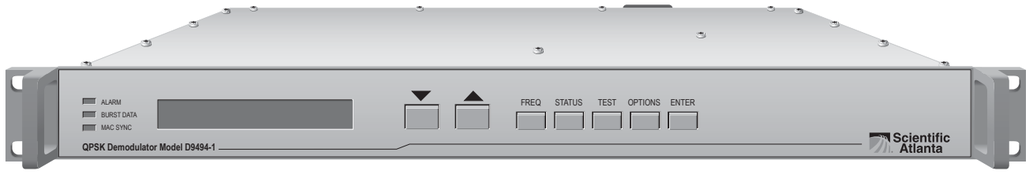
QPSK D9494 Demodulator Front Panel

Use the following diagram to assist you with the installation of the demodulator.



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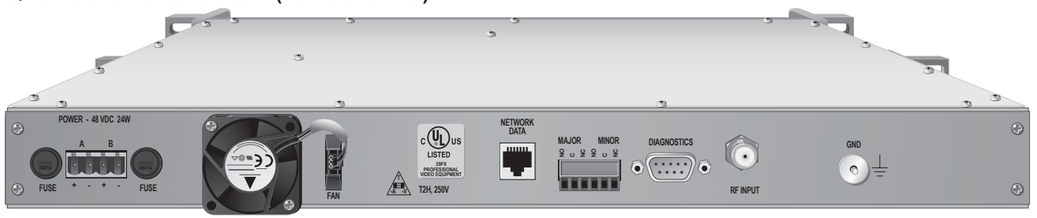
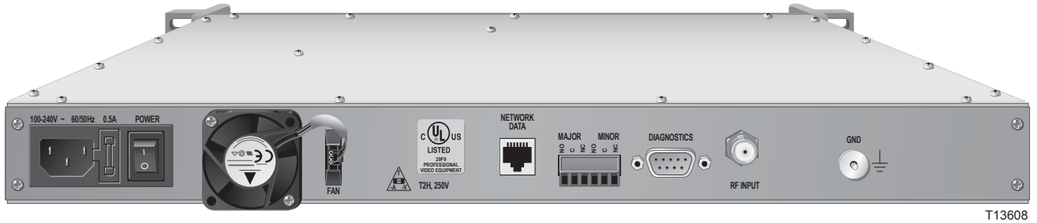
QPSK D9494 Demodulator Back Panels

Use the following diagrams to assist you with the installation of the demodulator, as well as the location of the connection ports.

QPSK D9494 Demodulator (48 VDC Model)



QPSK D9494 Demodulator (100-240 VAC Model)



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QPSK D9494 Demodulator

Introduction

This quick reference guide is intended for individuals who are responsible for installing the QPSK D9494 Demodulator into a rack unit.

For more detailed descriptions of the installation process and safety information for this demodulator, refer to the *Model D9494 DAVIC QPSK Demodulator Installation and Operation Guide* (part number 4022032).

Warning and Caution Icons

WARNING: Avoid personal injury and product damage! Do not proceed beyond any icon until you fully understand the indicated conditions.

The following icons alert you to important information about the safe operation of this product.

You will find this icon in the literature that accompanies this product. This icon indicates important operating or maintenance instructions.

You may find this icon affixed to this product and in this document to alert you of electrical safety hazards. On this product, this icon indicates a live terminal; the arrowhead points to the terminal device.

You may find this icon affixed to this product. This icon indicates a protective earth terminal.

You may find this icon affixed to this product. This icon indicates excessive or dangerous heat.

You may find this symbol affixed to this product and in this document. This symbol indicates an infrared laser that transmits intensity-modulated light and emits invisible laser radiation and an LED that transmits intensity-modulated light.

Controlling the Operating Temperature

CAUTION: The operating temperature for this equipment is 32 to 122°F (0 to 50°C). Avoid damage to this product! Your warranty is void if you operate this product above or below the maximum specified operating temperatures.

Measuring the Inlet Air Temperature

If you are concerned about inlet air temperature at the air inlet of any demodulator, you can measure the inlet air temperature in the rack. When measuring the temperature, ensure that all cabling is complete and that all adjacent QPSK demodulators are installed and running.

Important: Opening the door on the back panel of the rack may have an adverse effect on the managed airflow. If access to the door is not controlled, measure the inlet air temperature with the back panel door open because this typically redirects the airflow in an adverse manner.

Installation and Connections

Complete steps 1 through 10 to install and connect the demodulator into the rack unit.

Important: See the back page of this guide to view the front and back panels of the QPSK demodulator.

1 Install the QPSK Demodulator into a Rack

CAUTION:
- **Do not to tangle or strain interconnecting cables.**
- **Be sure to install additional support.**
- **Do not stack more than eight demodulators consecutively in the rack.**

A. Unpack and inspect the demodulator.

B. Install the angle support brackets (part numbers 734845 and 734846) supplied with the demodulator.

C. Place the demodulator into the rack.

D. Insert a mounting screw through each of the four bezel mounting holes on the front panel of the demodulator and then into the rack.

E. Firmly tighten each mounting screw.

Important: When you use the supplied angle support brackets, you can install the QPSK demodulators above or below each other in the rack. These brackets provide additional support and allow correct air circulation through the unit.

2 Connect the Network Data Port

The Network Data port provides two-way data flow with the QPSK modulator. The two-way data includes status monitoring and control (SMC) responses, application data, MAC Status, and SMC provisioning requests.

Use a shielded, CAT-5 Ethernet interconnect cable to connect the Network Data ATM-25 port on the demodulator to the modulator.

Note: The demodulator interface on the QPSK modulator is designed to connect to up to eight QPSK demodulators.

3 Connect the Diagnostics Port

The diagnostic port connects the demodulator to a diagnostic PC. This port is not designed to be connected for normal operation.

A. Connect the male end of a DB-9 data cable to the Diagnostics (craft) port on the back of the demodulator.

B. Connect the other end of a DB-9 data cable to an available serial port on the diagnostic PC.

Note: To maintain signal clarity and strength, use a ribbon cable no longer than 50 ft.

C. Power on the PC and activate a ProComm or HyperTerminal window using the following modem connection settings:
- 19200 baud
- 1 stop bit
- No parity
- 8 data bits
- No flow control

4 Connect the Alarm Relays (Optional)

A. If connected, disconnect the power wires from the power supply, or power off the unit.

WARNING: Avoid electric shock when disconnecting the power supply. Only a qualified electrician should disconnect the power supply.

B. Determine whether the indicator trips (activates) on an open or closed circuit (usually the external alarm has this information).
- A simple indicator (for example, an alarm based on a battery and beeper) would trip on a closed circuit (use the NO and COM terminals)
- A more complex indicator (for example, a commercial alarm system) would trip on an open circuit (use the NC and COM terminals)

Notes:
- The alarm connections power base ratio is 2 A at 50 V.
- The alarm connector uses a screw-cage clamp plug with mating jack on the demodulator. The plug accepts wire from 16 to 28 AWG.

C. Insert an indicator wire into the NO, the NC, or the COM plug screw-cage clamp (see step B in this section for determining which terminals to use).

Note: Make sure the screw-cage clamp closes on the bare wire, not on the insulation.

D. Use a small slotted screwdriver to tighten the screw-cage clamp screw.

E. Repeat steps C and D of this section for additional connections, as needed.

F. Connect the power to the power supply.

FINAL

5 Connect the RF Input Port

The RF Input port connects the demodulator to the HFC network and to set-tops.

A. Connect one end of a 75 Ω RG-59 coaxial cable to the RF Input port.

B. Connect the other end of the 75 Ω RG-59 coaxial cable to an RF signal splitter in the distribution plant (headend).

6 Connect an Earth Ground

CAUTION: The 48 VDC devices must be connected to an earth ground.

A. Place a ground wire onto the ground lug (marked GND) on the back of the demodulator; then, use your fingers to tighten the ground lug to secure the ground wire.

B. Connect the other end of the ground wire to the rack or earth ground.

7 Connect the Power Source

48 VDC Model

A. Verify that the DC power source to the 48 VDC model is set to the Off position.

B. Insert the wires from the DC power source into the screw-cage clamp. Use a small flat-blade screwdriver to tighten the screws at the top of the screw-cage clamp to secure the wires.

C. Insert the plug into the mating jack on the back panel of the demodulator.

D. Keep the DC power source set to the Off position until you are ready to power on the demodulator.

100-240 VAC Model

A. Verify that the power switch on the back panel of the 100-240 VAC model is set to the Off position.

B. Connect the power cord to the AC power inlet on the back panel of the demodulator.

C. Connect the other end of the power cord to an AC electrical outlet.

D. Keep the power switch set to the Off position until you are ready to power on the demodulator.

8 Install the Demodulator Software

For detailed information about installing the software, refer to the *QPSK Demodulator Software Installation Instructions* (part number 4022031).

9 Provision the QPSK Demodulator on the DNCS

After you have installed and connected the QPSK demodulator, you must provision the QPSK demodulator on the DNCS. For detailed instructions on how to provision the QPSK demodulator on the DNCS, refer to the DNCS Online Help for your system release.

10 Power On the Demodulator

After you have installed, connected, and provisioned the QPSK demodulator, power on the demodulator. The QPSK modulator manages the QPSK demodulator, and provides the provisioning information from the DNCS to the demodulator after the demodulator is powered on.