The HAL Devices 1550 Keyer with Station Identifier

SEPARATING THE "PROS" from the "Ham and Egger's" is often complicated by the fact that one has to be at least a "Ham and Egger" in order to appreciate the difference between the two. To the uninitiated, the HAL Devices 1550 keyer may not seem exceptional, however, even an inexperienced circuit designer would appreciate its economy and novelty.

The keyer features an unusual station identifier, and a few of the highlights follow. Fig. 1 is an abbreviated schematic diagram. The memory matrix consists of two sections, one section for dashes and the other section for spaces between letters. If there were no diodes on the board (except for two to form the STOP signal), the output from the keyer would be a string of 49 dots, as the clock advanced the address registers from positions 1 through 50 in the matrix. If a diode was present in the dash matrix, when the scanning process reached that position, the BCD converter would pull the line "low" and since all the inputs to the dash NOR gate would be low, a logical "1" results, causing a dash instead of a dot at the output. If a diode was present in the space matrix instead, a similar process would cause a space. If both dash and space positions have a diode, the identifier stops and returns the device to a normal keying function (the diagram shows the scanning process at position 14). Thus, the identification message can have a combination of dots, dashes, and letter

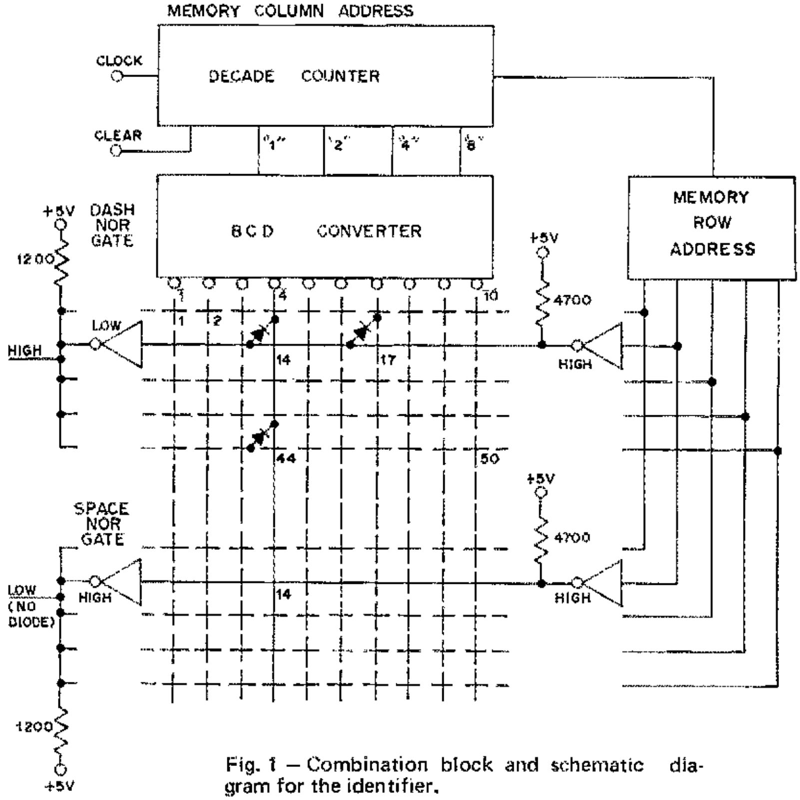
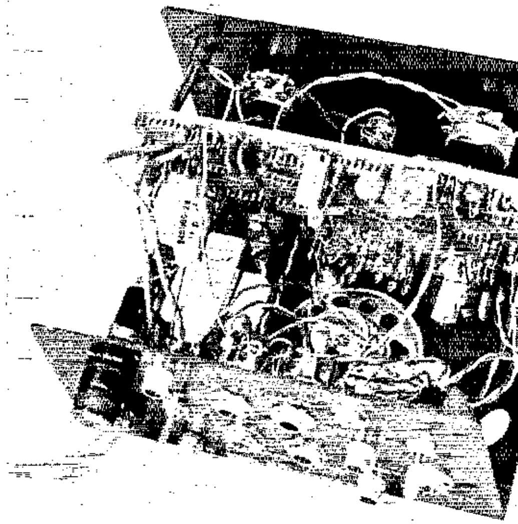


Fig. 1 — Combination block and schematic diagram for the identifier.

Interior view of the 1550 keyer with identifier option. *Diode* matrix can be seen just above the speaker.



spaces equalling 49. Custom programming of the matrix is done at the factory for each new keyer, or may be changed easily by the operator by relocating the diodes in the matrix as desired. As factory programmed, a typical message is DE W1AW/1. A switch on the rear panel of the keyer provides for selection of an earlier stop signal which shortens the message transmitted to DE W1AW.

As one who still uses a mechanical semiautomatic key, the author was surprised to find that the 1550 was tolerant of even his keying technique. Being comfortable with a new keyer from the start has advantages when changing over from some other type of key. Poor habits that are hard to break later on, can be avoided by not going to a keyer which requires a radically different style of sending, from that accustomed to. One of the reasons the 1550 is easy on a "bug-fist" is the incorporation of a dot-memory feature into the common automatic-dot-and-dash mode of operation.[1] The dot memory operates as follows. If the dot lever is depressed and released while a dash is being sent (dash lever should not be depressed), a dot will be generated after the dash. For example, if the letter "R" is sent at a somewhat faster speed than that for which the keyer is set, a perfect "R" still will be generated at the lower speed. In conventional-mode operation, if the dot was sent before the dash was completed, the last dot would be dropped, and the letter "A" would result. The latter problem accounts for much of the difficulty that a semiautomatic-key operator encounters when going to a conventional keyer for the first time. Since it is unnecessary to exactly time the dash and following dot with a "bug," any imperfections in sending (such as variations in sending speed) which would otherwise go undetected, are rejected by the conventional keyer, and a mistake results. One other mode of operation available is Iambic operation. Here, depending upon which lever makes contact first, either a series of alternating dots and dashes, or a series of alternating dashes and dots results when both levers are depressed.

Some keyers suffer from interface problems. They work with either cathode or grid-block keyed transmitters, but not both. The 1550 makes provision for either one, along with the inclusion of extra output jacks in the event it is desired to key more than one circuit simultaneously.

Other features include a built-in monitor with an internal pitch control and speaker. Front panel controls are for monitor VOLUME and keyer SPEED (which the manufacturer says is approximately 8 to 60 wpm). A TUNE button is provided for closing the keying circuits. Also, of interest to Field Day buffs and mobile operators perhaps, there are provisions and instructions for 12-volt dc operation.

Whether the 1550 keyer is judged from the standpoint of operating or technical expertise, HAL Communications definitely deserves a blue ribbon. *W1YNC*

[1] Should the operator desire conventional keyer operation only, instructions are included for disabling the dot memory along with the Iambic operation.

HAL Devices 1550 Keyer and Identifier

Dimensions (HWD) and Weight:
3-1/4 × 6-1/4 × 5-1/2 inches, 3 pounds.

Power Requirements: 120 V ac.

Price Class: Basic keyer $65, with identifier option $90.

Manufacturer: Hal Communications Corp., Box 365A, Urbana, IL 61801.

Strays

Ozzie Jaeger, W6AD, AE-2-91, reminds the first class of Extras that their "wallpaper" now qualifies for Old Timers Club — FCC began giving exams for Extra in January 1952, 20 years ago!

To commemorate the flight of Apollo 17, due to be launched December 16, WG3SFC will be on the air from prior to launch until after splashdown.

Contacts will be confirmed by a special QSL card. Requests should be accompanied by a self addressed stamped mailing label and sent to: Goddard Amateur Radio Club, P.O. Box 86, Greenbelt, MD 20770.

The following frequencies will be used: Ssb: 3950, 7275, 14325, 21400, 28650 kHz. Cw: 3560,7060, 14060, 21060, 28060 kHz.

Novice frequencies in each band will be tuned from time to time after suitable calls on the cw frequencies.