

## XT-4Beacon MK 2 ID Keyer

Version 1.00  
September 2023

### Specifications

Power: +7VDC to +15VDC, 5ma typical  
CW speed: Selectable 5, 10, 15, 20, 25 WPM  
Memory size: Approximately 960 Morse letters  
Output keying: Positive Keying only, RCA phono jack output  
Paddle input: 1/8" (3.5mm) stereo jack input

**Note: The XT4-Beacon comes pre-programmed with a test message. Verify that the message plays back properly before attempting to program a new message.**

### Set UP

1. Wire up your paddle with shielded cable with two conductors. The XT-4Beacon uses a 1/8" stereo plug. The shield wire is ground. The tip of the connector is for the dit contact and the center ring is for the dah contact.
2. Wire up a cable to the CW input of your transmitter. Use shielded cable with an RCA phono type connector for the keyer end and a connector compatible with your transmitter CW Key input jack on the other end.
3. Wire power to the pads marked + and – on the end of the board opposite the connectors. Be sure to observe correct polarity and voltage limits.

**Note: The XT-4Beacon is designed to work with solid state positive keyed radios only! Damage can occur to the XT-4 Beacon and/or your transmitter if it is used improperly!**

If you are unsure of your transmitter type, plug the CW cable into the transmitter but leave the other end free. Measure the voltage across the other end of the cable. Ground is the outer shield, and the inner wire is positive. The voltage should measure +5V to +12V. If the voltage is negative, or is more than 24V, do not use the XT-4Beacon keyer with your radio.

### Speed Control

CW speed is controlled by the small trim pot marked R4 on the circuit board. Turning the pot clockwise will increase the speed in 5 WPM increments from 5-25 WPM. Note that the "20 WPM" speed is actually set for slightly less than 20 WPM. FCC regulations require repeater CW ID and some other application be less than 20 WPM. Setting the XT-4B to the 20 WPM setting will ensure compliance.

Start with R4 fully counterclockwise. Press the dit paddle and slowly turn the trim pot clockwise. The speed will start at 5 WPM. As the pot is advanced, the speed will suddenly increase to 10 WPM, followed by 15 WPM, 20 WPM, and finally 25 WPM. Leave the pot setting at the desired speed. For best results, leave the trim pot setting near the middle of the desired speed setting.

### Jumper Selection

Operation of the XT-4B is controlled by jumpers on J4. The pin definitions are as follows:

Pin #	Description
1	Play message
2	5 second key down followed by recorded message.
3	20 second key down followed by recorded message.
4	Play message every 10 minutes
5	Record
6	Ground (GND)

Pin 1 is the one nearest the corner of the board. See Figure 1 for location of the jumper pins. To select a function, connect the

supplied jumper wire between pin 6 (GND) and the desired function pin.

### Recording

To record, briefly short pin 5 and 6 with the supplied jumper wire or a small screwdriver. The LED will turn on. The XT-4Beacon MK2 is now in record mode. Start sending the message with the paddle. The unit will start recording when you first start sending. Briefly short pins 5-6 again to stop recording. The LED will then go off indicating recording has finished.

Messages cannot be erased. New messages write over the old one. The message is non-volatile and will remain even if power is removed.

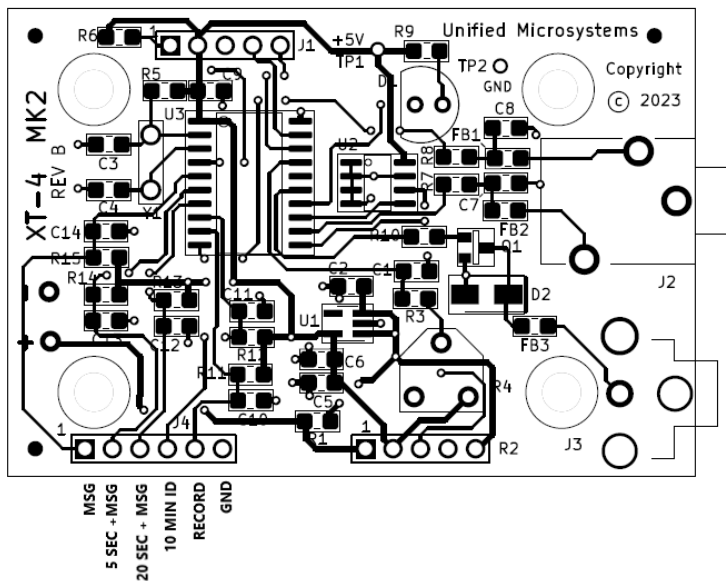
You can add a period of key up in the middle or at the end of your message. Simply stop sending for the desired time period and then resume keying or stop recording.

The maximum message length is approximately 960 Morse characters. This is over six minutes at 25 WPM, more than enough for most applications. If you record too long, the end of the message will not be stored. If this happens, re-record a shorter message.

### Playback

If pin 1, 2 or 3 is briefly grounded, the XT-4Beacon will go through the selected play back sequence and stop at the end of the message. Grounding these pins again will repeat the message. This mode is intended for external control, such as with a repeater controller. Leaving one of these pins grounded will cause the XT-4Beacon to repeat the recorded message indefinitely. Use the supplied jumper to run continuously.

The XT-4Beacon will send the recorded message every 10 minutes by connecting pin 5 to pin 6 (GND) with the jumper. Leave it connected to enable ID every 10 minutes.



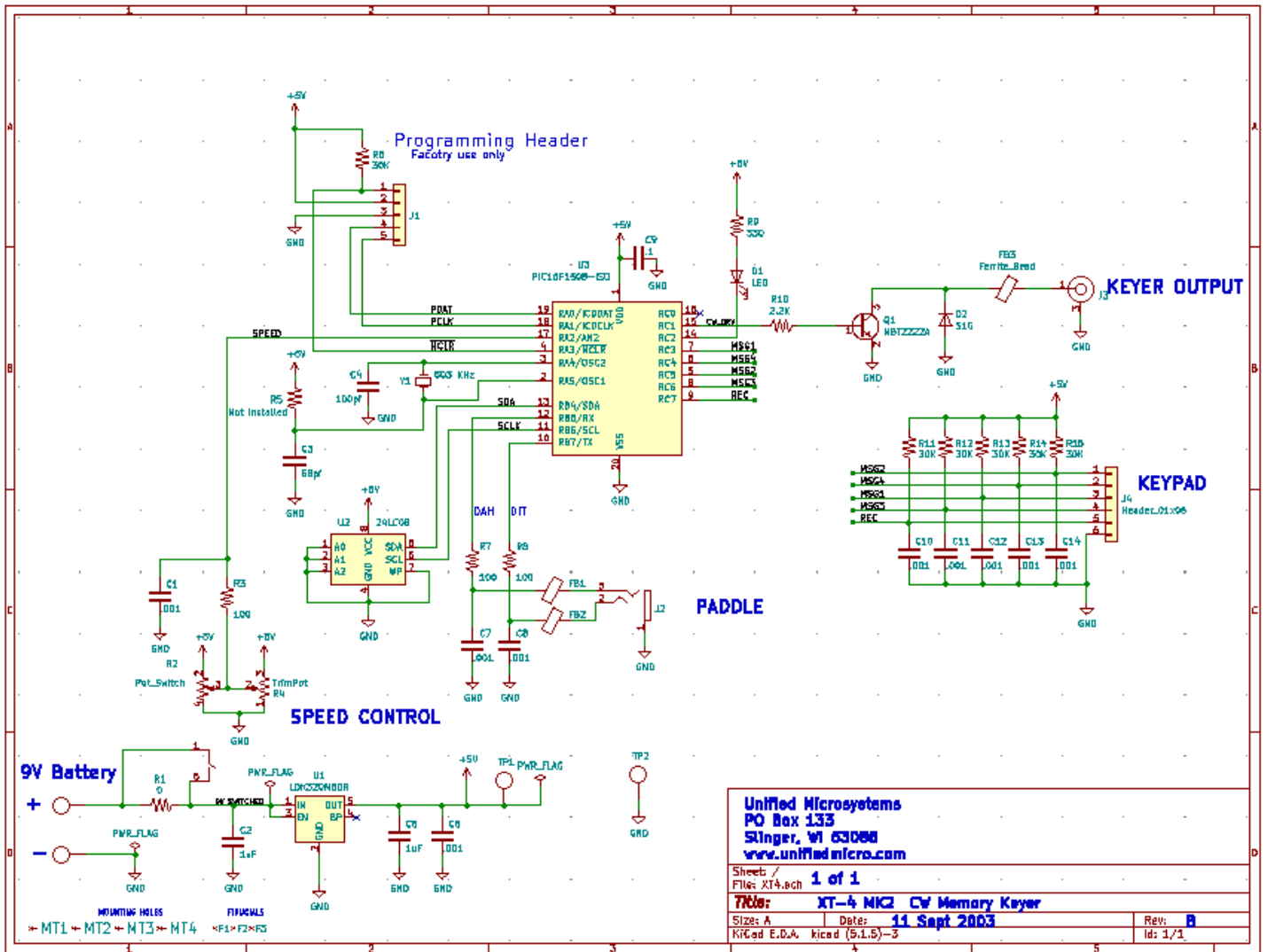
Pin #	Name	Function
1	MSG	Play message
2	5 SEC + MSG	Key down 5 sec then message.
3	20 SEC + MSG	Key down 20 sec then message.
4	10 Min ID	Send message every 10 min.
5	REC	Record start/stop
6	GND	Ground

**Figure 1. Connect Pin 6 (GND) to another pin with the supplied jumper to enable that function.**

### Warranty Information

Unified Microsystems warrants the components workmanship of the XT-4Beacon MK2 CW Beacon ID Keyer for a period of one year from the date of purchase. A copy of the receipt must be included with any units returned for warranty repairs. Unified Microsystems will, at its option, repair or replace defective units returned during the warranty period. Unified Microsystems reserves the right to change specifications of the XT-4Beacon at any time without notice.

For support, email [w9xt@unifiedmicro.com](mailto:w9xt@unifiedmicro.com). Please include "XT-4 MK2 Beacon" in the subject line.



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