

Setting up a beacon with the The Island Keyer II

The Island Keyer II has several features for beacon use, this article will review them and provide a few ideas for using the Island Keyer II for various beacon applications.

The Legacy Beacon

The first way to create a beacon with the Island Keyer II uses a mode which is a “legacy” from the PK series of keyers. This mode uses the switch 2 memory (and optionally switch 1) within the bank and chapter currently selected. The user records the beacon message within the switch 2 memory. Then after entering command mode (multipress switches 2 & 3) entering BE will start the beacon going. Message 2 will play over and over until the dit/dah/key are pressed.

The legacy beacon can be altered in a number of ways. First, the switch 2 memory play can be augmented with an alternation of play of the switch 1 memory. This feature is switched on using the BAN command in CE (command entry). Now the beacon will play the two memories alternately until interrupted by the dit/dah/key press.

Another variation on the legacy beacon is to use the Beacon Delay command to allow a key up delay between beacon plays of the memory. For a 3 second delay between plays, enter BD03 within CE (command entry). Note that the delays are approximate. The delay can be changed to key down by entering KN within CE.

One final variation on the legacy mode is the Powerup beacon mode. This mode allows the legacy beacon to automatically start up after power is applied to the keyer (however, FB is first sent through the sidetone only). The powerup beacon is turned on with the BPN command.

The Loop Beacon

Another way to create a beacon is to use the embedded commands alone to create an endless loop. This can be done in a couple of ways. For example, memory 1 can be recorded with an embedded command at the end to insert a memory play. If the memory inserted is the same as the one being recorded, the result is an endless loop:

For memory 1: CQ CQ CQ CQ DE WB9KZY WB9KZY K ?1

The ?1 at the end of the memory will loop back to the start and the CQ sequence will be played continuously until a dit/dah/key press.

A second way of doing a loop beacon would be to record memory 1 and insert a memory play of memory 2 at the end. Then memory 2 would be recorded and an embedded play of

memory 1 would be recorded at the end. This results in an endless loop which alternates between the two memories:

For memory 1: CQ CQ CQ CQ ?2
For memory 2: DE WB9KZY WB9KZY K ?1

Other Beacons Ideas

The embedded commands of the Island Keyer II can be used to create some other interesting applications for beacons. For example, a silent delay can be embedded at the end of a CQ sequence, to allow time for another station to respond to the CQ:

CQ CQ CQ CQ DE WB9KZY WB9KZY K ?D07X ?1

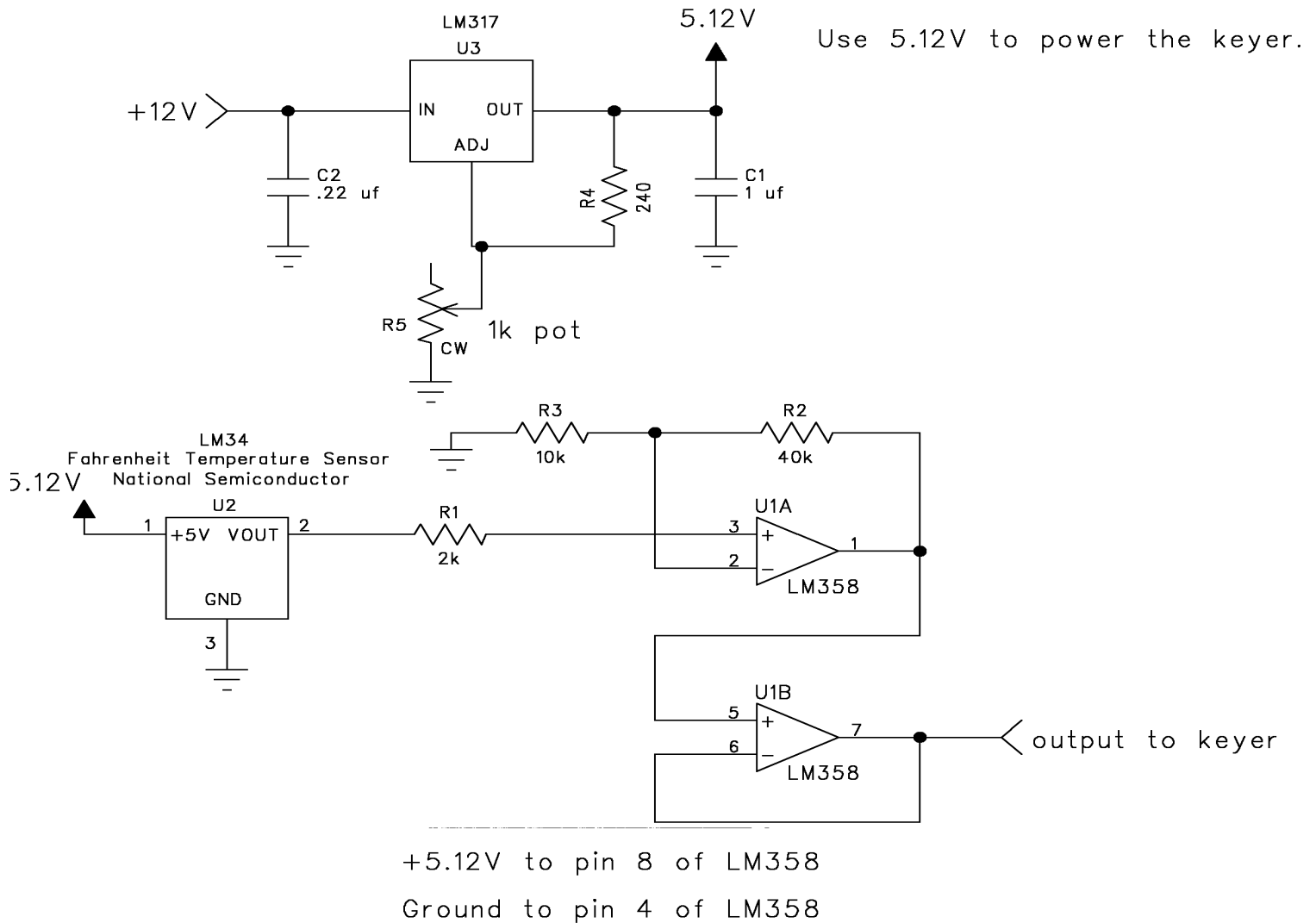
This results in a CQ sequence send, then a 7 second silent delay, then a repeat of the CQ.

Another idea is to use the key down delay to allow listeners to get a good reading of the beacon signal strength, for message 1:

VV DE WB9KZY/B QSL TO WB9KZY AT ARRL.NET ?D05? ?1

This provides a beacon send, then a 5 second key down period, then a loop back to the beacon send.

One interesting option with the Island Keyer II is the ability to read out three different A/D (analog to digital) converter inputs. These are 10 bit A/D conversions resulting in a readout from 0 to 1023. Normally these are connected to the wiper of a pot and used to sense the pot position for keyer speed, sidetone frequency or weight. However, they don't have to be connected to pots. They could also be used with some kind of external sensor and included in the beacon send. One relatively simple idea would be to read the temperature at the location of the Island Keyer II. On the following page is a circuit using an LM34 temperature sensor: The LM317 voltage regulator should be adjusted with the pot to provide a 5.12V output. The output of the LM34 sensor is a DC voltage which varies with the temperature. 10 mV corresponds to 1 Fahrenheit degree. The output of the LM34 is multiplied by 5 by the LM358 op amp. This 5X signal is then sent to the second half of the LM358 which acts as a unity gain buffer. This signal is then sent to the A/D input of the Island Keyer II. The Island Keyer II should be powered by the same 5.12V power supply. The 5.12V supply acts as a reference for the 10 bit A/D converter. The least significant bit of the A/D converter is thus $5.12 / 1024 = 5 \text{ mV}$. Since the LM34 output is multiplied by 5, the resulting Morse output of the Island Keyer II is scaled for a 0 to 102.3 degrees Fahrenheit. A 68.2 degree F temperature will be sent as 682 by the Island Keyer II.



Most of the features in the Island Keyer II were the result of suggestions from PK-3 keyer users. Please feel free to email with any questions, comments, suggestions or problems with the keyer- email to: jacksonharbor@att.net

Thanks for choosing the Island Keyer II and
Best Regards,

Chuck Olson, WB9KZY