

Continuous Duty Tray (CDT)

(Package for Continuous Duty Data Transmission)
Model FLN2294 for MICOM-2

1. GENERAL

The Continuous Duty Tray (CDT), FLN2294, is a package (kit) for continuous duty data transmission for the MICOM-2. It also enables the connection of up to four external devices simultaneously, in addition to CW and headphones, to the accessory port of the MICOM-2.

The Continuous Duty Tray consists of two units (see Figure 1): a fan tray and a junction box. The fan tray contains two fans, CW plug and headphone plug. The junction box contains an electrical board (FRN5865) which controls the fans and the connections of the four external devices.

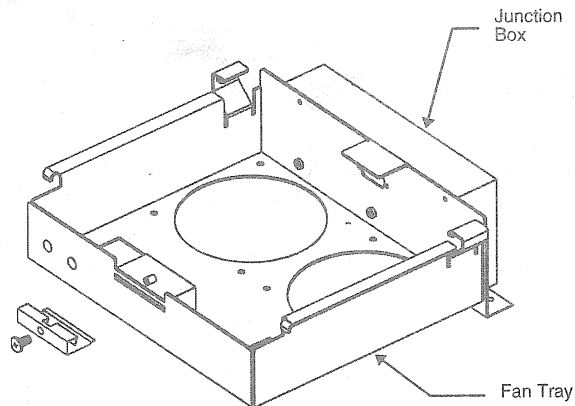


Figure 1. Continuous Duty Tray (CDT)

2. JUMPER SETTINGS

Before installing the CDT, the five jumpers located on the PC board inside the junction box must be set in accordance with the intended system configuration.

Jumpers JU1-JU4 determine whether the audio transmit paths will be controlled by the PTT lines or not (switched audio or continuous flow). Jumper JU5 determines the release decay time of the data PTT line (1 msec or 300 msec).

NOTE

Factory settings are as follows:

- JU1-JU4 (IN) – switched audio mode
- JU5 (IN 1-2) – 1 msec data PTT released time.

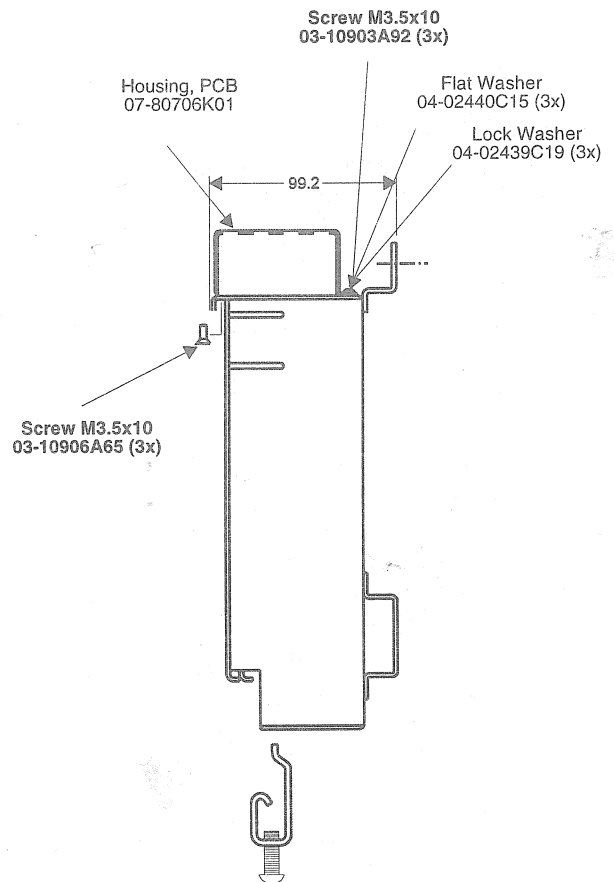


Figure 2. Junction Box Fastening to the Mounting Tray

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Continuous Duty Tray (CDT)

In order to set the jumpers proceed as follows:

Step 1. Remove the six screws fastening the junction box to the mounting tray (see Figure 2).

Step 2. Carefully remove the junction box and disconnect the internal cable connected to J7 on the PC board.

Step 3. Set the jumpers according to your intended system configuration, referring to the following table:

| No. | OUT (1-2) | IN (1-2) | IN (2-3) |
|-----|--------------------|---------------------------------------|--|
| JU1 | TX1 Switched Audio | TX1 Continuous Flow | |
| JU2 | TX2 Switched Audio | TX2 Continuous Flow | |
| JU3 | TX3 Switched Audio | TX3 Continuous Flow | |
| JU4 | TX4 Switched Audio | TX4 Continuous Flow | |
| JU5 | | Data PTT Released time = 1 msec | Data PTT Release time = 300 msec |

Step 4. Reconnect the internal cable to J7 on the PC board and replace the junction box.

3. INSTALLATION

3.1 GENERAL

This section describes the installation of the CDT in a mobile or fixed station configuration.

NOTE

Before installing the unit, read the entire installation procedure detailed in this section. It is also recommended to read the MICOM-2 installation instructions (MICOM-2 HF-SSB Transceiver Owner's Manual, 68P02941C60).

3.1.1 Selecting the Mounting Location

Select the mounting location taking into consideration access to electrical connections and maintenance. The mounting location should be clean, dry and well ventilated.

NOTE

Do not mount the unit in close proximity to strong electrical fields produced by brush motors and generators, welders, etc.

3.2 MOBILE INSTALLATION

3.2.1 Installing the CDT (Refer to Figure 3)

Step 1. Place the CDT in the desired location. If holes must be drilled, use the tray bracket as a template to mark drilling points.

Step 2. Use the four supplied screws to fasten the CDT to the mounting surface.

Step 3. Drill an additional hole for the ground bolt.

3.2.2 Connecting the DC Power

The Continuous Duty Tray is connected to a 12V negative-ground vehicular battery, using HKN6101 power cable. Proceed as follows:

Step 1. Lead the power connector of the DC Power Cable to the DC connector (located on the rear panel of the fan mounting tray) but do not attach it. Then lead the red and black wires to a 12V battery, inserting them through the access holes if necessary.

NOTE

The wires should be as short as possible. Once the tray is installed, cut the wires down to the minimum.

Step 2. Crimp or solder the supplied lugs to the red and black wires.

Step 3. Connect the lug of the red wire to the positive terminal of the battery.

Step 4. Connect the lug of the black wire to the negative terminal of the battery.

Step 5. Connect the power cable to DC connector J6 located on the rear panel of the mounting tray.

3.2.3 Final Connections

Step 1. Lead the cables of the external devices (up to four devices) to the rear panel of the CDT and connect them to connectors J1-J4 (refer to Figure 4).

NOTE

Connectors J1-J4 are identical, and external devices can be connected in any order.

Step 2. Install the radio (MICOM-2) according to the instructions in MICOM-2 Owner's Manual (68P02941C60).

Step 3. Use the control cable supplied with the CDT to connect the accessory connection of the MICOM-2 and connector J5 on the junction box.

Step 4. Slide the radio into the tray and fasten the tray bracket with the supplied screw.

3.3 FIXED STATION INSTALLATION

In a fixed station installation, an AC power supply is used instead of the 12V battery. A backup battery can be connected to the battery terminals on the power supply.

Installation of the CDT in a base station is identical to mobile installation.

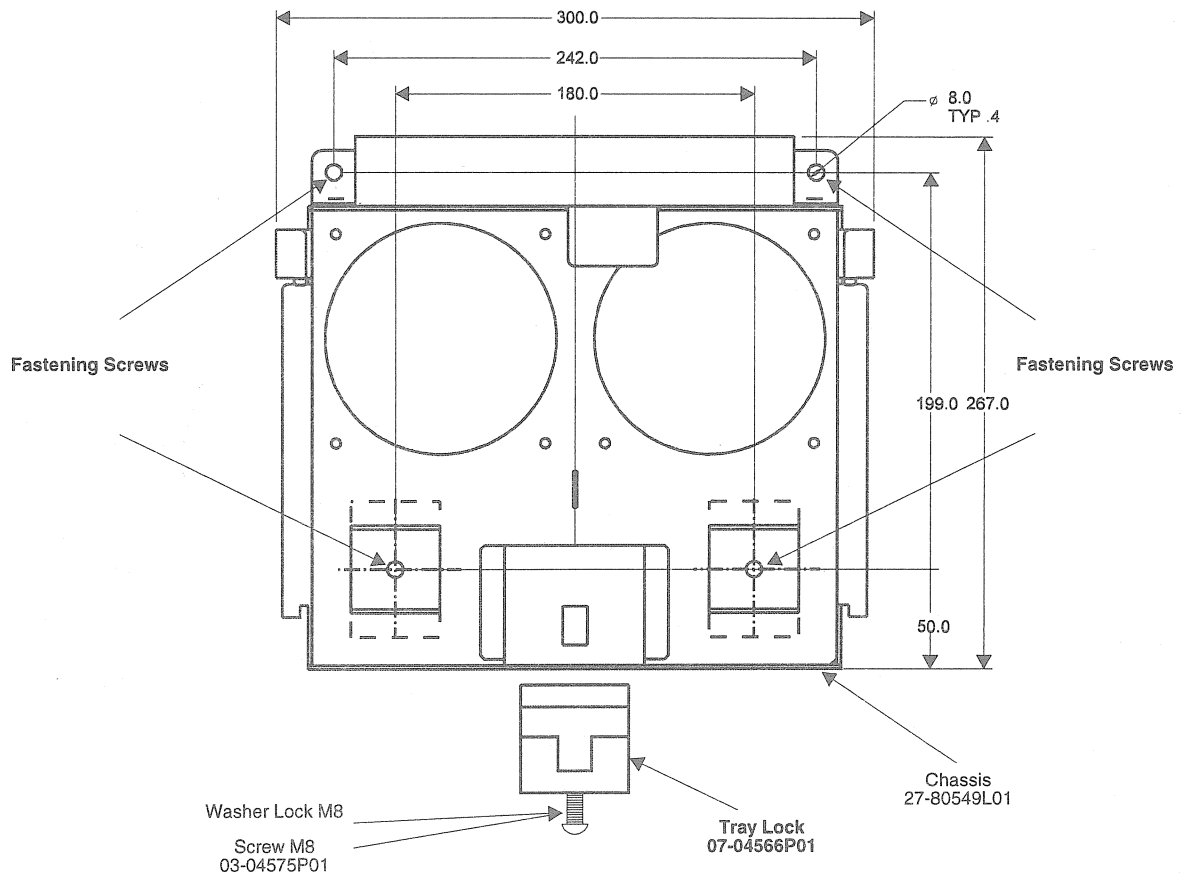


Figure 3. CDT Installation

4. CONNECTIONS AND ADJUSTMENTS

4.1 POTENTIOMETERS

Potentiometers are used to adjust the received audio levels (one for each connector). Each potentiometer is associated with a connector as follows:

RX1: J1 – R63

RX2: J2 – R62

RX3: J3 – R61

RX4: J4 – R60

The potentiometers are located on the PC board inside the junction box.

In order to adjust a potentiometer, insert a thin screwdriver through the relevant hole in the front panel of the junction box. The holes are adjacent to the connectors, and are marked RX1, RX2, RX3, RX4 respectively.

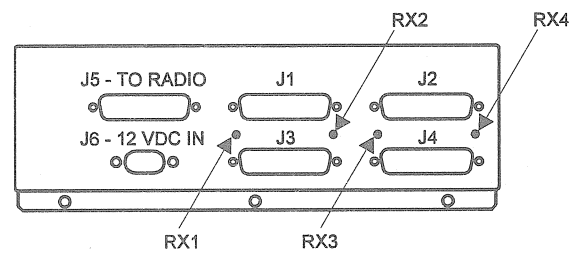


Figure 4. Location of Potentiometer Adjustment Holes and Connectors

4.2 ACCESSORY CONNECTORS J1-J4

The accessory connectors (J1-J4), located on the front panel of the junction box (see Figure 4), are used to connect up to four external devices (e.g. modem, linear amplifier, phone patch). See Table 1 for connector pin assignments.

Table 1. Pin Assignments of Connectors J1-J4

| Pin Number | Pin Name | Function | Input/Output | Notes |
|------------|----------------|--|--------------|---------------------|
| 1 | SPKR- | Differential output to external speaker | Output | 1 Ampere |
| 2 | SPARE | Digital I/O | I/O | |
| 3 | SPKR+ | Differential output to external speaker | Output | 1 Ampere |
| 4 | RX_AUDIO+ | Differential receive audio | Output | 0dBm 600 Ohm |
| 5 | RX_AUDIO- | Differential receive audio | Output | 0dBm 600 Ohm |
| 6 | TX_AUDIO+ | Differential transmit audio | Input | -9 – 0dBm 600 Ohm |
| 7 | TX_AUDIO- | Differential transmit audio | Input | -9 – 0dBm 600 Ohm |
| 8 | PTT_IN_VOICE | PTT for transmitting voice | Input | |
| 9 | PTT_IN_DATA | PTT for transmitting data | Input | |
| 10 | PTT_IN_CW | PTT for MORSE | Input | |
| 11 | SW_A+ | Power | Output | max 1A each |
| 12 | DSI/KW_C_C | BDM – Data Serial In / kw channel change | Output | multiplexed signals |
| 13 | KW_ON_OFF | KW power on/of | Output | |
| 14 | AGC_FAST_SLOW | AGC fast or slow | Input | |
| 15 | RXD | Point to point protocol to HOST/HLC | Input | |
| 16 | TXD | Point to point protocol to HOST/HLC | Output | |
| 17 | RESET | External RESET (for BDM) | Input | |
| 18 | GND | Ground | Output | |
| 19 | KW_PTT | kw PTT | Output | |
| 20 | EXT_ALARM | External alarm output | Output | |
| 21 | VPP | Flash programming voltage, entering to BDM | Input | not connected to J1 |
| 22 | DSCK/KW_ALC | BDM – Data Serial Clock / kw alc | Input/Output | multiplexed signals |
| 23 | SQ_GATE | Squelch open or closed | Output | |
| 24 | DSO/FAN_ON_OFF | BDM – Data serial out / Fan control | Output | multiplexed signals |
| 25 | FREEZE/KW_TU | BDM – Freeze / kw tune | Output | multiplexed signals |


4.3 CONTROL CONNECTOR J5

Control connector J5, located on the front panel of the junction box, is used to connect the junction box to the accessory connector of the MICOM-2.


4.4 DC CONNECTOR – J6

DC connector J6, located on the front panel of the junction box, is used to power the junction box and fans (12 VDC).

4.5 HEADPHONE CONNECTOR

The headphone connector is located on the front panel of the fan tray and is marked with the  sign.

4.6 CW CONNECTOR

The CW connector is located on the front panel of the fan tray and is marked with the  sign.