ELECRAFT® P3

HIGH-PERFORMANCE PANADAPTER

TRANSMIT MONITOR (TX MON) OPTION INSTALLATION INSTRUCTIONS

Revision B, May 4, 2018

E740271

Contents

⚠ Elecraft manuals with color images may be downloaded from www.elecraft.com.

Introduction

This manual describes how to install the Transmit Monitor (Tx Mon) option in an already-built P3. If you purchased a P3 kit and the Transmit Monitor option together, you will find instructions for installing the Transmit Monitor included as you build the P3.

The Transmit Monitor is a single board that plugs into the existing I/O board inside the P3. Only a few basic hand tools are needed (see pg 4) to perform the installation. No soldering or wiring is required.

Complete operating instructions for the Transmit Monitor option are in the P3 Owner's Manual revision E or later on page 28.

Customer Service and Support

Technical Assistance

You can send e-mail to **k3support@elecraft.com** and we will respond quickly – typically the same day Monday through Friday. If you need replacement parts, send an e-mail to **parts@elecraft.com**. Telephone assistance is available from 9 A.M. to 5 P.M. Pacific time (weekdays only) at 831-763-4211. Please use e-mail rather than calling when possible since this gives us a written record of the details of your problem and allows us to handle a larger number of requests each day.

Repair / Alignment Service

If necessary, you may return your Elecraft product to us for repair or alignment. (Note: We offer unlimited email and phone support, so please try that route first as we can usually help you find the problem quickly.)

IMPORTANT: You must contact Elecraft before mailing your product to obtain authorization for the return, what address to ship it to and current information on repair fees and turnaround times. (Frequently we can determine the cause of your problem and save you the trouble of shipping it back to us.) Our repair location is different from our factory location in Aptos. We will give you the address to ship your kit to at the time of repair authorization. *Packages shipped to Aptos without authorization will incur an additional shipping charge for reshipment from Aptos to our repair depot.*

Elecraft 1-Year Limited Warranty

This warranty is effective as of the date of first consumer purchase (or if shipped from the factory, the date the product is shipped to the customer). It covers both our kits and fully assembled products. For kits, before requesting warranty service, you should fully complete the assembly, carefully following all instructions in the manual.

Who is covered: This warranty covers the original owner of the Elecraft product as disclosed to Elecraft at the time of order. Elecraft products transferred by the purchaser to a third party, either by sale, gift, or other method, who is not disclosed to Elecraft at the time of original order, are not covered by this warranty. If the Elecraft product is being bought indirectly for a third party, the third party's name and address must be provided at time of order to ensure warranty coverage.

What is covered: During the first year after date of purchase, Elecraft will replace defective or missing parts free of charge (post-paid). We will also correct any malfunction to kits or assembled units caused by defective parts and materials. Purchaser pays inbound shipping to us for warranty repair; we pay shipping to return the repaired equipment to you by UPS ground service or equivalent to the continental USA and Canada. For Alaska, Hawaii, and other destinations outside the U.S. and Canada, actual return shipping cost is paid by the owner.

What is not covered: This warranty does not cover correction of kit assembly errors. It also does not cover misalignment; repair of damage caused by misuse, negligence, battery leakage or corrosion, or builder modifications; or any performance malfunctions involving non-Elecraft accessory equipment. The use of acid-core solder, water-soluble flux solder, or any corrosive or conductive flux or solvent will void this warranty in its entirety. Also not covered is reimbursement for loss of use, inconvenience, customer assembly or alignment time, or cost of unauthorized service.

Limitation of incidental or consequential damages: This warranty does not extend to non-Elecraft equipment or components used in conjunction with our products. Any such repair or replacement is the responsibility of the customer. Elecraft will not be liable for any special, indirect, incidental or consequential damages, including but not limited to any loss of business or profits.

Preventing Electrostatic Discharge Damage

We strongly recommend you take the following anti-static precautions (listed in order of importance) to avoid trouble:

- Leave ESD-sensitive parts in their anti-static packaging until you install them. The packaging may be a special plastic bag or the component's leads may be inserted in conductive foam. Parts which are especially ESD-sensitive are identified in the parts list and in the assembly procedures.
- Wear a conductive wrist strap with a series 1-megohm resistor. If you do not have a wrist strap, touch a ground briefly before touching any sensitive parts to discharge your body. Do this frequently while you are working. You can collect a destructive static charge on your body just sitting at the work bench. **DO NOT attach a ground directly to yourself as this poses a serious shock hazard.**
- Use a grounded anti-static mat on your work bench.
- If you choose to use a soldering iron to work on your P3 for any reason, be sure your iron has an ESD-safe grounded tip tied to the same common ground used by your mat or wrist strap.

Tools Required

1. #1 size Phillips screwdriver. To avoid damaging screws and nuts, a power screwdriver is ***not*** recommended.
2. Pliers or wrenches for installing 1/4" (6.4mm) nuts 3/16" (4.8 mm) jack screw nuts.

The following tools are strongly recommended:

1. ESD wrist strap.
2. Static dissipating work pad.

Parts Supplied

ILLUSTRATION	DESCRIPTION	QTY	ELECRAFT PART NO.
	TXMON PCB Assy ⚠ ***ESD Sensitive***	1	E850387
	W2 Sensor Cable RJ8 6' (183 cm)	1	E850368
	Coupler (power and frequency range chosen at time of order).	1	DCHF-200 DCHF-2000 DCV/U-200

P3TXMON Hardware Bag E850721

ILLUSTRATION	DESCRIPTION	QTY	ELECRAFT PART NO.
	Screw, 1/4" (6.4 mm) Zinc, Pan Head	4	E700005
	Lock Washer, Split Ring #4	4	E700004
	Standoff, 5/8" (15.8 mm) 4-40 Hex	2	E700060

Installation Procedure

☐ Remove the six screws in the P3 top cover and remove it. A side cover may be removed as well if it makes access easier. The modular design of the P3 enclosure allows you to remove panels independently as needed.

☐ On the P3 rear panel, there will be either two or three multi-pin DB-type connectors, depending upon whether you have the optional P3SVGA installed (see Figure 1). Remove the jack screw nuts at each connector to free the pc board assembly inside.

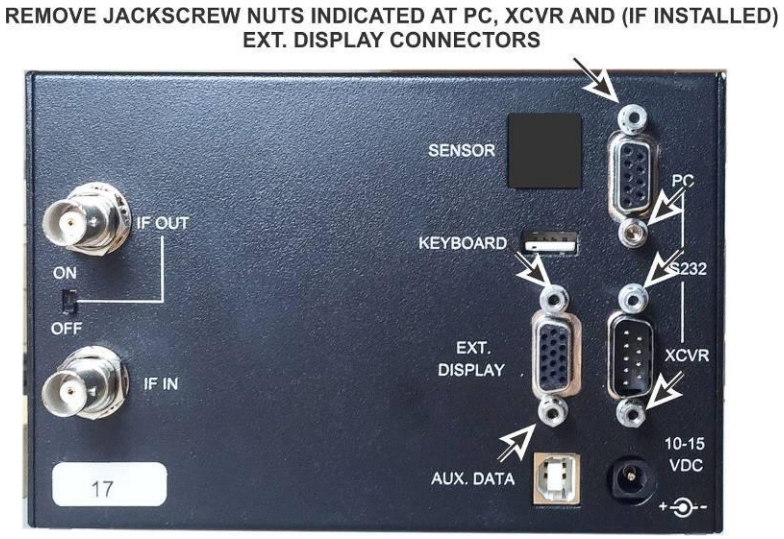

Figure 1. Jackscrew Nuts on Rear Panel.

☐ Move the circuit board assembly away from the rear panel and then peel off the stiff plastic cover over the SENSOR opening (see Figure 2). If you do <u>not</u> have the P3SVGA option installed this cover will be a single strip covering all four connector openings. In that case, place a straight edge on the score mark just below the sensor connector opening. Holding the plastic cover tightly against the back cover with the straight edge, peel up on the part over the SENSOR opening until it snaps off, leaving the other connector holes covered.

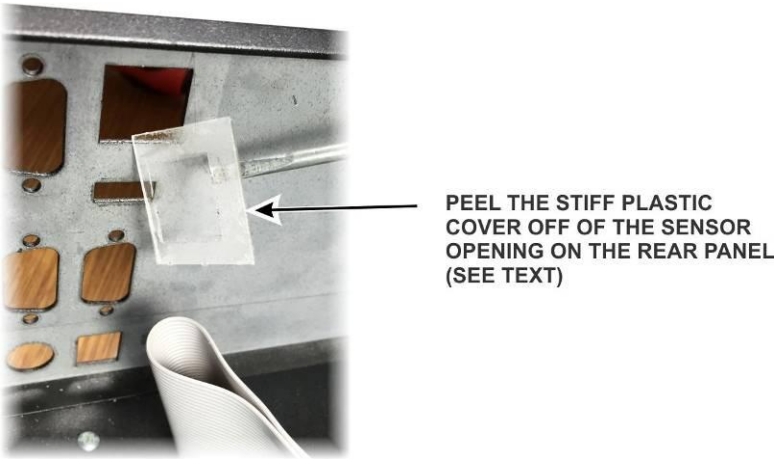

Figure 2. Removing Plaster Cover Over the Sensor Connector Opening.

☐ Install the two standoffs on the P3 I/O board as shown in Figure 3.

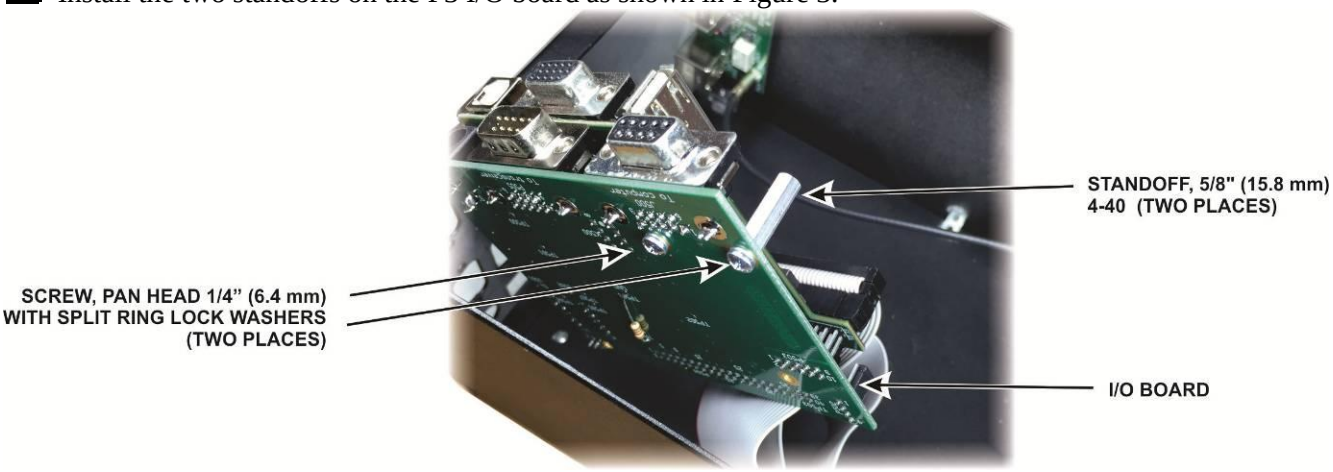

Figure 3. Installing Standoffs on P3 I/O Board.

☐ Mount the Tx Monitor board on the P3 I/O board as shown in Figure 4 using the remaining screws and lock washers.

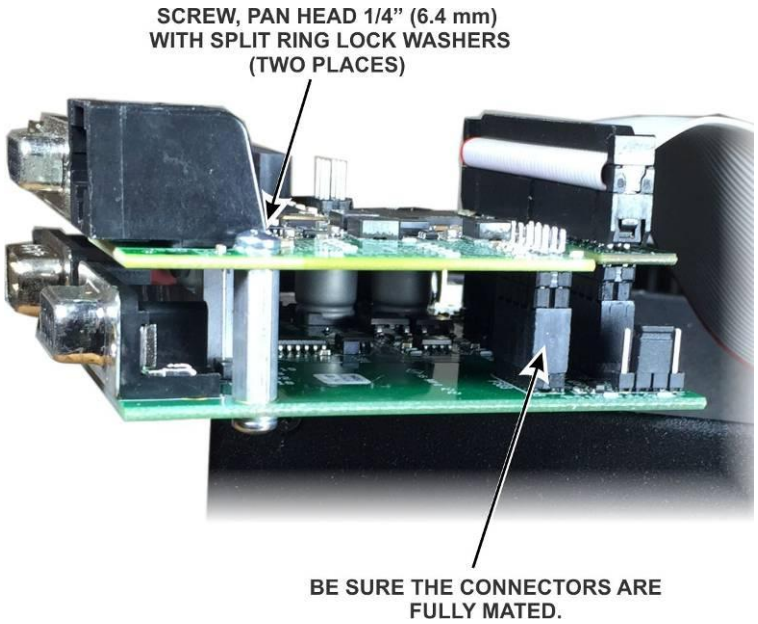

Figure 4. TX Monitor Module Mounted on the P3 I/O Board.

☐ Replace the PC board assembly in the P3 and secure it with the jack screw nuts and internal tooth lock washers you used earlier. The new connector will fit in the SENSOR opening on the rear panel.

> ⚠ **Do not over-tighten the jack screw nuts, especially if you are using a wrench or nut driver. Applying too much torque can twist the nut off of the threaded portion, ruining it.**

☐ Dress the ribbon cable against the side of the P3, held in place by the clip as shown in Figure 24 in the P3 Owner's Manual.

☐ Replace the covers on the P3. Be sure all the cover screws are tight to ensure good contact between the enclosure panels, but do not over-tighten the screws. It is possible to strip their threads.

That completes the installation of your Tx Mon option.