

*User selectable multicolor display!*



## World Class Performance in a Convenient Package

The Ten-Tec Model 599 Eagle signifies strength born from DSP technology in HF design. Listening to input from Ham radio operators from around the world led our team of engineers to a remarkable compact yet high performance transceiver that Hams of all ages and skill levels will find a joy to operate.

The large easy to read display can be conveniently configured with your favorite background color and intensity, making your Eagle a pleasure to use as a base, portable, or mobile radio. Flexibility also extends to the Eagle with Ten-Tec's Sensitune automatic antenna tuner, noise canceling circuitry, and of course Ten-Tec's famous selective roofing filters.

The Ten-Tec Eagle will truly provide years of outstanding performance unequaled by any other radio in its size or price class. You can be assured the Eagle offers more receiver horsepower with new DSP based architecture, Selectable Roofing filters, noise reduction, antenna tuner, and of course Ten-Tec's legendary QSK keying. A tribute to American ingenuity makes the Eagle a radio you can be proud to show your fellow Ham radio operators.

Whether you are a seasoned contester, DX chaser, net operator or a casual operator, the Ten-Tec Eagle has the performance and convenience that will provide years of operating enjoyment!

- Unlike any other radio in this price class the Eagle offers a combination of DSP and selectable roofing filter options to tailor your listening pleasure. Unlike most transceivers in this price class, Ten-Tec's unique crystal ladder filters help eliminate undesirable signals from entering the receivers first IF stage making a more enjoyable listening experience even in crowded band conditions.

- A Ten-Tec first: A user selectable color display which can be tailored to your favorite color and intensity. Different operating environments have varied lighting conditions so why not tailor your radio to meet those needs?

- You never have to worry about hearing the weak ones with the fully adjustable DSP noise reduction system used in the Eagle. Eliminating atmospheric band noise is just a push of the button!

- Tired of noise blankers that seldom work in a mobile environment? Ten-Tec's unique model 320 optional noise blanker will cancel noise you thought never would be possible.

- Eagle covers 10 HF amateur bands plus 6 meters along with general coverage receive. Dual VFO's with SPLIT mode and 100 memories, passband tuning, adjustable AGC, variable CW offset, RIT, built in CTCSS tones for 6 meter FM and Ten-Tec's legendary silky-smooth QSK for CW and fast switching digital modes. These features add up to one terrific radio!

## GENERAL SPECIFICATIONS

MICROPHONE CONNECTOR: 8-Pin  
HEADPHONE JACK: 1/4" Mono  
EXTERNAL CW KEY JACK: 1/8" Stereo  
EXTERNAL SPEAKER JACK: 1/8" Mono  
AUX DC OUTPUT CONNECTOR: RCA x2  
FREQUENCY RANGE TX: Ham Bands Only (160-6M)  
ACC DIN CONNECTOR: 8 PIN DIN Connector - Line In, Line Out, Aux PTT, Ext Key, Clock/Data/Enable, Ground  
DC POWER CONNECTOR: Power Pole  
FUSE: Automotive Blade Style Fuse, 25 Amp 32V  
FREQUENCY RANGE RX: 100 kHz - 30 MHz and 48 - 54 MHz. Specifications apply within Amateur Radio bands only.  
TUNING STEP SIZE: 1, 10, 100, 1000, 10000  
FREQUENCY STABILITY: Maximum +/- 0.5 PPM over operating temperature  
ANTENNA IMPEDANCE: 50 ohms nominal.  
ANTENNA CONNECTORS: 1 x SO-239 transceiver  
MODES: USB, LSB, CW, AM (optional), FM (optional)  
MEMORIES: 100  
FREQUENCY ACCURACY: ±5Hz @25°C, 1 Hz tuning resolution  
SUPPLY VOLTAGE RANGE: 13.8V +/-15%  
OPERATING TEMP. RANGE: 0-50 degrees Celsius  
DIMENSIONS (HxWxD): 2.9" x 8.5" x 10.25" (excluding knobs and connectors)  
WEIGHT: 7.25 lbs with all options  
CONSTRUCTION: Molded plastic front panel, aluminum chassis and texture painted steel covers  
PC CONTROL PORT: USB (using FTDI USB to UART Driver)  
DISPLAY: Custom FSTN monochrome LCD  
DISPLAY BACKLIGHT: 256 colors X 16 intensity levels

## RECEIVER SPECIFICATIONS

SSB SENSITIVITY: 0.5uV, 2.4kHz, 10dB SINAD, preamp off  
AM SENSITIVITY: 1.3uV, 30% Mod, 6kHz BW, 10dB SINAD, preamp off  
FM SENSITIVITY: 2.2uV, 5kHz Dev, 16kHz BW, 10dB SINAD, preamp off

SELECTIVITY IF1: 2.4kHz standard, 9.0015 MHz, 2 options  
SELECTIVITY IF2: 30 KHz Lowpass filter  
SELECTIVITY, DSP IF: 127 built-in DSP filters from 100-15000 Hz BW.  
IP3 (THIRD ORDER INTERCEPT POINT): 21.5dBm/20kHz tone separation, 19.5dBm/2kHz, preamp off  
IMD3 DYNAMIC RANGE: 100dB/20kHz, 99dB/2kHz, 300 Hz BW, preamp off  
BLOCKING DYNAMIC RANGE: 141dB/20kHz, 130dB/2kHz, 500 Hz BW, preamp off  
LO PHASE NOISE: -132dBc/Hz@20kHz, -121dBc/Hz@2kHz  
NOISE FLOOR: -137dBm/300Hz BW, preamp on  
IMAGE REJECTION: 1st IF: >90dB/HF bands, >70dB/6M; 2ND IF: >73dB  
IF FREQUENCIES: 1st:9.0015 MHz, 2nd:22.5 kHz, 3rd:0 Hz (DSP)  
IF REJECTION: >70dB  
OTHER SPURIOUS RESPONSE REJECTION  
REJECTION: >80dB; Birdies: <-100dBm equivalent\*  
PASS BAND TUNING: +/- 2.1kHz, 5Hz steps, 80 step deadband middle of POT  
ATTENUATOR: 10 db  
PREAMP: 12 db  
AUDIO OUTPUT: 2W into 4 ohms, <3% THD  
RIT RANGE: +/- 8.2 kHz  
RIT STEP SIZE: 10Hz  
S-METER REFERENCE: S9 = 50 uV RMS  
TX>RX RECOVERY TIME: < 20 ms  
RX HEADPHONE OUTPUT: Designed for 16-32 ohms impedance headphones. Usable at 8 ohms  
AUX AUDIO OUTPUT: 500 mv  
AUTO NOTCH: IF DSP, multi-tone  
RX NOISE REDUCTION: IF DSP, adjustable  
NOISE BLANKER: Optional HW, 2 levels of blanking  
RX CURRENT DRAIN: 1.25 Amps  
# OF IF DSP FILTERS: 127 built-in DSP filters from 100-15000 Hz BW.  
GENERAL COVERAGE RECEIVE: degraded specs outside ham bands

## TRANSMITTER SPECIFICATIONS

RF POWER OUTPUT: Adjustable, 5-100 W, +/- 1 dB  
CW & SSB DUTY CYCLE: continuous service @ 100W  
AM, FM, AFSK, PSK DUTY CYCLE: continuous service @ 100W, 50% duty cycle (Tx/Rx)  
AM TX BANDWIDTH: 6k  
MICROPHONE INPUT IMPEDANCE: >10 k-ohms at 1 kHz  
MICROPHONE SENSITIVITY: 1 mV RMS for full power output, internal gain adjustment, 9v dc power for electret elements  
FM DEVIATION: +/- 5 kHz peak nominal  
AUX LEVEL INPUT: variable, 200mV nominal  
SSB CARRIER SUPPRESSION: > 70 dB  
UNWANTED SIDEBAND SUPPRESSION: > 60 dB at 1 kHz  
HARMONIC & SPURIOUS OUTPUTS: <-50dBc @100 W <30MHz; -60dB >30MHz; -43 dB <5 W  
T/R SWITCHING: PTT or VOX on SSB, AM, FM, QSK on CW  
CW KEYSER TYPE: Internal Curtis Mode B  
CW RISE AND FALL TIMES: 5ms  
CW OFFSET: adjustable  
CW KEYSER SPEED: 5-50 WPM, adjustable weighting  
CURRENT DRAIN: transmit 20 amps typ.  
THIRD ORDER INTERMOD: Better than 25dB below peak  
SSB GENERATION: DSP Generated  
# OF DSP GENERATED TX BANDWIDTHS: 3 built-in DSP filters - automatically selected - standard = 2.4KHz for SSB/CW; optional = 6KHz for AM, 12KHz for FM

## ANTENNA TUNER SPECIFICATIONS

TYPE: Reversible L-network  
MATCHING FREQUENCY RANGE: 160 to 10 Meters, no Six Meters  
MATCHING IMPEDANCE RANGE: 10:1 SWR typical

## OPTIONS

FILTERS: 2.4K standard, optional = 300, 600, 1k, 1.8k, 6k, 15k  
NOISE BLANKER: daughter board module  
ROOFING FILTERS: 4-pole xtal, 9.0015 MHz center frequency

**Please note: These are preliminary specifications and are subject to change without notice.**



Back panel

[www.tentec.com](http://www.tentec.com)

**TEN-TEC**  
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