

ADAPTING ELECTRONIC KEYERS TO OLDER TRANSMITTERS

It all began when a kind good ham friend donated an older type, cathode-keyed transmitter for use at my summer QTH.

It was a Harvey-Wells T-90; immediately appealing for its compactness and light-weight as compared to my burdensome HT-32 when it comes to lugging it back and forth. I eagerly checked out the T-90, bringing it up to specs and found out, rather quickly, that I wouldn't be able to use my electronic keyer (Heath HD-10) with it. The T-90, like any of the older transmitters, calls for grounding the cathodes of the oscillator and/or amplifier tubes for keying. The keyer output transistor will not switch cathode type keying and an attempt to do so can ruin the keyer with too high current.

Operation of the keyer is designed for low negative current as with grid-block keying; this, then, is safely switched through the keyer's output transistor.

Researching the transmitter project indicated an extensive rewiring would be required and a source of large negative voltage necessary to bias the keyed tubes to cut off.

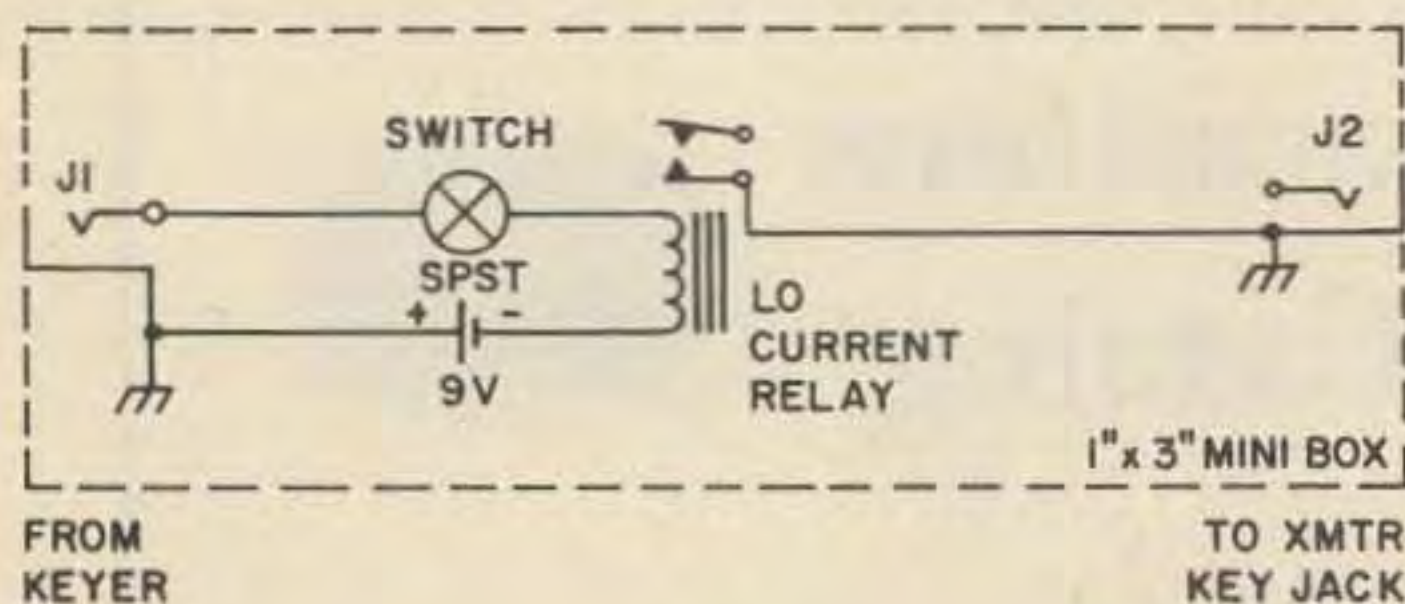


Fig. 1. Schematic diagram for match-key.



Rather than change the original design by rewiring and building an external supply, it occurred to me that a very simple and inexpensive solution might be applied. That is, a sort of interface unit that would satisfy both the keyer and the transmitter with the entire unit built into a "cigarette package size" including its power supply.

The electronic keyer requires that no spike voltages exceed 105 volts and that the circuit current be within 35 mA, otherwise the keyer output transistor will be damaged.

The MATCH-KEY unit constructed here is well within the requirements, running at 9 volts at 5 mA. To operate the unit, merely plug the keyer into J1 and a patch cord between J2 and the transmitter key jack.

The switch is optional and the battery should last indefinitely at a 5 mA drain. The combination of the MATCH-KEY and keyer have been used very successfully at slow or high speeds.

...W1JSS