

Part E T800 Memory & T830 VCO PCB Information

This part of the manual is divided into the sections listed below. These sections provide parts lists, PCB layouts and circuit diagrams for the T800 memory and T830 VCO PCBs. There is a detailed table of contents at the start of each section.

| Section | Title | IPN | Page |
|----------------|------------------------|---------------------|-------------|
| 1 | Introduction | | 1.1 |
| 2 | T800 Memory PCB | 220-01144-00 | 2.1 |
| 3 | T830 VCO PCB | 220-01176-01 | 3.1 |

1 Introduction

PCB Identification

All PCBs are identified by a unique 10 digit number, the last 2 digits of which define the issue status. The issue status starts at 00 and increments through 01, 02, 03, etc. as the PCB is updated. Some issue PCBs never reach full production status and are therefore not included in this manual. A letter following the 10 digit IPN has no relevance in identifying the PCB for service purposes.

Parts Lists

The 10 digit numbers (000-00000-00) in this Parts List are "internal part numbers" (IPNs). Your spare parts orders can be handled more efficiently if you quote the IPN and provide a brief description of the part.

The components listed in this parts list are divided into two main types: those with a circuit reference (e.g. C2, D1, R121, etc.) and those without (miscellaneous and mechanical).

Those with a circuit reference are grouped in alphabetical order and then in numerical order within each group. Each component entry comprises three or four columns, as shown below:

| Ref | Var | IPN | Description |
|-------|-----|--------------|------------------------------------|
| C126 | | 015-06100-08 | CAP CER 1206 CHIP 100N 10% X7R 50V |
| C127 | | 020-09220-01 | CAP ELECT RADL 220M 16V 10X12.5MM |
| C128 | | 015-06100-08 | CAP CER 1206 CHIP 100N 10% X7R 50V |
| C129 | | 015-06100-08 | CAP CER 1206 CHIP 100N 10% X7R 50V |
| &C130 | 10 | 015-25100-08 | CAP CER 0805 CHIP 10N 10% X7R 50V |
| &C130 | 15 | 015-24470-08 | CAP CER 0805 CHIP 4N7 10% X7R 50V |
| &C130 | 20 | 015-25100-08 | CAP CER 0805 CHIP 10N 10% X7R 50V |
| &C130 | 25 | 015-24470-08 | CAP CER 0805 CHIP 4N7 10% X7R 50V |
| C131 | | 015-24100-08 | CAP CER 0805 CHIP 1N 10% X7R 50V |
| C132 | | 015-24470-08 | CAP CER 0805 CHIP 4N7 10% X7R 50V |
| C133 | | 015-05470-08 | CAP CER 1206 CHIP 47N 10% X7R 50V |

The miscellaneous and mechanical parts are listed in IPN order at the end of the parts list.

2 T800 Memory PCB

This section contains the following information.

| IPN | Section | Page |
|--------------|----------------------------------|------|
| 220-01144-00 | Parts List | 2.2 |
| | Mechanical & Miscellaneous Parts | 2.2 |
| | PCB Layout - Top Side | 2.3 |
| | PCB Layout - Bottom Side | 2.4 |
| | Circuit Diagram | 2.5 |

T800 Memory PCB Parts List (IPN 220-01144-00)

How To Use This Parts List

The components listed in this parts list are divided into two main types: those with a circuit reference (e.g. C2, D1, R121, etc) and those without (miscellaneous and mechanical).

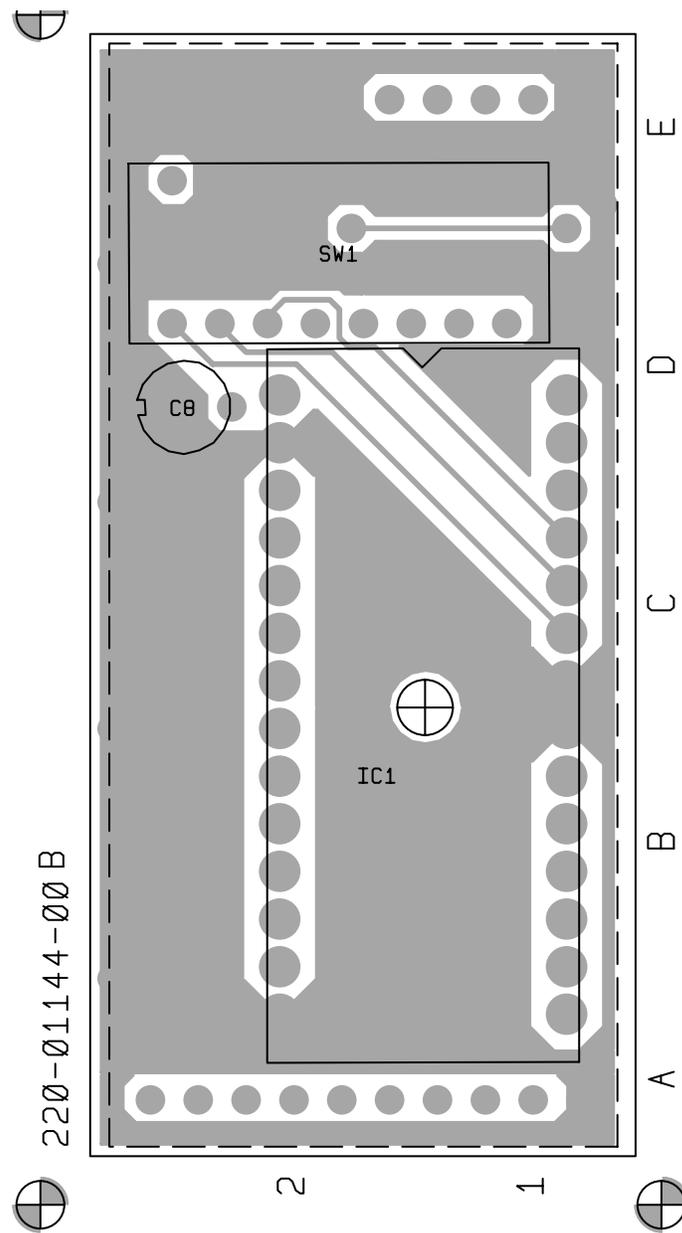
Those with a circuit reference are grouped by component type in numerical order. Each component entry comprises three or four columns: the circuit reference, variant number (if applicable), IPN and description. A number in the variant column indicates that this component is fitted only to that variant.

The miscellaneous and mechanical section lists the variant and common parts in IPN order.

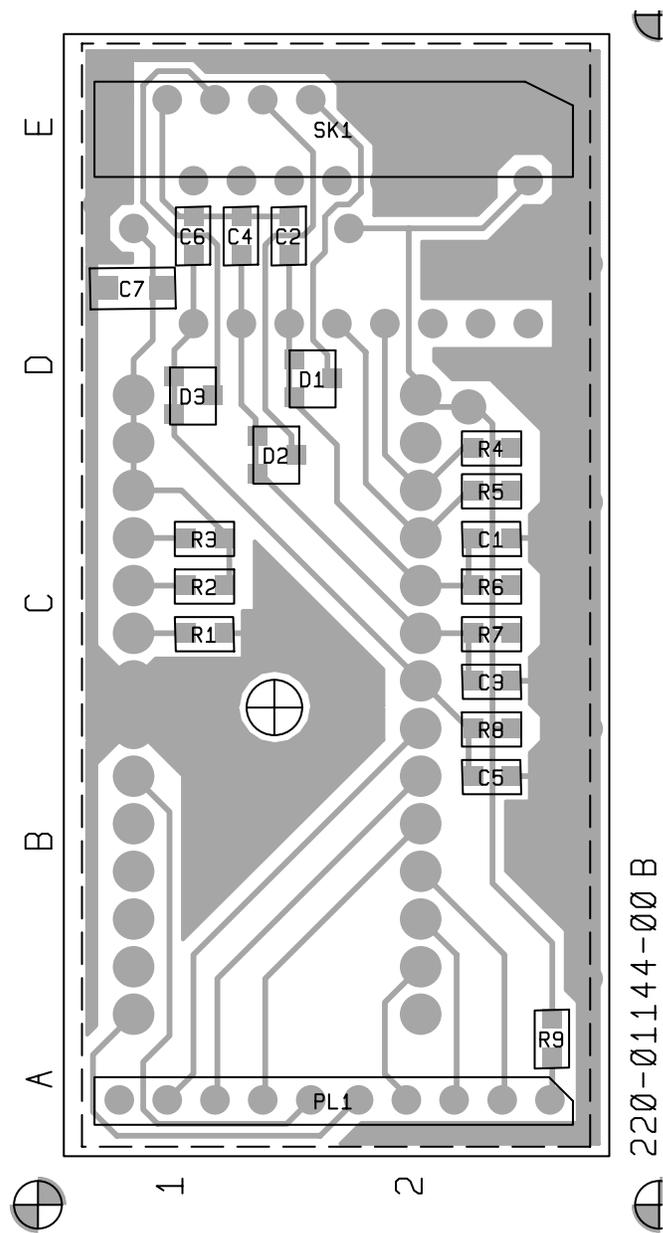
Parts List Amendments

There were no amendments to the parts list at the time of publication.

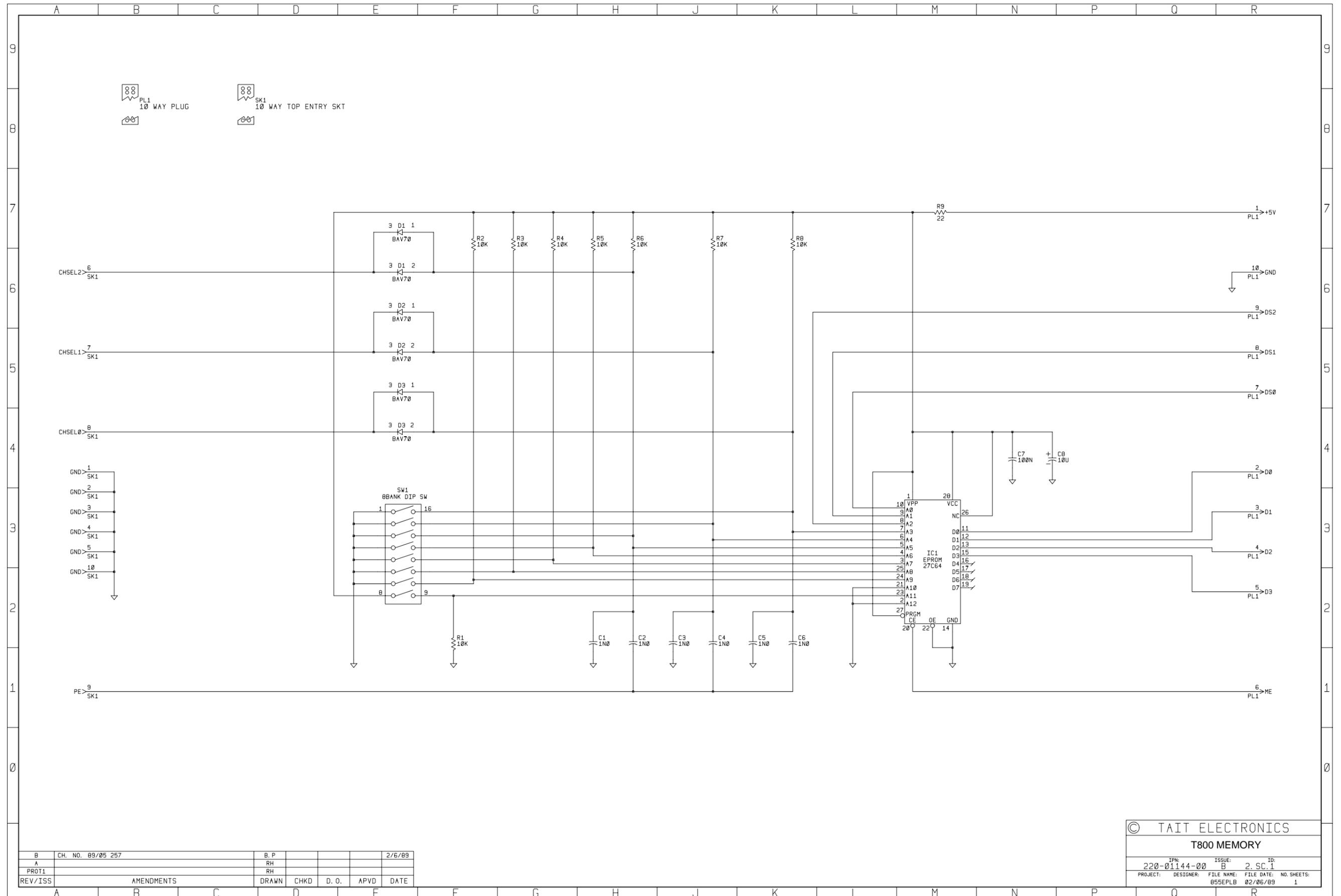
| Ref | Var | IPN | Description | Ref | Var | IPN | Description |
|------|-----|--------------|---|-----|-----|-----|-------------|
| C1 | | 015-24100-08 | CAP CER 0805 CHIP 1N 10% X7R 50V | | | | |
| C2 | | 015-24100-08 | CAP CER 0805 CHIP 1N 10% X7R 50V | | | | |
| C3 | | 015-24100-08 | CAP CER 0805 CHIP 1N 10% X7R 50V | | | | |
| C4 | | 015-24100-08 | CAP CER 0805 CHIP 1N 10% X7R 50V | | | | |
| C5 | | 015-24100-08 | CAP CER 0805 CHIP 1N 10% X7R 50V | | | | |
| C6 | | 015-24100-08 | CAP CER 0805 CHIP 1N 10% X7R 50V | | | | |
| C7 | | 015-06100-08 | CAP CER 1206 CHIP 100N 10% X7R 50V | | | | |
| C8 | | 025-08100-02 | CAP TANT BEAD 10M 10% 16V | | | | |
| D1 | | 001-10000-70 | (S) DIODE SMD BAV70 DUAL SW SOT-23 COM-CATH | | | | |
| D2 | | 001-10000-70 | (S) DIODE SMD BAV70 DUAL SW SOT-23 CO CATH | | | | |
| D3 | | 001-10000-70 | (S) DIODE SMD BAV70 DUAL SW SOT-23 COM CATH | | | | |
| IC1 | | 002-00018-04 | (S) IC 27C64 CMOS 8K*8 UV EPROM 250NS - 150NS | | | | |
| PL1 | | 240-00020-57 | HEADER 10 WAY 1 ROW PCB MTG | | | | |
| R1 | | 036-15100-00 | RES M/F 0805 CHIP 10K 5% | | | | |
| R2 | | 036-15100-00 | RES M/F 0805 CHIP 10K 5% | | | | |
| R3 | | 036-15100-00 | RES M/F 0805 CHIP 10K 5% | | | | |
| R4 | | 036-15100-00 | RES M/F 0805 CHIP 10K 5% | | | | |
| R5 | | 036-15100-00 | RES M/F 0805 CHIP 10K 5% | | | | |
| R6 | | 036-15100-00 | RES M/F 0805 CHIP 10K 5% | | | | |
| R7 | | 036-15100-00 | RES M/F 0805 CHIP 10K 5% | | | | |
| R8 | | 036-15100-00 | RES M/F 0805 CHIP 10K 5% | | | | |
| R9 | | 036-12220-00 | RES M/F 0805 CHIP 22E 5% | | | | |
| SW1 | | 230-00010-19 | SWITCH*8 SPST DIP PKG | | | | |
| SKT1 | | 240-04020-57 | SKT 10 WAY 1ROW PCB MTG TOP ENTRY | | | | |
| | | 220-01144-00 | PCB T855/856/857 MEM | | | | |
| | | 240-04020-35 | SKT 28 PIN DIL IC LO PROF IC1 | | | | |
| | | 365-00011-38 | LABEL STATIC WARNING YELLOW A4A315 | | | | |
| | | 365-00011-54 | LABEL WHITE RW1556/2 SPECIAL ADHESIVE | | | | |
| | | 399-00010-86 | BAG STATIC SHIELDING 127X203MM | | | | |
| | | 410-00010-64 | PKG HEADER CARD A3M2392 | | | | |



T800 Memory PCB (IPN 220-01144-00) - Top Side



T800 Memory PCB (IPN 220-01144-00) - Bottom Side



| | | | | | |
|---------|-------------------|-------|------|-------|-----------|
| B | CH. NO. 09/05 257 | B. P | | | 2/6/89 |
| A | | RH | | | |
| PROT1 | | RH | | | |
| REV/ISS | AMENDMENTS | DRAWN | CHKD | D. O. | APVD DATE |

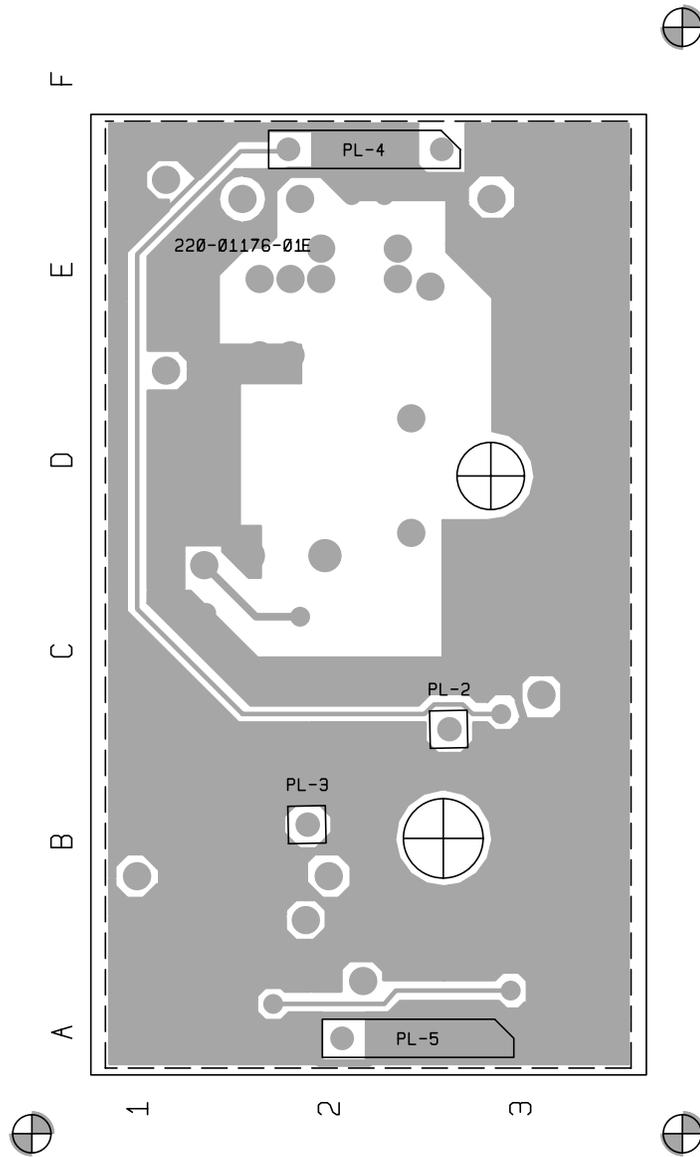
| | | | | | |
|--------------------|--------------|------------|------------|-------------|---|
| © TAIT ELECTRONICS | | | | | |
| T800 MEMORY | | | | | |
| IPN: | 220-01144-00 | ISSUE: | B | SC: | 1 |
| PROJECT: | DESIGNER: | FILE NAME: | FILE DATE: | NO. SHEETS: | |
| | | 855EPLB | 02/06/89 | 1 | |

3 T830 VCO PCB

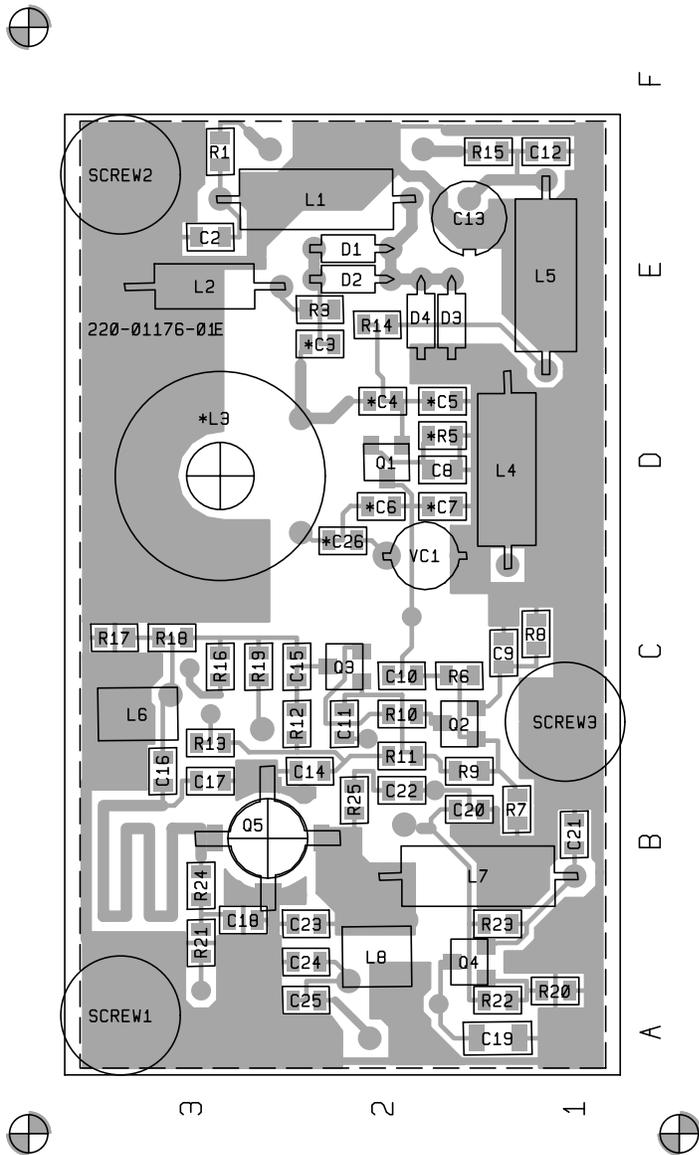
This section contains the following information.

| IPN | Section | Page |
|--------------|--------------------------|------|
| 220-01176-01 | Parts List | 3.2 |
| | PCB Layout - Bottom Side | 3.5 |
| | PCB Layout - Top Side | 3.6 |
| | Circuit Diagram | 3.7 |

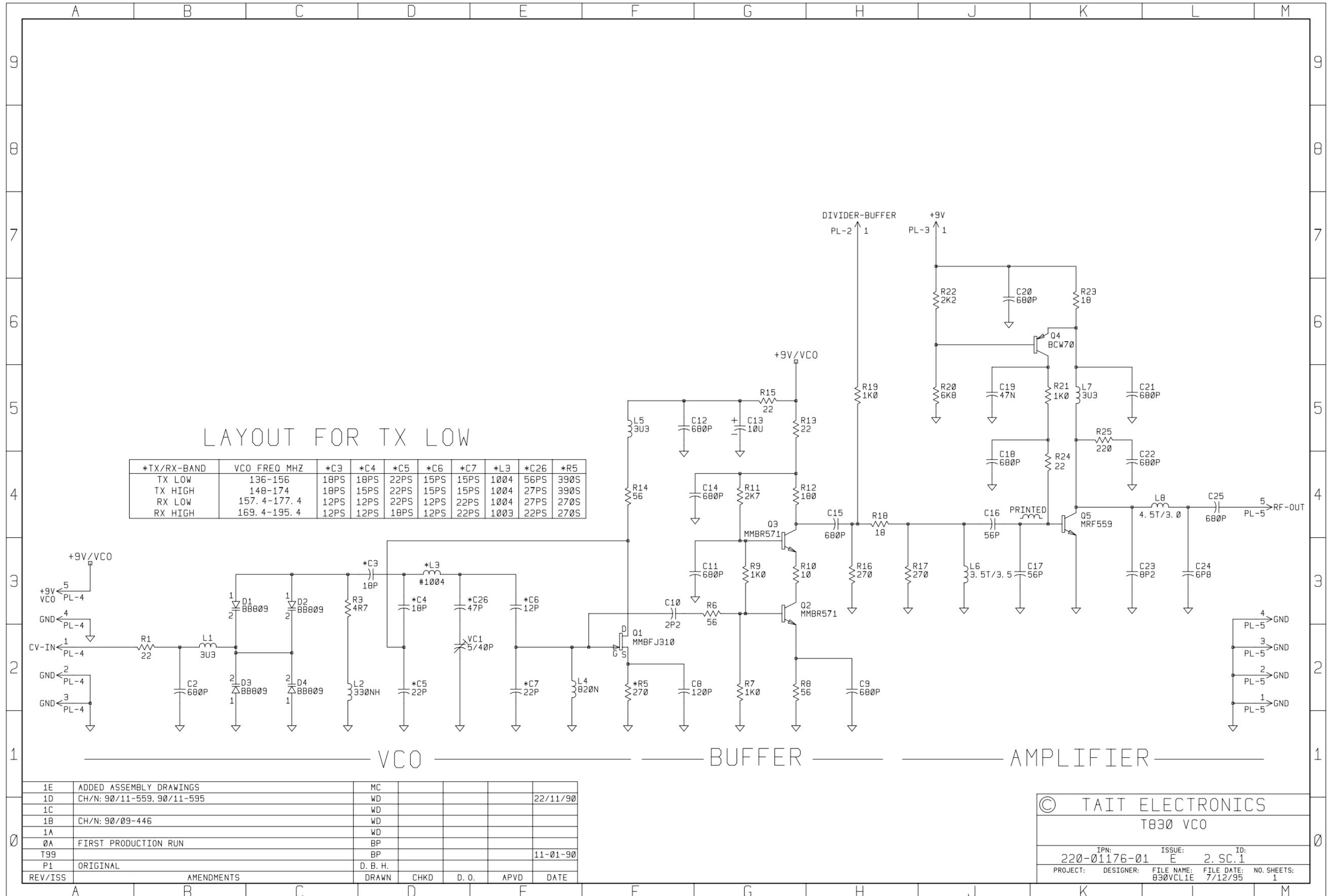
| Ref | Var | IPN | Description | Ref | Var | IPN | Description |
|-----|-----|--------------|---|-----|-----|-----|-------------|
| | | 220-01176-01 | PCB T830 VCO | | | | |
| | | 240-00025-36 | PLUG 32WAY 1ROW PC MTG HARWIN PL-1 PL-2 | | | | |
| | | 345-00040-10 | SCREW M3*6MM PAN POZI ST BZ | | | | |
| | | 345-00060-08 | SCREW M5 X 16 CHEESE SLOT PLASTIC T800 TO | | | | |
| | | 350-00016-42 | SPACER 5MM HI 8MM X M3 STUD 2.5MM X M3 HO | | | | |
| | | 352-00010-14 | NUT M5 HEX PLASTIC T800 TOROID | | | | |
| | | 353-00010-10 | WASHER M3 FLAT 7MM*0.6MM ST BZ | | | | |
| | | 353-00010-13 | WASHER M3 SHAKEPROOF INT BZ | | | | |
| | | 353-00010-41 | WASHER M6 NYLON BULTE LOCK T800 TOROID | | | | |



T830 VCO PCB (IPN 220-01176-01) - Bottom Side



T830 VCO PCB (IPN 220-01176-01) - Top Side



| | | | | | | |
|---------|----------------------------|----------|------|-------|------|----------|
| 1E | ADDED ASSEMBLY DRAWINGS | MC | | | | |
| 1D | CH/N: 90/11-559, 90/11-595 | WD | | | | 22/11/90 |
| 1C | | WD | | | | |
| 1B | CH/N: 90/09-446 | WD | | | | |
| 1A | | WD | | | | |
| 0A | FIRST PRODUCTION RUN | BP | | | | |
| T99 | | BP | | | | 11-01-90 |
| P1 | ORIGINAL | D. B. H. | | | | |
| REV/ISS | AMENDMENTS | DRAWN | CHKD | D. O. | APVD | DATE |

| | | | |
|--------------------|-----------|------------|-------------|
| © TAIT ELECTRONICS | | | |
| T830 VCO | | | |
| IPN: | ISSUE: | ID: | |
| 220-01176-01 | E | 2. SC. 1 | |
| PROJECT: | DESIGNER: | FILE DATE: | NO. SHEETS: |
| | 830VCL1E | 7/12/95 | 1 |

Part F Installation

This part of the manual is divided into the sections listed below. These sections give a brief description of the basic rack mounting and wiring procedures for the T835 receiver, T836 transmitter, T837 exciter and T838 power amplifier.

| Section | Title | Page |
|----------|----------------------------------|------------|
| 1 | T835/836/837 Installation | 1.1 |
| 1.1 | Rack Mounting | 1.1 |
| 1.2 | Rack Wiring | 1.2 |
| 1.3 | Power Supply | 1.3 |
| 1.4 | Reverse Polarity Protection | 1.3 |
| 2 | T838 Installation | 2.1 |
| 2.1 | Rack Mounting | 2.1 |
| 2.2 | Rack Wiring | 2.2 |
| 2.3 | Power Supply | 2.3 |

| Figure | Title | Page |
|--------|-------------------------------------|------|
| 1.1 | T800 Series Guide | 1.1 |
| 1.2 | T835/836 Chassis Connectors | 1.1 |
| 1.3 | T837 Chassis Connectors | 1.1 |
| 1.4 | T835 D-Range Wiring - Rear View | 1.2 |
| 1.5 | T836/837 D-Range Wiring - Rear View | 1.2 |
| 2.1 | T838 Guide | 2.1 |
| 2.2 | T838 Chassis Connectors | 2.1 |
| 2.3 | T838 Latched Position | 2.2 |
| 2.4 | T838 D-Range Wiring - Rear View | 2.2 |

1 T835/836/837 Installation

1.1 Rack Mounting

The T835 receiver, T836 transmitter and T837 exciter are designed for use in a standard 483mm rack frame using a Tait T800 Series guide which locates and mates the rear D-range connectors (refer to Figure 1.1, Figure 1.2 and Figure 1.3).

A T800 Series guide is supplied with each unit. The guide is located in the rack frame with four screws, two at the rear and two at the front, and the T800 unit is secured into the guide with two front panel mounting screws.

A rear mounted N-type connector is used for RF input on the T835 receiver and RF output on the T836 transmitter, while the exciter RF output is via the front panel SMC connector. All DC, audio and control connections are via the rear mounted D-range connector. An additional rear D-range connector (T800-03) is fitted when remote multichannel operation, or additional control or low frequency lines are required.

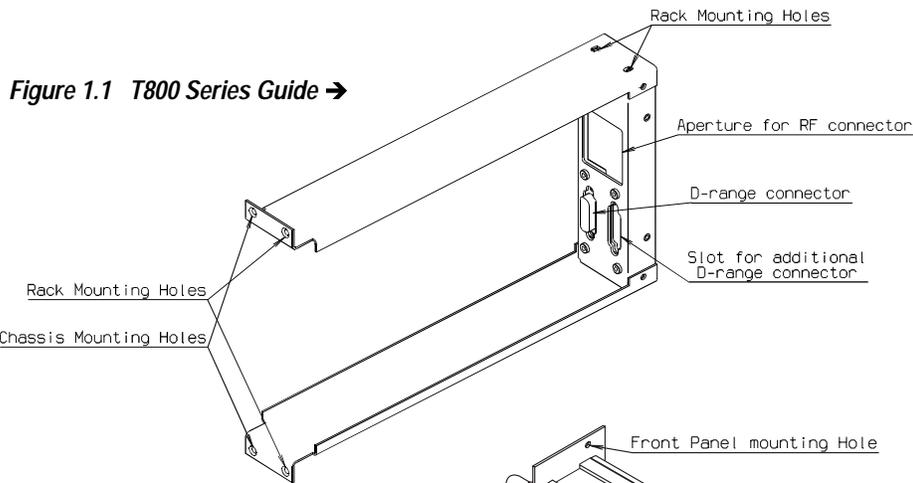
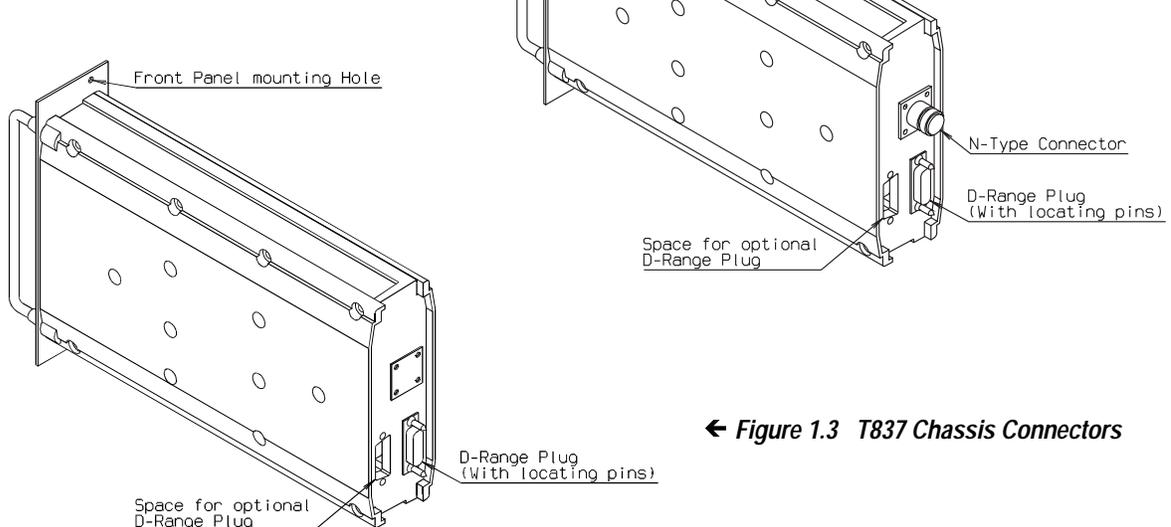


Figure 1.2 T835/836 Chassis Connectors →



← **Figure 1.3 T837 Chassis Connectors**

1.2 Rack Wiring

Wire the D-range connector as shown in Figure 1.4 or Figure 1.5. Ensure that the cables are not subjected to any stresses due to tight bends or incorrect lengths.

The RF coaxial cable to the N-type connector should be free from acute bends or twists. If access to the rear of the rack frame is restricted, the cable should be long enough to permit full withdrawal of the chassis from the guide.

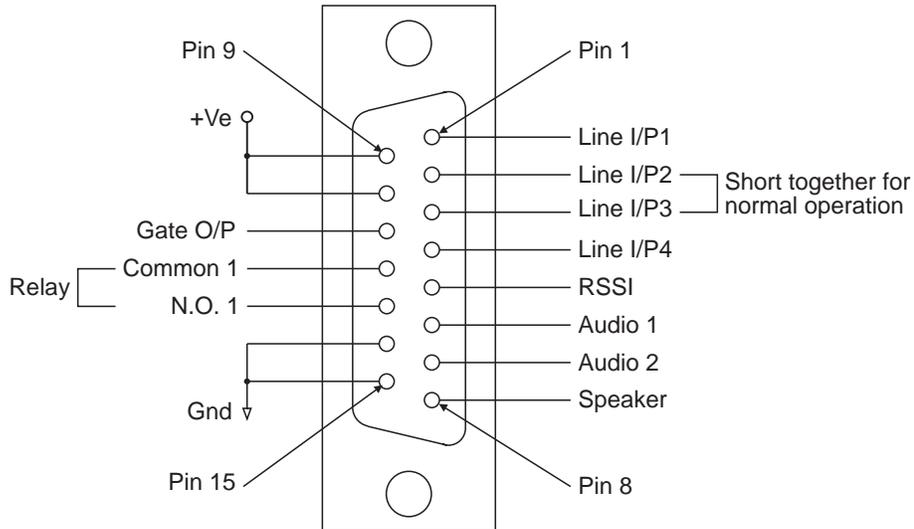


Figure 1.4 T835 D-Range Wiring - Rear View

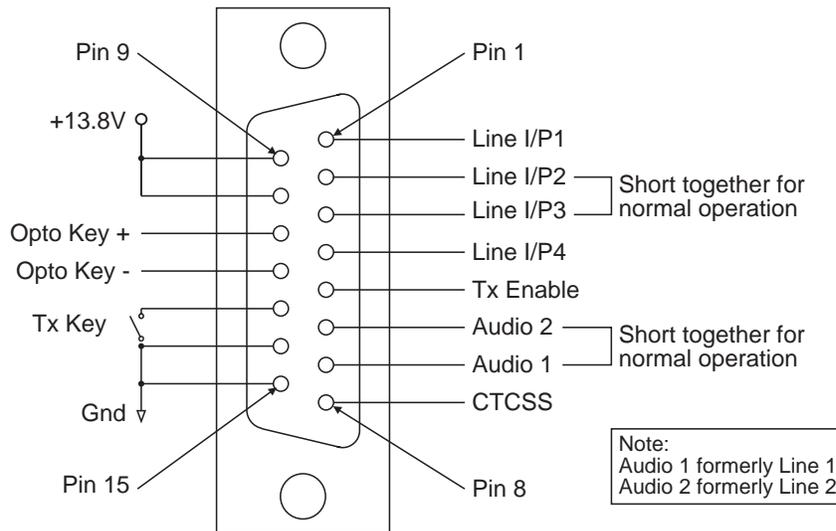


Figure 1.5 T836/837 D-Range Wiring - Rear View

1.3 Power Supply

If a power supply other than an appropriate Tait model is used, ensure that it is capable of providing enough current to drive the T800 system and is also free from excessive ripple or noise.

The system should be protected by the use of appropriately rated fuses in the power supply.

Note: It is particularly important when the prime power source is a battery that fuses be employed in all supply lines.

1.4 Reverse Polarity Protection

A shunt diode is fitted to all T835 receivers, T836 transmitters and T837 exciters for protection against connection to a power supply of incorrect polarity.

Note: A fuse must be fitted in the power supply line for the diode to provide effective protection.

2 T838 Installation

2.1 Rack Mounting

The T838 50W PA is designed for use in a standard 483mm rack frame using the supporting guide rails supplied with the units (refer to Figure 2.1).

The lower guide rail is located in the rack frame with three screws, two at the rear and one at the front. The short upper guide rail is located with just one screw. The PA is secured into the guide with two front panel mounting screws.

The RF input via the front panel SMC connector should be connected to an adjacent T837 exciter. The RF output is via the rear N-type connector, whilst all DC, audio and control connections are via the D-range connector.

The guide rails will allow the PA to be latched in the extended position (refer to Figure 2.3).



Caution: If continuous operation of the T838 is required, the rack module position immediately adjacent to the finned heatsink should be left vacant. Adequate airflow over the fins should be maintained at all times.

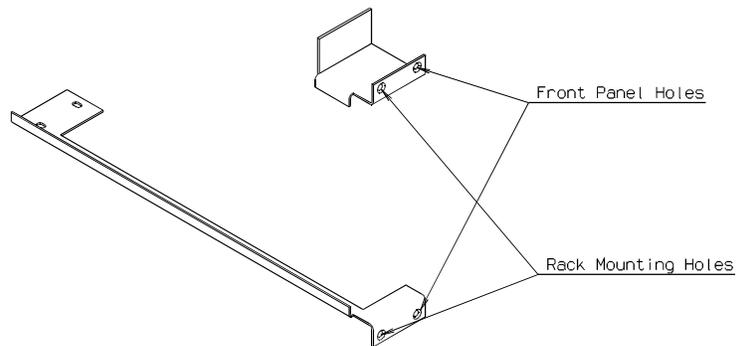
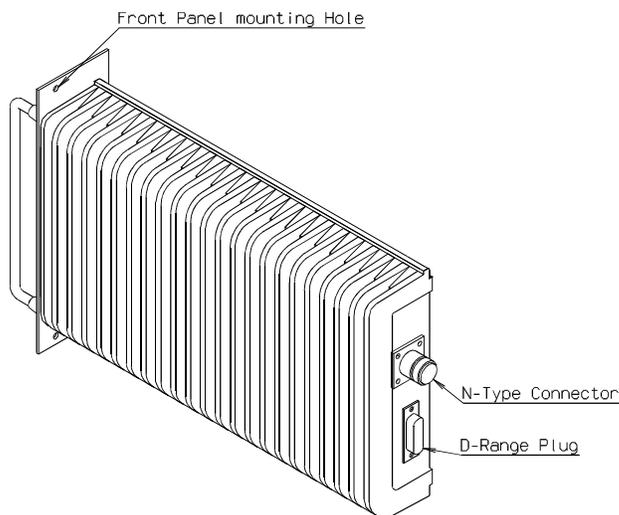


Figure 2.1 T838 Guide →



← Figure 2.2 Chassis Connectors

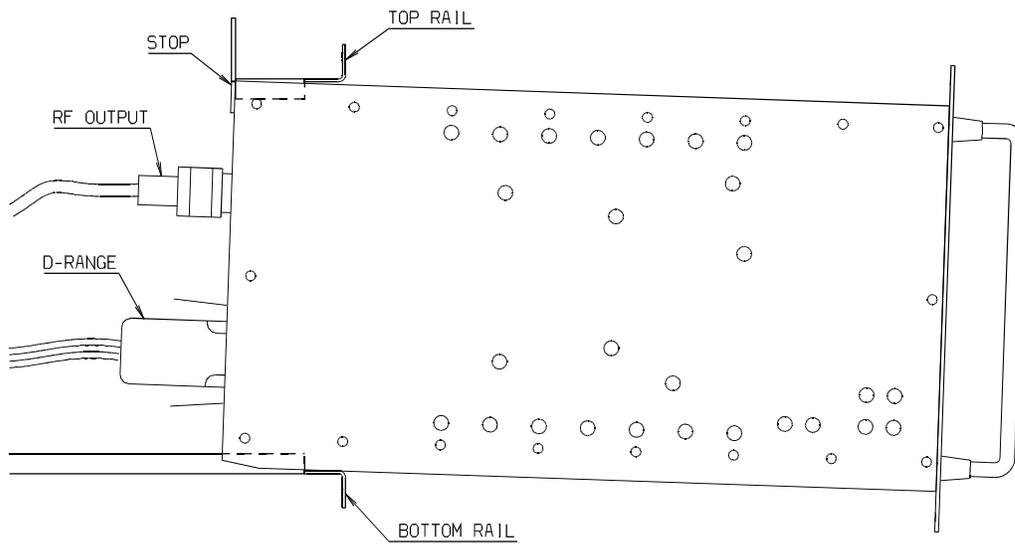


Figure 2.3 Latched Position

2.2 Rack Wiring

Wire the D-range connector as shown in Figure 2.4. Ensure that the cables are not subjected to any stresses due to tight bends or incorrect lengths.

The RF coaxial cable to the N-type connector should be free from acute bends or twists. If access to the rear of the rack frame is restricted, the cable should be long enough to permit full withdrawal of the chassis from the guide.

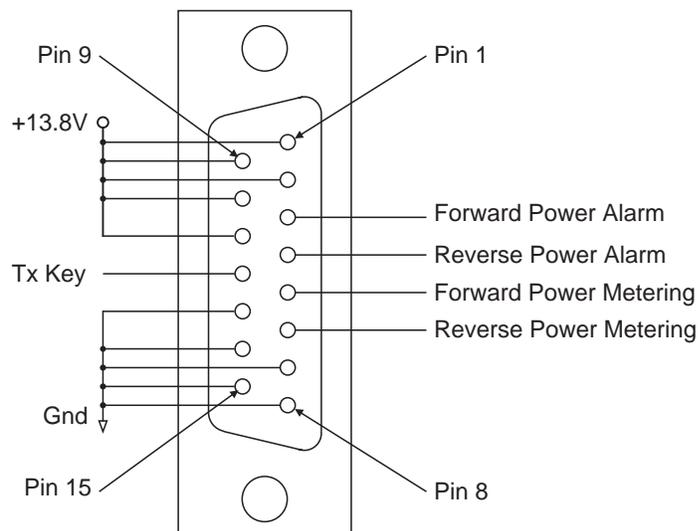


Figure 2.4 D-Range Wiring - Rear View

2.3 Power Supply

If a power supply other than an appropriate Tait model is used, ensure that it is capable of providing enough current to drive the T800 system and is also free from excessive ripple or noise.

Part G System Configurations

This part of the manual is divided into the sections listed below. These sections provide some brief information on basic system types and how to configure T830 equipment for use in them.

| Section | Title | Page |
|----------|--|------------|
| 1 | T835 Link Selectable Features | 1.1 |
| 1.1 | Flat Or De-emphasised Response | 1.1 |
| 1.2 | Mute Relay Control | 1.1 |
| 1.3 | Mute Selection | 1.1 |
| 1.4 | Receiver Disable | 1.1 |
| 1.5 | CTCSS Configuration | 1.1 |
| 1.6 | 300Hz High Pass Filter | 1.2 |
| 2 | T836/837 Optional Features | 2.1 |
| 2.1 | Audio Processor | 2.1 |
| 2.2 | Line Transformer Inputs And Outputs | 2.1 |
| 2.3 | Opto Key | 2.1 |
| 2.4 | Relay Driver | 2.1 |
| 2.5 | Local Microphone | 2.2 |
| 2.6 | Keying With Option PCBs | 2.2 |
| 3 | Talk Through Repeater | 3.1 |
| 4 | Line Controlled Base Without Talk Through | 4.1 |
| 4.1 | General | 4.1 |
| 4.2 | Transmitter Tail Timer | 4.2 |
| 5 | DC Line Keying | 5.1 |

| Figure | Title | Page |
|---------------|---|-------------|
| 3.1 | Talk Through Repeater | 3.1 |
| 4.1 | Basic Configuration | 4.1 |
| 4.2 | Remote Line Controlled Base Station | 4.1 |
| 4.3 | 4-Wire to 2-Wire Convertor | 4.2 |
| 4.4 | Receiver Disable Time vs Tail Time | 4.2 |
| 5.1 | DC Loop Keying With Common Earth | 5.1 |
| 5.2 | Isolated Constant Current Loop Current Detector | 5.1 |
| 5.3 | Isolated Loop Current Switch | 5.2 |
| 5.4 | Typical System | 5.2 |

1 T835 Link Selectable Features

1.1 Flat Or De-emphasised Response

The links of PL101 and PL103 may be set to give either a flat or de-emphasised audio frequency response (refer to Section 3.3 in Part B for further details).

1.2 Mute Relay Control

A relay with undedicated contacts (RL100) is available in the audio processor circuit block for various switching applications. A link (PL102) is available for control of the relay from the mute circuit (refer to Section 3.3 in Part B). This makes the relay suitable for controlling the keying of a transmitter in repeater applications.

1.3 Mute Selection

Link PL104 may be set to operate with noise mute or carrier mute (refer to Section 3.3 in Part B).

1.4 Receiver Disable

The receiver audio can be disabled by pulling the "Rx disable" line low. When the circuit is pulled from low to high, the receiver audio cannot be re-enabled until the disable timer completes its operation. This time is variable from 15ms to 200ms by adjusting RV101 in the audio processor section.

If required, the operation of this circuit can be disabled by changing the link of PL100 from 1-2 to 2-3.

Typical applications of the receiver disable are as an extra mute for signalling purposes, or when the T835 is configured as a line controlled base station (refer to Section 4 in Part G).

1.5 CTCSS Configuration

Links PL105 & PL106 select various CTCSS options (refer to Section 3.3.2 in Part B).

1.6 300Hz High Pass Filter

Link PL105 also allows the insertion of this filter to improve hum and noise performance.

2 T836/837 Optional Features

2.1 Audio Processor

The T836 and T837 come with a number of link selectable features which give added system flexibility.

Refer to Section 3.3 in Part C for further details.

2.2 Line Transformer Inputs And Outputs

The line transformer (T100) is designed to provide a balanced interface to 600 ohm lines. For normal operation the two centre connections (LINE I/P 2, LINE I/P 3) are shorted together, and the 600 ohm line is connected between LINE I/P 1 and LINE I/P 4.

The secondary winding of the transformer is connected via a 1k resistor to pin 7 of the D-range connector and may be used to monitor audio on the line. It is normally shorted at the connector socket to pin 6 to route the audio signal back into the processor. If required, the audio path may be broken at this point for use with signalling options, e.g. CTCSS (refer to TI-346).

2.3 Opto Key

The keying circuitry may be completely isolated from the rest of the system by means of the optocoupler (IC100) connected between pins 11 and 12 of the D-range connector. A constant current source (Q106) allows keying voltages between 6 and 50V.

2.4 Relay Driver

A dedicated transistor (Q105) is provided for the purpose of switching an external (e.g. coaxial) relay. The output is open collector and is activated by the Tx-reg rail.

This output is not normally connected to the standard D-range connector, and use of the relay driver will necessitate manual wiring to an additional D-range connector, as supplied with the T800-03 auxiliary D-range.

2.5 Local Microphone

Use of the local microphone (via the front panel stereo socket) will disable the audio input from the line. The audio switching occurs when the PTT switch is closed.

2.6 Keying With Option PCBs

If an option PCB (e.g. CTCSS) is fitted to the exciter, keying may then be accomplished via the TX-EN-OPT pad in the audio processor. The line must be pulled low to key.

3 Talk Through Repeater

In this configuration the receiver directly keys the transmitter when the signal is received. The demodulated audio is fed via 600 ohm lines to the transmitter to modulate the carrier. The receiver and transmitter operate simultaneously and must therefore be on different frequencies. The minimum frequency separation depends on the duplexer used.

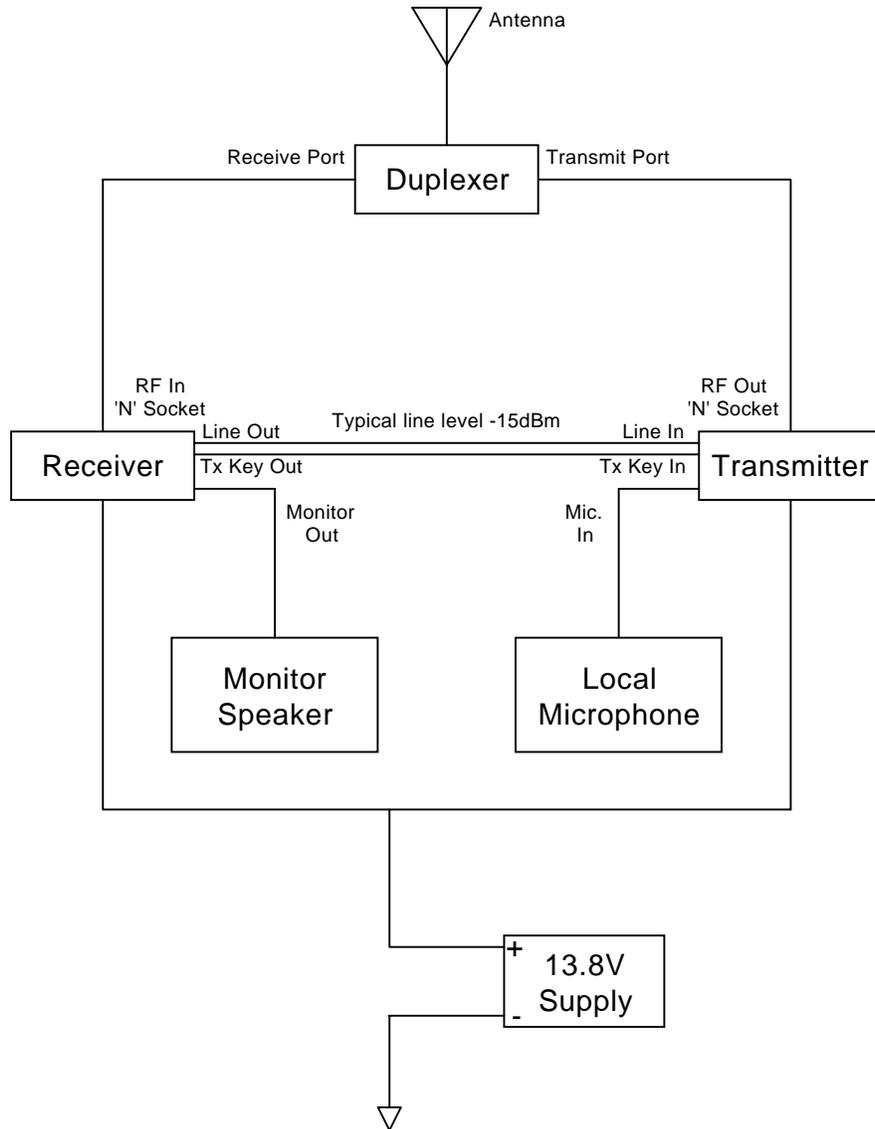


Figure 3.1 Talk Through Repeater

4 Line Controlled Base Without Talk Through

4.1 General

This installation contains a transmitter and receiver which may or may not be on the same frequency, thus simultaneous transmission and reception is not possible. When the transmitter is keyed, the coaxial relay is also energised. When the relay is in its rest position, signals from the aerial are passed to the receiver and the demodulated output is fed via 600 ohm lines to the RCU.

The receiver is disabled when the transmitter is energised to prevent the receiver mute opening from RF due to lack of isolation in the relay, direct radiation or the noise skirt of the dual frequency link.

Since the base station may be controlled via a 2-wire line and a 4-wire to 2-wire hybrid, there is a possibility of system oscillation if the receiver is not disabled during transmit. This occurs when the transmit energy enters the receiver and produces an audio response which can pass from the receive to the transmit audio part of the hybrid (impedance imbalance, etc).

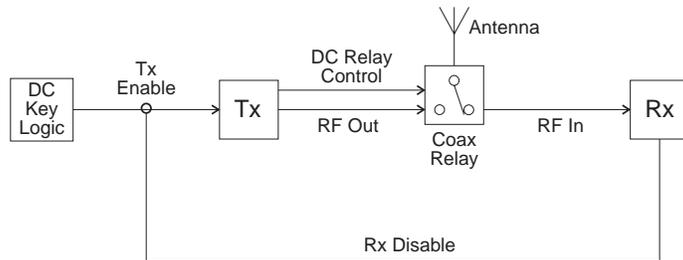


Figure 4.1 Basic Configuration

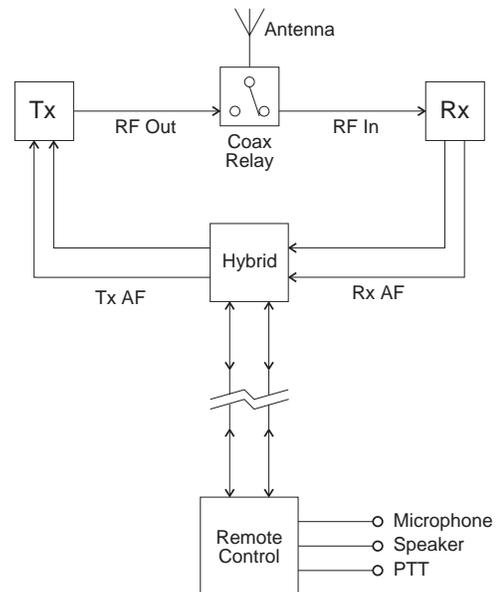


Figure 4.2 Remote Line Controlled Base Station

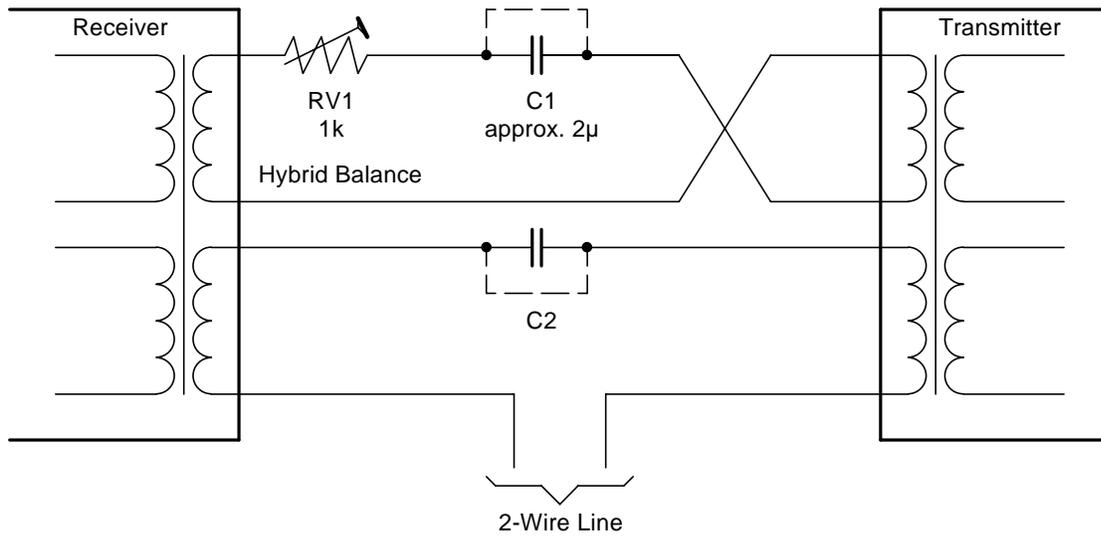


Figure 4.3 4-Wire to 2-Wire Converter

4.2 Transmitter Tail Timer

If the transmitter has a tail timer fitted:

- the receiver disable timer must be set so that $t_{Rx/Dis} > t_{Tx/Tail}$;

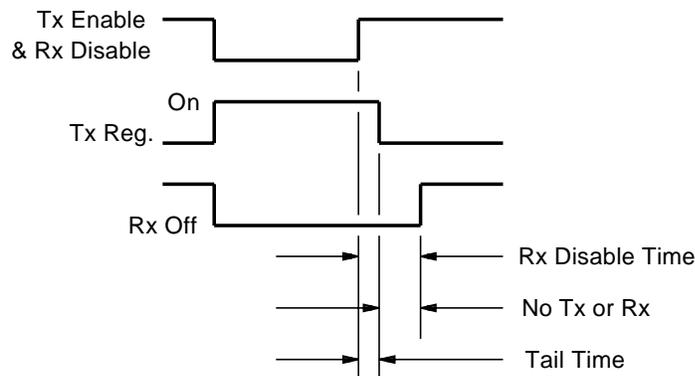


Figure 4.4 Receiver Disable Time vs Tail Time

- if the system configuration also uses an aerial changeover relay as well as the tail timer, the changeover relay must be driven from the relay driver (Q105) in the audio processor rather than by Tx key or Tx enable;
- depending on tail time requirements, it is possible for the transmitter tail time to exceed the receiver disable time capability; in this situation the receiver disable line should also be driven from relay driver Q105.

5 DC Line Keying

Where the transmitter and receiver are separated by only a short distance and DC isolation is not required, DC loop keying may be employed.

A small DC current (usually less than 10mA) can be fed via the balanced 2-wire line to provide remote control of various functions.

In a duplex system the receiver mute is used to key a transmitter, provided there is a common earth between the two units (refer to Figure 5.1).

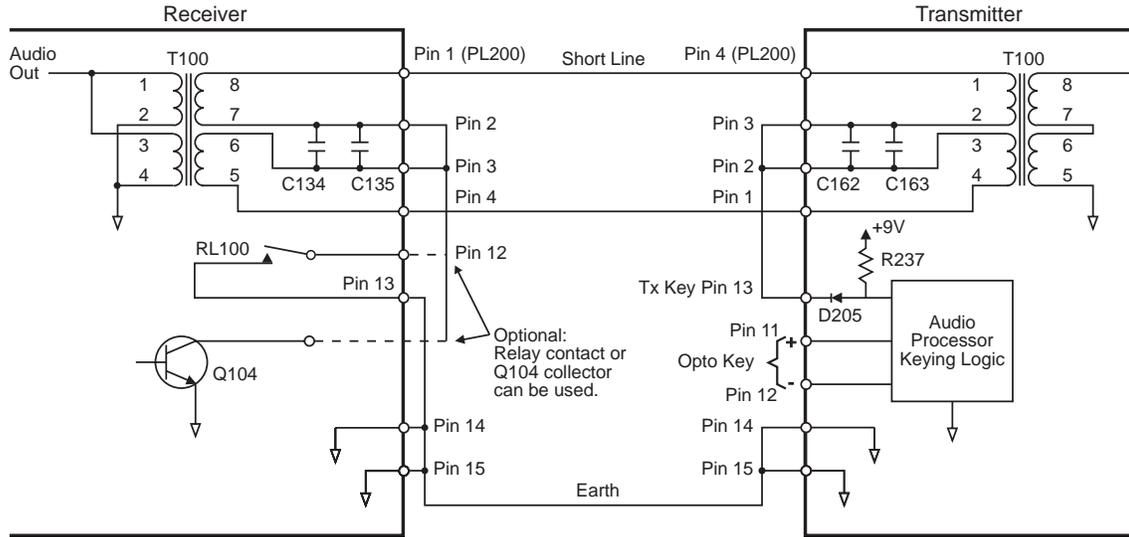


Figure 5.1 DC Loop Keying With Common Earth

Where the receiver and transmitter (or remote control) are distant, DC loop keying is provided by an isolated supply, driver and detector because an earth cannot be relied on (refer to Figure 5.2, Figure 5.3 & Figure 5.4).

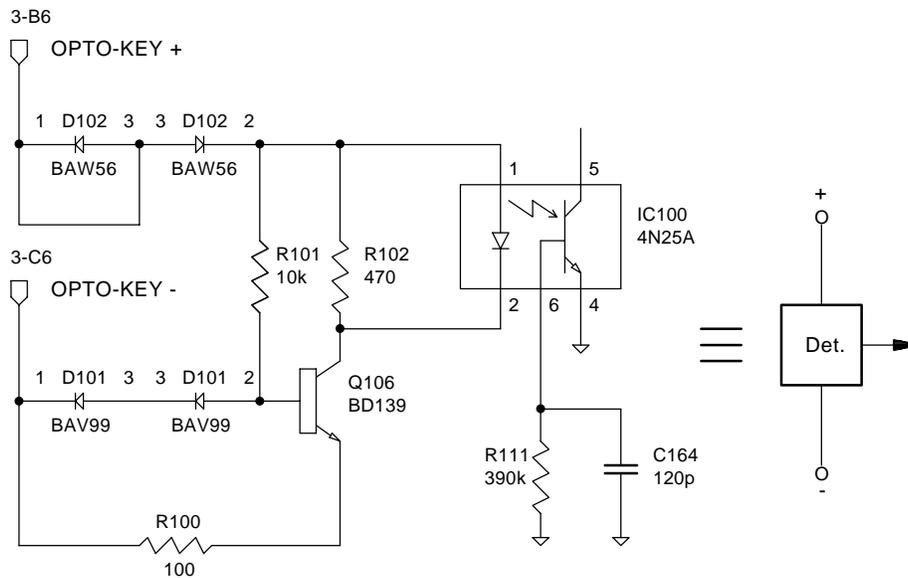


Figure 5.2 Isolated Constant Current Loop Current Detector (Opto-key input on T836 & T837)

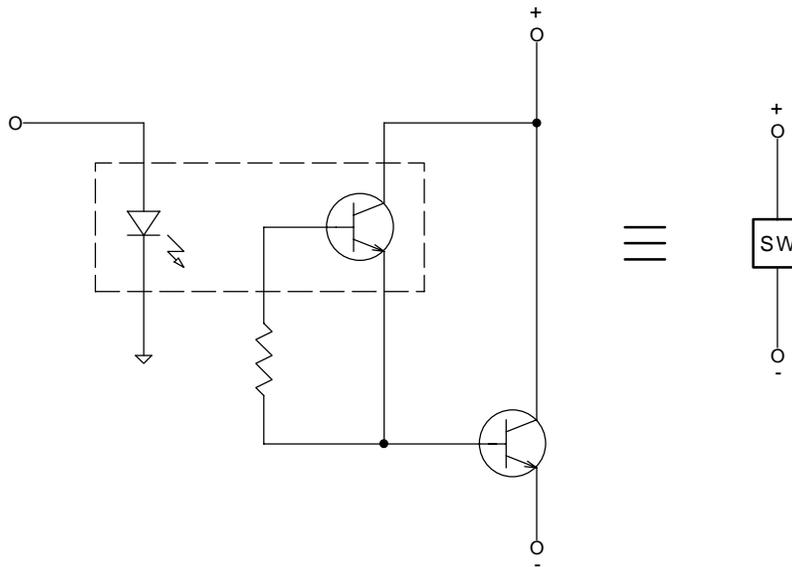


Figure 5.3 Isolated Loop Current Switch

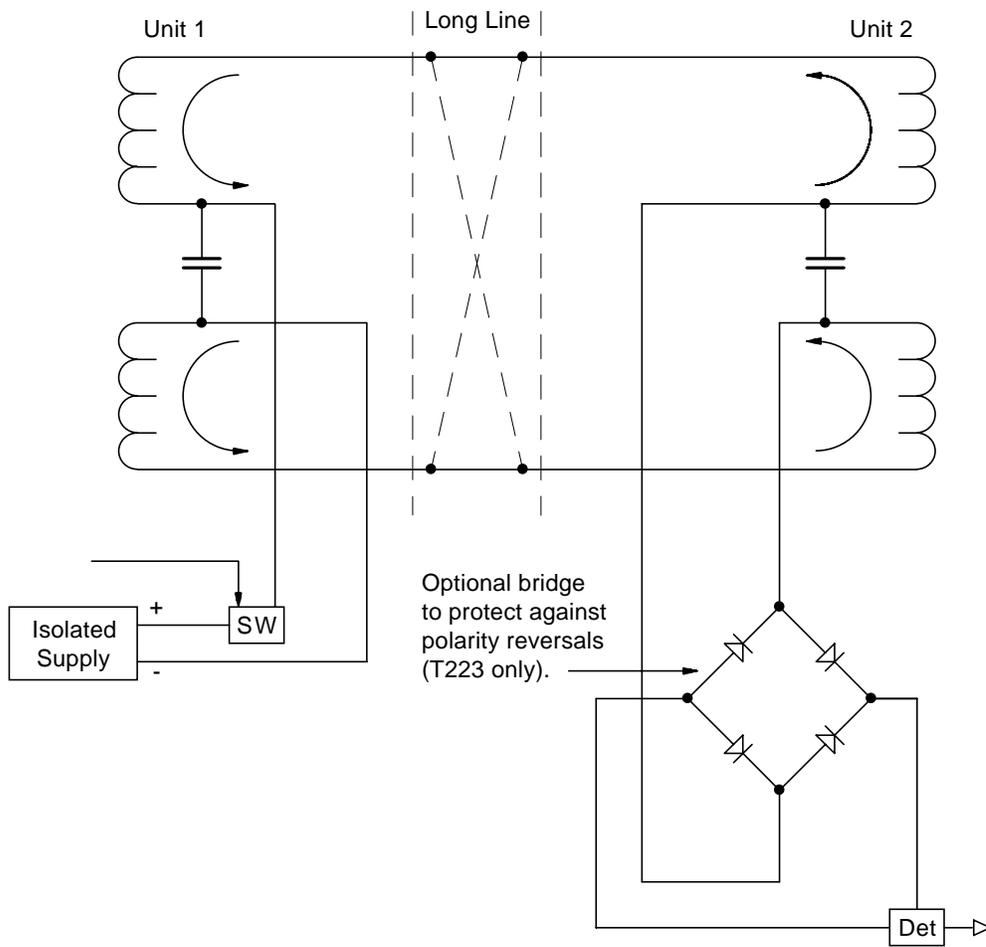


Figure 5.4 Typical System

Part H T800 Ancillary Equipment

This part of the manual gives a brief description of the ancillary equipment and accessory kits available for use with T800 series base station equipment.

| Section | Page |
|--|------|
| T708-91/92 Mains Power Supplies | 1 |
| T800-01 Programming Kit | 1 |
| T800-02 CTCSS Decoder | 1 |
| T800-03 Auxiliary D-Range | 1 |
| T800-05 Guide Rail | 1 |
| T800-06 External Frequency Reference Kit | 2 |
| T800-07 Multichannel Kit | 2 |
| T800-10 Memory Module | 2 |
| T800-13 Extender Rail | 2 |
| T800-14 Extender Rail | 2 |
| T800-19 Rack Mounting Fan | 2 |
| T800-30 & T800-35 DFSK Modulators | 3 |
| T800-60 Slimline Repeater Mounting Kit | 3 |
| T801 Frequency Reference Module | 3 |
| T802 Remote Monitor | 3 |
| T802-10 RF Splitter | 4 |
| T802-21 Programming Kit | 4 |
| T802-22 Modem | 4 |
| T806 Mains Power Supply | 4 |
| T807 Mains Power Supply | 4 |
| T808 Mains Power Supply | 5 |
| T1500-50 Trunking Extra D-Range | 5 |
| T1500-51 Trunking Transmitter Interface | 5 |

T800 Ancillary Equipment

T708-91/92 Mains Power Supplies

The T708-91/92 mains power supplies are designed to power the T800-60 Slimline Repeater and mount on the front panel instead of the options tray. Two versions are available:

- T708-91 230V/50Hz mains supply
- T708-92 120V/60Hz mains supply.

The units are electrically the same as (although mechanically different from) the T708-01 and T708-02 respectively.

Refer to M700-00 or M708-01.

T800-01 Programming Kit

The T800-01 kit is used for programming T800 series base station equipment and must be used in conjunction with an EPROM programming device and appropriate software capable of programming an EPROM from an Intel hex format or binary file.

The kit comprises the following items:

- PGM800 programming software user's manual
- PGM800 programming software on a 3½" floppy disc.

T800-02 CTCSS Dencoder

The T800-02 CTCSS unit is designed to operate with the T800 range of receivers and transmitters. It will encode and decode CTCSS tone frequencies within the range 67 to 250.3Hz and is compatible with any other CTCSS unit which conforms to EIA RS220.

Refer to TI-346.

T800-03 Auxiliary D-Range

The T800-03 is an additional D-range kit comprising 1 D-range plug assembly, 1 D-range socket and 2 locating pins, nuts & washers.

T800-05 Guide Rail

The standard T800 series guide with one D-range socket for mounting in the standard 483mm rack frame assembly.

T800-06 External Frequency Reference Kit

The T800-06 kit features an additional D-range plug which incorporates a miniature RF connector to carry an externally generated 12.8MHz reference signal into a T800 module. This enables the use of very high stability external reference oscillators for special applications.

T800-07 Multichannel Kit

The T800-07 is a plug-in multichannel memory PCB (supplied with connecting cable) which is intended as a substitute for the T800-10 memory PCB. Up to 128 channels may be addressed via the on-board DIP switch or remotely via the T800-03 D-range kit. CTCSS frequencies may also be stored alongside channel information within the EPROM.

Refer to TI-356.

T800-10 Memory Module

The T800-10 is the standard, plug-in T800 channel memory PCB.

T800-13 Extender Rail

The T800-13 extender rail allows a T800 unit to be operated out of the rack with the covers off for tuning purposes. It is fitted with two 15-way D-range connectors.

T800-14 Extender Rail

The T800-14 extender rail allows a T800 unit to be operated out of the rack with the covers off for tuning purposes. It is fitted with one 15-way D-range connector and one 11-way D-range incorporating a miniature RF connector for an externally generated reference signal.

T800-15 Speaker Panel

A 60mm speaker panel fitted with a 4 Ω speaker and complete with mounting hardware.

T800-19 Rack Mounting Fan

The T800-19 kit features a rack mounting fan which is designed to fit into the base of any standard 483mm rack frame without affecting its ability to house 7 modules. The kit contains all mounting hardware.

T800-30 & T800-35 DFSK Modulators

The T800-30 and T800-35 are DFSK modulators for T800 transmitters, suitable for POC-SAG or similar paging data formats. Analogue transmissions (e.g. tone or speech) are still possible by disabling the data path via a control line. 512 or 1200 baud data rates are link selectable. The T800-35 is adapted for use with an external reference oscillator for simulcast transmission.

Refer to TI-373.

T800-60 Slimline Repeater Mounting Kit

The T800-60 Slimline Repeater kit enables one T800 receiver and one T800 transmitter to be mounted horizontally side-by-side in a standard 483mm rack frame. The kit contains a front panel complete with speaker, an options tray (for mounting a power supply, duplexer, etc.), and a wiring loom to connect the two T800 modules to the terminal blocks mounted on the rear of the options tray. The T708-91/92 mains power supplies (available separately) are designed for use with the T800-60. The rack height of the assembled unit is 2U.

T801 Frequency Reference Module

The T801 frequency reference module provides a high stability frequency source to which the synthesiser within a T800 base station can be locked. The master standard within the T801 is primarily intended to be rubidium, although high quality ovenised crystal oscillators can also be used in applications where more frequent readjustment of frequency is acceptable. The T801 converts the output frequency from its master standard to the 12.8MHz required by the T800 base station.

Refer to M801-00.

T802-00 Remote Monitor

The T802-00 is a microprocessor controlled remote monitor unit designed for use with Tait base station equipment. Each remote base requires one T802-00 which communicates via its integral modem with a centrally located PC based controller. The PC controller runs software to convert the raw data from the T802-00 into a user friendly form.

Refer to M802-00.

T802-10 RF Splitter

The T802-10 RF splitters are used to take attenuated RF from the transmitter to the T802-00 where it is mixed onto the receiver frequency by the shift mixer. This RF is then inserted via another splitter into the receiver. Each T802-10 kit contains 2 identical RF splitter modules.

Refer to M802-00.

T802-21 Programming Kit

The T802-21 kit provides the operating software for the T802-00 remote monitor PC controller and comprises the following items:

- T802-00 PC software user's manual
- T802-00 PC software on a 5¼" floppy disc.

T802-22 Modem

A CCITT V.23 modem for use with the T802-00 PC controller.

T806 Mains Power Supply

The T806 is a power supply capable of supplying up to 6A at 11-14V DC and is available in 2 versions to suit a mains supply of either 230V/50Hz or 115V/60Hz (nominal values). The T806 is designed to power T800 series 25W transmitters (plus receivers, etc.) and comes complete with a guide to mount in a standard 60mm rack frame assembly.

Refer to M806-00.

T807 Mains Power Supply

The T807 is a switching power supply capable of supplying up to 15A at 11-14V DC. It requires a mains supply of 230V/50Hz or 115V/60Hz (nominal values) which can be internally selected with a switch or wire links. The T807 is designed to power T800 series 50W transmitters (plus receivers, etc.) and comes complete with a guide to mount in a standard 60mm rack frame assembly.

Refer to M807-00.

T808 Mains Power Supply

The T808 is a switching power supply capable of supplying up to 25A at 11-14V DC. It requires a mains supply of 230V/50Hz or 115V/60Hz (nominal values) which can be internally selected with a switch or wire links. The T808 is designed to power T800 series 100W transmitters (plus receivers, etc.) and comes complete with a guide to mount in a standard 60mm rack frame assembly.

Refer to M807-00.

T1500-50 Trunking Extra D-Range (formerly T800-50)

Trunking systems require additional outputs for flat audio (FFSK) and Rx line monitoring. This kit provides the components to connect these outputs via a second D-range.

T1500-51 Trunking Transmitter Interface (formerly T800-51)

When fitted to a T800 series transmitter, the T1500-51 trunking transmitter interface PCB allows the trunking system to switch the audio processor between FFSK and normal audio. The PCB comes complete with wires, sockets and screws, but a T800-03 auxiliary D-range kit will also be required.

