

CAP, MARS & 160 Meter SSB Transceivers

A unique series of low cost crystal-controlled SSB transceivers especially designed for use by CAP, MARS, and 160 meter hams



Kit HW-18-1
CAP
\$119⁹⁵
(including crystals)

Wired HWW-18-1
CAP
\$179⁹⁵
(including crystals)

Kit HW-18-2
MARS
\$109⁹⁵
(less crystals)

Kit HW-18-3
160 meters
\$109⁹⁵
(less crystals)

The Heathkit HW-18 Series . . . 2-Channel, 200-Watt SSB Transceivers

- 200 watts PEP SSB input • 25 watts input with carrier for compatibility with AM stations • CAP version employs upper sideband, MARS upper or lower sideband, 160 meter model lower sideband • CAP complies with new FCC rule effective June 21, 1968 which establishes a CAP SSB frequency tolerance of .005% until Jan. 1, 1973 and 50 Hz thereafter • Crystal filter sideband generation • 2 channels, switch selected, crystal controlled (tolerance .005%) • Fixed tuned for simple PTT operation • Transmit and receive frequencies locked together for true transceiver operation • Clarifier control adjusts transceiver frequency ± 100 Hz • Relayless transmit-receive switching • Local-Distance switch prevents receiver overload from strong local stations • Built-in speaker • PTT mic. included • Carrier & sideband suppression 45 dB • Sensitivity 1 μ v • Selectivity 2.1 kHz • 50 ohm coax output • Mobile or "fixed" use • HP-13 & HP-23A power supplies (See amateur accessories) • Mobile mount included

GOOD NEWS FOR CAP, MARS, AND 160 METER OPS. Now there is a special series of Heathkit SSB transceivers designed with your needs in mind, priced with your budget in mind. No more adapting commercial rigs, no more converting surplus military gear, no more make-shift set-ups. The new Heathkit HW-18 series is tailored just for you with the sensitivity, selectivity, power output, and operating convenience that make for effective, efficient communication at a fraction of the costs you've had to pay in the past.

COMPARE THE FEATURES, COMPARE THE CONVENIENCE, COMPARE THE PERFORMANCE. Power that speaks with authority . . . 200 watts of peak envelope power input on single sideband provides talk-power equal to 800 watts AM input . . . and for compatibility with stations equipped with AM receivers only, just flip a switch to insert carrier. And nothing is easier to operate . . . just select the channel and pick up the microphone . . . no power amplifier tuning, no loading adjustments, no receiver tuning. Automatic Level Control (ALC) holds the transmitter output constant under varying voice levels . . . the built-in meter checks ALC as well as transmitter plate current and received signal strength. Trimming capacitors provide easy, exact adjustment of transmitter frequency.

SENSITIVE, MODERN RECEIVER. No drifting off channel with this one, for transmitter and receiver frequency are crystal-controlled, locked together, always on the same frequency, always on the same sideband. And the Clarifier Control corrects the transceiver frequency within the .005% tolerance to assure accurate "netting." The crystal filter IF provides the high selectivity needed to eliminate adjacent channel interference. The product detector provides clear SSB reception with no control juggling. The Local-Distance switch prevents overloading of the receiver by nearby net stations. Best of all . . . the sensitivity of 1 microvolt for a 15 dB S+N/N ratio means solid copy every time. So easy to use that all that's required is to release the push-to-talk button on the microphone to hear the reply . . . even a 4" x 6" speaker is built-in.

12 TUBE CIRCUIT, 17 TUBE FUNCTION. Multi-section tubes keep the number of tubes low, yet provide the functions required for a sophisticated

transceiver. Nearly everything except the front panel controls mount on one large circuit board for fast, easy construction and a wiring harness makes interconnections simple.

ALIGNMENT REQUIRES ONLY A VOLTMETER, OHMMETER AND DUMMY LOAD. Circuit may be powered by HP-13 DC supply for mobile use or HP-23A AC supply for fixed station operation. Whether you operate CAP, MARS, or 160 meters, this HW-18 series provides fine performance fixed-frequency SSB facilities at the lowest cost anywhere. Order yours now.

Kit HW-18-1, CAP transceiver and crystals for any two channel frequencies from list below; specify choices; 16 lbs., no money dn., \$11 mo. **\$119.95**

Assembled HWW-18-1, ready to operate CAP transceiver with crystals for any two channel frequencies from list below; specify choices; 16 lbs., no money dn., \$17 mo. **\$179.95**

CAP CRYSTALS; channel frequency: 4467.5, 4507.5, 4585, 4602.5, 4630 kHz; 1 lb. ea. **\$4.95**

Kit HW-18-2, MARS transceiver less channel crystals, 16 lbs., no money dn., \$11 mo. **\$109.95**

MARS CRYSTALS; specify LSB or USB operation & channel frequencies (both channels must use same sideband); 4451.5, 4518.5, 4558.5, 4581.5, 4591.5, 4595 kHz; 1 lb. ea. **\$4.95**

Kit HW-18-3, 160 M transceiver less crystals, 16 lbs., no money dn., \$11 mo. **\$109.95**

160 METER MODEL HETERODYNE CRYSTALS for operation on: 1805, 1809, 1813, 1817, 1821 kHz; 1 lb. ea. **\$4.95**

HW-18 SERIES SPECIFICATIONS—RECEIVER SECTION: Frequency coverage: HW-18-1 & 2, 4450 to 4650 kHz; HW-18-3, 1800 to 2000 kHz. Channels: 2. Sideband: HW-18-1, USB; HW-18-2, USB or LSB option; HW-18-3, LSB. Clarifier range: HW-18-1 & 2, ± 100 Hz; HW-18-3, ± 250 Hz. Sensitivity: All models, 1 μ v input signal will provide at least a 15 dB signal-plus-noise to noise ratio. Selectivity: 2.1 kHz nominal @ 6 dB down, 6 kHz @ 50 dB down (3395 kHz filter). Intermediate frequency: All models, 3395 kHz. Image rejection: 100 dB. IF Rejection: 50 dB. Antenna input impedance: 50 ohm, unbalanced. Receiver audio response: 400 to 3000 Hz. Receiver audio power output: 1 watt. Internal speaker: 8 ohm impedance 4" x 6". **TRANSMITTER SECTION:** Frequency coverage: HW-18-1 & 2, 4450 to 4650 kHz; HW-18-3, 1800 to 2000 kHz. Channels: 2. Transmitting mode: HW-18-1, upper sideband carrier suppressed, and low level carrier with sideband. HW-18-2, upper or lower (optional) sideband carrier suppressed, and low-level carrier with sideband. HW-18-3, lower sideband. Frequency accuracy: HW-18-1 & 2, .005% overall (after adjusting to channel frequency). HW-18-3, .005%. Clarifier range: HW-18-1 & 2, ± 100 Hz; HW-18-3, ± 250 Hz. RF Power input: 200 watts PEP. Output impedance: 50 ohm, unbalanced. Transmitter audio response: 400 to 3100 Hz. Microphone: High impedance ceramic. Unwanted sideband suppression: 45 dB min. below peak output with 1000 Hz modulation. Carrier suppression: 45 dB min. below peak output. Ambient temperature range: +10° to +110°F. Controls: Front panel: Volume with on/off switch, Reception, Mode, Meter, Channel, Clarifier, Meter Zero, Bias Adjust. Circuit board: Carrier null. Chassis rear: Mic. gain. **GENERAL SPECIFICATIONS:** Power requirements: 800 VDC @ 250 mA peak, 250 VDC @ 100 mA, —130 VDC @ 5 mA, 12.6 VAC or VDC @ 3.75 amperes. Tube complement: (3) 6EA8 microphone amp & AF cathode follower, transmitter IF amp & relay amp, RF amp & receiver mixer; (4) 6AU6 heterodyne osc., IF amps (2), transmitter mixer; (1) 12BY7 transmitter driver; (1) 12AT7 prod. detector & carrier osc.; (1) 6EB8 AF amp & AF output; (2) 6G5 transmitter RF output. Cabinet dimensions: 6 1/4" H x 12 1/4" W x 10" D. Add 1" to height, width, & depth for gimbal bracket, knobs & connecting plugs. Net weight: 12 lbs.