

RECEIVER Jumper Options

JP1 - 240 Hz Notch Filter

Notch Filter IN
 OUT

Position
1-2 *
2-3

JP11 EPROM Type

27C256
27C64

Position
2-3 *
1-2

JP2 - Audio Response

750 uSec. de-emphasis
Flat response

Position
1-2 *
2-3

**THE FOLLOWING JUMPERS ARE VALID ON
RX PCB VERSION 30/9131/0004 OR LATER**

JP3 - Audio Filter in/Out

Hi-pass & Notch In
Flat Response

Position
2-3 *
1-2

JP13 – Squelch Defeat

Squelch operation normal
Squelch Defeat on active low input at DB25 pin 19

Position
1-2 *
2-3

JP4 - 600 Ohm Line dc Loop COS

dc Loop Configured
by JP7, JP8, JP9
dc Loop Not Used

Position
1-2 *
2-3

JP19 – LED Alarm output

No alarm output
Alarm LED signal output brought to DB25 pin 7

Position
1-2 *
2-3

JP6 - COS Polarity

Active on Signal
Active on No Signal

Position
2-3 *
1-2

* = Standard Factory Configuration

JP7, JP8, JP9 - dc Loop COS Configuration (JP4 1 -2)

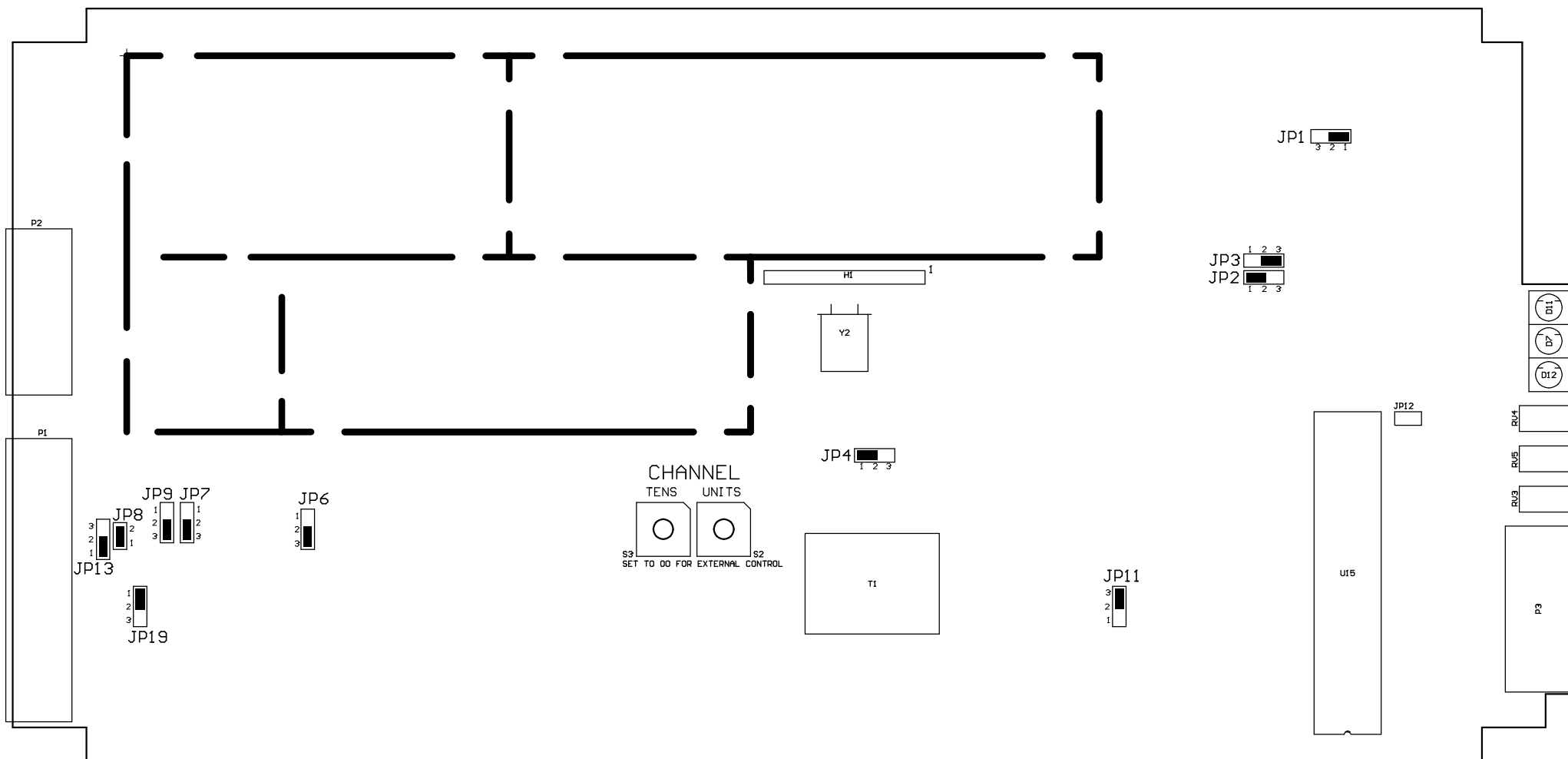
Source +12Vdc Loop
Free Switch Output

<u>JP7</u>	<u>JP8</u>	<u>JP9</u>
2-3	ON	1-2 *
1-2	ON	2-3

JP7, JP8, JP9 - Direct Output COS (JP4 2-3)

+12 Vdc Direct Output
Free Switch Output

<u>JP7</u>	<u>JP8</u>	<u>JP9</u>
2-3	OFF	OFF
1-2	OFF	OFF



STANDARD RECEIVER JUMPER CONFIGURATION

TRANSMITTER Jumper Options

JP2- EPROM Type

	<u>Position</u>
27C256	2-3 *
27C64	1-2

JP3 - 600 Ohm Line dc Loop PTT Input

	<u>Position</u>
dc Loop Connected	1-2 *
dc Loop Not Connected	2-3

JP4 - Audio Input Source Selection

	<u>Position</u>
600 Ohm Line Input	2-3 *
Hi-Z Balanced Input	1-2

JP5 - 600 ohm Audio Terminator

	<u>Position</u>
Terminated 600 Ohm	1-2 *
Not terminated	2-3

JP6 - Input Level Attenuation

	<u>Position</u>
0 dB	1-2 *
20 dB	2-3

JP7 - Audio Frequency Response

	<u>Position</u>
750 uSec. Pre-emphasis	1-2 *
Flat Response	2-3

JP8 - Subaudible Tone Source

	<u>Position</u>
Internal CTCSS	1-2, 4-5 *
External Input	2-3, 5-6

JP9, JP10, JP11 dc Loop PTT Input Configuration (JP3 1 -2)

	<u>JP9</u>	<u>JP10</u>	<u>JP11</u>
Current Loop input	ON	OFF	OFF *
+12 Vdc Loop Source	OFF	ON	ON

THE FOLLOWING JUMPERS ARE VALID ON TX PCB VERSION 30/9103/0009 OR LATER

JP16 -(see also JP22) DCS and low frequency Digital Data Input

	<u>Position</u>
DCS Not selected JP16	1-2 *
Select DCS input JP16	2-3

JP22 - (see also JP16) Tone input or DCS Digital Data Input

	<u>Position</u>
Tone- input JP22 fitted	1-2 *
DCS input JP22 removed	open

JP17 - Bypass Tone circuit 250Hz low pass filter

	<u>Position</u>
Default - Link not fitted JP17	open*
Bypass active JP17 fitted	1-2

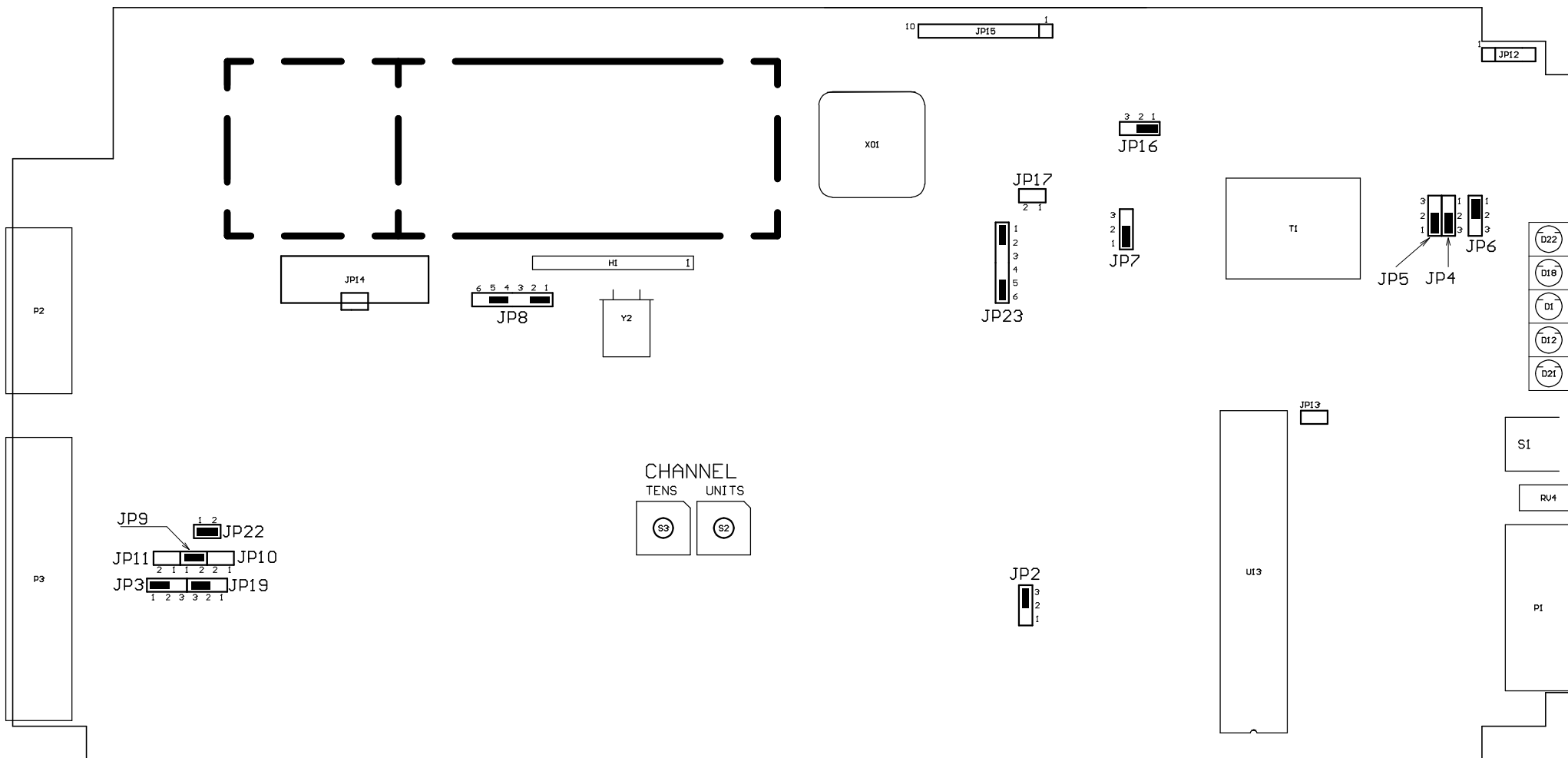
JP19 - LED Alarm output

	<u>Position</u>
No alarm output	2-3 *
Alarm - active low output at DB25 pin 7	1-2

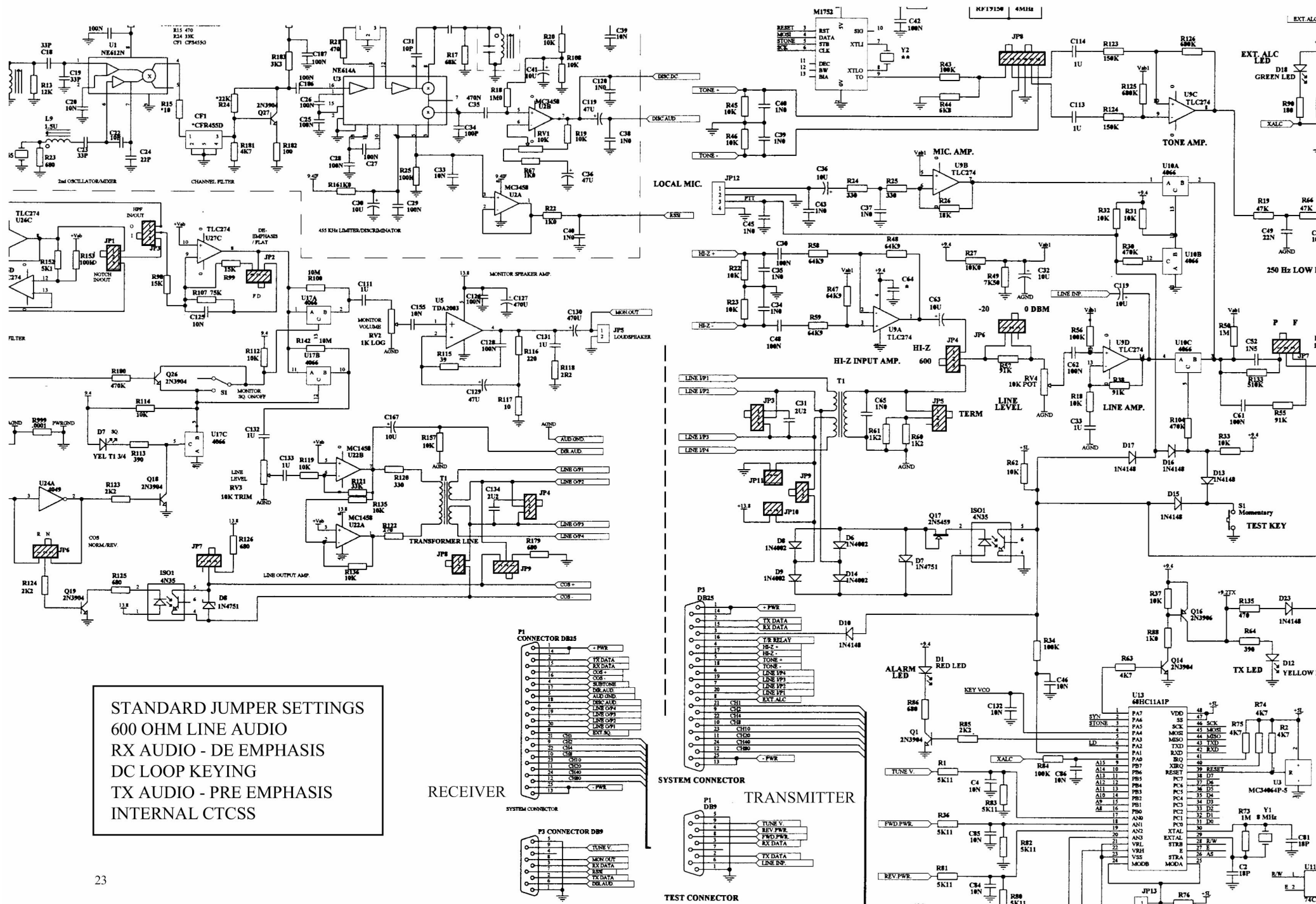
JP23 - DMTX Digital and audio modulation option

	<u>Position</u>
Audio modulation only	1-2, 5-6 *
DMTX fitted for Digital and Audio modulation	2-3, 4-5

* = Standard Factory Configuration



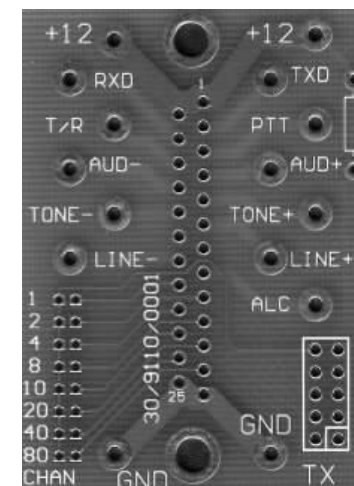
STANDARD EXCITER JUMPER CONFIGURATION



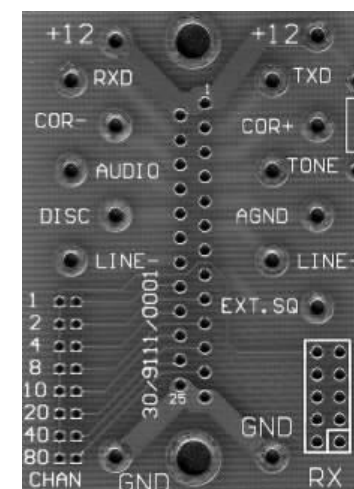
The Receiver and Transmitter modules plug into the back plane DB25/F connectors

Miniature spade connectors (2.1 x 0.6 x 7mm) are captive/ soldered at the labelled points.
To configure: Solder wire connections between appropriate points.

Receiver DB25/F	RX PCB	DESCRIPTION		TX PCB	Transmitter DB25/F
1, 14	+12V	+12V DC SUPPLY		+12V	1, 14
2	TXD	TX Data		TXD	2
15	RXD	RX Data		RXD	15
3	COR+	Carrier Operate Sw+	PressToTalk input	PTT	3
16	COR-	Carrier Operate Sw-	Tx/Rx output	T/R	16
4	TONE	Subtone output	Hi Z audio input+	AUD+	4
17	AUDIO	Audio output	Hi Z audio input-	AUD-	17
5	AGND	Audio Ground	Ext tone input+	TONE+	5
18	DISC	Discriminator output	Ext tone input-	TONE-	18
6	LINE+	Line output+	Line input+	LINE+	6
20	LINE-	Line output-	Line input-	LINE-	20
8	EXT SQ	Ext Squelch input	Auto Level Control	ALC	8
13, 25	GND	Ground, 0V		GND	13, 25
21	BCD 1	Channel select 1's digit		BCD 1	21
9	BCD 2	Channel select 1's digit		BCD 2	9
22	BCD 4	Channel select 1's digit		BCD 4	22
10	BCD 8	Channel select 1's digit		BCD 8	10
23	BCD 10	Channel select 10's digit		BCD 10	23
11	BCD 20	Channel select 10's digit		BCD 20	11
24	BCD 40	Channel select 10's digit		BCD 40	24
12	BCD 80	Channel select 10's digit		BCD 80	12



TX PCB



RX PCB

CHANNEL SELECTION WITHOUT BCD THUMB WHEEL SWITCH OPTION

There are 100 channels available (CH0 to CH99) for frequency and subtone information. The channels can be selected via a front panel thumb wheel switch option or hard wired on the rear rack frame pcb. The default channel is CH0.

Binary or BCD logic is used to select the required channel. Examples are included below.

Channel	Binary (BCD)							
Select	80	40	20	10	8	4	2	1
0	-	-	-	-	-	-	-	-
1	-	-	-	-	-	-	-	X
2	-	-	-	-	-	-	X	-
3	-	-	-	-	-	-	X	X
4	-	-	-	-	-	X	-	-
15	-	-	-	X	-	X	-	X
22	-	-	X	-	-	-	X	-
97	X	-	-	X		X	X	X

X = need to solder across the pins to form link on the pcb.