

GLB MODEL ID-2C  
AUTOMATIC CW IDENTIFIER

JANUARY 1991

GLB Electronics, Inc.  
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**FEATURES:**

- \* High quality at low cost
- \* Up to 8 EPROM reprogrammable, selectable messages
- \* Adjustable audio, speed, pitch and interval timer
- \* ID over voice inhibit (selectable)
- \* Beacon mode
- \* High level, low impedance audio output
- \* Easy installation
- \* Modular design - Small size
- \* Low power option

**DESCRIPTION:**

The Model ID-2C is a CW identifier intended for use with repeaters or automatic stations. It has been designed to provide required station identification without troublesome diode programming. Each message can be up to 2000 bits long - that's continuous sending for almost 2.5 minutes at 20 WPM. The standard time interval is 10 minutes, adjustable from 7 to 25 minutes. Intervals from 30 seconds to 1 hour can be supplied on special order. The ID-2C can also be wired for beacon mode (operation independent of squelch activity).

The following is an example of ID-2C operation with a 10 minute identification interval:

Station activity is determined by an input line, normally connected to the receiver squelch. The station is identified every 10 minutes as long as the squelch breaks at least once during the previous 10 minutes, and no activity is currently present on the squelch input. If activity is present on the squelch input, the ID is delayed until activity ceases. The ID-2C then keys and holds the transmitter carrier as necessary while identifying. A final ID is sent 10 minutes after the last squelch break. The next time the 10 minute interval expires, no ID occurs but the ID-2C "arms" itself such that an ID will occur after the next squelch closing. Until then it remains dormant.

Remove the JPl jumper to obtain beacon mode operation.

## TYPICAL SPECIFICATIONS:

Power	+7.5 to +15 volts DC, unregulated
Current drain	operating: 85 ma    idle: 75 ma
Low power option	operating: 10 ma    idle: 6 ma
Interval time	7 - 25 minutes, adjustable
Speed	15 - 35 WPM, adjustable
Pitch	500 - 2500 Hz, adjustable
EPROM	2764, 2732 or 2716
Audio output	0-2 Volts p-p (50 ohms)
Connector	10 pin .1" locking header mating socket and ribbon cable
Dimensions	3.0 x 2.6 x 0.7 inches

INPUTS:            power, ground, squelch, message select, manual ID  
OUTPUT:            audio, transmit key  
ADJUSTMENTS:    interval time, audio level, audio pitch, speed

## CONNECTIONS:

## SQUELCH:

(1)            Input a squelch signal from the receiver that is between 3.5 and 15 volts positive when the squelch is closed and drops to less than 2 volts when the squelch opens. For beacon mode, connect to ground, and remove jumper at JP1.

## POWER:

(2)            Power supply input +7.5 to +15 volts DC, unregulated.

## GROUND:

(3)            Common for signal and power supply negative.

## MANUAL ID:

(4)            An ID is generated manually by applying ground momentarily to this input.

## AUDIO:

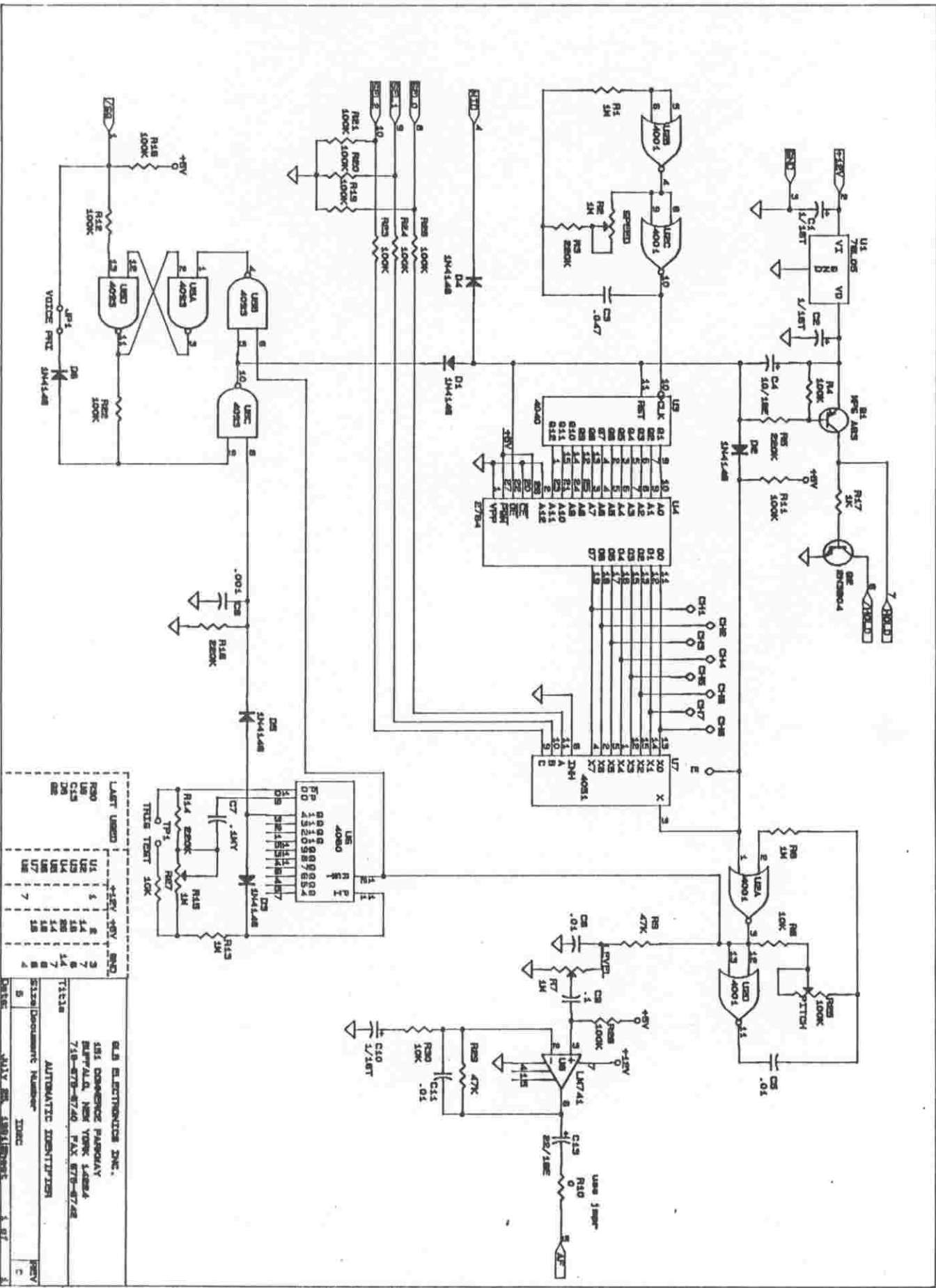
(5)            For connection into line circuit; capable of 0-2 V into 50 ohms without distortion.

## TRANSMITTER KEYING:

(6,7)        /HOLD, HOLD    This output is used to key the repeater transmitter. Connect HOLD (pin 7) for transmitters requiring a positive 5 volt 10 ma signal or connect /HOLD (pin 6) for transmitter requiring negative keying signal. Do not draw more than 10 ma from the HOLD terminal or 100 ma from the /HOLD.

## MESSAGE SELECT:

(8,9,10)    SEL 0,1,2    The desired message is selected via binary input as per the chart on page 3.



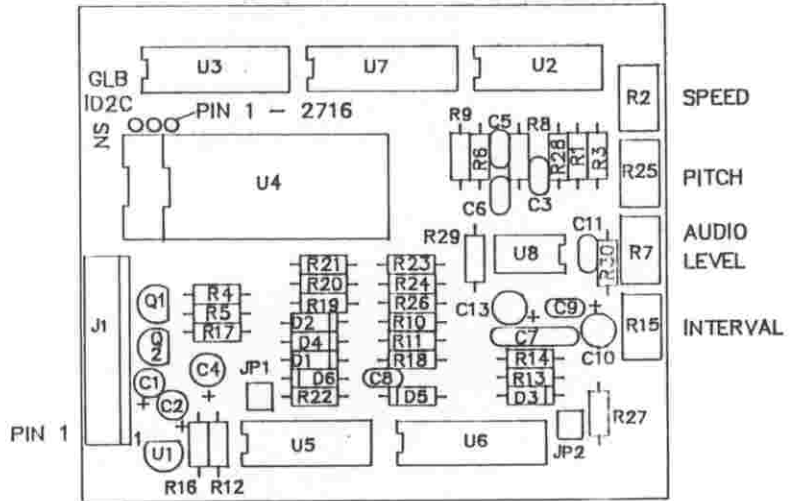
LAST USED	U1	U2	U3	U4	U5	U6	U7	U8
	1	2	3	4	5	6	7	8
	9	10	11	12	13	14	15	16
	17	18	19	20	21	22	23	24
	25	26	27	28	29	30	31	32
	33	34	35	36	37	38	39	40
	41	42	43	44	45	46	47	48
	49	50	51	52	53	54	55	56
	57	58	59	60	61	62	63	64
	65	66	67	68	69	70	71	72
	73	74	75	76	77	78	79	80
	81	82	83	84	85	86	87	88
	89	90	91	92	93	94	95	96
	97	98	99	100				

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 AUTOMATIC IDENTIFICATION  
 Size/Document Number  
 DATE: JULY 28, 1981/REV: 1.01

MODEL ID-2C AUTOMATIC IDENTIFIER  
COMPONENT LAYOUT

CONNECTOR PINOUT

1	/SQ
2	PWR
3	GND
4	MID
5	AF
6	/HOLD
7	HOLD
8	SEL 0
9	SEL 1
10	SEL 2



ADJUSTMENTS & OPTIONS

Speed - R2 - Factory set to approximately 20 WPM.

Interval timer - R15 - Factory set to approximately 10 minutes.

Audio level - R7 - Factory set to approximately 2 Volts p-p.

Audio pitch - R25 - Factory set to approximately 1 Khz.

ID over voice inhibit - JP1 - Jumper installed.

Beacon mode - Ground pin 1 and remove jumper at JP1

Low power option - CMOS EPROM

High impedance audio output - For connection to a low-level mic input connect a 1-megohm resistor in series with the output. To avoid hum pickup in the connecting wire place this resistor physically close to the microphone jack in the transmitter, but if the connecting wire is short or shielded the 1-megohm resistor can be soldered in place of the jumper at R10 on the board.

MESSAGE SELECTION

Up to eight messages can be programmed into the memory chip. Messages are selected by programming SEL 0,1,2 according to the chart below:

Note: 1 = +5 to +15 VDC 0 = 0 VDC

	PIN 10 SEL2	PIN 9 SEL1	PIN 8 SEL0	
msg 1	0	0	0	(default)
msg 2	0	0	1	
msg 3	0	1	0	
msg 4	0	1	1	
msg 5	1	0	0	
msg 6	1	0	1	
msg 7	1	1	0	
msg 8	1	1	1	

### REPROGRAMMING

GLB offers a reprogramming service. The memory chip is socketed for ease of replacement. Simply call or write GLB to order a replacement EPROM.

To program the ID memory yourself, use the following format:

Message start: 0 hex for 2716, 2732; 800 hex for 2764.

Each data line from the chip is used as a message. Data line 0 is message 1, data line 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. When bits are set to 1 (the erased condition of ROM), no tone is present. One bit separates dits and dahs within a character and three bits separate characters. Six bits separate words.

The message terminates when no 0s are detected for a second or more. Be sure to start each message with 2 spaces (six 1's) for a starting pause.

### LIMITED WARRANTY

The ID-2C is warranted against defective materials and workmanship for a period of 90 days from date of purchase. This warranty is void if the unit has been physically abused or has unauthorized replacement parts or solder joints.

### NOTE

The information contained in this document has been carefully checked and is believed to be reliable. No responsibility is assumed for inaccuracies.

GLB Electronics, Inc. reserves the right to make changes in the product to improve reliability, function or design without obligation to purchasers of previous equipment. GLB Electronics Inc. does not assume any liability arising out of the application or use of any product or circuit described herein.

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Model ID-2C \$ 100.00

Model ID-2C-LP (low power) \$ 110.00

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