



QUANTAR EXTERNAL INTERFACE MODULE

DEVICE OVERVIEW AND THEORY OF OPERATION

The QUANTAR External Interface Module (QUANTAR EIM) is a multilayer PCB that allows the Motorola QUANTAR/QUANTRO to be easily and rapidly interfaced with external control apparatus. The form factor is that of a daughterboard inasmuch as the device is connected directly to the station backplane at J17. It may be permanently secured thereto, with the provided mounting hardware.

Once connected, the QUANTAR EIM will provide bidirectional audio and logic signaling to either the Wireline or Wideband AF audio paths through the corresponding RJ-45 connectors. Additional logic I/Os can also be accessed via the 8-PIN connector labeled "GPIO-WILDCARD". This connector uses the same PINs and pinning tools as all Motorola XPR series 26- PIN rear accessory connectors. Two light-emitting diodes labeled "PTT IN" and "COR DET" provide direct visual identification of a PTT signal provided **TO** the station as well as a COR or PL signal provided **BY** the station. Finally, external devices may be powered via the QUANTAR EIM 2- PIN Phoenix Connector. This socket provides 14.25VDC nominally (as derived from the QUANTAR/QUANTRO backplane) and is protected with dual 500 mA socketed SMD fuses on both the positive and negative power leads.

The physical function of the audio routing topology (Wireline or Wideband AF), as well as the requisite functions of the five logical inputs and the four logical outputs, are all configured through the QUANTAR/QUANTRO wildcard Table(s) via RSS. More detail on the use and programming of the wildcard system will be covered later in this manual. However, the QUANTAR EIM/wildcard combination provides a broad set of station control options.

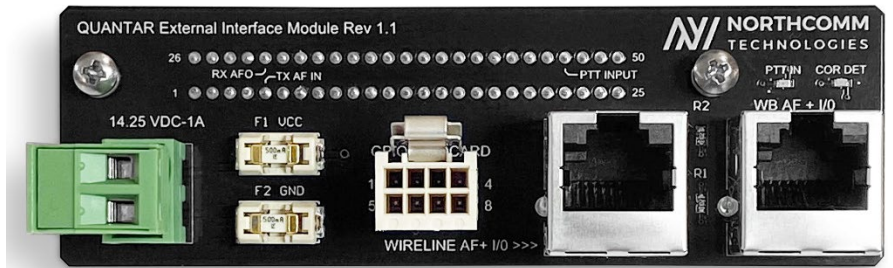
The QUANTAR EIM can be installed at the J17 (50- PIN Centronics Connector) within a few minutes using only basic hand tools. If the QUANTAR EIM is used to connect a device such as an external repeater controller or similar audio routing device you **MUST** be able to perform the requisite audio level adjustment to achieve proper FM deviation and minimal audio distortion. A communications service monitor such as the Viavi/Aeroflex 3920B test set is recommended for these types of audio alignments. If you are unsure how to perform these alignments, please call us so that we may provide general guidance and resource materials.

QUANTAR EIM – LIMITATIONS OF LIABILITY

- 1: Proper and safe installation of the QUANTAR EIM product is the sole responsibility of the installer. We recommend that this device is installed by a professional technician, with appropriate certifications, credentials, and training. Improper installation, poor wire management or deviations from industry best practices may lead to an unreliable operation, injury, or death.
- 2: The QUANTAR EIM is an **EXPERIMENTAL** accessory product that is designed and intended for external station control. Any device, including the QUANTAR EIM, that allows external control capabilities has the potential to inhibit the proper function of your station/communications system. There is always the potential that a malfunction of the QUANTAR EIM would render the station unusable. Therefore, we **DO NOT** recommend or intend for this item to be used in an environment where the sudden and unexpected loss of communications, or harm to a communications channel, would present a danger to life, property, or an undue burden of any kind. The customer and end user are ultimately responsible for determining whether or not this product is appropriate for their needs. **Northcomm Technologies Group, Ltd. including its agents, owners, partners, and shareholders are not responsible for any type of loss, damage, or harm, whether actual or perceived, that may be caused by the use of this product.**
- 3: By installing this device, you acknowledge and agree to the following:
 - This product shall be used in accordance with all federal, state, and local laws
 - You or your agency accept full and sole responsibility for the installation, use, and integration of this equipment
 - Should you or your agency elect to install this product, you agree to hold harmless and indemnify Northcomm Technologies Group, Ltd, its agents, owners, and partners against any and all harm or liability, actual or perceived that might arise out of the use or installation of this equipment
- 4: Additional limitations of liability are discussed within our “Invoice Terms and Conditions”. By purchasing and installing this product you further agree to and are bound by these additional limitations.
- 5: If you do not agree to these Terms and Conditions, do not use this product.

QUANTAR EIM – KIT CONTENTS

QUANTAR EIM – Base Module
PN: NC-03-QPCEIC-2 **(Front view)**



QUANTAR EIM – Base Module
PN: NC-03-QPCEIM-2 **(Back view)**



QUANTAR EIM – Hardware
PN: NC-03-QPCEIM-2 **(Hardware)**



QUANTAR EIM – QUANTAR SETTINGS

PROGRAMING THE QUANTAR REPEATER

Before installing the QUANTAR EIM, we recommend you make the required programming adjustments to the QUANTAR's codeplug using QUANTAR RSS. Connecting the EIM to the QUANTAR before programming the station WILL NOT damage the QUANTAR EIM or the station.

- 1: Read your station with QUANTAR RSS. Customer programming software is available from Motorola Solutions, Inc. ©. Northcomm Technologies does not supply, sell, or furnish this software.

- 2: Select the "Hardware Configuration" tab
 - Once in Hardware Configuration, set the "**Wireline**" tab to "**8-Wireline**"
 - Please note – your station **MUST** have a working Wireline card; however, you will only require the 4-wire card. Regardless of which card you have, 4 or 8-wire, you **MUST** tell the station that it's using an 8-wire card. ***The 8 Wire card selection activates enhanced wildcard features for both the 4 and 8 wire cards.***
 - Locate the "**Wildcard**" tab and select "**ENHANCED**"

- 3: Select the "**Wireline Configuration**" tab
 - Locate "**Wireline Operation**" and select "**4 WIRE FULL DUPLEX**"
 - Within "**Wireline Configuration**" select the "**Astro**" tab, then locate the "**Wireline Interface**" menu and select "**V.24 HYBRID**"
 - All other settings including **Analog Idle Link Check**, **Digital Idle Link Check**, and **External Transmit Clock** should be set to "**DISABLED**"

QUANTAR EIM – QUANTAR SETTINGS (CONT.)

4: Select the **“Channel Information”** Tab

- You may create as many channels as the QUANTAR allows. Each channel may contain the same frequencies, or they may be different. This determination is dependent upon your requirements. For example, you might elect to have three channels that are all identical except that each one uses different TX or RX PLs, DPLs, etc.
- Further, you might decide to create channels with:
 - Different power levels
 - Individual and unique CW IDs
 - Longer or shorter hang timers
 - Analog or Mixed-Mode (P25-Phase 1 CAI) operation
 - Unique PL or DCS settings per channel for receive, transmit, or both
 - Different TX and RX frequencies
- The QUANTAR EIM can aid in the channel selection process by providing access to the QUANTAR logic I/Os via the EIM’s 8- PIN connector labeled “GPIO/WILDCARD”. These I/O’s can be used to steer the station using BCD logic. For simplicity and convenience, the 8- PIN plug that was selected for the QUANTAR EIM uses the same PINs that are provided with all Motorola XPR mobile radio rear accessory kits. Please note, that we also tell you the proper crimping tool for this PIN if you require it.

5: Remaining within the **“Channel Information”** Tab

- Set **“Analog RX Activation”** to **“S=Carrier Squelch”** (Or whichever selection best meets your receiver activation requirements)
 - **“Analog Rprt Activation”** and **“Analog Rptr Hold-in”** can be set based on your requirements

NOTICE:

Please ensure that your station’s squelch settings are adjusted for the noise floor at the installation location. If your receiver locks open due to a maladjusted squelch setting you will need to realign the squelch to address the noise present at your installation site.

QUANTAR EIM – QUANTAR SETTINGS (CONT.)

- In the “Advanced” tab of “Channel Information” ensure that:
 - **“Compander”** and **“Noise Canceller”** are *disabled*
 - **“Rcv Signal Inversion”** is *disabled*
 - **“PTT Priority”** is **R>W>L>M>D**
 - **“Analog Repeater Boost”** is *enabled*

NOTICE:

It is a best practice, and we **STRONGLY** recommend that you set time-out timers of at least 180 seconds for “Wireline” “Repeater” and “Local.” These timers ensure that your Repeater won’t stay keyed beyond the time allotted in the timer, no matter what the keying source point. A time-out time of “0” (zero) means that the timer is inactive and that the station would potentially remain infinitely keyed from that PTT source. **However, if you are using an external controller you may have to set these time-out timers (TOT) to zero so that the TOT in the external controller does not conflict with the TOT in the QUANTAR. It should be noted that if your external control device malfunctions while the station has “0” set in the TOT fields, the station has the potential to remain infinitely keyed.**

6: Select the **“RF Configuration”** Tab

- Locate the **“Repeater Operation”** tab and select **“REPEATER”** if you are **NOT** using an external controller, and select **“BASE”** if you **ARE** using an external or third-party control product
 - The remaining requirements on this tab may be left as default or per your system requirements

7: Select the **“Wildcard Input”** Tab and press the **“Set to Default”** button

8: Select the **“Wildcard Output”** Tab and press the **“Set to Default”** button

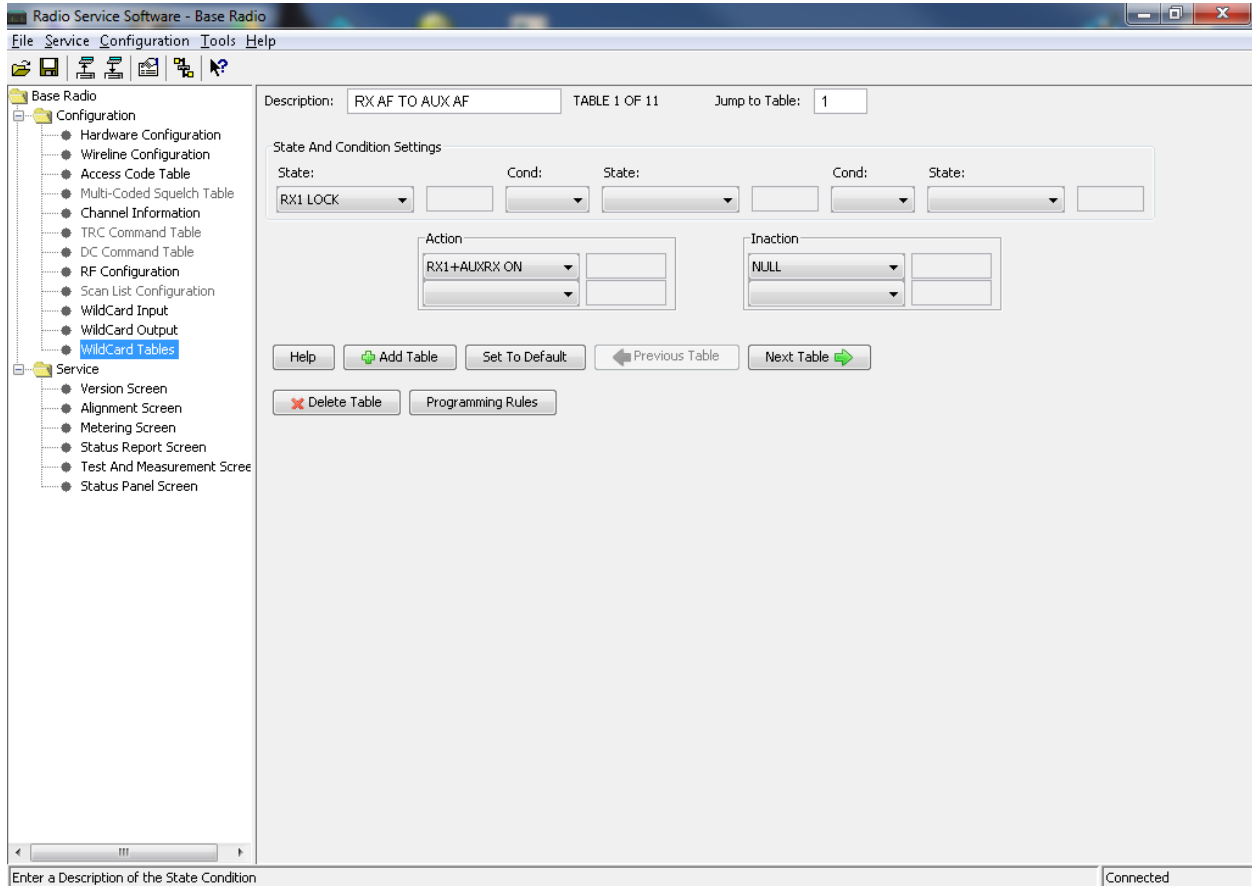
The next section contains examples of recommended wildcard tables. The operation of your QUANTAR EIM is dependent upon how your wildcard tables are configured. Please review the examples provided herein and use them as a guide. Feel free to create tables that deviate from what is shown below and which are specifically tailored to your particular use case. If you need additional assistance, please do not hesitate to contact us at info@northcommtechnologies.com or 1-866-858-1745.

QUANTAR EIM – QUANTAR WILDCARD

PROGRAMING THE WILDCARD TABLES

1: Receiver Audio Routing Wildcard Table

- This table causes receiver audio to be routed from the QUANTAR receiver to the QUANTAR EIM RJ-45 labeled “WB-AF + I/O” (PIN-3 on the RJ-45)

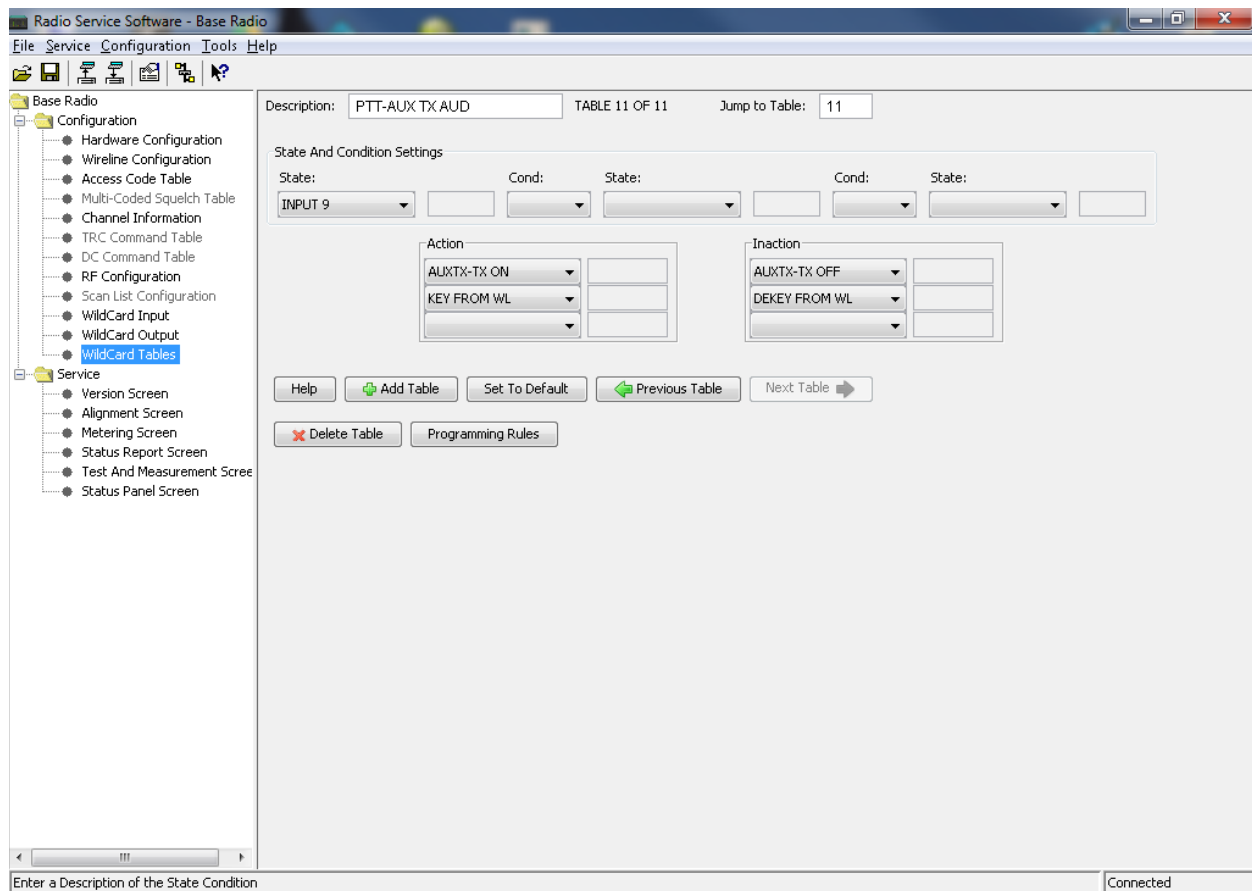


QUANTAR EIM – QUANTAR WILDCARD (CONT.)

2: Transmit Audio Routing VIA AUX TX and External PTT Mapping Wildcard Table

(INJECTING TX AUDIO TO the QUANTAR via QUANTAR 50-PIN connector, PIN-5)

- This table allows for TX AF to be injected into PIN-4 of the QUANTAR EIM RJ-45 labeled “WB-AF + I/O”. Conversely, this table INHIBITS TX wireline audio from passing through the station. However, RX wireline audio is still present on both RJ-45s. This table also enables external PTT via QUANTAR EIM RJ-45 PIN-6. A ground potential provided to PIN-6 will key the station and cause the “PTT IN” LED to light. **PLEASE NOTE – THE “PTT IN” LED ONLY INDICATES THAT PIN-6 IS GROUNDED. THIS LIGHT IS NOT AN AFFIRMATIVE INDICATION THAT THE STATION IS, IN FACT KEYED**



SELECT THIS TABLE IF YOU WISH TO USE AUX TX AUDIO AND YOU WILL NOT BE USING WIRELINE TX AUDIO

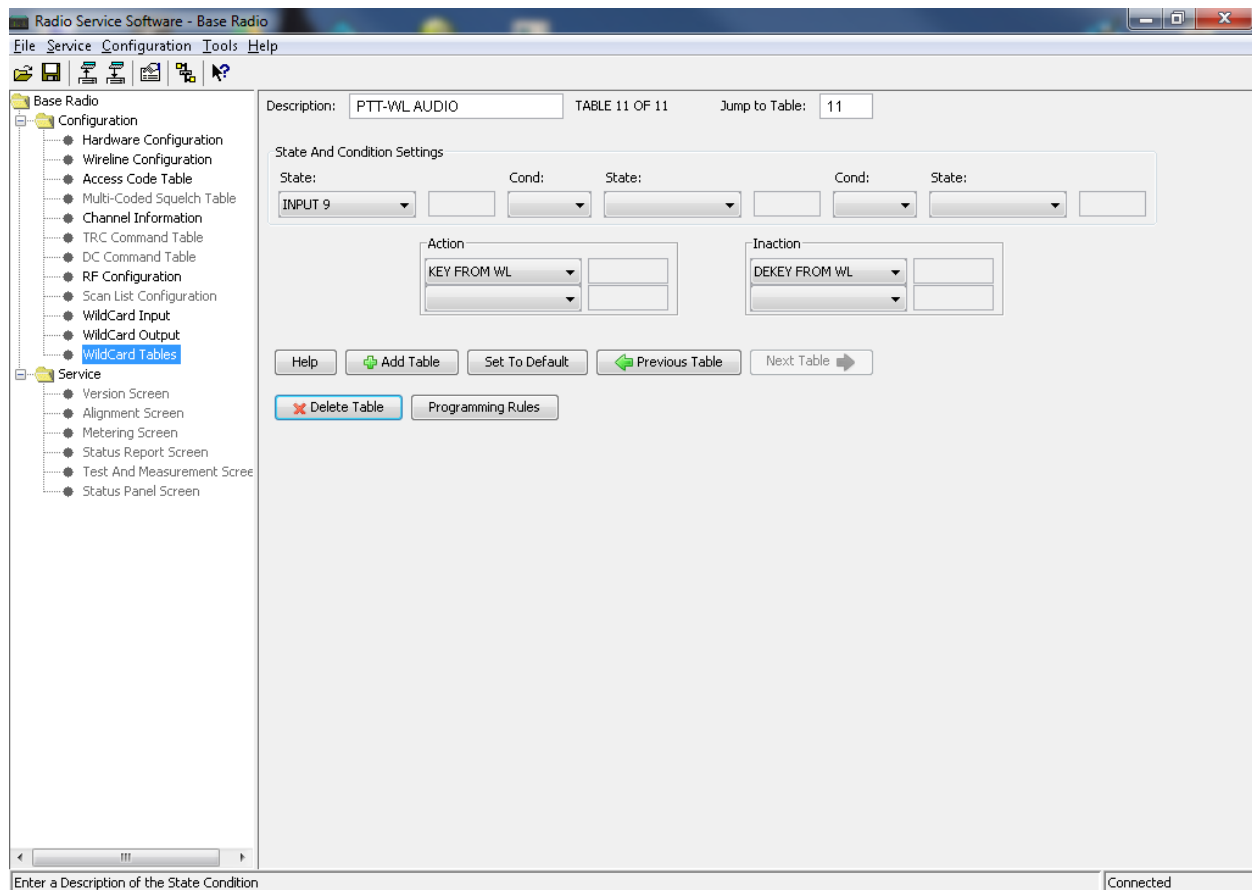
QUANTAR EIM – QUANTAR WILDCARD (CONT.)

3: Transmit Audio Routing VIA TX WIRELINE and External PTT Mapping Wildcard Table

(INJECTING TX AUDIO via QUANTAR 50-PIN connector, PINS 1 and 26, TX WIRELINE)

- This table allows for TX AF to be injected into PIN-4 (+) and PIN-5 (-) of the QUANTAR EIM RJ-45 labeled “Wireline-AF + I/O”. Conversely, this table INHIBITS AUX TX audio from passing through the station via the WB-AF + I/O connector. However, AUX RX audio is still present on both RJ-45s. This table also enables external PTT via QUANTAR EIM PIN-6. A ground potential provided to PIN-6 will key the station and cause the “PTT IN” LED to light. **PLEASE NOTE – THE “PTT IN” LED ONLY INDICATES THAT PIN-6 IS GROUNDED. THIS LIGHT IS NOT AN AFFIRMATIVE INDICATION THAT THE STATION IS, IN FACT KEYED**

4:

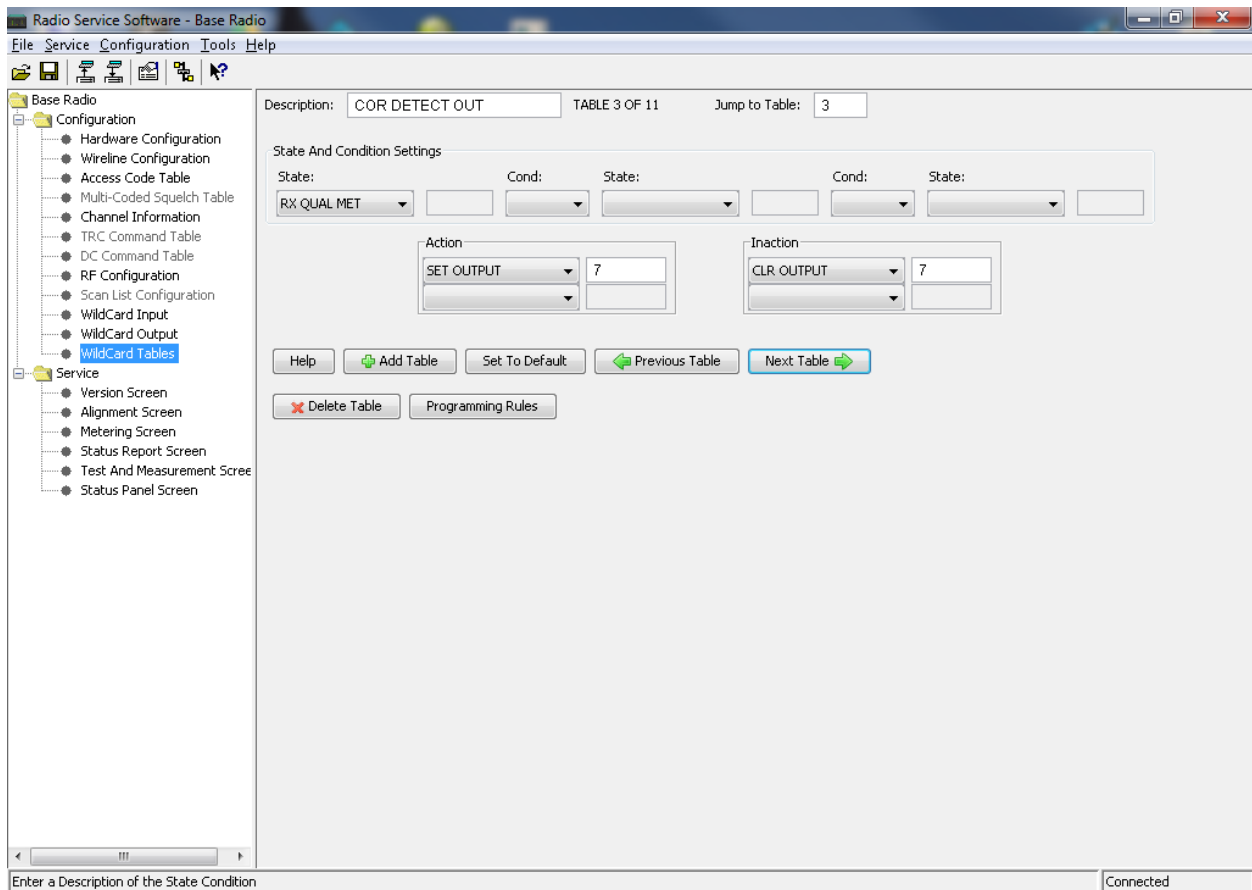


SELECT THIS TABLE IF YOU WISH TO USE WIRELINE TX AUDIO AND YOU WILL NOT BE USING AUX TX AUDIO

QUANTAR EIM – QUANTAR WILDCARD (CONT.)

COR or PL Detect Output Wildcard Table

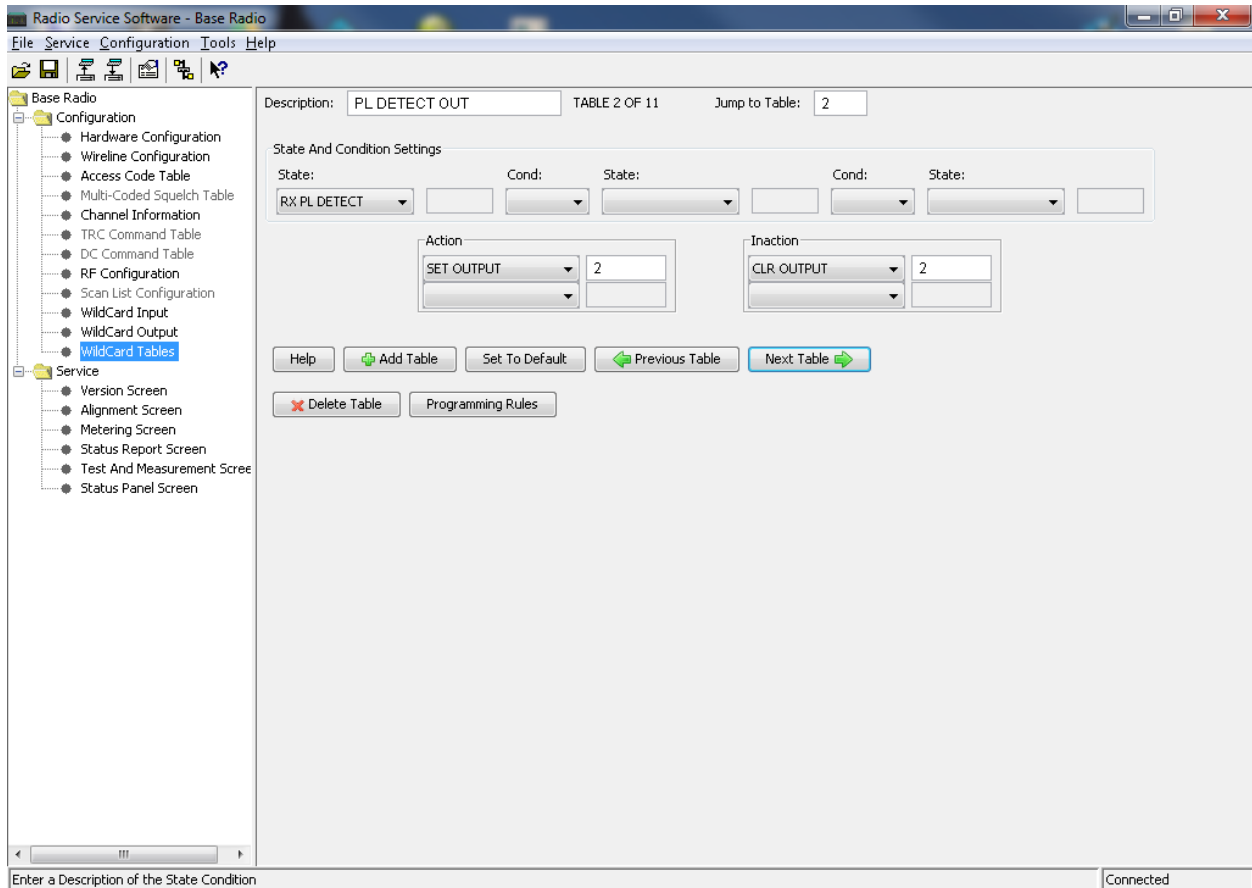
- This table provides a logical low signal to PIN-7 on both the RJ-45 labeled “Wireline-AF + I/O” as well as the RJ-45 labeled “WB-AF + I/O”. The COR or PL detect qualification is determined by the receiver qualification requirements previously set as “S-Carrier Squelch”. Please note that this logic signal provides a potential to ground when active. There is **NO** pullup voltage when the line is inactive.



QUANTAR EIM – QUANTAR WILDCARD (CONT.)

Dedicated PL/DCS Detect Output Wildcard Table

- This table provides a logical low signal to PIN-3 the RJ-45 labeled “WB-AF + I/O”. This signal is **not present on the “Wireline-AF + I/O”**. Please note that this logic signal provides a potential to ground when active. There is **NO** pullup voltage when the line is inactive.



QUANTAR EIM – QUANTAR WILDCARD (CONT.)

The QUANTAR EIM provides access to several logical inputs and outputs that are available within the QUANTAR Repeater. Connection to these I/Os are provided both at the 8-PIN connector labeled “GPIO-WILDCARD”, at the RJ-45, and in the case of AUX Input 1, at both PIN-1 of the “WB AF + I/O” RJ-45 and PIN-1 of the “GPIO-WILDCARD” 8-PIN Connector.

For example, the AUX I/O highlighted in **RED** is present at both PIN-1 of the “WB AF + I/O” RJ-45 as well as PIN-1 of the “GPIO-WILDCARD” connector. The AUX I/O’s highlighted in **GREEN** are accessible only at the “GPIO-WILDCARD” connector, and the AUX I/O’s highlighted in **VIOLET** are present only on the appropriately specified RJ-45s.

Please note that the AUX I/O labels discussed herein are identically labeled in the QUANTAR manual and correspond to the proper label in the Wildcard Settings of RSS.

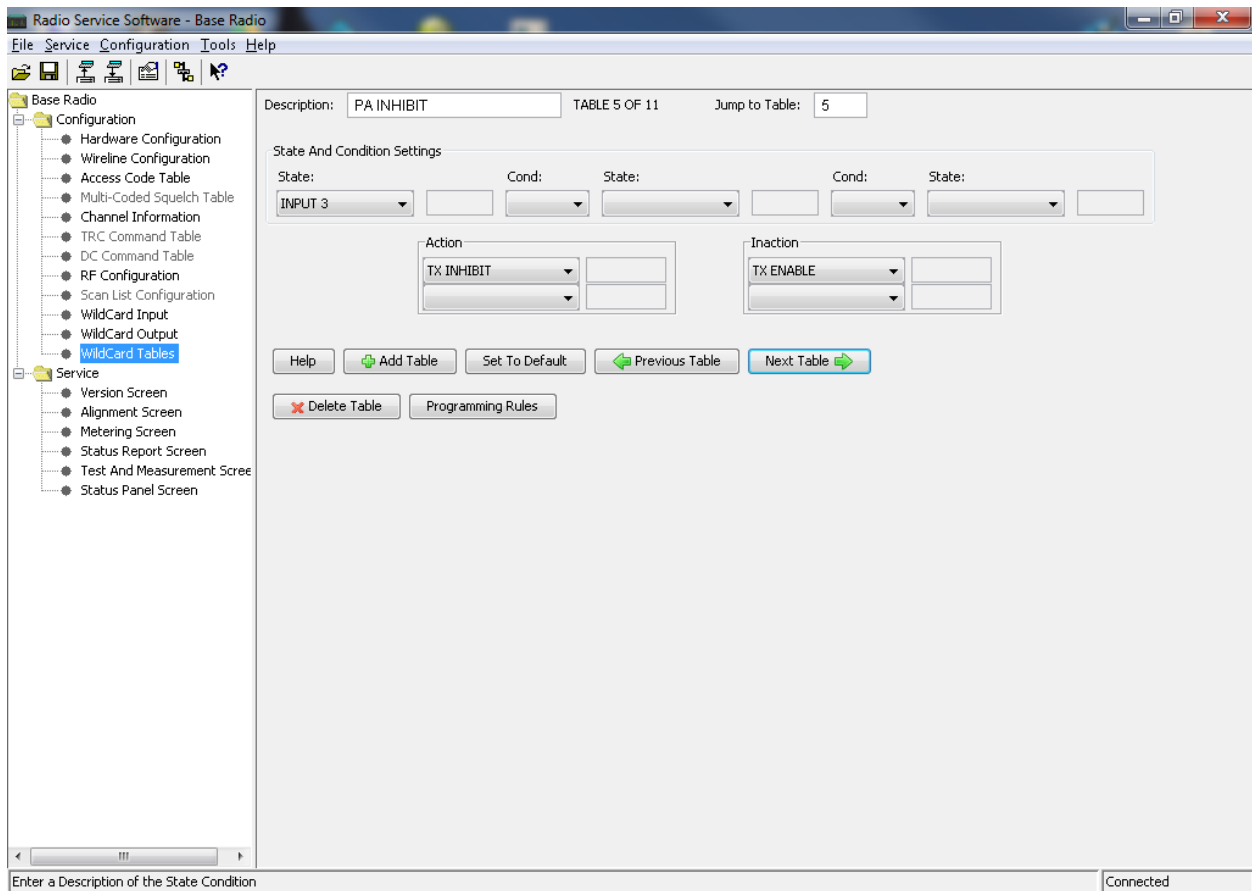
- **AUX Input 1** – Available on PIN-1 of the RJ-45 “WB-AF + I/O” and PIN-1 of the 8-PIN connector labeled “GPIO-WILDCARD”
- **AUX Input 2** – Available on PIN-2 of the 8-PIN connector labeled “GPIO-WILDCARD”
- **AUX Input 3** – Available on PIN-3 of the 8-PIN connector labeled “GPIO-WILDCARD”
- **AUX Input 4** – Available on PIN-4 of the 8-PIN connector labeled “GPIO-WILDCARD”
- **AUX Input 5** – Available on PIN-5 of the 8-PIN connector labeled “GPIO-WILDCARD”
- **AUX Input 9** – Available on PIN-6 of both RJ-45s and typically used as PTT IN
- **AUX Out 3** – Available on PIN-6 of the 8-PIN connector labeled “GPIO-WILDCARD”
- **AUX Out 2** – Available **ONLY** on PIN-3 of the “WB-AF + I/O” RJ-45 and is typically used as PL DETECT OUT. PIN-3 on the “Wireline-AF + I/O” RJ-45 is a ground
- **AUX Out 4** – Available on PIN-7 of the 8-PIN connector labeled “GPIO-WILDCARD”
- **AUX Out 5** – Available on PIN-8 of the 8-PIN connector labeled “GPIO-WILDCARD”
- **AUX Out 9** – Available on PIN-7 of both RJ-45s and typically used as COR DETECT OUT

For further clarity on how you might employ wildcard settings to utilize these AUX I/O’s, we have included a few wildcard examples below. These examples are neither comprehensive nor are they all-encompassing. Rather, they are intended as a guide to help provide general direction.

QUANTAR EIM – QUANTAR WILDCARD (CONT.)

An example of how to use AUX INPUT 3 for Transmitter Inhibit

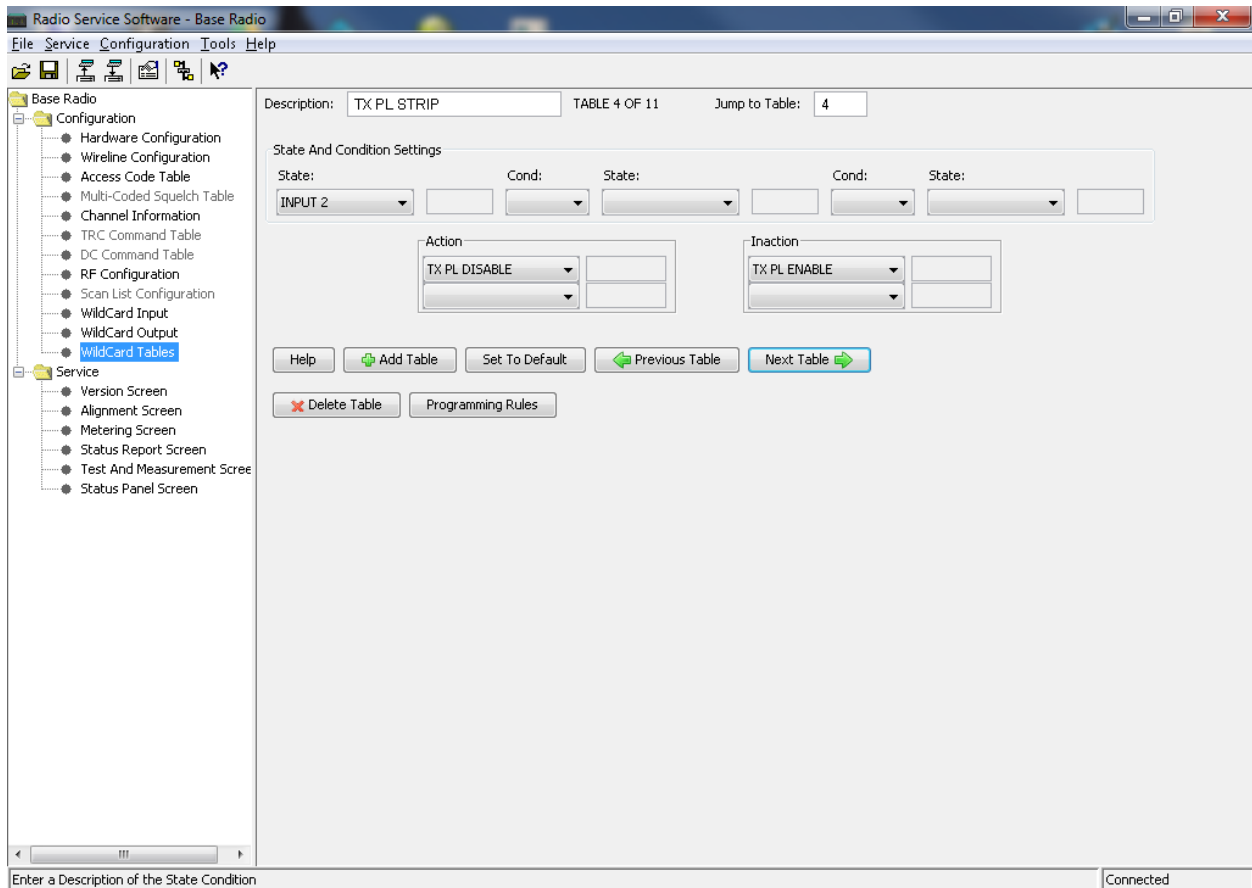
- This table will inhibit both analog and P25 transmit functions when PIN-3 at the “GPIO-WILDCARD” connector is grounded (logic low)



QUANTAR EIM – QUANTAR WILDCARD (CONT.)

An example of how to use AUX INPUT 2 for PL STRIP

- This table will remove the encoded PL or DCS tone from the transmitted signal when a ground potential is provided at PIN-2 of the “GPIO-WILDCARD” connector



Once you have successfully written your wildcard tables, please take a moment to check your work. It is necessary to recreate the wildcard structure exactly as we have shown above with regard to COR Detect, PTT, Audio Routing, and PL Detect. If you require additional assistance, please contact us directly.

Please proceed to the next section, Controller Installation.

QUANTAR EIM – PRODUCT INSTALLATION

DEVICE INSTALLATION

The QUANTAR External Interface Module (QUANTAR EIM) is installed by attaching the device to QUANTAR backplane connector J17. Before attempting this installation, it will be necessary to remove the Velcro shroud surrounding the J17 connector housing (pictured below).

Before you begin your installation, please ensure that your station is powered down and that you have removed the AC and/or DC mains connection.

1: Using a small Philips head screwdriver, remove the J17 Velcro retainer clip as pictured below. Once removed, **RETAIN THE FLAT WASHERS** as they will be re-used later.

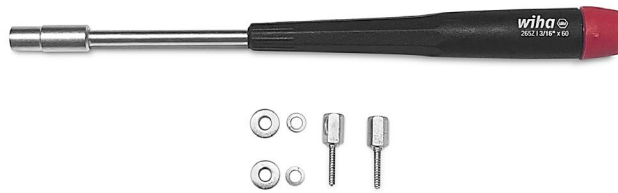
- BRACKET REMOVAL: Remove and discard the bracket. RETAIN THE FLAT WASHERS.



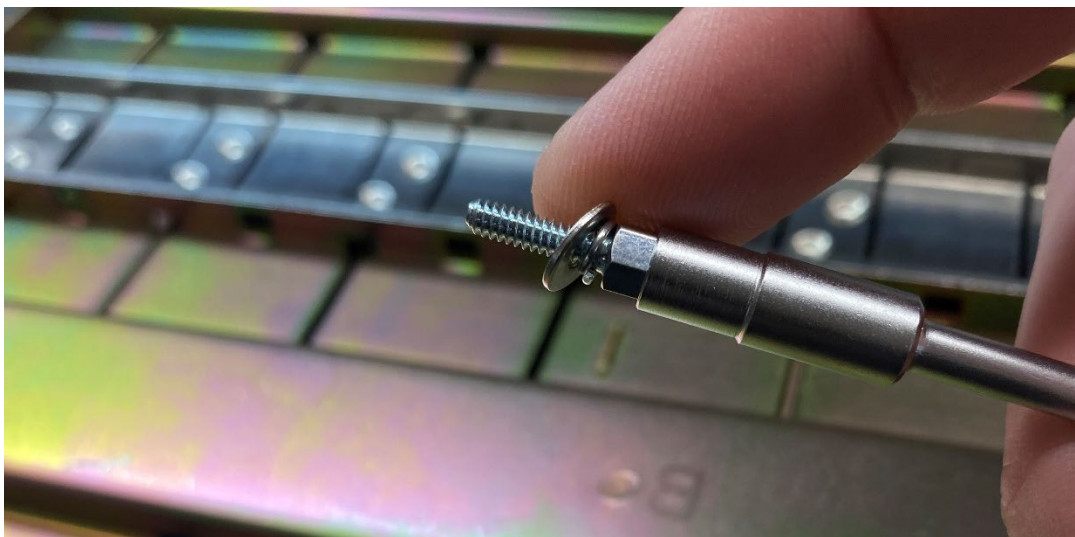
QUANTAR EIM – PRODUCT INSTALLATION (CONT.)

The QUANTAR External Interface Module is secured to J17 using the supplied standoffs and screws that are included with the device. For your convenience, we have also included the necessary nut driver to help you quickly install the standoffs. This mounting system ensures that the EIM is securely and permanently attached to the station backplane.

- 2: The QUANTAR EIM is secured to J17 using the supplied standoffs and screws that are included with the device. Please locate the standoffs, lock washers, and nut driver pictured below:



- 3: Place the lock washers and flat washers onto the standoff as shown below:

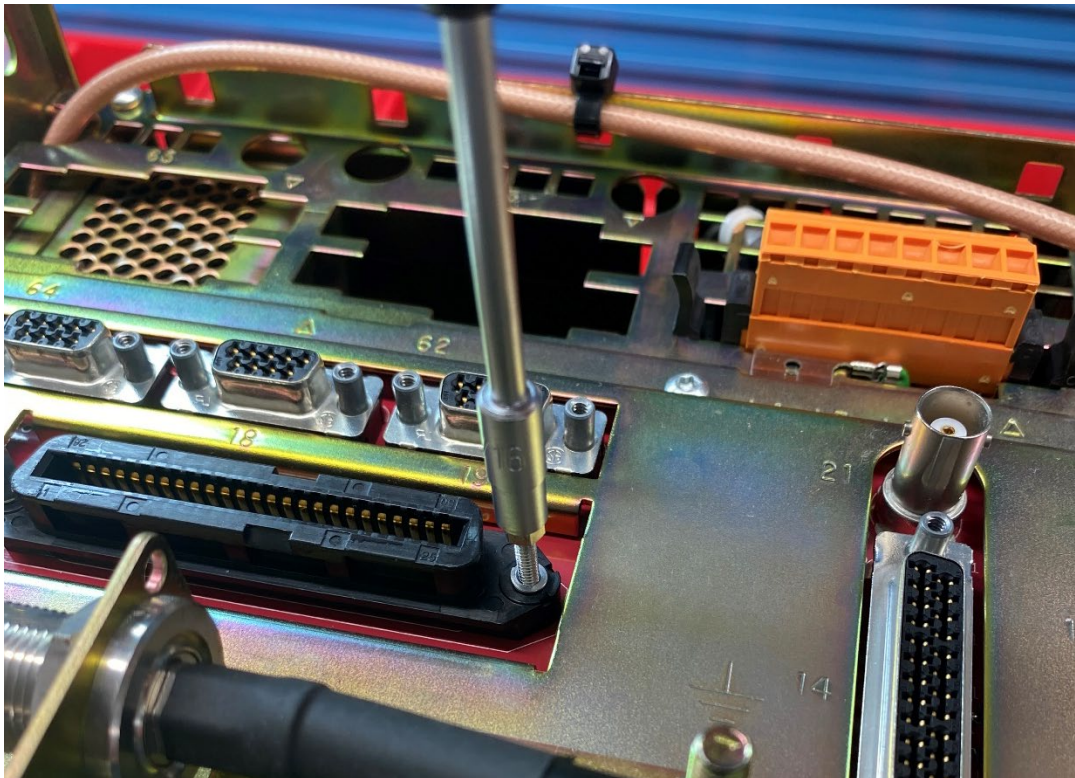


QUANTAR EIM – PRODUCT INSTALLATION (CONT.)

Installing the standoffs, lock washers, and flat washers

- 4: Carefully thread the standoff into the J17 connector, as shown below. The flat washers that were retained from the de-installation of the Velcro connector are reused here and should be touching the J17 connector. The lock washer should be located between the flat washer and the standoff. Care should be taken not to cross-thread the J17 connector housing which is constructed from a plastic composite.

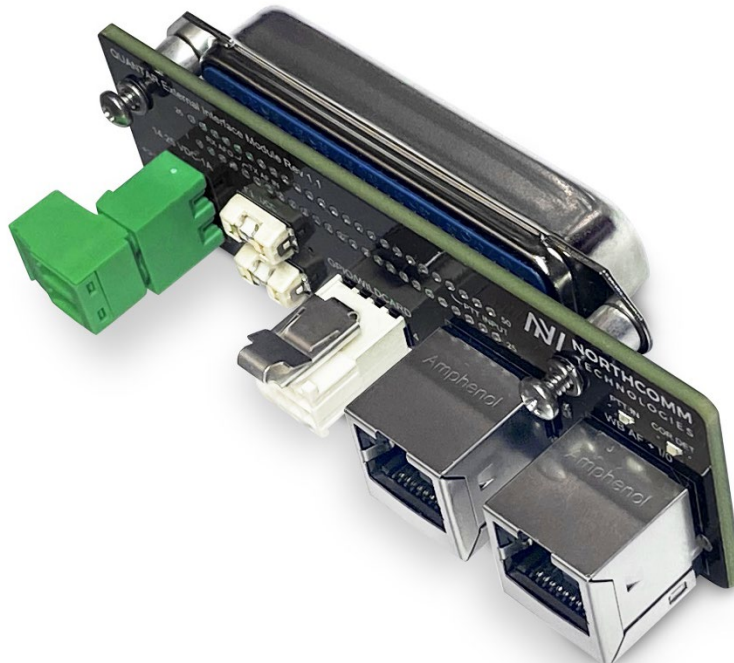
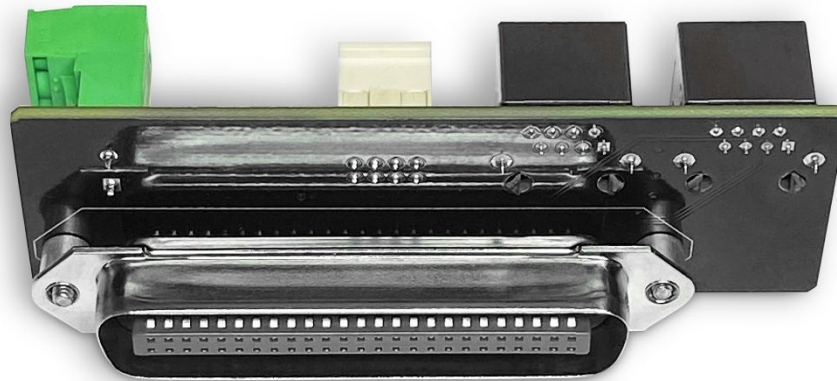
It may be necessary to place the standoff into the threaded hole and rotate the nut driver counterclockwise as if you were trying to unthread the standoff. Do this while applying gentle pressure to the fastener. At some point in this process, you will hear and feel a slight click. This sound is an indication that the threads of the screw and the J17 housing are in alignment. At this point, thread the standoff in a clockwise direction until you have fully compressed the lock washer. **DO NOT** over-tighten this screw as you will damage the threads of the J17 plug housing. Gentle rotation force is all that should be needed to thread the fastener into the plug housing. If you feel as if there is too much resistance, STOP, and be sure that you are not cross-threading the screw into the plug housing.



QUANTAR EIM – PRODUCT INSTALLATION (CONT.)

Installing the QUANTAR External Interface Module

- 5: Remove the EIM from its protective anti-static bag. You will notice that the 4-40 stainless steel screws are only partially threaded into the board and are flush with the 50-PIN connector. The unit was delivered in this way so that you can thread these screws into the standoffs that you had previously just installed. During shipping, these screws are held in place by the smooth aluminum threaded standoffs that are located between the 50-PIN connector and the PCB. If these screws are standing proud of the connector, unscrew them until they are flush as shown in the picture below.

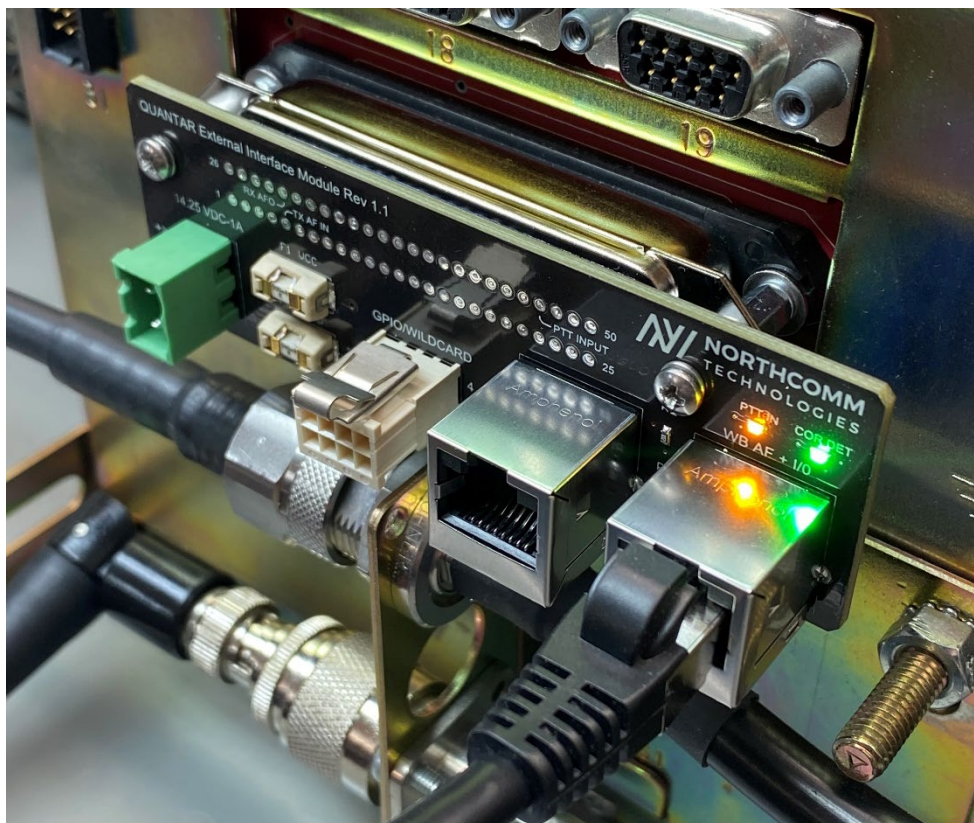


QUANTAR EIM – PRODUCT INSTALLATION (CONT.)

Installing the QUANTAR External Interface Module (Cont.)

- 5: You will now install the QUANTAR EIM onto the J17 connector by plugging the board into J17. Firm pressure may be required to fully seat the connector into the plug. Be sure to apply the pressure evenly and smoothly. You will know that the connector is fully seated because the QUANTAR EIM 50-PIN plug will make contact with the standoffs that you have previously installed in Step 4.

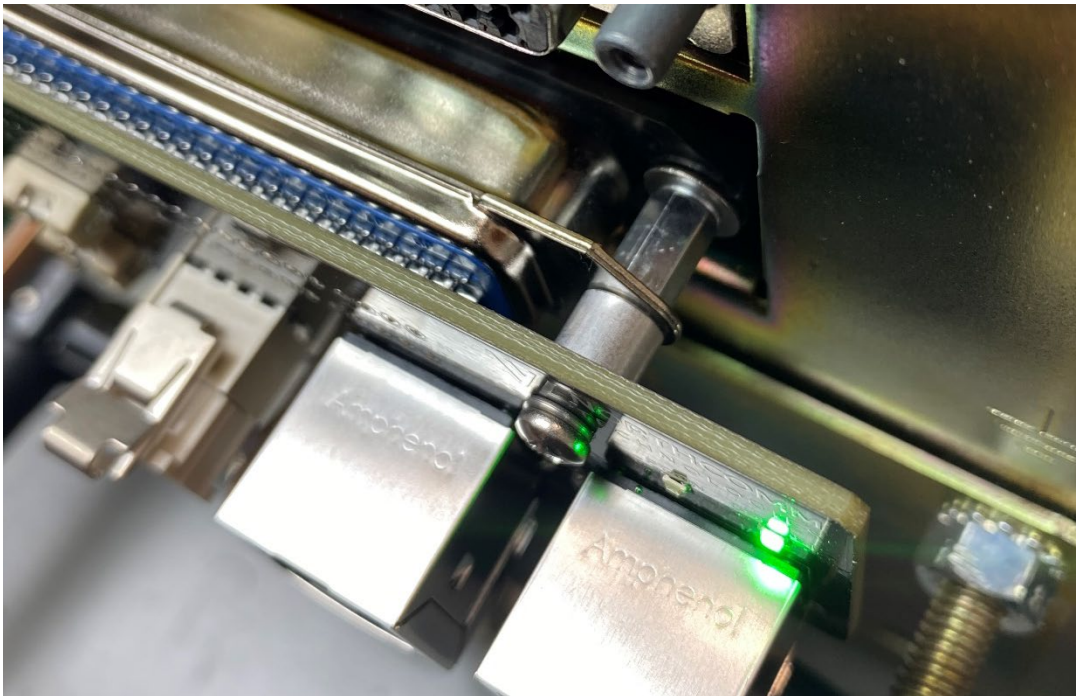
Next, you will screw the 4-40 Phillips head screws into the standoffs. PLEASE NOTE: The spacers between the EIM board and the 50-PIN connector are THREADED. It will be necessary to keep those spacers from threading and binding by inhibiting their rotation while you attempt to turn the screw. To avoid binding, simply use your index finger to place pressure on the spacer to keep it from rotating as you thread the screw into the standoff below. Your completed installation should look like the picture below:



QUANTAR EIM – PRODUCT INSTALLATION (CONT.)

Installing the QUANTAR External Interface Module (Cont.)

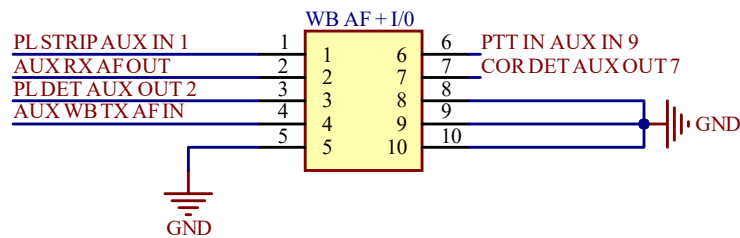
Please note how the standoffs, spacers, and connectors are all in perfect alignment. You should now see that the previously retained flat washers, in conjunction with the split lock washers, lock the system into place while keeping the PCB aligned and flat. Had these washers not been installed, the standoffs would sit too low and the board would bend under the pressure of the screws. If your installation resembles what is described in this manual, your installation is now complete.



QUANTAR EIM – PINOUTS AND WIRING

PIN ASSIGNMENTS OF THE “WB-AF +I/O” RJ-45

The Pinout of the RJ-45 labeled “WB AF + I/O” is shown below. Please note that we have used an 8-PIN RJ-45 connector and that PINs 9 and 10 are the connector shield tabs. PINs 9 and 10 are not physical PINs within the connector.



The PINs are described as follows:

PIN-1: AUX IN 1 – Assignable as a PL strip in wildcard via RSS (LOGIC INPUT)

PIN-2: AUX RX AF OUT – This is receiver audio FROM the station (AUDIO OUTPUT)

PIN-3: AUX OUT 2 – Assignable as PL detect in wildcard via RSS (LOGIC OUTPUT)

PIN-4: AUX WB TX AF IN – This PIN passes transmit audio INTO the station (AUDIO INPUT)

PIN-5: GROUND

PIN-6: AUX IN 9 – Assignable as PTT via wildcard. Grounding this PIN will key the station and cause the Amber “PTT IN” LED to illuminate. Note that the station will only key if the associated wildcard table has been written to accomplish this task. (LOGIC INPUT)

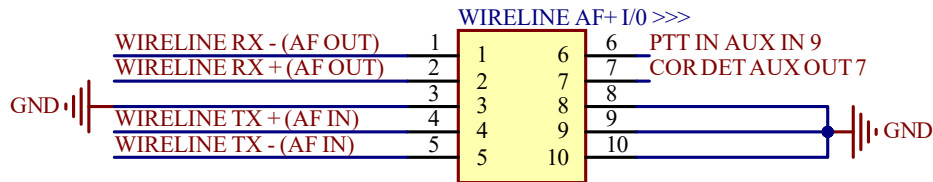
PIN-7: AUX OUT 7 – Assignable as COR or PL detect in wildcard via RSS. The Green “COR DET” LED will light when this PIN is active. (LOGIC OUTPUT)

PIN-8: GROUND

QUANTAR EIM – PINOUTS AND WIRING

PIN ASSIGNMENTS OF THE “WIRELINE AF + I/O” RJ-45

The Pinout of the RJ-45 labeled “WIRELINE AF + I/O” is shown below. Please note that we have used an 8-PIN RJ-45 connector and that PINs 9 and 10 are the connector shields.



The PINs are described as follows:

PIN-1: WIRELINE RX (-) – This is the negative side of the RX wireline receiver audio output

PIN-2: WIRELINE RX (+) – This is the positive side of the RX wireline receiver audio output

PIN-3: GROUND

PIN-4: WIRELINE TX (+) – This is the positive side of the TX wireline transmit audio input

PIN-5: WIRELINE TX (-) – This is the negative side of the TX wireline transmit audio input

PIN-6: AUX IN 9 – Assignable as PTT via wildcard. Grounding this PIN will key the station and cause the Amber “PTT IN” LED to illuminate. Note that the station will only key if the associated wildcard table has been written to accomplish this task. (LOGIC INPUT)

PIN-7: AUX OUT 7 – Assignable as COR or PL detect in wildcard via RSS. The Green “COR DET” LED will light when this PIN is active. (LOGIC OUTPUT)

PIN-8: GROUND

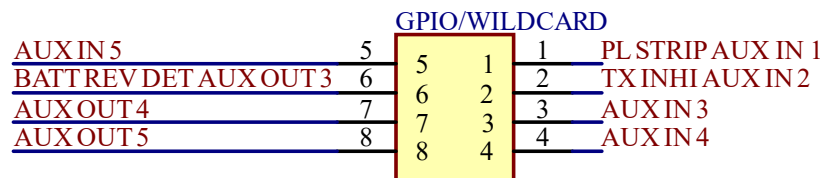
PLEASE NOTE: Wireline audio is balanced differential audio. Unlike the AUX AF and AUX TX audio circuits on the “WB AF + I/O” RJ-45, these sources must have both a positive and negative audio connection. These audio I/O’s are transformers isolated within the station. If you elect to use these circuits, it shall also be necessary to perform a wireline alignment via RSS in order to achieve the desired audio levels.

QUANTAR EIM – PINOUTS AND WIRING

PIN ASSIGNMENTS OF THE “GPIO/WILDCARD” 8-PIN PLUG

The Pinout of the 8-PIN rectangular connector labeled “GPIO/WILDCARD” is shown below. Please note that this connector uses the same PINs as the Motorola XPR mobile radio 26-PIN rear accessory connector. We sell a crimping tool for this PIN if you require it. Please contact us for further details regarding tooling.

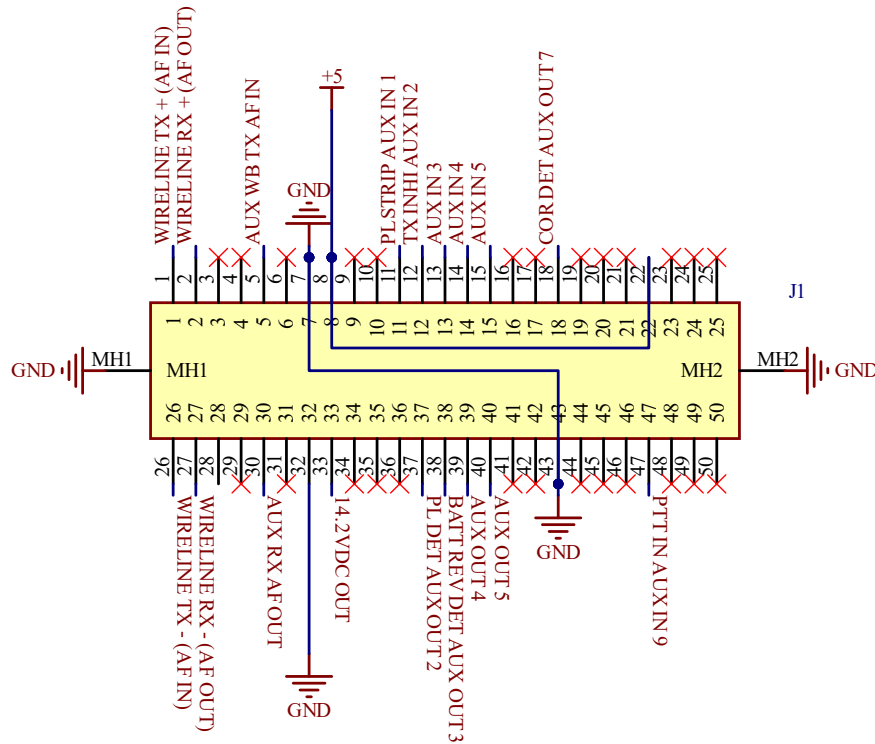
The function and polarity of these logical I/Os are assignable in wildcard via RSS. The names assigned below such as “BATT REV DET”, “PL STRIP” and “TX INHI” are the functions we tested during our evaluation. These I/Os may also be used for whatever other tasks are available in wildcard. Please also note that logical low outputs on the QUANTAR are established by the presence of a potential to ground. Logical high outputs are floating above ground and are not supplied with a DC pull-up voltage. If your device requires a 3.3, or 5-volt DC offset for logic transitions, you will need to install an appropriately sized pullup resistor in your device.



QUANTAR EIM – PINOUTS AND WIRING

PIN ASSIGNMENTS OF THE 50-PIN CENTRONICS CONNECTOR

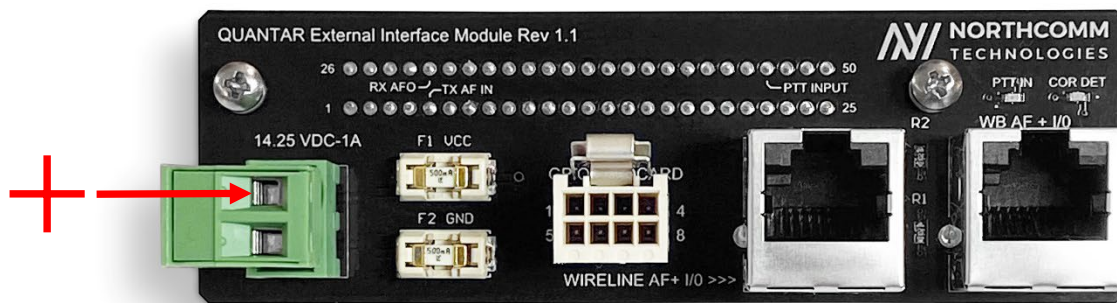
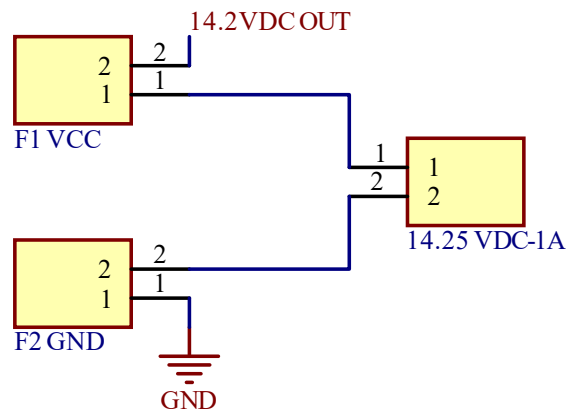
The Pinout of the 50-PIN Centronics connector is shown below. This schematic element shows all of the nets taken from the QUANTAR and routed to the QUANTAR EIM. Nets with the same name are physically connected within the QUANTAR EIM PCB. The 5-Volt DC supply line on PIN-8 is reserved for the LED functions of the “PTT IN” and “COR DET” LED’s. The 14.2 VDC OUT net on PIN-33 is supplied to the EIM’s Phoenix power connector and is protected by replicable, socketed 500 mA SMD fuses. The replacement PN for these fuses is is: 0448.500MR. The fuse Tradename is “NANO2”. The OEM manufacturer of this fuse at the time of this writing was Littelfuse.



QUANTAR EIM – PINOUTS AND WIRING

PIN ASSIGNMENTS OF THE 2-PIN PHOENIX POWER CONNECTOR

The Pinout of the 2-PIN Phoenix connector is shown below. Both the positive and negative side of this circuit are fused with 500 mA SMD NANO2 fuses, PN 0448.500MR. PIN-1 is the positive supply side. This PIN is the upper PIN with the silkscreen text “+>>>” pointing to it. PIN-1 is furthered identified below with the RED ARROW and “+” symbol.



QUANTAR EIM – INSTALLATION COMPLETION

Installation is now complete in all respects.

At this point you may use any professional quality RJ-45 cable to make a cable assembly that meets your requirements. We will still continue to manufacture and provide cable assemblies as required and specifically for this product. The OEM cable assemblies that we offer for the QUANTAR EIM use the same 24 AWG UL Listed shielded communications cable that have been used throughout our entire product line. Pre-made QUANTAR EIM cable assemblies for popular devices are available on our website. If you don't see a cable that meets your particular needs, please contact us. We are happy to build these assemblies to order.

Any questions or concerns regarding the use, installation, or repair of this product can be directed to info@northcommtechnologies.com. Technical support is also available by phone Monday through Friday 0830-1630 CST at 1-866-858-1745.

The QUANTAR EIM is a highly adaptable and versatile product. If you have any suggestions, ideas, or special requirements please do not hesitate to contact us. are available.

Email inquiries can be directed to info@northcommtechnologies.com. We will typically respond within two hours or less. More urgent matters will be handled via telephone.