Application Note for the: 10 Minute Timer
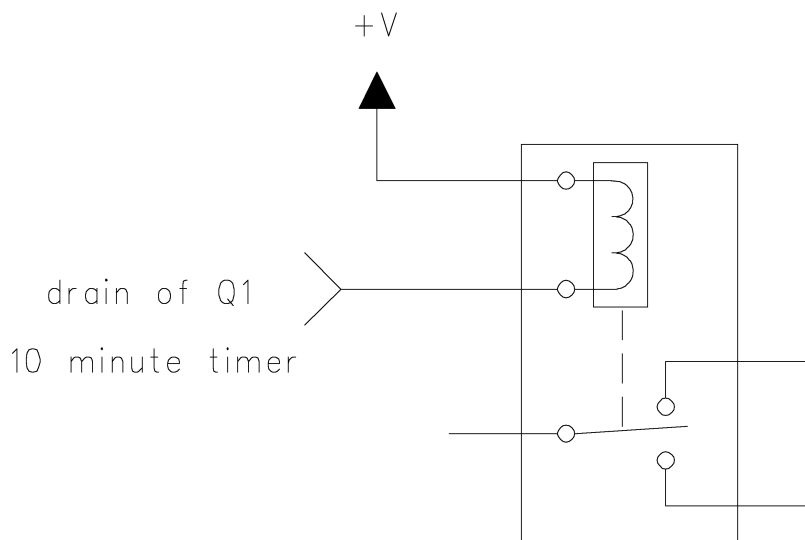   from Jackson Harbor Press

Introduction:

Here are a few ideas for using the 10 minute timer in other ways than just an ID timer.

1) Sleep Timer:

The 10 minute timer makes a nice sleep timer for a radio or TV. The 10 minuite timer output can be connected to control an
external relay as shown here:

+V

drain of Q1

10 minute timer

One side of the relay coil is connected to the drain of
the output transistor of the 10 minute timer kit. The
other side is connected to a positive supply voltage
appropriate for the relay. Be sure to observe the
polarity of the relay coil if there is an internal free-
wheeling diode (a reverse biased diode should be
connected either internal to the relay or externally
across the coil, with the cathode (banded end)
connected to the relay +V and the anode to the other
end of the coil). The ground for the relay supply
voltage should be connected to the ground of the 10
minute timer if the relay and 10 minute timer are
powered from different sources.

The contacts of the relay can be connected to nearly
anything, such as in series with a radio speaker or in
series with the AC supply of a radio or TV. It can
also be used to actuate a really LOUD siren or other noisemaker if the internal piezo isn't loud enough.

The 10 minute timer should be setup with the following to allow easy sleep timer operation:

RTG? should be set OFF (default)
TCK? can be set OFF if the tick sound is annoying (default is ON)

KEY? should be set OFF (default is ON)
POL? should be set ON (default is OFF)
QRS? should be turned OFF (default)

MSG? should be set to a word space (****--* , SP run together) so that no sound Is heard
        then an END character (*-*-** , END run together)

2) Morse Beacon

The 10 minute timer can be used as an inexpensive Morse code beacon. One thing that many folks like to do with beacons is to
set them up as CQ generators. The favorite 3x3 or 4x2 or whatever CQ pattern is desired can be programmed into the MSG?
memory and then a delay interval can be set for listening for responses.

MIN? and SEC? should be set to the desired interval between beacon sends
DL? should be set to the desired Morse code speed (default is 20 wpm)
RTG? should be set ON (default is OFF)
TCK? can be set OFF if the tick sound is annoying (default is ON)

KEY? should be set ON (default)
POL? should be set OFF (default)
QRS? should be turned OFF (default)

MSG? should be set to the favorite CQ or beacon sequence

3) Fox Hunting Beacon

The 10 minute timer can also be used as an inexpensive Fox hunting beacon. Many of these fox hunts are done on VHF using FM or other non-Morse type rigs. The 10 minute timer can be used to control a Fox hunt beacon by turning off the keyed output and using the 10 minute timer output to control a PTT input of a voice rig. The sidetone can then be fed into the microphone input of the voice rig (with appropriate level set and filtering circuitry on the sidetone output). A character space can be used at the start and end of the message to allow switching time for the rig circuitry.

MIN? and SEC? should be set to the desired interval between beacon sends
DL? should be set to the desired Morse code speed (default is 20 wpm)
RTG? should be set ON (default is OFF)
TCK? can be set OFF if the tick sound is annoying (default is ON)

KEY? should be set OFF (default is ON)
POL? should be set OFF (default)
QRS? should be turned OFF (default)

MSG? should be set to beacon sequence

4) QRSS Beacon

One special feature of the 10 minute timer is that it supports QRSS beacons, where the code speed is specified by the number of seconds per dit. Popular speeds are QRSS30 (30 seconds per dit) and QRSS60. These beacons are usually quite short in length as it takes quite a while to send a message at these speeds. The slow QRSS beacon speed allows listeners to use very narrow bandwidth signal processing which in turn allows the beacon operator to use very low power.

MIN? and SEC? can be left as is since the delay is NOT used during a QRS beacon
DL? should be set to the desired QRSS code speed (default is 20, limits are 1 to 60)
RTG? should be set ON (default is OFF)
TCK? can be set OFF if the tick sound is annoying (default is ON)

KEY? should be set ON (default)
POL? should be set OFF (default)
QRS? should be turned ON (default is OFF)

MSG? should be set to the beacon sequence

Please feel free to email with any questions, comments, suggestion or problems with this kit. My email address is:
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Thanks for choosing the 10 Minute Timer kit and Best Regards,

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