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QST Issue: Nov 1990
Title: Teaming the W6OWP Keying Interface with the Heathkit HW-101 Transceiver
Author: Jim Zvolanek, W9AG

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Hints and Kinks

Conducted By David Newkirk, WJ1Z
Assistant Technical Editor

TEAMING THE W6OWP KEYING INTERFACE WITH THE HEATHKIT HW-101 TRANSCEIVER

☐ In April 1987 *QST*,[1] F. A. Bartlett, W6OWP, described a circuit capable of eliminating first-character distortion (shortening) that occurs during semi-break-in (keyed VOX) CW operation with some transceivers. Teaming the circuit with my Heathkit® HW-101 involved a few modifications that may be of interest to others who intend to use the interface with older, tube-based transceivers. Here's how I modified the two to work together.

Fig 1 shows the additional circuitry necessary to connect the interface's PTT-control line to V12B, the HW-101's TR-relay driver. U2D, unused in the original interface circuit, is put to work here.

The original interface was designed to be powered from a 13.5-V dc source in its associated transceiver. Such a supply is unavailable in the HW-101, so I used the circuit shown in Fig 1B, deleting the 9.1-V Zener diode, 200-Ω resistor, and 0.1- and 200-μF capacitors that provide 9.1-V dc from 13.5 V in the original design.

Construction and Installation

I decided to build the interface into the transceiver on a Radio Shack® 276-150 Multipurpose Board. This board has ample room to accommodate the original interface circuitry (including the **MARK** and **SPACE** pots) and the additional parts called for in Fig 1A.

I mounted the interface board on the HW-101's main chassis, 3/4 inch to the right of the cage containing the rig's 6146 amplifier tubes and over the 5/8-inch-diameter access hole, which also allows wiring to the underchassis circuits. An aluminum bracket, 3 × 2 inches in size with a 1/4-inch flange, supports the board. Position the board on the bracket so the **MARK** and **SPACE** pots are accessible for easy adjustment.

I built the power supply underneath the chassis on the vertical partition that supports the coil compartment. A bolt suitable for mounting the 7808 regulator is available 3-1/2 inches from the rear of the chassis. Other power-supply parts are wired to a terminal strip mounted over the grounding lug for the socket of RL2 (one of the HW-101's TR relays).

The HW-101's **KEY**-jack wiring must be modified because the interface unit's keying transistor (Q2, an MPSA42; see the article cited in note 1) must operate grounded-collector, with its emitter connected to the HW-101's keying line. Lift the black/white wire at the tip terminal of the HW-101's **KEY** jack and connect this wire to Q2's emitter. Then run a wire from the HW-101's **KEY**-jack tip terminal to the cathode of D6 in the interface circuit. This completes the modification.

Follow the adjustment procedures described in the original article, and you're ready to operate.—*Jim Zvolanek, W9AG, 3827 W 83rd Pl, Chicago, IL 60652*

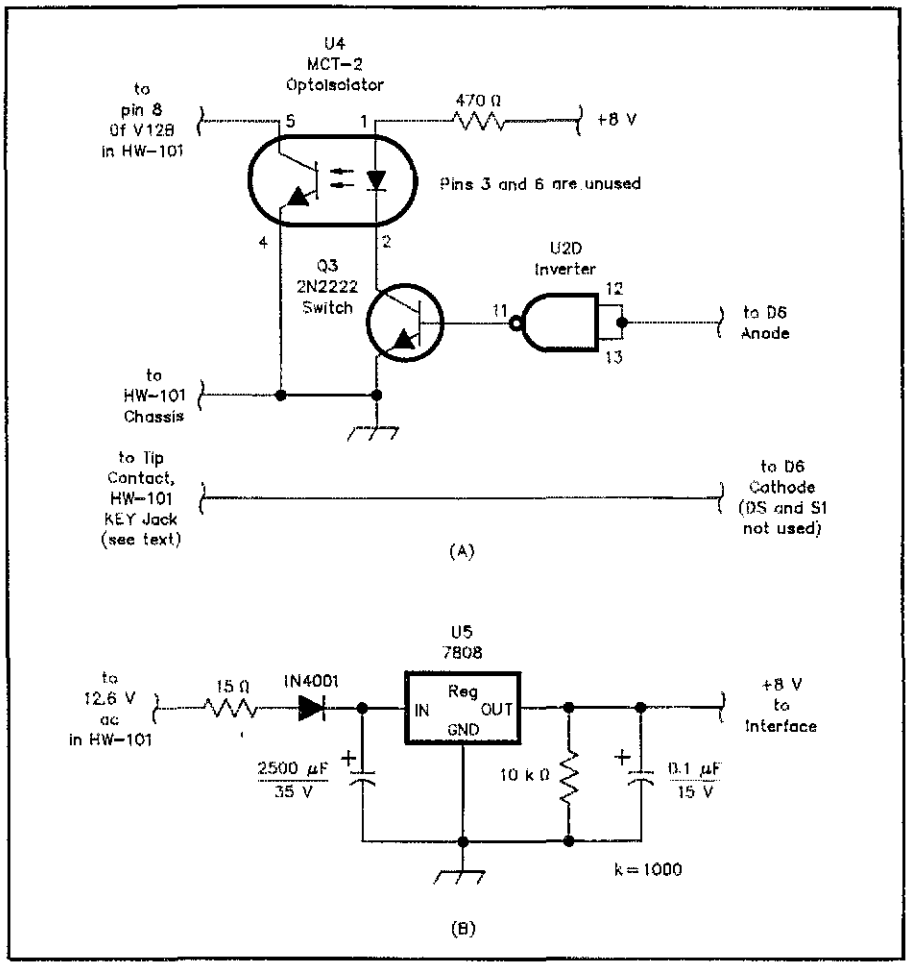

Fig 1—Jim Zvolanek modified F. A. Bartlett's CW keying interface for compatibility with a Heathkit HW-101 transceiver as shown at A. New power-supply circuitry (B), powered by the HW-101's 12.6-V ac heater supply, was necessary, too. Resistors are ¼-W, carbon-film units. See text.

MAKE YOUR OWN QRP CARRY-ALL

☐ One of the great things about QRP is that it really opens up the possibility of go-anywhere operation. Recently, I've been taking my gear with me in style in my QRP Carry-All bag (Fig 2). Besides holding my gear, it's a great way to "fly the flag" because it displays the League diamond and a Michigan QRP Club patch. The Carry-All makes a home construction project that requires absolutely no debugging and no test equipment!

An uncle in England gave me a British school bag—similar to an American canvas knapsack—that was just the right size for my W7EL transceiver, battery box and assorted portable-operation-materials kit that I've assembled for my QRP ramblings. I based the QRP Carry-All on this bag. The assembly instructions? Simply dress it up with a couple of patches!

You don't even need to sew. Acquire a suitable bag or day pack. Then, using iron-on adhesive (intended for hemming garments, and available at fabric stores and variety-store notions counters), apply ham-radio-related patches to the bag. Such patches are available from many sources; ARRL sells an eye-catching ARRL-flag patch, as well as ARRL-diamond patches of two different sizes. The Society of Wireless Pioneers and other organizations also offer beautiful patches.

When not toting a portable station, the QRP Carry-All is also great for holding small hamfest purchases. Carried during air travel, the bag invariably attracts the attention of other traveling hams, who stop by

[1] F. Bartlett, "A CW Keying Interface," *QST*, Apr 1987, pp 51-53.