FOR MOBILE, PORTABLE OR BASE USE

ASTRO 150A

Professional Grade HF/SSB Transceiver

THE MICROPROCESSOR CONTROLLED TRANSCEIVER FEATURING VRS®—A KNOB WITH A NEW TWIST!

FEATURES

- ✓ **High Power—Full 235 Watt Input, 100 Watt Output PEP and CW—All Bands**
- ✓ **Truly Synthesized in Accurate 100 Hz Steps**
- ✓ **Full CW Break-In**
- ✓ **Standby Memory**
- ✓ **True PEP Output Meter**
- ✓ **Microphone Tuning**
- ✓ **CWN Filter (crystal)**
- ✓ **Exceptional Immunity to Overload and Cross Modulation**
- ✓ **Dual Gate MOSFET RF Amplifier**

The ASTRO-150A is an extremely high quality Transceiver in both circuitry design and construction. Emphasis has been placed on performance and human engineering. QST's Product Review stated, "The quality of construction is second to none. In fact the reviewer was reminded of a well-executed piece of expensive commercial or industrial test gear."

MIL grade double sided plated through epoxy glass boards are used throughout. Circuit boards are interconnected by means of strip line connectors and coax microconnectors for reliability and ease of service. No bulky wiring harnesses.

The choice of circuitry prompted QST to also add, "It is this design choice that is probably responsible for the excellent dynamic range of the receiver."

The VRS® tuning system employs a knob with a center detent. In the center position the receive or transmit frequency is locked and indicated by the LED frequency readout. If the knob is rotated clockwise or counterclockwise scanning up or down is initiated. The rate of scanning is proportioned to the degree of knob rotation. Returning to the detent position stops the scan. "Reading the mail" is a simple and automatic function!

For mobile operation tuning is accomplished by the microphone up-down push buttons. No need to take your eyes off the road! A single push on a button will move the frequency by one precise 100 Hz increment. Holding a button down will initiate a smooth up/down scan stopping instantly upon release of the button!

Study the specifications, talk to fellow hams using the ASTRO-150, and visit your dealer for a demonstration.

Compare the performance and quality of this all American designed and American produced radio. You won't want to leave the store without one!

CUBIC COMMUNICATIONS, INC.

305 Airport Road, Oceanside, CA 92054 (714) 757-7525 / Telex: 695435; ANS BK: Cubicom, OCEN.

In addition to outstanding quality, all Cubic Communications products are backed by a responsive Factory Service Department. Skilled technicians working in close cooperation with the Engineering Department are at your service to assure your ultimate satisfaction.

ASTRO 150A
TECHNICAL SPECIFICATIONS

GENERAL

Frequency Range:

160M	1.8- 2.4 MHz*
80M	3.0- 4.5 MHz
40M	6.0- 8.3 MHz
20M	13.0-15.0 MHz
15M	20.8-23.0 MHz
10M	28.0-30.0 MHz**

*Mode 151 Only
**Mode 150 Only

Frequency Resolution:
100 Hz synthesized steps, with continuously variable "fine" control for infinite resolution between 100 Hz synthesized steps

Frequency Stability:
10 Hz per hour after warm-up

Frequency Readout:
6 Digit LED

Frequency Control:
1. VRS (Variable Rate Scan) Up or Down in precise 100 Hz Steps with center "off." Scan rate vanible from approximately 200 Hz to 80 kHz per second depending on how far VRS knob is rotated from center detent.
2. Microphone push buttons provide precise 100 Hz per push up or down, or continuous scan when held down. Mic scan rate set to operator's preference by internal control.

Modes:
USB, LSB, CW, CWN

Break-In:
Full or Semi, Switch controlled on front panel

Input Power:
13.6 VDC @ 18A peak (transmit)
1A (receive)

Antenna Impedance:
50 ohms unbalanced

Memory:
Remembers last used frequency on each band. Memory is retained as long as power applied or OFF-STANDBY-ON switch is in STANDBY

RECEIVER

Sensitivity:
.35μv for 10dB $\frac{S+N}{N}$ typical

Circuit Design:
Single conversion to 9.00155 MHz IF. Receive signal filtered by lowpass and three section bandpass filters then amplified by a dual gate MOSFET feeding a double balanced diode ring mixer. This design provides exceptional immunity to overload and cross modulation.

Selectivity:
8 pole filter, 6dB 2.7 kHz, 60dB 4.32 kHz (1.6:1 shape factor) SSB and CW.
CWN-300 Hz (crystal filter)

Audio Output:
>3 watts into 4 ohms

Audio Response:
300 to 3000 Hz

Image Ratio:
Better than 60dB

AGC Control:
6dB audio change with 100dB RF input change

RIT Range:
Approximately ± 300 Hz

Noise Floor:
Typically -130dBm

IMD Dynamic Range:
-85dB typical

Noise Blanker:
Sophisticated impulse type with independent AGC and FET blanking gate. Adds no undesirable cross modulation when operating.

Metering:
"S" Units 1 to 9 and to + 60dB above S9 (S9 = 50 μv)

TRANSMITTER

RF Input Power:
235 watts all modes, all bands

RF Power Output:
100 watts all modes, all bands limited by ALC to 100 watts PEP or CW

Duty Cycle:
100% for voice or CW, 50% for RTTY or facsimile unless small external blower used

VSWR Shutdown:
Full power up to VSWR = 1.7:1
Approximate limit rates as follows:

VSWR	Percent Power
1.5	100%
2:0	80%
3:0	60%
∞	25%

Full protection for output devices

Carrier Suppression:
Better than 50dB

Sideband Suppression:
Better than 60dB

Harmonic & Spurious Suppression:
Harmonic -45dB and other spurious -55dB below peak power

Third Order Distortion Products:
Better than 32dB down

VOX-PTT:
Internally adjustable

Sidetone:
Level controlled by internal control to suit operator preference

Metering:
Forward power in watts, PEP

Audio Frequency Response:
300-3000 Hz

Microphone Impedance:
47K ohms. Supplied with microphone equipped with push button tuning

PHYSICAL

Controls:
AF Gain/IF Gain
Mic Gain (also sets CW Power)
RIT
Fine Frequency (Transmit & Receive)
VRS Control
Mode
Band
CW Break-In, Full or Semi
NB—On/Off
VOX/PTT
Power On/Standby/Off

Indicators:
LED Frequency Readout

Front Panel Connectors:
MIC/KEY

Rear Panel Connectors:
13.6 VDC Input
EXT Modulation, RCA Jack
EXT Key, RCA Jack
EXT Relay (Linear Keying), RCA Jack
EXT Speaker, Phone Jack
Antenna Connector, UHF Type
Fuse
Ground Lug

Dimensions:
3¾" (95mm) H x 9¾" (248mm) W x 11⅞" (302mm) D

Weight:
12.9 lbs (5.85 kg)

ENVIRONMENT

Temperature Range:
Operating: -20° to + 50°C
Storage: -30° to + 70°C

Humidity:
95%

Shock & Vibration:
Meets all applicable EIA specifications for vehicular environment. Supplied with mobile mounting bracket.

ACCESSORIES

PSU-1B Power Supply with Speaker
Provides 13.6 VDC at 20A peak regulated output from 115 VAC, 50/60 Hz at 6A/3A peak AC input. Height and color scheme to match transceiver.

COMPATIBLE PRODUCTS

- ST-2B Antenna Tuner (2kw)
- ST-3B Antenna Tuner (200 watts)
- 1500A 1500 watt Linear Amplifier

Specifications subject to change without notice.

Printed in U.S.A. 9-80-2M

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Represented by: