RIGtalk

Revision 5

Owner's Manual
2012

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Introduction:

A RIGtalk is a USB (universal serial bus) to serial port converter with 3.3 volt TTL level output. It is designed specifically for Amateur Radio transceiver computer control of Kenwood, Icom (CI-V), Yaesu (CAT), and other radio transceivers. It may also be used to program and clone hand held transceivers if you make a custom cable.

A RIGtalk may be used with radios that require serial TTL voltage level rig control signals. It will not work, nor do you need a RIGtalk, if your radio has an RS232 level control interface.

The RIGtalk communicates directly with a PC through the now popular and standard USB interface. It emulates a serial port but that port communicates with a radio at TTL voltage levels NOT RS232. A serial port connection is not needed; the RIGtalk emulates one for you.

The RIGtalk is compatible with all versions of Windows® that support USB operation. This only includes Windows® 98SE, ME, W2K, XP or higher.

RIGtalk precautions:

Do not allow the RIGtalk to get wet or to use it in humid locations.

Make sure that your computer and you ham station have a common AC ground that is bonded at a single point. This means that all station grounds and AC grounds must be at a single low impedance point. Any AC leakage or voltage between multiple grounds could damage your radio, computer or the RIGtalk when connecting the system together. This is true of all station interconnections and accessory installations.

Having the AC service ground on one side of your house and another ground for your antenna on the other side of your house creates dangerous ground loop if not bonded together at a single point. This huge ground loop (loop antenna) could pick up the electromagnetic pulse of a near-by lightning strike and induce a huge electrical spike directly through your equipment. If your equipment is effectively connecting two ground systems together instead of being connected to a single point ground you are asking for trouble. Disconnecting your antennas for thunder storms will not protect you if you have a station ground that is at a different location from your AC house ground.

Be careful not to bump or stress the RIGtalk sticking out of your USB port as this could physically damage your computer's USB connector, or the RIGtalk.

RIGtalk Installation:

Windows® Plug and Play driver installation

Plug the RIGtalk into the USB socket on your computer that you plan to keep it in.

A Windows® Plug & Play wizard should pop up in a few seconds. Let the wizard install the software automatically and search for the best driver files. It should find the files on the Microsoft® driver update server if your computer is on-line and if not the wizard should find the drivers on the RIGblaster and RIGtalk CD that is in your CD drive.

Once the drivers are completely installed by Windows®, the green "POWER" LED on the RIGtalk will illuminate.

The driver installation is complete if Windows® indicates "Your Hardware is Ready to Use" and the RIGtalk green LED comes on. This will not happen if you have stopped, cancelled or aborted the installation at any point for any reason.

Continue to the next step only if the driver installation completed correctly. See tip below.

TIP: To confirm that the driver installation has completed correctly first check that you have the green RIGtalk LED lit. You may then check the Windows® device manager. To do this, right click "My Computer" and then left click "Properties". Click "Hardware" then "Device manager". Scroll down and click the "+" symbol next to "Universal Serial Bus controllers" and also click + for "Ports (COM and LPT)". You MUST see the WMR RIGtalk under both these categories of installed hardware. If not, the RIGtalk installation was not completed successfully.

TIP: Accessing device manager from Vista/Win7 is easier than previous versions of Windows - bring up the Start menu and type "device manager" in the text box. Hit the return key and the correct window will be opened immediately.

TIP: While you are looking at "Ports (COM and LPT)" note which COM port number was assigned to your RIGtalk by Windows®. Later when you set up your ham radio software you will need to know the COM port number for software configuration.

Rig control software setup guidelines and tips:

The following information is provided as general (generic) guidelines for setting up rig control. Please refer to your radio's manual and your software's documentation or help files for specific information.

> **The following software settings MUST be set for rig control to function:**
>
> - **The COM port number, assigned to the RIGtalk by Windows®.**
> - **The serial communication's baud rate, parity and stop bits.**
> - **The radio make and model must be an EXACT MATCH.**
> - **The Icom or Ten Tec CI-V address must match: radio and rig control software.**
> - **(Continue reading below for help on doing these settings!)**

Checking the COM port assignment given to the RIGtalk by Windows®:

After installing the RIGtalk drivers and connecting the RIGtalk, as outlined above in the RIGtalk installation, assure that the RIGtalk is plugged in and that the RIGtalk's LED is illuminated.

Right click "My Computer"
Left click "Properties"
Left click "Hardware"
Left click "Device Manager"
Scroll down to "Ports (COM & LPT)"
Left click the plus + next to "Ports (COM & LPT)"

The COM port assignment will appear in parentheses to the right of "WMR RIGtalk Serial Emulator"

Tip: Accessing device manager from Vista/Win7 is easier than previous versions of Windows - bring up the Start menu and type "device manager" in the text box. Hit the return key and the correct window will be opened immediately.

You will need this COM port number to setup your control program so that it may communicate with the RIGtalk's virtual serial port.

Note: if you plug the RIGtalk into different USB ports each USB port will have a different COM port number assigned to it. You may use several RIGtalks with one computer and several radios, each with a different COM port assignment.

TIP: Your control program may not or may be able to be set to the COM port assigned to the RIGtalk by Windows®., because it's port number is too high. You may be able to change it depending on your computer and your version of Windows®. Try the following:

After installing the RIGtalk drivers, as outlined above in the RIGtalk installation, plug in the RIGtalk and insure that the LED on the RIGtalk is illuminated.

Right click "My Computer"
Left click "Properties"
Left click "Hardware"
Left click "Device Manager"
Scroll down to "Ports (COM & LPT)"
Left click the plus + next to "Ports (COM & LPT)"
Left click "WMR RIGtalk Serial Emulator"
Right click "Properties"
Left click the "Port Settings" tab.
Left click "Advanced"

Select a lower "COM Port Number:" that may or may not be "in use". Note that if you ever temporarily installed any serial devices a COM port number will show "in use" for that device even though the number is not presently in use.
Right click "OK"

Windows® will pop up a warning message that the port is in use. If you override that message by left clicking "Yes", the RIGtalk will work without any conflicts if the computer actually didn't have other hardware assigned to the COM port number that you have just selected.

Close all Windows® and set your control program to the new COM port assignment that you have selected and test it to make sure that it works.

Note: if you have correctly selected a COM port that was actually not in use, Windows® will permanently assign that COM port number to the RIGtalk the next time that you re-start your computer with the RIGtalk plugged in.

TIP: A radio's menu settings may have been changed from the radio manufactures default setting. Check this, it will cause a rig control communications problem even if the software is set correctly for that make and model radio.

Most modern radios have these menus that allow changing computer control settings. Simply selecting the correct make and model of your radio in the control software does NOT insure that it will match the radio if the radio's default menu settings as the defaults may have been altered.

Check the baud rate and in the case of a CI-V radio, that the address is correct for the radio model. Icom radios have menu functions where you may set not only the baud rate but also the CI-V address to something other than the default. Each Icom model comes with a unique default CI-V address that should be set to the default but may be altered via the radio's menus for special applications.

It is best to refer to your radio's manual and to set the radio to the default settings of what a new, out-of-the-box, version of that radio would have. At least check to see that it is set to the default. Any setting for the radio, other than the default, will cause the default setting of the software, for that radio, not to work.

Also remember some older transceivers required firmware upgrades and/or minor circuit modifications for rig control to work properly. If you can't get rig control to work properly on an older radio this may be the reason. In many cases a newer version of the transceiver firmware and/or a pull-up or pull-down resistor will solve the problem.

RIGtalk Warranty

The RIGtalk is warranted against failure due to defects in workmanship or materials for one year after the date of purchase from West Mountain Radio. Warranty does not cover damage caused by abuse, accident, misuse, improper or abnormal usage, failure to follow instructions, improper installation, alteration, lightning, or other incidence of excessive voltage or current. If failure occurs within this period, return the RIGtalk or accessory to West Mountain Radio at your shipping expense. The device or accessory will be repaired or replaced, at our option, without charge, and returned to you at our shipping expense. Repaired or replaced items are warranted for the remainder of the original warranty period. You will be charged for repair or replacement of the RIGtalk or accessory made after the expiration of the warranty period.

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