

EAGLE

Model 599

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 transceive
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: 0.5µV, 2.4kHz, 10dB SINAD, preamp off
AM SENSITIVITY: 1.3µV, 30% Mod, 6kHz BW, 10dB SINAD, preamp off
FM SENSITIVITY: 2.2µV, 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 µV 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

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TEN-TEC
The SSB Company

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