



# USBCAT Windows Control Program

Version 1.0

USBCAT is a Microsoft Windows based program written in C using Win32 API calls to control the upgraded Ten-Tec 1254 Shortwave Receiver from a PC over a USB port. It allows easy control of the radio using PC keyboard entries, mouse clicks, and mouse wheel spins.

## Installation

The program **USBCAT.exe** and it's dll are included in the zip file **USBCAT.zip** downloaded from:

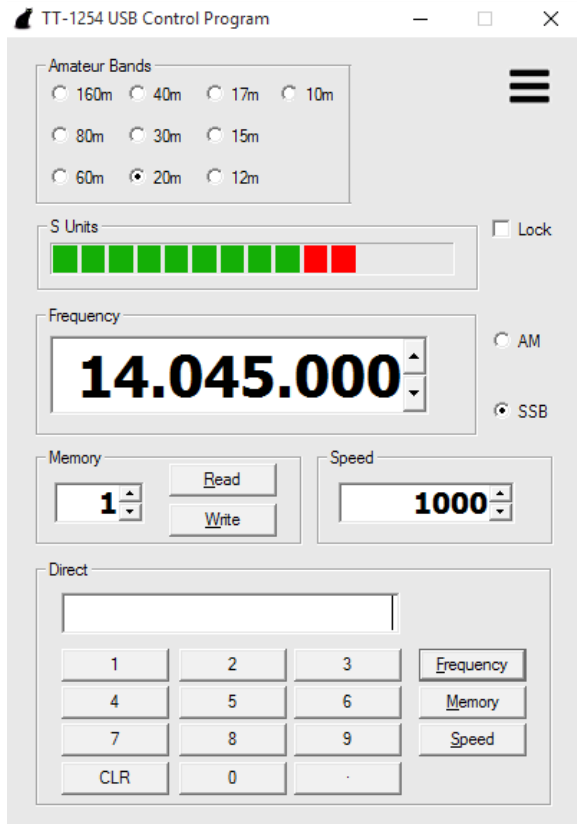
<http://cholakian.com/USBCAT.zip>

To install the program open the zip file and copy the **USBCAT.exe** program and the **lcclibc.dll** to any convenient location on your PC hard disk. No other files are required. No installation is required.

To use the program connect the USB port on the radio to an available USB port on your computer using a standard size type A to B cable. No driver installation is required.

## Program Features

The **USBCAT** program controls all the parameters used in the radio. These are the tuned frequency, the receiver mode, and the tuning step speed. Also any of the memory channels can be saved and recalled. The front panel of the radio can be locked from changing the radio state. For convenience the amateur or shortwave radio bands can be preselected using a set of windows radio control buttons.



## Numeric Entries

There are a few ways to enter numbers into the program. One is to use the number keys shown in the program window. Each time you press a number key with a mouse click that number is entered into the box labeled **Direct**. To clear the numbers entered in the box hit the **CLR** key.

The **Direct** box can also accept numbers typed in directly into it using the PC keyboard. First click on the **Direct** box to place the windows caret in the box. Then type the number desired, either frequency to tune, memory channel or new step speed. Do not use the PC keyboard **Enter** key, instead to complete a selection press the **Frequency**, **Memory**, or **Speed** button. The typed number, if valid, will be transferred to the selected box, **Memory**, **Speed**, or **Frequency**, and the **Direct** box will be cleared. If the number typed is invalid the **Direct** box will be cleared, but no other action will be taken.

Note: frequency entries are assumed to be to in exact KHZ if no decimal point is entered, and any frequency

expressed in MHz if a point is part of the entered number: i.e. 14.045 MHz could be entered as either 14045 or 14.045

Each entry box, **Frequency**, **Memory**, and **Speed** can be changed with a click on the up down arrows in the box. A click up or down changes the frequency by one speed increment. Up or down clicks on the **Memory** arrows change the memory channel to access. Up or down clicks on the **Speed** box changes to the next available frequency step increment.

The easiest method to change the data in these boxes is to use the mouse wheel. First click on the box you wish to change to move the Windows focus to that location. Then roll the mouse wheel up or down to spin through all the possibilities. This is very useful for frequency selection. The rate you roll through the frequencies is set by the current **Speed** number. The radio operates best rolling very fast on steps of 1 KHz or greater. When tuning in finer steps scroll through the frequencies more slowly.

## Receiver Mode Selection

The radio has two modes, **AM** and **SSB** (both upper and lower). To change the mode click the labeled radio button.

## Frequency Band Group

The radio buttons in the **Band** group can be clicked at anytime to jump to the beginning of each band. At any other time when a frequency is selected that is within one of the amateur bands the radio button is automatically shown selected. There are two band groups available, the **Amateur Bands**, and general **Shortwave Bands**. Select the group shown with the system pull down menu (clicking on the black cat).

## Memory Channels

Use any of the methods to change the number shown in the **Memory** box. To recall a channel previously saved in the radio in that channel click the **Read** button. To save the current frequency and mode to the channel shown in the **Memory** box click on the **Write** button. You will get a pop up window to make sure you wish to do the write.

## Radio Lock

When any change is made on the radio using it's front panel controls that change is reflected in the **USBCAT** Windows program. To lock the radio from simultaneously making mode and frequency changes click on the check box **Lock**.

## S Units

Signal strength is show in the box **S Units**, one box per S Unit.