

This is a personal page of what I've learned and how I programmed my PicCon Fox Hunt Controller. This page could have some errors. By using these instruction pages you agree that this use is solely at your own risk, and agree that the author will not be liable for any losses, injuries, or damages from the use of these instructions. Use the Byonics PicCon manuals and data for exact programming instructions, and for electronic harness purchase and wiring information.

The PicCon is a Fox (Transmitter) Hunt Controller. Once it is programmed as you wish, it will key a radio, send repetitive tones via a microphone connection, send your call sign in Morse Code, and stop transmitting for a quiet radio cool down period. It will keep repeating this cycle until you shut it off physically or remotely by using the DTMF tone keypad of a remote radio.

There are 6 basic, and 2 optional items to program for a simple fox hunt, they are:

1 - Musical Tones Time 2 - Total Cycle Time 3 - Morse Code ID Speed 4 - Morse Audio Frequency 5 - Your Call Sign 6 - Musical Rhythm Speed 7 - (optional) Secret Lock Code 8 - (optional) Battery Connection Auto Start.

The PicCon is programmed via DTMF touch tones from the fox-radio or from a remote transceiver using the same simplex frequency. To program a setting, you send keypad tones by holding in the transmit push-to-talk button (PTT) and pressing one of the A,B,C,D buttons on the keypad, some numbers, possibly the "#", and then releasing the PTT. The PicCon receives these tones via the speaker jack connection and enters them into its non-volatile EEPROM memory. Since it programs and responds to these tones, the **volume on the fox-radio** (radio connected to the PicCon) **must be turned up to a normal audible level** so the PicCon can actually hear them. Remember, since it receives tones - the PicCon **can only be programmed or controlled while it is quiet** (not transmitting). The fox-radio (radio connected to PicCon) doesn't require a keypad, it could be an older radio or an HT that has a low power setting. It could still be started and stopped using the case button, or by applying and removing voltage, and the PicCon could still be programmed and controlled remotely with a radio that does have a keypad.

Personally, I prefer to use a remote radio to program and control the PicCon. This way you're leaving the fox-box-setup (radio, PicCon, harness, battery, antenna, switches, fan, etc.) alone, and this assures you that you can program and control all functions from a distance - which could be handy at a hidden fox site.

NOTE - Before you change any original factory settings – listen with a remote radio, on the same simplex frequency, to make sure the PicCon is keying and sending tones and an ID message repetitively.

Once the harness is connected to the radio, the PicCon has voltage available, volume up a little, antenna or dummy load connected, radio on lowest power (while programming) then you can press the SW1 button on the PicCon Case to start a transmitting sequence. If there is no keying/transmission and tones are not heard via a remote radio on the same simplex frequency, then don't make any changes and find out what the problem is before using any of these instructions. Consider asking a fellow Fox Hunter who owns a PicCon to help get your system going. If it is working ok then press the PicCon case button SW1, or remove power to stop the unit.

The following are my programmed settings examples. Enter these settings and listen to how they sound, then modify these settings to meet your needs.

Your programming/control radio (either the fox-radio or a remote radio) must have a working DTMF tone keypad with ABCD buttons. For safety, while programming, turn your power to low-as-possible to avoid too much RF to yourself and to avoid overloading the receiver of a second near-by radio.

For this first setting below 1.(A2), with the volume on the fox-radio turned up to a normal audible level, using either the keypad on the fox-radio or a remote radio, you would hold in the transmit button (PTT) and enter from the keypad " A 2 0 0 4 8 ", then release the PTT. These tones should have carried from the fox-radio's speaker jack to the PicCon and this setting should now be entered in PicCon's memory.

1. (A2) Set the Musical Tones Time: PTT A20048 - This example sets the transmit time to 00 minutes and 48 seconds. Your Morse code ID (about 12 seconds) will be added to this A2 time which will be about 60 seconds of transmit "ON" time.

NOTE: Do Not Setup Long Transmit Times that may overheat and damage your radio. Operate well within your radio's duty-cycle specifications, don't transmit from inside a hot-summer-time car or in direct hot sunlight. Make sure your radio is not overheating, add heat-sink fins and a cooling fan - do whatever it takes to keep your radio cool and safe. Run only enough power to get the job done. Instead use a better antenna or add height. Less power makes for a more enjoyable hunt - even five watts is hard to locate at close range.

2. (A3) Set the Total Cycle Time: PTT A30145 - This example is 01 minutes and 45 seconds, which consists of 48 seconds repetitive tones, 12 sec. Morse Code ID, and 45 seconds of cool-down no-transmit quiet time.

Once the Tone Time and Total Cycle Time are set, the unit should stop transmitting after the Total Cycle Time, then when quiet, you can PTT 2, or PTT 3 to completely stop transmissions. PTT 1 or PTT 2 will restart transmissions. Using the PTT 2 to both start and stop has been most reliable for me. The PicCon Case switch SW1 will always start and stop transmissions.

3. (B2) Set the Morse Code ID Speed: PTT B213 - Programs at 13 wpm, 05 to 27 wpm is possible.

4. (B3) Set the Morse Code Tones-frequency: PTT B350 - Sets to 50, 01 to 99 represents 256hz to 2542hz.

5. (C1) Set the Morse Code Identifier (your call sign): You will enter C1 , two digit codes from the chart below, and end with pound sign # (PTT C1 04 05 00 00 00 00 #).

Example: PTT C1 04 05 00 00 23 24 34 24 25 26 00 00 23 24 34 24 25 26 #

This will send: DE *pause* WX4XYZ *pause* WX4XYZ . Replace WX4XYZ (23 24 34 24 25 26) with your call sign letters using this chart.

Pause 00 Slash 27

a 01 b 02 c 03 d 04 e 05 f 06 g 07 h 08 i 09 j 10 k 11 l 12 m 13
n 14 o 15 p 16 q 17 r 18 s 19 t 20 u 21 v 22 w 23 x 24 y 25 z 26
0 30 1 31 2 32 3 33 4 34 5 35 6 36 7 37 8 38 9 39

6. (B1) Set the Rhythm Speed of the Musical Tones: PTT B175 - Set to 75, range of 00 slow to 99 fast.

7. (A6) Optional - enter a 4 digit Secret Lock Code PTT A60000 (use your own 4 digit secret code instead of 0000). This feature can lock the unit so it will not receive any over-the-air commands. This could prevent others from maliciously stopping or even reprogramming your PicCon during a fox hunt transmissions. Then if needed, send #0000 (or your secret code) to unlock, send your commands, and then relock with PTT 4 .

To turn Lock "ON" PTT 4 , To turn Lock "OFF" PTT #0000 , or remove power.

Two other lock methods would be to simply turn the volume of the fox-radio all the way down which will probably not allow commands from any remote radio, but test this idea with your radio to see if it does actually stop commands. Also simply removing the speaker jack plug or adding a switch in the speaker wire (non grounded conductor) should inhibit unwanted programming or commands.

8. (B4) Optional – Battery Auto Start: PTT B432 - 32 turns this function “ON” , PTT B400 turns it “OFF”.

This setting makes the PicCon start sending when it is initially connected to a battery. This setting could be used with a fox box using a switch from the battery to the PicCon which would start the fox transmissions. At the end of a hunt you could turn the switch off - which would stop transmissions and depower to the PicCon. If you put your components in a tackle or ammo box (fox box), then it might be a good idea to put the power switch inside the box to keep passer-bys from switching it off.

Optional - To do a RESET of the EEPROM & erase your Morse ID & change all settings back to the factory default: Hold the (SW1) case button in and also PTT 0. (may need to do this twice to work)

REMEMBER: Once you are programmed - you can:

Start and Stop your fox transmission by pressing the case button (SW1), or with PTT 2

Lock the PicCon so remote entries cannot be made PTT 4

Unlock the PicCon by entering your Secret Code PTT # 0000 (or your 4 digit secret code)

FOX BOX CHEAT SHEET (keep a copy of this in your fox-box)

Toggle ON & OFF with PTT 2 or SW1 button. Keep Fox radio volume to audible level.

1. (A2) Musical Tones Time: PTT A20048 (00 min & 48 sec + 12 CW ID = 60 sec ON)

2. (A3) Total Cycle Time: PTT A30145 (01 min & 45 sec = ~ 45 sec. OFF no TX)

3. (B2) Morse Code ID Speed: PTT B213 (13 wpm, 05 to 27 wpm is possible)

4. (B3) Morse Tones-freq: PTT B350 (50 ~ 1150hz, 01 to 99 = 256hz to 2542hz)

5. (C1) CW ID: PTT C1 04 05 00 00 _____ 00 00 _____ # (replace __ from chart)

6. (B1) Rhythm Musical Tones: PTT B175 (75, 00 to 99 = slow to fast)

7. (A6) Enter Secret Lock Code: PTT A60000 (0000 = default, enter your secret code)

Lock the PicCon PTT 4 , Unlock PTT # 0000 (or your 4 digit secret code)

8. (B4) Battery Auto Start to “ON” PTT B432 , turn “OFF” PTT B400

Chart for Morse Code ID Characters

a 01 b 02 c 03 d 04 e 05 f 06 g 07 h 08 i 09 j 10 k 11 l 12 m 13

n 14 o 15 p 16 q 17 r 18 s 19 t 20 u 21 v 22 w 23 x 24 y 25 z 26

0 30 1 31 2 32 3 33 4 34 5 35 6 36 7 37 8 38 9 39 Pause 00 Slash 27

Full RESET to factory defaults: Press case button “with” PTT 0 (may need to do twice)