

2 T800-55-0000 Backplane PCB

The T800-55-0000 paging backplane PCB is designed for use in the T800-28-0X00 paging rack frame. The PCB mounts across the rear panel of the T800-41-0003 triple module rack frame guide, and has provision for the following modules:

- high stability oscillator
- repeater/link receiver (optional)
- paging exciter/transmitter (25, 50 or 100W).

These modules plug directly into the D-range sockets provided on the inner side of the PCB (both D-range 1 and D-range 2 are provided for). The other side of the PCB features:

- a programming port
- two DIP switches for external channel selection
- one 25-way OEM D-range connector (refer to Figure 2.1)
- one 11-way D-range connector with provision for an external frequency reference.

The T800-55-0000 also allows the fitting of an optional link transmitter/repeater, but will not accept personality PCBs.

Pin	Function
1	Rx line 1
2	Rx aux 2
3	Rx aux 1
4	Rx line 4
5	Tx line 1
6	POCSAG data
7	lock detect
8	Tx line 4
9	signal strength (RSSI)
10	speaker +ve
11	Tx tone input
12	reverse power alarm
13	0V
14	Rx gate
15	Tx key
16	Rx relay common
17	Rx relay normally open
18	Rx inhibit
19	Data/speech (mode select)
20	opto key +
21	opto key -
22	forward power alarm
23	
24	Rx audio 1
25	13.8V (fused)

Figure 2.1 T800-55-0000 PL1 Wiring

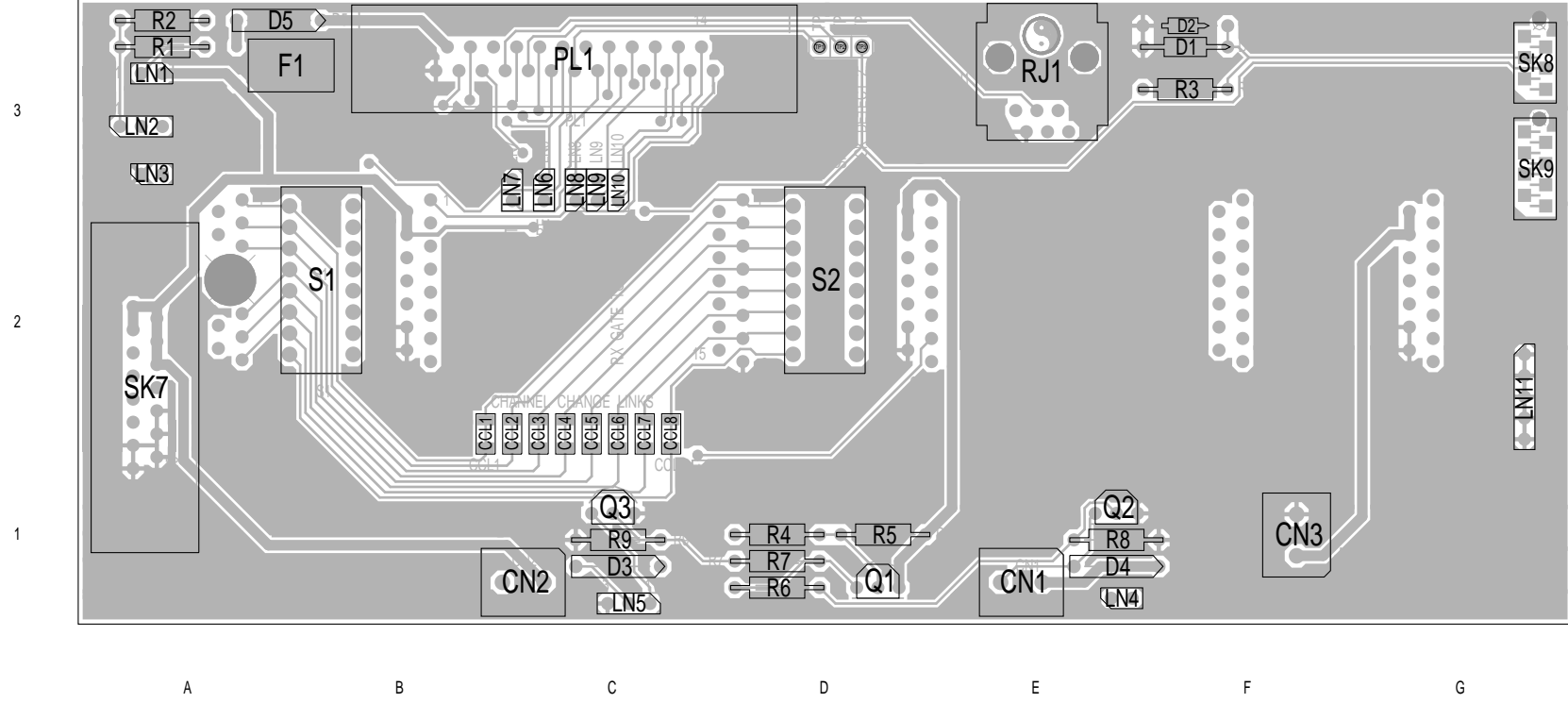


Figure 2.2 T800-55-0000 PCB Layout - Top Side (Outer)

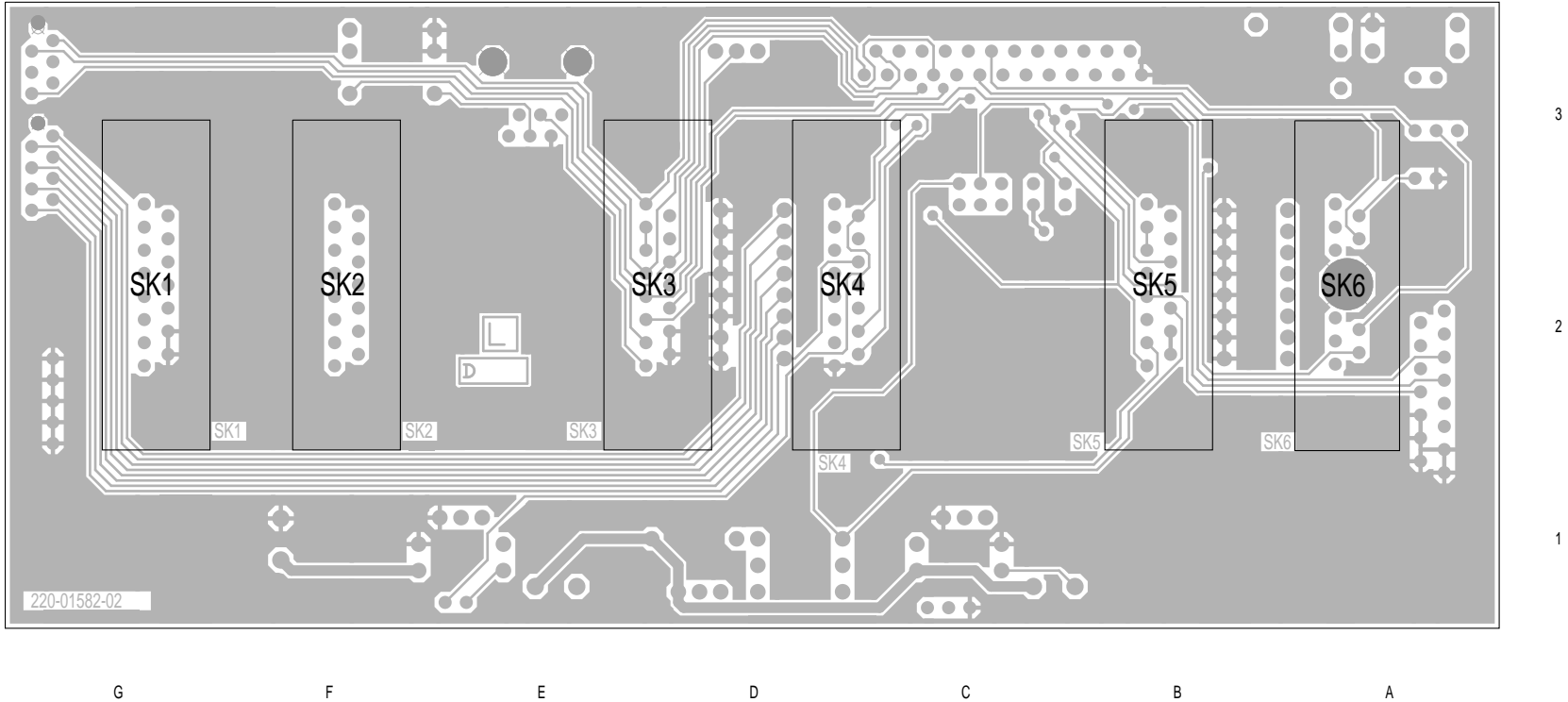


Figure 2.3 T800-55-0000 PCB Layout - Bottom Side (Inner)

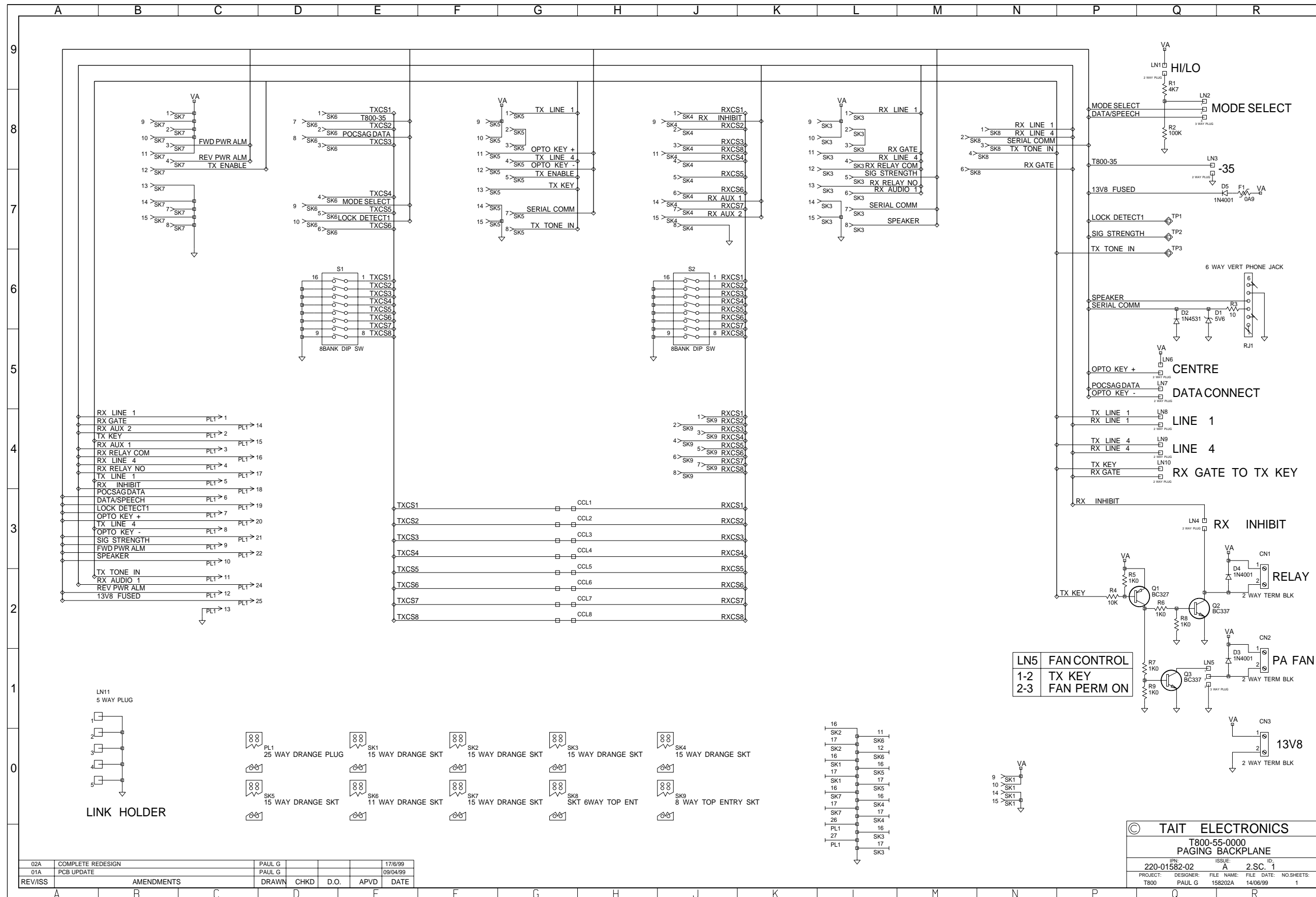


Figure 2.4 T800-55-0000 Circuit Diagram

PL1		SK7		SK8 SIGNALS		RJ1		CN1		LN1 CARRIER TEST		LN6			
PIN	FUNCTION	PIN	FUNCTION	PIN	FUNCTION	PIN	FUNCTION	PIN	FUNCTION	PIN	FUNCTION	PIN	FUNCTION		
1	RX LINE 1	1	13.8V	1	RX LINE 1 - (TX LINE 1)	1	N/C	1	13.8V	1	13.8V	1	13.8V		
2	RX AUX 2	2	13.8V	2	RX LINE 4 - (TX LINE 4)	2	N/C	2	DRIVE RELAY	2	R1	2	OPTO KEY +ve		
3	RX AUX 1	3	FWD PWR ALARM	3	SERIAL COMM	3	SERIAL COMM	CN2		LN2 POCSAG BOARD SELECT		LN7			
4	RX LINE 4	4	REV PWR ALARM	4	TX TONE INPUT	4	SPEAKER								
5	TX LINE 1	5	N/C	5		5	0V	1	13.8V	1	R1	1	POCSAG DATA		
6	POCSAG DATA	6	N/C	6	RX GATE - (TX KEY)	6	N/C	2	DRIVE FAN	2	MODE SELECT (DATA/SPEECH)	2	OPTO KEY -ve		
7	LOCK DETECT	7	0V	SK9 CHANNEL				CN3		LN3 POCSAG BOARD SELECT		LN8			
8	TX LINE 4	8	0V												
9	SIGNAL STRENGTH (RSSI)	9	13.8V					1	CHANNEL SELECT 1	1	13.8V	1	T800-35 (SK6:7)	1	TX LINE 1
10	SPEAKER +ve	10	13.8V					2	CHANNEL SELECT 2	2	0V	2	0V	2	RX LINE 1
11	TX TONE INPUT	11	13.8V					3	CHANNEL SELECT 3	TP1		LN4 RECEIVE DISABLE		LN9	
12	REV PWR ALARM	12	TX ENABLE					4	CHANNEL SELECT 4						
13	0V	13	0V					5	CHANNEL SELECT 5	1	LOCK DETECT	1	TX KEY	1	TX LINE 4
14	RX GATE	14	0V					6	CHANNEL SELECT 6	TP2		LN5 FAN SELECT		LN10	
15	TX KEY	15	0V	7	CHANNEL SELECT 7	2	RX INHIBIT	2	RX LINE 4						
16	RX RELAY COMMON			8	CHANNEL SELECT 8	1	SIGNAL STRENGTH (RSSI)	1	TX KEY	2	RX GATE				
17	RX RELAY NORMALLY OPEN					TP3		LN5 FAN SELECT							
18	RX INHIBIT											1	PAGING DATA	2	CN2 DRIVE
19	DATA/SPEECH (MODE SELECT)														
20	OPTO KEY +														
21	OPTO KEY - (*1)														
22	FWD PWR ALARM														
23															
24	RX AUDIO 1														
25	13.8.V (FUSED)														

TP1 LOCK DETECT 1, IS THE SYNTHESISER LOCK DETECT OF AN EXTERNAL REFERENCE DRIVE T800 PAGING BOARD

TP2 SIGNAL STRENGTH, IS THE STRENGTH OF THE SIGNAL RECEIVED, AND IS GENERATED BY THE RSSI CIRCUITS

TP3 LOCK DETECT 2, IS THE DATA INFORMATION TO PAGING TRANSMITTER

***NOTE 1:**

When link 7 is fitted, these pins become POCSAG DATA IN for T837-xx-102x Paging Exciters

SK6		SK5		SK4		SK3		SK2		SK1	
LEFT	TX/EX	RIGHT	TX/EX	LEFT	RX	RIGHT	RX	LEFT	HSO	RIGHT	HSO
PIN	FUNCTION	PIN	FUNCTION	PIN	FUNCTION	PIN	FUNCTION	PIN	FUNCTION	PIN	FUNCTION
1	CHANNEL SELECT 1	1	TX LINE 1	1	CHANNEL SELECT 1	1	RX LINE 1	1	N/C	1	N/C
2	CHANNEL SELECT 2	2		2	CHANNEL SELECT 2	2		2	N/C	2	N/C
3	CHANNEL SELECT 3	3		3	CHANNEL SELECT 3	3		3	N/C	3	N/C
4	CHANNEL SELECT 4	4	TX LINE 4	4	CHANNEL SELECT 4	4	RX LINE 4	4	N/C	4	N/C
5	CHANNEL SELECT 5	5	TX ENABLE	5	CHANNEL SELECT 5	5	SIGNAL STRENGTH	5	N/C	5	N/C
6	CHANNEL SELECT 6	6	N/C	6	CHANNEL SELECT 6	6	RX AUDIO 1	6	N/C	6	N/C
7	T800-35 (LN3:1)	7	SERIAL COMM	7	CHANNEL SELECT 7	7	SERIAL COMM	7	N/C	7	N/C
8	POCSAG DATA	8	TX TONE INPUT	8	0V	8	SPEAKER	8	N/C	8	N/C
9	MODE SELECT (DATA/SPEECH)	9	13.8V	9	RX INHIBIT	9	13.8V	9	N/C	9	13.8V
10	LOCK DETECT	10	13.8V	10	N/C	10	13.8V	10	N/C	10	13.8V
CO-AX		11	TX OPTO KEY +	11	CHANNEL 8 SELECT	11	RX GATE	11	N/C	11	N/C
		12	TX OPTO KEY - (*1)	12	N/C	12	RX RELAY COMMON	12	N/C	12	N/C
11	REF FREQ IN	13	TX KEY	13	N/C	13	RX RELAY NORMALLY OPEN	13	N/C	13	N/C
		14	0V	14	RX AUX 1	14	0V	14	N/C	14	0V
		15	0V	15	RX AUX 2	15	0V	15	N/C	15	0V

- LN 1 :-FITTED : 1-2, TEST CARRIER CENTRE FREQUENCY (T800-32-00n0 ONLY)
- LN 2 :-FITTED : 1-2, for T800-32-00n0 FITTED TO TX/EX
:-FITTED : 2-3, for T800-35 FITTED TO TX/EX
- LN 3 :-FITTED : 1-2, for T800-35 FITTED TO TX/EX
- LN 4 :-FITTED : 1-2, for RX INHIBIT IF RX FITTED AND OPERATING SIMPLEX FREQUENCY
- LN 5 :-FITTED : 1-2, for FAN DRIVE WHEN TX IS KEYED
:-FITTED : 2-3, for FAN DRIVE CONTINUOUSLY
- LN 6 :-FITTED : 1-2, TEST CARRIER CENTRE FREQUENCY (T8nn-nn-1020)
- LN 7 :-FITTED : 1-2, ALLOWS POCSAG DATA INPUT THROUGH PIN 12 OF TX/EX PRIMARY (RIGHT HAND) 'D' RANGE (T8nn-nn-1020)
- LN 8 :-FITTED : 1-2, REPEATER OPERATION (T8nn-nn-1020)
- LN 9 :-FITTED : 1-2, REPEATER OPERATION (T8nn-nn-1020)
- LN 10 :-FITTED : 1-2, REPEATER OPERATION (T8nn-nn-1020)

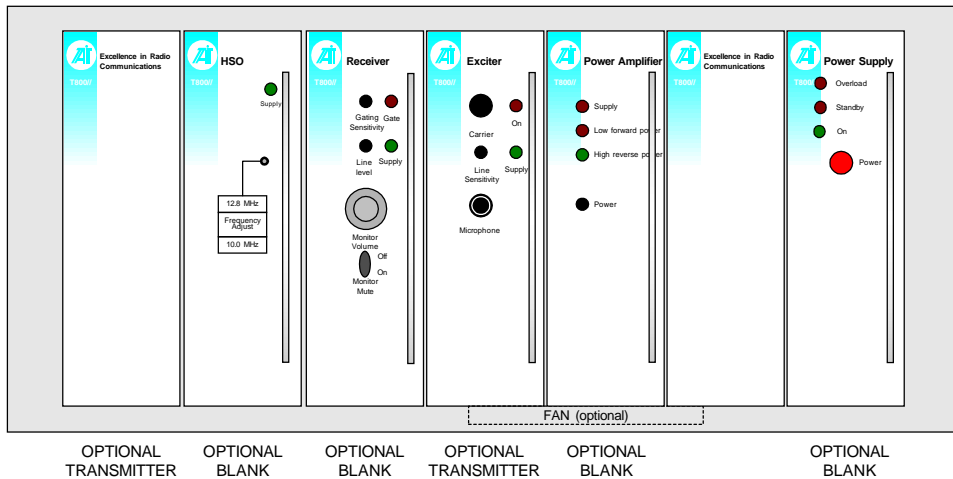


ISSUE	AMENDMENT	DRAWN	CHECKED	DATE
3	IPN ADDED	AMM	LH	6/3/01
2	TP3 INFORMATION ADDED	AMM	ABB	6/10/99
1	Original	AMM	ABB	30/6/99

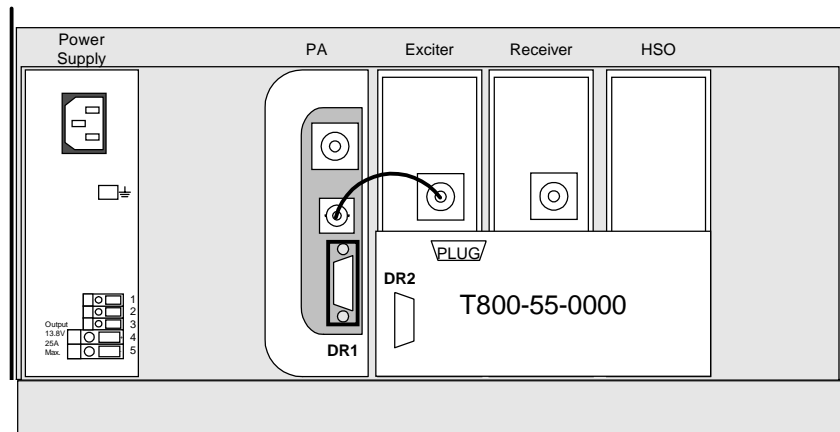
FILE: \t800-55-0000(02) pins.vsd

TITLE: PIN FUNCTIONS OF BACKPLANE (220 - 01582 - 02) PAGING
DRAWING: T800-55-0000pins Drawing IPN: 300-01582-02

FRONT VIEW



REAR VIEW



X800-90-0004 AC ONLY	EARTH STUD		-0000	RACK TYPE AND SERIAL No		WARNING		TB1	OUTPUT ONLY 13.8V MAX 2 AMPS
X800-91-0004 DC ONLY	EARTH STUD		-0100	RACK TYPE AND SERIAL No		WARNING		TB1	OUTPUT ONLY 13.8V MAX 2 AMPS NO PSU CRADLE BLANK PANEL
X800-92-0004 AC + DC	EARTH STUD		-0200	RACK TYPE AND SERIAL No		WARNING		TB1	OUTPUT ONLY 13.8V MAX 2 AMPS
X800-93-0004 AC + BATTERY	EARTH STUD		-0300	RACK TYPE AND SERIAL No		WARNING		TB1	OUTPUT ONLY 13.8V MAX 2 AMPS BATTERY BACK-UP
X800-94-0004 DC + BATTERY	EARTH STUD		-0400	RACK TYPE AND SERIAL No		WARNING		TB1	OUTPUT ONLY 13.8V MAX 2 AMPS BATTERY BACK-UP NO PSU CRADLE BLANK PANEL
X800-95-0004 AC + DC + BATTERY	EARTH STUD		-0500	RACK TYPE AND SERIAL No		WARNING		TB1	OUTPUT ONLY 13.8V MAX 2 AMPS BATTERY BACK-UP
			(-??00)						

TAIT Radio Communications Christchurch New Zealand	4	Drg name changed	AMM	ABB	26/11/99	TITLE: RACK, SNGL<100W, (PAGING) DRAWING: T800-28 (-??00) RACKFRAME
	3	Drg No changed, Ref added	AMM	ABB	26/8/99	
	2	Speaker removed	AMM	ABB	30/6/99	
	1	Original	AMM	ABB	2/6/99	
	Version			Drawn	Checked	