PIEXX FT-726T
Direct Reading CTCSS Tone Encoder/Decoder for the Yaesu FT-726 Transceiver
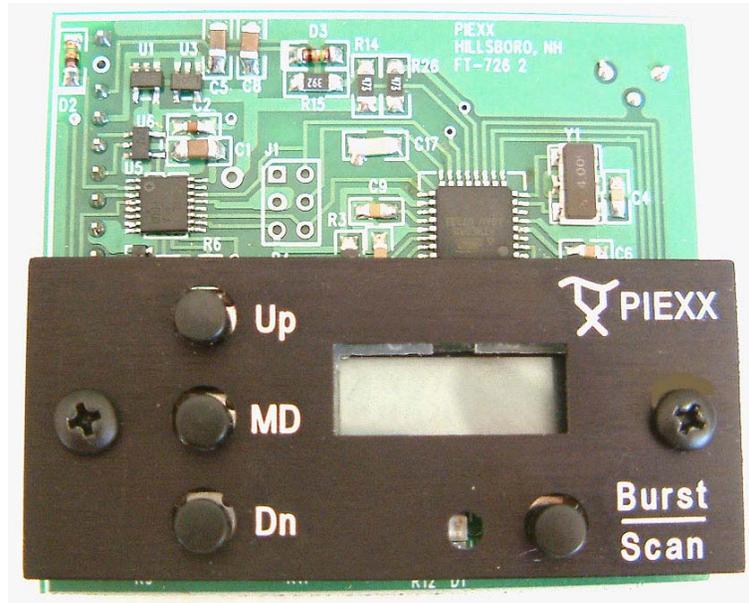

Introduction

The PIEXX FT-726T is a version of our ToneLCD board specifically manufactured for use in the Yaesu FT-726 transceiver. The FT-726T mounts in place of the original scan board in the top cover of the FT-726 and replaces the functionality of that board as well as adding CTCSS tone encoder and decoder functions.

Features:

- Encoder / Decoder for both transmit encode and receive tone squelch decode operation.
- Find mode detects CTCSS tone that the receiver hears for automatic operation.
- Mounts in place of the original FT-726 scan switch board.
- Low power consumption
- Easy installation
- Easy to Operate
- Fully configurable Power Up State.

Installation

1. Remove the top cover from your FT-726 transciever. There are seven screws holding the top cover including one under the front handle mounting plate on the front right of the transceiver. Be careful when you lift the cover as there are wires attached to the speaker and the Scan Switch board.
2. Unplug the two wires from the speaker and the 12-pin connector from the Scan Switch board. The cover will now be free.
3. Remove the 2 screws holding the Scan switch board and its nameplate on the top cover of the transceiver.
4. Install the FT-726T and its new nameplate in the spot vacated by the old Scan Switch board.
5. Install the 12-position cable onto the connector pin strip on the FT-726T. Note that there is a missing pin on the FT-726T that should align with the missing hole in the connector.
6. Reconnect the Speaker leads and replace the cover.
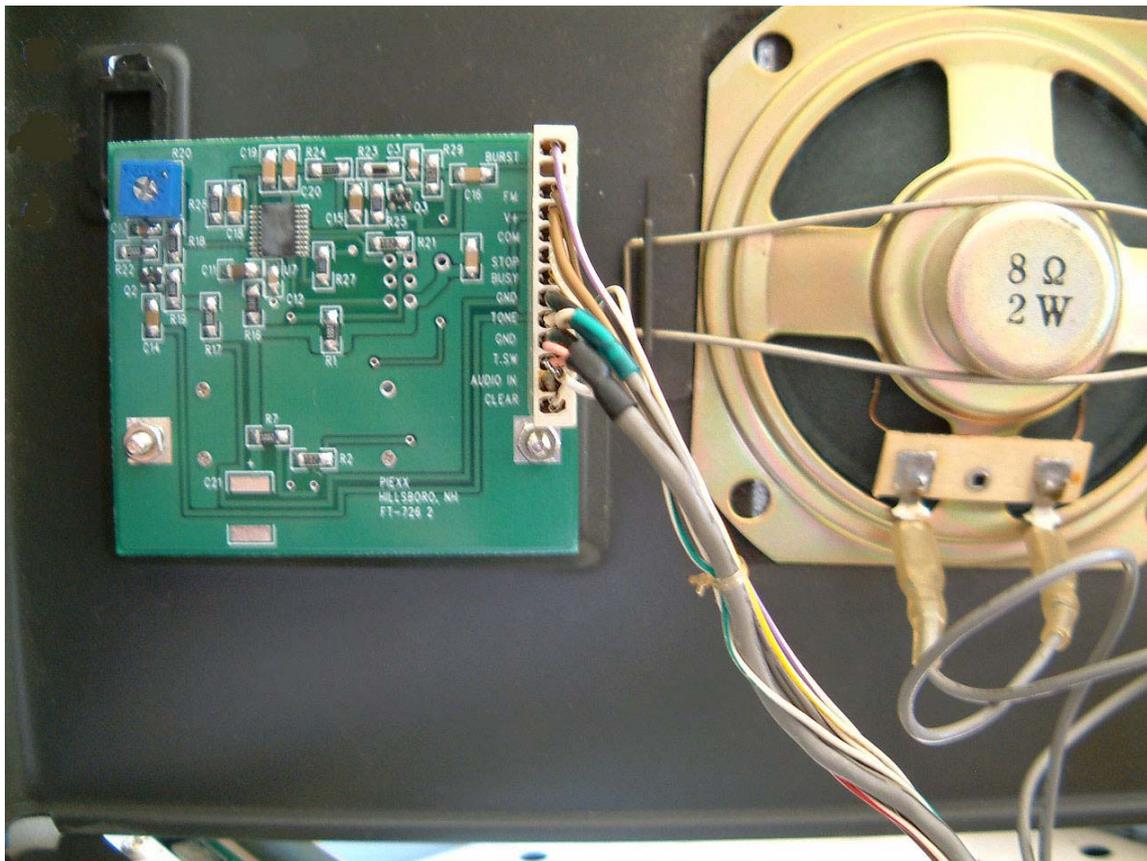
Operation

The FT-726T has four modes of operation associated with the CTCSS as well as various setup functions that take the place of the original Scan Switch operations.

CTCSS Tone Mode

The 4 CTCSS modes of operation are selected by momentarily pressing the
MD button:

1. **Off** – No CTCSS tone transmitted and the receive path is enabled.
2. **t** – The CTCSS tone is transmitted but the receive tone squelch is
   disabled.
3. **tr** – Both CTCSS transmit and receive squelch modes are enabled.
4. If ---, or a blinking tone value is shown on the display, then the
   ToneLCD is in the FIND mode. In the FIND mode the ToneLCD
   samples the FT-726s detected Audio and if it 'hears' a valid CTCSS
   tone on the receive audio it shows the values as a blinking set of digits
   on the display. If no valid CTCSS tone is sensed, --- is displayed. In
   the FIND mode, if a valid CTCSS tone is present for approximately ½
   second, the FT-726T's tone frequency is set to that tone. This allows a
   semi automatic mode of operation. If the FT-726T finds a valid tone,
   the next time you key up you will be transmitting on that same tone.

When you are in the **Off, t or tr** operating modes, pressing the **Up** or **Dn**
buttons will cause the active CTCSS tone frequency to be moved up or down
in value. You can slew the tone up or down by pressing and holding the **Up**
or **Dn** buttons.

Pressing the **Up** or **Dn** buttons, while in the FIND mode, will cause the FT-
726T to leave the FIND mode and enter the "transmit only" (**t**) mode.

After you have the FT-726T set to the most convenient mode of CTCSS
operation, you can save this as the default power up state of the device by
simultaneously pressing and holding the **Up** or **Dn** buttons for 1 second.
This saves not only the tone frequency but also the current CTCSS mode of
operation as the power on default.

Scan / Burst Modes:

Momentarily pressing the **BURST / SCAN** button will alternately turn the
tone burst mode on or off. The blue indicator light, to the right of the **Up**
button, indicates the state of the burst feature. If the blue light is on, the burst
tone will be active upon applications of the PTT switch.

By pressing, and holding, the **BURST / SCAN** button, for about ½
second, you will enter the Scan / Burst setup mode. In the Burst / Scan mode
you can select the behavior of the radio that was formerly selected by the

slide switches on the old Scan Switch board. The 3 possible setting are reached, when in the Scan / Burst setup mode, by momentarily pressing the **BURST / SCAN** button. When you reach the parameter you would like to change, press either the **Up** or **Dn** buttons to toggle between the parameters setting.

- Burst Mode State – The power up state of the burst mode is the first option selected. The LCD display will show either **bUF** for burst off or **bUo** for burst on. You can toggle between these 2 states by pressing either the **Up** or **Dn** buttons.
- Scan Type – There are 3 scan types you can select. If the LCD display shows **SCb** scanning will proceed until a busy (unsquelched) frequency is reached. **SCC** will cause the radio to scan until a clear channel (squelched) is reached. **SC-** is the manual scan mode and you must stop the scanning by pressing the appropriate button the FT-726 transceiver. These 3 scan types are functionally the same as those selected with the 3-position slide switch on the old Scan Switch board. Pressing either the **Up** or **Dn** buttons will toggle between these 3 modes.
- Scan Stop – The 2 scan stop setting select what the transceiver does when the appropriate scan activity has been reached. In the Scan Stop mode, **StP** showing on the LCD display, the scanning will stop on the interrupting event. If the scan is in the pause mode, **PAU** showing on the LCD display, the scanning will pause on the interrupting event.

You can leave the Scan / Burst setup mode by either pressing and holding the **BURST / SCAN** button, in which case your newly adjusted parameters will be saved, or by waiting about 60 seconds until the Scan / Burst setup mode times out. If the Scan / Burst setup mode times out, the parameter you changed will not be saved.

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