TA-7625

VHF Transmitter

1 DISPLAY

2 FbA (Function button A)

3 PTT button

4 RS (Rotary Switch)

5 Low indicator LED

6 Remote LED

7 Front connector

8 FbC (Function button C)

9 ON/OFF

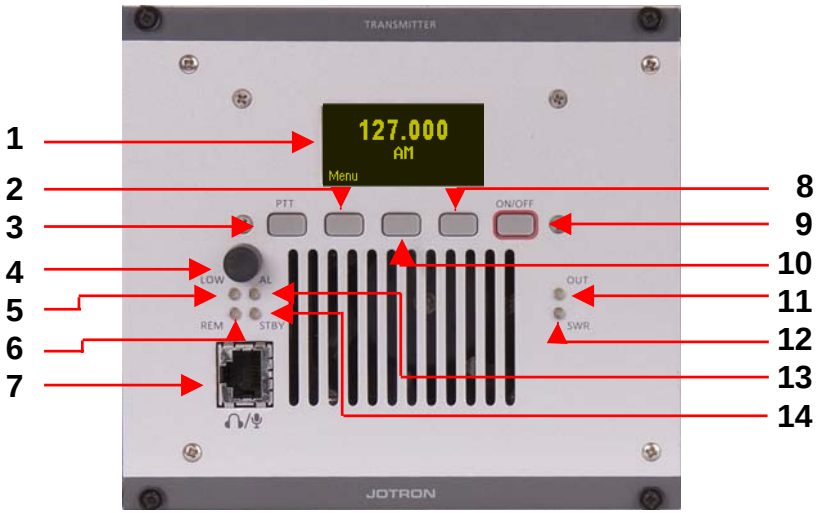
10 FbB (Function button B)

11 OUT LED

12 SWR LED

13 ALARM LED

14 STANDBY LED



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Front RJ45 connector

Front Connector, RJ45		
Name	**PIN**	**Purpose**
Mic input	1	Dynamic. Sensitivity 2.5mV nominal.
Mic GND	2	
Headset	3	
RS232	4	RS232 Tx
RS232	5	RS232 Rx
PTT	6	Key at GND
+12VDC	7	+12 VDC to external equipment (10mA)
GND	8	Common ground

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Technical data, 1 of 3

Standards;	ICAO annex 10, EN300 676(AM, AM-MSK), EN301 841(VDL2 – Physical layer) EMC: EN 301 489 – part 22
Environmental:	Temperature range -20˚C to +55˚C (operating) -40˚C to +70˚C (storage) Humidity 90% @+40˚C (non condensing)
Shock Transport:	IEC-721-3-2, Class 2M3
Vibration Transport:	IEC-68-2-32, Class 2M3. IEC-68-2-6
Weight:	3.0 kg
Dimension:	142mm(28TE)(W) * 230mm(D) * 128mm (H)

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Technical data, 2 of 3

Transmitter	*AM 25kHz*	*AM 8.33kHz*
Adjacent channel power:	>70dB	>60dB
Frequency response:	300-3400 Hz	350-2500 Hz
RF modes:	6K80A3EJN	5K00A3EJN
Keying time:	< 1,0ms	< 1,0ms

BITE monitoring: VSWR, Voltages, Currents, Levels, Lock detect, Temperature, Output power, Reflected power, a.o.

Supply voltage: DC 21.6 - 31.2VDC negative ground
Power consumption: < 280VA

MTBF: >10 years / unit
MTTR: <30 minutes at lowest replaceable unit

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Technical data, 3 of 3

Data ports:	RS232, RS485, 100/10BaseT
Protocol:	(SNMP v.2) Simple Network Management RS232/RS485 Jotron proprietary
Output power:	1-50W ±1dB
Duty cycle:	100% continuous operation @ ambient below 40ºC
VSWR:	1: infinity
Intermodulation protection:	>40dB when interfering signal is decoupled with at least 30dB
Modulation level:	Up to 95%
Distortion:	< 3%
Line input:	600Ω, -36 to +7 dBm
TX timeout:	15s to 5 min in 1s steps
Inband keying:	Configurable tones 100 – 5000Hz
Carrier offset:	2, 3, 4, or 5
Wide band noise:	<150dBc @ 1% frequency offset

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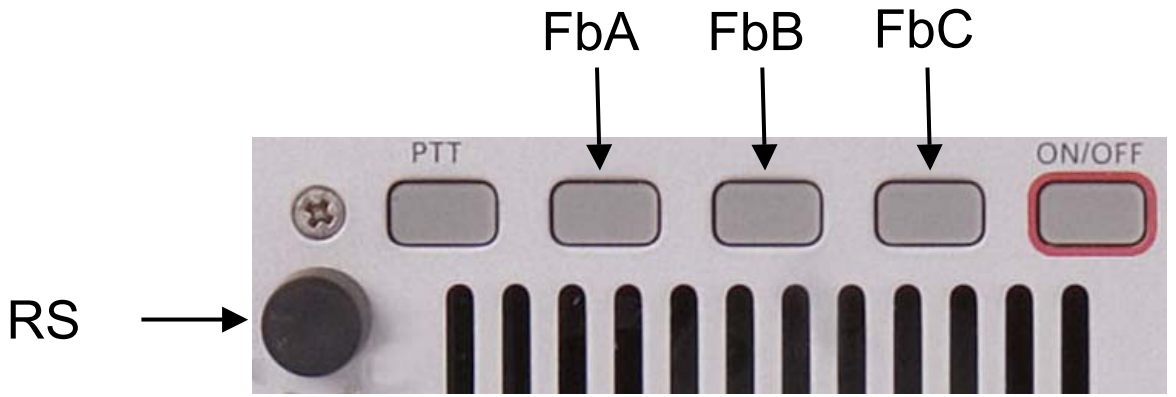
Menus, 1 of 16



NOTE: RS can be pushed and turned.

The radio is controlled through an advanced menu system.
The access level for each menu is restricted by a user parameter.
The System Operator can change all user parameters from SNMP, or from the menu using a hardware key.

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Menus, 2 of 16

There are four user access levels:

User parameter:	Name of menu:	Access and restrictions:
1	System Operator	Full access to all parameters (R/W by System Operator)
2	Technician	Access to some settings in TX menu system + bite (R/O)
3	Operators	Access only to Volume, Frequency and memory store and recall
4	Restricted	Restricted to Volume and memory recall

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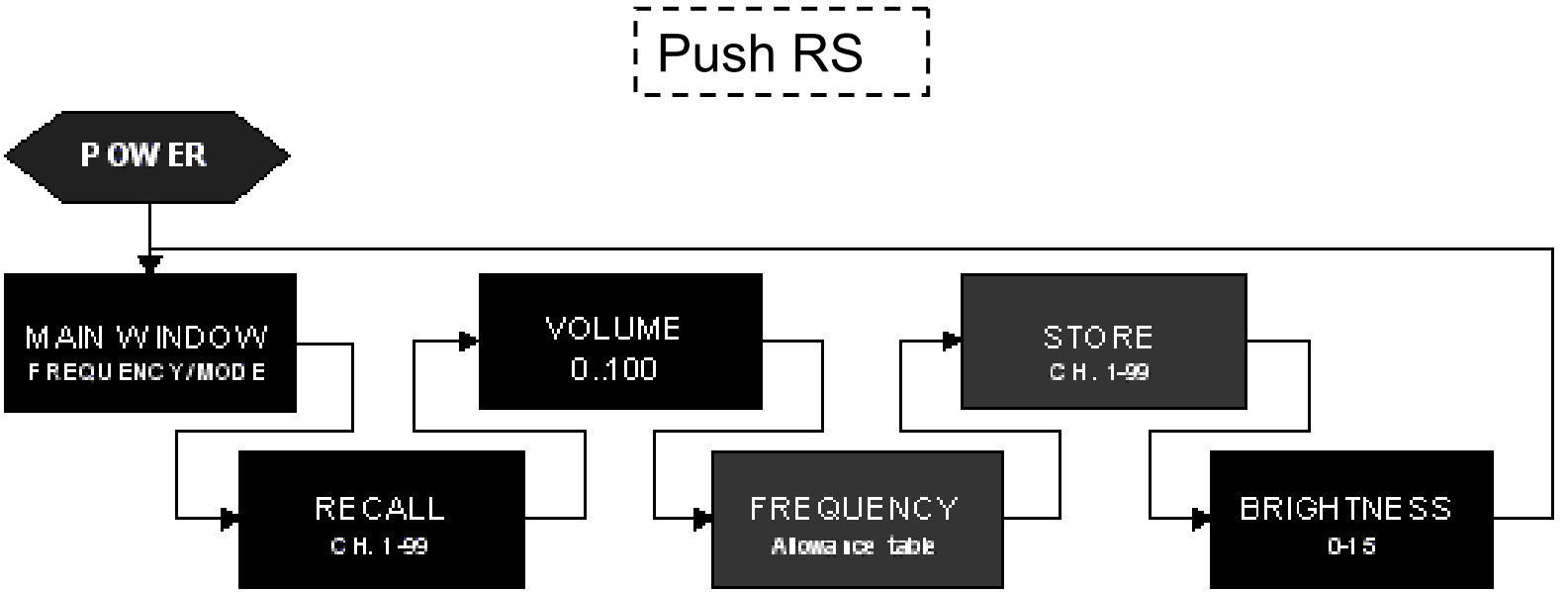
Menus, 3 of 16

When operated locally, the operator has full access to all facilities using the various controls at the front panel.



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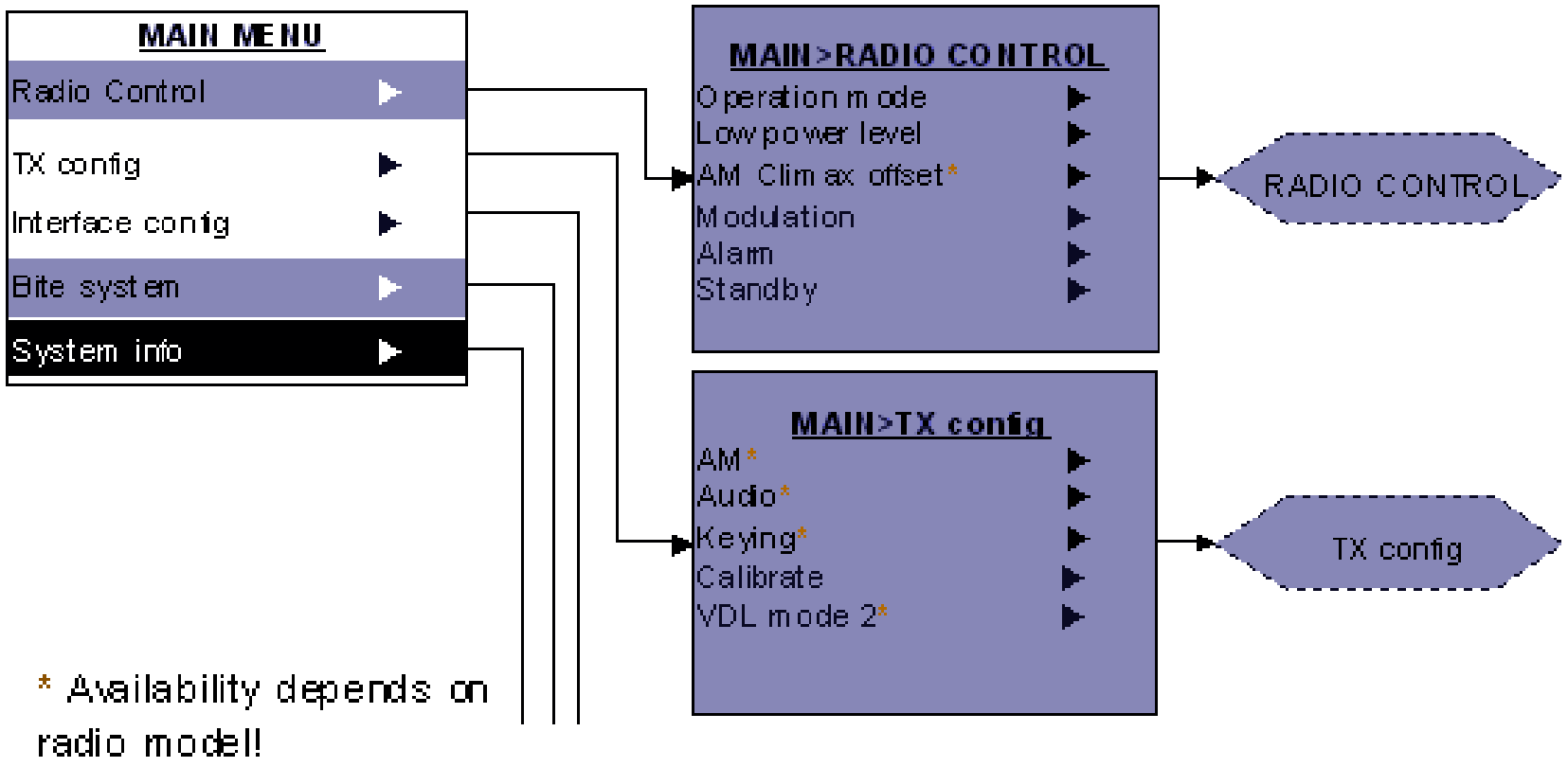
Menus, 4 of 16



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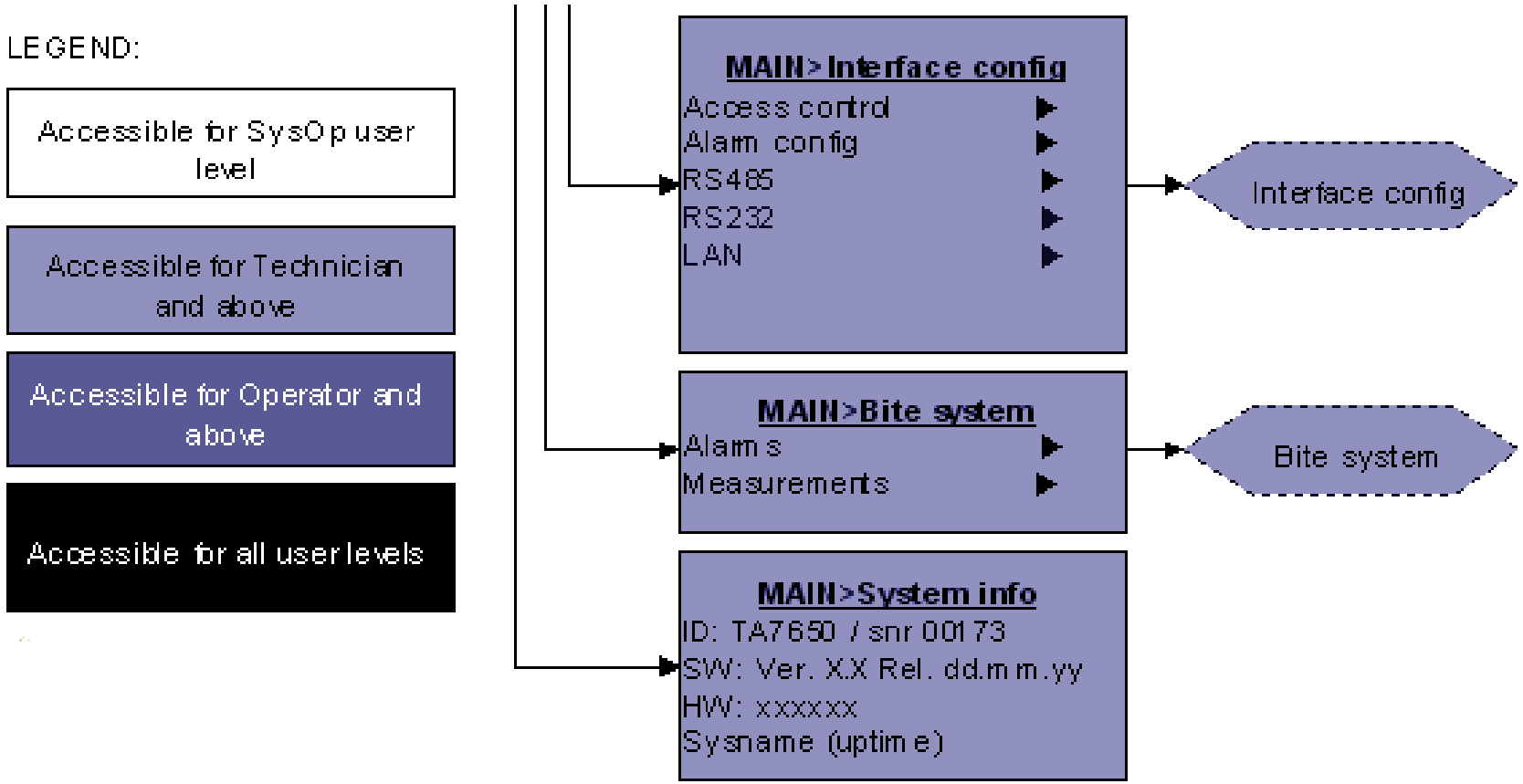
Menus, 5 of 16



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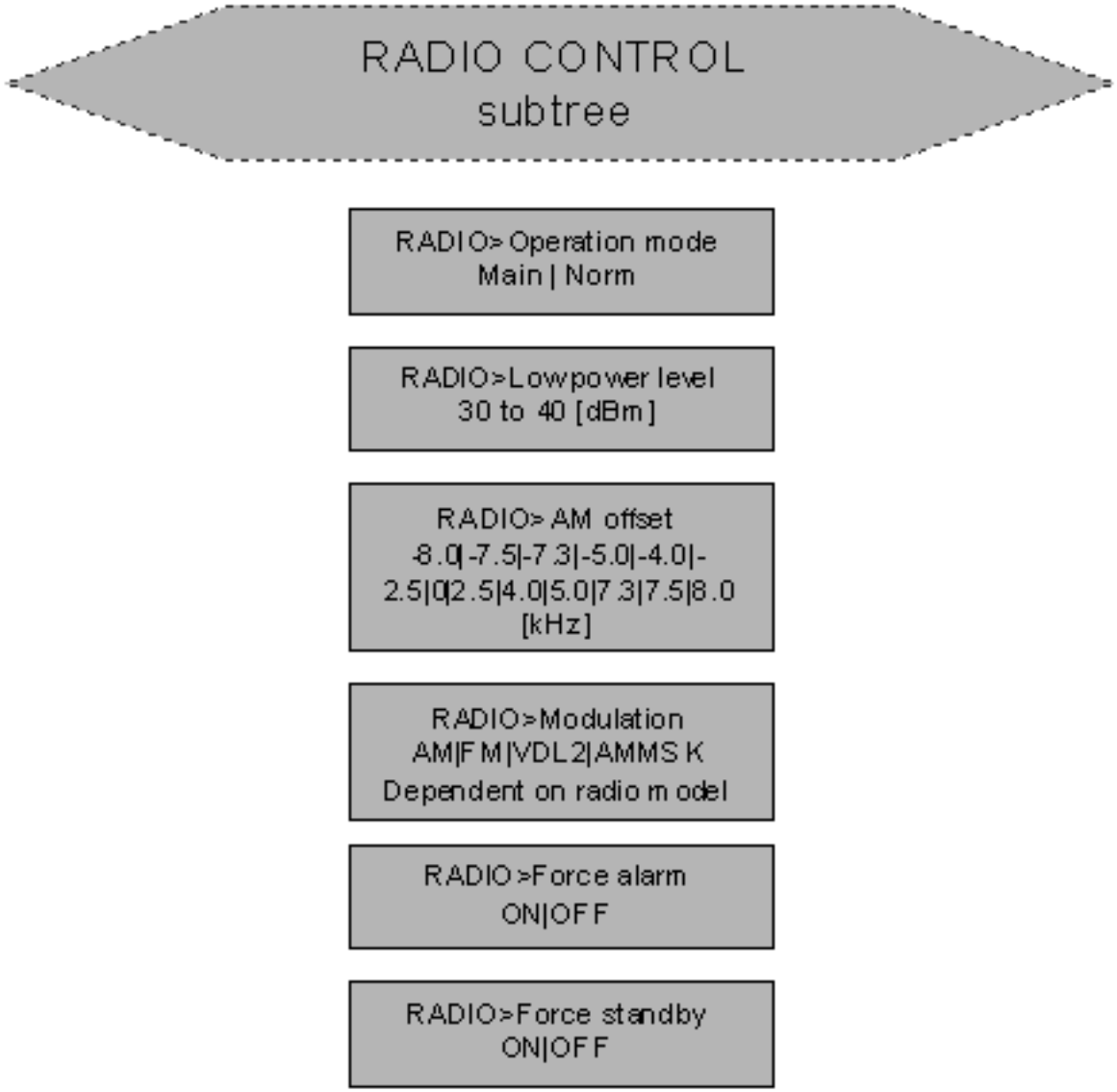
Menus, 6 of 16



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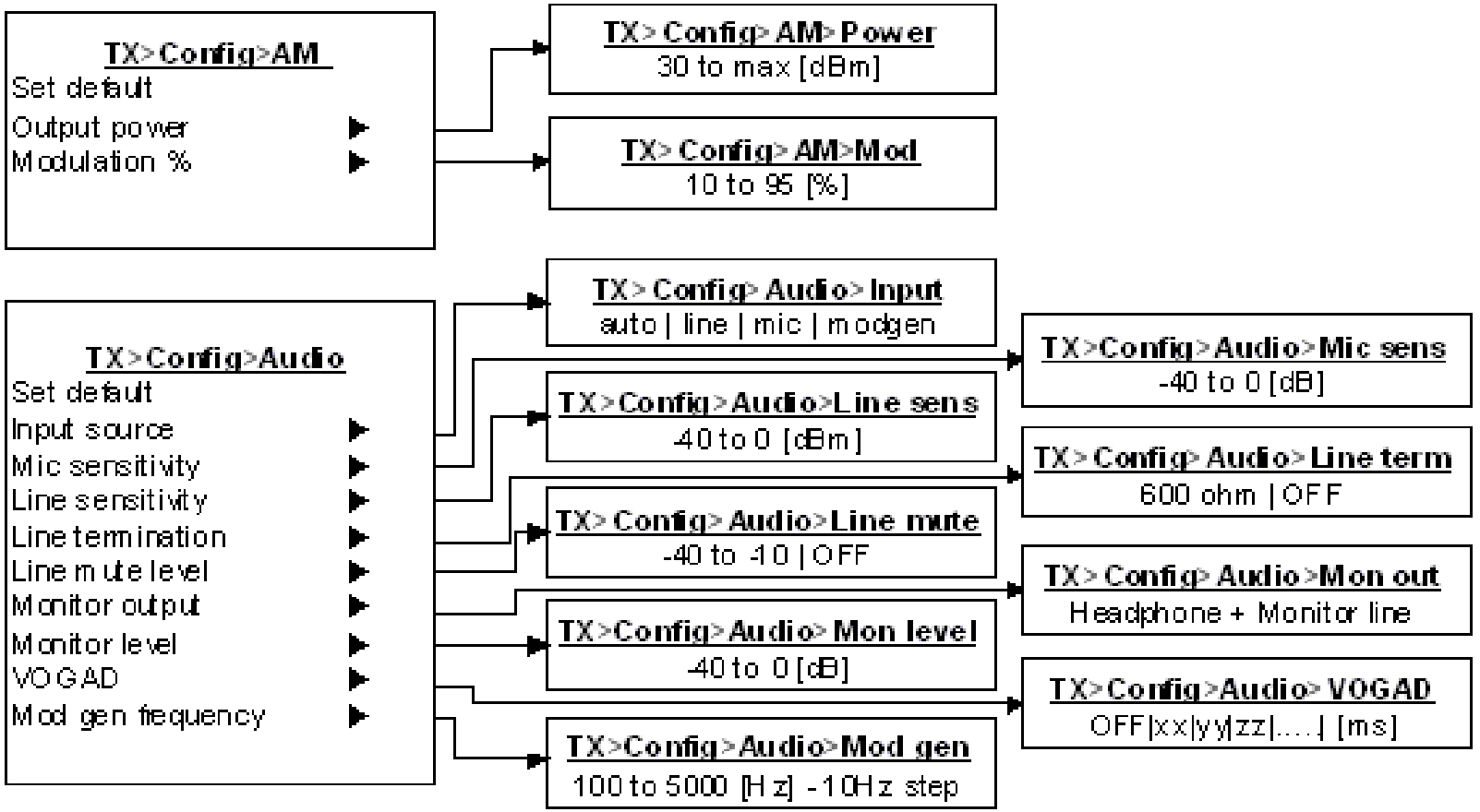
Menus, 7 of 16

TX config subtree menu, 1 of 2



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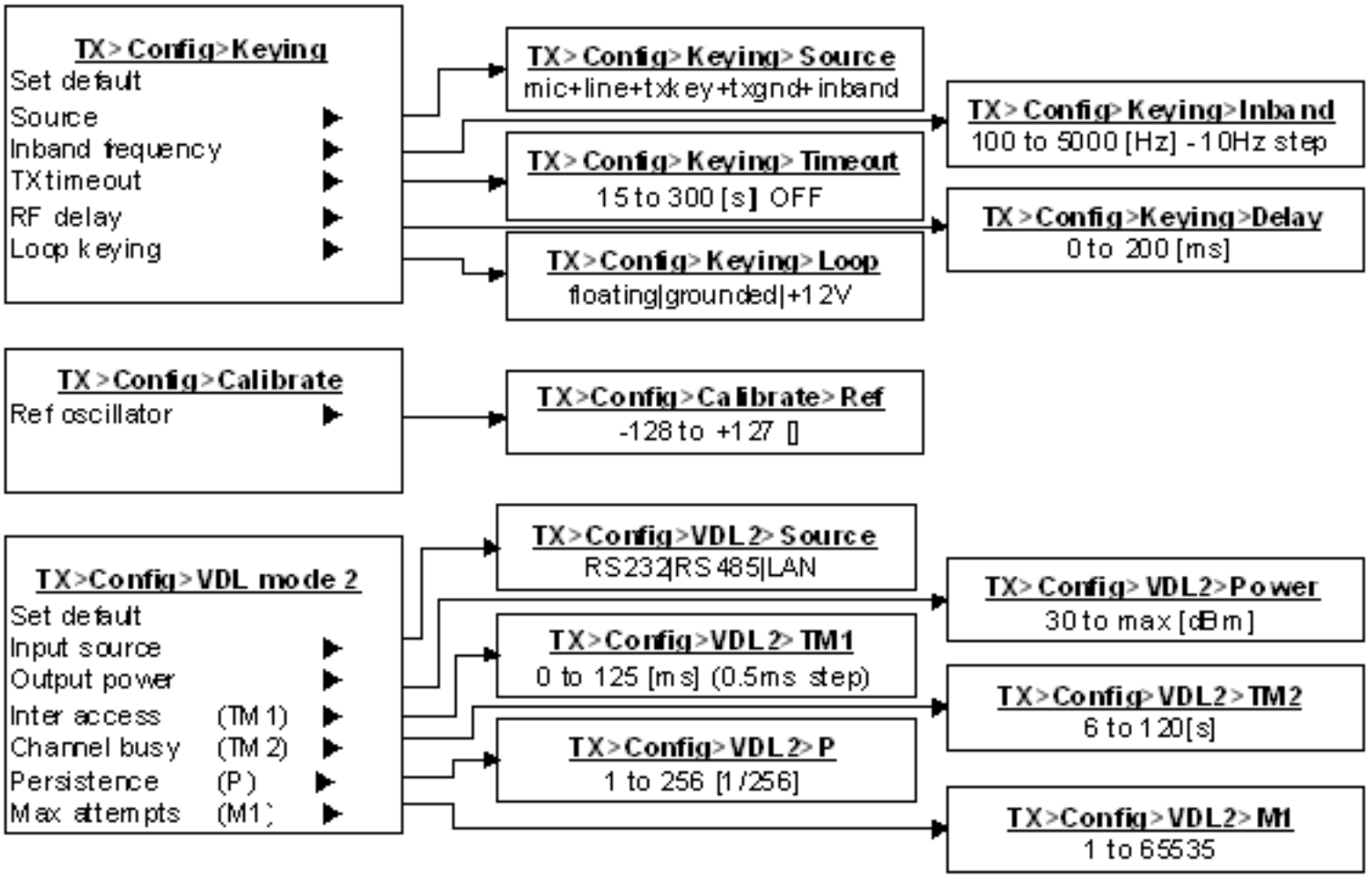
Menus, 8 of 16

TX config subtree menu, 2 of 2



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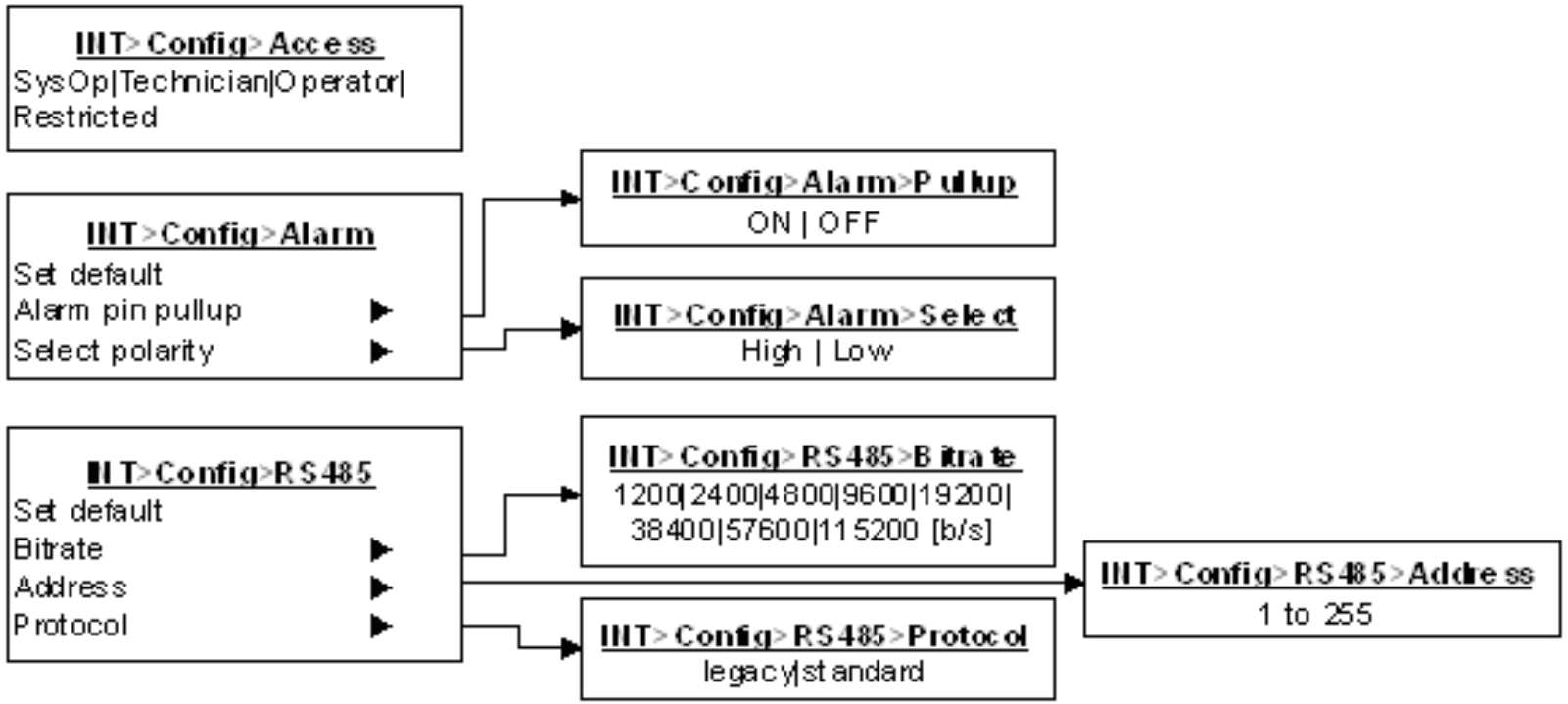
Menus, 9 of 16

Interface config subtree menu, 1 of 2



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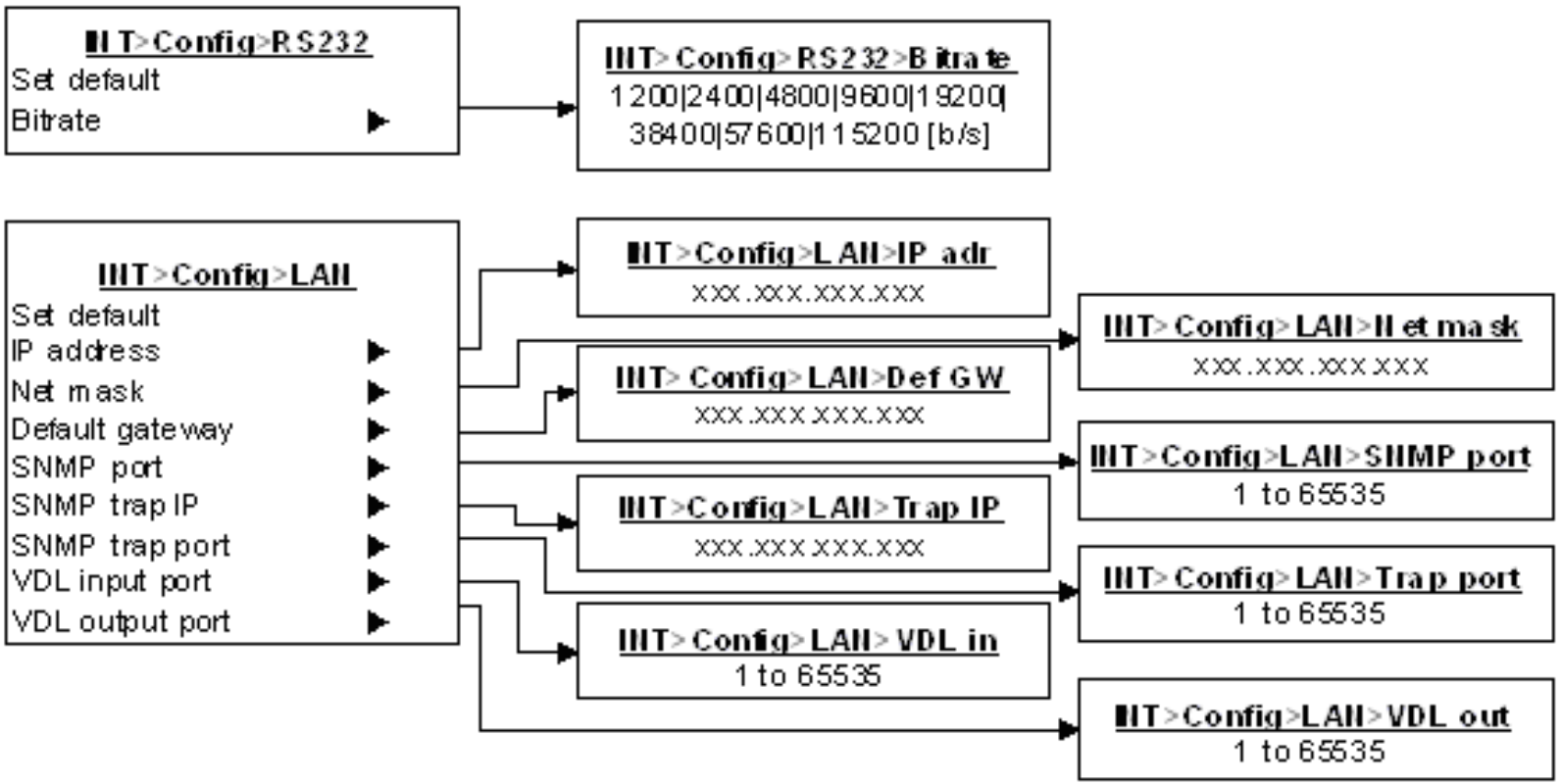
Menus, 10 of 16

Interface config subtree menu, 2 of 2



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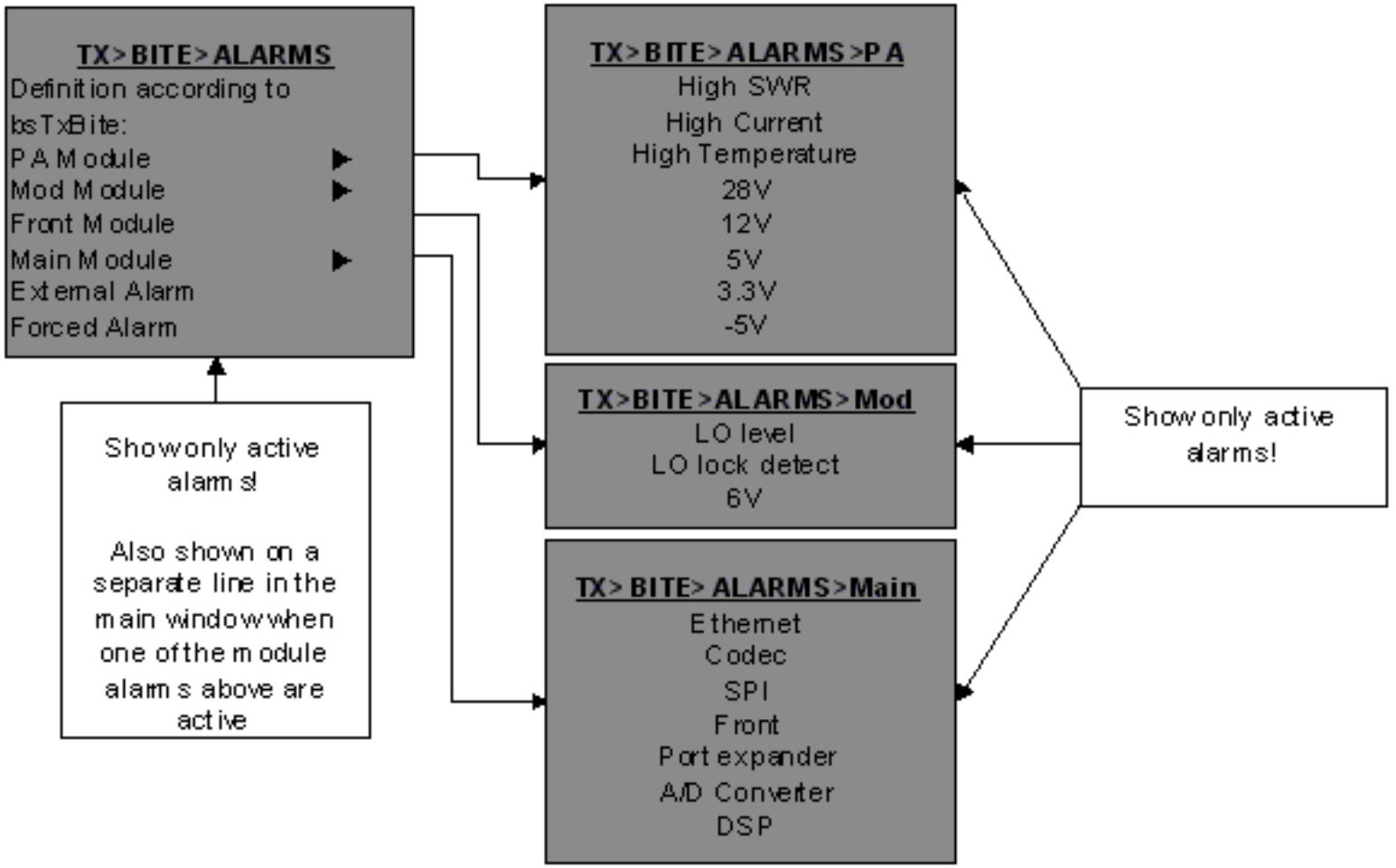
Menus, 11 of 16

Bite system subtree, 1 of 2



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Menus, 12 of 16

Bite system subtree, 2 of 2

TX> BITE> MEASUREMENTS		
Forward	xx.x dBm	(-- if less than 20 dBm)
Reflected	xx.x dBm	(-- if less than 20 dBm)
VSWR	1:x	
Modulation	xx %	(--- if less than 10%)
Current	xx.x A	
PA Temp	xx .C	
LO level	xx.x dBm	
Line level	xx.x dBm	
28 Volt	xx.x V	
12 Volt	xx.x V	
6 Volt	xx.x V	
5 Volt	xx.x V	
-5 Volt	- xx.x V	
3.3 Volt	xx.x V	

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Menus, 13 of 16

To maneuver in the menu systems, use the up-button FbA, the down-button FbB or (preferably) turn the RS.

The different submenus are selected by pressing the rotary switch and turning up/down until the desired menu is reached. (FbA, FbB and FbC may be used as well)

To return to previous menu, press RS (or FbC) when “ ,,,” is selected in the present menu.

The TA-7650 will enter the Operator menu when turned “ON”.

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Menus, 14 of 16

Operator menu, 1 of 3

Normal operating display

Press RS

Normal operating display with no channels stored. Press FbC to recall stored channels.

Press RS

Set headset volume by turning RS. Press FbC to mute headset

PressRS

See part 3 for selecting frequency

Press RS

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Menus, 15 of 16

Operator menu, 2 of 3

Press RS

Press FbC to store new frequency on specified channel. Select storing channel by turning RS

Press RS

Select brightness level by turning RS.

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Menus, 16 of 16

Operator menu, 3 of 3

Press FbA

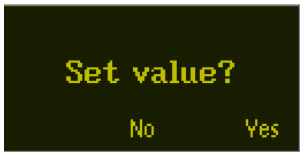
Select 8,33kHz steps by turning RS. For no changes press FbC.

Press FbA

Select 100kHz steps by turning RS.

Press FbC

Select 1MHz steps by turning RS.



Press FbC to store new frequency and return.

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Rear RJ45 connectors, 1 of 6

1 EARTH TAG

2 ANTENNA CONNECTOR

3 ANTENNA STANDBY / RX ANTENNA OUTPUT CONNECTOR

4 DC INPUT CONNECTOR

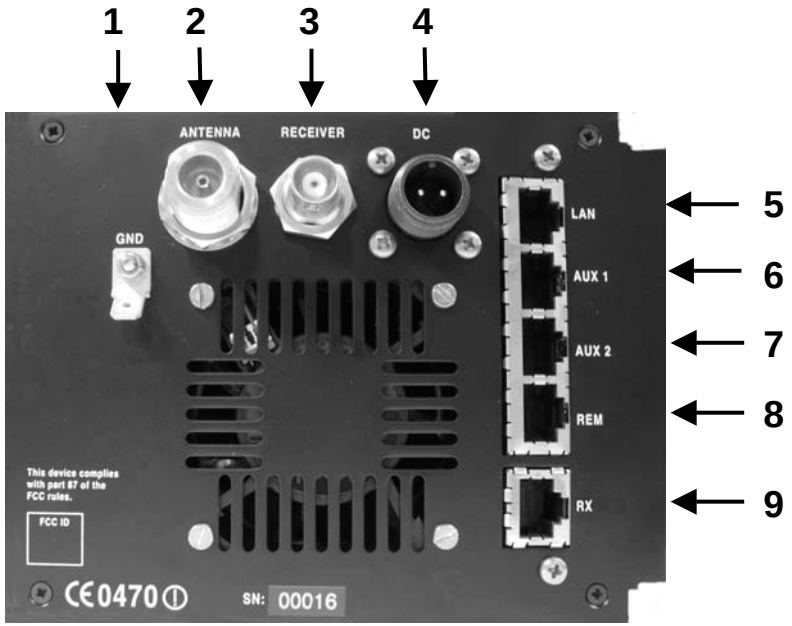
5 LAN CONNECTOR

6 AUX 1 CONNECTOR

7 AUX 2 CONNECTOR

8 REMOTE CONNECTOR

9 RX CONNECTOR



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Rear RJ45 connectors, 2 of 6

LAN interface connector		
Name	**PIN**	**Purpose**
LAN_TXP	1	Tx data
LAN_TXN	2	Tx data
LAN_RXP	3	Rx data
LAN_D3P	4	Optional
LAN_D3N	5	Optional
LAN_RXN	6	Rx data
LAN_D4P	7	Optional
LAN_D4N	8	Optional

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Rear RJ45 connectors, 3 of 6

Aux 1 connector		
Name	**PIN**	**Purpose**
ALARM_P	1	Alarm out – rele
ALARM_N	2	Alarm out – rele
Select_in_P	3	Select in – opto isolated
RS232_S	4	RS232 Transmit data
RS232_R	5	RS232 Receive data
Select_in_N	6	Select in – opto isolated
+12V	7	12V output to ext equipment (D/O: 300mA)
GND	8	Common ground

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Rear RJ45 connectors, 4 of 6

AUX 2 connector		
Name	**PIN**	**Purpose**
Key_out_P	1	Closed=Transmitting - opto output
Key_out_N	2	Closed=Transmitting - opto output
MONITOR_P	3	Monitor output to tape recorder
TXLOW_P	4	Applying a voltage > 5VDC between pin 4 and 5 forces the transmitter into low power
TXLOW_N	5	Applying a voltage > 5VDC between pin 4 and 5 forces the transmitter into low power
MONITOR_N	6	Monitor output to tape recorder
TXKEY_P	7	Applying a voltage > 5VDC between pin 7 and 8 will key the transmitter
TXKEY_N	8	Applying a voltage > 5VDC between pin 7 and 8 will key the transmitter

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Rear RJ45 connectors, 5 of 6

REM connector (Interface to remote equipment)		
Name	**PIN**	**Purpose**
RS485_Z	1	RS485 (-)
RS485_Y	2	RS485(+)
LINE_P	3	Diff. line input/output to TX/RX, 600 ohm
TX_KEY_G	4	Key at GND
RX_BUSY_OUT	5	RX Busy indicator output (Squelch indicator)
LINE_N	6	Diff. line input/output to TX/RX, 600 ohm
ALARM	7	Low=Alarm (TX or TX/RX)
GND	8	Common ground

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Rear RJ45 connectors, 6 of 6

RX connector (Interface to receiver, transceiver config)		
Name	**PIN**	**Purpose**
RS485_Z	1	RS485 (-)
RS485_Y	2	RS485(+)
LINE_P	3	Diff. line input to RX, 600 ohm
TX_BUSY	4	TX Busy indicator output (Mute output)
RX_BUSY	5	RX Busy opto-input (Repeater Key input)
LINE_N	6	Diff. line input to RX, 600 ohm
INT_ALARM	7	Low=Alarm (Note: I/O – low input will also be recognized as an alarm (EXT)
GND	8	Common ground

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External wiring