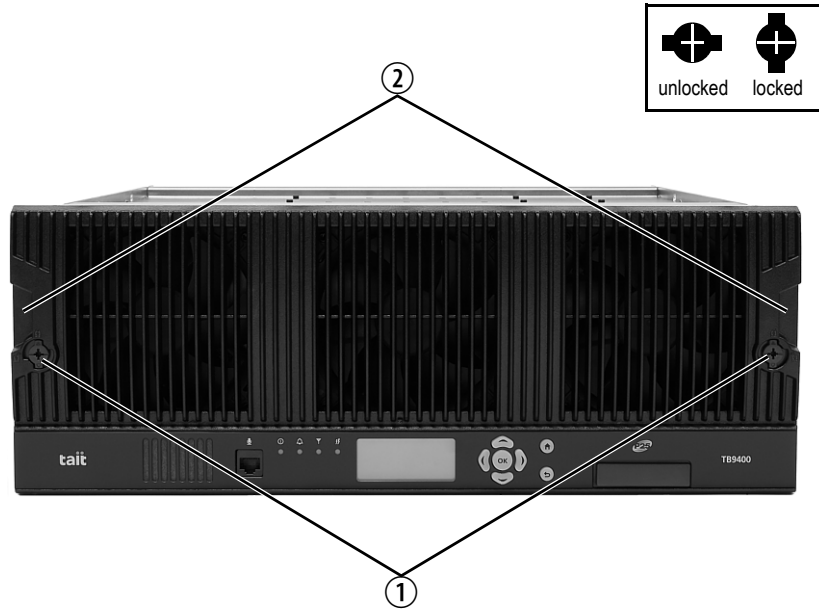


Remove the Front Panel

1. Using a Pozidriv PZ2 screwdriver, undo the fastener at each end of the front panel ① with a quarter turn counterclockwise.



2. Place a finger in the recess ② provided at each end of the front panel and pull the front panel away from the subrack.

Cable Retaining Clips

The cable retaining clips are used to hold cables in position at the top of the subrack so that they do not interfere with the mounting of the front panel, or interrupt the airflow through the base station.

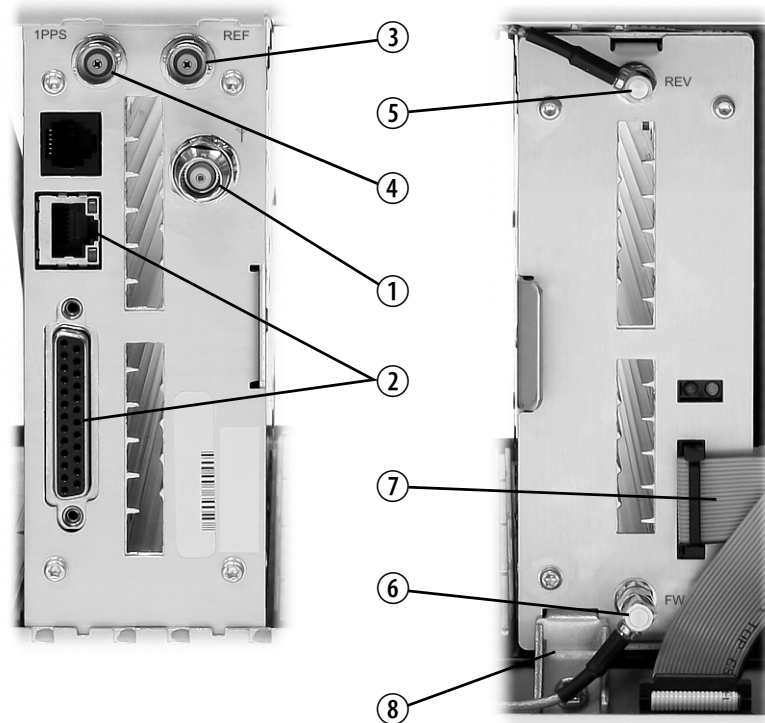
If you need to remove any front panel cables, simply pull the front of the cable retaining clip down and then slide it out from the subrack until it reaches the end of its travel.



8.3 Replacing a Reciter

Removal

1. If you have not already done so, carry out the instructions in [“Preliminary Disassembly” on page 106](#).
2. At the rear of the reciter, unplug the RF input cable ①, any system cables ②, and the external reference ③ and 1 PPS ④ cables (if fitted).
3. At the front of the reciter, unplug the transmit reverse ⑤ and transmit forward ⑥ cables (if fitted), and move both cables to one side. Unplug both ends of the system control bus cable ⑦ and remove it.
4. Loosen the screw securing the retaining clamp ⑧ and rotate the clamp through 90° to clear the module.
5. Slide the reciter out of the subrack, taking care not to damage any of the cables.



Refitting

1. Slide the replacement reciter into the subrack and secure it with the retaining clamp.
2. Reconnect all the front and rear panel cables previously disconnected. Ensure the front panel cables are positioned correctly, and retained where required by the cable retaining clips in the top of the subrack (refer to [“Appendix B – Inter-Module Connections” on page 117](#)).

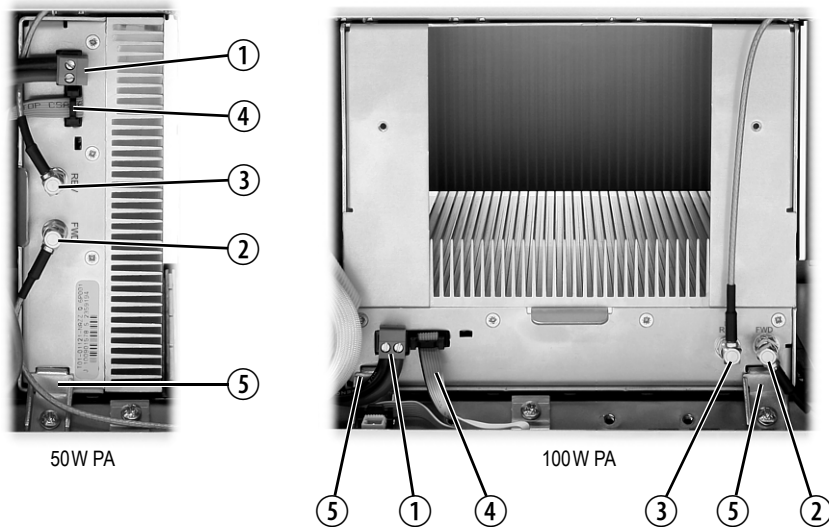
3. Tighten the nut on the SMA connector to a torque of 5 lbf·in (0.6N·m).
4. Carry out the instructions in [“Final Reassembly” on page 115](#).

8.4 Replacing a Power Amplifier

Notice Before removing a PA, first disconnect the DC input, transmit forward input and transmit reverse output, followed by the RF output. After refitting the PA, reconnect the RF output first, followed by the transmit forward input, transmit reverse output, and then the DC input.

Removal

1. If you have not already done so, carry out the instructions in [“Preliminary Disassembly” on page 106](#).
2. At the front of the PA, unplug the DC input ①, transmit forward ② and transmit reverse ③ cables, and move the cables to one side. Unplug both ends of the system control bus cable ④ and remove it.
3. At the rear of the PA, unplug the RF output cable.
4. Loosen the screw securing the retaining clamp(s) ⑤ and rotate the clamp(s) through 90° to clear the module.
5. Slide the PA out of the subrack, taking care not to damage any of the cables.



Refitting

1. Slide the replacement PA into the subrack and secure it with the retaining clamp(s).
2. At the rear of the PA, connect the RF output cable.
3. At the front of the PA, connect the transmit forward and transmit reverse cables, followed by the DC input cable.
4. Reconnect all the other front and rear panel cables previously disconnected. Ensure the front panel cables are positioned correctly, and retained where required by the cable retaining clips in the top of

the subrack (refer to [“Appendix B – Inter-Module Connections”](#) on [page 117](#)).

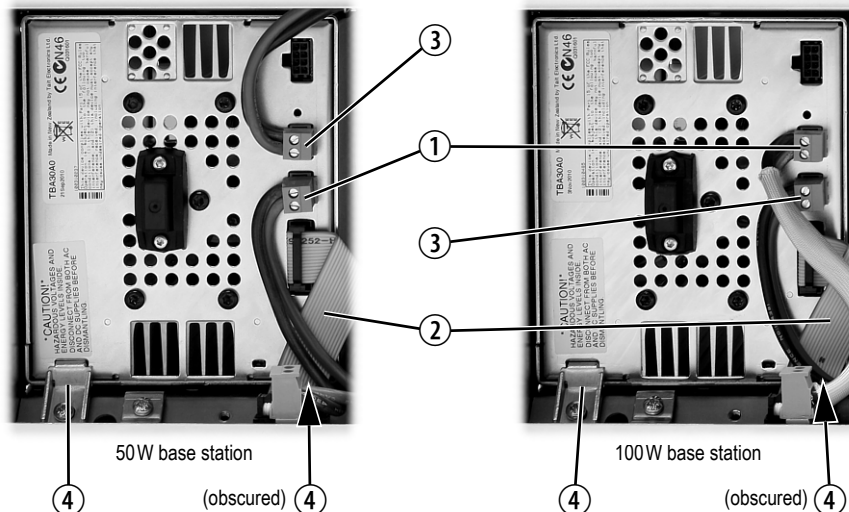
5. Tighten the nut on the SMA connector to a torque of 5 lbf·in (0.6 N·m).
6. Carry out the instructions in [“Final Reassembly”](#) on [page 115](#).

8.5 Replacing a Power Management Unit

Notice You must disconnect the AC and DC power cables before removing the PMU from the subrack.

Removal

1. If you have not already done so, carry out the instructions in [“Preliminary Disassembly” on page 106](#).
2. At the front of the PMU, unplug and remove the output power cable ① to the subrack interconnect board. Also unplug and remove the system control bus cable ②.
3. Unplug the output power cable to the PA ③ and move it to one side.
4. Loosen the screws securing the retaining clamps ④ and rotate the clamps through 90° to clear the module.
5. Slide the PMU out of the subrack, taking care not to damage any of the cables.



Refitting

1. Slide the replacement PMU into the subrack and secure it with the retaining clamps.
2. Reconnect all the front and rear panel cables previously disconnected. Connect the DC power cables on the rear panel as shown in [Figure 4.8 on page 70](#). Tighten the screws to a torque of 18–20lbf·in (2–2.25N·m). Ensure the front panel cables are positioned correctly, and retained where required by the cable retaining clips in the top of the subrack (refer to [“Appendix B – Inter-Module Connections” on page 117](#)).
3. Carry out the instructions in [“Final Reassembly” on page 115](#).

8.6 Replacing the Module Guide Rails

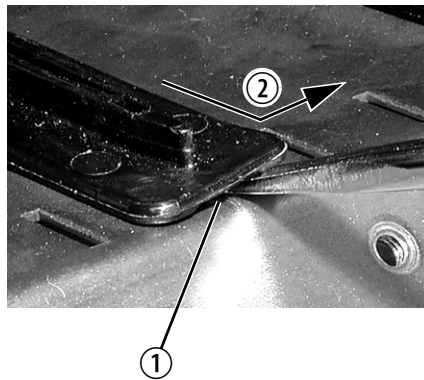
The module guide rails are held in place by four hooks that fit through the slots in the top and bottom of the subrack. There is also a locking tab which prevents the guide rails from working loose.

Notice Subracks produced from late 2008 onwards have wider slots than earlier subracks. Guide rails designed for these wider slots will not fit older subracks with narrow slots.

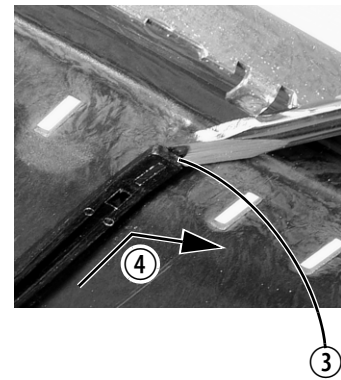
Removal

1. Bottom Guide Rails
 - a. Insert a small flat-blade screwdriver under the front end of the guide rail and lift it slightly ①. This will ensure the small locking tab is clear of the slot in the subrack.
 - b. While holding the front end of the guide rail up, pull the guide rail towards the front of the subrack ② and lift it clear of the slots.
2. Top Rails
 - a. Insert a small flat-blade screwdriver under the rear end of the guide rail and lift it slightly ③. This will ensure the small locking tab is clear of the slot in the subrack.
 - b. While holding the rear end of the guide rail up, pull the guide rail towards the rear of the subrack ④ and lift it clear of the slots.

bottom guide rail



top guide rail



Refitting

1. Bottom Guide Rails
 - a. With the locating hooks pointing towards the rear of the subrack, insert the hooks into the slots in the subrack.
 - b. Push the guide rail towards the rear of the subrack until you hear the locking tab “click” into place.
2. Top Guide Rails
 - a. With the locating hooks pointing towards the front of the subrack, insert the hooks into the slots in the subrack.
 - b. Push the guide rail towards the front of the subrack until you hear the locking tab “click” into place.

8.7 Replacing the Subrack Interconnect Board

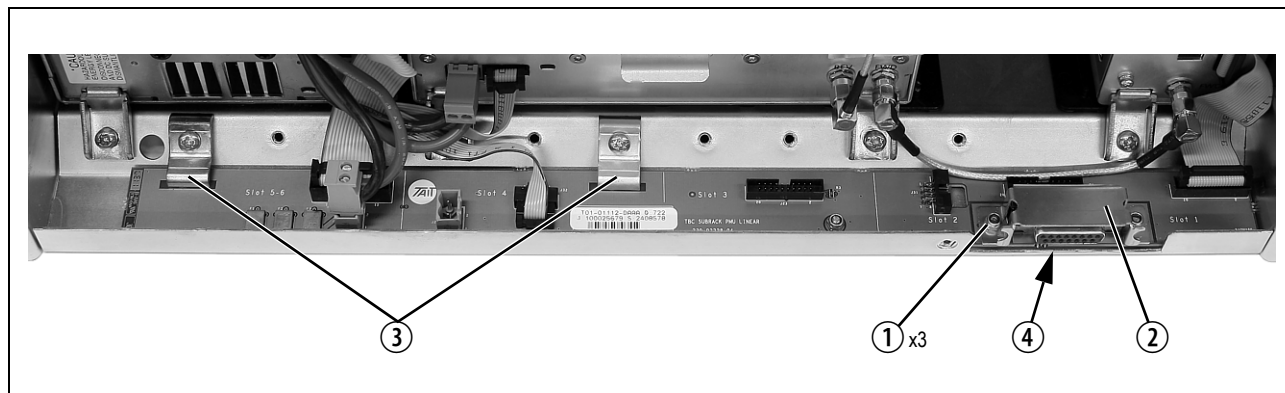
Removal

1. If you have not already done so, carry out the instructions in [“Preliminary Disassembly” on page 106](#).
2. Disconnect any system control bus cables and DC power cables from the subrack board.
3. Remove the three M3 nuts and spring washers ① securing the right end of the board to the subrack.
4. Remove the D-range cover ②.
5. Remove the two retaining clamps ③ securing the left end and centre of the board.
6. Remove the board.

Refitting

1. If previously removed, replace the insulator ④.
2. Refit the board and D-range cover, and secure with the M3 nuts and spring washers. Replace the two retaining clamps.
3. Reconnect the system control bus cables and reciter DC cables as shown in [“Appendix B – Inter-Module Connections” on page 117](#)).

Figure 8.1 Replacing the subrack interconnect board



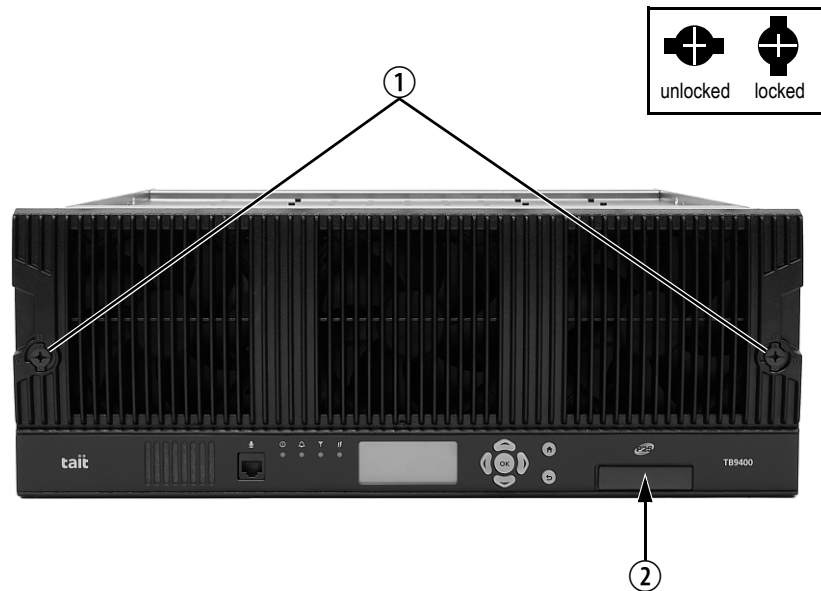
8.8 Final Reassembly

Notice You must fit the correct type of front panel to your base station. The different types of front panel and fan ducts are explained in [“Appendix C – Identifying Front Panels” on page 121](#).

1. Before fitting the front panel, ensure that all cables are secured and positioned correctly so they are clear of the fan ducts (refer to [“Appendix B – Inter-Module Connections” on page 117](#)). Otherwise the panel may not fit properly, or you may damage the cables.

 Base stations manufactured after May 2015 no longer have an airflow separator.

2. Refit the Front Panel
 - a. Ensure that the fasteners ① are in the unlocked position.
 - b. Fit the front panel onto the locating pegs on the subrack.
 - c. Secure each fastener with a quarter turn clockwise.
 - d. **Push the self-aligning D-range connector ② fully in.**



3. Before powering up the base station, check that all power, RF and system cables are connected correctly and securely at the rear of the base station.

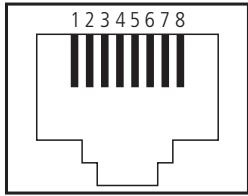
When refitting modules, make sure they are fitted correctly into the subrack and all retaining clamps are securely tightened. The recommended torque for the retaining clamp screws is 17lbf·in (1.9N·m). As well as holding the modules in place, the retaining clamps push the modules hard against the rear rail of the subrack to ensure a good ground connection between the modules and the subrack.

Appendix A – Interface Pin Allocations

System Interface Connector

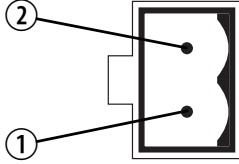
For the pin allocations for the system interface DB-25 connector, see [“Connecting General Purpose Inputs and Outputs” on page 80](#).

Ethernet Connector

 external view	Pin	Description
	1	transmit data +
	2	transmit data –
	3	receive data +
	4	not connected
	5	not connected
	6	receive data –
	7	not connected
	8	not connected

PMU Auxiliary DC Output

The pin allocations for the auxiliary DC output on the PMU are given in the following table.

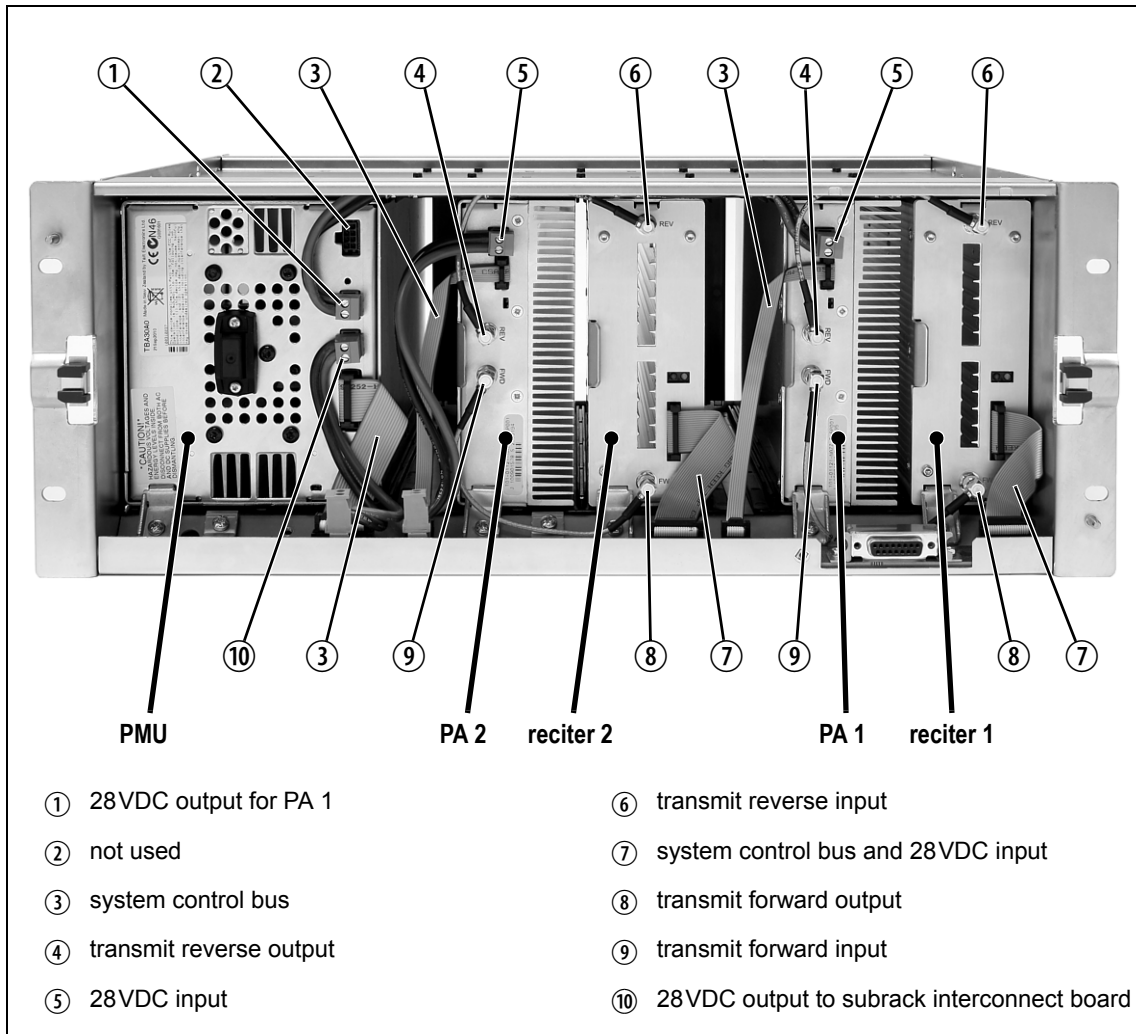
 2-pin connector - external view	Pin	Description
	1	+V output
	2	–V output

Appendix B – Inter-Module Connections

Dual 50W Base Station

The connections between modules at the front of a dual 50W base station are shown below.

Dual 50W base station inter-module connections



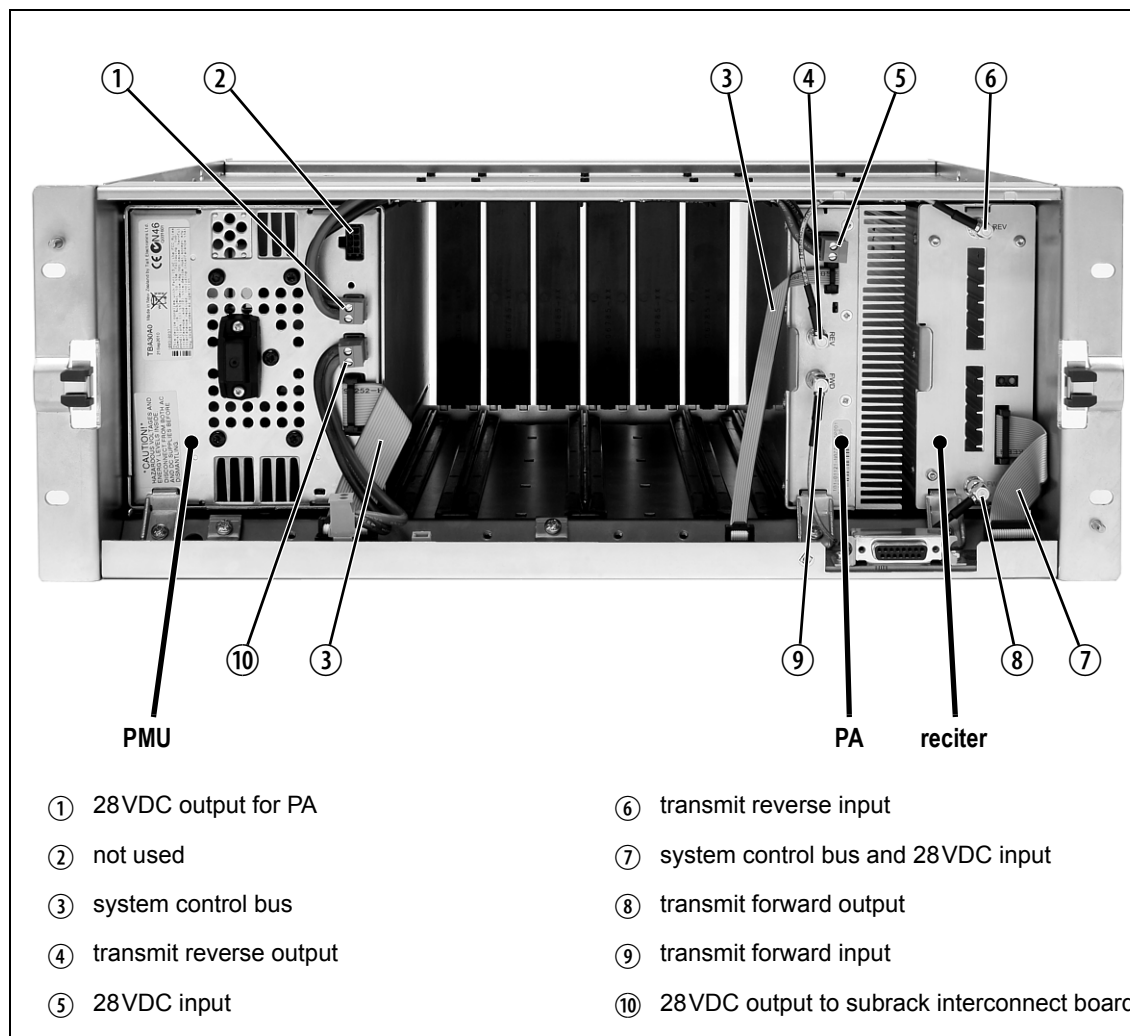
DC Supply

PA 1 is powered by a direct connection from the PMU. The other modules in the subrack are powered from the PMU via the subrack interconnect board. The DC supply to the reciters is via the system control bus ribbon cable.

Single 50W Base Station

The connections between modules at the front of a single 50 W base station are shown below.

Single 50W base station inter-module connections



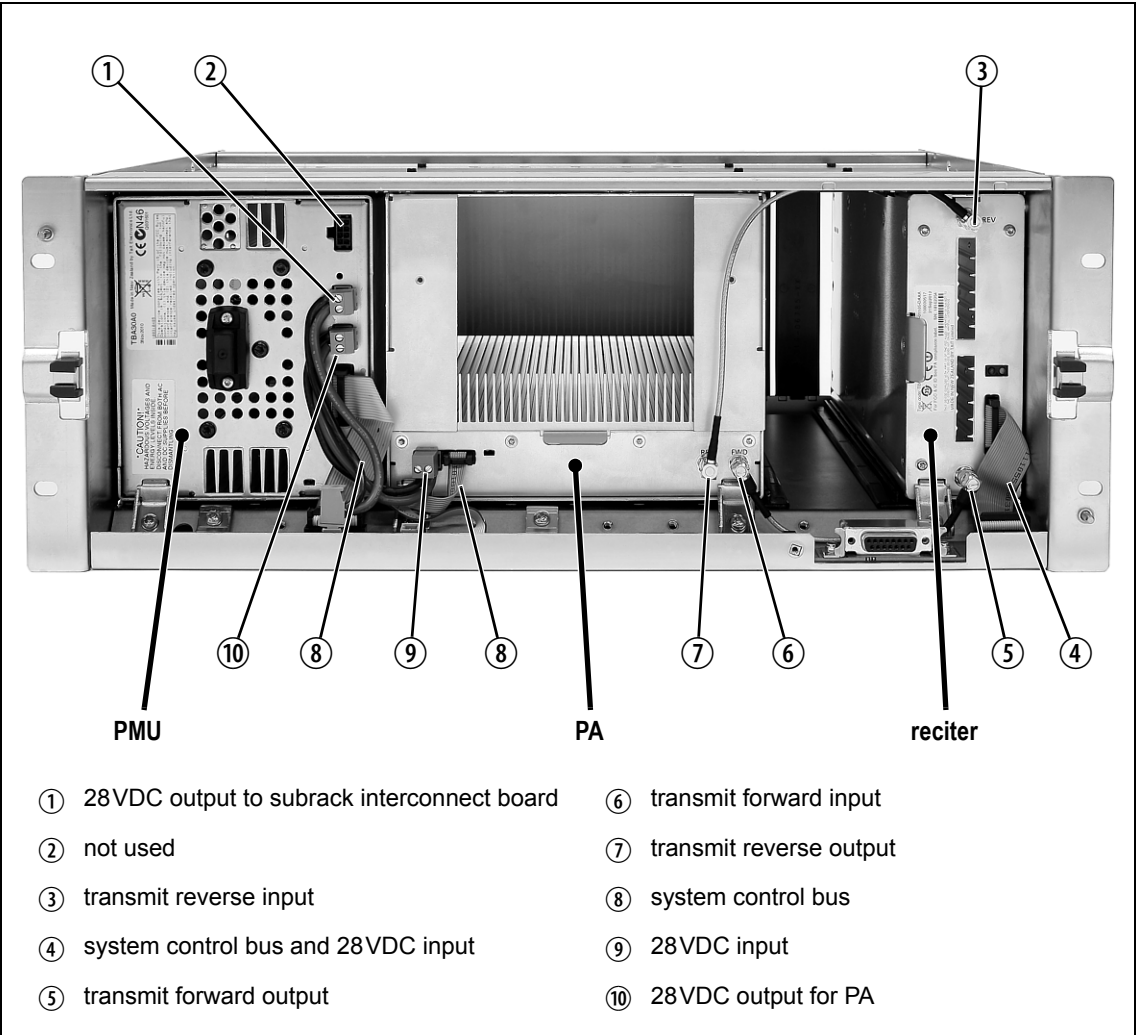
DC Supply

The PA is powered by a direct connection from the PMU. The reciter is powered from the PMU via the subrack interconnect board and system control bus ribbon cable.

100W Base Station

The connections between modules at the front of a 100W base station are shown below.

100W base station inter-module connections



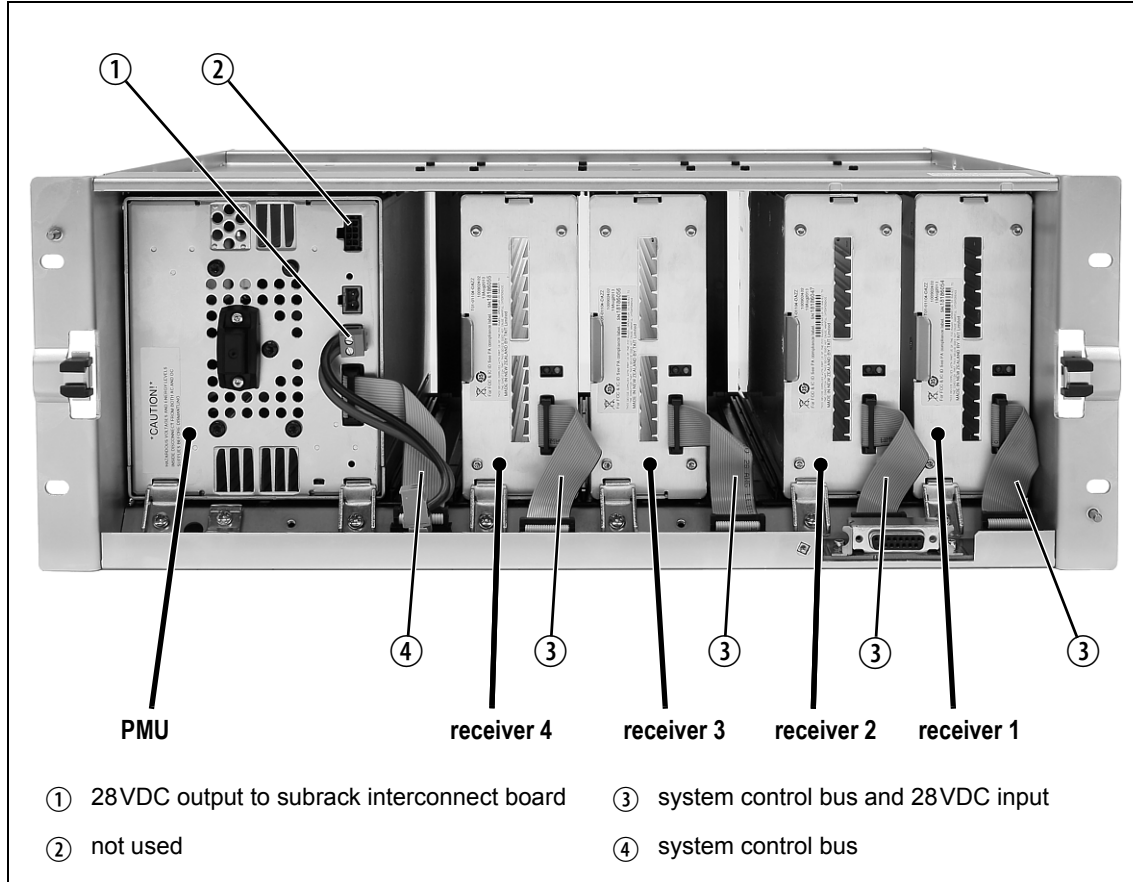
DC Supply

The PA is powered by a direct connection from the PMU. The reciter is powered from the PMU via the subrack interconnect board and system control bus ribbon cable.

Receive-only Base Station

The connections between modules at the front of a receive-only base station are shown below. A receive-only base station can have up to four receivers with a PMU.

Receive-only base station inter-module connections



DC Supply

The receivers are powered from the PMU via the subrack interconnect board and system control bus ribbon cables.

Appendix C – Identifying Front Panels

You must fit the correct type of front panel to your base station. Each type of base station has a different combination of modules, and must use a front panel fitted with fan ducts that match those modules. Each module, or pair of modules, requires a specific type of fan duct to ensure the cooling air flow passes directly through the modules' heatsinks. The illustration below shows the different front panels and identifies each fan duct by its part number (the xx in the part number indicates the version of the part).

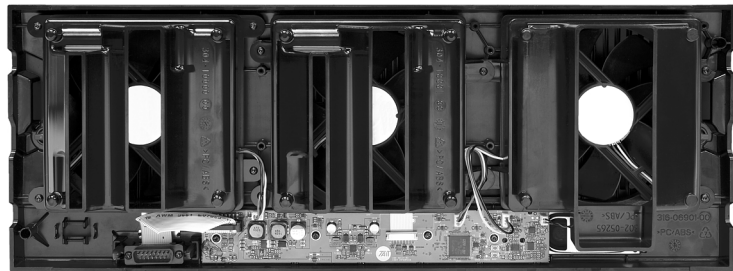
Identifying the different types of front panel

**50W base station
(single and dual)
T01-01110-BAAA**

fan 1
reciter 1 and 50W PA 1
duct: 304-10000-xx

fan 2
reciter 2 and 50W PA 2
duct: 304-10001-xx

fan 3
PMU
duct: 302-05265-xx

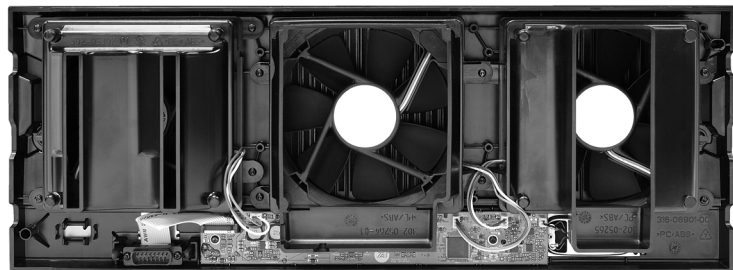


**100W base station
T01-01110-AAAA**

fan 1
reciter
duct: 302-05302-xx

fan 2
100W PA
duct: 302-05264-xx

fan 3
PMU
duct: 302-05265-xx

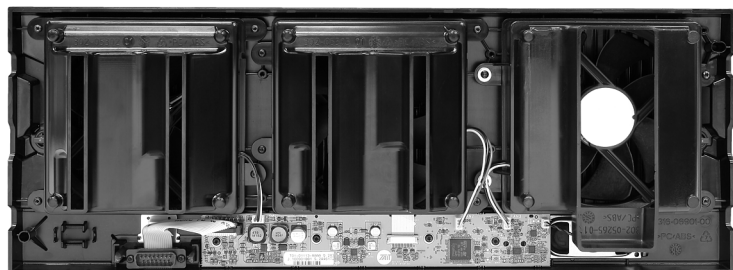


**Receive-only base station
T01-01110-DAAA**

fan 1
receiver 1 and 2
duct: 302-05302-xx

fan 2
receiver 3 and 4
duct: 302-05303-xx

fan 3
PMU
duct: 302-05265-xx



Glossary

This glossary contains an alphabetical list of terms and abbreviations, from within this manual, related to the Tait network and the TB9400 base station.

base station	A radio receiver and transmitter that is located in a specific place (at a site) that enables a two-way radio to communicate with a dispatcher or over a larger range with other two-way radios. Specifically, Tait TB9400 equipment in a subrack.
battery protection mode	A PMU enters battery protection mode when it has AC power but its DC power is below the configured power shutdown voltage. In battery protection mode, the PMU will shut down to protect the battery if it loses AC power.
call	A complete exchange of information between two or more parties. A call requires a receive signal path and a transmit signal path. In conventional systems, a call is an over, but in trunked systems, a call may be a conversation, made up of a number of overs.
central voting	Voting that is centralized at one member of the channel group.
channel group	A single logical channel consisting of a set of base stations. The members of a channel group operate on the same RF frequencies, are linked by an IP network and share a common multicast IP address.
channel profile	A named group of configuration settings that help to define the properties of a channel. Each channel in the channel table must have a channel profile assigned to it.
channel spacing	The bandwidth that a channel nominally occupies. If a base station has a channel spacing of 12.5 kHz, there must be a separation of at least 12.5 kHz between its operating frequencies and those of any other equipment.
configuration file	Consists of all the configuration settings needed for a base station, stored as a file.
conventional network	Systems that do not have centralized management of channel access. System operation is entirely controlled by system end users.
CTCSS	CTCSS (continuous tone controlled squelch system), also known as PL (private line), is a type of signaling that uses subaudible tones to segregate groups of users.

CWID	Continuous Wave Identification is a method of automatically identifying the base station using a Morse code. Continuous wave means transmission of a signal with a single frequency that is either on or off, as opposed to a modulated carrier.
dispatcher	A person who gives official instructions by radio to one or more SU users.
downlink	The transmission path from fixed equipment to SUs.
duplex	Providing transmission and reception in both directions simultaneously.
duty cycle	Used in relation to the PA, it is the proportion of time (expressed as a percentage) during which the PA is transmitting.
EIA	Electronic Industries Alliance. Accredited by the American National Standards Institute (ANSI) and responsible for developing telecommunications and electronics standards in the USA.
EMC	Electromagnetic Compatibility. The ability of equipment to operate in its electromagnetic environment without creating interference with other devices.
ETSI	European Telecommunications Standards Institute. The non-profit organization responsible for producing European telecommunications standards.
FCC	Federal Communications Commission. The FCC is an independent United States government agency that regulates interstate and international radio communications.
feature license key	The unique set of digits belonging to a license which is programmed into the base station to enable a feature set.
flash	Electrically block-erasable and programmable read-only memory.
FM	Frequency Modulation. Often used as an adjective to denote analog radio transmission.
frequency band	The range of frequencies that the equipment is capable of operating on.
front panel	The cover over the front of the base station containing the indicator LEDs, four-line LCD display, user controls and cooling fans.

host name	The unique name by which a network element is known on the network.
I²C	A bi-directional two-wire serial bus which is used to connect integrated circuits (ICs). I ² C is a multi-master bus, which means that multiple chips can be connected to the same bus, and each one can act as a master by initiating a data transfer. Used in the TB9400 for communications between reciter 1 and the PMU.
IP	Internet Protocol is a protocol for sending data packets between hosts.
isolator	A passive two-port device which transmits power in one direction, and absorbs power in the other direction. It is used in a PA to prevent damage to the RF circuitry from high reverse power.
LAN	Local Area Network. A computer network that interconnects computers in a limited area, such as a single building or group of buildings.
LED	Light Emitting Diode. Also the screen representation of a physical LED.
license	Some operational functions of the base station are controlled by licenses. Purchasing a license from Tait allows you to enable the feature set which includes the required functionality.
logical channel	One of the two timeslots provided in each TB9400 radio frequency. Each timeslot can function as a separate logical channel, independent of the other timeslot. One radio frequency can therefore carry two separate voice or data streams, one in each timeslot.
LSM	Linear Simulcast Modulation is a proprietary modulation scheme designed to give optimal performance in simulcast systems, compared to that obtainable using C4FM.
marshaling duration	The length of time that the voice stream needs to travel from the central voter to the furthest channel group member. The fixed marshaling duration parameter includes the time needed to fill the transmit buffer to the required level.
master	The channel group master is the member with the control connection to the trunking site controller.
monitor	The Monitor function unmutes the receiver, so that the user can hear all traffic on a channel.
multicast group	The group of hosts associated with a specific IP multicast address.

multicast IP address	An IP address that refers to a group of hosts rather than a single host. These hosts will all accept packets with this IP address.
NAC	Network Access Code. The 12 most significant bits of the network identifier information that precedes every packet sent on the CAI. The NAC identifies which network the data belongs to, allowing base stations and mobiles to ignore packets belonging to interfering networks.
NAT	Network Address Translation allows the use of a single IP address for a whole network of computers. A NAT sits between the public Internet and the network it serves, and works by rewriting IP addresses and port numbers in IP headers on the fly so the packets all appear to be coming from (or going to) the single public IP address of the NAT device instead of the actual source or destination.
network element	Any device that is network-connected. A Tait digital network consists of a number of network elements. The TB9400 base station is a network element designed and manufactured by Tait.
NTP	Network Time Protocol is a protocol and software implementation for synchronizing the clocks of computer systems across a network. An NTP server obtains the correct time from a time source and sets the local time in each connected computer.
Offline mode	A mode of operation in which active service is suspended so that special operations can be carried out, such as programming in a new configuration or carrying out invasive diagnostic tests.
Online mode	The normal operating mode of the base station.
over	A single transmission, which begins when a user presses PTT and ends when the user stops pressing.
PA	The Power Amplifier is a base station module that boosts the exciter output to the required transmit level.
PMU	The Power Management Unit is a module in the base station that provides power to the subrack and monitors power conditions.
PTT	Push To Talk. The button on an SU that keys the transmitter.
QoS	Quality Of Service. A router feature that gives real-time data such as voice calls priority over other data.

reciter	A module of a base station that provides both receiver and exciter functionality.
router	A router is an internetwork packet switch that switches data packets from an input interface to an output interface. The interfaces can be of different types.
RS-232	A protocol for serial communications between a DTE (data terminal equipment) and a DCE (data communications equipment) device.
RS-485	An updated version of the RS-232 protocol for serial communications between multiple devices.
RSSI	Received Signal Strength Indicator is a level that indicates the strength of the received signal.
RTP	Real Time Protocol is an Internet protocol that supports the real-time transmission of voice and data.
Rx	Receiver.
simplex	Able to provide transmission and reception in only one direction at a time.
simulcast	The simultaneous broadcast by more than one transmitter of the same signal on the same frequency.
site	<ol style="list-style-type: none"> 1. The base station equipment at a particular location. This includes power supplies, transmitters, receivers, network interfaces and controllers. 2. The location of that equipment.
skew	A measure used in centrally voted channel groups. If a voice stream arrives at the central voter 20ms later than the first voice stream from the same SU, it is said to have a skew of 20ms.
SNMP	Simple Network Management Protocol. A protocol used (for example) by the trunking site controller to monitor the status of the channel group and its members.
system control bus	<p>Provides the following physical paths in a TB9400 base station:</p> <ul style="list-style-type: none"> ■ I²C and RS-485 communications between the modules in the subrack ■ fan power from the PMU ■ power connections for the reciter and front panel.

TaitNet	Brand name for a PMR network designed and manufactured by Tait International Limited.
TCP	Transmission Control Protocol. A complex protocol on top of IP for sending reliable streams of data with flow control.
TDMA	Time Division Multiple Access. TDMA divides a single RF channel into multiple time slots (logical channels), with each time slot being transmitted in rapid succession, one after the other. A time slot can be occupied by a single voice or data stream.
TIA	Telecommunications Industry Association
toggle	Describes the switching between two states. If something is on, toggling it turns it off. If it is off, toggling it turns it on.
tone	A sound wave of a particular frequency.
Tx	Transmitter.
uplink	The transmission path from SUs to fixed equipment.
UTC	Coordinated Universal Time (word order from French). An international time standard that has replaced Greenwich Mean Time.
voice stream	A digitized voice signal that passes through the main switch.
VoIP	Voice over IP. The name for the technology that puts speech signals in packets and then routes them over an IP backbone network.
voting	The systematic sampling of a group of channels for the channel with the best signal quality. Voting provides wide-area coverage and ensures that as the user moves throughout the coverage area the strongest channel is always available for a call.
VPN	Virtual Private Network. A private communications network used to communicate confidentially over a non-private network.
VSWR	Voltage Standing Wave Ratio is the ratio of the maximum peak voltage anywhere on the transmission line to the minimum value anywhere on the transmission line. A perfectly matched line has a VSWR of 1:1. A high ratio indicates that the antenna subsystem is poorly matched.

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3.2. If the Software licensed under this Agreement contains or is derived from Open Source Software, the terms and conditions governing the use of such Open Source Software are in the Open Source Software Licenses of the copyright owner and not in this Agreement. If there is a conflict between the terms and conditions of this Agreement and the terms and conditions of the any applicable Open Source Software Licenses, the terms and conditions of the Open Source Software Licenses will take precedence. For information about Open Source Components contained in Tait products and the related Open Source licenses, see:

<http://support.taitradio.com/go/opensource>

Section 4 LIMITATIONS ON USE

4.1. Licensee may use the Software only for Licensee's internal business purposes and only in accordance with the Documentation. Any other use of the Software is strictly prohibited. Without limiting the general nature of these restrictions, Licensee will not make the Software available for use by third parties on a "time sharing," "application service provider," "service bureau" basis, or for any other similar commercial rental or sharing arrangement.

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4.3. Unless otherwise authorized by Tait in writing, Licensee will not, and will not enable or allow any third party to: (i) install a copy of the

Software on more than one unit of a Designated Product; or (ii) copy or transfer Software installed on one unit of a Designated Product to any other device. Licensee may temporarily transfer Software installed on a Designated Product to another device if the Designated Product is inoperable or malfunctioning. Temporary transfer of the Software to another device must be discontinued when the original Designated Product is returned to operation and the Software must be removed from the other device.

4.4. Licensee will maintain, during the term of this Agreement and for a period of two years thereafter, accurate records relating to this license grant to verify compliance with this Agreement. Tait, or a third party nominated by Tait, may inspect Licensee's premises, books and records, upon reasonable prior notice to Licensee, during Licensee's normal business hours and subject to Licensee's facility and security regulations. Tait is responsible for the payment of all expenses and costs of the inspection, provided that Licensee shall indemnify Tait for all costs (including audit costs and legal costs on a solicitor client basis) if Licensee has breached the terms of this Agreement. Any information obtained by Tait during the course of the inspection will be kept in strict confidence by Tait and used solely for the purpose of verifying Licensee's compliance with the terms of this Agreement.

Section 5 OWNERSHIP AND TITLE

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Section 6 LIMITED WARRANTY; DISCLAIMER OF WARRANTY

6.1. The commencement date and the term of the Software warranty will be a period of one (1) year from Tait shipment of the Software. If Licensee is not in breach of any obligations under this Agreement, Tait warrants that the unmodified Software, when used properly and in accordance with the Documentation and this Agreement, will be free from a reproducible defect that eliminates the functionality or successful operation of a feature critical to the primary functionality or successful operation of the Software. Whether a defect has occurred will be determined solely by Tait. Tait does not warrant that Licensee's use of the Software or the Designated Products will be uninterrupted, error-free, completely free of Security Vulnerabilities, or that the Software or the Designated Products will meet Licensee's particular requirements. Tait makes

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6.2 Tait sole obligation to Licensee, and Licensee's exclusive remedy under this warranty, is to use reasonable efforts to remedy any material Software defect covered by this warranty. These efforts will involve either replacing the media or attempting to correct significant, demonstrable program or documentation errors or Security Vulnerabilities. If Tait cannot correct the defect within a reasonable time, then at Tait option, Tait will replace the defective Software with functionally equivalent Software, license to Licensee substitute Software which will accomplish the same objective, or terminate the license and refund Licensee's paid license fee. If Tait investigation of the perceived defect reveals that no such defect in fact exists, Tait may recover its costs in respect of such investigation from Licensee.

6.3. Tait disclaims any and all other warranties relating to the Software or Documentation other than the express warranties set forth in this Section 6. Warranties in Section 6 are in lieu of all other warranties whether express or implied, oral or written, and including without limitation any and all implied warranties of condition, title, non-infringement, merchantability, or fitness for a particular purpose or use by Licensee (whether Tait knows, has reason to know, has been advised of, or is otherwise aware of any such purpose or use), whether arising by law, by reason of custom or usage of trade, or by course of dealing. In addition, Tait disclaims any warranty to any person other than Licensee with respect to the Software or Documentation.

Section 7 TRANSFERS

7.1. Licensee will not transfer the Software or Documentation to any third party without specific prior written consent from Tait. Tait may withhold such consent or at its own discretion make the consent conditional upon the transferee paying applicable license fees and agreeing to be bound by this Agreement.

7.2. In the case of a value-added reseller or distributor of Tait Designated Products, the consent referred to in Section 7.1 may be contained in a Tait Reseller or Tait Distributor Agreement.

7.3. If the Designated Products are Tait vehicle-mounted mobile products or hand-carried portable radio products and Licensee transfers ownership of the Tait mobile or portable radio products to a third party, Licensee may assign its right to use the Software which is embedded in or furnished for use with the radio products and the related Documentation; provided that Licensee transfers all copies of the Software and Documentation to the transferee.

7.4. For the avoidance of any doubt, Section 7.3 excludes TaitNet Infrastructure, or the products listed at any time under network products at: <http://www.taitradio.com>.

7.5. If Licensee, as a contractor or subcontractor (integrator), is purchasing Tait Designated Products and licensing Software not for its own internal use but for end use only by a Customer, the

Licensee may transfer such Software, but only if a) Licensee transfers all copies of such Software and the related Documentation to the transferee and b) Licensee has first obtained from its Customer (and, if Licensee is acting as a subcontractor, from the interim transferee(s) and from the ultimate end user sub license) an enforceable sublicense agreement that prohibits any other transfer and that contains restrictions substantially identical to the terms set forth in this Software License Agreement. Except as stated in the foregoing, Licensee and any transferee(s) authorised by this Section may not otherwise transfer or make available any Tait Software to any third party nor permit any party to do so. Licensee will, on request, make available evidence reasonably satisfactory to Tait demonstrating compliance with all the foregoing.

Section 8 TERM AND TERMINATION

8.1. Licensee's right to use the Software and Documentation will commence when the Designated Products are supplied by Tait to Licensee and will continue for the life of the Designated Products with which or for which the Software and Documentation are supplied, unless Licensee breaches this Agreement, in which case this Agreement and Licensee's right to use the Software and Documentation may be terminated immediately upon notice by Tait.

8.2. Within thirty (30) days after termination of this Agreement, Licensee must certify in writing to Tait that all copies of the Software have been removed or deleted from the Designated Products and that all copies of the Software and Documentation have been returned to Tait or destroyed by Licensee and are no longer in use by Licensee.

8.3. Licensee acknowledges that Tait made a considerable investment of resources in the development, marketing, and distribution of the Software and Documentation and that Licensee's breach of this Agreement will result in irreparable harm to Tait for which monetary damages would be inadequate. If Licensee breaches this Agreement, Tait may terminate this Agreement and be entitled to all available remedies at law or in equity including immediate injunctive relief and repossession of all non-embedded Software and associated Documentation. Licensee shall pay all Tait costs (on an indemnity basis) for the enforcement of the terms of this Agreement.

Section 9 CONFIDENTIALITY

Licensee acknowledges that the Software and Documentation contain proprietary and Confidential Information valuable to Tait and are Tait trade secrets, and Licensee agrees to respect the confidentiality of the information contained in the Software and Documentation.

Section 10 LIMITATION OF LIABILITY

10.1. In no circumstances shall Tait be under any liability to Licensee, or any other person whatsoever, whether in Tort (including negligence), Contract (except as expressly provided in this Agreement), Equity, under any Statute, or otherwise at law for any losses or damages whether general, special, exemplary, punitive, direct,

indirect, or consequential arising out of or in connection with any use or inability of using the Software.

10.2. Licensee's sole remedy against Tait will be limited to breach of contract and Tait sole and total liability for any such claim shall be limited at the option of Tait to the repair or replacement of the Software or the refund of the purchase price of the Software.

Section 11 GENERAL

11.1. COPYRIGHT NOTICES. The existence of a copyright notice on the Software will not be construed as an admission or presumption of publication of the Software or public disclosure of any trade secrets associated with the Software.

11.2. COMPLIANCE WITH LAWS. Licensee acknowledges that the Software may be subject to the laws and regulations of the jurisdiction covering the supply of the Designated Products and will comply with all applicable laws and regulations, including export laws and regulations, of that country.

11.3. ASSIGNMENTS AND SUBCONTRACTING. Tait may assign its rights or subcontract its obligations under this Agreement, or encumber or sell its rights in any Software, without prior notice to, or consent of, Licensee.

11.4. GOVERNING LAW. This Agreement shall be subject to and construed in accordance with New Zealand law and disputes between the parties concerning the provisions hereof shall be determined by the New Zealand Courts of Law. Provided however Tait may at its election bring proceedings for breach of the terms hereof or for the enforcement of any judgment in relation to a breach of the terms hereof in any jurisdiction Tait considers fit for the purpose of ensuring compliance with the terms hereof or obtaining relief for breach of the terms hereof.

11.5. THIRD-PARTY BENEFICIARIES. This Agreement is entered into solely for the benefit of Tait and Licensee. No third party has the right to make any claim or assert any right under this Agreement, and no third party is deemed a beneficiary of this Agreement. Notwithstanding the foregoing, any licensor or supplier of third-party software included in the Software will be a direct and intended third-party beneficiary of this Agreement.

11.6. SURVIVAL. Sections 4, 5, 6.3, 7, 8, 9, 10, and 11 survive the termination of this Agreement.

11.7. ORDER OF PRECEDENCE. In the event of inconsistencies between this Agreement and any other Agreement between the parties, the parties agree that, with respect to the specific subject matter of this Agreement, this Agreement prevails.

11.8. SECURITY. Tait uses reasonable means in the design and writing of its own Software and the acquisition of third-party Software in order to limit Security Vulnerabilities. While no software can be guaranteed to be free from Security Vulnerabilities, if a Security Vulnerability is discovered, Tait will take the steps specified in Section 6 of this Agreement.

11.9. EXPORT. Licensee will not transfer,

directly or indirectly, any Designated Product, Documentation or Software furnished hereunder or the direct product of such Documentation or Software to any country for which New Zealand or any other applicable country requires an export license or other governmental approval without first obtaining such license or approval.

11.10. SEVERABILITY. In the event that any part or parts of this Agreement shall be held illegal or null and void by any court or administrative body of competent jurisdiction, such determination shall not affect the remaining terms which shall remain in full force and effect as if such part or parts held to be illegal or void had not been included in this Agreement. Tait may replace the invalid or unenforceable provision with a valid and enforceable provision that achieves the original intent and economic effect of this Agreement.

11.11. CONSUMER GUARANTEES. Licensee acknowledges that the licenses supplied in terms of this agreement are supplied to Licensee in business, and that the guarantees and other provisions of prevailing consumer protection legislation shall not apply.

11.12. WHOLE AGREEMENT. Licensee acknowledges that it has read this Agreement, understands it and agrees to be bound by its terms and conditions. Licensee also agrees that, subject only to the express terms of any other agreement between Tait and Licensee to the contrary, this is the complete and exclusive statement of the Agreement between it and Tait in relation to the Software. This Agreement supersedes any proposal or prior agreement, oral or written, and any other communications between Licensee and Tait relating to the Software and the Designated Products.

Simplified EU Declaration of Conformity

EN Hereby, Tait International Limited declares that the radio equipment type TBCB1A, TBCB1B, TBCB1X, TBCH1A, TBCH1B, TBCH2A & TBCH2B is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: www.taitradio.com/eudoc

BG С настоящото Tait International Limited декларира, че този тип радиосъоръжение TBCB1A, TBCB1B, TBCB1X, TBCH1A, TBCH1B, TBCH2A & TBCH2B е в съответствие с Директива 2014/53/ЕС.

Цялостният текст на ЕС декларацията за съответствие може да се намери на следния интернет адрес: www.taitradio.com/eudoc

ES Por la presente, Tait International Limited declara que el tipo de equipo radioeléctrico TBCB1A, TBCB1B, TBCB1X, TBCH1A, TBCH1B, TBCH2A & TBCH2B es conforme con la Directiva 2014/53/UE. El texto completo de la declaración UE de conformidad está disponible en la dirección Internet siguiente: www.taitradio.com/eudoc

CS Tímto Tait International Limited prohlašuje, že typ rádiového zařízení TBCB1A, TBCB1B, TBCB1X, TBCH1A, TBCH1B, TBCH2A & TBCH2B je v souladu se směrnicí 2014/53/EU.

Úplné znění EU prohlášení o shodě je k dispozici na této internetové adrese: www.taitradio.com/eudoc

DA Hermed erklærer Tait International Limited, at radioudstyrstypen TBCB1A, TBCB1B, TBCB1X, TBCH1A, TBCH1B, TBCH2A & TBCH2B er i overensstemmelse med direktiv 2014/53/EU.

EU-overensstemmelseserklæringens fulde tekst kan findes på følgende internetadresse: www.taitradio.com/eudoc

DE Hiermit erklärt Tait International Limited, dass der Funkanlagentyp TBCB1A, TBCB1B, TBCB1X, TBCH1A, TBCH1B, TBCH2A & TBCH2B der Richtlinie 2014/53/EU entspricht.

Der vollständige Text der EU-Konformitätserklärung ist unter der folgenden Internetadresse verfügbar: www.taitradio.com/eudoc

ET Käesolevaga deklareerib Tait International Limited, et käesolev raadioseadme tüüp TBCB1A, TBCB1B, TBCB1X, TBCH1A, TBCH1B, TBCH2A & TBCH2B vastab direktiivi 2014/53/EL nõuetele.

ELi vastavusdeklaratsiooni täielik tekst on kättesaadav järgmisel internetiaadressil: www.taitradio.com/eudoc

EL Με την παρούσα ο/η Tait International Limited, δηλώνει ότι ο ραδιοεξοπλισμός TBCB1A, TBCB1B, TBCB1X, TBCH1A, TBCH1B, TBCH2A & TBCH2B πληροί την οδηγία 2014/53/ΕΕ.

Το πλήρες κείμενο της δήλωσης συμμόρφωσης ΕΕ διατίθεται στην ακόλουθη ιστοσελίδα στο διαδίκτυο: www.taitradio.com/eudoc

FR Le soussigné Tait International Limited, déclare que l'équipement radioélectrique du type TBCB1A, TBCB1B, TBCB1X, TBCH1A, TBCH1B, TBCH2A & TBCH2B est conforme à la directive 2014/53/UE.

Le texte complet de la déclaration UE de conformité est disponible à l'adresse internet suivante: www.taitradio.com/eudoc

HR Tait International Limited ovime izjavljuje da je radijska oprema tipa TBCB1A, TBCB1B, TBCB1X, TBCH1A, TBCH1B, TBCH2A & TBCH2B u skladu s Direktivom 2014/53/EU.

Cjeloviti tekst EU izjave o sukladnosti dostupan je na sljedećoj internetskoj adresi: www.taitradio.com/eudoc

IT Il fabbricante, Tait International Limited, dichiara che il tipo di apparecchiatura radio TBCB1A, TBCB1B, TBCB1X, TBCH1A, TBCH1B, TBCH2A & TBCH2B è conforme alla direttiva 2014/53/UE.

Il testo completo della dichiarazione di conformità UE è disponibile al seguente indirizzo Internet: www.taitradio.com/eudoc

LV Ar šo Tait International Limited deklarē, ka radioiekārta TBCB1A, TBCB1B, TBCB1X, TBCH1A, TBCH1B, TBCH2A & TBCH2B atbilst Direktīvai 2014/53/ES.

Pilns ES atbilstības deklarācijas teksts ir pieejams šādā interneta vietnē: www.taitradio.com/eudoc

LT Aš, Tait International Limited, patvirtinu, kad radijo įrenginių tipas TBCB1A, TBCB1B, TBCB1X, TBCH1A, TBCH1B, TBCH2A & TBCH2B atitinka Direktyvą 2014/53/ES.

Visas ES atitikties deklaracijos tekstas prieinamas šiuo interneto adresu: www.taitradio.com/eudoc

HU Tait International Limited igazolja, hogy a TBCB1A, TBCB1B, TBCB1X, TBCH1A, TBCH1B, TBCH2A & TBCH2B típusú rádióberendezés megfelel a 2014/53/EU irányelvnek.

Az EU-megfelelőségi nyilatkozat teljes szövege elérhető a következő internetes címen: www.taitradio.com/eudoc

MT B'dan, Tait International Limited, niddikjara li dan it-tip ta' tagħmir tar-radju TBCB1A, TBCB1B, TBCB1X, TBCH1A, TBCH1B, TBCH2A & TBCH2B huwa konformi mad-Direttiva 2014/53/UE.

It-test kollu tad-dikjarazzjoni ta' konformità tal-UE huwa disponibbli f'dan l-indirizz tal-Internet li ġej: www.taitradio.com/eudoc

NL Hierbij verklaar ik, Tait International Limited, dat het type radioapparatuur TBCB1A, TBCB1B, TBCB1X, TBCH1A, TBCH1B, TBCH2A & TBCH2B conform is met Richtlijn 2014/53/EU.

De volledige tekst van de EU-conformiteitsverklaring kan worden geraadpleegd op het volgende internetadres: www.taitradio.com/eudoc

PL Tait International Limited niniejszym oświadcza, że typ urządzenia radiowego TBCB1A, TBCB1B, TBCB1X, TBCH1A, TBCH1B, TBCH2A & TBCH2B jest zgodny z dyrektywą 2014/53/UE. Pełny tekst deklaracji zgodności UE jest dostępny pod następującym adresem internetowym: www.taitradio.com/eudoc

PT O(a) abaixo assinado(a) Tait International Limited declara que o presente tipo de equipamento de rádio TBCB1A, TBCB1B, TBCB1X, TBCH1A, TBCH1B, TBCH2A & TBCH2B está em conformidade com a Diretiva 2014/53/UE. O texto integral da declaração de conformidade está disponível no seguinte endereço de Internet: www.taitradio.com/eudoc

RO Prin prezenta, Tait International Limited declară că tipul de echipamente radio TBCB1A, TBCB1B, TBCB1X, TBCH1A, TBCH1B, TBCH2A & TBCH2B este în conformitate cu Directiva 2014/53/UE. Textul integral al declarației UE de conformitate este disponibil la următoarea adresă internet: www.taitradio.com/eudoc

SK Tait International Limited týmto vyhlasuje, že rádiové zariadenie typu TBCB1A, TBCB1B, TBCB1X, TBCH1A, TBCH1B, TBCH2A & TBCH2B je v súlade so smernicou 2014/53/EÚ. Úplné EÚ vyhlásenie o zhode je k dispozícii na tejto internetovej adrese:

SL Tait International Limited potrjuje, da je tip radijske opreme TBCB1A, TBCB1B, TBCB1X, TBCH1A, TBCH1B, TBCH2A & TBCH2B skladen z Direktivo 2014/53/EU. Celotno besedilo izjave EU o skladnosti je na voljo na naslednjem spletnem naslovu: www.taitradio.com/eudoc

FI Tait International Limited vakuuttaa, että radiolaitetyypit TBCB1A, TBCB1B, TBCB1X, TBCH1A, TBCH1B, TBCH2A & TBCH2B on direktiivin 2014/53/EU mukainen. EU-vaatimustenmukaisuusvakuutuksen täysimittainen teksti on saatavilla seuraavassa internetosoitteessa: www.taitradio.com/eudoc

SV Härmed försäkrar Tait International Limited att denna typ av radioutrustning TBCB1A, TBCB1B, TBCB1X, TBCH1A, TBCH1B, TBCH2A & TBCH2B överensstämmer med direktiv 2014/53/EU. Den fullständiga texten till EU-försäkran om överensstämmelse finns på följande webbadress: www.taitradio.com/eudoc