RX-350D HF DSP Receiver

RX-350D HF DSP RECEIVER - only $ 1199!

Click here to visit Ten-Tec's online store to purchase RX-350D

Click here for photos: Full Image, Top view, Bottom view, Rear panel.

The Ten-Tec RX-350D is a full featured, mid-price range HF DSP receiver designed for today's demanding shortwave listener. The RX-350D is identical to the earlier RX-350, but now features a 12 kHz I-F output jack on the rear panel. This output jack can be connected to your PC sound card for decoding of Digital Radio Mondiale(tm) signals. See below for more details.

The world of IF level digital signal processing is now available in a powerful desktop SWL receiver unlike anything that has come before it.

What benefit does IF-DSP provide the shortwave listener? The 'big picture' benefit is cleaner signal readability. Eliminate heterodynes and limit spurious broadband noise instantly by pushing buttons. Take advantage of the wide variety of DSP filter choices built-in to the receiver to suppress undesired adjacent interference. Use these same filters to tailor the response of the receiver to your needs - from a wide 8 kHz for pleasing SAM or AM audio to a tiny 300 Hz for digging weak CW and digital mode signals out of the noise. There are 34 of them built-in. That's right, 34, not 2 or 3 built-in, and not sold as expensive options!

IF-DSP also allows Flash ROM updating of your receiver with the latest features and functions. Free! If new functions and features are added to the RX-350D, simply visit our website, download the latest version of the receiver, connect it via a serial port cable to your RX-350D and it's as if your radio rolled off the assembly line minutes earlier.

The RX-350D features a clean, modern look featuring a large multi-function LCD graphics panel for display of all receiver functions. Push-button operation of major receiver controls are provided from the receiver front panel. Simple, logical layout of front panel controls allow operation of the radio without having to constantly refer to the instruction manual. Never has such a powerful receiver been so easy to operate.

RX-350D supports operating modes tailored to the dedicated shortwave listener. Selectable sideband, synchronous AM detection allows higher quality reception of AM signals especially under conditions of severe fading. DSP automatic notch filter for suppressing unwanted carriers in voice modes. Push-button DSP noise reduction to suppress unwanted broadband noise. The built-in 34 bandwidth filters from 300 Hz to 8 kHz are instantly selectable by turning a knob. All filters are independent of mode - use any available filter in any receive mode. Mode selection via dedicated push buttons rather than 'mode-cycling' with a single control. 'FAST UP' and 'FAST DOWN' buttons for quick large-step frequency changing. FAST UP and FAST DOWN buttons are user-configurable for step sizes, 1 MHz, 500 kHz, 100 kHz up or down. Main tuning knob can be adjusted in 7 user-selectable step sizes from 1 Hz to 100 kHz steps. Passband tuning and manual notch control are available in all modes, including synchronous AM.

Momentary 'SWEEP' function shows band activity in 8 selectable coverage rates. Find the signals without even being on frequency! Simply tune to a desired frequency, select one of 8 SWEEP ranges, and press the SWEEP button. Signals will be shown on the bar graph on opposite sides of the starting frequency. A cursor will appear and allow you to tune RX-350D to any signal visible on the screen. Easy!

8 banks of 128 memories each that retain frequency, mode and bandwidth information. An alphanumeric tag function of up to 8 letters allows memories to be tagged with specific names like "WSEV 930" or "VOA", etc.

Scan functions allow scanning of band segments or memory banks. Memory bank scan feature includes a memory lockout function for skipping of constantly busy channels. Band scanning is user-programmable; set the start and stop frequencies, push a button and the radio starts to scan between the two frequencies.

Built in clock displayed on LCD screen displays hours, minutes, and seconds in user-selectable 12 or 24 hour format. Timer circuitry and a squelch-activated output allow for monitoring and/or taping of band activity even when the user is not present. Timer function allows the radio to be set in a 'wait' mode, to power on at a specific time and to send a control signal for actuation of accessory equipment. Two separate timer outputs are provided for connection of two separate devices to be actuated by the timer circuit. The squelch-activated output allows the radio to be left on and squelched on a given frequency. When a signal is present to open the squelch, an actuation signal is sent via a rear-panel jack.

Rear panel Hi-Z and Lo-Z antenna inputs allow connection of virtually any antenna to the RX-350D. Built-in AC switching power supply allows operation of RX-350D from either 115 or 230 VAC. Separate DC power input jack can be used for 13.8 VDC operation. AC and DC supply can be connected at the same time for back-up. Plug the RX-350D into the wall and connect to battery supply. If the AC power goes off, the connected DC source automatically takes over power to the receiver. Mute function for muting of receiver if used with a companion transmitter.

An optional remote encoder knob/keypad, model 302R, is available for armchair operation of the RX-350D. Simply plug the 302R into the rear panel of the RX-350D via the provided 6 foot cable. The 302R provides a duplicate of the main tuning knob of the receiver, a direct frequency entry keypad, and three functions buttons that can be user-assigned to control various receiver functions like mode switching, main tuning knob step size, SWEEP

actuation, etc. Main tuning knob on the receiver front panel and all other receiver functions are active even when the 302R is in use. Sit back and relax!

RX-350D is computer controllable through the rear panel RS-232 connector. Several commercial software packages have written support for the receiver, or you can 'roll-your-own' version by downloading the programmer's reference manual from our firmware site at www.rfsquared.com

No other shortwave receiver packs this much value 'under the hood'. To top it off, it's MADE IN USA and competitively priced!

Put the RX-350D side-by-side with your present HF receiver and see for yourself why Ten-Tec is the fastest growing name in high-quality shortwave receivers.

Q. What's the difference between the original Ten-Tec RX-350 and the RX-350D model?

A. Only the addition of a 12 kHz I-F output jack that allows received signals to be streamed from the I-F directly to your computer's sound card for Digital Radio Mondiale decoding.

Q. What is Digital Radio Mondiale (DRM)?

A. Digital Radio Mondiale is a consortium of radio and electronics manufacturers from around the world that banded together in the late 1990's to create a universal digital system for the AM broadcasting bands below 30 MHz -- shortwave, mediumwave and longwave. The system that was created also bears the name of the group; Digital Radio Mondiale. DRM is the world's only non-proprietary, digital system for shortwave, mediumwave and longwave with the ability to use existing frequencies and bandwidth across the globe. There are extensive Q&A's addressed about the system, how it works, and how it will be used on the official DRM web site at www.drm.org/newsevents/globfaqs.htm

Q. So I all I need is an RX-350D and I can plug the 12 kHz I-F output of the radio directly into my computer's soundcard and start hearing DRM broadcasts, right?

A. No. You need to have a capable radio, and you also need to have software for decoding DRM signals. This software is only available through the consortium via the DRM Software Radio web site located at www.drmrx.org. It is not available through Ten-Tec or any other distributor. There is a list of specific computer operating system and sound card requirements to be able to successfully decode DRM signals. The list of specifications is on the DRM software purchase page located at www.drmrx.org/purchase.php. The last specification listed is "suitable front end with 12 kHz output......" - that's the RX-350D.

There are two Digital Radio Mondiale websites that provide a lot of information about this revolutionary new transmission capability.

www.drm.org is the DRM consortium website.

www.drmrx.org is the DRM Software Radio website.

Looking for off-the-shelf control software for the RX-350D for your personal computer?

DXtra's WorldStation commercial software package controls all functions of
your RX-350D with just a click of your mouse. Valuable extras such as
real-time access to shortwave databases is included. Built into
WorldStation is the ability to remote control your RX-350D
on a LAN or the Internet from anywhere in the
world. For software details and screen shots, please visit
www.dxtra.com
DXtra is a Ten-Tec value added reseller for the RX-320D, RX-340, and RX-350D receivers.

RX-350D SPECIFICATIONS

MODES	Synchronous AM/DSB, SAM/LSB, SAM/USB, AM, LSB, USB, CW, DIG, FM
FREQUENCY RANGE	100 kHz - 30 MHz.
DISPLAY	Multi-line text and graphic Liquid Crystal Display.
TUNING	Continuous Manual VFO, Frequency Scanning, and Channel Memory.
MEMORIES	128 per Bank, 8 Banks internal to RX-350.
FREQUENCY ACCURACY	+/- 90 Hz at 25*C at 30 MHz for 1 year.
ANTENNA CONNECTIONS	Coaxial: 50 ohms, nominal unbalanced. Terminal Posts: 450 ohms, nominal unbalanced.
SENSITIVITY	0.35 uV typical for 10 dB S+N/N @ 3 kHz bandwidth, SSB mode.
SELECTIVITY	34 filters built-in with 1.5:1 or better shape factors (-6 to -60 dB): 300 Hz, 330 Hz, 375 to 750 Hz in 75 Hz increments, 750 Hz to 3 kHz in 150 Hz increments, 3 kHz to 6 kHz in 300 Hz increments, and 8.0 kHz.
SPURIOUS FREE DYNAMIC RANGE	90 dB for 3 kHz bandwidth at 50 kHz tone spacing.
THIRD ORDER INTERCEPT	+10 dBm typical.
NOISE FLOOR	-126 dBm @ 3 kHz bandwidth.
S-METER	S9 calibrated to 50 uV standard.
RF ATTENUATOR	20 dB, selectable by operator
PASSBAND TUNING	+/- 2 kHz.
I-F FREQUENCIES	1st I-F 45 MHz, 2nd I-F 455 kHz, 3rd I-F 12 kHz.
I-F REJECTION>	60 dB typical.
IMAGE REJECTION	> 60 dB typical.
AUDIO	Speaker: 1 watt @ 4 ohms. Line out: > 1 V p-p into 600 ohms.
SPECTRUM SWEEP DISPLAY	8 widths from 240 Hz to 2.4 MHz, with tuning cursor and selectable Autosweep function.
POWER REQUIRED	110/220 VAC +/- 10% 50 - 60 Hz, or 12-14 VDC @1.5

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CONSTRUCTION	8 epoxy-glass PC boards, molded front panel, aluminum chassis, textured painted steel cover.
DIMENSIONS	HWD = 5" x 12.125" x 13" (12.7 x 30.8 x 33 cm.)
WEIGHT	12 lb. (5.45 kg.)