

TPK-OP-100 TP8100 Man Down Options Board Installation Instructions

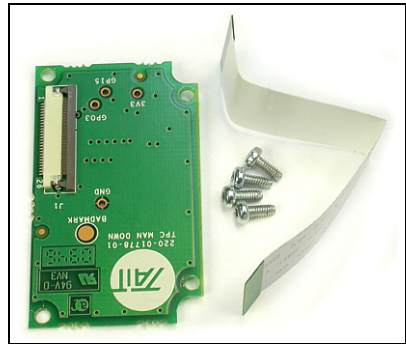
Introduction

The TP8100 man down board adds man down functionality to the TP8100 radio.

The kit contains the following items:

- TP8100 man down board
- 26-way 70mm Flat Flex Circuit (FFC) cable (219-03114-01)
- 4x M2x5 mm self-tapping screw (345-00011-00)


TP8100 radios with factory-fitted TP8100 man down options board are also available.



i Man Down functionality requires version 03 ('Star Ground') hardware. Version 01 hardware is not supported. For more information about hardware compatibility refer to the TP8100 Service Manual (MPC-00003-xx).

A radio equipped with Man Down functionality is programmed to alert, initially, the **radio user** if any of the following conditions are met:

- the radio is kept horizontal for longer than a programmed period (0–60 seconds)
- the radio is not moved at all for longer than a programmed period (1–60 minutes)
- no keys on the radio are pressed for longer than a programmed period (1–60 minutes)

The period for each condition can be different, and the radio user is told which condition(s) will trigger the alarm and after what interval(s). The tilt sensor or 'accelerometer' that monitors radio movement is built into the man down options board. A flashing icon  on the bottom right of the display indicates to the user that Man Down is active.

The radio sounds an alarm to alert the radio user if any one of the above conditions is met. The radio user has a programmable period (for example, 30 seconds) to respond appropriately by doing one of the following things:

- reorienting the radio to a vertical position
- moving the radio in some way
- pressing any key or knob (other than the volume knob) on the radio

The required action depends on the condition that triggered the alarm. If the radio user responds, the alarm is silenced and the timer starts to count down again.

A radio equipped with Man Down functionality is also programmed to alert the **dispatcher** if the **radio user** does not respond as expected. If the radio user does not silence the alarm in

the appropriate way, the radio automatically makes an emergency call to the dispatcher. The radio starts to cycle between transmitting (audio) to the dispatcher and receiving from the dispatcher.

If the radio is also programmed to use **Search Alert**, Search Alert is also activated. The radio will then cycle between transmitting, receiving, and emitting (through the radio speaker) sharp beeps to alert a rescuer. For detailed programming information, please refer to the online help for the relevant programming application.

Lone Worker

For clarification: Lone Worker functionality is similar to Man Down, but is triggered only by a lack of radio use for a programmable period. If the radio user fails to respond to the alarm, the radio makes an emergency call to the dispatcher.

Installation and Programming



Warning Do not attempt to retrofit the TPK-OP-100 TP8100 man down options board to an intrinsically safe (IS) radio unless specifically certified to do so by both Tait and the relevant Intrinsic Safety approval authority. Any unauthorized modification of an IS item exposes the customer to a risk of explosion which could cause serious injury or death. Unauthorized repairs invalidate both the Intrinsic Safety rating and the third-party IS approval. For more information, refer to the TP8100 Service Manual (MPC-00003-xx).

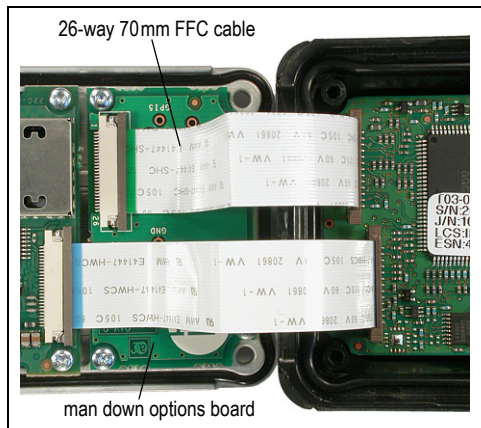
Notice The TP8100 is uniquely designed to meet published specifications for protection against entry ('ingress') by water and dust. Follow the instructions on disassembly, reassembly, and vacuum and pressure testing in the TP8100 Service Manual.

The man down options board fits into the space below the RF board on the chassis, and is secured by four screws (345-00011-00). The white 26-way 70mm Flat Flex Circuit (FFC) cable (219-03114-01) connects the man down options board to J7 on the control board.

1. Complete the standard steps required when servicing a TP8100 radio.

Read the programming file and the calibration file that is currently in the radio and save the files to the computer. The file names automatically include the serial number of the radio they are taken from. (If you do not want a file to be overwritten in subsequent steps, you can rename the file now.)

2. Disassemble the radio, install the board, reassemble the radio, and vacuum and



pressure test the radio as described in the TP8100 Service Manual.



Important: Calibrate the man down options board **before** reprogramming the radio.

3. Use the **calibration application** to calibrate the settings that relate specifically to the new man down options board:
 - a. Select the Man Down test.
 - b. Lie the radio horizontal and click the Calibrate Horizontal button. Then stand the radio upright and click the Calibrate Vertical button.
 - c. Save the updated calibration file to the computer.
 - d. Use the updated calibration file to calibrate the radio.

For details see the online help for the calibration application and the instructions provided on the form.

4. Once calibration is complete, use the **programming application** to program Man Down functionality:
 - a. From the conventional programming application select **General Options**; from the trunked programming application select **SOS Options**.
 - b. On the Lone Worker/Man Down tab, configure the Man Down settings.
 - c. Save the updated programming file to the computer.
 - d. Use the updated programming file to program the radio.

For details see the online help for the programming application.

Troubleshooting

Calibration Error

You must calibrate the new man down options board before you can program Man Down functionality in the radio. If this error message appears, the man down options board is not yet calibrated. Restore the original calibration file, calibrate horizontal and vertical as described above, and then program the radio.

More Information

Refer to your radio provider for more information about these products.