



ST-6 RTTY DEMODULATOR

HAL COMMUNICATIONS CORP.



GENERAL

The ST-6 RTTY Demodulator provides outstanding performance for reception of FSK radioteletype signals. Features such as autostart operation, antispace circuitry, 850 and 170 Hz shifts, and a self-contained loop supply make the ST-6 the value it is.

Bandpass input filters and linear discriminators for each shift allow the reception of signals having incorrect or non-standard shifts as well as those having correct shift. The addition of an optional 425 Hz discriminator, and two AFSK tone keyers makes a complete terminal unit for reception and transmission of FSK RTTY. The ST-6 is compatible with the HAL TTY Video display unit and keyboard as well as conventional mechanical equipment.

SPECIFICATIONS

Electrical

Input Data Rate: Up to 75 Baud (100 WPM) standard.

Input Signal: Audio Tones in the range of 2000 - 3000 Hz.

Input Impedance: 600 ohms, unbalanced.

Output Signals - Loop or Low Level

Loop: TTY current loop, 60 ma at 175 VDC

Low Level: Bipolar voltage compatible with RS-232B

-15 VDC Mark (1K ohm load)

+15 VDC Space (1K ohm load)

Bandpass Filter Bandwidth (-3 db points)

Shift: 850 Hz 170 Hz

Bandwidth: 1100 Hz 260 Hz

Limiter Threshold: "FM" Mode, 1.0 mv RMS (-57 dbm)

"AM" Mode, 50 mv RMS (-24 dbm)

Maximum Input: 3.5 v RMS (+13 dbm)

Discriminator Frequencies (\pm 5 Hz)

Shift: 850 Hz 170 Hz 425 Hz (optional)

Mark: 2125 Hz 2125 Hz 2125 Hz

Space: 2975 Hz 2295 Hz 2550 Hz

Discriminator Filter Bandwidth (-3 db points)

Shift: 850 Hz 170 Hz 425 Hz (optional)

Bandwidth: 200 Hz 125 Hz 150 Hz

Automatic Threshold Control: Permits copy on mark-only or space-only

Autostart Response Time: "Slow" - 3.5 sec.

"Fast" - 1.5 sec.

Motor Control Dropout Time: 30 sec. \pm 10 sec. AC connector on rear panel for motor connection.

Tuning Indicator: Front panel meter. Filter output available on rear panel for use with scope tuning aid.

CW ID Key Input: Provides key input for narrow shift CW ID in FSK systems, or control of CW ID portion of optional tone keyers.

Physical

Cabinet Finish: Light gray front and rear panels;
Textured dark gray top, bottom, and sides.

Cabinet Style: Table or Rack Mount

Size: Table: 3.50 H x 12 D x 17 W (inches)

8,9 H x 30,5 D x 43,2 W (cm)

Rack: 3.50 H x 12 D x 19 W (inches)

8,9 H x 30,5 D x 48,3 W (cm)

Weight: 12.0 lbs. (5.45 kg) net, 15 lbs. (6.82 kg) shipping.

Power: 105-125 VAC (210-250 VAC optional), 50-60 Hz, 100 ma. maximum

Construction: Seven plug-in glass epoxy printed circuit boards.

OPTIONAL EQUIPMENT

ST-6 425 Hz Discriminator

The 425 Hz Discriminator provides optimum performance for reception of commercial stations using 425 or 400 Hz shift and improved performance down to 200 Hz shift. It is used with the 850 Hz input bandpass filter, and is automatically switched by the ST-6 front panel shift switch. The discriminator is constructed on a plug-in glass epoxy printed circuit board.

AK-1 AFSK Oscillator (Tone Keyer)

The AK-1 keyer provides mark, space, and CW ID audio tones compatible with the ST-6 for the AFSK method of transmission with SSB transmitters. Constructed on a glass epoxy printed circuit board, the AK-1 plugs into a connector provided in the ST-6 chassis and is automatically keyed by the low level data output of the ST-6. Refer to AK-1 data sheet.

XTK-100 Crystal AFSK Oscillator (Tone Keyer)

The XTK-100 crystal control keyer provides the same features of the AK-1, but with increased long and short term stability given by crystal control of the audio tones. Refer to the XTK-100 data sheet.

ORDERING INFORMATION

When ordering the ST-6 Demodulator, specify table or rack mount cabinet, and options desired (425 Hz discriminator and/or AK-1 or XTK-100 tone keyers).

Manufactured by:

Representative or Distributor:



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