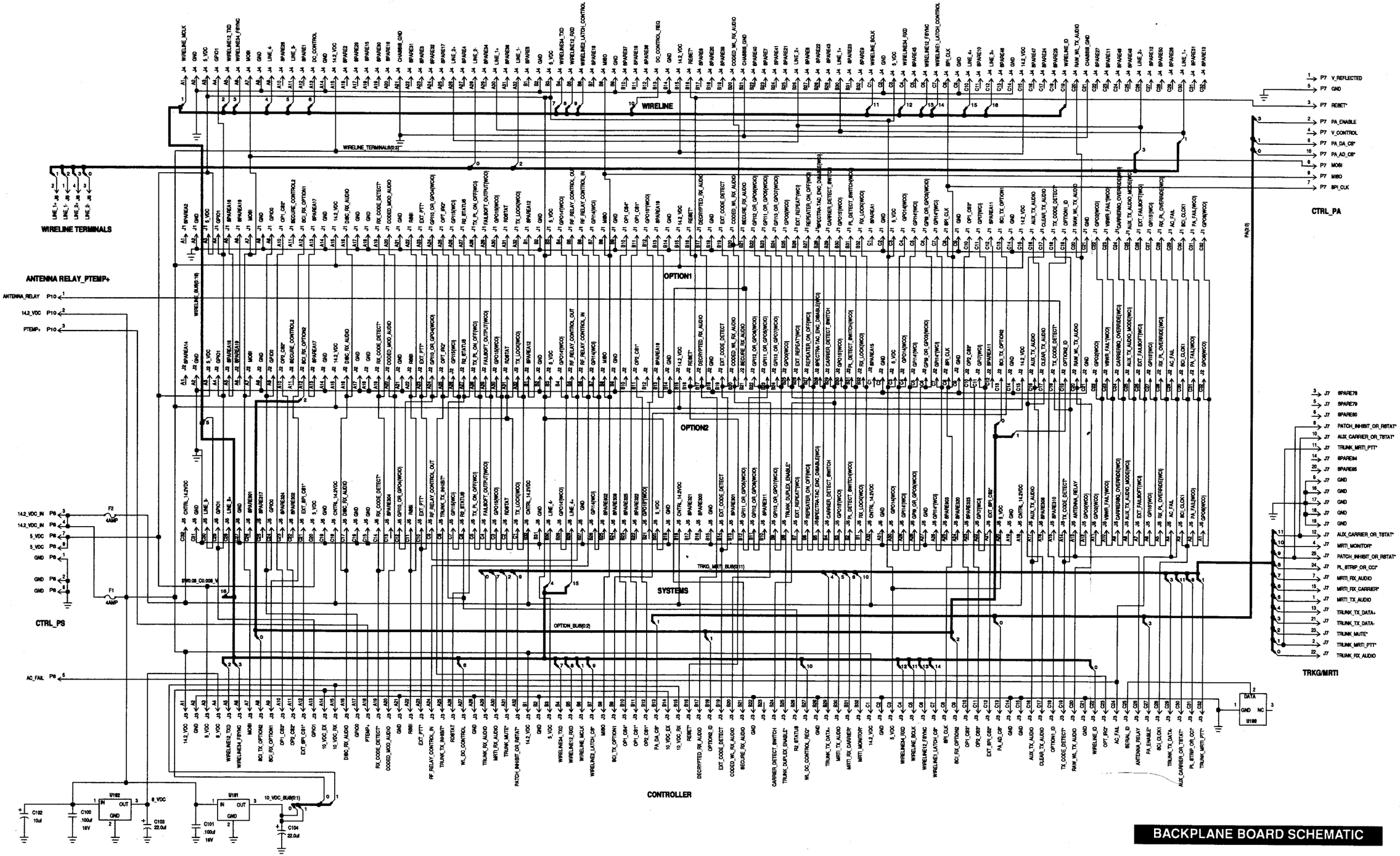
STATIONBACKPLANEMODULE

MODEL TTN5062B



BACKPLANE BOARD SCHEMATIC

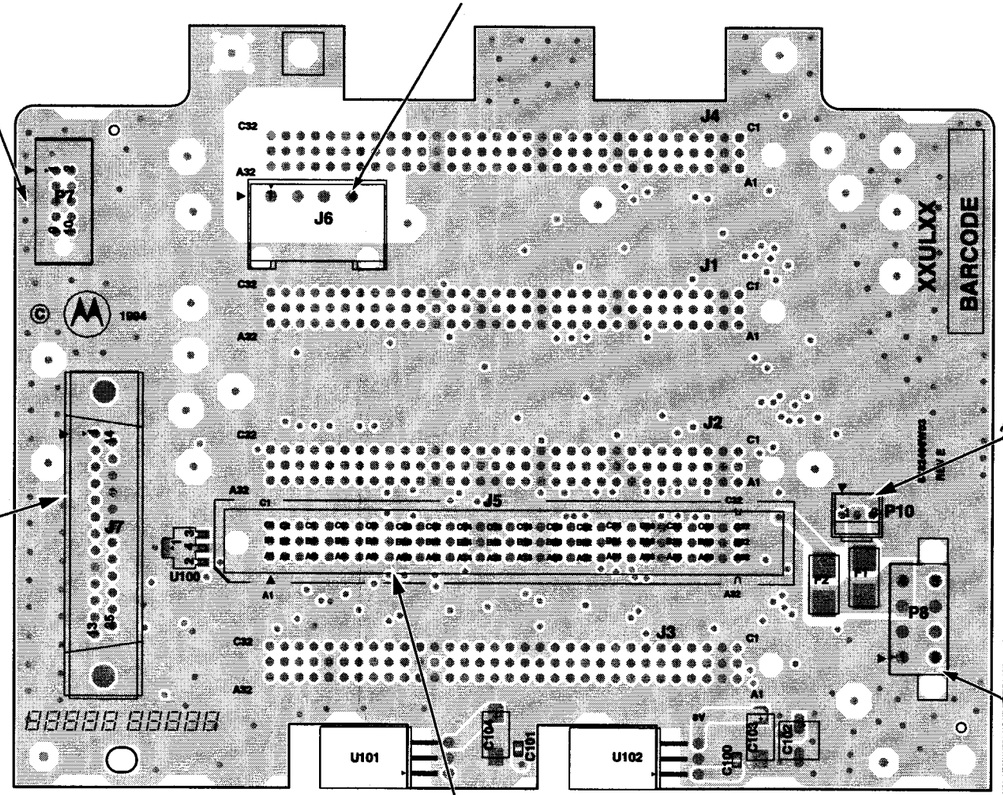
68P81094E32-E
Schematics (Sheet 1 of 11)
03/26/99

STATIONBACKPLANEMODULE
MODEL TTN5062B

P7 PA CONTROL CONNECTOR	
Pin No.	Signal
1	Voltage Forward
2	PA Enable*
3	PA Reset
4	V Control
5	GND
6	PA D/A CS*
7	SPI CLK
8	MOSI
9	MISO
10	PA A/D CS*

J6 WIRELINE TERMINALS	
Pin No.	Signal
1	Line 1–
2	Line 1+
3	Line 2–
4	Line 2+

J7 TRUNKING/MRTI CONNECTOR	
Pin No.	Signal
1	MRTI TX Audio
2	Trunk MRTI PTT*
3	Spare
4	MRTI Monitor*
5	Spare
6	Spare
7	MRTI RX Audio
8	Patch Inhibit* or RSTAT
9	GND
10	Aux Carrier* or TSTAT
11	Trunk MRTI PTT*
12	Aux Carrier* or TSTAT
13	Trunk TX Data+
14	Spare
15	MRTI RX Carrier*
16	GND
17	GND
18	GND
19	GND
20	Spare
21	Trunk TX Data–
22	Trunk RX Audio
23	Trunk Mute*
24	PL Strip* or CCI*
25	Patch Inhibit* or RSTAT



P10 ANTENNA RELAY / PTEMP+ CONNECTOR	
Pin No.	Signal
1	Antenna Relay
2	14.2 VDC
3	PTemp+

P8 POWER SUPPLY CONNECTOR	
Pin No.	Signal
1	GND
2	GND
3	14.2 VDC
4	14.2 VDC
5	AC Fail
6	GND
7	5 VDC
8	5 VDC

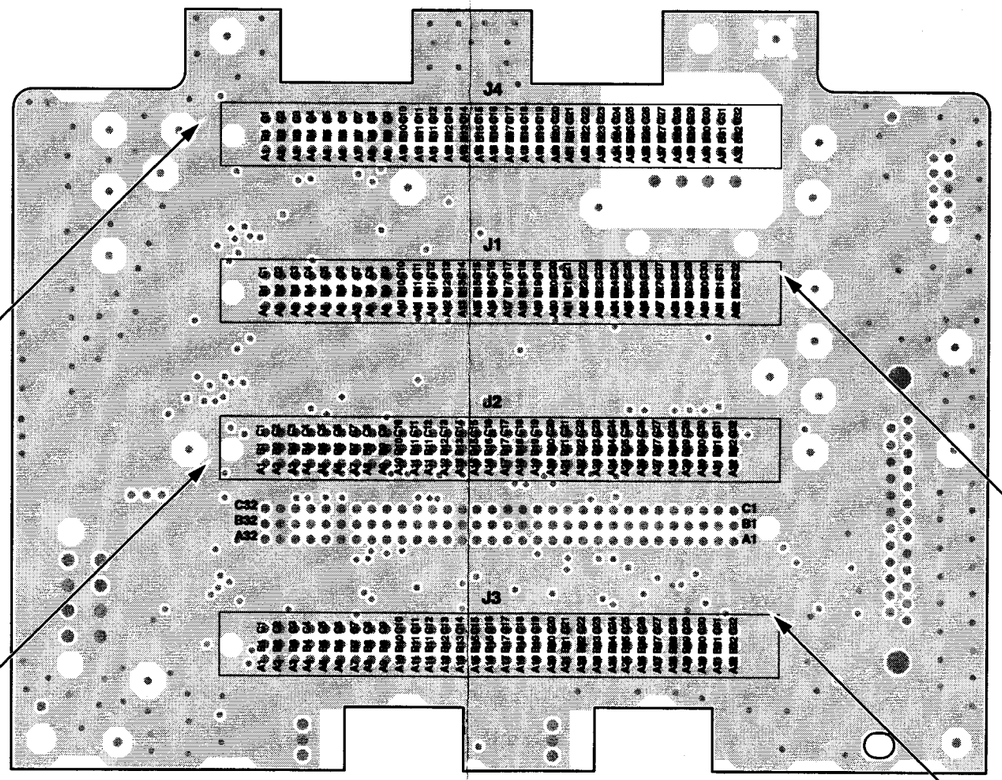
J5 SYSTEM CONNECTOR
See Table 1

(VIEW FROM REAR OF RADIO)

BACKPLANE BOARD DETAIL OUTSIDE VIEW

68P81094E32-E
Board Detail (Sheet 3 of 11)
03/26/99

STATION BACKPLANE MODULE
MODEL TTN5062B



J4 WIRELINE CONNECTOR
See Table 2

J2 OPTION 2 CONNECTOR
See Table 4

J1 OPTION 1 CONNECTOR
See Table 3

J3 CONTROLLER CONNECTOR
See Table 5

BACKPLANE BOARD DETAIL INSIDE VIEW

Table 1. J5 SYSTEM CONNECTOR

Pin #	Row A	Input/ Output	To/From	Signal Characteristics	Row B	Input/ Output	To/From	Signal Characteristics	Row C	Input/ Output	To/From	Signal Characteristics
1	GPO_8 (WCO)	O	J1-C32, J2-C32	OCO, 100mA, 40V	RX Lock (Aux I/O)	O	J1-B32, J2-B32	OCO, 100mA, 40V; RX Lock, active high	TX Lock (Aux I/O)	O	J1-A32, J2-A32	OCO, 100mA, 40V; TX Lock, active high
2	PA Fail (Aux I/O)	O	J1-C31, J2-C31	OCO, 100mA, 40V, active low	GPO_13 (WCO)	O	J1-B31, J2-B31	OCO, 100mA, 40V	RdStat-R2 Control	O	J1-A31, J2-A31, J3-A26	TTL output, high when unsquelched
3	SCI_CLCK1	O	J1-C30, J2-C30, J3-C28	Do not use.	RdStat or GPO_15, Note 4	O	J1-B30, J2-B30	One side of relay closure, see C3	RdStat or GPO_15, Note 4	O	J1-A30, J2-A30	Other side of normally open relay, see B3
4	AC Fail	O	P8-5, J1-C29, J2-C29, J3-C24	TTL output, active high	Carrier Detect Switch	O	J1-B29, J2-B29, J3-B24	TTL output, active high	Failsoft Output (Aux I/O)	O	J1-A29, J2-A29	OCO, 100mA, 40V, active low
5	GPI_3 (WCI)	I	J1-C28, J2-C28	Pulled up transistor input, 16V max	GPI_8 (NS)	I	J1-B28, J2-B28	Pulled up transistor input, 16V max	GPI_4 (WCI)	I	J1-A28, J2-A28	Pulled up transistor input, 16V max
6	GP1_15 (–) (NS)	I	J1-C27, J2-C27	–ve side opto-isolated input, see C7	GPI_5 (NS)	I	J1-B27, J2-B27		Not Supported	I	J1-A27, J2-A27, J3-B26	
7	Ext Failsoft (Aux I/O)	I	J1-C26, J2-C26	Pulled up transistor input, 16V max	Ext Repeat* (Aux I/O)	I	J1-B26, J2-B26		GPI_15 (+) (NS)	I	J1-A26, J2-A26	+ve side opto-isolated input, see A6
8	GPI_1 (NS)	I	J1-C25, J2-C25		Trunk Duplex Enable*	I	J3-B25	TTL input	Trunk TX Inhibit*	I	J3-A25	TTL input
9	GPI_2 (NS)	I	J1-C24, J2-C24	Pulled up transistor input, 16V max	GPI_13 (WCI) or GPO_7 (NS)	I/O	J1-B24, J2-B24	Caution: See Auxiliary I/O section for jumpering information	RF Relay Control Out (Aux I/O)	O	J1-B5, J2-B5	OCO, 200mA, 40V, active high
10	VSWR_Fail* (Aux I/O)	O	J1-C23, J2-C23	Pulled up transistor output (10Kohms to +5Vdc), active low	Spare 311	–	N/C		Ext PTT Out (Aux I/O) *, Note 5	I	J1-A23, J2-A23, J3-A23	TTL input
11	GPO_2 (WCO)	O	J1-C22, J2-C22	Pulled up transistor output (10kohms to +5Vdc)	GPI_12 (WCI) or GPO_6 (NS)	I/O	J1-B22, J2-B22	Caution: See Auxiliary I/O section for jumpering information	RSSI	O	J1-A22, J2-A22, J3-A22	RSS programmable sensitivity, Note 6
12	GPO_0 (WCO)	O	J1-B25, J2-B25		GPI_11 (WCI) or GPO_5 (NS)	I/O	J1-B23, J2-B23		GPI_10 (WCI) or GPO_4 (NS)	I/O	J1-A24, J2-A24	Caution: See Auxiliary I/O section for jumpering information
13	Antenna Relay	O	P10-1, J3-C26	OCO, 200mA, active low	Spare 301	–	N/C		Spare 304	–	–	
14	Not Supported	O	J1-C18, J2-C18, J3-C19		Not Supported	I	J1-B19, J2-B19, J3-B19	TTL input	Not Supported	O	J1-A19, J2-A19, J3-A19	
15	Spare 310	–	–		GND	–	Station ground		GND	–	Station ground	
16	Spare 308	–	–		Spare 300	–	–		GND	–	Station ground	
17	Aux TX Audio	I	J1-C16, J2-C16, J3-C16	RSS programmable input sensitivity	Spare 321	–	–		Disc RX Audio	O	J1-A16, J2-A16, J3-A16	Discriminator audio, flat response; 80mV to 400mV for 60% deviation
18	Cntrl 14.2 VDC	O	P8 pins 3, 4 (thru F2)	+14.2Vdc, Note 1	Cntrl 14.2 VDC	O	P8 pins 3, 4 (thru F2)	+14.2Vdc, Note 1	Cntrl 14.2 VDC	O	P8 pins 3, 4 (thru F2)	+14.2Vdc, Note 1
19	GND	–	Station ground		GND	–	Station ground		GND	–	Station ground	
20	5 VDC	O	P8 pins 7, 8	+5.1 ± 0.25 Vdc	5 VDC	O	P8 pins 7, 8	+5.1 ± 0.25 Vdc	5 VDC	O	P8 pins 7, 8	+5.1 ± 0.25 Vdc
21	Not Supported	O	J3-C12		RdStat or GPO_15, Note 4	O	J1-B12	OCO, 100mA, 40V	Not Supported	O	J3-A12	
22	GP1_7 (WCI)	I	J1-C11, J2-C11	Pulled up transistor input, 16V max.	Spare 322	–	–		Spare 302	–	–	
23	Spare 323	–	–		Spare 325	–	–		Spare 324	–	–	
24	Spare 320	–	–		Spare 309	–	–		GPIO_0 (CNTR I/O)	I/O	J1-A9, J2-A9, J3-A17	TTL input/output
25	Spare 903	–	–		Spare 902	–	–		Spare 317	–	–	
26	Ext PTT or GP1_14 (–), Note 1	I	J1-C7, J2-C7	–ve side opto-isolated input, see A29	Ext PTT or GPI_14, Note 2	I	J1-B7, J2-B7	Pulled up transistor input, 16V max, see A29	Spare 901	–	–	
27	GND	–	Station ground		GND	–	Station ground		GND	–	Station ground	
28	GPI_9 (WCI) or GPO_3 (NS)	I/O	J1-C6, J2-C6	Caution: See Auxiliary I/O section for jumpering information	Line 4+	O	J4-C10	Wireline output, balanced (+)	Line 3+	I	J4-C12	Wireline input, balanced (+)
29	Ext PTT or GPI_14 (–), Note 2	I	J1-C5, J2-C5	+ve. side opto-isolated input, see A26	AC Fail or GPO_14, Note 3	O	J1-B4, J2-B4	Other side of relay closure, see A30	GPIO_1 (CNTR I/O)	I/O	J1-A4, J2-A4, J3-A13	TTL input/output
30	AC Fail or GPO_14, Note 3	O	J1-C4, J2-C4	One side of normally open relay, see B29	Line 4–	O	J4-A9	Wireline output, balanced (–)	Line 3–	I	J4-A11	Wireline input, balanced (+)
31	GND	–	Station ground		GND	–	Station ground		GND	–	Station ground	
32	Cntrl 14.2 VDC	O	P8 pins 3, 4 (thru F2)	+14.2Vdc, Note 1	Cntrl 14.2 VDC	O	P8 pins 3, 4 (thru F2)	+14.2Vdc, Note 1	Cntrl 14.2 VDC	O	P8 pins 3, 4 (thru F2)	+14.2Vdc, Note 1

Note 1: For dc-only 250W power supplies, this voltage is equal to the input supply voltage.

Note 2: This pin can be jumpered for Ext PTT (supported) or GPI_14 (not supported). See Aux I/O jumpers P2 and P9.

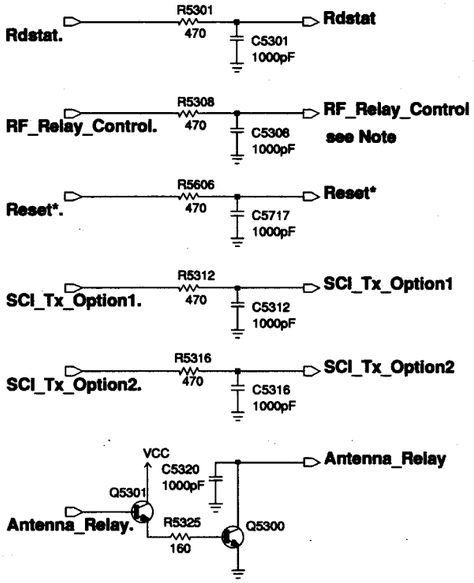
Note 3: This pin can be jumpered for AC Fail (supported) or GPO_14 (not supported). See Aux I/O jumper P5.

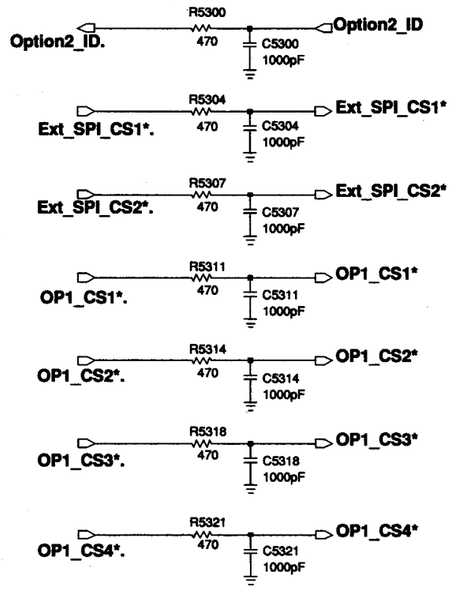
Note 4: This pin can be jumpered for RdStat (supported) or GPO_15 (supported). See Aux I/O jumpers P3 and P4.

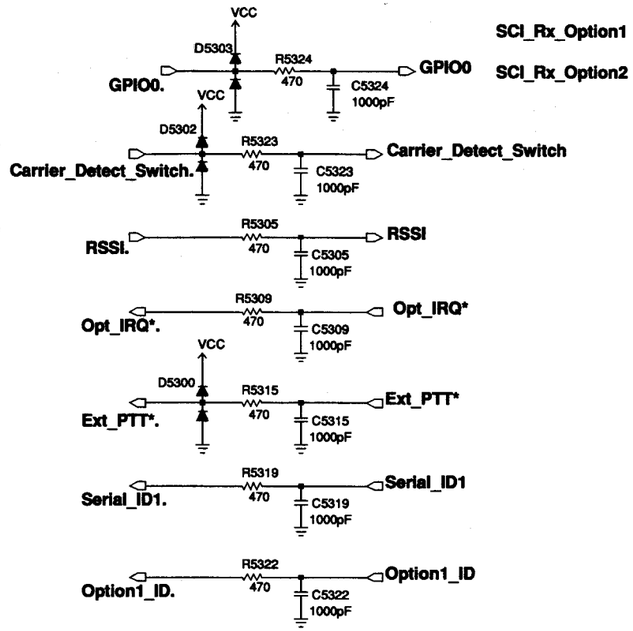
Note 5: Ext PTT signal output, taken from Ext PTT input. The output signal can be inverted, depending on jumper settings. See jumpers P2, P6, P9.

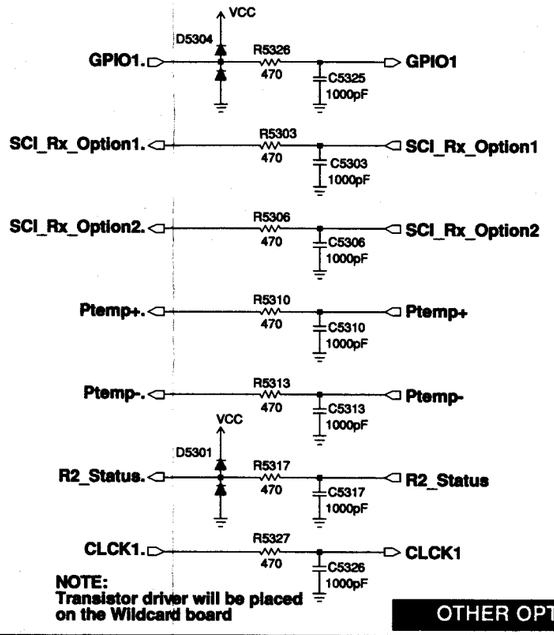
Note 6: For R03.01 (host software) and earlier, the fixed sensitivity is @ 172 mVrms for 60% system deviation. RSS programmable for pre-emphasized or flat response. DC offset +2.4V. High impedance input.

STATION CONTROL MODULE
MODEL TCN6273D



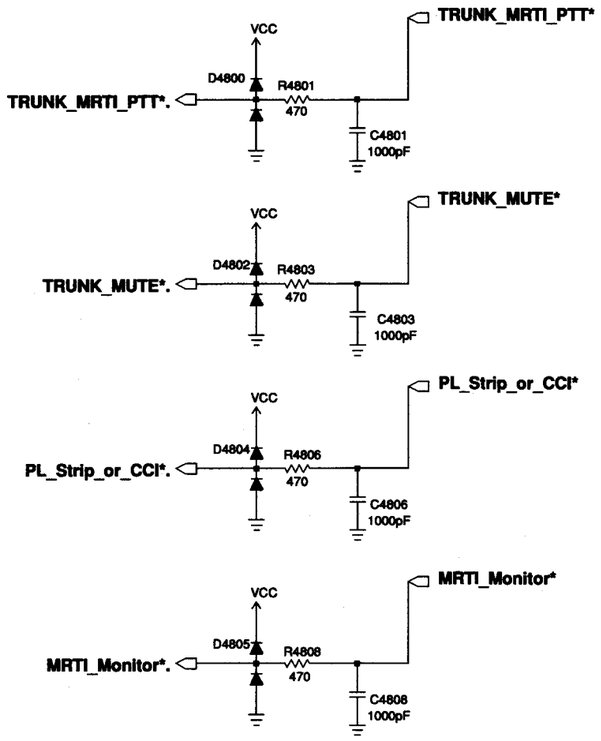


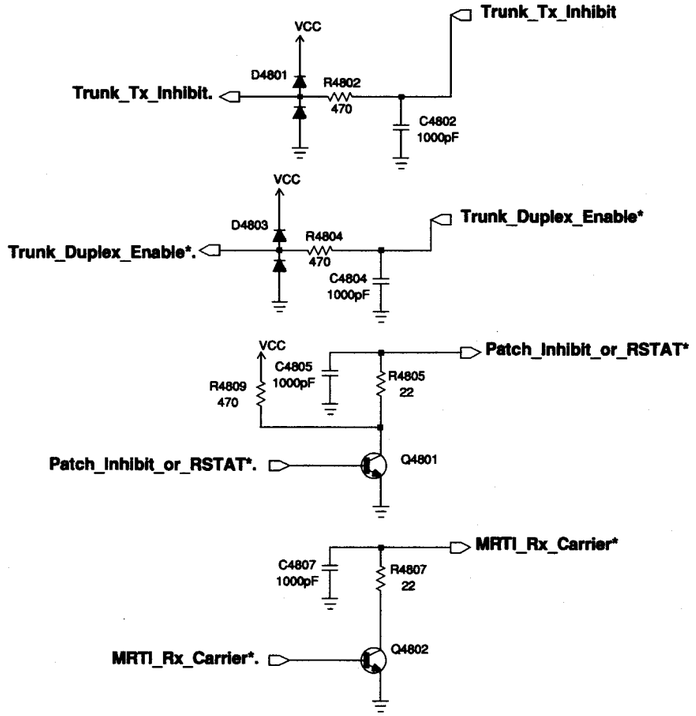


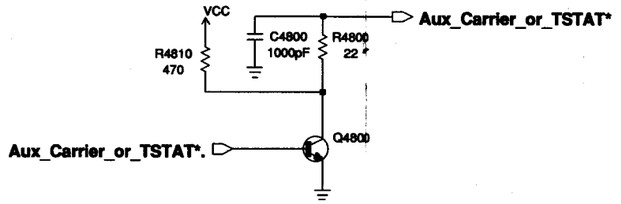


NOTE:
Transistor driver will be placed on the Wildcard board

OTHER OPTIONS

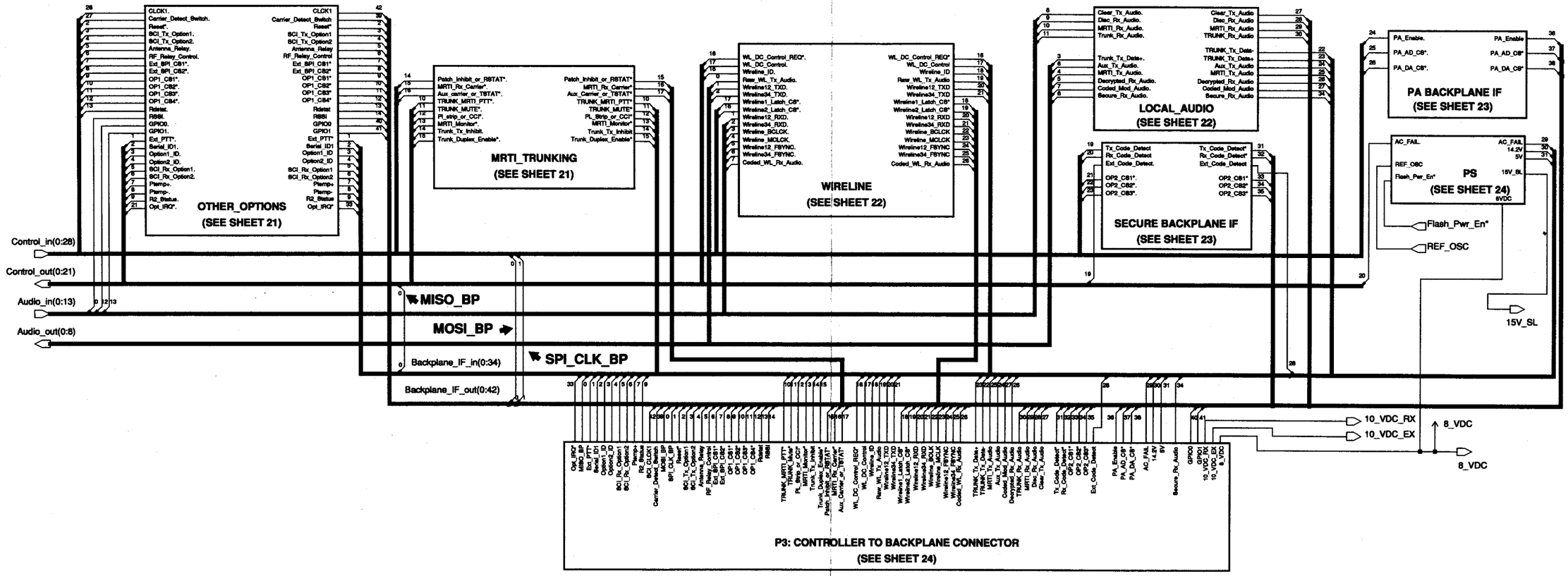






MRTI TRUNKING

STATION CONTROL MODULE
MODEL TCN6273D



CONTROLLER TO BACKPLANE INTERFACE BLOCK DIAGRAM