

L787K



## Two-Meter Transceiver and Mobile Power Supply



Exclusive distributor for Norway  
**HAUER RADIO A/S**  
Kongshavn, 0700 Oslo 3  
Telex: 184117

HW17

**Dependable, Rugged Mobile Operation** . . . with the HWA-17-1 optional solid-state power supply. Goes together in just a few hours. Mount it almost anywhere in the car — 10 feet of connecting cable supplied. No modifications necessary to the HW-17 — just plug it in and you're ready to go.

## Heathkit® 2-Meter AM Amateur Transceiver Kit and Optional Solid-State Mobile Power Supply Kit

**The Heathkit HW-17 2-Meter AM Transceiver . . . the finest in value and performance for the VHF enthusiast.**

**Extended Coverage** . . . transceives not only on the 2-meter ham band, but also capable of MARS, CAP and U. S. Coast Guard Auxiliary operation.

**All Solid-State Receiver** . . . the HW-17 receiver section is completely transistorized and employs 15 transistors in a high performance double conversion superhet circuit.

**Relayless PTT Operation** . . . switching done quickly — quietly by solid-state circuits.

**Prebuilt, Prealigned Toner** . . . speeds assembly, minimizes construction errors. Incorporates an advanced design PET (Field Effect Transistor) circuit for low noise, low cross-modulation and higher amplification.

**Crystal Controlled or VFO Transmit Option** . . . one crystal supplied (145.08 MHz), sockets for three more of your choice. Or plug in the Heathkit HG-10 Series VFO (power and input jacks are provided on the rear apron of the HW-17).

**Battery-Saver Switch** . . . activates only the receiver section and draws just 100 mA — just the thing for mobile monitoring.

**Fixed or Mobile** . . . the HW-17 can be quickly switched from one type of operation to the other, thanks to the gimbal mounting bracket and separate power cables.

**Built-In AC Power Supply** . . . the HW-17 can be operated from either 120 v. or 240 v., 50-60 Hz sources depending on wiring option selected.

**High Sensitivity** . . . receiver features 1 uv sensitivity for 10 dB signal plus noise to noise ratio.

**Dual AGC** . . . Automatic Gain Control voltage is derived from both the audio and IF circuits to provide optimum reception of both DX and strong local signals.

**Automatic Noise Limiter** . . . the ANL is activated by pulling out the squelch control knob and effectively reduces interfering impulse noise.

**"Spot" Function** . . . helps to quickly determine transmitting frequency by activating the exciter stages of the transmitter.

**Optimum Selectivity** . . . selectivity of 27 kHz at the 6 dB points is most consistent with ease of tuning and band occupancy.

**Squelch Circuit** . . . sensitive squelch circuit eliminates background noise between transmissions.

**High Output Per Dollar** . . . the output of the transmitter is 8 to 10 watts; input to the final is 25 to 30 watts.

**Less Sideband Splatter** . . . modulating frequencies above 3500 Hz are attenuated to reduce the splatter of higher frequencies in the sidebands.

**Short Construction Time** . . . the 15 transistor, 20 diode, 3 tube circuit on two circuit boards goes together in about 25 hours.

**Fixed Level Microphone Gain** . . . provides overmodulation protection by clipping any voice input above the predetermined level.

**Relative Power/Signal Strength Meter** . . . indicates relative power output when mike button is depressed; signal strength when in receive mode.

**Front Panel Controls** for Final Load, Final Tune and Driver Tune are easily adjustable for maximum power output.

**Built-In Speaker** . . . essential for mobile installations where space is at a premium. Delivers up to 2 watts of audio power.

**Microphone Supplied** . . . a PTT ceramic hand-held microphone is supplied with coil cord and hanger.

**Headphone Jack** . . . jack for low impedance phones is located on the rear apron.

**Handsome** . . . the HW-17 is housed in an attractive two-tone green wrinkle finish and matches the latest Heath designs.

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## HW-17 SPECIFICATIONS

### TRANSMITTER:

**Frequency Coverage:** 143.2 MHz to 148.2 MHz.

**Power Input:** 25 to 30 watts.

**Output Impedance:** 50-72 ohm unbalanced.

**Power Output:** 8 to 10 watts.

**Transmitting Mode:** A3 emission (AM).

**Modulation Capability:** Modulation is automatically limited to 100% or less.

**Frequency Control:** Limited to four internal crystals or an external VFO, such as the Heathkit Model HG-10B.

**Crystal Holder:** One HC6/U type and three FT243 types.

**Crystal Multiplication:** 18 times.

**Microphone:** Ceramic PTT (furnished).

**Tubes:** 7059 — oscillator and tripler; tripler. 12GN7 — doubler-driver, 8156 — PA final.

**Final Tuning:** Series tuned, link coupled.

**Note:** This transceiver is wired to power the Heathkit Model HG-10 series VFO.

### RECEIVER:

**Frequency Coverage:** 143.2 MHz to 148.2 MHz.

**Receiving Mode:** Type A3 emission (AM).

**Sensitivity:** 1 microvolt or less for 10 dB signal-plus-noise to noise ratio (30% modulation at 400 Hz).

**IF Selectivity:** 27 kHz at 6 dB down.

**Intermediate Frequencies:** 24.965 MHz and 2 MHz.

**Antenna Input Impedance:** 50-72 ohm unbalanced.

**Audio Output Power:** 1 watt at less than 10% distortion.  
2 watts maximum.

**Transistors:** (2) UC734 RF amplifier and mixer; (1) SE5023 HF oscillator; (4) 2N3694 IF amplifiers second mixer, second oscillator; (4) 2N3393 audio preamplifier, microphone amplifier, microphone squelch amplifier; (1) X29A829 Squelch gate; (2) 40050 audio output; (1) 2N1274 audio driver.

### GENERAL:

**Dial Calibration:** Every 100 kHz.

**Temperature Range:** 20 degree C to +50 degree C.

**Power Requirements:** 120 or 240 volts AC input, 50-60 Hz.

**Battery Saver:** 8 watts.

**Receiver Trans:** 20 watts.

**Spot:** 35 watts.

**Transmit:** 100 watts.

**Cabinet Dimensions:** 14½" W. x 8½" D. x 8½" H. including microphone and feet.

**Net Weight:** 13 lbs.

## HWA-17-1 SPECIFICATIONS

**Input Voltage:** 12 to 15 volts DC.

**Input Current:** 10 amperes maximum.

**Allowable Ambient Temperature:** 10 degrees F to 122 degrees F.

**High Voltage Output:** 380 VDC, no load; 340 VDC at 150 mA load.

**Ripple:** Less than 1% at 150 mA.

**Duty Cycle:** 50%.

**Conversion Frequency:** 2500 Hz (approx.)

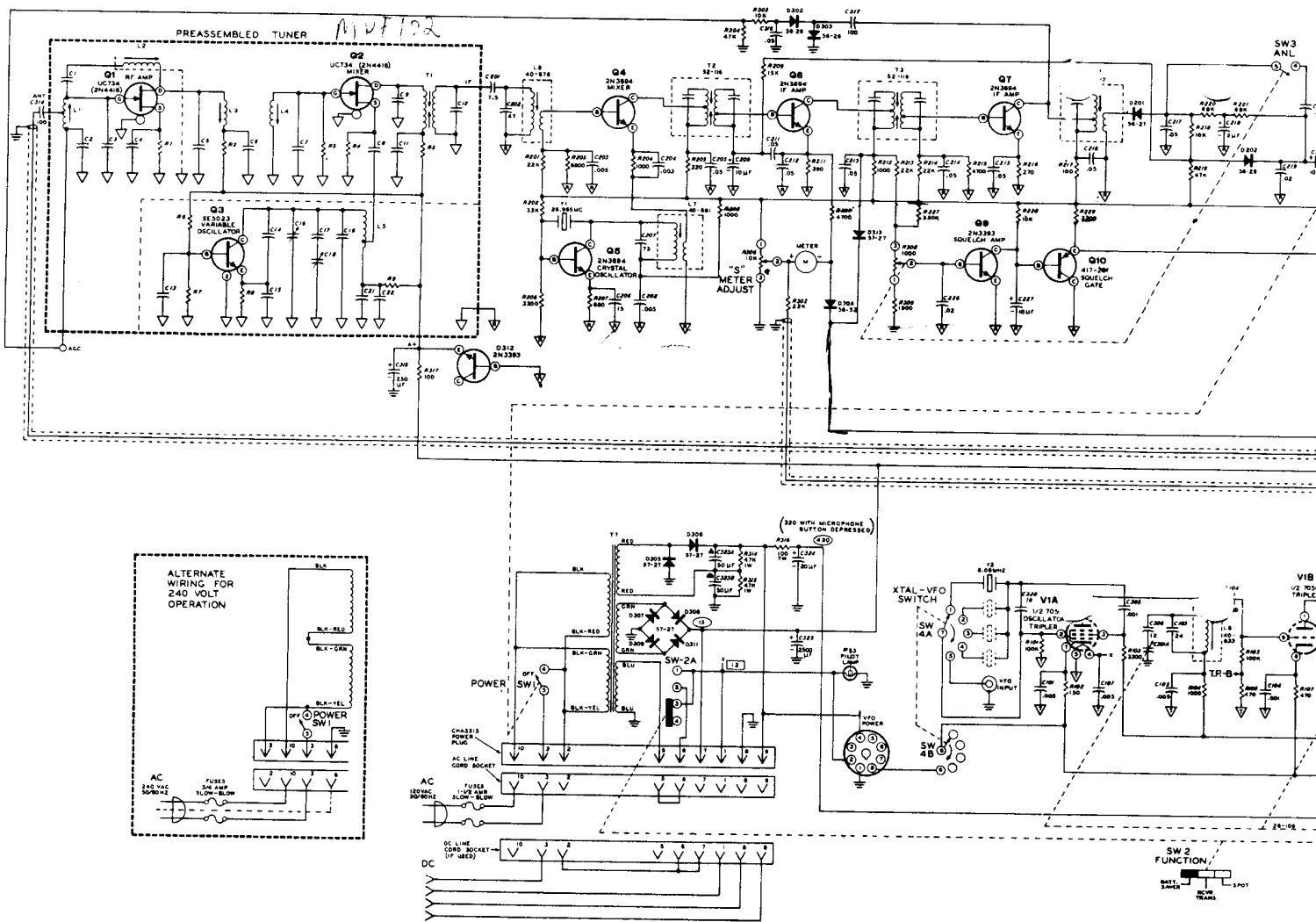
**Dimensions:** 3¾" W. x 7 5/16" L. x 2½" H.

**Net Weight:** 3 lbs.

**Note:** A 13.5 volt DC input was used in determining the electrical specifications.

**HEATHKIT-GERÄTE**  
GmbH

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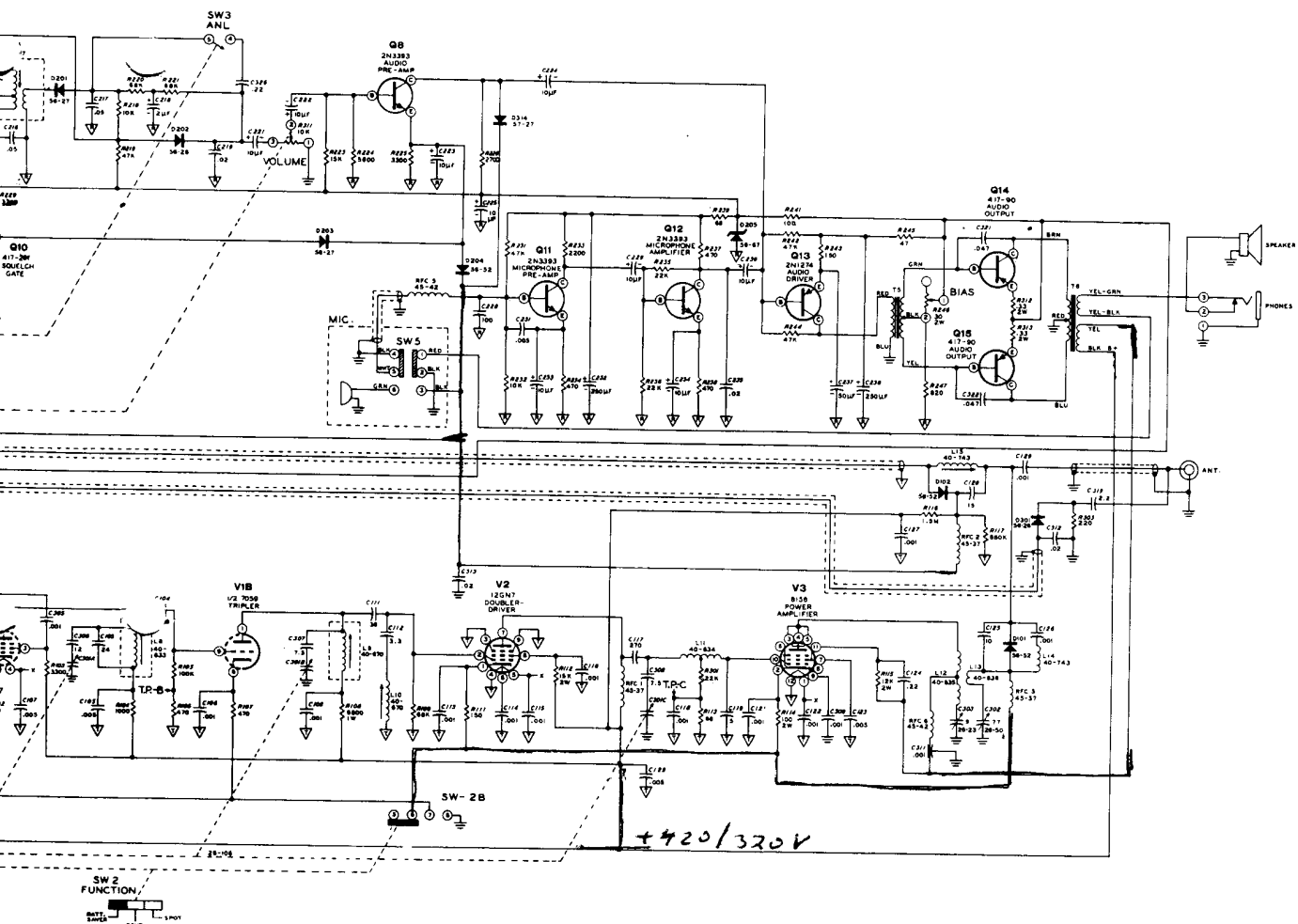


**SCHEMATIC OF THE  
HEATHKIT®  
TWO METER AM TRANSCEIVER  
MODEL HW-17**

- RESISTOR, CAPACITOR, AND DIODE NUMBERS ARE IN THE FOLLOWING GROUPS:
  - 0- 99 PARTS MOUNTED IN THE TUNER
  - 100-199 PARTS MOUNTED ON THE TRANSMITTER CIRCUIT BOARD
  - 200-299 PARTS MOUNTED ON THE RECEIVER CIRCUIT BOARD
  - 300-399 PARTS MOUNTED ELSEWHERE
- ALL RESISTORS ARE 1/2 WATT UNLESS MARKED OTHERWISE. RESISTOR VALUES ARE IN OHMS (K=1,000; M=1,000,000).
- CAPACITOR VALUES LESS THAN 1 ARE IN  $\mu$ F. VALUES OF 1 AND ABOVE ARE pF UNLESS THEY ARE MARKED OTHERWISE.
- ARROW (↻) INDICATES CLOCKWISE ROTATION OF SWITCH SHAFT (VIEWED FROM KNOB END).
- SWITCHES ARE SHOWN IN THE FOLLOWING POSITIONS:  
POWER SWITCH IN OFF.  
FUNCTION SWITCH IN BATT. SAVER.  
ANL SWITCH IN "ON".  
MICROPHONE PTT SWITCH IN "RECEIVE".
- THIS SYMBOL INDICATES A POSITIVE DC VOLTAGE MEASUREMENT, UNLESS MARKED OTHERWISE, TAKEN FROM THE POINT INDICATED TO CHASSIS GROUND WITH AN 11 MEGOHM INPUT VTVM. VOLTAGES MAY VARY  $\pm 20\%$ . □ THIS SYMBOL INDICATES AN AC VOLTAGE TAKEN FROM THE POINT INDICATED TO CHASSIS GROUND.
- REFER TO CHASSIS PHOTOGRAPHS AND X-RAY VIEWS FOR THE PHYSICAL LOCATIONS OF PARTS.
- POWER TRANSFORMER PRIMARY WIRING CONNECTIONS FOR 240 VAC ARE SHOWN IN THE BOX.
- ▽ THIS SYMBOL INDICATES A COMMON CONNECTION INSIDE THE PREASSEMBLED TUNER.
- ▽ THIS SYMBOL INDICATES A CONNECTION TO THE RECEIVER CIRCUIT BOARD GROUND FOIL.
- ▽ THIS SYMBOL INDICATES A CONNECTION TO THE TRANSMITTER CIRCUIT BOARD GROUND FOIL.
- ≡ THIS SYMBOL INDICATES A CONNECTION TO THE CHASSIS.

NOTES:

- ALL OTHER VALUES
- ALL FAR VALUES
- WITH VOL



**SCHEMATIC OF THE  
HEATHKIT®  
MODEL HWA-17-1  
TRANSISTORIZED DC  
POWER SUPPLY**

- NOTES:
1. ALL RESISTORS ARE 1/2 WATT UNLESS OTHERWISE INDICATED. RESISTOR VALUES ARE IN OHMS (K=1000).
  2. ALL CAPACITOR VALUES ARE IN MICRO-FARADS (μF)
  3. ALL VOLTAGE READINGS WERE TAKEN WITH AN 11 MEGOHM INPUT VOLTMETER. VOLTAGES MAY VARY AS MUCH AS ±20%.

