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Hy-Gain 3750 Amateur Transceiver

1.8-30.0 MHz (160-10 meters)



3854

3750

3855

**The finest
Amateur Transceiver
you can buy.**

hy-gain[®]
Amateur Radio Systems.

Hy-Gain Electronics Corporation 8601 Northeast Highway Six; Lincoln, NE 68505

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Hy-Gain 3750 SSB/CW Amateur Transceiver

1.8-30.0 MHz (160-10 meters)

The Hy-Gain 3750 is, unquestionably, a transceiver of the highest possible quality. This coupled with its outstanding performance and entirely reasonable price, makes it a truly remarkable value for the serious radio amateur.

The 3750 covers all amateur bands from 1.8 through 29.7 MHz. It utilizes an advanced Phase-Lock-Loop circuit system to lock the first local oscillator with the VFO, providing direct injection into the first i-f at 9 MHz.

The first i-f incorporates a narrow band SSB crystal filter which virtually eliminates receiver image and spurious response problems. Transmitted spurious signals are also reduced to the absolute minimum.

Receiver intermodulation and cross modulation performance are enhanced through the use of dual-gate MOS FET's at all critical RF amplifier and mixer stages. Strong signal handling capabilities are further improved through the inclusion of a selectable RF attenuator. This RF attenuator combined with dual-gate MOS FET's in all stages ahead of the crystal filter means the Hy-Gain 3750 delivers the maximum dynamic range attainable with current technology.

For improved skirt selectivity and heterodyne interference reduction the 3750 uses a second i-f with a T-notch filter at 50 kHz. In combination with the 9 MHz crystal filter, this provides an ultimate signal attenuation of 100 dB at ± 20 kHz, a level not available with any other unit.

A gated, front panel adjustable noise blanker ahead of the high selectivity stages reduces their pulse stretching before performance is affected by degradation of cross modulation capability.

In the transmitter an audio compression circuit and automatic level control are used to maintain a high average power output. A microphone compression circuit gives up to 20 dB of audio compression and the ALC provides an additional 20 dB to prevent "flat topping" and transmitted adjacent channel splatter. A low pass filter is also incorporated in the output circuit to reduce TVI problems generated by harmonics. The output stage has two specially developed S-2002 tubes for high peak power output with maximum plate dissipation characteristics. For further protection a whisper-quiet fan is

standard equipment.

The VFO section of the 3750 has exceptional stability. Drift is less than 500 Hz from turn-on to 10 minutes and less than 100 Hz after a 30 minute warm-up.

Tuning the sophisticated 3750 is easy and exceedingly accurate. A rotating dial (0-500kHz) gives slow-speed frequency indication for easy band-scanning and an electronic frequency counter with a four-place digital readout gives TX/RX frequencies to 100 Hz for pinpoint accuracy. The tuning section incorporates a unique memory feature for retaining interesting areas of signal activity with a flip of a switch, while you scan other frequencies. No crystal calibrator is used in the 3750, since a 10 MHz WWV receive position is included. Once the counter has been calibrated against WWV the 3750 needs no further adjustment between bands.

Other features include a noise blanker VOX, and side-tone circuits. All stages have been by-passed and tightly sealed to improve performance and reduce internally generated "birdies" to the minimum possible.

The Hy-Gain 3750 is truly the finest amateur transceiver available today.

SPECIFICATIONS

Frequency coverage

1.8 MHz Band	1.8	2.0 MHz
3.5 MHz Band	3.5	4.0 MHz
7.0 MHz Band	7.0	7.5 MHz
14 MHz Band	14.0	14.5 MHz
21 MHz Band	21.0	21.5 MHz
28 MHz Band A	28.0	28.5 MHz
28 MHz Band B	28.5	29.0 MHz
28 MHz Band C	29.0	29.5 MHz
28 MHz Band D	29.5	30.0 MHz
WWV	RX only	10.0 MHz

MIC. input impedance

50K Ω

Frequency

300 2700Hz (-6dB)

Sensitivity

SSB less than .25 μ V for
10 dB S/N+N ratio
CW less than .15 μ V for
10 dB S/N+N ratio

Modes of operation

SSB (LSB or USB)
CW

Input power

200W
1.8-21.5MHz
100W
28-30MHz

ANT. impedance

50 Ω 75 Ω (Unbalanced)

Carrier suppression

More than 50dB

Side band suppression

More than 50dB

Spurious and harmonic suppression

Greater than 40dB

3rd order distortion products suppression

Greater than 30dB

IF Frequencies

1st IF 9MHz
2nd IF 50kHz

Selectivity

SSB 2.4kHz (-6dB)
4.0kHz (-66dB)
CW 400Hz (-6dB)
1.8kHz (-66dB)

Audio output into 8 Ω load

2.5W (10% distortion)

Power source

AC 120V 50/60 Hz (can be re-wired for 240V)

Order No. Description.

3750	SSB/CW amateur transceiver 1.8-30.0 MHz (160-10 meters)
3854	Matching speaker unit w/tailored audio frequency response
3855	Complete external VFO w/provision for 7 crystal controlled channels

Power drain

400VA TX
78VA RX
48VA RX (Power tube OFF)

Semi-conductors

Transistor 98
IC 43
Diode 120
Tube 3
Digital Ind. 1

Weight

44 lbs. 6 ozs. (23kg)

Dimensions

16 $\frac{3}{4}$ " x 7" x 13 $\frac{5}{8}$ " (420 x 172 x 340mm)

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