



OPERATOR'S MANUAL

**Model 526
2m/6m DSP
Transceiver**

Preliminary Draft

SPECIFICATIONS

GENERAL

MODES: CW, FM, LSB, USB
FREQUENCY RANGE: 50-54 and 144-148 MHz transceive, 136-174 MHz receive.
DISPLAY: 7 segment LED's for main and secondary DUAL VFO's with SPLIT mode
OFFSET TUNING: +/- 10 kHz receive
FM REPEATER OFFSETS:
 standard for 6m and 2m. Programmable for odd splits.
CTCSS: built-in, encode only.
MEMORIES: 100
ANTENNA: 50 ohms unbalanced, separate SO-239 output connectors for 6m and 2m
POWER REQUIRED: 1A receive, 6A transmit @ 12-14 VDC
CONSTRUCTION:
 4 epoxy glass PC boards
 molded front panel
 aluminum chassis
 texture painted steel top and bottom.
DIMENSIONS: HWD 2.75" x 8.5" x 8.75" (7 x 21.6 x 22.2 cm)

TRANSMITTER

RF OUTPUT: 1-20 watts, ALC stabilized
MICROPHONE INPUT:
 200 to 50k ohms
 4 pin front panel connector
 accepts microphones with 5 mv (-67 dB) output
 Polarized voltage provided at mic jack for electrets
T/R SWITCHING: PTT on SSB, QSK on CW.
METERING: forward power
SSB GENERATION: DSP generated

RECEIVER

SENSITIVITY: .20 uv typical for 10 dB S+N/N @ 2.4 kHz bandwidth, SSB mode.
SELECTIVITY: 30 filters built-in; 200-1000 Hz in 50 Hz steps, 1000-2800 Hz in 100 Hz steps.
NOISE FIGURE: 7 dB
S-METER: Calibrated to 50 uv at S-9
I-F FREQUENCIES: 1st I-F 45 MHz, 2nd I-F 450 kHz, 3rd I-F 14.5 kHz

Ten-Tec Model 526 FCC ID: DJ7-526
This device complies with Part 15 of the FCC Rules.
Operation is subject to the following two conditions:
(1) this device may not cause harmful interference,
and (2) this device must accept any interference

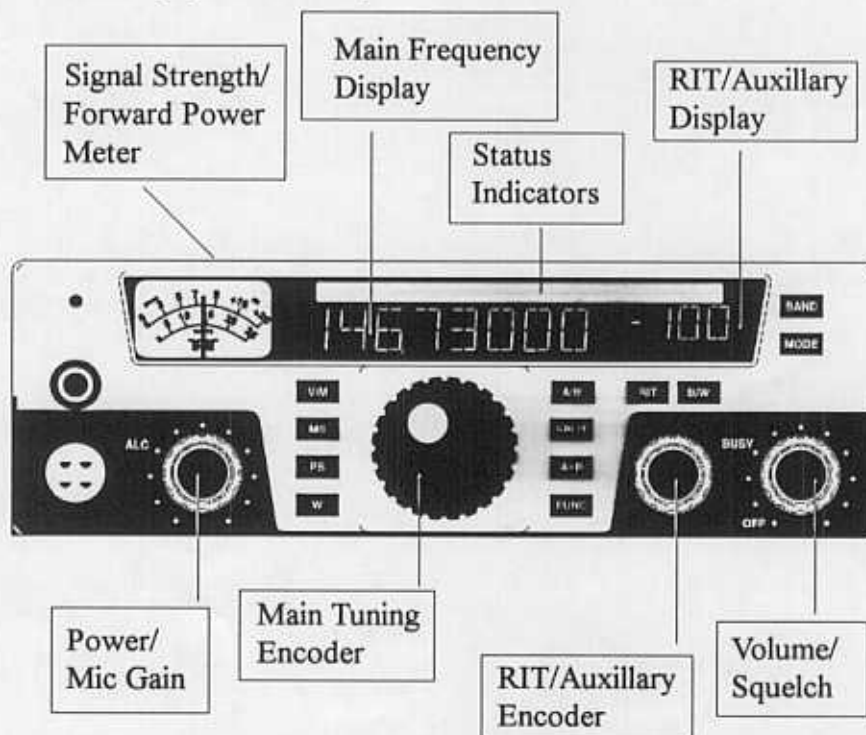


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The Ten-Tec model 526 is an All-Mode 2 meter and 6 meter transceiver with IF-DSP technology. The digitized IF is processed by a programmable DSP. All user interface and signal processing functions are performed in firmware. DSP processing allows the model 526 to provide All-Mode operation, multiple IF bandwidths and Tx/Rx timing in a compact package. In addition, the model 526 provides a low-level signal interface for connection to UHF or microwave transverters.

Conventional VHF FM functions are provided for normal or odd repeater splits, channel memories and CTCSS encode and Memory-Scan with channel-lockout. Separate Antenna connectors for 6 and 2 meters makes band hopping quick and simple. Separate Tx control signals are provided for each band for easy connection to external amplifiers.

For SSB/CW enthusiasts the model 526 dual VFOs which can be operated in Split mode, RIT control and silky-smooth QSK. Band-Scan when used with the All-Mode squelch makes finding band activity quick and easy.



OPERATIONAL CONTROLS

MODE

Pressing the MODE button cycles through modes. Pressing FUNC MODE cycles in reverse order. MODE is global; changing BANDS does not affect MODE.

A/B

Pressing A/B swaps between VFO-A and VFO-B. VFOs have separate frequency and mode.

A=B

Pressing A/B copies the contents of VFO-A into VFO-B.

SPLIT

Pressing SPLIT selects split operation. Rx on VFO-A and Tx on VFO-B. SPLIT works cross-band/cross-mode.

BAND

Pressing BAND toggles between 2 meters and 6 meters.

BW

In CW/USB/LSB, toggles filter bandwidth selection display on/off. In FM, toggles sub tone selection display on/off and toggles subaudible tone on/off. In CW, FUNC BW toggles sidetone frequency selection display on/off. In CW, FUNC V/M enters "set sidetone level" mode.

RIT

In CW/USB/LSB, toggles RIT frequency display on/off. Hold RIT for 1 sec to clear RIT display to zero. In FM, returns display to "SHIFT" selection. SHIFT is +/- 500KHZ and 1MHz on 6 meters and +/-600KHz on 2.

TUNING RATE

FUNC SPLIT toggles between fast and slow tuning rates. Display will briefly display FAS or SLO accordingly.



MEM

V/M toggles between VFO and MEM mode, and stops a scan.

Offset encoder scrolls (tunes) through memories.

Empty memories are muted and appear as "—.—.—."

W sends a memory to the current VFO and returns to VFO mode.

FUNC SKIP toggles "-" lock character for current memory.

FUNC W erases memory. Held-W on powerup erases all memories.

W in mem mode sends memory to VFO.

W in VFO mode puts radio in "WRITING" mode. Scroll through memories then press W a second time to write to the selected memory. Press V/M if you wish to abort the memory write.

SCAN

MS key is either MEM scan or FREQ scan depending on VFO/MEM mode

In MEM mode, MS starts a memory scan; in VFO mode, frequency scan.

Squelch must be closed for radio to scan; open squelch stops scan until squelch closes again. Offset encoder knob changes scan direction. In frequency scan, FAST/SLOW rate setting and mode affect scan speed.

NB

Controls display of Noise Blanker setting. A Setting of zero turns the Noise Blanker OFF.

LOCK

Locks the main tuning encoder. Prevents inadvertent tuning.

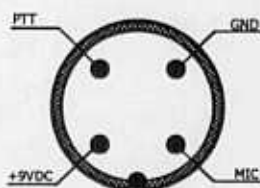
ATTENUATOR

FUNC PS toggle the Attenuator on/off. (There is no indicator for the state of the attenuator.

FRONT PANEL CONNECTIONS

Microphone

The Ten-Tec standard 4-pin MIC jack accomodates a low impedance microphone and provides a polarizing voltage of +9 VDC to power an electret microphone. Any Ten-Tec microphone, using our 4-pin connector, works without change. Please refer to the following figure then adapting other microphones for use with the Model 526.



Phones

This is a standard jack used for connecting 8-ohm stereo or mono headphones. However, because dropping resistors reduce the output to headphone level, this jack cannot provide sufficient audio to drive an external speaker.



REAR PANEL CONNECTIONS

13.8 VDC Supply

The Model 526 requires a regulated 13.8 volt supply capable of providing a current of 7.5 amps.

2 Meter Antenna/6 Meter Antenna

Connection should be made to appropriate antennas using standard PL-259 connectors.

Fuse

A Mini Blade 7.5 amp fuse. Replacements are available at most automotive parts suppliers.

KEY/PTT (Input)

A CW Keyer or external PTT signal may be connected to the Model 526. The transmitter is activated by a low (ground) signal on this input.

Audio In/Audio Out

The audio In/Out connections are provided to allow the Model 526 to be attached to external devices such as Modems or TNC's

XVTR Out

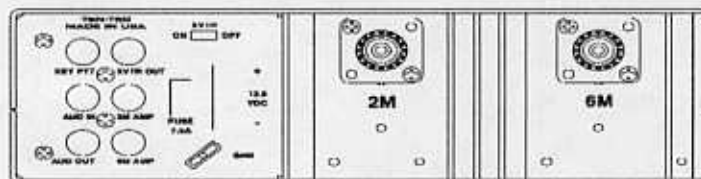
Low level RF output at the tuned frequency. Can be used to connect the Model 526 to transverters requiring low-level RF drive.

2M Amp

Amplifier Key signal for use with external 2M amplifier.

6M Amp

Amplifier Key signal for use with external 6M amplifier.



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