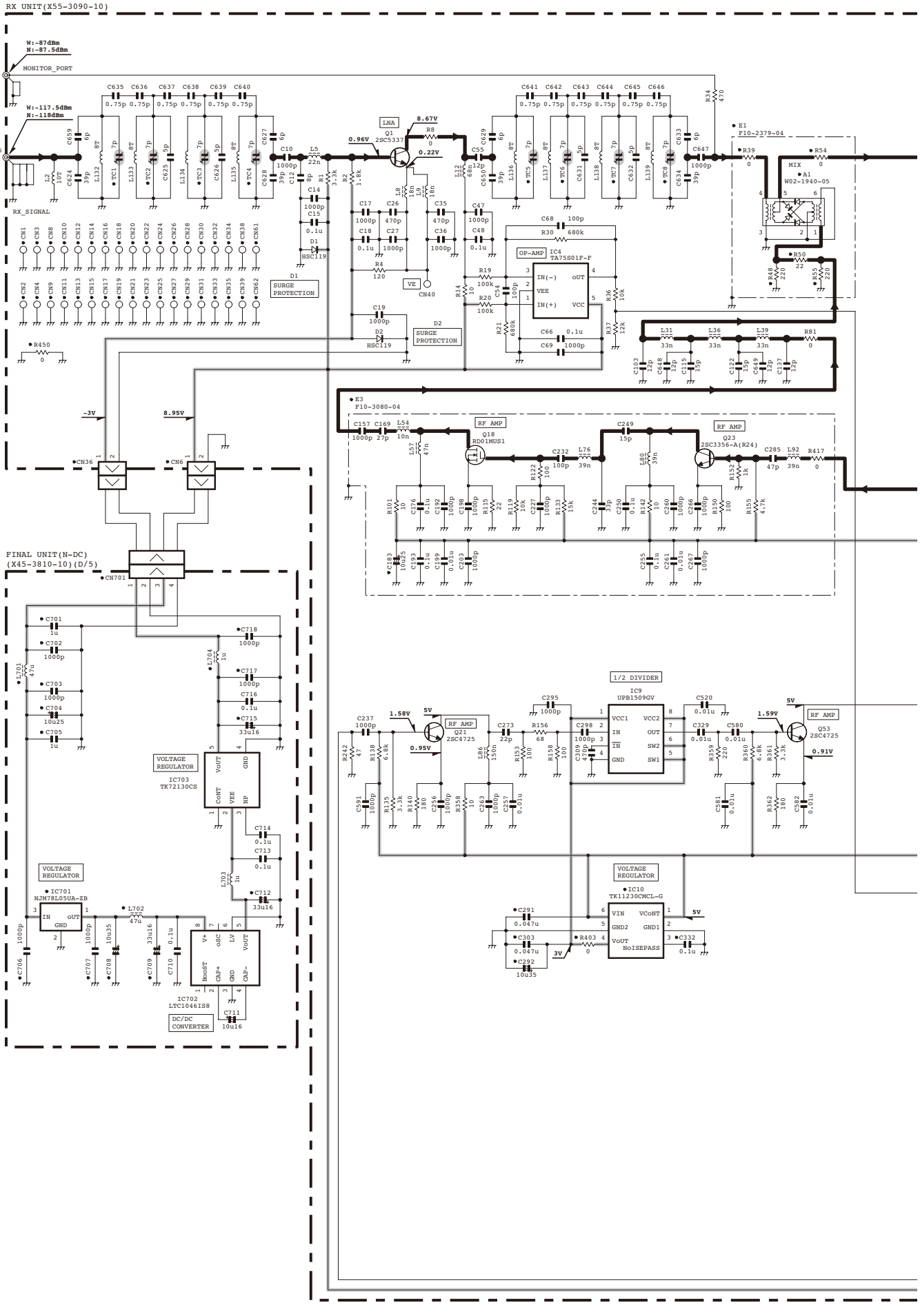
SCHEMATIC DIAGRAM NXR-700

FINAL UNIT (PA SECTION)
(X45-3810-10) (A/5)



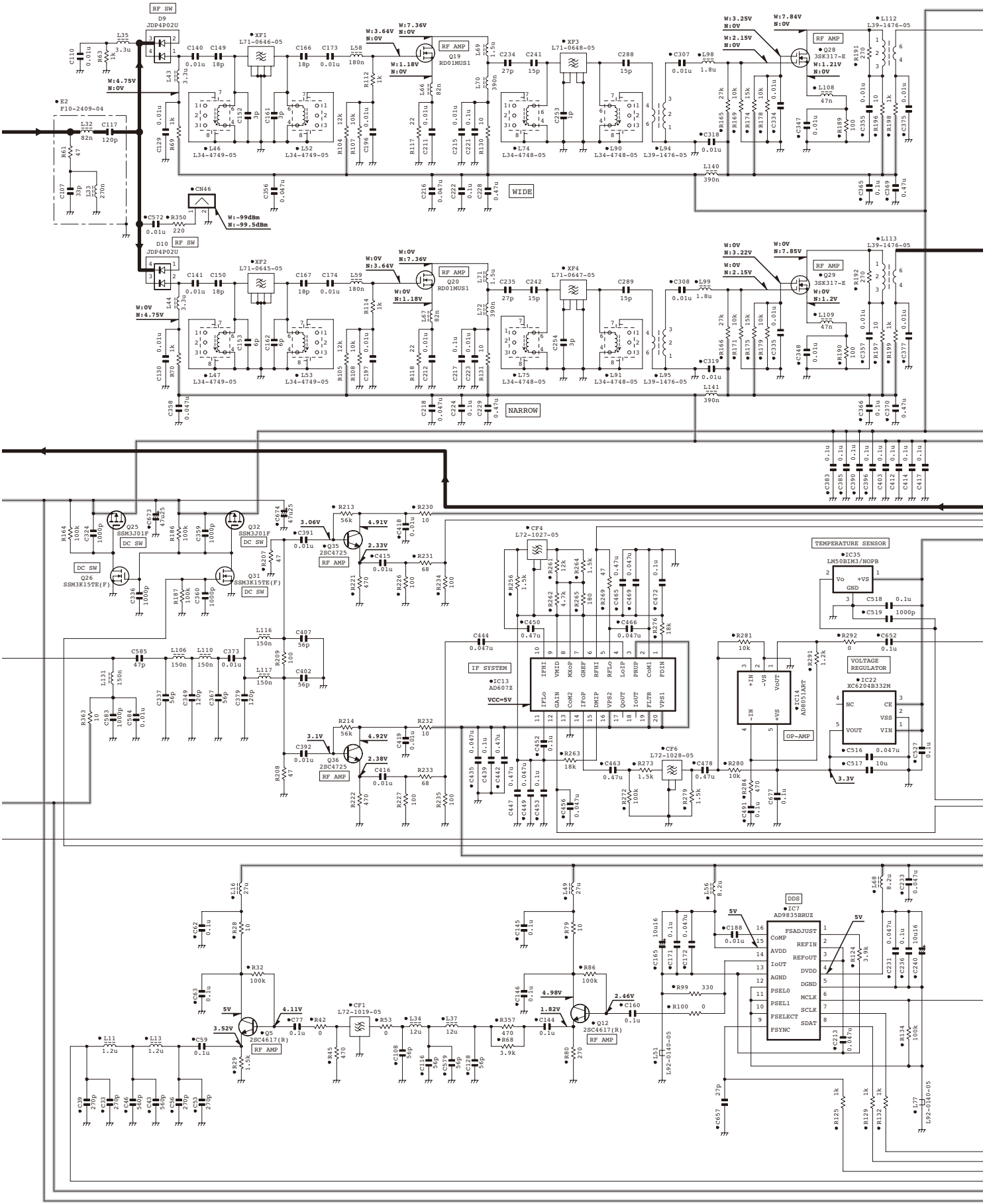
Note : The components marked with a dot (•) are parts of layer 1.

NXR-700 SCHEMATIC DIAGRAM



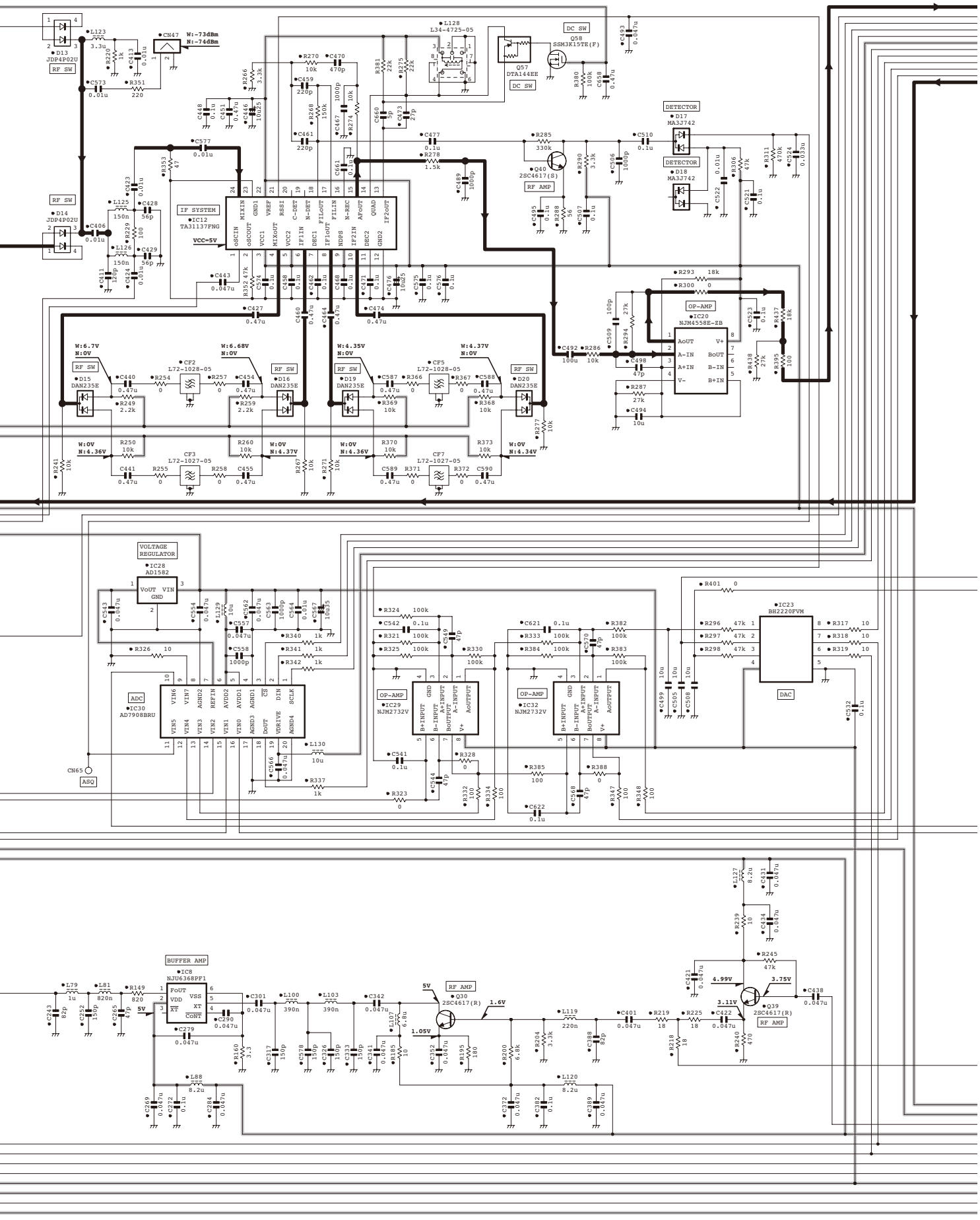
SCHEMATIC DIAGRAM NXR-700

RX UNIT (X55-3090-10)



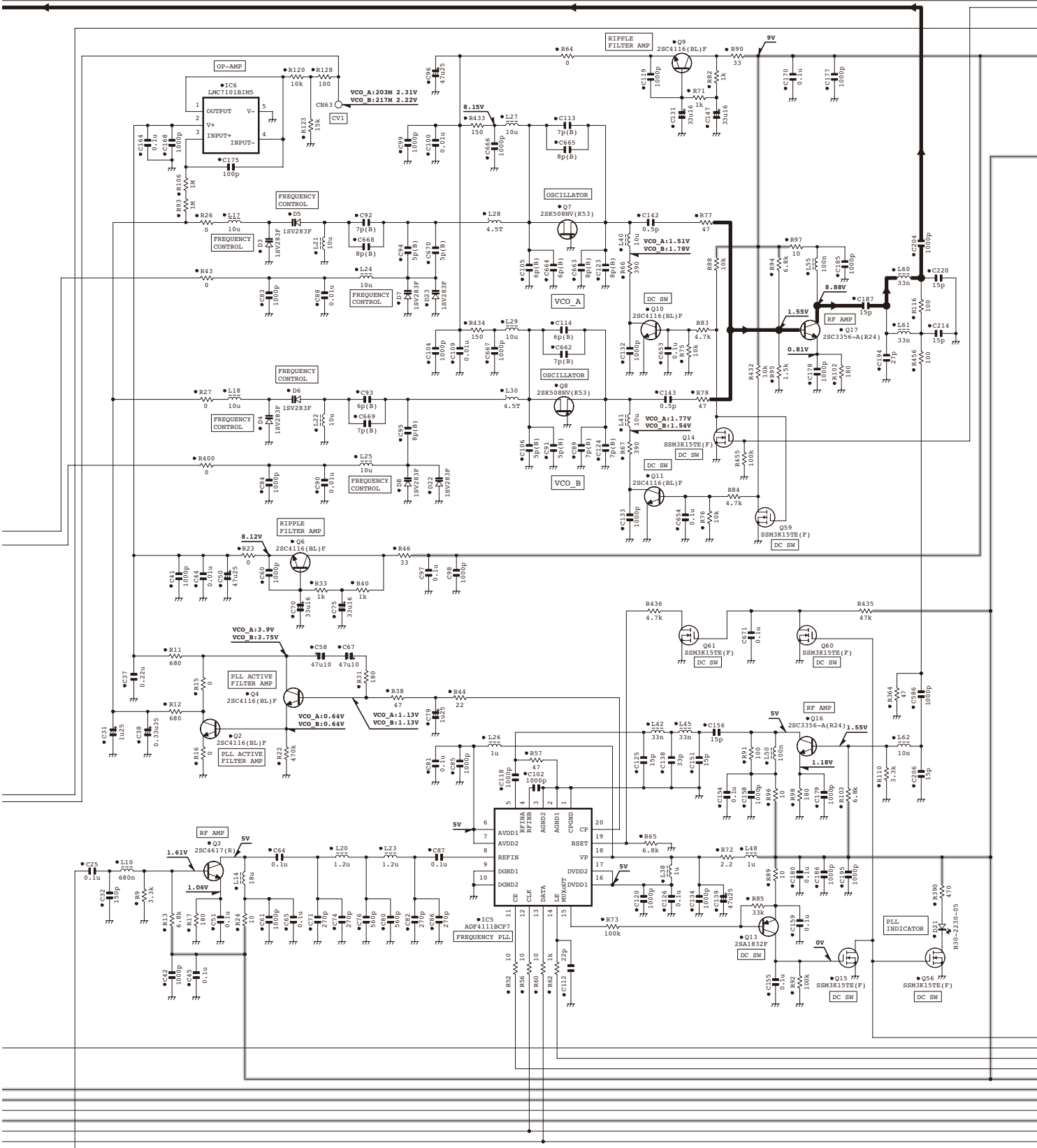
NXR-700 SCHEMATIC DIAGRAM

RX UNIT (X55-3090-10)

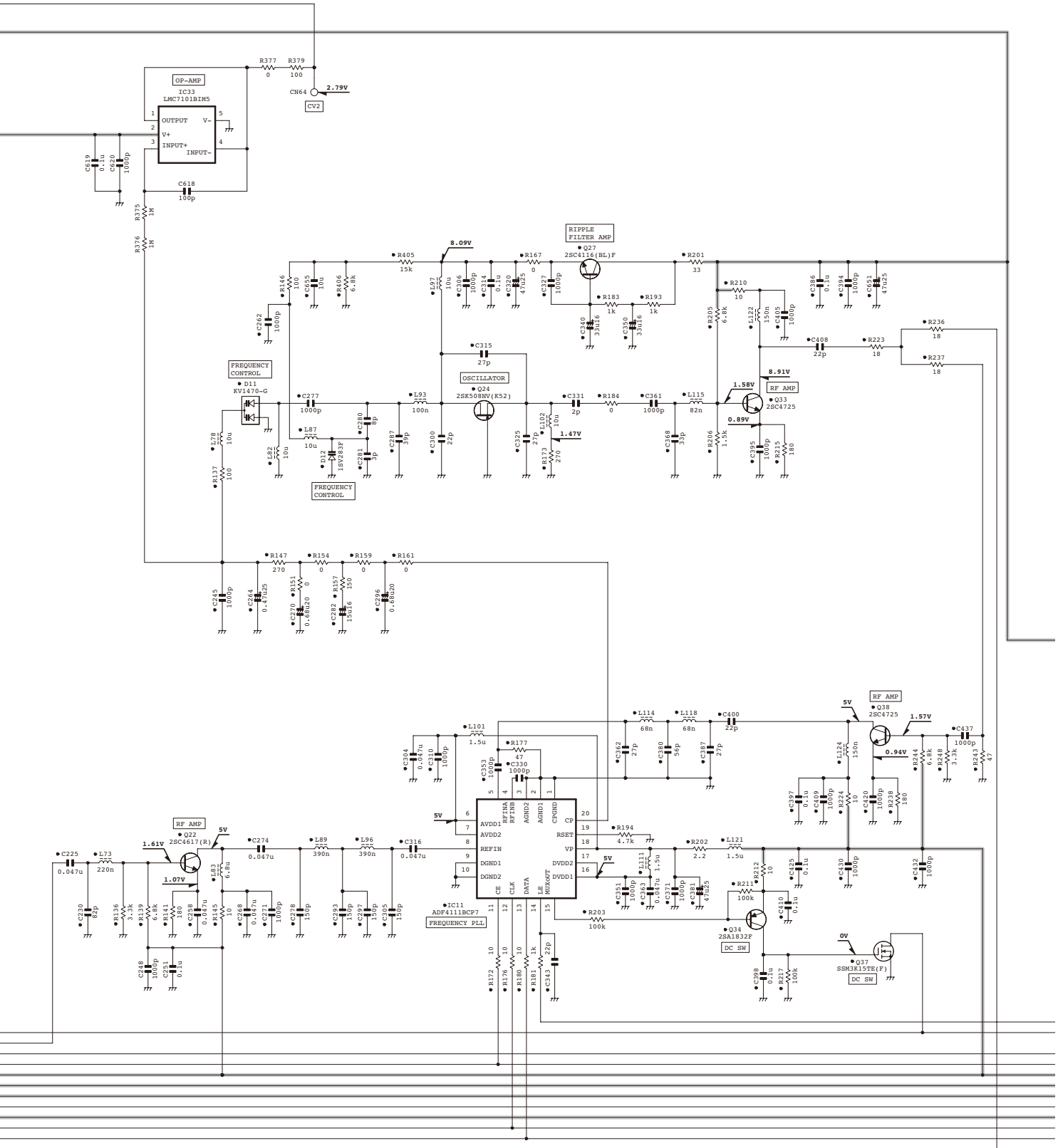


SCHEMATIC DIAGRAM NXR-700

RX UNIT (X55-3090-10)

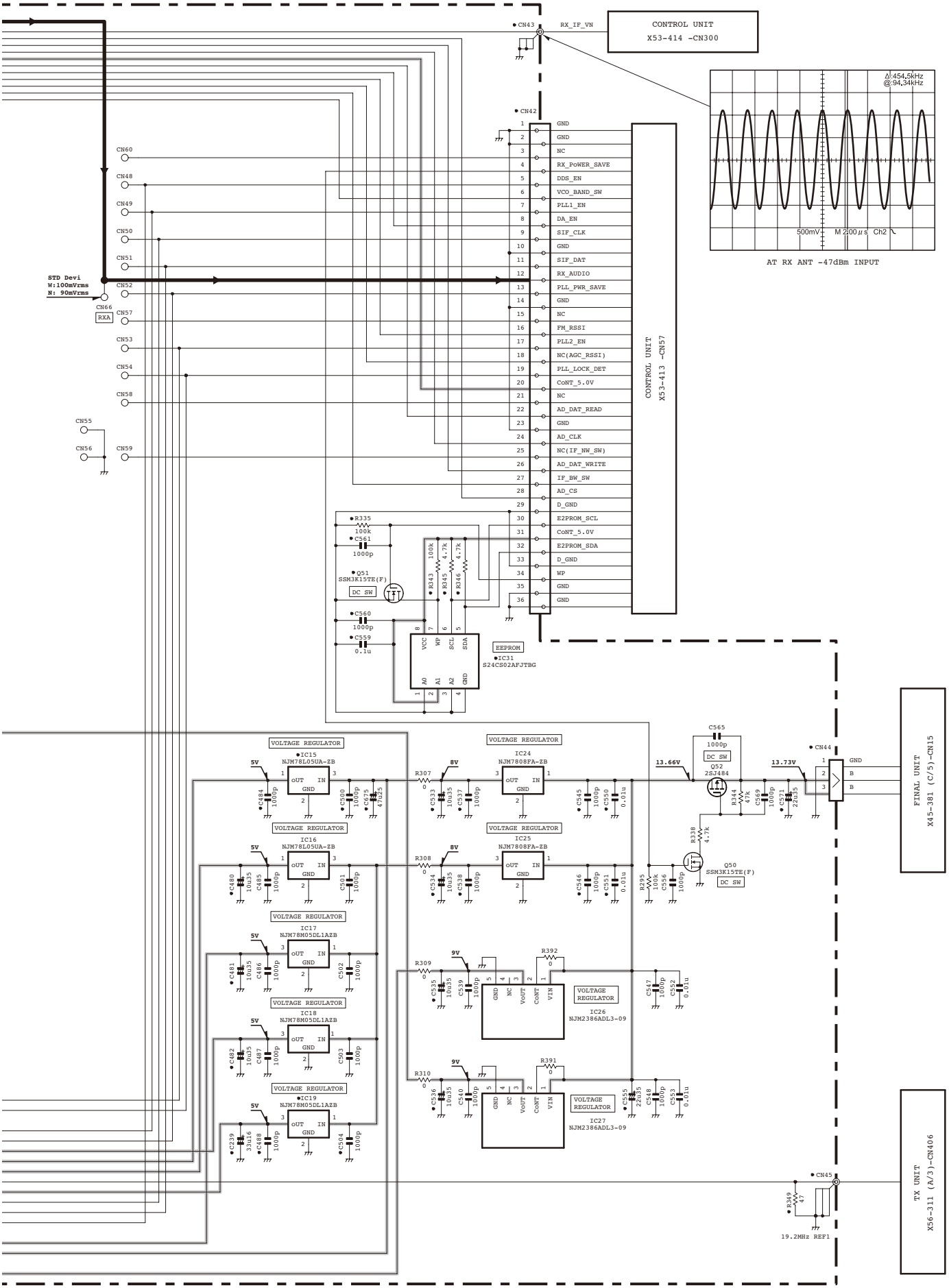


NXR-700 SCHEMATIC DIAGRAM



SCHEMATIC DIAGRAM NXR-700

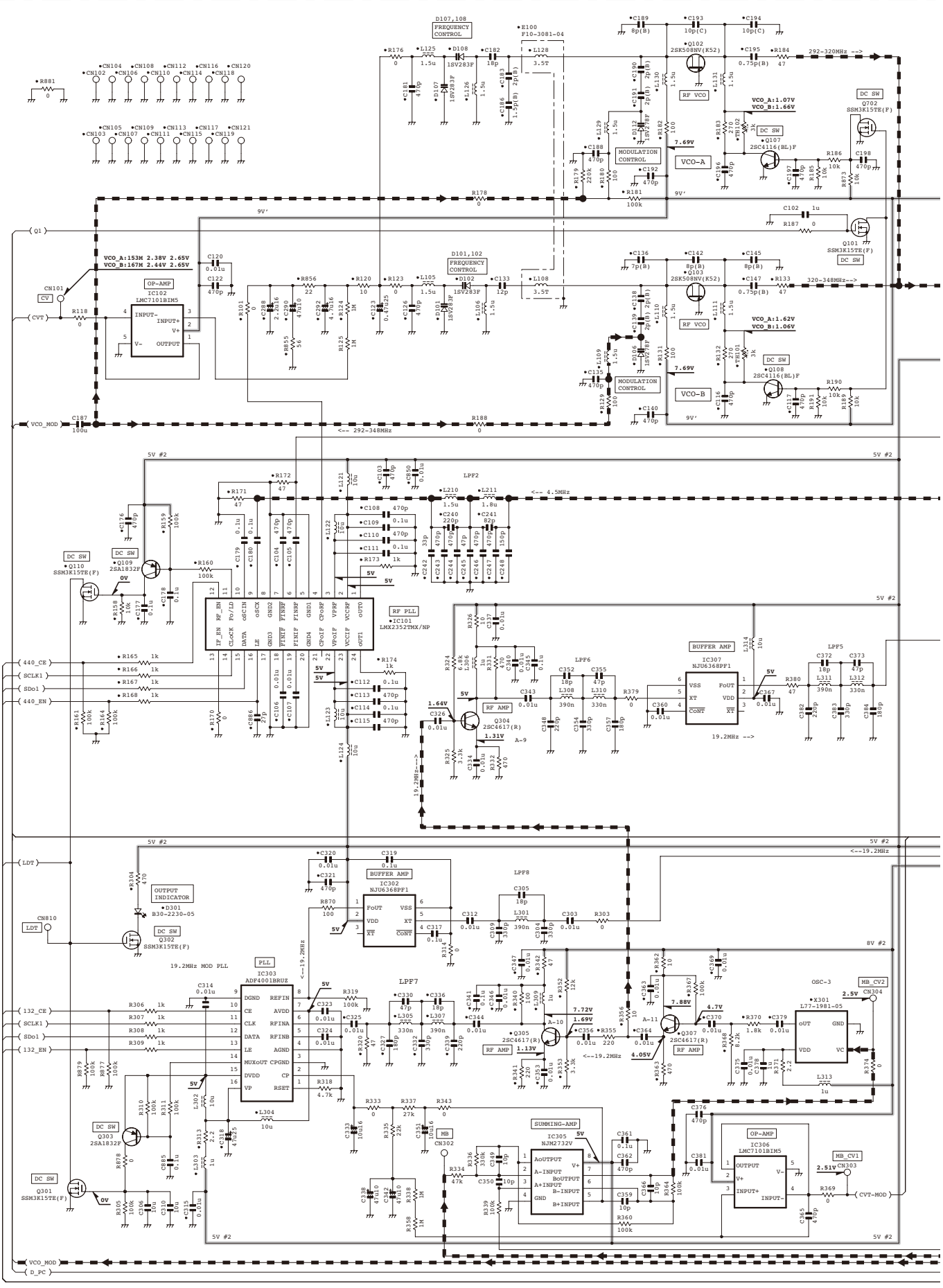
RX UNIT (X55-3090-10)



Note : The components marked with a dot (•) are parts of layer 1.

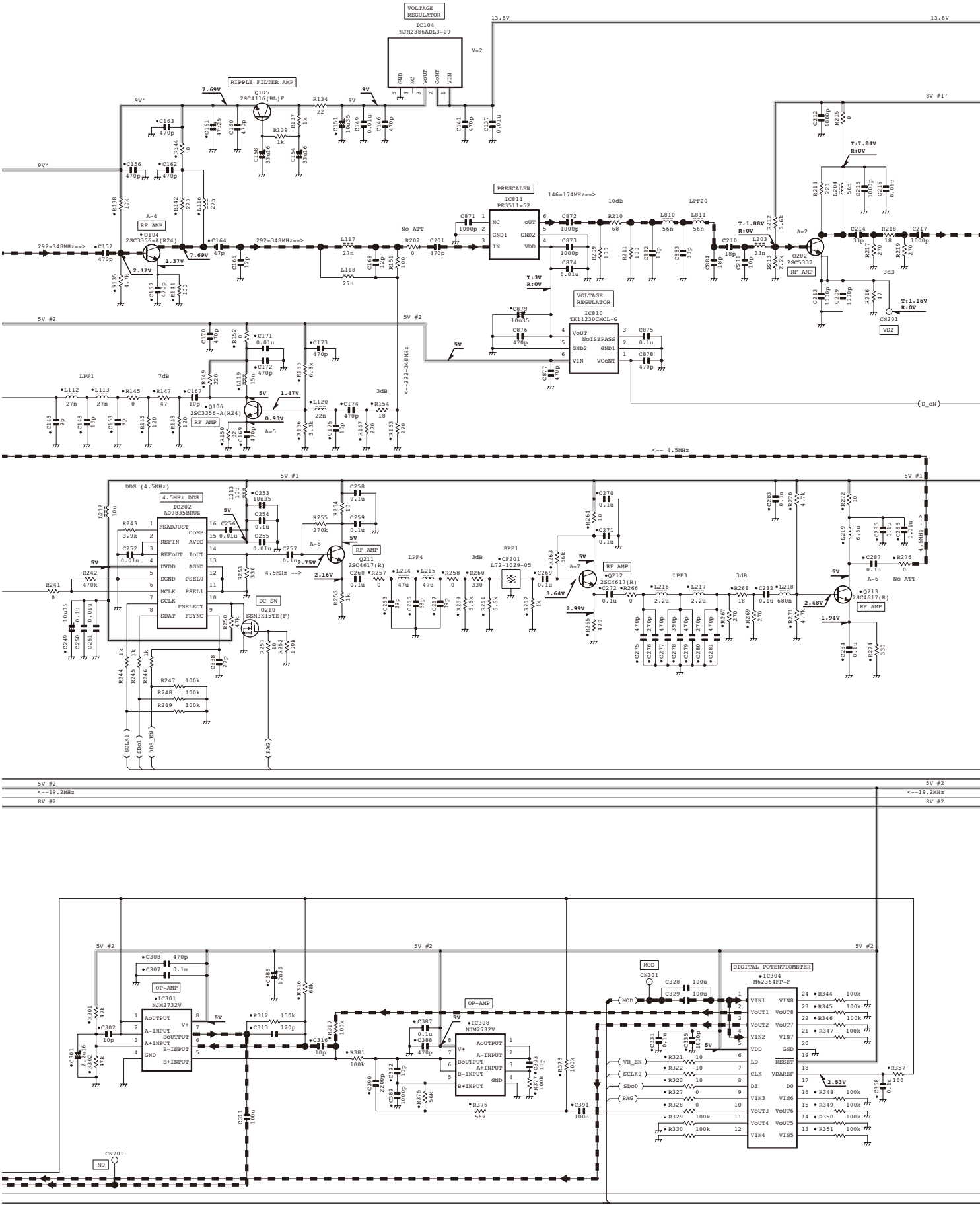
NXR-700 SCHEMATIC DIAGRAM

TX UNIT(X56-3110-10)(A/3)



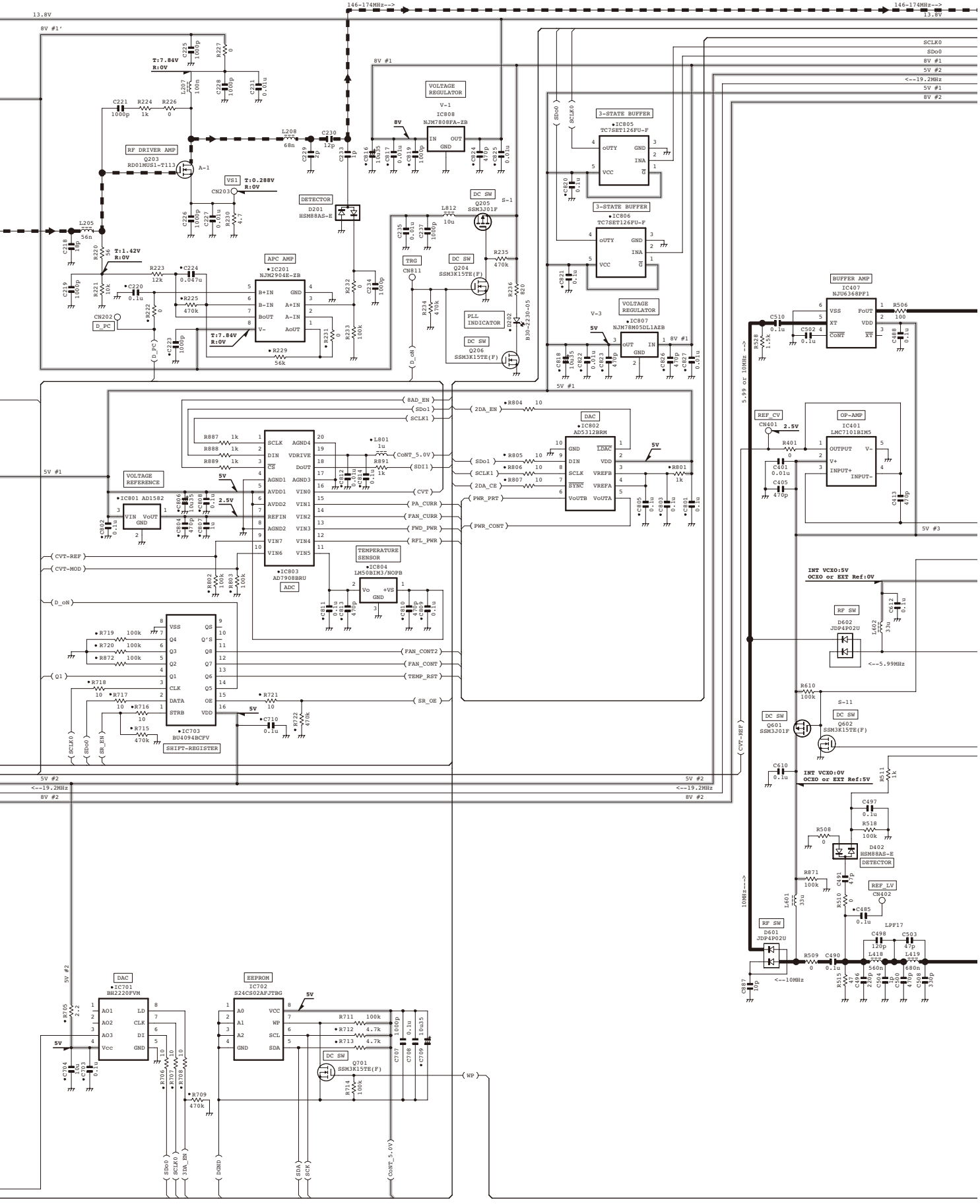
SCHEMATIC DIAGRAM NXR-700

TX UNIT (X56-3110-10) (A/3)



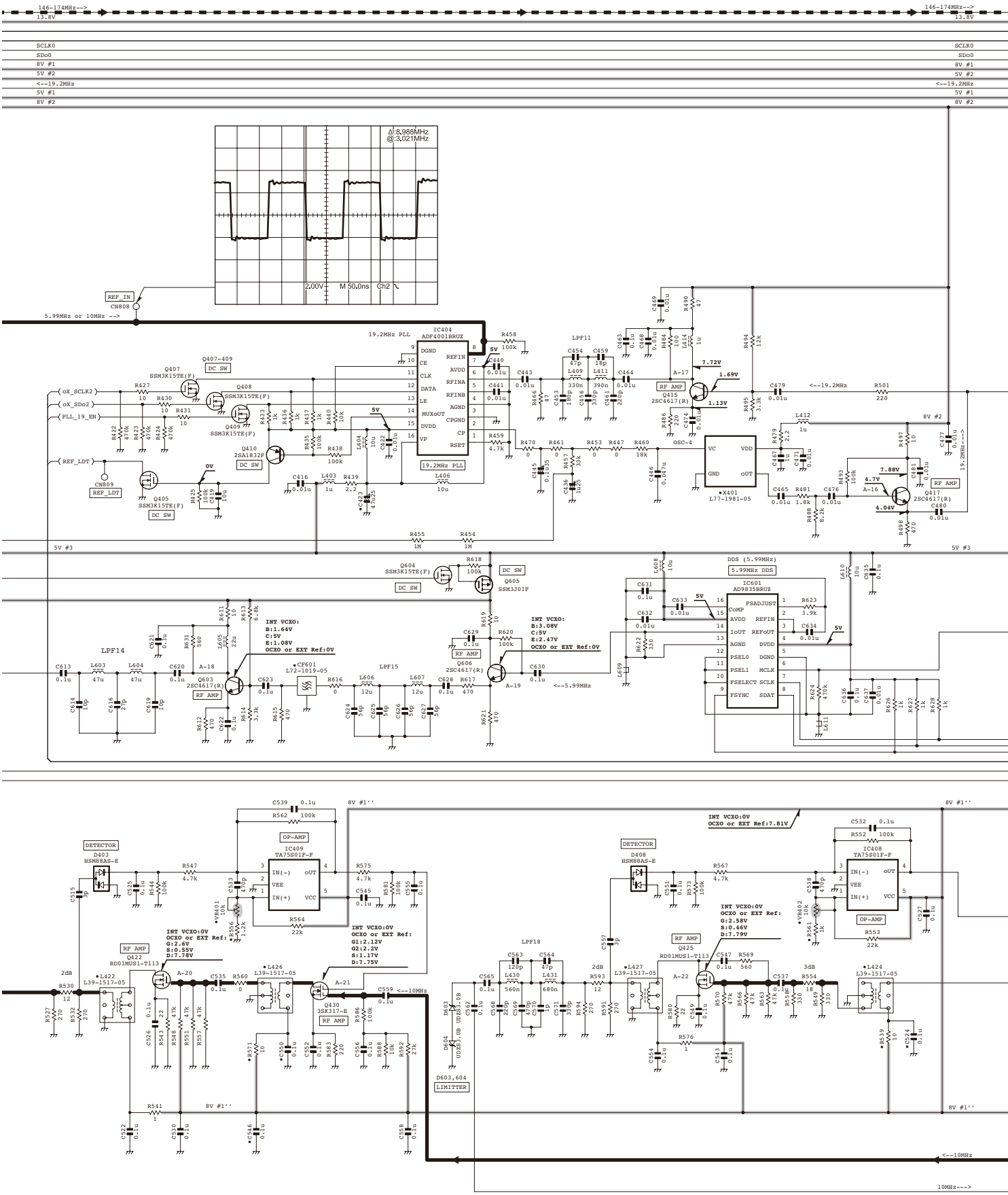
NXR-700 SCHEMATIC DIAGRAM

TX UNIT (X56-3110-10) (A/3)



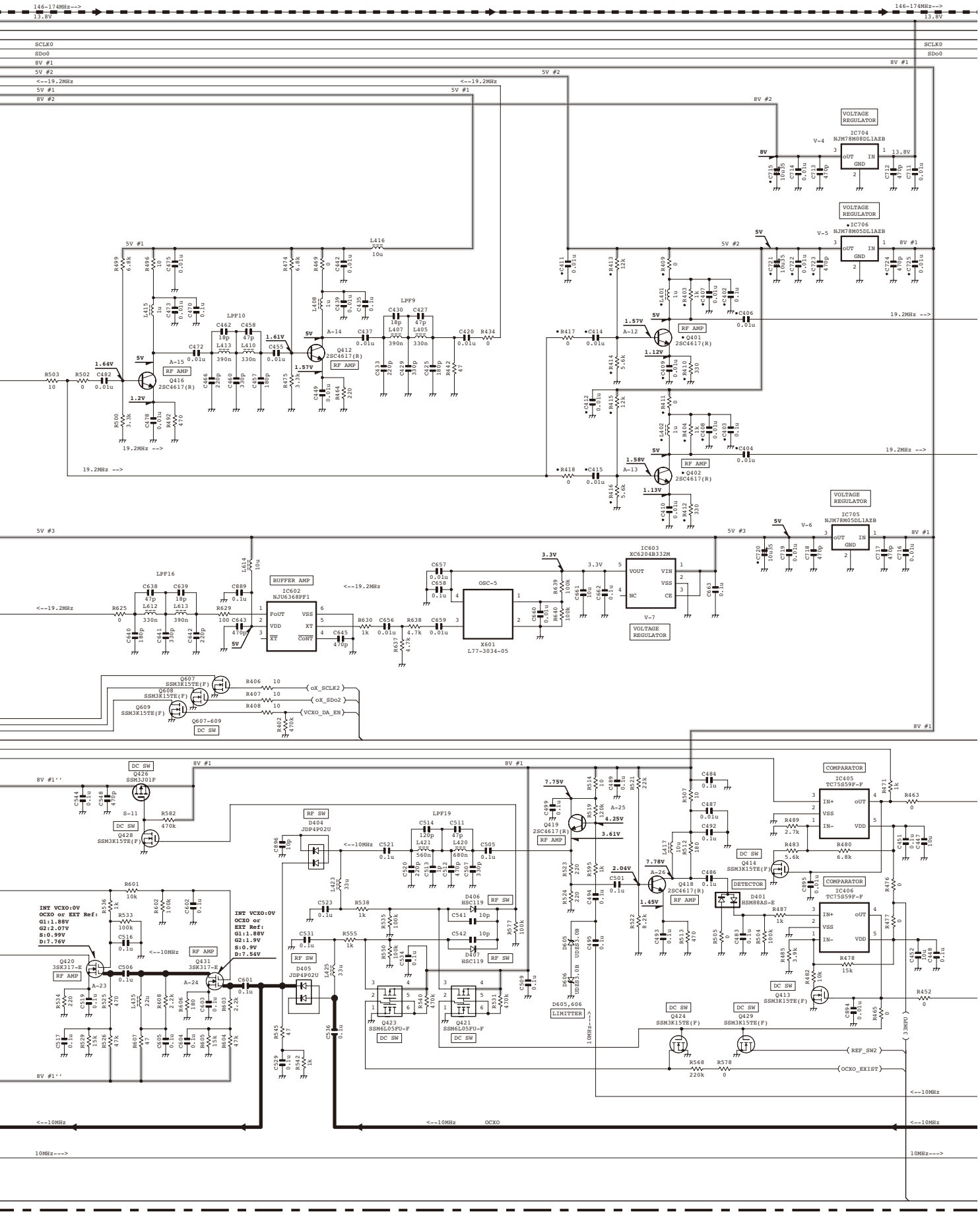
SCHEMATIC DIAGRAM NXR-700

TX UNIT (X56-3110-10) (A/3)



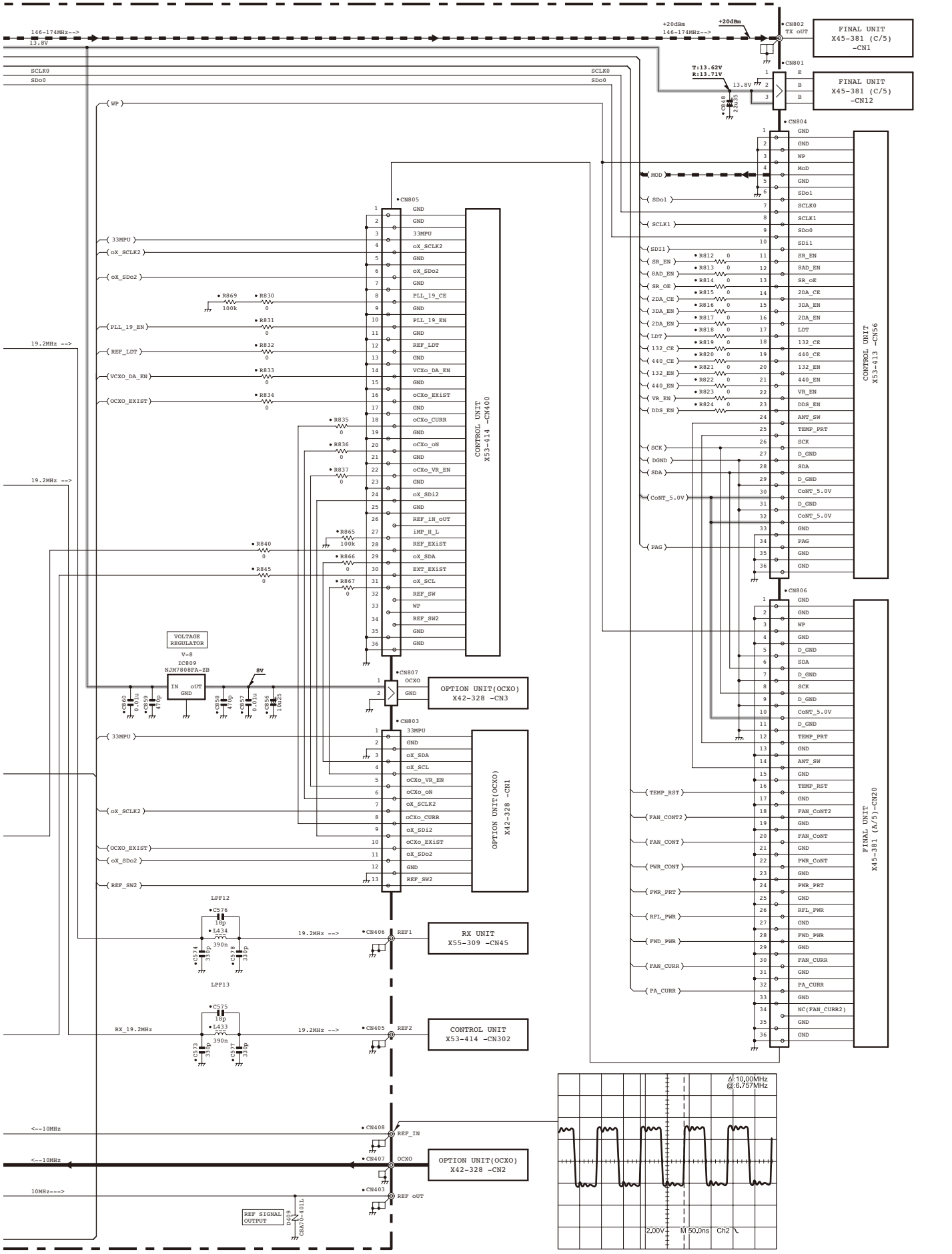
NXR-700 SCHEMATIC DIAGRAM

TX UNIT (X56-3110-10) (A/3)



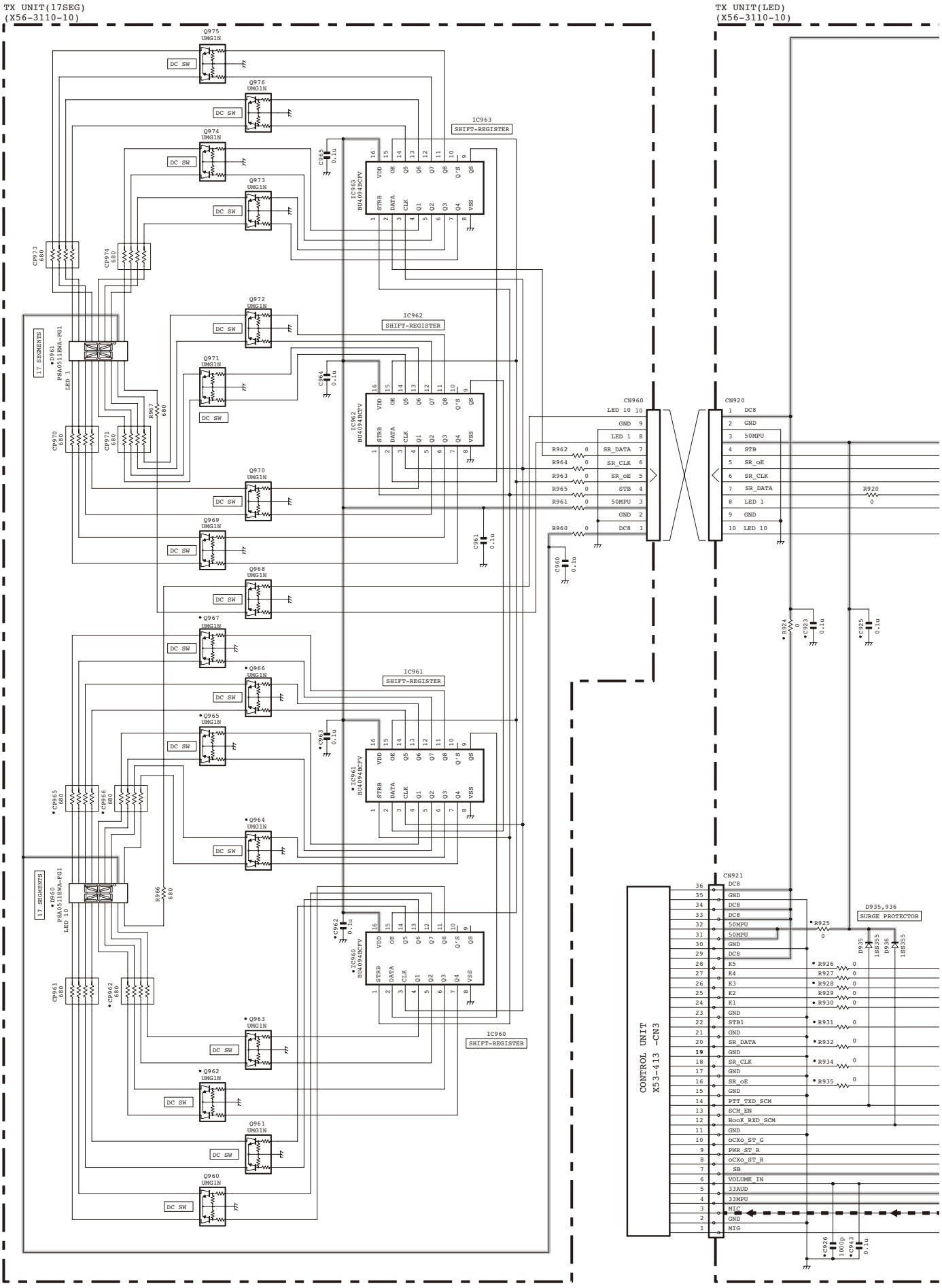
SCHEMATIC DIAGRAM NXR-700

TX UNIT (X56-3110-10) (A/3)



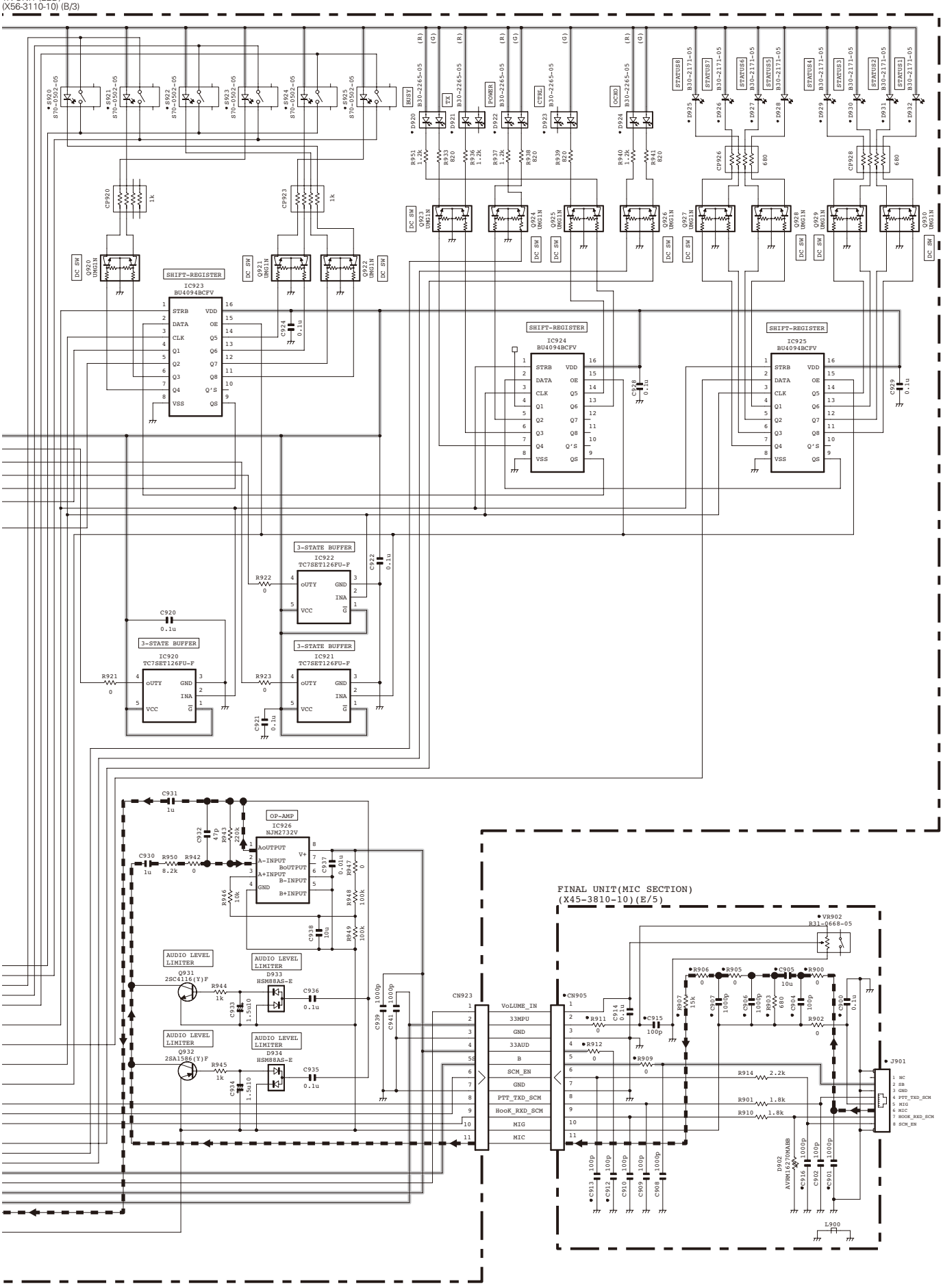
Note : The components marked with a dot (•) are parts of layer 1.

NXR-700 SCHEMATIC DIAGRAM



SCHEMATIC DIAGRAM NXR-700

TX UNIT (LED)
(X56-3110-10) (B/3)

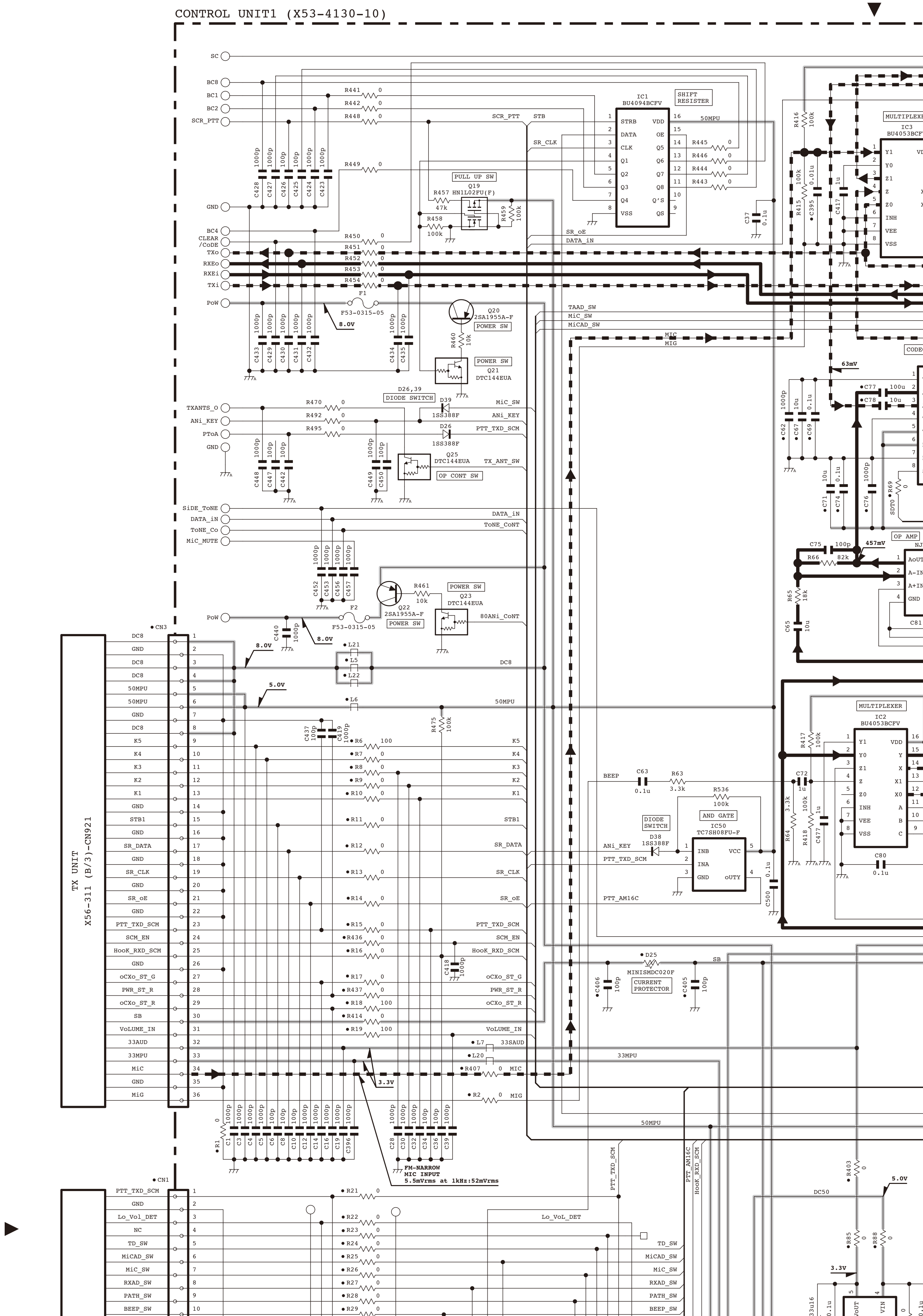


Note : The components marked with a dot (•) are parts of layer 1.

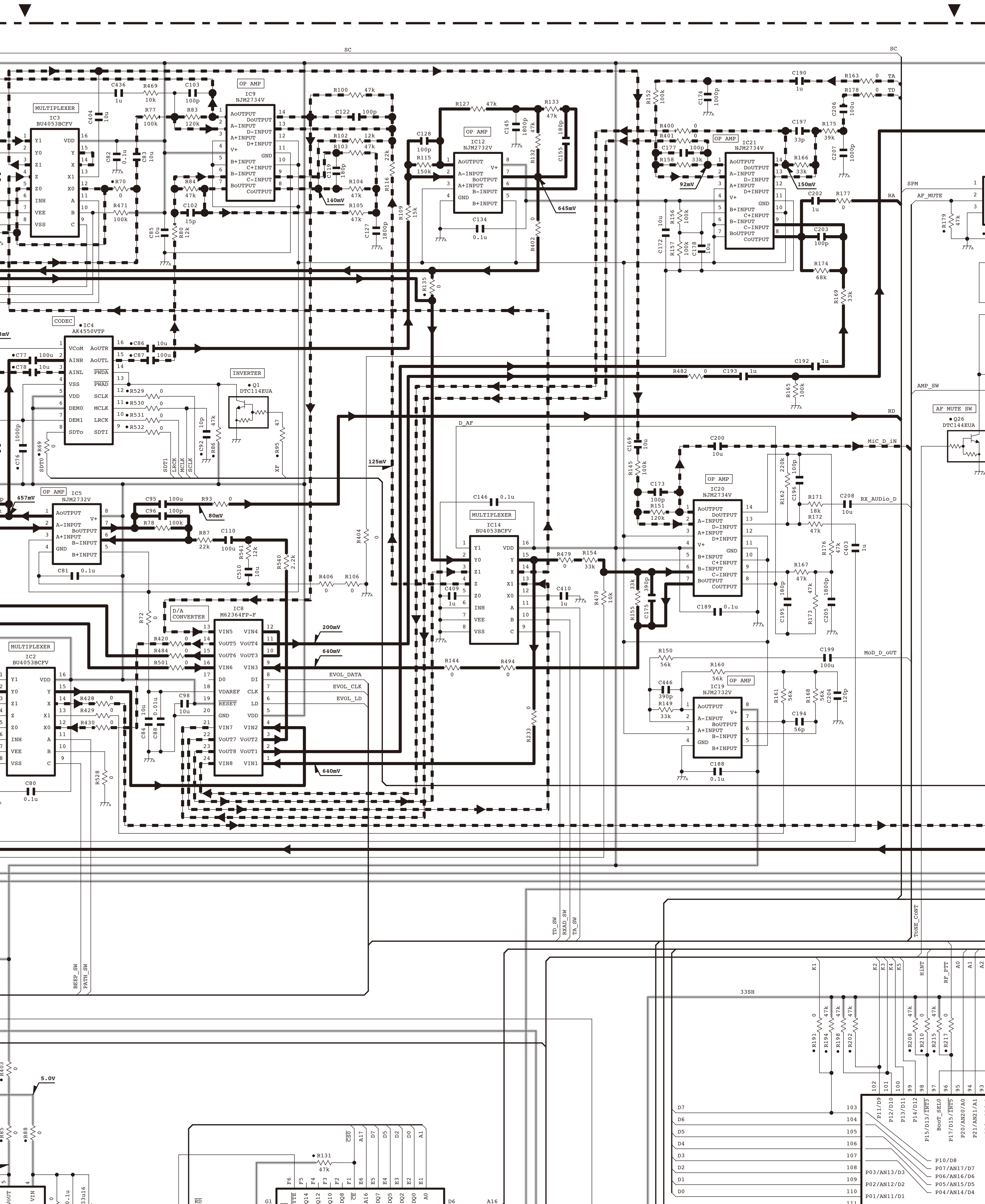
Note : The components marked with a dot (•) are parts of layer 1.

mV:AC voltage value measured with an electronic voltmeter.
The unit is mVrms.
V:DC voltage value
rms:60% modulation TX signal or RX signal
Audible signal:Measures it by 1kHz
Sub audible signal:Measures it by 100Hz

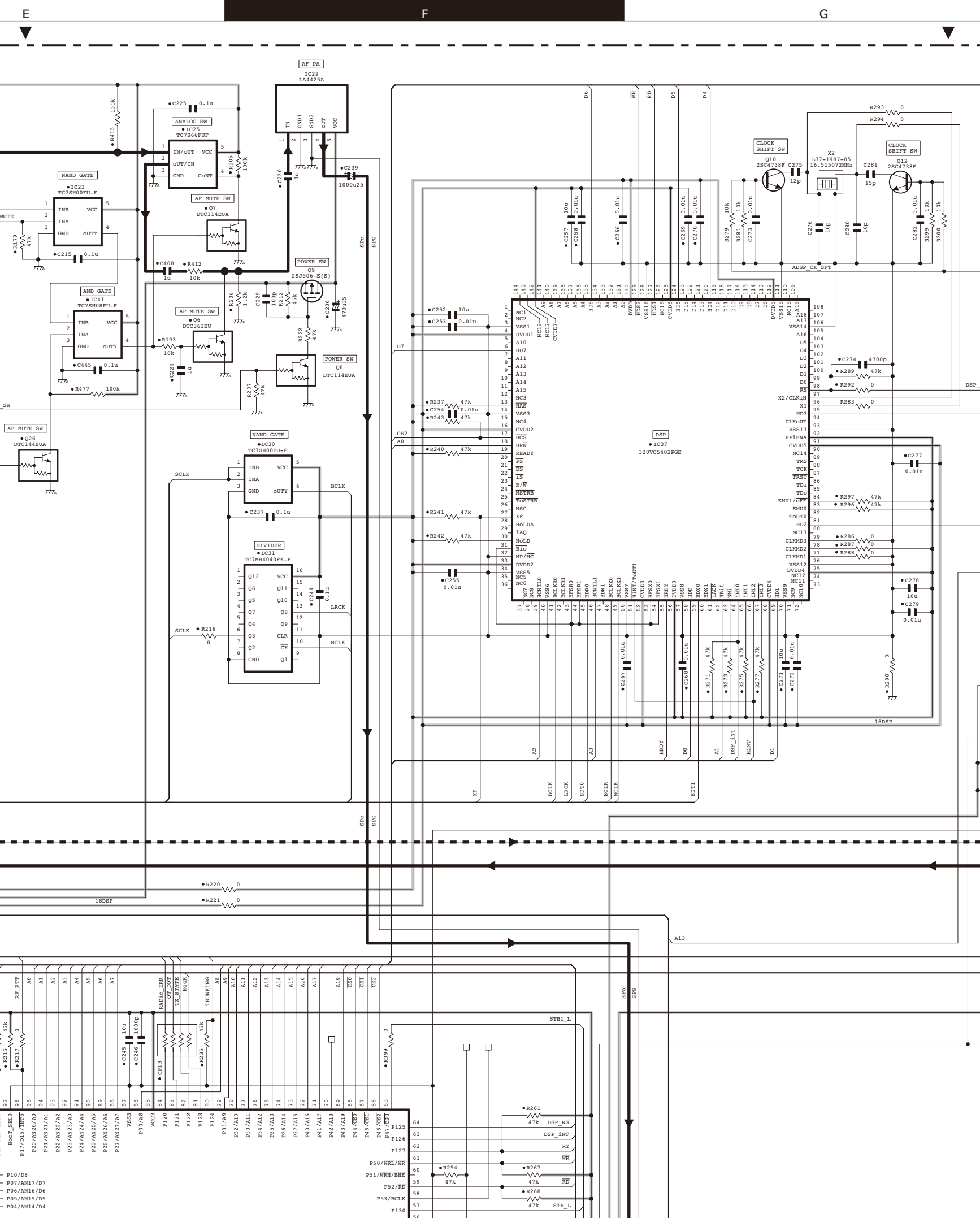
A B



CONTROL UNIT1 (X53-4130-10)
SHIFT RESISTER
IC1 BU4094BCFV
PULL UP SW
Q19 HN1L02FU(F)
MULTIPLEXER
IC3 BU4053BCFV
Q20 2SA1955A-F
POWER SW
Q21 DTC144EUA
F1 F53-0315-05
8.0V
63mV
D26,39
DIODE SWITCH
D39 1SS388F
D26 1SS388F
Q25 DTC144EUA
OP CONT SW
OP AMP
457mV
Q22 2SA1955A-F
Q23 DTC144EUA
F2 F53-0315-05
5.0V
TX UNIT
X56-311 (B/3)-CN921
CN3
MULTIPLEXER
IC2 BU4053BCFV
AND GATE
IC50 TC7SH08FU-F
D38 1SS388F
D25 MINISMDC020F
CURRENT PROTECTOR
3.3V
FM-NARROW
MIC INPUT
5.5mVrms at 1kHz:52mVrms
CN1



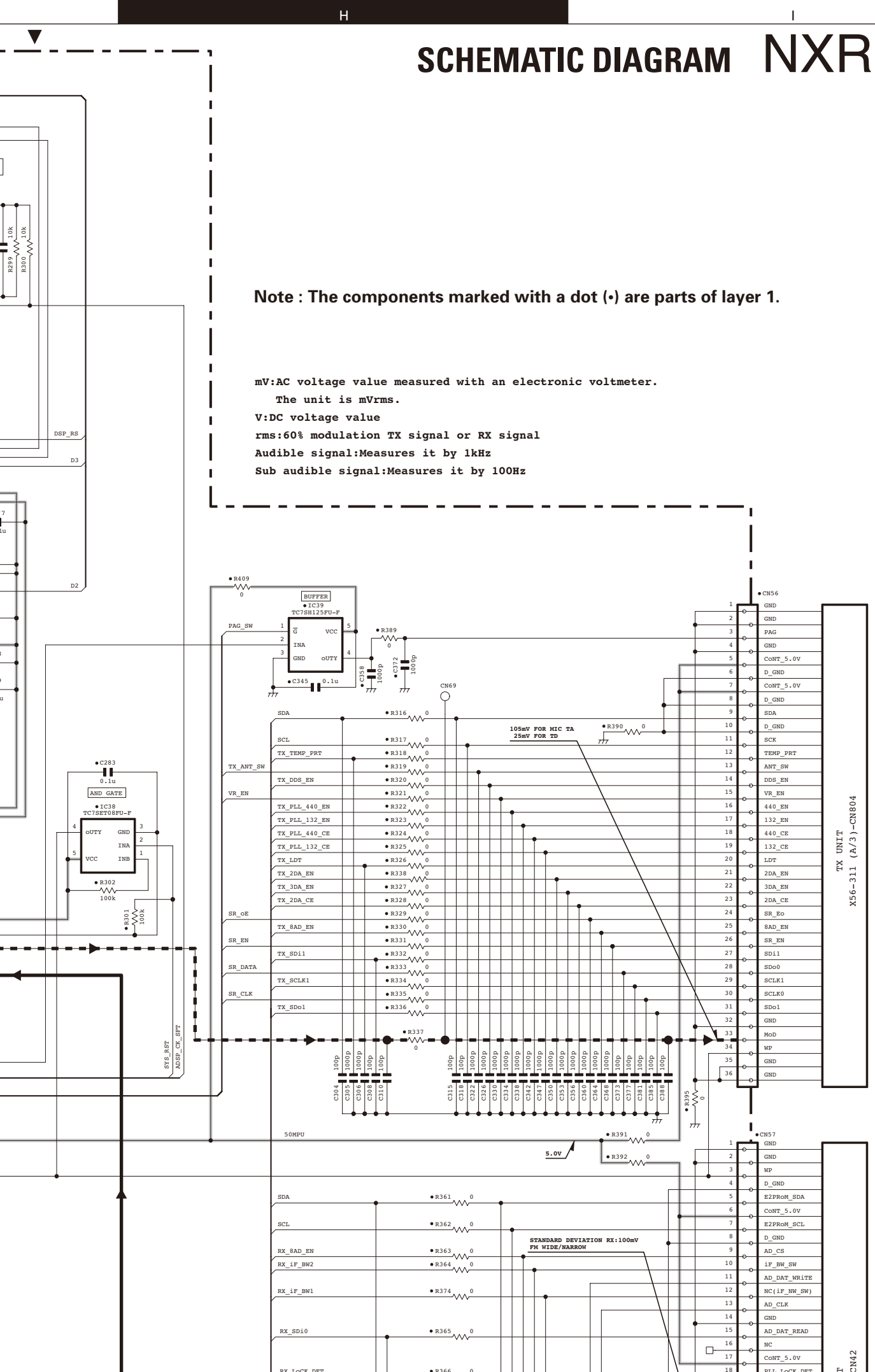
SC
MULTIPLEXER
IC3
BU4053BCFV
OP AMP
IC9
NJM2734V
OP AMP
IC12
NJM2732V
OP AMP
IC21
NJM2734V
CODEC
IC4
AK4550VTP
INVERTER
Q1
DTC114EUA
OP AMP
IC5
NJM2732V
MULTIPLEXER
IC14
BU4053BCFV
OP AMP
IC20
NJM2734V
AF MUTE SW
Q26
DTC144EUA
D/A CONVERTER
IC8
M62364FP-F
MULTIPLEXER
IC2
BU4053BCFV
OP AMP
IC19
NJM2732V
140mV
645mV
92mV
150mV
457mV
80mV
125mV
200mV
640mV
640mV
5.0V
TA
TD
RA
RD
SPM
AF_MUTE
AMP_SW
D_AF
MiC_D_iN
RX_AUdio_D
MoD_D_oUT
EVOL_DATA
EVOL_CLK
EVOL_LD
TD_SW
RXAD_SW
TA_SW
TONE_CoNT
BEEP_SW
PATH_SW
33SH
SDT1
LRCK
MCLK
SCLK
SDTO
XF

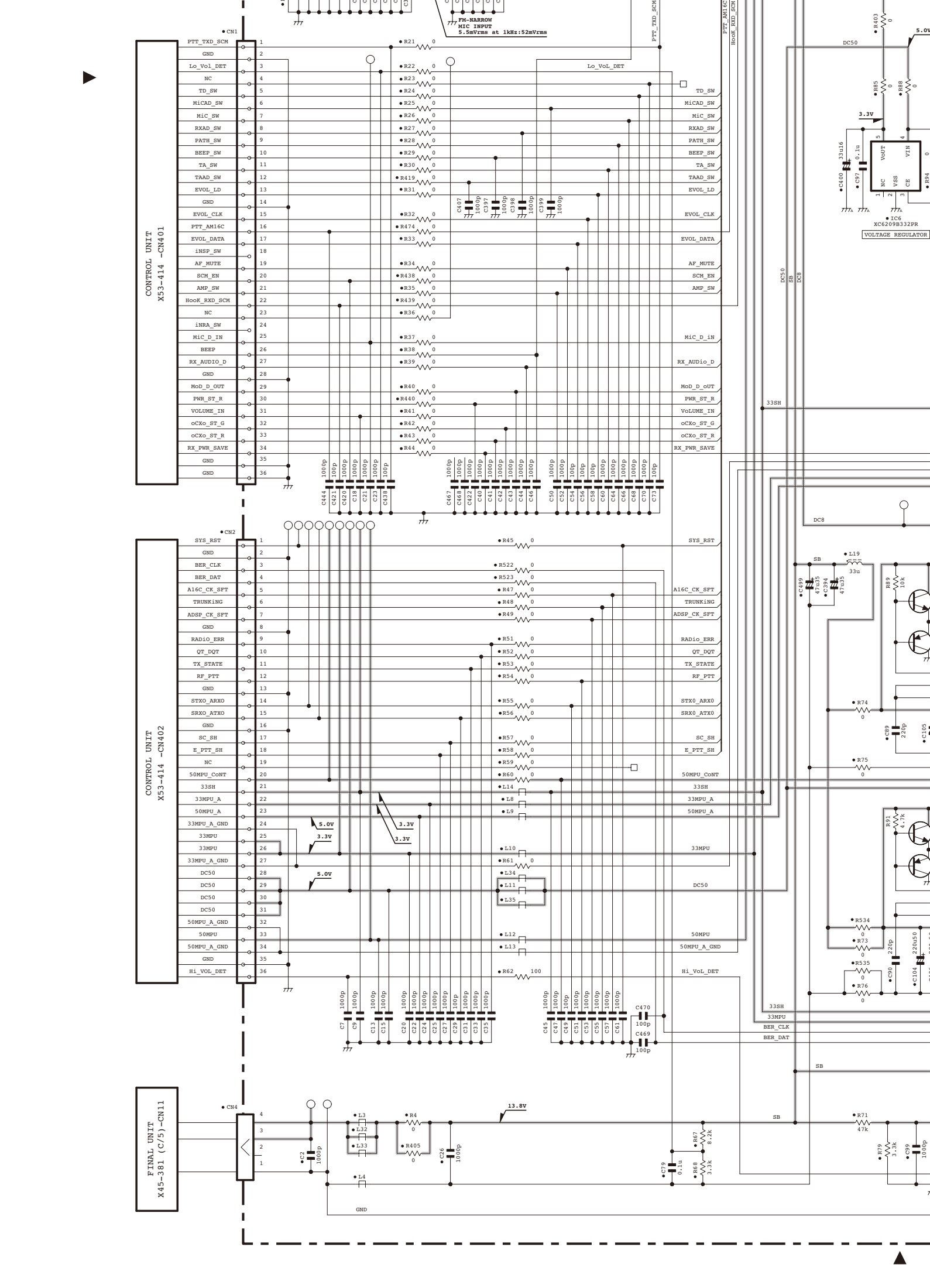

E
F
G
AF PA
IC29
LA4425A
ANALOG SW
IC25
TC7S66FUF
NAND GATE
IC23
TC7SH00FU-F
AF MUTE SW
Q7
DTC114EUA
POWER SW
Q9
2SJ506-E(S)
AND GATE
IC41
TC7SH08FU-F
AF MUTE SW
Q6
DTC363EU
POWER SW
Q8
DTC114EUA
AF MUTE SW
Q26
DTC144EUA
NAND GATE
IC30
TC7SH00FU-F
DIVIDER
IC31
TC7MH4040FK-F
DSP
IC37
320VC5402PGE
CLOCK SHIFT SW
Q10
2SC4738F
CLOCK SHIFT SW
Q12
2SC4738F
X2
L77-1987-05
16.S15072MHz
ADSP_CK_SFT
18DSP
SCLK
BCLK
LRCK
MCLK
SPo
SPG
STB1_L
DSP_RS
DSP_iNT
RY
WR
RD
STB_L

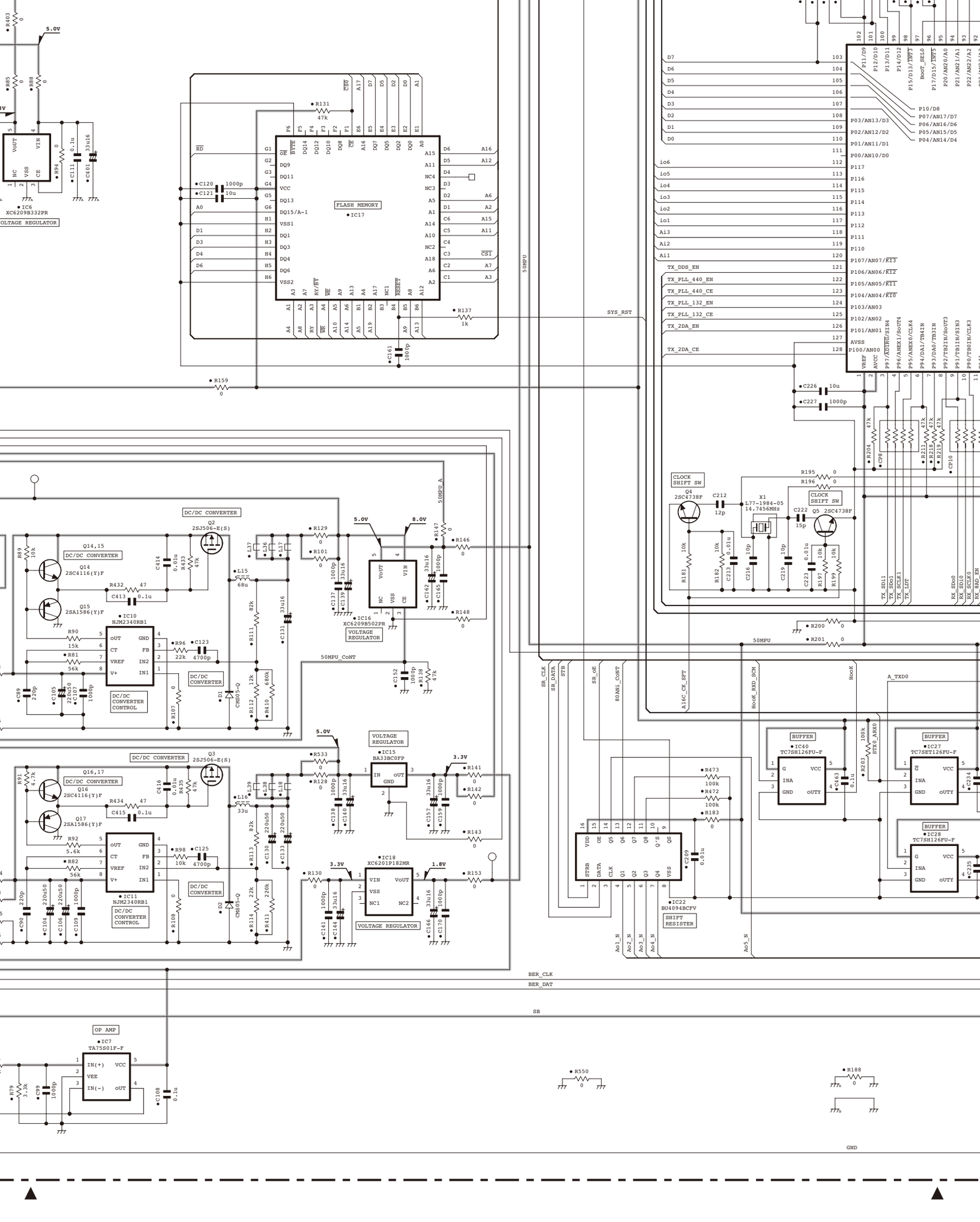
SCHEMATIC DIAGRAM NXR-700

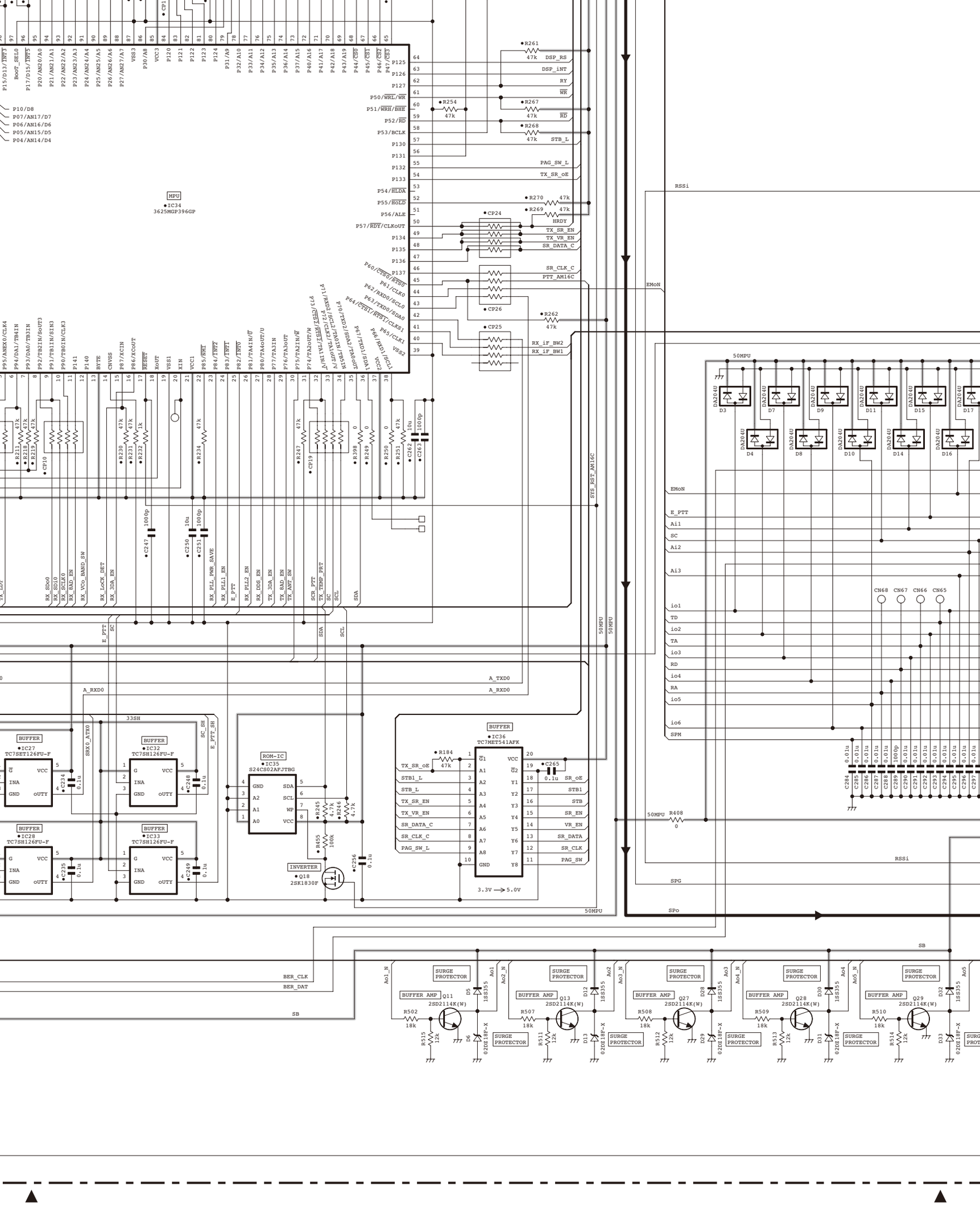
Note : The components marked with a dot (•) are parts of layer 1.

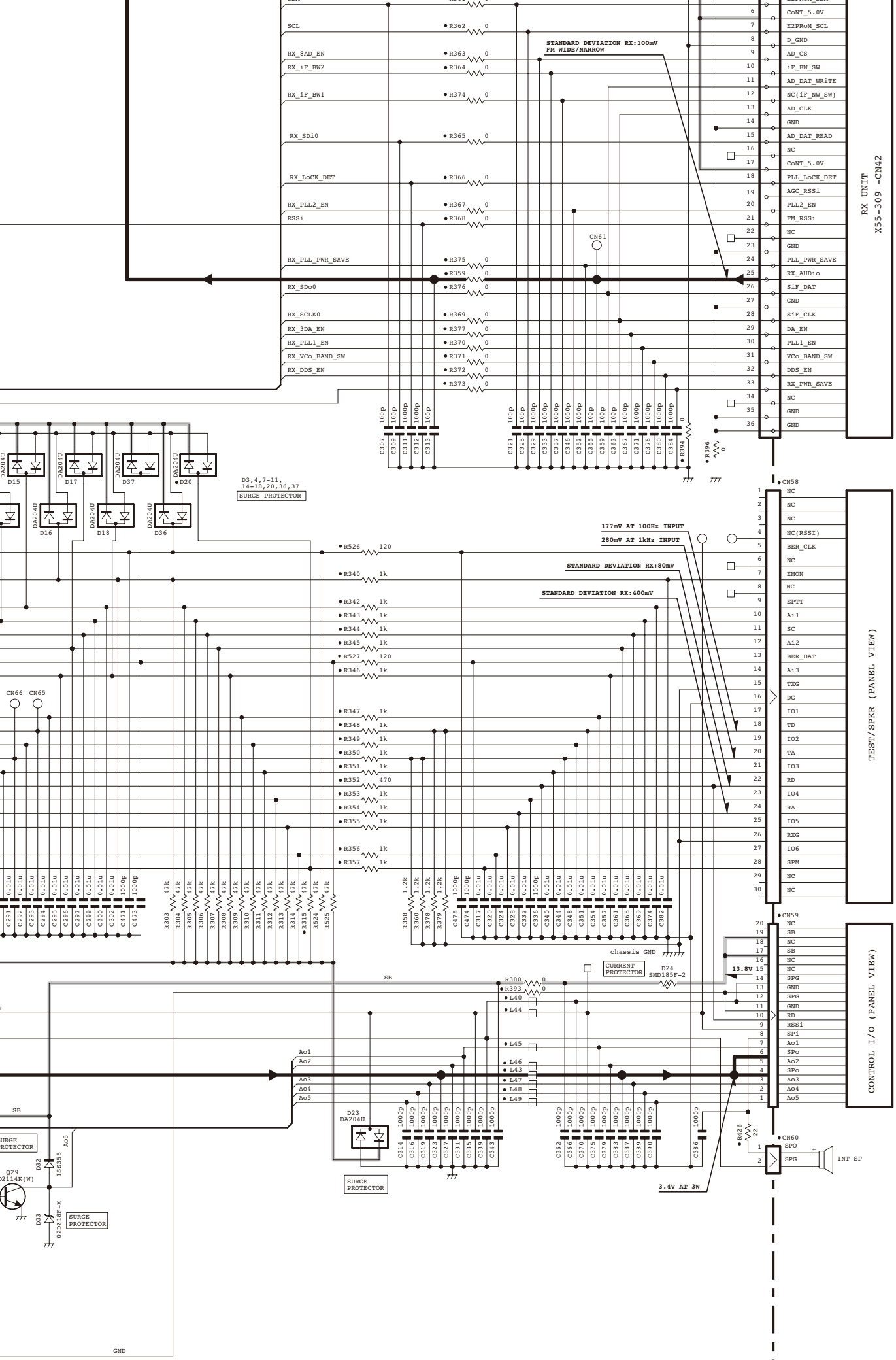
mV:AC voltage value measured with an electronic voltmeter.
The unit is mVrms.
V:DC voltage value
rms:60% modulation TX signal or RX signal
Audible signal:Measures it by 1kHz
Sub audible signal:Measures it by 100Hz




CONTROL UNIT
X53-414 -CN401
CN1
PTT_TXD_SCM
GND
Lo_Vol_DET
NC
TD_SW
MiCAD_SW
MiC_SW
RXAD_SW
PATH_SW
BEEP_SW
TA_SW
TAAD_SW
EVOL_LD
GND
EVOL_CLK
PTT_AM16C
EVOL_DATA
iNSP_SW
AF_MUTE
SCM_EN
AMP_SW
HooK_RXD_SCM
NC
iNRA_SW
MiC_D_IN
BEEP
RX_AUDIO_D
GND
MoD_D_OUT
PWR_ST_R
VOLUME_IN
oCXo_ST_G
oCXo_ST_R
RX_PWR_SAVE
GND
GND
FM-NARROW
MIC INPUT
5.5mVrms at 1kHz:52mVrms
CONTROL UNIT
X53-414 -CN402
CN2
SYS_RST
GND
BER_CLK
BER_DAT
A16C_CK_SFT
TRUNKiNG
ADSP_CK_SFT
GND
RADiO_ERR
QT_DQT
TX_STATE
RF_PTT
GND
STXO_ARXO
SRXO_ATXO
GND
SC_SH
E_PTT_SH
NC
50MPU_CoNT
33SH
33MPU_A
50MPU_A
33MPU_A_GND
33MPU
33MPU
33MPU_A_GND
DC50
DC50
DC50
DC50
50MPU_A_GND
50MPU
50MPU_A_GND
GND
Hi_VOL_DET
5.0V
3.3V
3.3V
3.3V
5.0V
FINAL UNIT
X45-381 (C/5)-CN11
CN4
13.8V
GND
IC6
XC6209B332PR
VOLTAGE REGULATOR
3.3V
5.0V
DC50
DC8
SB
33SH
33MPU
BER_CLK
BER_DAT


FLASH MEMORY
IC17
IC6
XC6209B332PR
VOLTAGE REGULATOR
DC/DC CONVERTER
DC/DC CONVERTER CONTROL
IC10
NJM2340RB1
IC11
IC16
XC6209B502PR
IC15
BA33BC0FP
IC18
XC6201P182MR
IC22
BU4094BCFV
SHIFT RESISTER
IC40
TC7SH126FU-F
IC27
TC7SET126FU-F
IC28
TC7SH126FU-F
BUFFER
IC7
TA75S01F-F
OP AMP
CLOCK SHIFT SW
X1
L77-1984-05
14.7456MHz
Q2
2SJ506-E(S)
Q3
2SJ506-E(S)
Q4
2SC4738F
Q5
2SC4738F
Q14,15
Q14
2SC4116(Y)F
Q15
2SA1586(Y)F
Q16,17
Q16
2SC4116(Y)F
Q17
2SA1586(Y)F
5.0V
8.0V
3.3V
1.8V
SYS_RST
50MPU
50MPU_A
50MPU_CONT
SR_CLK
SR_DATA
SFTB
SR_OE
80ANA_CONT
A16C_CK_SFT
HOOK_RXD_SCM
HOOK
A_TXD0
SFTA0_ARX0
BER_CLK
BER_DAT
SB
GND


MPU
IC34
3625MGP396GP
IC36
TC7MET541AFK
BUFFER
ROM-IC
IC35
S24CS02AFJTBG
INVERTER
Q18
2SK1830F
3.3V → 5.0V
SURGE PROTECTOR
BUFFER AMP
2SD2114K(W)
1SS355
02DZ18F-X
50MPU
RSSi
SPG
SPo
SB
EMoN
SYS_RST_AM16C
BER_CLK
BER_DAT
A_TXD0
A_RXD0
E_PTT
SC
SDA
SCL
33SH
SC_SH
E_PTT_SH
SRX0_ATX0


RX UNIT
X55-309 -CN42
TEST/SPKR (PANEL VIEW)
CONTROL I/O (PANEL VIEW)
CN58
CN59
CN60
CN61
CN66
CN65
SCL
RX_8AD_EN
RX_iF_BW2
RX_iF_BW1
RX_SDi0
RX_LoCK_DET
RX_PLL2_EN
RSSi
RX_PLL_PWR_SAVE
RX_SDo0
RX_SCLK0
RX_3DA_EN
RX_PLL1_EN
RX_VCo_BAND_SW
RX_DDS_EN
STANDARD DEVIATION RX:100mV
FM WIDE/NARROW
177mV AT 100Hz INPUT
280mV AT 1kHz INPUT
STANDARD DEVIATION RX:80mV
STANDARD DEVIATION RX:400mV
D3,4,7-11,
14-18,20,36,37
SURGE PROTECTOR
CURRENT
PROTECTOR
D24
SMD185F-2
chassis GND
13.8V
3.4V AT 3W
INT SP
SB
GND

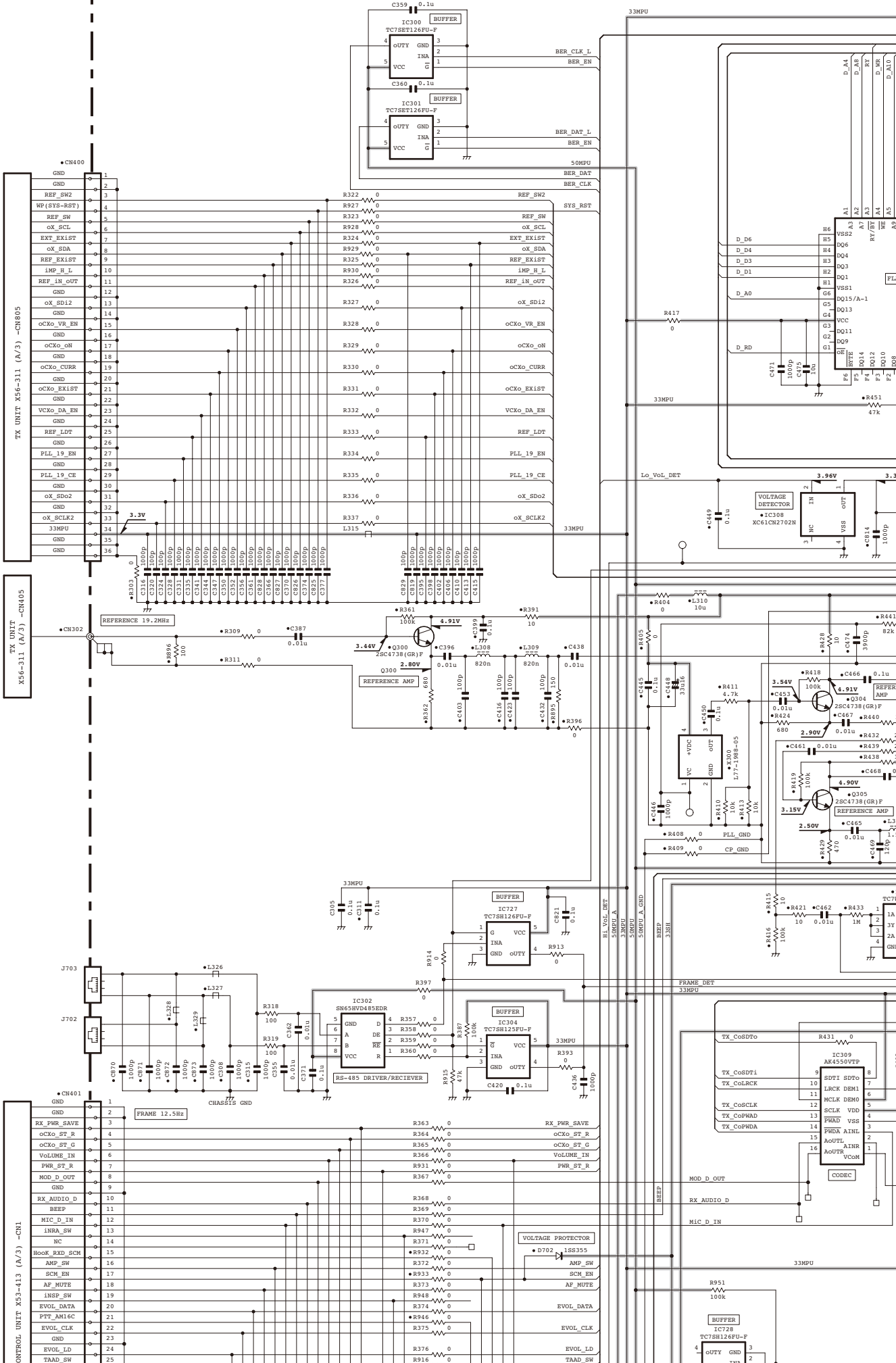
NXR-700 SCHEMATIC DIAGRAM

CONTROL UNIT2 (X53-4140-10)

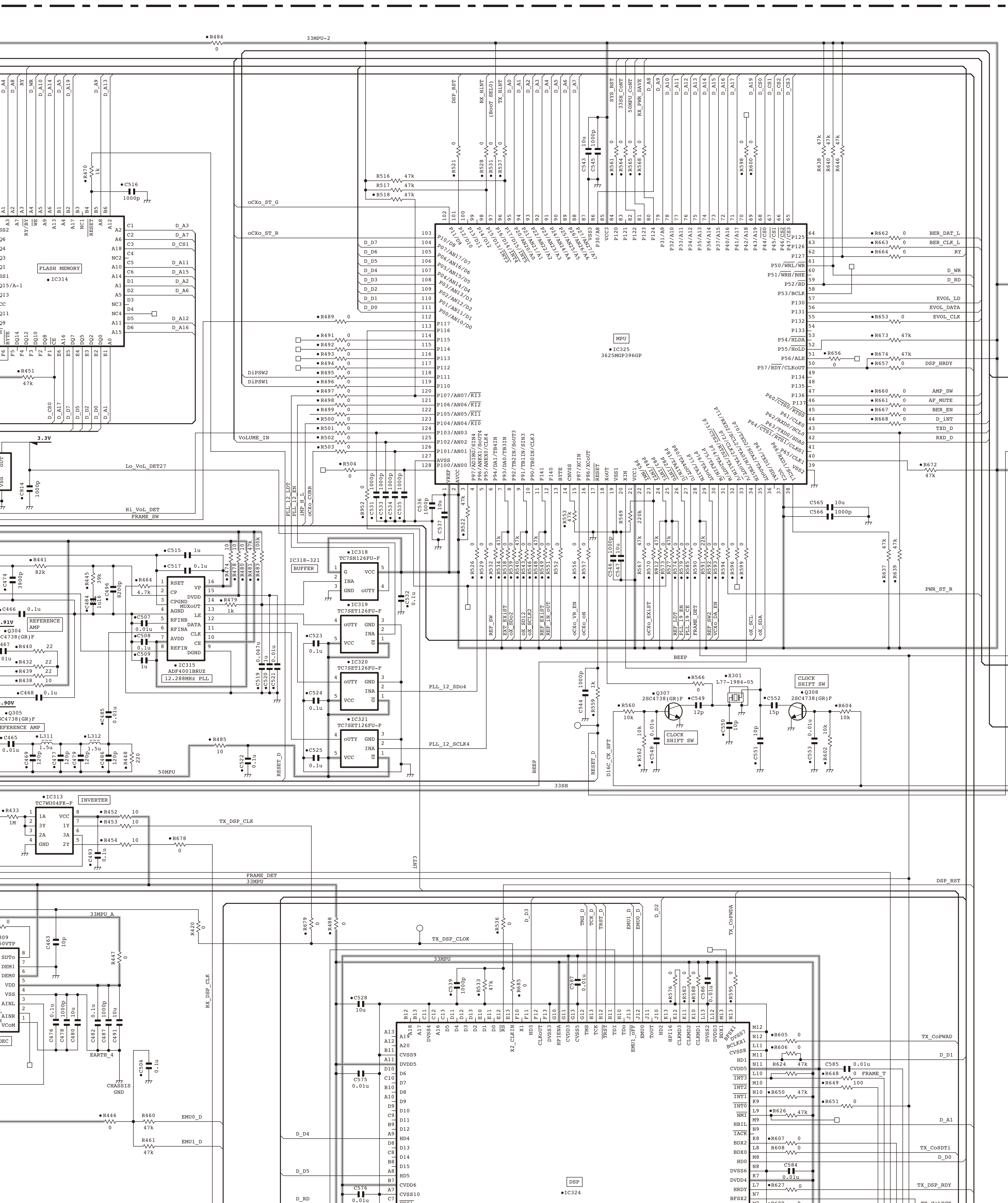
Note : The components marked with a dot (•) are parts of layer 1.

NXR-700 SCHEMATIC DIAGRAM

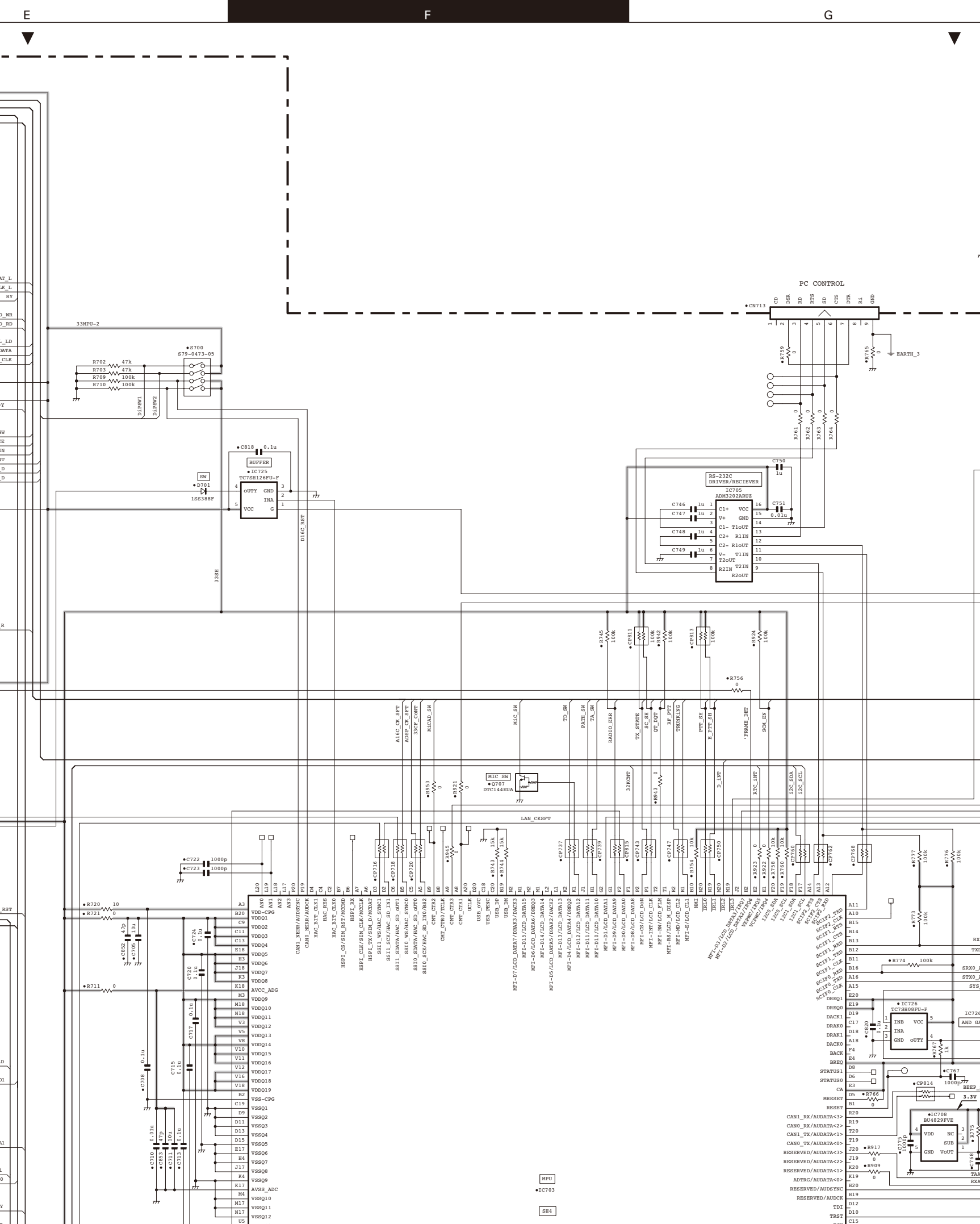
CONTROL UNIT2 (X53-4140-10)



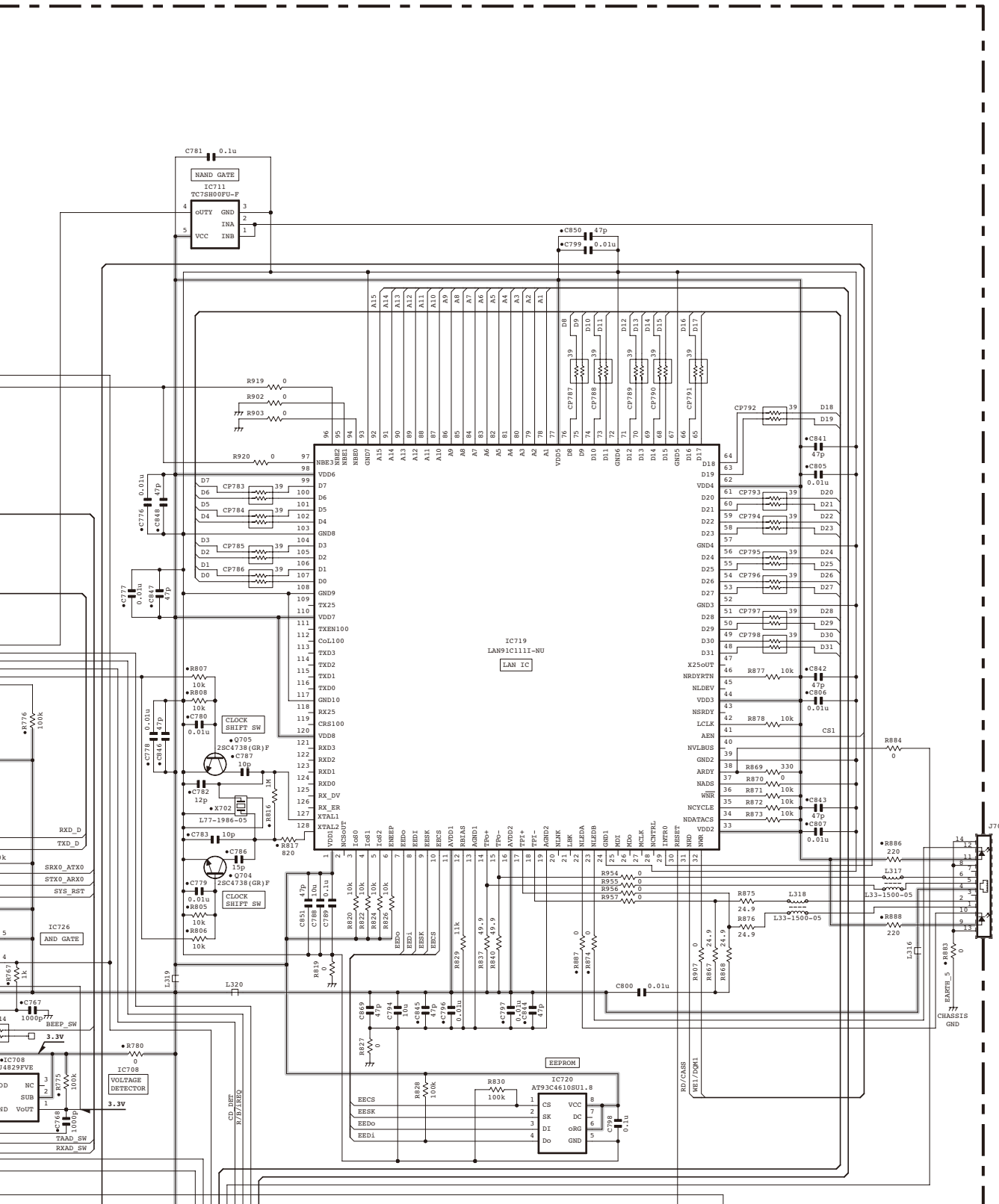
C D E

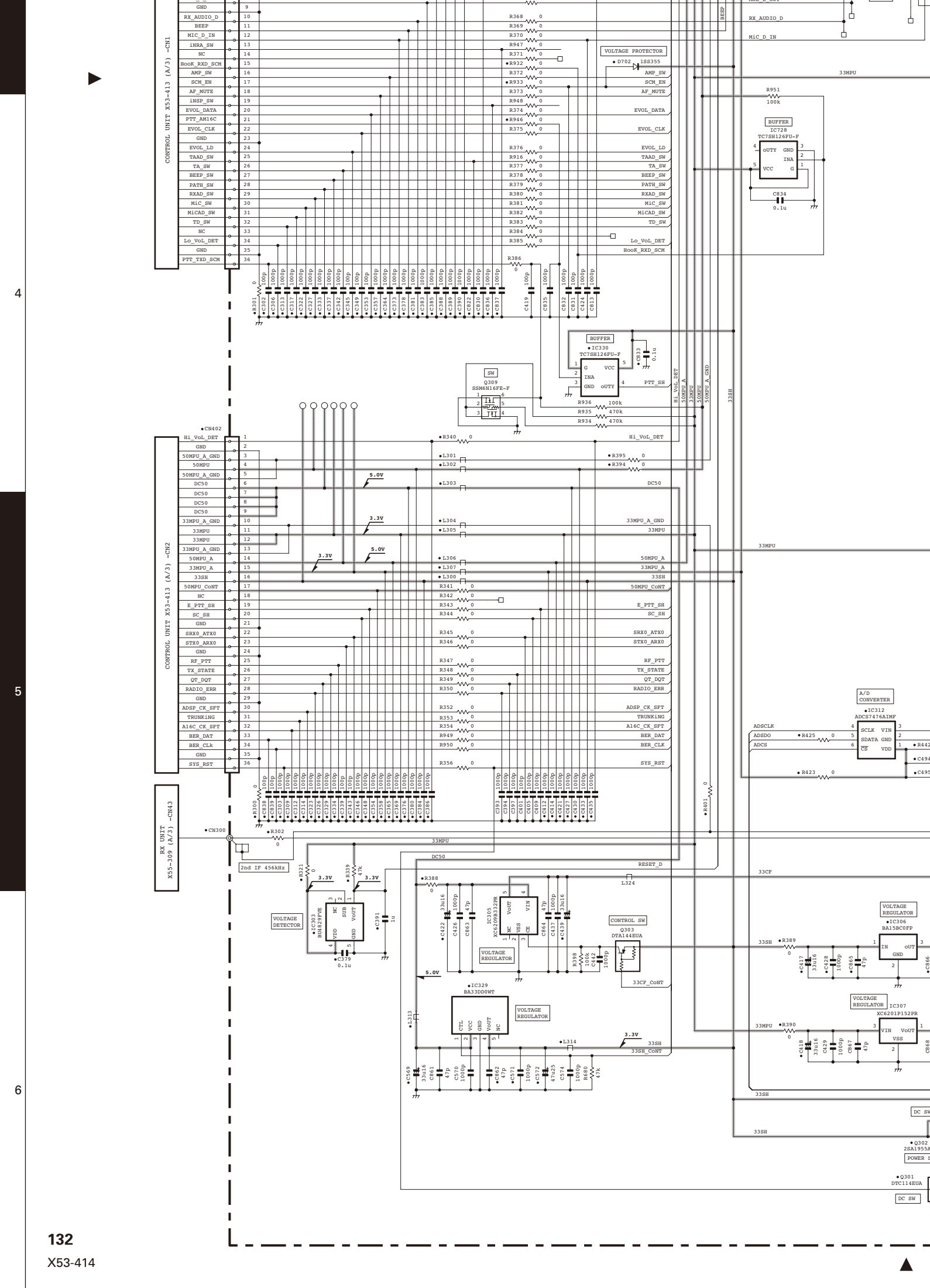


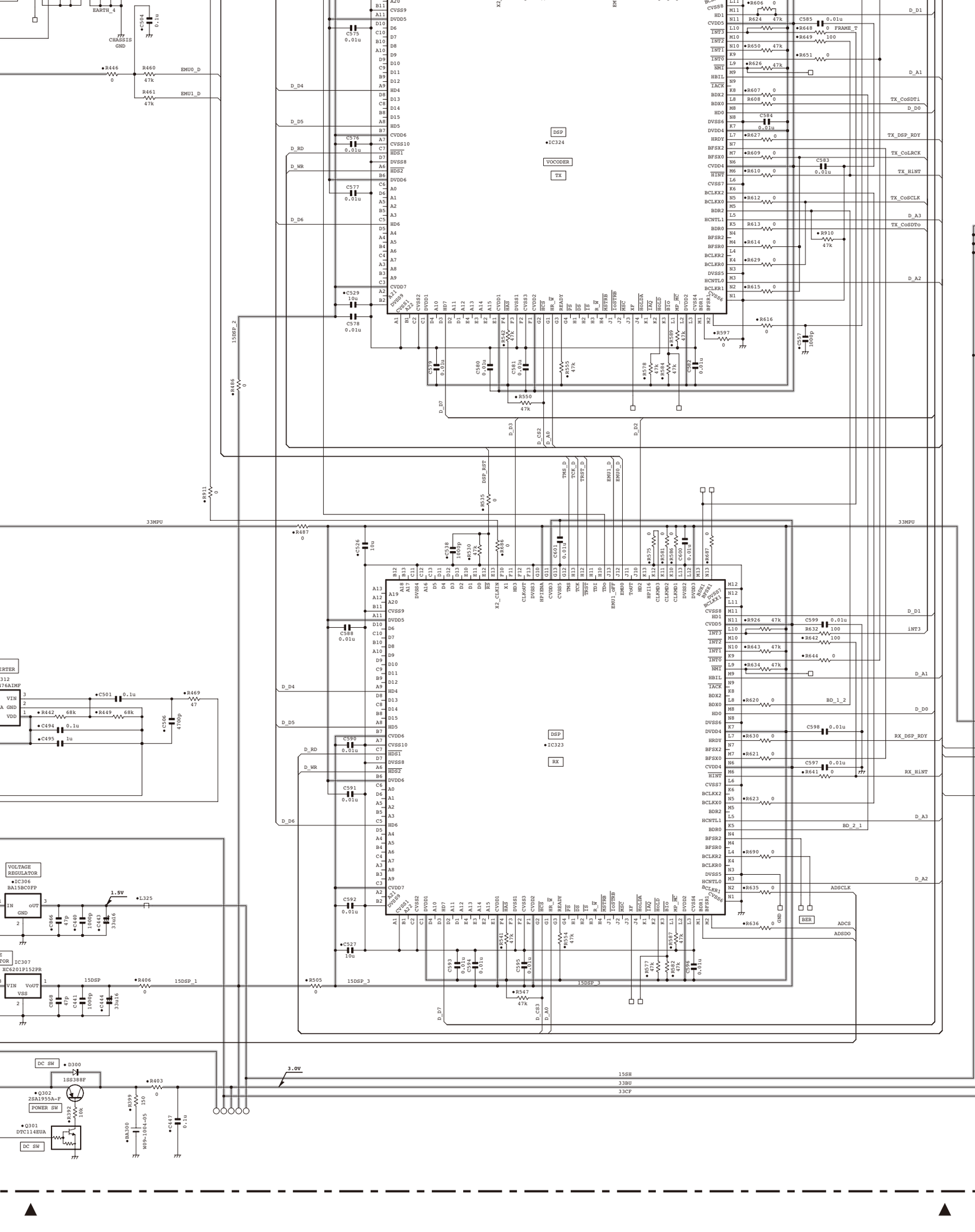
FLASH MEMORY
IC314
MPU
IC325
3625MGP396GP
IC318
TC7SH126FU-F
IC318-321
BUFFER
IC319
TC7SET126FU-F
IC320
TC7SET126FU-F
IC321
TC7SET126FU-F
IC315
ADF4001BRUZ
12.288MHz PLL
REFERENCE AMP
Q304
2SC4738(GR)F
Q305
2SC4738(GR)F
IC313
TC7WU04FK-F
INVERTER
Q307
2SC4738(GR)F
Q308
2SC4738(GR)F
X301
L77-1984-05
CLOCK SHIFT SW
DSP
IC324
CHASSIS GND
EARTH_4
33MPU-2
33MPU
33MPU_A
33SH
50MPU
3.3V
oCXo_ST_G
oCXo_ST_R
DiPSW2
DiPSW1
VOLUME_IN
Lo_VoL_DET27
Hi_VoL_DET
FRAME_SW
PLL_12_SDo4
PLL_12_SCLK4
BEEP
RESET_D
D16C_CK_SFT
TX_DSP_CLK
FRAME_DET
33MPU
iNT3
RX_DSP_CLK
EMU0_D
EMU1_D
DSP_RST
PWR_ST_R
BER_DAT_L
BER_CLK_L
RY
D_WR
D_RD
EVOL_LD
EVOL_DATA
EVOL_CLK
DSP_HRDY
AMP_SW
AF_MUTE
BER_EN
D_iNT
TXD_D
RXD_D
TX_CoPWAD
D_D1
FRAME_T
D_A1
TX_CoSDTi
D_D0
TX_DSP_RDY
TX_DSP_CLOK

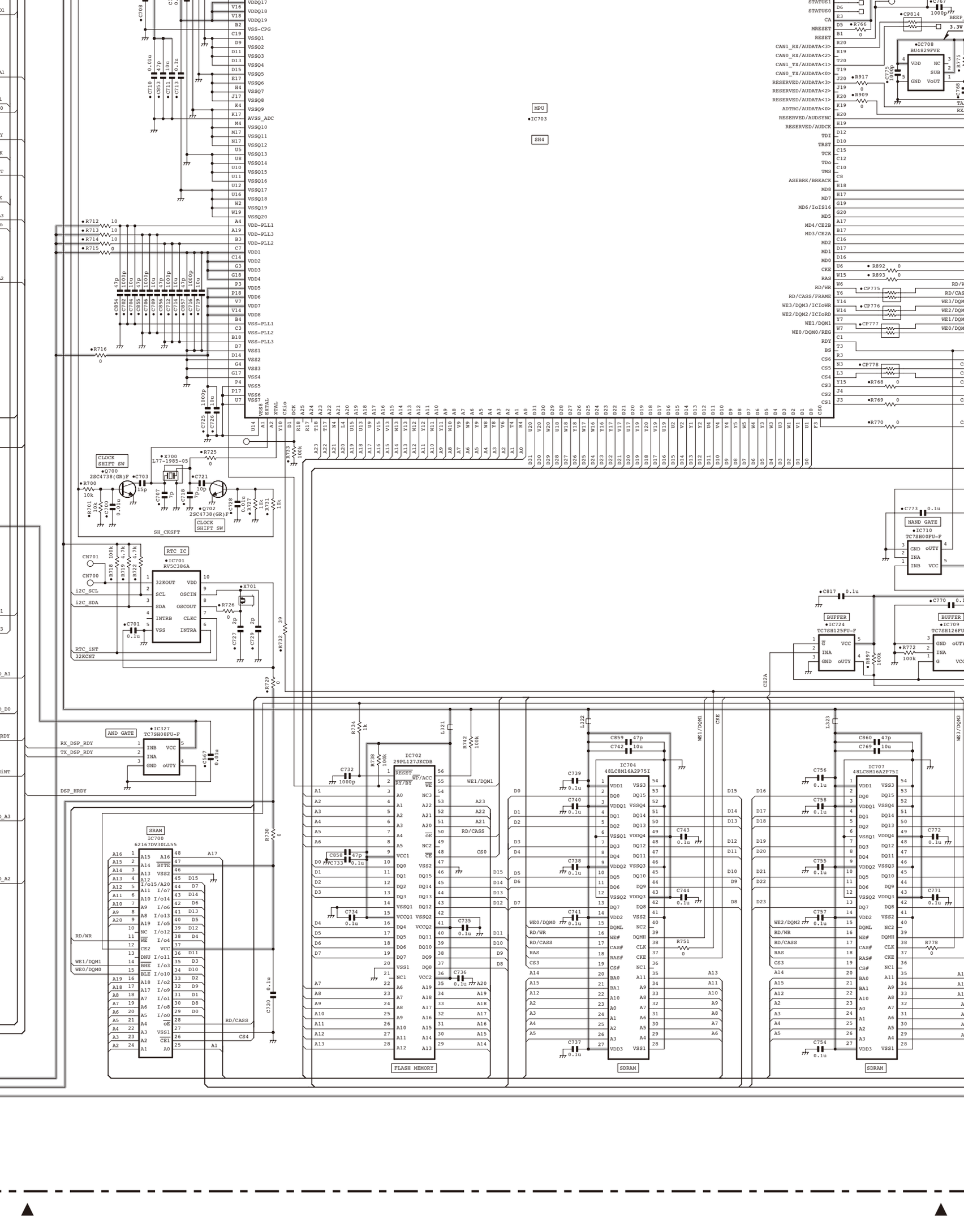

E
F
G
PC CONTROL
CN713
CD DSR RD RTS SD CTS DTR RI GND
33MPU-2
S700
S79-0473-05
R702 47k
R703 47k
R709 100k
R710 100k
D1PSW1
D1PSW2
C818 0.1u
BUFFER
IC725
TC7SH126FU-F
oUTY GND INA VCC G
SW
D701
1SS388F
D16C_RST
33SH
R759 0
R765 0
EARTH_3
R761 0
R762 0
R763 0
R764 0
C750 1u
RS-232C DRIVER/RECIEVER
IC705
ADM3202ARUZ
C746 1u
C747 1u
C748 1u
C749 1u
C751 0.01u
C1+ VCC V+ GND C1- T1oUT C2+ R1IN C2- R1oUT V- T1IN T2oUT R2IN T2IN R2oUT
R745 100k
CP811 10k
R942 100k
CP813 100k
R924 100k
R756 0
A16C_CK_SFT
ADSP_CK_SFT
33CP_CONT
W1CAD_SW
MIC_SW
TD_SW
PATH_SW
TA_SW
RADIO_ERR
TX_SYNTH
SC_SH
QT_DQT
RF_PTT
TRUNKING
PTT_SH
B_PTT_SH
*FRAME_DET
SCN_EN
MIC SW
Q707
DTC144EUA
R953 0
R921 0
32KCNT
R943 0
D_INT
RTC_INT
I2C_SDA
I2C_SCL
LAN_CKSFT
C722 1000p
C723 1000p
R720 10
R721 0
R711 0
C852 47p
C709 10u
C724 0.1u
C720 0.1u
C717 0.1u
C715 0.1u
C708 0.1u
C710 0.01u
C853 47p
C711 10u
C713 0.1u
R845 0
R743 15k
R744 15k
CP716
CP718
CP720
CP737
CP739
CP815
CP743
CP747
CP750
R754 10k
CP762
CP768
R923 0
R922 0
R758 10k
R760 10k
R777 100k
R776 100k
R773 100k
R774 100k
R766 0
C820 0.1u
R767 1k
C767 1000p
CP814
BEEP_
3.3V
IC708
BU4829FVE
VDD NC SUB GND VOUT
C709 0.01u
R775
C768
R917 0
R909 0
MPU
IC703
SH4
VDD-CPG
VDDQ1 VDDQ2 VDDQ3 VDDQ4 VDDQ5 VDDQ6 VDDQ7 VDDQ8 AVCC_ADG VDDQ9 VDDQ10 VDDQ11 VDDQ12 VDDQ13 VDDQ14 VDDQ15 VDDQ16 VDDQ17 VDDQ18 VDDQ19
VSS-CPG
VSSQ1 VSSQ2 VSSQ3 VSSQ4 VSSQ5 VSSQ6 VSSQ7 VSSQ8 VSSQ9
AVSS_ADC
VSSQ10 VSSQ11 VSSQ12
CAN1_NERR/AUDSYNC
CAN0_NERR/AUDCK
HAC_BIT_CLK1
HAC_RES
HAC_BIT_CLK0
HSPI_CS/SIM_RST/MCCMD
HSPI_RX
HSPI_CLK/SIM_CLK/MCCLK
HSPI_TX/SIM_D/MCDAT
SSI1_WS/HAC_SYNC1
SSI1_SCK/HAC_SD_IN1
SSI1_SDATA/HAC_SD_OUT1
SSIO_WS/HAC_SYNCO
SSIO_SDATA/HAC_SD_OUTO
SSIO_SCK/HAC_SD_IN0/FAS2
CMT_CTR2
CMT_CTR0/TCLK
CMT_CTR3
CMT_CTR1
UCLK
USB_oVC
USB_PENC
USB_DP
USB_DM
MFI-D7/LCD_DATA7/DRAK3/DACK3
MFI-D15/LCD_DATA15
MFI-D6/LCD_DATA6/DREQ3
MFI-D14/LCD_DATA14
MFI-D5/LCD_DATA5/DRAK2/DACK2
MFI-D13/LCD_DATA13
MFI-D4/LCD_DATA4/DREQ2
MFI-D12/LCD_DATA12
MFI-D11/LCD_DATA11
MFI-D10/LCD_DATA10
MFI-D1/LCD_DATA1
MFI-D9/LCD_DATA9
MFI-D0/LCD_DATA0
MFI-D8/LCD_DATA8
MFI-CS/LCD_DON
MFI-INF/LCD_CLK
MFI-HW/LCD_TIM
MFI-RS/LCD_M_DISP
MFI-WD/LCD_CL2
MFI-E/LCD_CL1
MFI-D3/LCD_DATA3/TXD7
MFI-D2/LCD_DATA2/RXD7
VBPWC/AN05
VCPWC/AN04
I2C0_SDA
I2C0_SCL
I2C1_SDA
I2C1_SCL
SCIF2_RTS
SCIF2_CTS
SCIF2_RXD
SCIF2_TXD
SCIF2_CLK
SCIF1_RTS
SCIF1_CTS
SCIF1_RXD
SCIF1_TXD
SCIF1_CLK
SCIF0_RXD
SCIF0_TXD
SCIF0_CLK
DREQ1 DREQ0 DACK1 DRAK0 DRAK1 DACK0 BACK BREQ STATUS1 STATUS0 CA MRESET RESET
CAN1_RX/AUDATA<3>
CAN0_RX/AUDATA<2>
CAN1_TX/AUDATA<1>
CAN0_TX/AUDATA<0>
RESERVED/AUDATA<3>
RESERVED/AUDATA<2>
RESERVED/AUDATA<1>
ADTRG/AUDATA<0>
RESERVED/AUDSYNC
RESERVED/AUDCK
TDI TRST
IC726
TC7SH08FU-F
INB VCC INA GND oUTY
AND GA
RX
TXD
SRX0_A
STX0_A
SYS_
TAA
RXA

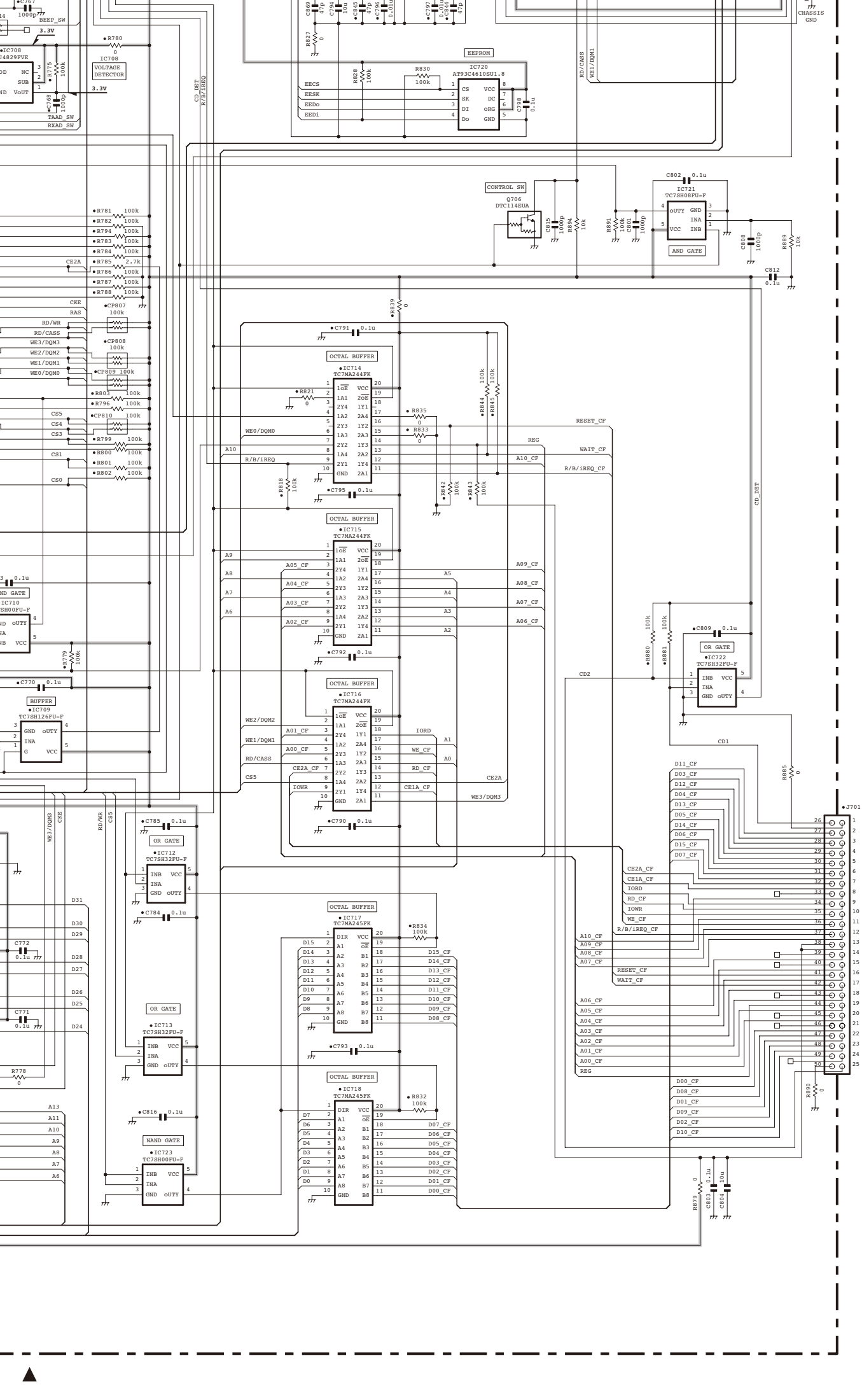
Note : The components marked with a dot (•) are parts of layer 1.




CONTROL UNIT X53-413 (A/3) -CN1
CONTROL UNIT X53-413 (A/3) -CN2
RX UNIT X55-309 (A/3) -CN43
VOLTAGE PROTECTOR
BUFFER
SW
A/D CONVERTER
VOLTAGE REGULATOR
VOLTAGE DETECTOR
CONTROL SW
2nd IF 456kHz
33MPU
33SH
DC50
5.0V
3.3V
RESET_D
33CF
DC SW
POWER S


DSP
IC324
VOCODER
TX
DSP
IC323
RX
VOLTAGE REGULATOR
IC306
BA15BC0FP
IC307
XC6201P152PR
POWER SW
DC SW
Q302
2SA1955A-F
Q301
DTC114EUA
D300
1SS388F
33MPU
15DSP
15DSP_1
15DSP_2
15DSP_3
3.0V
1.5V
DSP_RST
TX_CoSDTi
TX_CoSDTo
TX_CoLRCK
TX_CoSCLK
TX_DSP_RDY
TX_HiNT
RX_DSP_RDY
RX_HiNT
ADSCLK
ADSDO
BER
FRAME_T
15SH
33BU
33CF


MPU
IC703
SH4
CLOCK SHIFT SW
Q700 2SC4738(GR)F
Q702 2SC4738(GR)F
X700 L77-1985-05
SH_CKSFT
RTC IC
IC701 RV5C386A
32KOUT
SCL
SDA
INTRB
VSS
VDD
OSCIN
OSCOUT
CLKC
INTRA
i2C_SCL
i2C_SDA
RTC_iNT
32KCWF
X701
CN701
CN700
AND GATE
IC327 TC7SH08FU-F
RX_DSP_RDY
TX_DSP_RDY
DSP_HRDY
SRAM
IC700 62167DV30LL55
RD/WR
WE1/DQM1
WE0/DQM0
RD/CASS
CS4
IC702 29PL127JKCDB
FLASH MEMORY
IC704 48LC8M16A2P75I
IC707 48LC8M16A2P75I
SDRAM
NAND GATE
IC710 TC7SH00FU-F
BUFFER
IC724 TC7SH125FU-F
IC709 TC7SH126FU
CE2A
CKE
WE3/DQM3
IC708 BU4829FVE
3.3V
BEEP_
TA
RX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IC720
AT93C4610SU1.8
CS
SK
DI
Do
VCC
DC
oRG
GND
EECS
EESK
EEDo
EEDi
VOLTAGE DETECTOR
CONTROL SW
Q706
DTC114EUA
IC721
TC7SH08FU-F
AND GATE
OCTAL BUFFER
IC714
TC7MA244FK
IC715
IC716
IC717
TC7MA245FK
IC718
OR GATE
IC722
TC7SH32FU-F
IC712
IC713
BUFFER
IC709
TC7SH126FU-F
NAND GATE
IC723
TC7SH00FU-F
J701
RESET_CF
WAIT_CF
R/B/iREQ_CF
REG
A10_CF
WE0/DQM0
WE2/DQM2
WE1/DQM1
RD/CASS
CS5
CS4
CS3
CS1
CS0
CKE
RAS
RD/WR
CD_DET
CD1
CD2
IORD
WE_CF
RD_CF
CE1A_CF
CE2A_CF
IOWR
WE3/DQM3
TAAD_SW
RXAD_SW
CHASSIS GND
3.3V

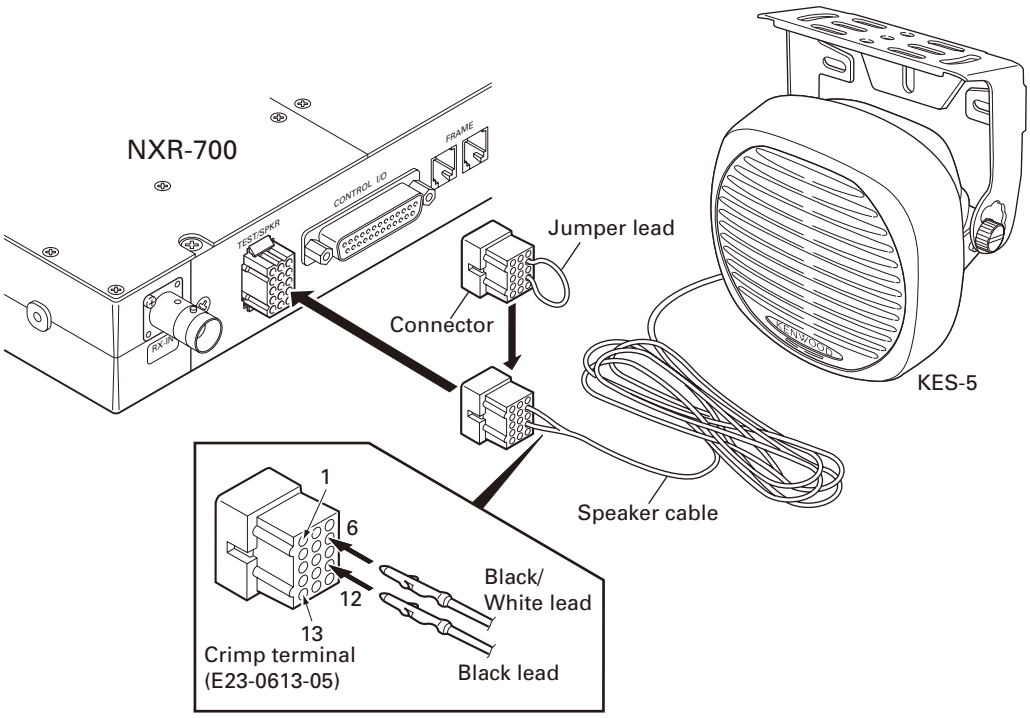
OPTIONAL ACCESSORIES: KES-5 (EXTERNAL SPEAKER)

When Using an External Speaker

1. Make sure the unit's power is tuned off.
2. When using the external speaker, remove the jumper lead from the connector, and attach the speaker cable.
3. When not using the external speaker, replace the jumper lead and insert the connector into the speaker jack (pin9 and 12).

Specifications

Maximum input power 40W
Impedance 4Ω
Dimensions (W x H x D) projection not included
..... 129 x 129 x 77 mm (51/16 x 5-1/16 x 3 inches)
Weight ..... 820g / 1.81 lbs



OPTIONAL ACCESSORIES: KXK-3 (OCXO UNIT)

Components Description

■ ACCESSORY UNIT (X42-3280-20)

Ref. No.	Part Name	Description
IC3	MOS-IC	Gigital potentiometer
IC4	Analogue IC	OP AMP
IC6	MOS-IC	OP AMP
IC9	Bi-polar IC	Voltage regulator
IC10	MOS-IC	Inverter
IC11	ROM IC	EEPROM
IC12	Analogue IC	ADC
Q2~4	FET	DC switch
Q5,6	Transistor	RF AMP
Q13~17	FET	DC switch
D5	Diode	DC switch
D8	Diode	Detector

Parts List

✻ New Parts.

Ref. No.	Address	New parts	Parts No.	Description
KXK-3				
		✻	B62-2022-00	INSTRUCTION MANUAL
			E31-3269-05	LEAD WIRE WITH MINIPIN PLUG
		✻	E37-1405-05	FLAT CABLE
		✻	E37-1406-05	LEAD WIRE WITH CONNECTOR
			N67-3008-48	PAN HEAD SEMS SCREW
IC9		✻	NJM7805FA-ZB	BI-POLAR IC
ACCESSORY UNIT (X42-3280-20)				
C1-4			CK73GB1H471K	CHIP C 470PF K
C5			CK73GB1H104K	CHIP C 0.10UF K
C6			CK73GB1H471K	CHIP C 470PF K
C7			CK73GB1H102K	CHIP C 1000PF K
C8			CK73GB1H471K	CHIP C 470PF K
C10			CK73GB1H471K	CHIP C 470PF K
C12			CK73GB1H103K	CHIP C 0.010UF K
C13			CK73GB1H104K	CHIP C 0.10UF K
C14			CC73GCH1H090B	CHIP C 9.0PF B
C16-19			CK73GB1H104K	CHIP C 0.10UF K
C20			CK73GB1H471K	CHIP C 470PF K
C21,22			CK73GB1H104K	CHIP C 0.10UF K
C24			CC73GCH1H030B	CHIP C 3.0PF B
C26			CK73GB1H471K	CHIP C 470PF K
C27			CK73GB1H103K	CHIP C 0.010UF K
C28			CK73GB1H104K	CHIP C 0.10UF K
C29			CC73GCH1H060B	CHIP C 6.0PF B
C30		✻	CE32AU1C330M	CHIP EL 33UF 16WV
C31			CK73GB1H104K	CHIP C 0.10UF K
C33			CK73GB1H104K	CHIP C 0.10UF K
C35			CK73GB1H104K	CHIP C 0.10UF K
C36-39			CK73GB1H471K	CHIP C 470PF K
C46			CC73GCH1H820J	CHIP C 82PF J
C47			CK73GB1H104K	CHIP C 0.10UF K
C54			CK73GB1H104K	CHIP C 0.10UF K
C56			CK73GB1H104K	CHIP C 0.10UF K
C59			CK73GB1H104K	CHIP C 0.10UF K
C61			CC73GCH1H560J	CHIP C 56PF J
C62			CK73GB1H104K	CHIP C 0.10UF K
C63			CC73GCH1H391J	CHIP C 390PF J
C64			CK73GB1H104K	CHIP C 0.10UF K
C71			CC73GCH1H101J	CHIP C 100PF J
C72			CC73GCH1H270J	CHIP C 27PF J
C73			CC73GCH1H101J	CHIP C 100PF J
C80			CK73GB1H104K	CHIP C 0.10UF K
C81			CC73GCH1H050B	CHIP C 5.0PF B
C82			CC73GCH1H1R5B	CHIP C 1.5PF B
C84			CC73GCH1H220J	CHIP C 22PF J
C86			CK73GB1E105K	CHIP C 1.0UF K
C87,88			CK73GB1H471K	CHIP C 470PF K
C89			CC73GCH1H101J	CHIP C 100PF J
C90			CK73GB1H104K	CHIP C 0.10UF K
C91			CK73GB1H103K	CHIP C 0.010UF K
C93			CK73GB1H104K	CHIP C 0.10UF K
C94			CK73GB1H103K	CHIP C 0.010UF K
C95,96		✻	CS77CC1C100M	CHIP TNTL 10UF 16WV
C97			CK73GB1H104K	CHIP C 0.10UF K
C99			CK73GB1H103K	CHIP C 0.010UF K
C100,101			CK73GB1H104K	CHIP C 0.10UF K
C102,103			CK73GB1H471K	CHIP C 470PF K
C104			CK73GB1H103K	CHIP C 0.010UF K
C105			CK73GB1H104K	CHIP C 0.10UF K
CN1		✻	E40-6822-05	FLAT CABLE CONNECTOR
CN2			E04-0154-05	PIN SOCKET
CN3			E41-2671-05	PIN ASSY
F1			F53-0324-05	FUSE (2.5A)
L4			L41-2205-33	SMALL FIXED INDUCTOR (22UH)
L5		✻	L41-1205-33	SMALL FIXED INDUCTOR (12UH)
L6			L41-1505-33	SMALL FIXED INDUCTOR (15UH)
L8			L41-2205-33	SMALL FIXED INDUCTOR (22UH)
L10			L41-3305-33	SMALL FIXED INDUCTOR (33UH)
L15			L41-3305-33	SMALL FIXED INDUCTOR (33UH)
L17		✻	L41-2292-28	SMALL FIXED INDUCTOR (2.2UH)
L19			L41-2295-33	SMALL FIXED INDUCTOR (2.2UH)
L20			L41-6885-33	SMALL FIXED INDUCTOR (0.68UH)
L21			L41-5685-33	SMALL FIXED INDUCTOR (0.56UH)
X1		✻	L77-1977-05	OCXO (10MHZ)
R1-3			RK73GB2A474J	CHIP R 470K J 1/10W
R4-6			RK73GB2A471J	CHIP R 470 J 1/10W
R10			RK73GB2A102J	CHIP R 1.0K J 1/10W
R12,13			RK73GB2A102J	CHIP R 1.0K J 1/10W
R15			RK73GB2A104J	CHIP R 100K J 1/10W
R16			RK73GB2A000J	CHIP R 0.0 J 1/10W
R17			RK73GB2A474J	CHIP R 470K J 1/10W
R18,19			RK73GB2A221J	CHIP R 220 J 1/10W
R20			RK73GB2A101J	CHIP R 100 J 1/10W
R21			RK73GB2A103J	CHIP R 10K J 1/10W

OPTIONAL ACCESSORIES: KXK-3 (OCXO UNIT)

ACCESSORY UNIT (X42-3280-20)

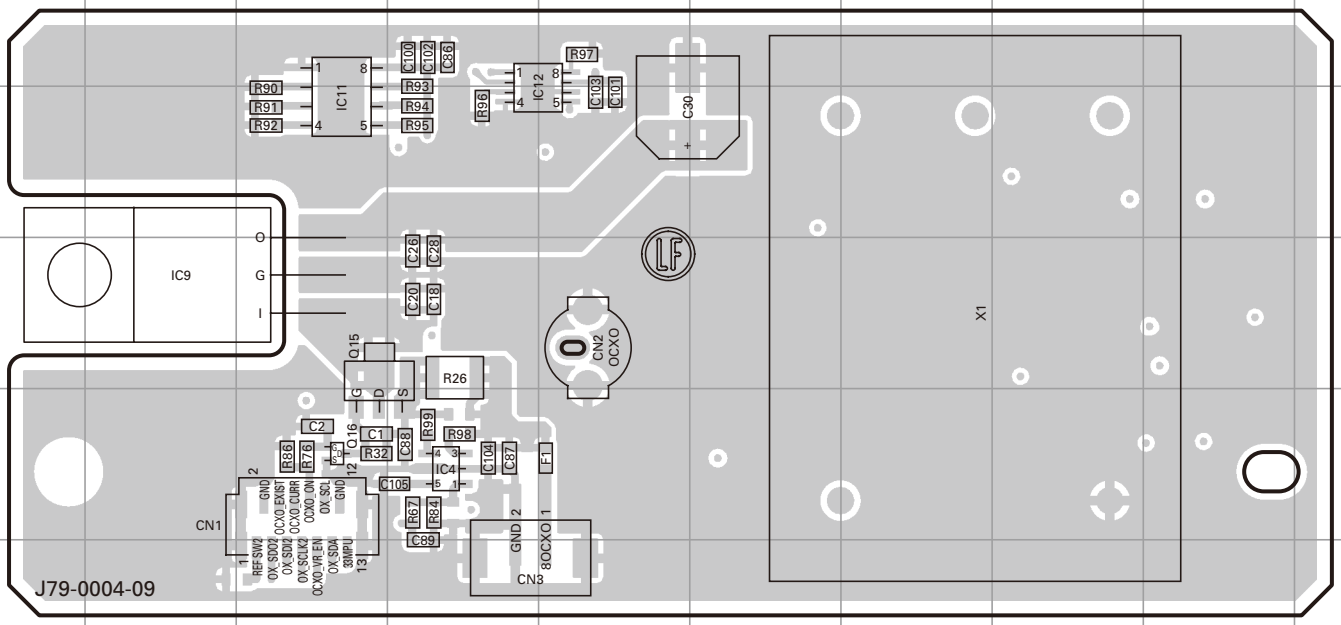
Ref. No.	Address	New parts	Parts No.	Description
R22			RK73GB2A562J	CHIP R 5.6K J 1/10W
R23			RK73GB2A470J	CHIP R 47 J 1/10W
R24			RK73GB2A102J	CHIP R 1.0K J 1/10W
R25			RK73GB2A331J	CHIP R 330 J 1/10W
R26			R92-3475-05	CHIP R 0.27 F 1/2W
R27			RK73GB2A105J	CHIP R 1.0M J 1/10W
R28			RK73GB2A101J	CHIP R 100 J 1/10W
R29			RK73GB2A103J	CHIP R 10K J 1/10W
R30			RK73GB2A181J	CHIP R 180 J 1/10W
R31			RK73GB2A102J	CHIP R 1.0K J 1/10W
R32			RK73GB2A104J	CHIP R 100K J 1/10W
R33			RK73GB2A473J	CHIP R 47K J 1/10W
R34			RK73GB2A153J	CHIP R 15K J 1/10W
R36			RK73GB2A102J	CHIP R 1.0K J 1/10W
R43			RK73GB2A332J	CHIP R 3.3K J 1/10W
R55			RK73GB2A180J	CHIP R 18 J 1/10W
R59,60			RK73GB2A821J	CHIP R 820 J 1/10W
R62			RK73GB2A332J	CHIP R 3.3K J 1/10W
R63,64			RK73GB2A331J	CHIP R 330 J 1/10W
R67			RK73GB2A101J	CHIP R 100 J 1/10W
R68			RK73GB2A103J	CHIP R 10K J 1/10W
R69			RK73GB2A102J	CHIP R 1.0K J 1/10W
R72			RK73GB2A472J	CHIP R 4.7K J 1/10W
R73			RK73GB2A102J	CHIP R 1.0K J 1/10W
R74			RK73GB2A104J	CHIP R 100K J 1/10W
R75			RK73GB2A223J	CHIP R 22K J 1/10W
R76			RK73GB2A471J	CHIP R 470 J 1/10W
R77			RK73GB2A470J	CHIP R 47 J 1/10W
R78,79			RK73GB2A104J	CHIP R 100K J 1/10W
R80			RK73GB2A471J	CHIP R 470 J 1/10W

Ref. No.	Address	New parts	Parts No.	Description
R81			RK73GB2A000J	CHIP R 0.0 J 1/10W
R82,83			RK73GB2A104J	CHIP R 100K J 1/10W
R84			RK73GB2A472J	CHIP R 4.7K J 1/10W
R85			RK73GB2A000J	CHIP R 0.0 J 1/10W
R86			RK73GB2A104J	CHIP R 100K J 1/10W
R87			RK73GB2A100J	CHIP R 10 J 1/10W
R88,89			RK73GB2A102J	CHIP R 1.0K J 1/10W
R90-92			RK73GB2A000J	CHIP R 0.0 J 1/10W
R93-95			RK73GB2A102J	CHIP R 1.0K J 1/10W
R96,97			RK73GB2A103J	CHIP R 10K J 1/10W
R98,99			RK73GB2A561J	CHIP R 560 J 1/10W
D5		✻	JDP4P02U	DIODE
D8			HSM88AS-E	DIODE
IC3		✻	AD5231BRU10	MOS-IC
IC4		✻	LTC6101BIS5-F	ANALOGUE IC
IC6		✻	TC75S59F-F	MOS-IC
IC10			TC7SHU04F-F	MOS-IC
IC11			S24CS02AFJTBG	ROM IC
IC12		✻	AD7418ARMZ	ANALOGUE IC
Q2-4			SSM3K15TE(F)	FET
Q5,6			2SC4617(R)	TRANSISTOR
Q13			SSM6L05FU-F	FET
Q14			SSM3K15TE(F)	FET
Q15			2SJ484	FET
Q16,17			SSM3K15TE(F)	FET

NXR-700 OPTIONAL ACCESSORIES: KXK-3 (OCXO UNIT)

PC Board

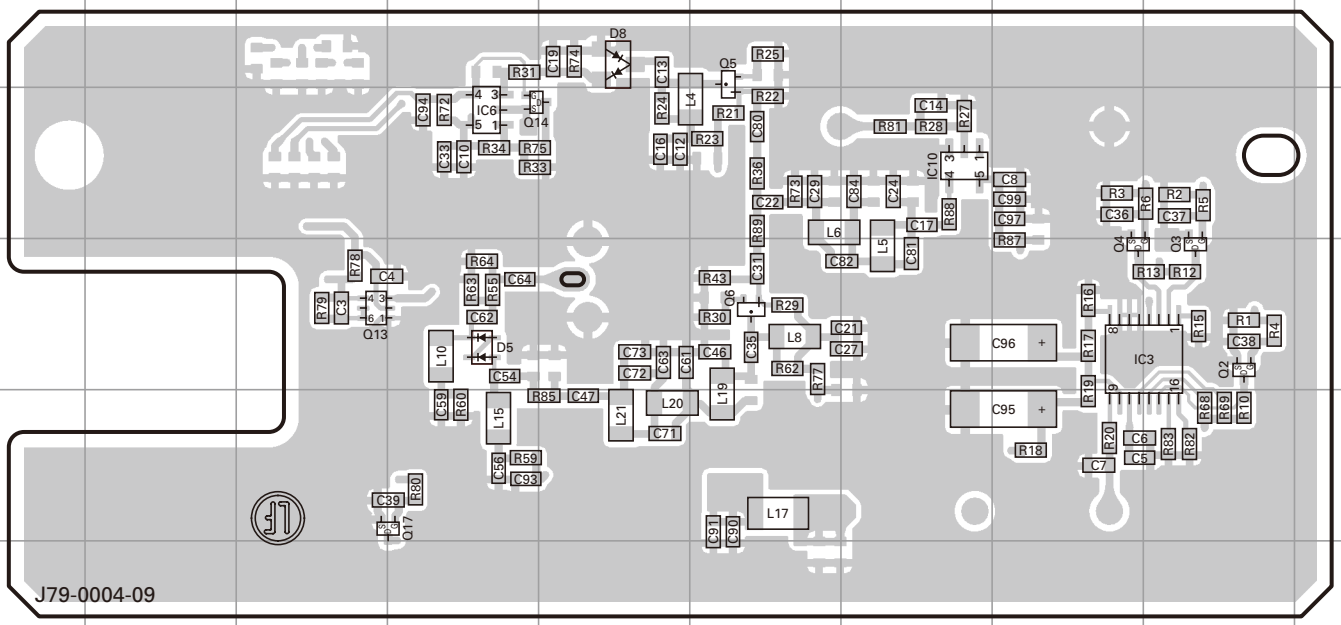
ACCESSORY UNIT (X42-3280-20) Component side view (J79-0004-09)



Ref. No.	Address	Ref. No.	Address
IC4	5D	Q15	4C
IC11	3C	Q16	5C
IC12	3D		

Component side
Layer 1
Layer 2
Layer 3
Layer 4
Foil side

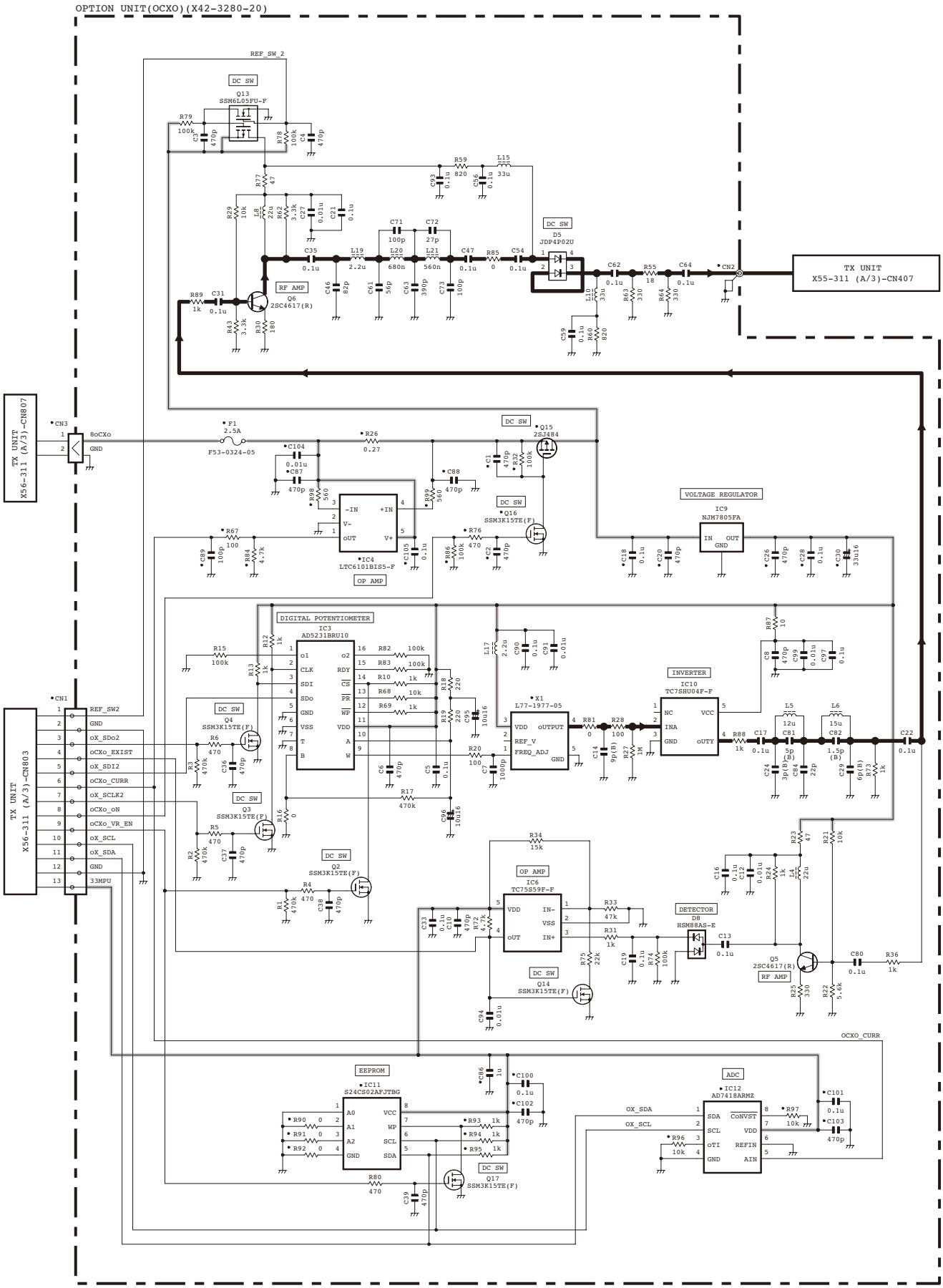
ACCESSORY UNIT (X42-3280-20) Foil side view (J79-0004-09)



Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC3	10I	Q3	10I	Q13	10C	D8	8E
IC6	9D	Q4	10H	Q14	9D		
IC10	9G	Q5	8F	Q17	11D		
Q2	10I	Q6	10F	D5	10D		

Component side
Layer 1
Layer 2
Layer 3
Layer 4
Foil side

Schematic Diagram



Note : The components marked with a dot (•) are parts of layer 1.

NXR-700

SPECIFICATIONS

General

Frequency Range ..... 146~174MHz
Channel Spacing
- Wide 30kHz
- Narrow 15/ 12.5kHz
- VN 7.5/ 6.25kHz

PLL Channel Step 2.5/ 3.125/ 5/ 6.25kHz
Frequency Staability ..... ±1.5ppm
- with OCXO unit ..... ±0.5ppm

Operating Voltage ..... 10.8~15.9V DC
Operating Temperature Range
..... –22°F~+140°F (–30°C~+60°C)
Antenna Impedance 50Ω
Dimensions (W x H x D) (Projections not included)
..... 19.02" x 1.73" x 13.03" (483 x 44 x 331 mm)
Weight ..... 11 lbs (5kg)

Transmitter

RF Power Output ..... 5~0.5W
Spurious & Harmonics 73dB
FM Hum & Noise
- Wide 55dB
- Narrow 50dB

Modulation
- Wide 16K0F3E
- Narrow 11K0F3E, 8K30F1E, 8K30F1D, 8K30F7W
- VN 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D

Receiver

Sensitivity
- Digital@6.25kHz (3% BER) 0.33µV
- Digital@12.5kHz (3% BER) 0.27µV
- Analog (12dB SINAD) 0.30µV

Selectivity
- Analog Wide *1 (±30kHz) 93dB
- Analog Narrow *1 (±12.5kHz) 85dB

Intermodulation Distortion
- Analog Wide (±50kHz/100kHz) 85dB
- Analog Narrow (±50kHz/100kHz) 85dB

Spurious & Image 100dB
Audio Distortion (at 0.3W) ..... Less than 2%
Audio Output (EXT. SP) 3W

*1: Analog measurements made per TIA/EIA 603.
Without *1: Analog measurements made per TIA/EIA 603A.
KENWOOD reserves the right to change specifications without prior notice or obligation.

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Amsterdamseweg 37, 1422 AC Uithoorn, The Netherlands

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Via G. Sirtori, 7/9 20129 Milano, Italy

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Bolivia, 239-08020 Barcelona, Spain

Kenwood Electronics Australia Pty. Ltd.
(A.C.N. 001 499 074)
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Unit 3712-3724, Level 37, Tower one Metroplaza, 223 Hing Fong Road, Kwai Fong, N.T., Hong Kong

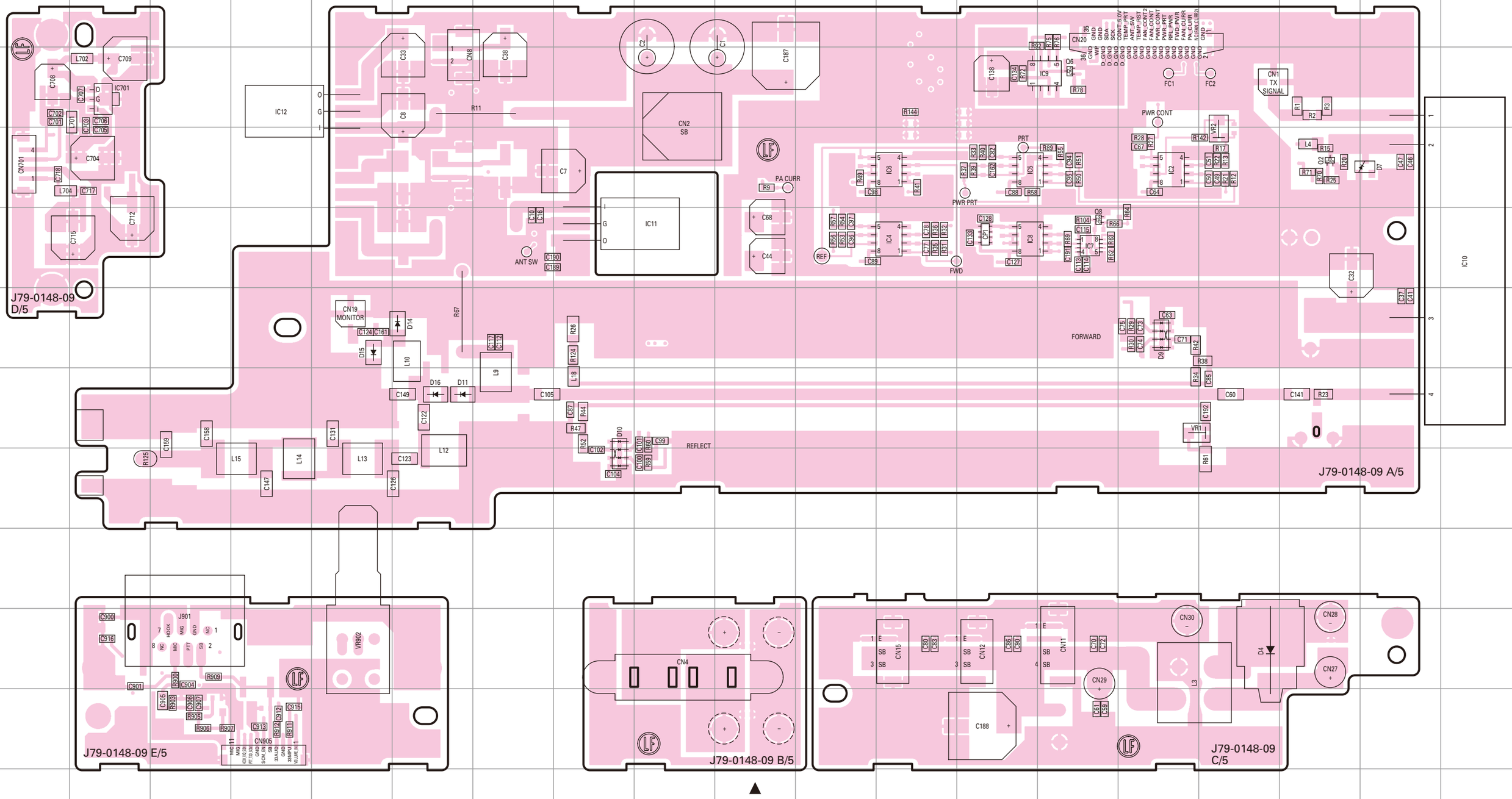
Kenwood Electronics Singapore Pte Ltd
1 Ang Mo Kio Street 63, Singapore 569110

NXR-700 PC BOARD

FINAL UNIT (X45-3810-10)
Component side view (J79-0148-09)

NXR-700 PC BOARD

FINAL UNIT (X45-3810-10)
Component side view (J79-0148-09)



Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC2	4O	IC8	5M	IC701	3B	D7	4R	D15	6E
IC4	5L	IC9	3N	Q2	4Q	D9	6O	D16	7F
IC5	4M	IC10	5S	Q6	3N	D10	8H		
IC6	4L	IC11	5I	Q8	5N	D11	7F		
IC7	5N	IC12	3D	D4	10P	D14	6F		

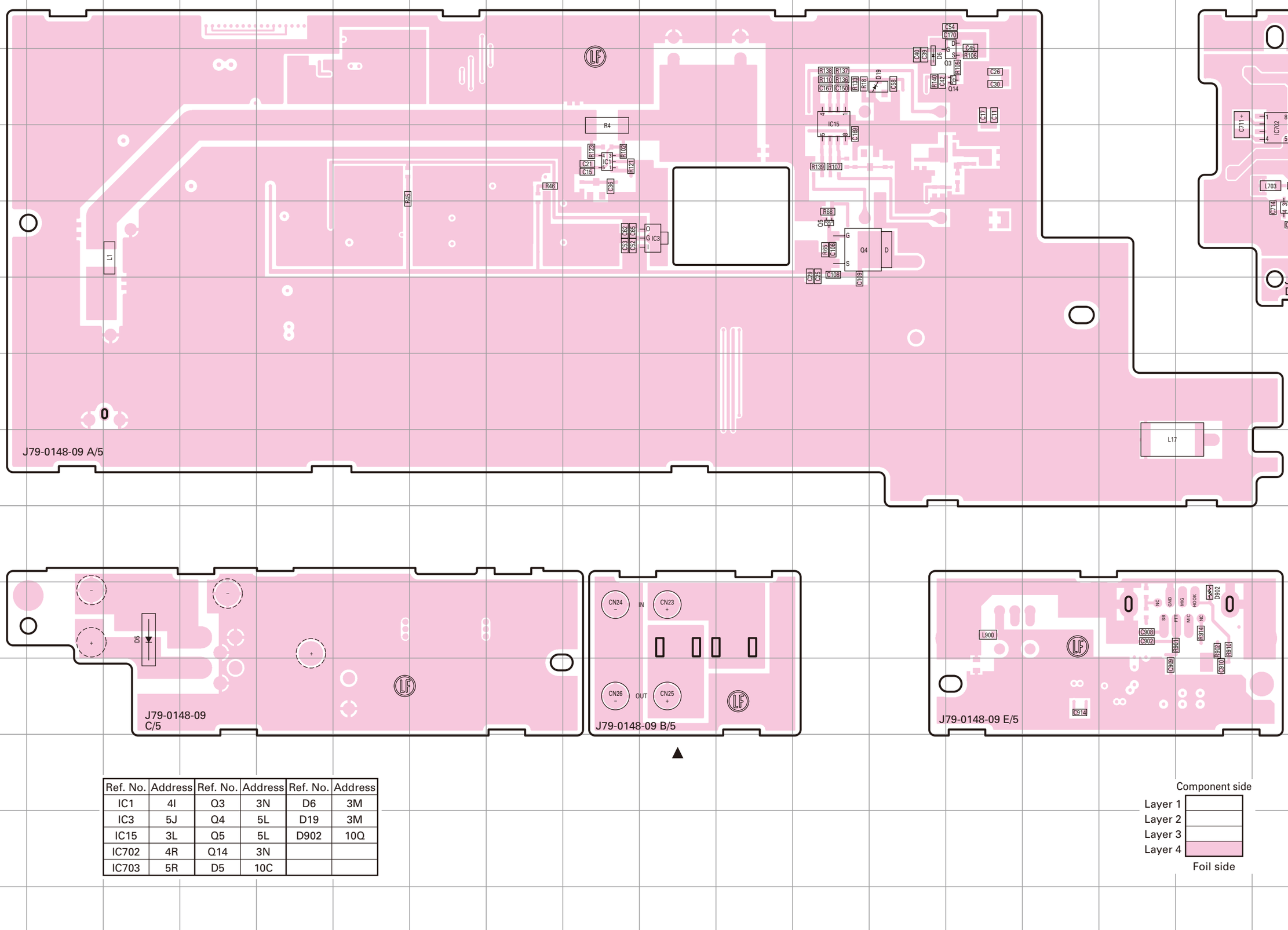
Component side
Layer 1
Layer 2
Layer 3
Layer 4
Foil side

NXR-700 PC BOARD

PC BOARD NXR-700

FINAL UNIT (X45-3810-10)
Foil side view (J79-0148-09)

FINAL UNIT (X45-3810-10)
Foil side view (J79-0148-09)



Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC1	4I	Q3	3N	D6	3M
IC3	5J	Q4	5L	D19	3M
IC15	3L	Q5	5L	D902	10Q
IC702	4R	Q14	3N		
IC703	5R	D5	10C		

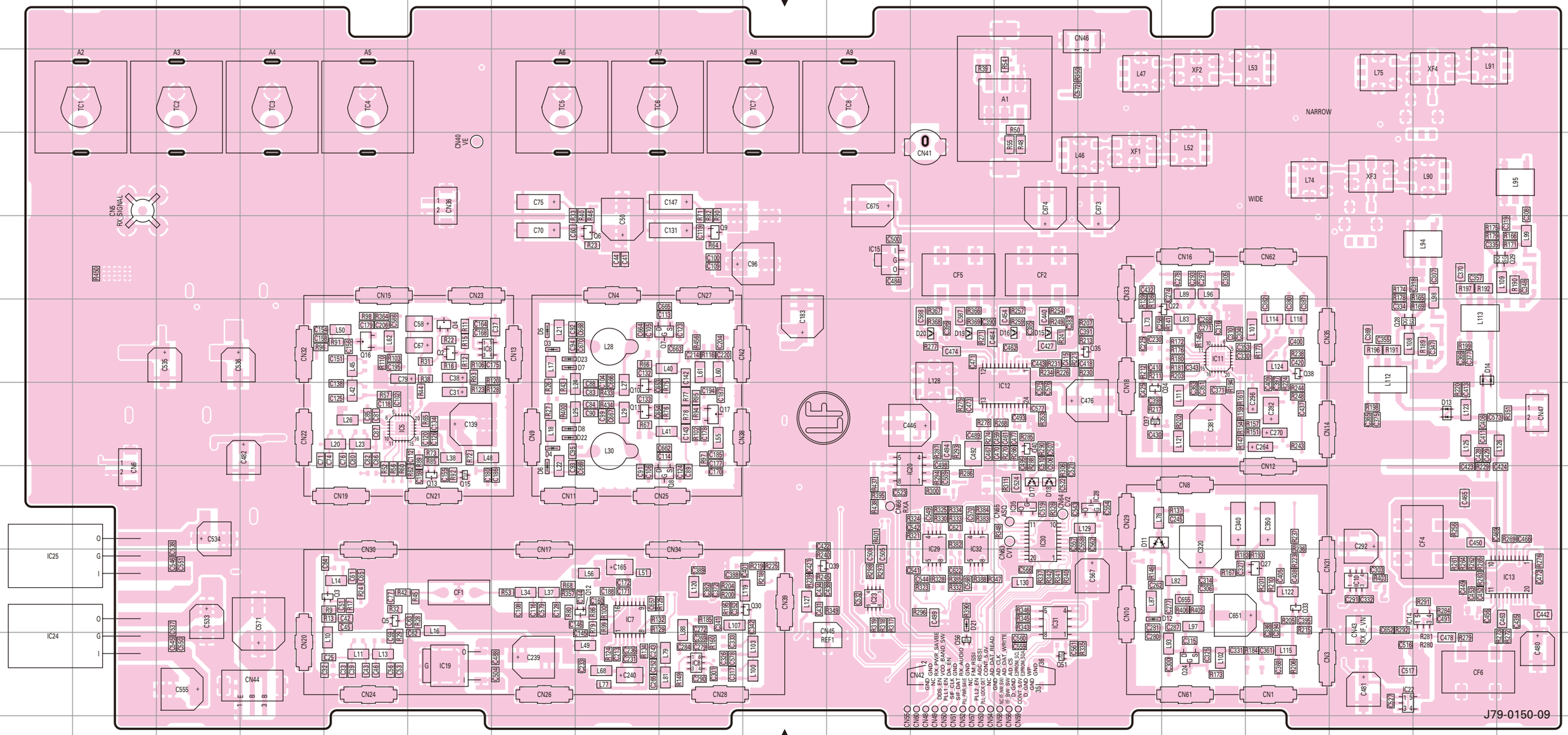
Component side
Layer 1
Layer 2
Layer 3
Layer 4
Foil side

NXR-700 PC BOARD

RX UNIT (X55-3090-10)
Component side view (J79-0150-09)

PC BOARD NXR-700

RX UNIT (X55-3090-10)
Component side view (J79-0150-09)



Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC5	7E	IC15	5K	IC30	8M	Q7	6I	Q17	7I	Q35	6N	D5	6G	D16	6M
IC6	6F	IC19	10F	IC31	9M	Q8	8I	Q22	6O	Q37	7N	D6	8G	D17	8M
IC7	9H	IC20	8K	IC32	8L	Q9	5I	Q24	10O	Q38	6P	D7	6G	D18	8M
IC8	10I	IC22	10Q	IC35	8M	Q10	7H	Q27	9P	Q39	9J	D8	7G	D19	6L
IC10	9Q	IC23	9K	Q2	6F	Q11	7H	Q28	6Q	Q40	7M	D11	8N	D20	6L
IC11	6O	IC24	10A	Q3	9E	Q12	9H	Q29	5S	Q51	10M	D12	9N	D21	9L
IC12	7M	IC25	9A	Q4	6F	Q13	8F	Q30	9J	Q56	10L	D13	7R	D22	7G
IC13	9S	IC28	8N	Q5	9E	Q15	8F	Q33	9P	D3	6G	D14	6R	D23	6G
IC14	9R	IC29	8L	Q6	5H	Q16	6E	Q34	7N	D4	7G	D15	6M		

Component side
Layer 1
Layer 2
Layer 3
Layer 4
Foil side

NXR-700 PC BOARD

PC BOARD NXR-700

RX UNIT (X55-3090-10)
Foil side view (J79-0150-09)

RX UNIT (X55-3090-10)
Foil side view (J79-0150-09)

Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC4	4M	Q14	7L	Q32	5G	Q61	7N
IC9	8C	Q18	6J	Q36	8B	D1	4N
IC16	10A	Q19	4D	Q50	10Q	D2	4N
IC17	10C	Q20	3D	Q52	10Q	D9	3G
IC18	8P	Q21	9D	Q53	9B	D10	3G
IC26	7Q	Q23	7I	Q57	7H		
IC27	7P	Q25	4G	Q58	7H		
IC33	8E	Q26	4F	Q59	7L		
Q1	3N	Q31	5F	Q60	7N		

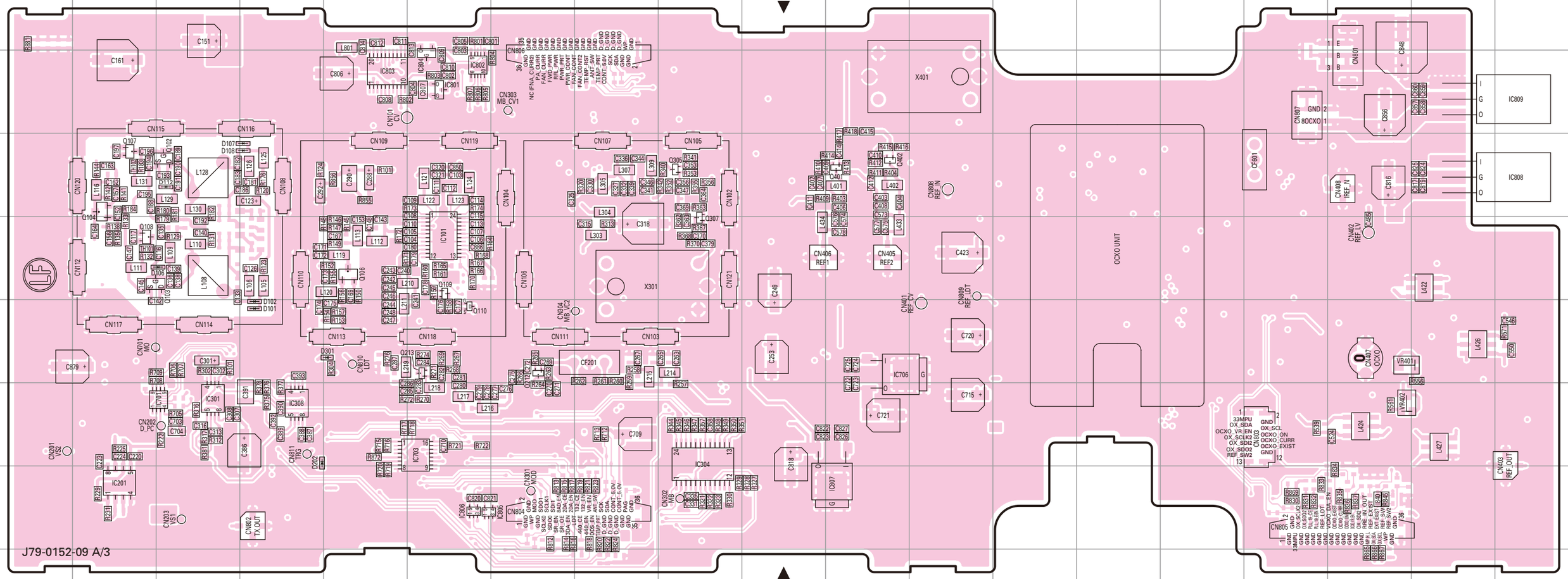
Component side
Layer 1
Layer 2
Layer 3
Layer 4
Foil side

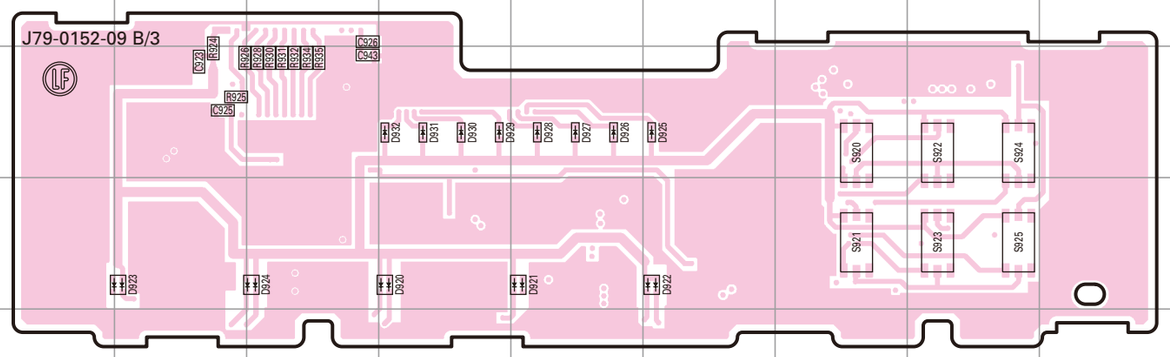
NXR-700 PC BOARD

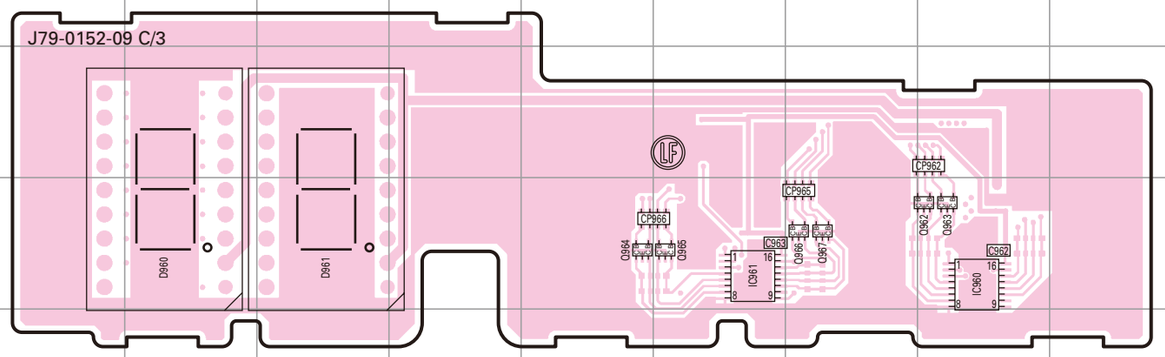
NXR-700 PC BOARD

TX UNIT (X56-3110-10)
Component side view (J79-0152-09)

TX UNIT (X56-3110-10)
Component side view (J79-0152-09)





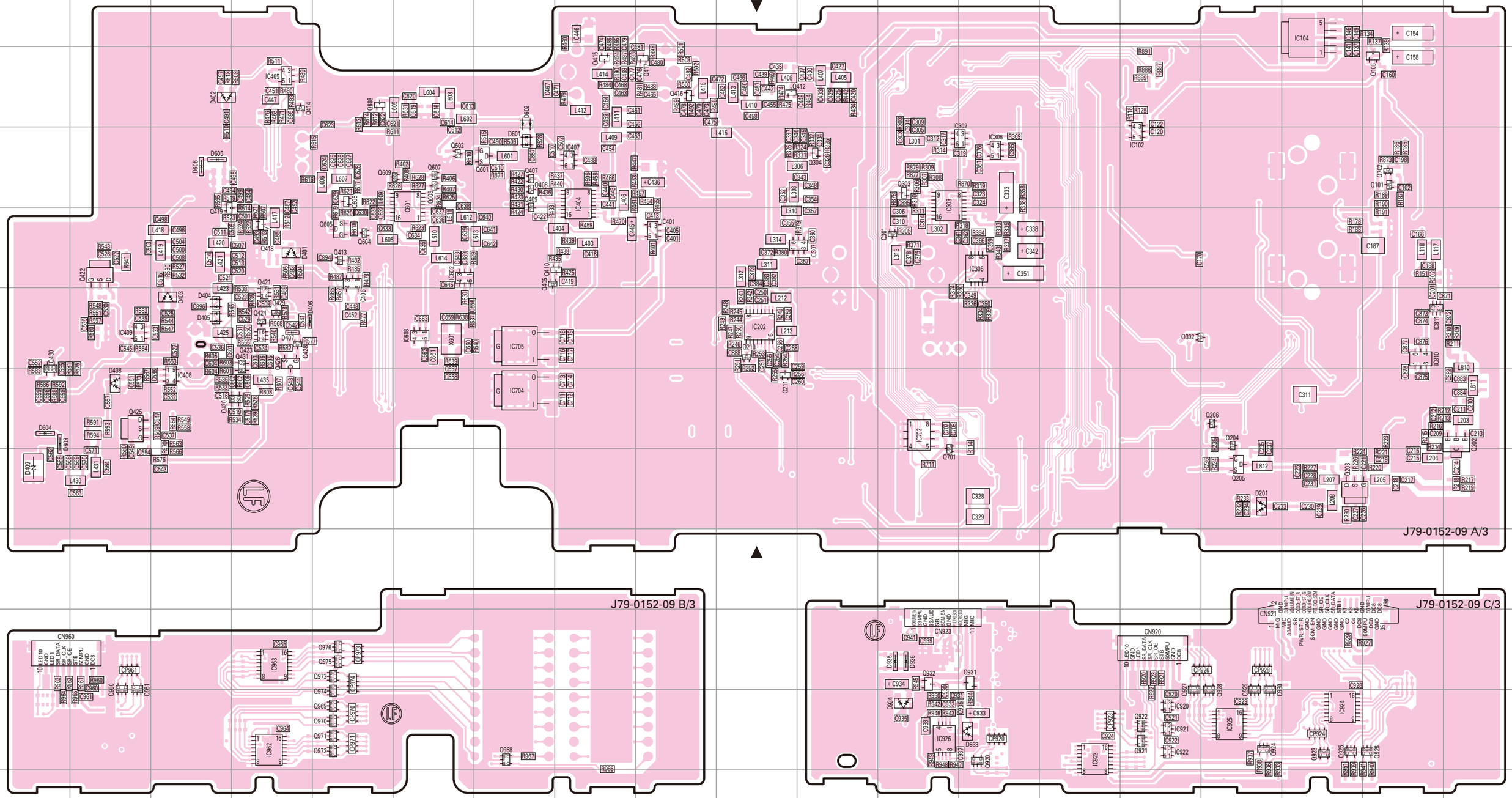


Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC101	5F	IC706	6K	IC807	8K	Q104	4B	Q213	6F	Q964	11O	D107	4D	D922	11F	D929	10D
IC201	8B	IC801	3F	IC808	4S	Q106	5E	Q305	4I	Q965	11P	D108	4D	D923	11B	D930	10D
IC301	7C	IC802	3F	IC809	3S	Q107	4B	Q307	5I	Q966	11Q	D112	4C	D924	11C	D931	10D
IC304	7I	IC803	3E	IC960	11R	Q108	5B	Q401	4K	Q967	11Q	D202	7D	D925	10F	D932	10D
IC308	7D	IC804	3F	IC961	11P	Q109	5F	Q402	4K	D101	6D	D301	6E	D926	10E	D960	11L
IC701	7C	IC805	8F	Q102	4C	Q110	6F	Q962	11R	D102	6D	D920	11D	D927	10E	D961	11M
IC703	7F	IC806	8F	Q103	5C	Q212	6G	Q963	11R	D106	5C	D921	11E	D928	10E		

Component side
Layer 1
Layer 2
Layer 3
Layer 4
Foil side

NXR-700 PC BOARD

TX UNIT (X56-3110-10)
Foil side view (J79-0152-09)



NXR-700 PC BOARD

TX UNIT (X56-3110-10)
Foil side view (J79-0152-09)

Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC102	4O	IC404	4H	IC702	7L	IC924	11Q	Q204	7P	Q405	5G	Q416	3I	Q425	7B	Q604	5E	Q921	11O	Q930	11P	Q972	11E	D404	6C	D604	7A
IC104	2Q	IC405	3D	IC704	7G	IC925	11P	Q205	8P	Q407	4G	Q417	3I	Q426	6D	Q605	5E	Q922	11O	Q931	10M	Q973	10E	D405	6C	D605	4C
IC202	6J	IC406	5E	IC705	6G	IC926	11L	Q206	7P	Q408	4G	Q418	5D	Q428	6D	Q606	4E	Q923	11Q	Q932	10L	Q974	11E	D406	6D	D606	4C
IC302	4M	IC407	4H	IC810	6R	IC962	11D	Q210	6J	Q409	4G	Q419	5C	Q429	6D	Q607	4F	Q924	11P	Q960	10B	Q975	10E	D407	6D	D933	11M
IC303	4L	IC408	7C	IC811	6R	IC963	10D	Q211	7J	Q410	5H	Q420	7D	Q430	6A	Q608	4F	Q925	11Q	Q961	10B	Q976	10E	D408	7B	D934	11L
IC305	5M	IC409	6B	IC920	11O	Q101	4R	Q301	5L	Q412	3J	Q421	6D	Q431	6D	Q609	4F	Q926	11R	Q968	11G	D201	8P	D409	8A	D935	10L
IC306	4M	IC601	4F	IC921	11O	Q105	3R	Q302	6O	Q413	5E	Q422	5B	Q601	4G	Q701	8L	Q927	11O	Q969	11E	D401	5D	D601	4G	D936	10L
IC307	5K	IC602	5F	IC922	11O	Q202	7S	Q303	4L	Q414	3D	Q423	6D	Q602	4F	Q702	4R	Q928	11P	Q970	11E	D402	3C	D602	3G		
IC401	5H	IC603	6F	IC923	11N	Q203	8Q	Q304	4K	Q415	3H	Q424	6D	Q603	3E	Q920	11M	Q929	11P	Q971	11E	D403	6C	D603	7A		

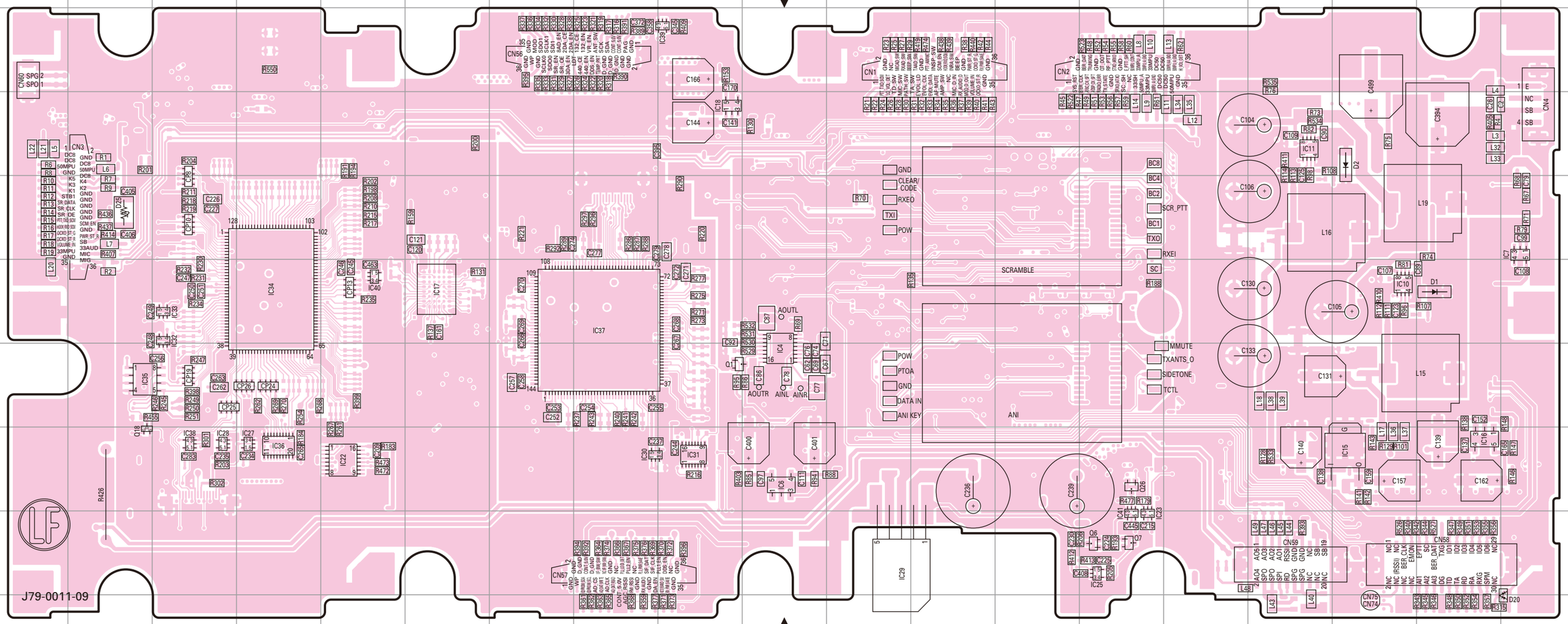
Component side
Layer 1
Layer 2
Layer 3
Layer 4
Foil side

NXR-700 PC BOARD

PC BOARD NXR-700

CONTROL UNIT (X53-4130-10)
Component side view (J79-0011-09)

CONTROL UNIT (X53-4130-10)
Component side view (J79-0011-09)



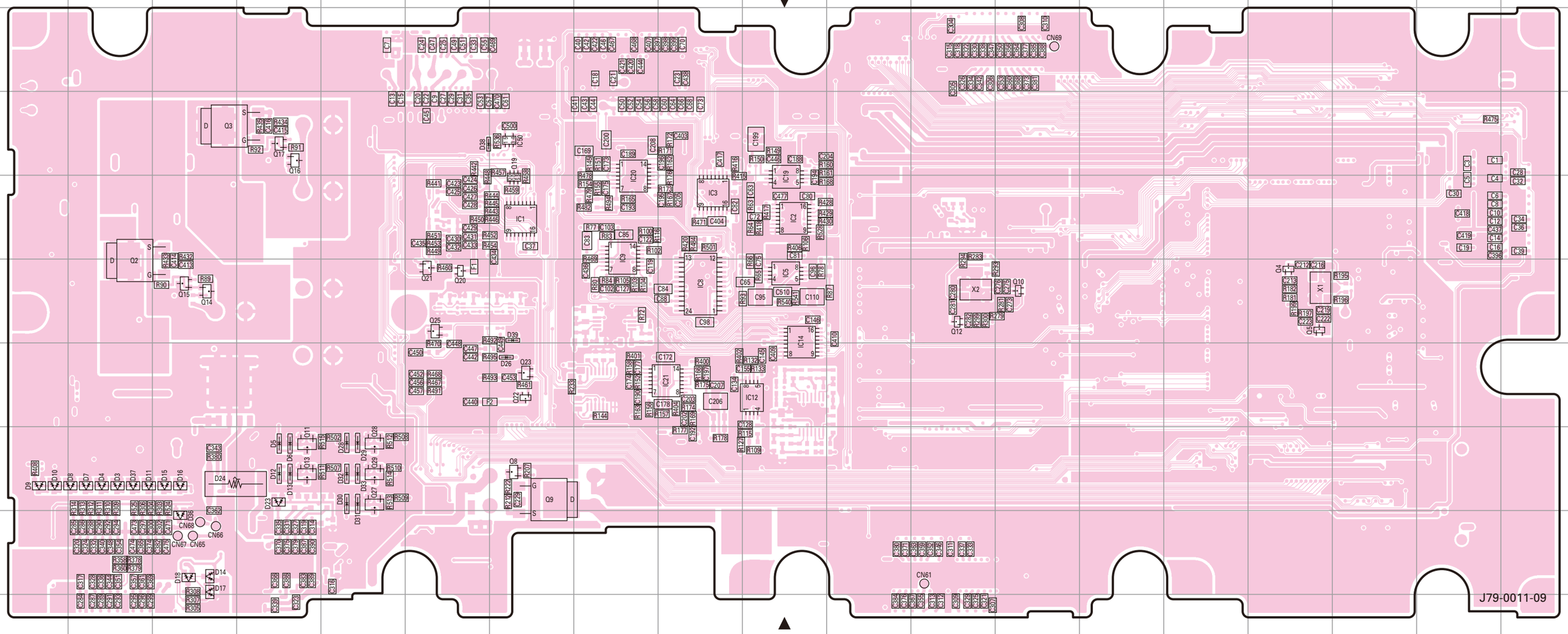
Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC4	7J	IC22	8E	IC33	6C	Q1	7I
IC6	8J	IC23	9N	IC34	6D	Q6	9N
IC7	5S	IC25	9N	IC35	7B	Q7	9N
IC10	6Q	IC27	8D	IC36	8D	Q18	8B
IC11	4P	IC28	8C	IC37	6H	Q26	8N
IC15	8Q	IC29	9K	IC38	8C	D1	6R
IC16	8R	IC30	8H	IC39	3I	D2	4Q
IC17	6F	IC31	8I	IC40	6E	D20	10S
IC18	4I	IC32	6C	IC41	9N	D25	5B

NXR-700 PC BOARD

PC BOARD NXR-700

CONTROL UNIT (X53-4130-10)
Foil side view (J79-0011-09)

CONTROL UNIT (X53-4130-10)
Foil side view (J79-0011-09)



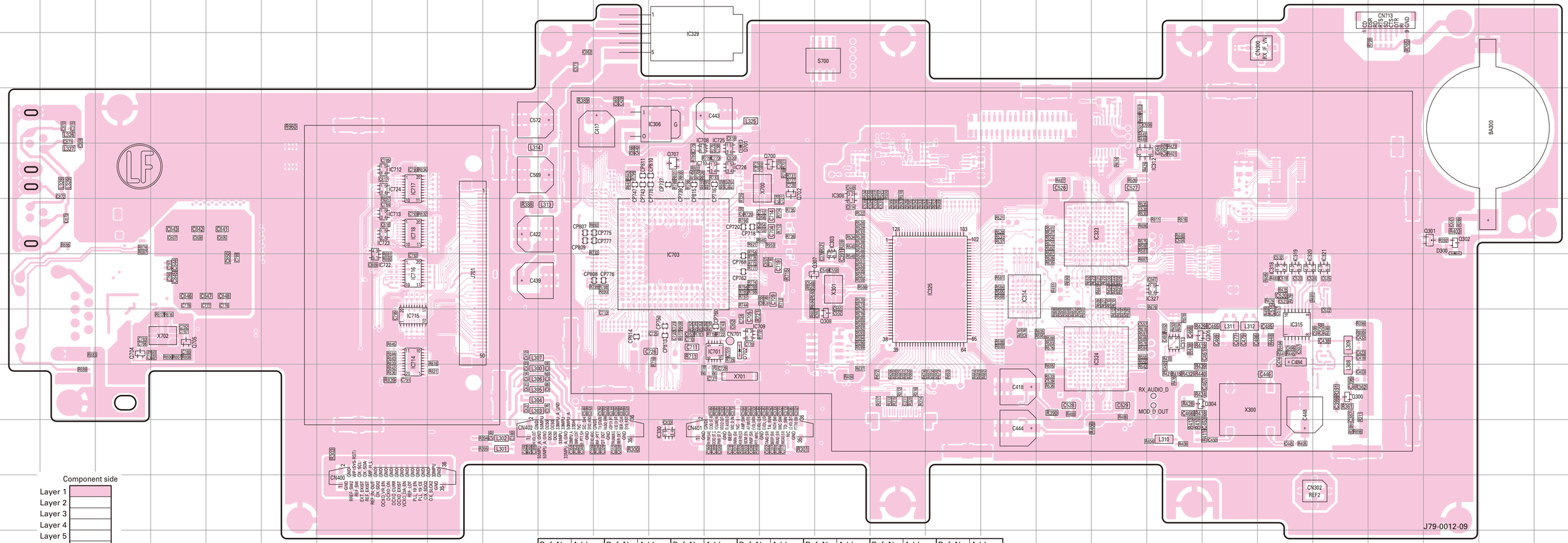
Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC1	5G	Q3	4C	Q19	5G	D7	8B	D24	8C
IC2	5J	Q4	6P	Q20	6F	D8	8B	D26	7G
IC3	5I	Q5	6P	Q21	6F	D9	8A	D28	8E
IC5	6J	Q8	8G	Q22	7G	D10	8A	D29	8E
IC8	6I	Q9	8G	Q23	7G	D11	8B	D30	8E
IC9	5H	Q10	6M	Q25	6F	D12	8D	D31	8E
IC12	7J	Q11	8D	Q27	8E	D13	8D	D32	8E
IC14	6J	Q12	6L	Q28	8E	D14	9C	D33	8E
IC19	5J	Q13	8D	Q29	8E	D15	8C	D36	9C
IC20	5H	Q14	6C	D3	8B	D16	8C	D37	8B
IC21	7I	Q15	6C	D4	8B	D17	9C	D38	4F
IC50	4G	Q16	4D	D5	8D	D18	9C	D39	6G
Q2	6B	Q17	4D	D6	8D	D23	8D		

Component side
Layer 1
Layer 2
Layer 3
Layer 4
Foil side

PC BOARD NXR-700

CONTROL UNIT (X53-4140-10)
Component side view (J79-0012-09)

CONTROL UNIT (X53-4140-10)
Component side view (J79-0012-09)



Component side

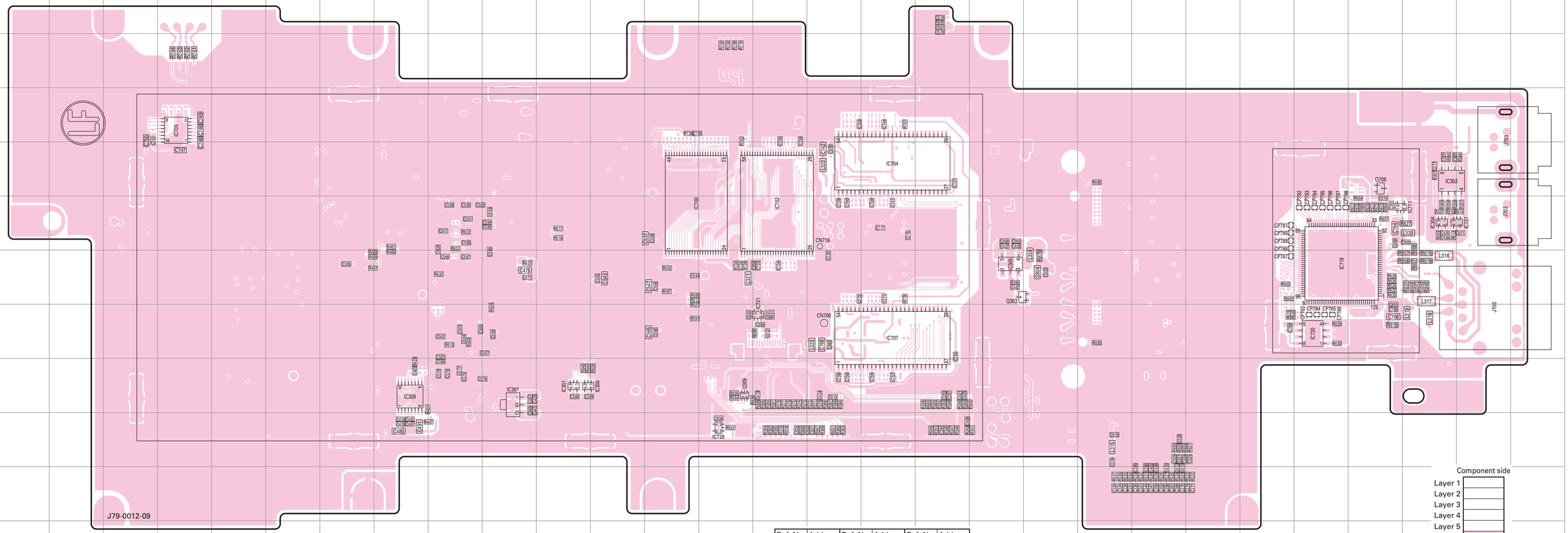
Layer 1	
Layer 2	
Layer 3	
Layer 4	
Layer 5	
Layer 6	

Foil side

Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC303	7P	IC318	7X	IC327	7V	IC710	5N	IC718	6H	Q301	6AA	Q702	5O
IC306	4M	IC319	7X	IC329	3M	IC712	5H	IC722	7H	Q302	6AA	Q704	8C
IC308	5P	IC320	7X	IC330	10M	IC713	6H	IC723	6H	Q304	9V	Q705	8D
IC312	5U	IC321	7Y	IC701	8N	IC714	8H	IC724	5H	Q305	8V	Q707	5M
IC313	8V	IC323	6U	IC703	7M	IC715	8H	IC725	5N	Q307	7O	D300	6AA
IC314	7S	IC324	8U	IC708	5M	IC716	7H	IC726	5N	Q308	8P	D701	5N
IC315	8X	IC325	7R	IC709	8N	IC717	5H	Q300	9Y	Q700	5O	D702	8N

NXR-700 PC BOARD

CONTROL UNIT (X53-4140-10)
Foil side view (J79-0012-09)



CONTROL UNIT (X53-4140-10)
Foil side view (J79-0012-09)

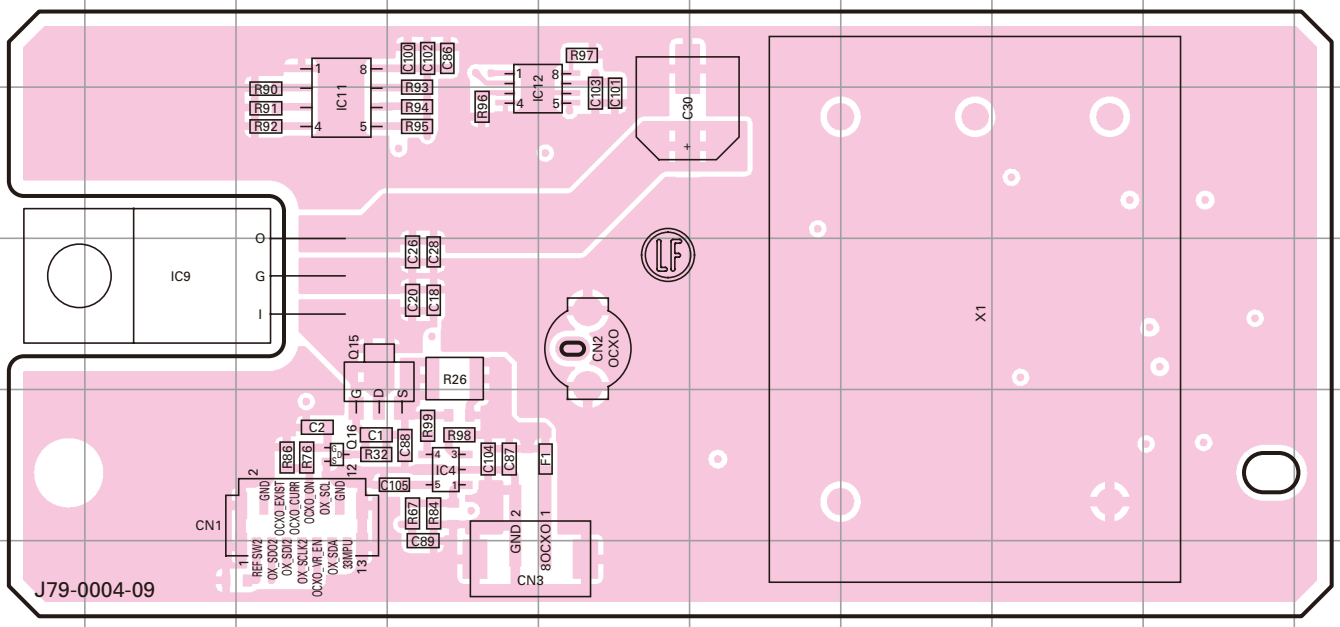
Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC300	9K	IC700	6M	IC720	8Y
IC301	9K	IC702	6O	IC721	8O
IC302	5AA	IC704	5Q	IC727	6AB
IC304	6AA	IC705	4D	IC728	10N
IC305	7S	IC707	8Q	Q303	7S
IC307	9J	IC711	6Z	Q309	9N
IC309	9H	IC719	7Y	Q706	5Z

Component side
Layer 1
Layer 2
Layer 3
Layer 4
Layer 5
Layer 6
Foil side

NXR-700 OPTIONAL ACCESSORIES: KXK-3 (OCXO UNIT)

PC Board

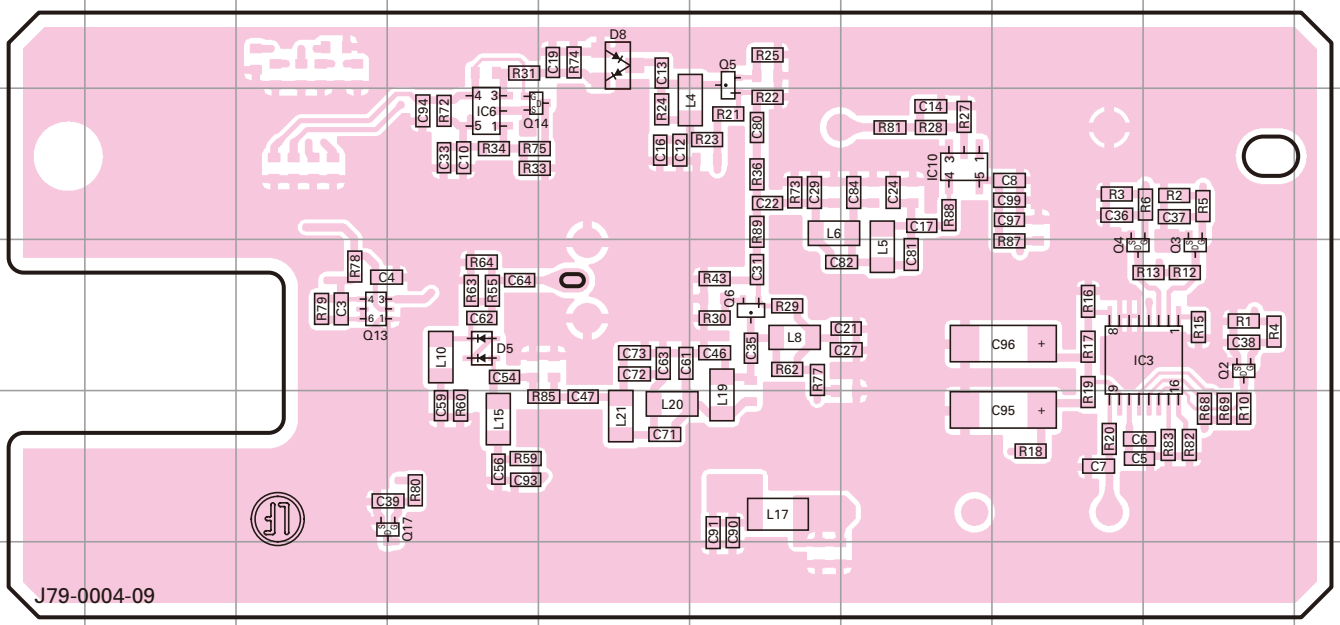
ACCESSORY UNIT (X42-3280-20) Component side view (J79-0004-09)



Ref. No.	Address	Ref. No.	Address
IC4	5D	Q15	4C
IC11	3C	Q16	5C
IC12	3D		

Component side
Layer 1
Layer 2
Layer 3
Layer 4
Foil side

ACCESSORY UNIT (X42-3280-20) Foil side view (J79-0004-09)



Ref. No.	Address	Ref. No.	Address	Ref. No.	Address	Ref. No.	Address
IC3	10I	Q3	10I	Q13	10C	D8	8E
IC6	9D	Q4	10H	Q14	9D		
IC10	9G	Q5	8F	Q17	11D		
Q2	10I	Q6	10F	D5	10D		

Component side
Layer 1
Layer 2
Layer 3
Layer 4
Foil side

TX UNIT
X56-311 (A/3)-CN802

RX UNIT
X55-309 -CN44

TX UNIT
X56-311 (A/3)-CN801

CONTROL UNIT
X53-413 -CN4

DC

FAN 1

TX UNIT
X56-311 (A/3)-CN806

POWER MODULE
IC10
RA13H1317M1131

FINAL UNT(PA SECTION)
(X45-3810-10)(A/5)

FINAL UNIT(DC SECTION)
(X45-3810-10)(C/5)

FINAL UNIT(FUSE SECTION)
(X45-3810-10)(B/5)

TX:100mW
RX:0W

TX H:2.45V
L:1.95V
RX :0V

TX H:13.65V
L:13.75V
RX :13.8V

TX H:5W
L:0.5W
RX :0W

3DB ATT

HPF

LPF

DIRECTIONAL COUPLER

FORWARD

REFLECT

ANT SW

RF SW

CURRENT SENSE

CURRENT MONITOR
IC1
LTC6101BIS5-F

TX H:1.02V
L:0.33V
RX:0V

PA CURR

OVERVOLTAGE PROTECTION
D7
02CZ5.6(Y)F

DC SW
Q2
SSM3K15TE(F)

DETECTOR
D9
HSB88WS

DETECTOR
D10
HSB88WS

OP AMP
IC4
NJM2904E-ZB

TX H:3.28V
L:0.95V
RX:0V

FWD

RFL

DC SW
Q4
2SJ306-E(S)

DC SW
Q5
SSM3K15TE(F)

ANT SW

TX:8V
RX:0V

5V

IC9
S24CS02AFJTBG

E2PROM

DC SW
Q6
SSM3K15TE(F)

TEMPERATURE SENSOR
IC7
S-8130AC

OP AMP
IC8
NJM2904E-ZB

0V

DC SW
Q8
SSM3K15TE(F)

CP1
RK75GB1J103J

OP AMP
IC2
NJM2904E-ZB

PWR CONT

R32-0754-05

L4
L92-0131-05

L1
L92-0179-05

L3
L79-0558-05

SURGE PROTECTION
D5
DSM3MA1-RPB

SURGE PROTECTION
D4
Z5W27V

VOLTAGE REGULATOR
IC11
NJM7808FA-ZB
8V

VOLTAGE REGULATOR
IC3
TA78L05FF
5V

VOLTAGE REGULATOR
IC12
NJM7805FA-ZB
5V

DC SW
Q3
SSM3J01F

DC SW
Q14
SSM3K15TE(F)

SURGE PROTECTION
D6
188355

OP AMP
IC15
NJM2904E-ZB

OVERVOLTAGE PROTECTION
D19
02CZ4.7(Y)F

1.35V

OP AMP
IC5
NJM2904E-ZB

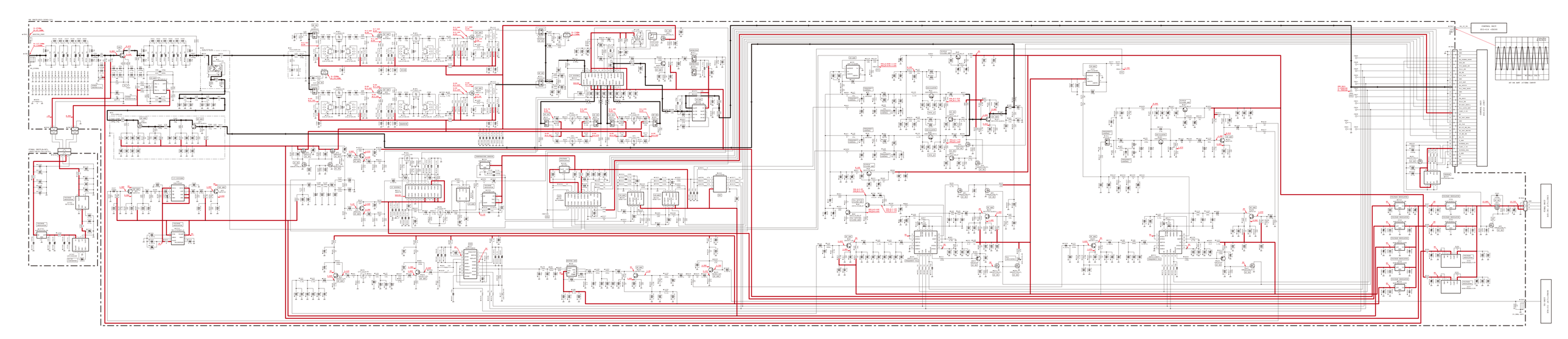
OP AMP
IC6
NJM2904E-ZB

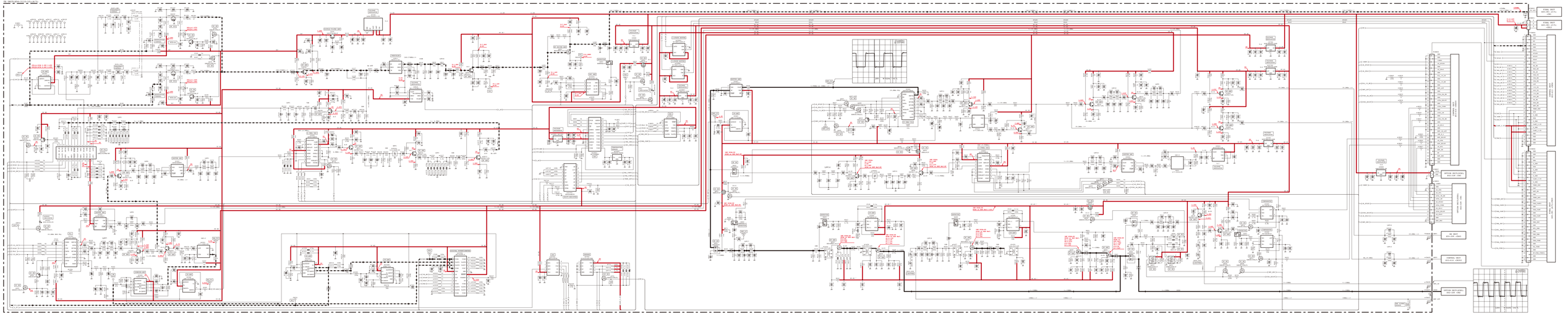
PRT

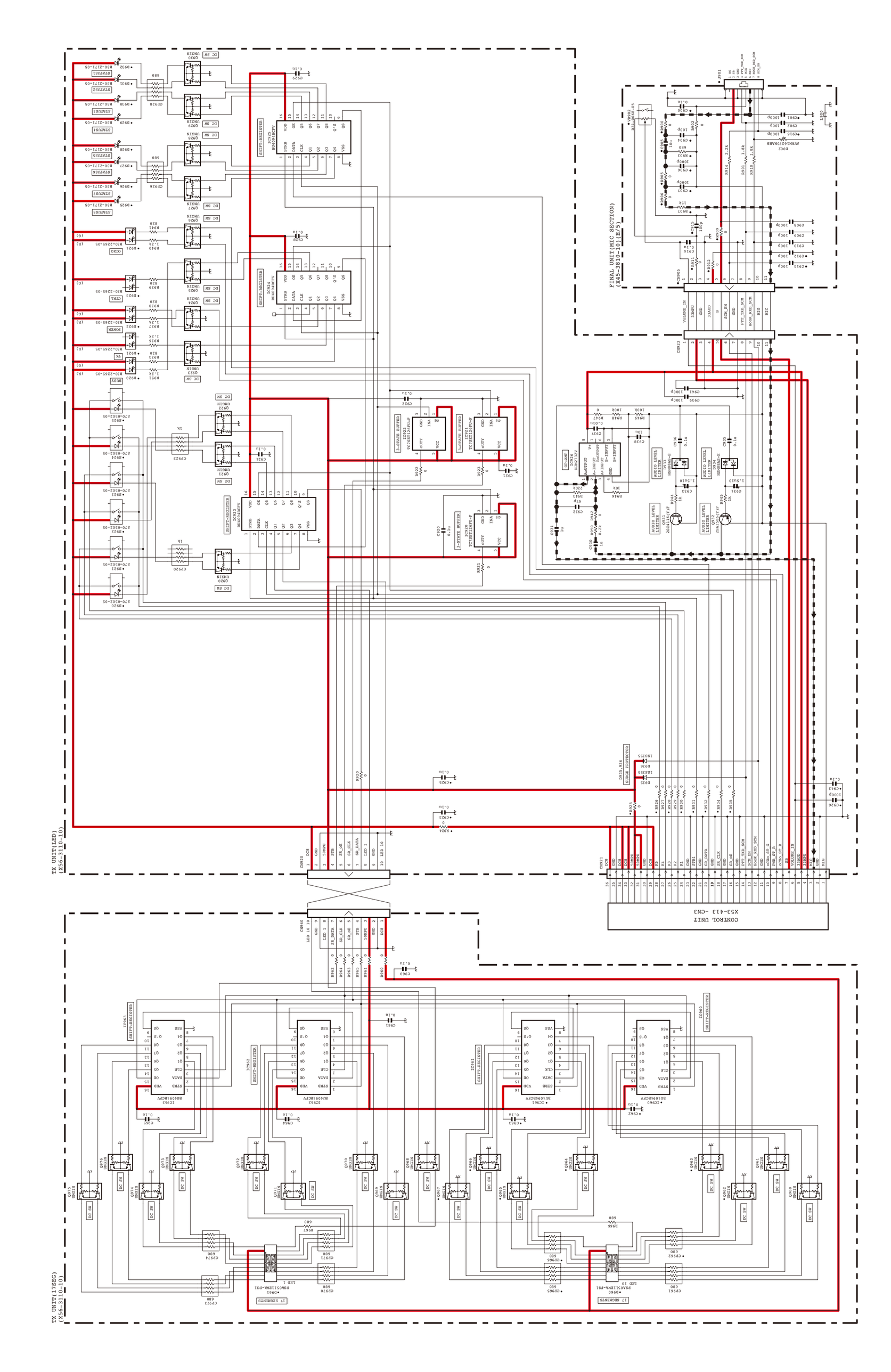
PWR PRT

1.1V

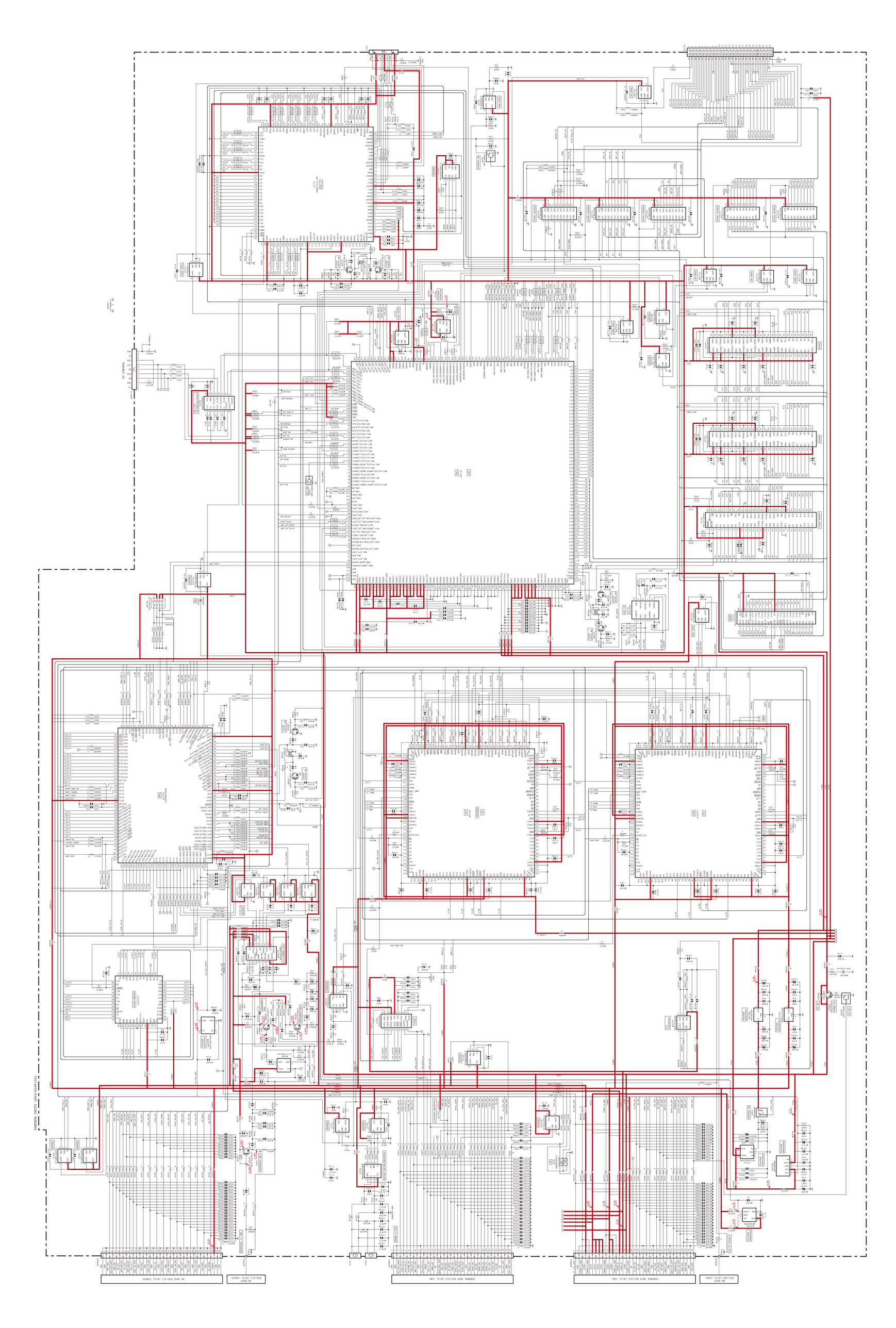
CN20
36 GND
35 GND
34 WP
33 GND
32 D_GND
31 SDA
30 D_GND
29 SCK
28 D_GND
27 CONT_5.0V
26 D_GND
25 TEMP_PRT
24 GND
23 ANT_SW
22 GND
21 TEMP_RST
20 GND
19 FAN_CONT2
18 GND
17 FAN_CONT
16 GND
15 PWR_CONT
14 GND
13 PWR_PRT
12 GND
11 RFL_PWR
10 GND
9 FWD_PWR
8 GND
7 FAN_CURR
6 GND
5 PA_CURR
4 GND
3 NC(FAN_CURR2)
2 GND
1 GND

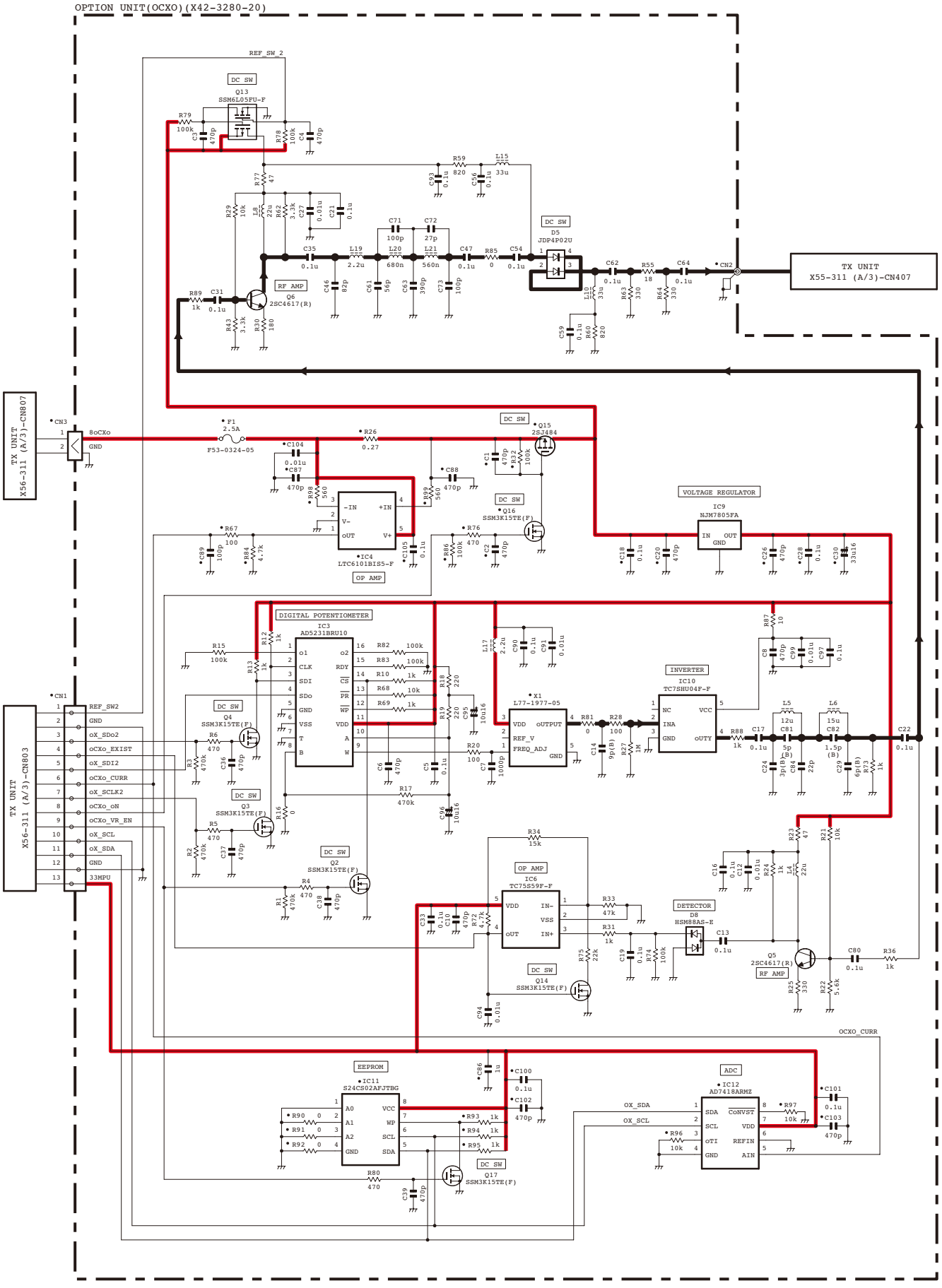




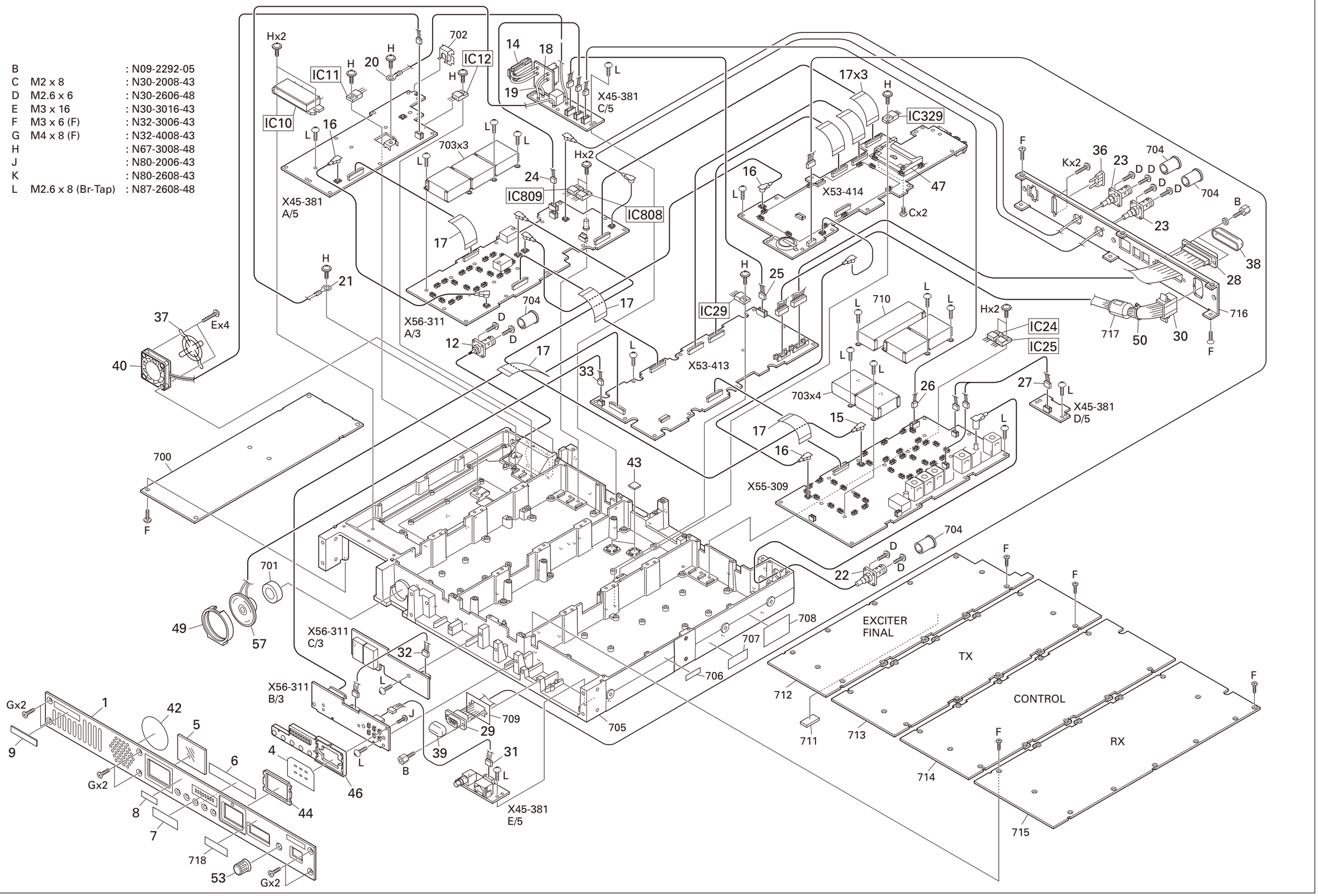

FINAL UNIT(MIC SECTION)
(X45-3810-10)(E/S)
TX UNIT(LED)
(X56-3110-10)
TX UNIT(17SEG)
(X56-3110-10)
CONTROL UNIT
X53-413 -CN3
17 SEGMENTS
17 SEGMENTS


CONTROL UNIT1 (X53-4130-10)
TX UNIT X56-311 (B/3)-CN921
CONTROL UNIT X53-414 -CN401
CONTROL UNIT X53-414 -CN402
FINAL UNIT X45-381 (C/3)-CN11
TX UNIT X56-311 (B/3)-CN904
RX UNIT X55-269 -CN2
mV:AC voltage value measured with an electronic voltmeter.
The unit is mVrms.
V:DC voltage value
rms:60% modulation TX signal or RX signal
Audible signal:Measures it by 1kHz
Sub audible signal:Measures it by 100Hz




OPTION UNIT(OCXO)(X42-3280-20)
TX UNIT X55-311 (A/3)-CN407
TX UNIT X56-311 (A/3)-CN807
TX UNIT X56-311 (A/3)-CN803
REF_SW 2
DC SW
Q13 SSM6L05FU-F
RF AMP
Q6 2SC4617(R)
D5 JDP4P02U
CN2
CN3
8oCXo
GND
F1 2.5A
F53-0324-05
Q15 2SJ484
DIGITAL POTENTIOMETER
IC3 AD5231BRU10
OP AMP
IC4 LTC6101BIS5-F
Q16 SSM3K15TE(F)
VOLTAGE REGULATOR
IC9 NJM7805FA
INVERTER
IC10 TC7SHU04F-F
X1 L77-1977-05
Q4 SSM3K15TE(F)
Q3 SSM3K15TE(F)
Q2 SSM3K15TE(F)
IC6 TC75S59F-F
DETECTOR
D8 HSM88AS-E
Q14 SSM3K15TE(F)
Q5 2SC4617(R)
OCXO_CURR
EEPROM
IC11 S24CS02AFJTBG
Q17 SSM3K15TE(F)
ADC
IC12 AD7418ARMZ
OX_SDA
OX_SCL
REF_SW2
GND
oX_SDO2
oCXo_EXIST
oX_SDI2
oCXo_CURR
oX_SCLK2
oCXo_oN
oCXo_VR_EN
oX_SCL
oX_SDA
33MPU

B			: N09-2292-05
C	M2 x 8		: N30-2008-43
D	M2.6 x 6		: N30-2606-48
E	M3 x 16		: N30-3016-43
F	M3 x 6 (F)		: N32-3006-43
G	M4 x 8 (F)		: N32-4008-43
H			: N67-3008-48
J			: N80-2006-43
K			: N80-2608-43
L	M2.6 x 8 (Br-Tap)		: N87-2608-48



FINAL UNIT
X45-381 A/5

FINAL UNIT
X45-381 B/5

FINAL UNIT
X45-381 C/5

TX UNIT
X56-311 A/3

CONTROL UNIT
XS3-414

CONTROL UNIT
XS3-413

TX UNIT
X56-311 B/3

TX UNIT
X56-311 C/3

FINAL UNIT
X45-381 E/5

ACCESSORY UNIT
X42-328

RX UNIT
X55-309

FINAL UNIT
X45-381 D/5

AUDIO BLOCK

33H: IC702~IC705,IC707~IC724,IC726,IC17,IC34,IC37,IC28,IC30~IC33,IC40
33BU: IC700,IC701
33MPU: IC7,IC303,IC304,IC313,IC314,IC316,IC318,IC323,IC324,IC325,IC327,IC725,IC727
33MPU_A: IC309,IC312
33AUD: IC2~IC5,IC9,IC12,IC14,IC19,IC20,IC21,IC23,IC25,IC41,IC926
33CF: J701
50MPU: IC300~IC302,IC319~IC321,IC315,IC22,IC27,IC35,IC36,IC38,IC39,IC1,IC150,IC920~IC925,IC960~IC963
50MPU_A: IC315
150SP: IC37
15SH: IC703
150SP: IC323,IC324
80ANI: oPTioN (ANI)
805CR: oPTioN (SCRAMBLE)

TX UNIT
X56-311 C/3

CN960
DC8
GND
50MPU
STB
SR_oE
SR_CLK
SR_DATA
LED 1
GND
LED 10

CN920
DC8
GND
50MPU
STB
SR_oE
SR_CLK
SR_DATA
LED 1
GND
LED 10

TX UNIT
X56-311 B/3

CN923
VOLUME_IN
33MPU
GND
33AUD
SB
SCM_EN
GND
PTT_TXD_SCM
HOOK_RXD_SCM
MiG
MIC

FINAL UNIT
X45-381 E/5

CN905
VOLUME_IN
33MPU
GND
33AUD
SB
SCM_EN
GND
PTT_TXD_SCM
HooK_RXD_SCM
MiG
MIC

J901
NC
SB
GND
PTT_TXD_SCM
MiG
MIC
HOOK_RXD_SCM
SCM_EN

CN921
DC8 GND DC8 DC8 50MPU 50MPU GND DC8 K5 K4 K3 K2 K1 GND STB1 GND SR_DATA GND SR_CLK GND SR_oE GND PTT_TXD_SCM SCM_EN HooK_RXD_SCM GND oCXo_ST_G oCXo_ST_R oCXo_ST_R SB VoLUME_IN 33AUD 33MPU MIC GND MIG

TEST/SPKR (PANEL ViEW)

SPG SPI SPO AO5
SB GND RSI AO2 AO4
SB GND RD AO1 AO3

INT SP

CONTROL I/O (PANEL VIEW)

SPKP SPKM MICP MICM PTT KEY1 KEY2 KEY3 KEY4 KEY5 KEY6 KEY7 KEY8 TXG AI3 BER_DAT AI2 SC AI1 EPTT EXINT BER_CLK NC

CN59
NC NC SPM IO8 RSSI IO5 RA IO4 RD IO3 TA IO2 TD IO1 DO1 TXG AI3 BER_DAT AI2 SC AI1 EPTT NC EMON(IO0) NC BER_CLK NC(RSSI) NC NC

CN60
SPO
SPG

CN58
NC NC SPM IO8 RSSI IO5 RA IO4 RD IO3 TA IO2 TD IO1 DO1 TXG AI3 BER_DAT AI2 SC AI1 EPTT NC EMON(IO0) NC BER_CLK NC(RSSI) NC NC

OPTION (OCXO)
KXK-3

CN3
8oCXo
GND

CN1
REF_SW2
GND
oX_SDo2
oCXo_EXiST
oX_SDi2
oX_SCLK2
oCXo_CURR
oCXo_oN
oCXo_VR_EN
oX_SCL
oX_SDA
GND
33MPU

CN2
OCXO

CN807
8oCXo
GND

CN803
REF_SW2
GND
oX_SDo2
oCXo_EXiST
oX_SDi2
oX_SCLK2
oCXo_CURR
oCXo_oN
oCXo_VR_EN
oX_SCL
oX_SDA
GND
33MPU

CN807

FINAL UNIT
X45-381 D/5

CN701
CN36
CN6

RX UNIT
X55-309

CN42
GND
GND
WP
D_GND
E2PRoM_SDA
CoNT_5.0V
E2PRoM_SCL
D_GND
AD_CS
iF_BW_SW
AD_DAT_WRiTE
NC(iF_NW_SW)
AD_CLK
GND
AD_DAT_READ
NC
CoNT_5.0V
PLL_LoCK_DET
NC(AGC_RSSi)
PLL2_EN
FM_RSSi
NC
GND
PLL_PWR_SAVE
RX_AUDio
SiF_DAT
GND
SiF_CLK
DA_EN
PLL1_EN
VCo_BAND_SW
DDS_EN
RX_PoWER_SAVE
NC
GND
GND

CN57
GND
GND
WP
D_GND
E2PRoM_SDA
CoNT_5.0V
E2PRoM_SCL
D_GND
AD_CS
iF_BW_SW
AD_DAT_WRiTE
NC(iF_NW_SW)
AD_CLK
GND
AD_DAT_READ
NC
CoNT_5.0V
PLL_LoCK_DET
NC(AGC_RSSi)
PLL2_EN
FM_RSSi
NC
GND
PLL_PWR_SAVE
RX_AUDio
SiF_DAT
GND
SiF_CLK
DA_EN
PLL1_EN
VCo_BAND_SW
DDS_EN
RX_PoWER_SAVE
NC
GND
GND

REF1 (19.2MHz) CN45
RX_IF_VN CN43
MONITOR_PORT CN41
RX ANT CN5
CN44 B B E
CN4 SB SB E

CONTROL UNIT1
X53-413

CN2
Hi_VoL_DET GND 50MPU_A_GND 50MPU 50MPU_A_GND DC50 DC50 DC50 DC50 33MPU_A_GND 33MPU 33MPU_A_GND 50MPU_A 33MPU_A 33SH 50MPU_CoNT NC E_PTT_SH SCK_ST_SH GND SRX0_ATX0 STX0_ARX0 GND RF_PTT TX_STATE QT_DQT RADIO_ERR GND ADSP_CK_SFT TRUNKiNG A16C_CK_SFT BER_DAT BER_CLK GND SYS_RST

CN1
GND GND RX_PWR_SAVE oCXo_ST_G oCXo_ST_R VoLUME_IN PWR_ST_R MOD_D_OUT GND RX_AUDIO_D BEEP MIC_D_IN INPA_SW NC HooK_RXD_SCM AMP_SW SCM_EN PTT_MUTE INSP_SW EVOL_DATA PTT_AM16C EVOL_CLK GND EVOL_LD TAAD_SW TA_SW BEEP_SW PA_TH_SW RXAD_SW MIC_SW MiCAD_SW TD_SW NC Lo_VoL_DET GND PTT_TXD_SCM

CN401
GND GND RX_PWR_SAVE oCXo_ST_G oCXo_ST_R VoLUME_IN PWR_ST_R MOD_D_OUT GND RX_AUDIO_D BEEP MIC_D_IN INPA_SW NC HooK_RXD_SCM AMP_SW SCM_EN PTT_MUTE INSP_SW EVOL_DATA PTT_AM16C EVOL_CLK GND EVOL_LD TAAD_SW TA_SW BEEP_SW PA_TH_SW RXAD_SW MIC_SW MiCAD_SW TD_SW NC Lo_VoL_DET GND PTT_TXD_SCM

CN56
GND GND PAG GND CoNT_5.0V D_GND CoNT_5.0V D_GND SDA D_GND SCK TEMP_PRT ANT_SW DDS_EN VR_EN 440_EN 132_EN 440_CE 132_CE LDT 2DA_EN 3DA_EN 2DA_CE SR_oE 8AD_EN SR_EN SDi1 SDo0 SCLK1 SCLK0 SDo1 GND MoD WP GND GND

CN804
GND GND PAG GND CoNT_5.0V D_GND CoNT_5.0V D_GND SDA D_GND SCK TEMP_PRT ANT_SW DDS_EN VR_EN 440_EN 132_EN 440_CE 132_CE LDT 2DA_EN 3DA_EN 2DA_CE SR_oE 8AD_EN SR_EN SDi1 SDo0 SCLK1 SCLK0 SDo1 GND MoD WP GND GND

FINAL UNIT
X45-381 A/5

CN806
GND GND NC(FAN_CURR2) GND PA_CURR GND FAN_CURR GND FWD_PWR GND RFL_PWR GND PWR_PRT GND PWR_CONT GND FAN_CONT GND FAN_CONT2 GND TEMP_RST GND ANT_SW GND TEMP_PRT D_GND CONT_5.0V D_GND SCK D_GND SDA D_GND GND WP GND GND

CN20
GND GND NC(FAN_CURR2) GND PA_CURR GND FAN_CURR GND FWD_PWR GND RFL_PWR GND PWR_PRT GND PWR_CONT GND FAN_CONT GND FAN_CONT2 GND TEMP_RST GND ANT_SW GND TEMP_PRT D_GND CONT_5.0V D_GND SCK D_GND SDA D_GND GND WP GND GND

CN22 TX ANT
CN19 MONITOR PORT
CN8 FAN 1 M

TX UNIT
X56-311 A/3

CN21 E B CN2

CN802 TX SIGNAL CN1

CN801 E B B

CN408 REF_IN(10MHz)
CN403 REF_OUT(10MHz)

CN400
GND GND REF_SW2 WP REF_SW oX_SCL EXT_EXiST oX_SDA REF_EXiST iMP_H_L REF_iN_oUT GND oX_SDi2 GND oCXo_VR_EN GND oCXo_oN GND oCXo_CURR GND oCXo_EXiST GND VCXo_DA_EN GND REF_LDT GND PLL_19_EN GND PLL_19_CE GND oX_SDo2 GND oX_SCLK2 33MPU GND GND

CN805
GND GND REF_SW2 WP REF_SW oX_SCL EXT_EXiST oX_SDA REF_EXiST iMP_H_L REF_iN_oUT GND oX_SDi2 GND oCXo_VR_EN GND oCXo_oN GND oCXo_CURR GND oCXo_EXiST GND VCXo_DA_EN GND REF_LDT GND PLL_19_EN GND PLL_19_CE GND oX_SDo2 GND oX_SCLK2 33MPU GND GND

CONTROL UNIT2
X53-414

CN300
RX_IF_VN

CN713
GND RI DTR CTS SD RTS RD DSR CD
PC CONTROL

J700
J703 FRAME A FRAME B
J702 FRAME A FRAME B

J701
GND CD3 CF DO4 CF DO6 CF DO8 CF DO0 CF DO2 CF CE1A CF A10 CF RD CF A09 CF A08 CF A07 CF 33CF A06 CF A05 CF A04 CF A03 CF A02 CF A01 CF A00 CF D00 CF D01 CF D02 CF NC CD2
CD1 D11 CF D12 CF D13 CF D14 CF D15 CF CE2A CF NC IO RD IO WR WE CF RIB/iREQ CF 33CF NC NC RESET CF WAIT CF NC REG NC NC NC NC NC NC GND

CN302
CN405
CN406
REF2(19.2MHz)

FINAL UNIT
X45-381 C/5

CN11 E E B B
CN15 E B B
CN12 E B B

CN27 CN23 CN25
CN28 CN24 CN26
CN30 CN29
FINAL UNIT
X45-381 B/5
DC

REF1 (19.2MHz)