GLB ELECTRONICS MODEL ID-1 AUTOMATIC IDENTIFIER
Description

Automatic identification of amateur transceivers has several advantages: you can't get in trouble for not identifying if you forget the time; and if your rig is stolen it will identify itself whenever it is put into operation.

The ID-1 was designed to be as simple as possible, so as to keep its cost, size and weight to a minimum. Yet it has impressive capabilities:

1. Reprogrammable messages. (We provide programming service, but if you have an EPROM programmer you can do it yourself!)

2. Enormous capacity. You can have up to 8 messages in each memory chip, and each message can be 2000 bits long - that's continuous sending for almost 2.5 minutes at 20 WPM!

3. Two modes of fully automatic operation. in MODE 1 a trigger input starts the message cycle, which terminates automatically at the end of the message. For repeaters a "hold" signal is provided that can be used to maintain transmission until the cycle is completed. In MODE 2, the message is started when power is applied and thereafter cycled continuously until power goes off. At 20 WPM, the message repeats about every 2.5 minutes (note 1).

4. Built-in pots for adjustment of audio output level and sending speed.

5. Simple installation. Connect to transmit B+ and microphone audio input.

6. Non-critical power requirements. The only supply needed is +7 to +15 volts DC, unregulated.

TRANSCEIVER INSTALLATION (MODE 2)

Figure 1 shows how to hook it up to a transceiver. The B+ point of the ID-1 (point A) is connected to the transmitter B+ of the transceiver. When the transmitter is keyed, the ID-1 is powered up. Connect the audio output (point D) directly to the microphone audio line. If the length of wire needs to be longer than an inch or two, shielded wire is recommended. The ID-1 has a high value series resistor at the output to minimize any loading on the microphone circuit, hence it has no significant effect on normal audio. In MODE 2 point C is grounded.

REPEATER INSTALLATION (MODE 1)

The ID-1 is easy to use for repeater identification. The easiest approach is to use MODE 2, where it is triggered by the application of B+ to point A. In this mode identification occurs each time the transmitter is keyed, and if a continuous transmission exceeds the message cycle time (about 2.5 minutes) it repeats.

MODE 1 (fig 2) provides a means for the identification process to initiate transmission. Connect a simple interval timer to the START input (point C) and leave B+ to the ID-1 on continuously. A negative-going trigger is required. The optional circuit shown can be used if you need a positive trigger.

In MODE 1 operation the ID HOLD output (point B) is used to key the repeater transmitter. If your transmitter can be keyed with a +5-volt 10-ma signal, connect the HOLD output to that point. Don't draw more than 10 ma from the HOLD terminal. If your transmitter requires a negative-going keying signal, the optional circuit shown represents one way to get it.

ADJUSTMENT

The speed adjustment is R2.

The amplitude of the ID tone is adjustable at R7. We suggest that you set the tone to a background level so that it doesn't compete with your voice. For repeater installations the high output impedance (1 meg) of the ID-1 may not provide the audio level required, since repeater audio channels are often low-impedance. In this case an op-amp or an FET follower is suggested to provide a low-impedance conversion.

For maximum audio, jumper either R9 or R10 or both.

CHANGING MESSAGES

There are 8 message channels in the memory chip. Each message is available at a terminal pad under the ID-1 board, as shown in the drawings. To select a channel, connect point E to the channel desired. For manual selection, you can use a simple multiposition switch. A method of doing the switching electronically is shown in fig. 3. The input required for the 4051 is a binary (or BCD) code as shown.

REPROGRAMMING

The original price of the ID-1 includes a custom-programmed memory.

GLB offers a programming service; the cost is the same for one short message as it is for 8 long ones, so use foresight to get the most out of the chip when you have it programmed.

If you can program 2716's, each bit line from the chip is used as a message. Bit 0 is message 1, bit 1 is message 2, etc. When a memory bit is set to 0 the tone goes on; a CW message is built up by setting a bit low for a dit or 3 bits in a row (at successive address locations) low for a dah. Spaces timing occur where bits are set to 1 (the erased condition of the ROM). One 0 separates dits and dahs within a character and three 0's separate characters. Six zeros separate words.

The message terminates when no zeros are detected for a second or more. Be sure to start each message with a space (three 1's) for a starting pause.

(NOTE 1: at 20 WPM the maximum message length is about 2.5 minutes; thus short messages will repeat that often if the unit is left to run continuously. Faster speeds will shorten the time and vice-versa. For more frequent identification we can program the call more than once in a message with space in between.)

MODEL ID-1
APPLICATION
DATA
7-81

FIG. 1. MODE 2 HOOKUP:

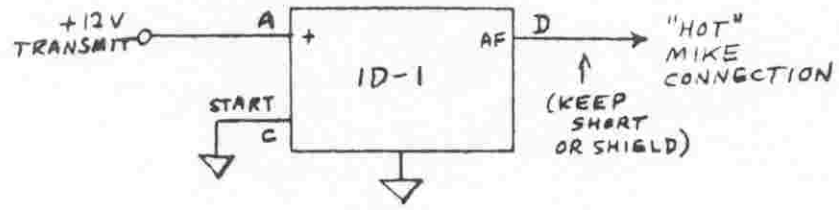


FIG 2. MODE 1:

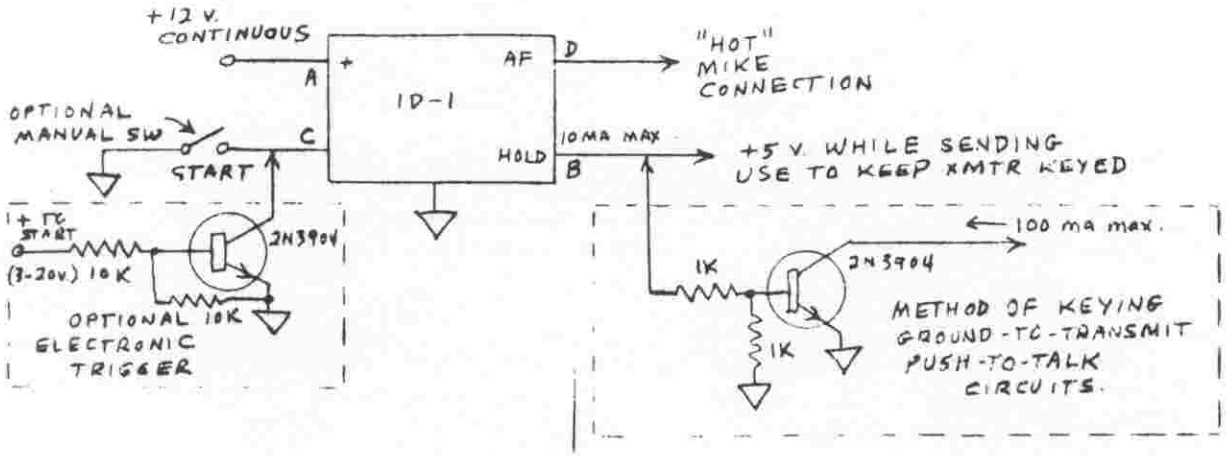
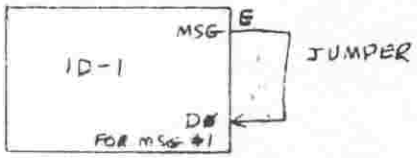
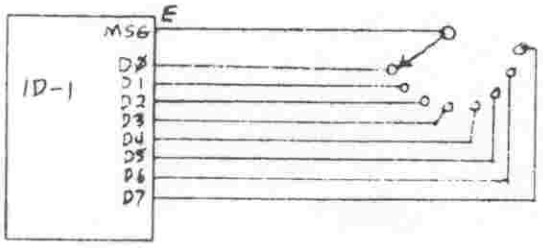


FIG 3. MESSAGE SELECTION:

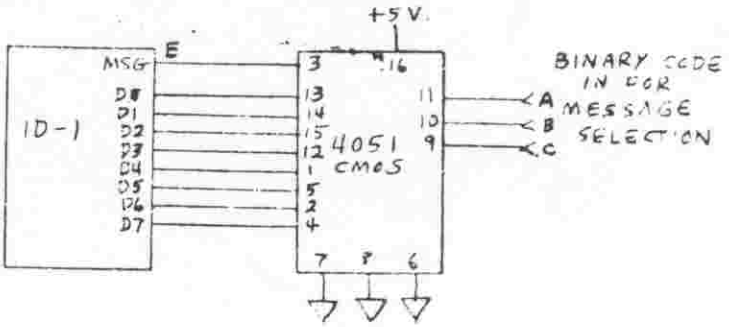
1. SINGLE MESSAGE:



2. MANUAL SWITCH

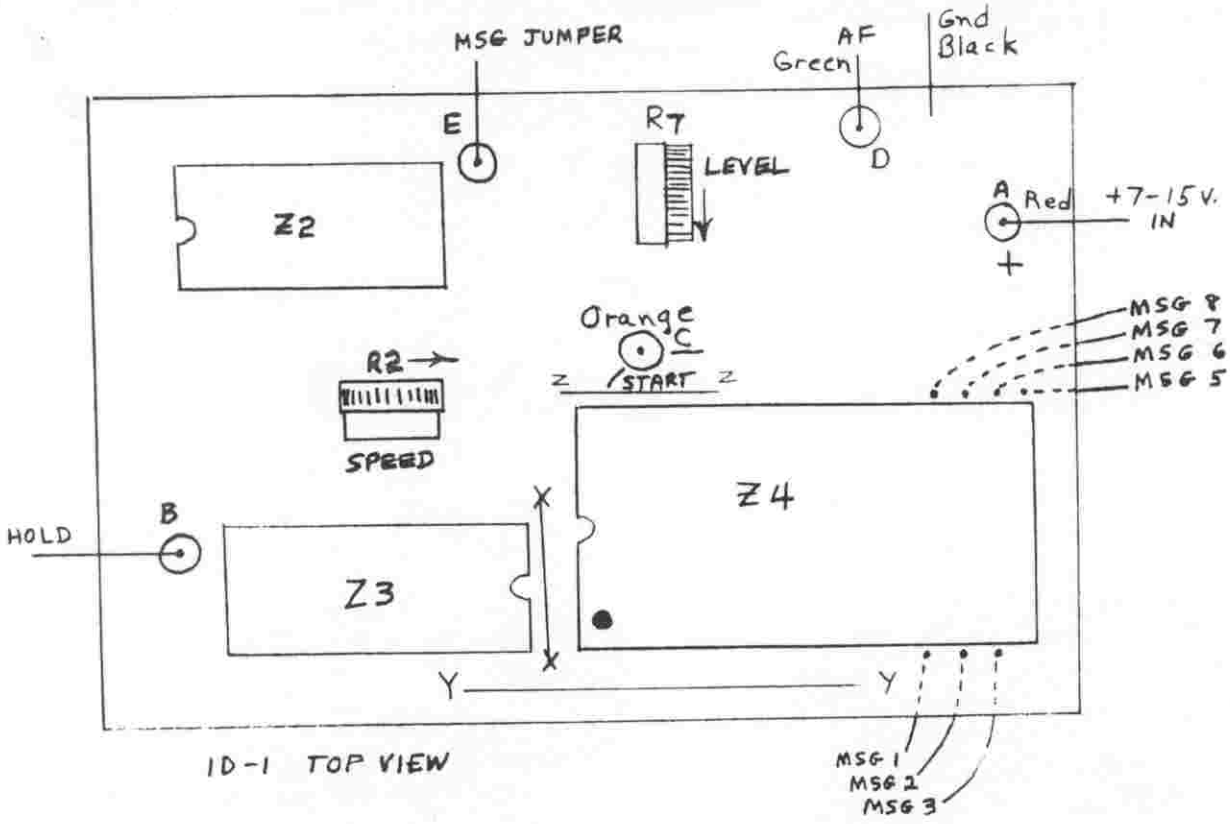


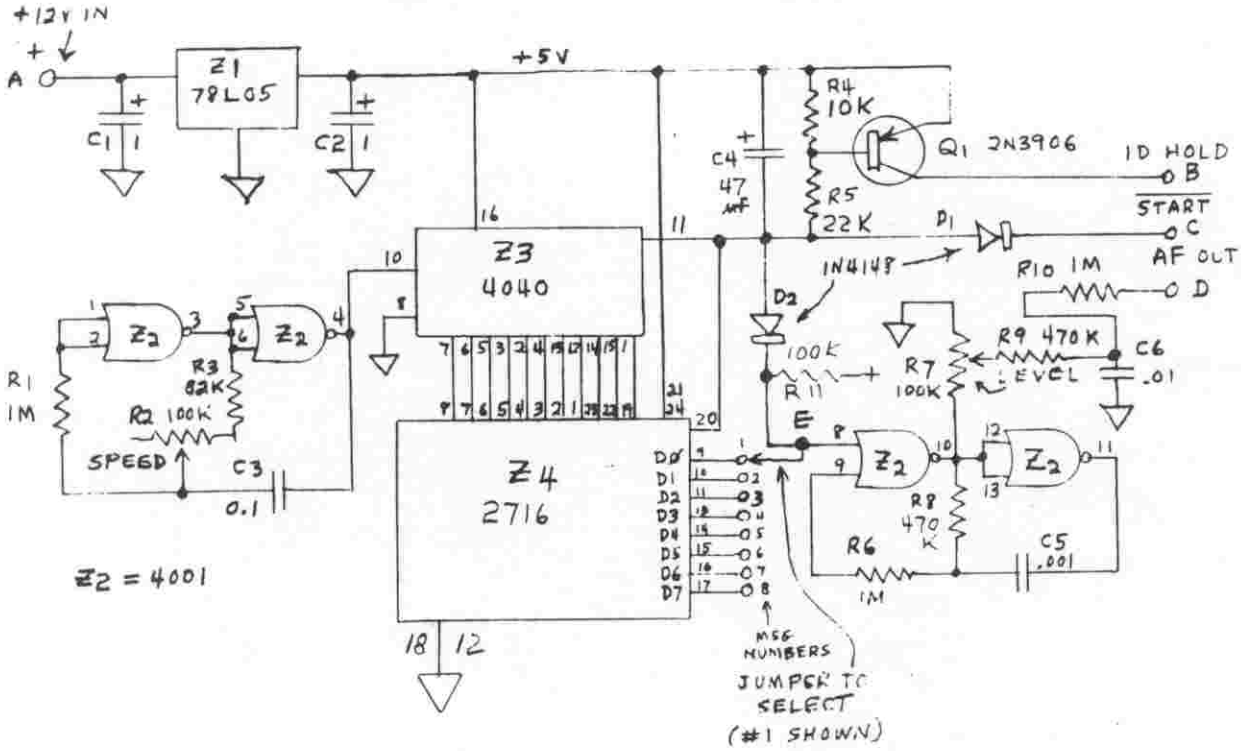
3. ELECTRONIC SWITCHING.



C	B	A	MSG #
0	0	0	1
0	0	1	2
0	1	0	3
0	1	1	4
1	0	0	5
1	0	1	6
1	1	0	7
1	1	1	8

(0 = 0V, 1 = +5 V.)





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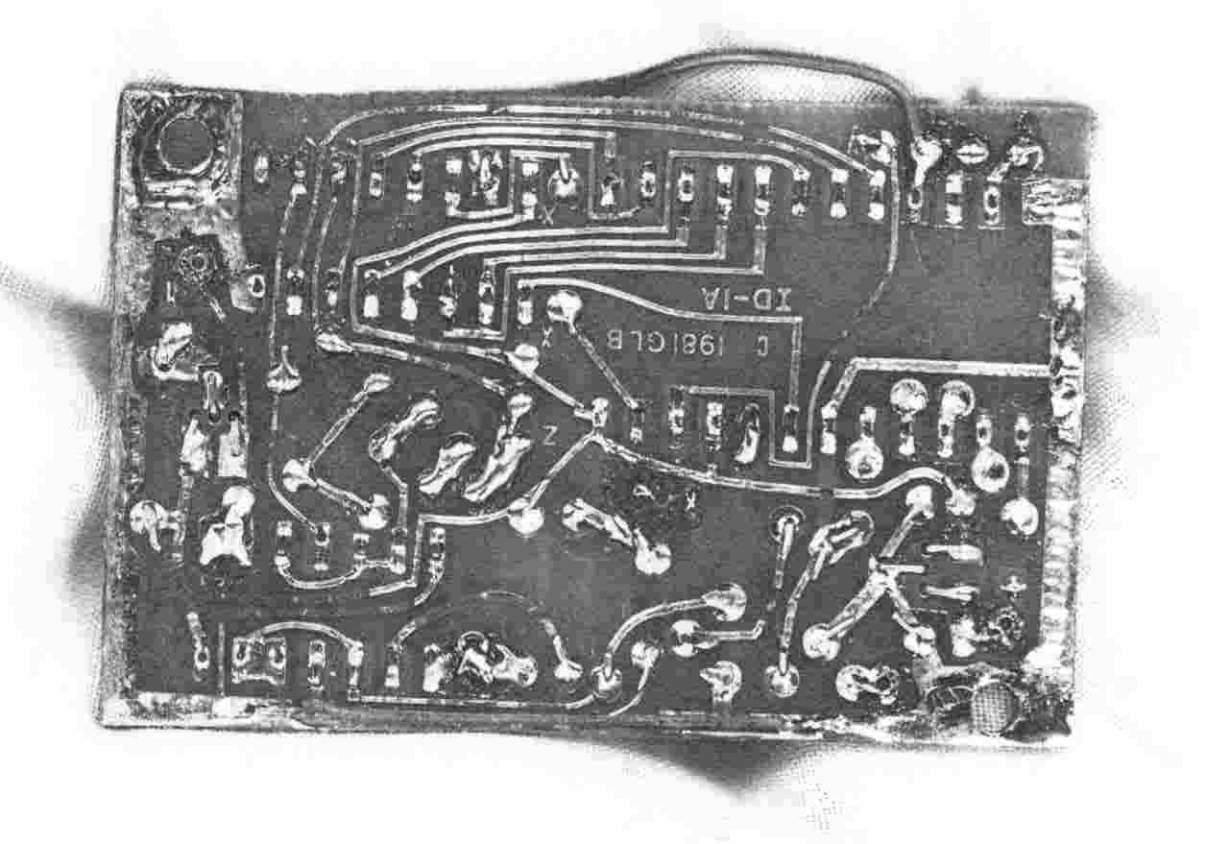
Rev A - 4/15/82


ID-1A
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