RFEngineers, Inc. Cerberus Broadcast Monitor– Quick Start Guide

Rear Panel Overview

Antenna input:
- 50-Ohm BNC connector
- Common input for AM, FM and WB

USB Power & Data I/O:
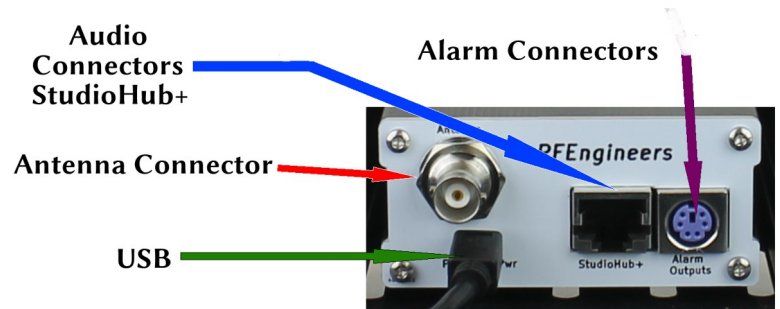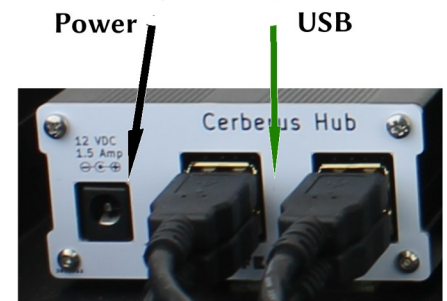- USB-A on the Hub to USB-Mini-B on each WDC

Alarm output:
- 6 Pin MiniDIN
- Alarm outputs D, E, F & G

Balanced audio output:
- StudioHub+ RJ45 Analog audio
- optional AES3 available

Main Power input:
- 5.5mm center positive
- 12VDC at 2 Amps

Receiver Setup Overview

1. Download & install the latest version of our FREE Watch Dog Dashboard software
The latest Watch Dog Dashboard software can be downloaded from the Watch Dog downloads web page, which is at http://www.RFEngineers.com/WDC. It is a self-installing program for Windows 7 & 10. Simply double-click on the installation file once you've downloaded it and proceed from there.

2. Connect Cerberus to your computer
Simply connect the supplied USB cable between your computer and Cerberus' front-panel USB Control Port.

> *** Important Note:** Connecting a computer to the Cerberus USB Control Port will cause all Watch Dog receivers to power cycle. This is normal and necessary to establish a USB connection to the receivers.

3. Start the Watch Dog Dashboard software and connect to a Watch Dog receiver
Once you have connected Cerberus to your computer and installed the latest version of the Dashboard, start the Dashboard by finding it in the Start Menu. Dashboard should show a list of all Watch Dog receivers connected to your computer. Select the Watch Dog you wish to control from the list.
- In the special case where Dashboard only detects one Watch Dog the list dialog will not appear and Dashboard will connect to the Watch Dog.

4. Basic receiver configuration using the Watch Dog Dashboard
The following parameters for your Watch Dog receiver can be easily changed from within the Watch Dog Dashboard. All settings are stored in EEPROM and your receiver will always return to this configuration anytime it is power-cycled or rebooted. All of the basic receiver parameters are located within the **General settings** pane of the Dashboard:
- Receiver mode (FM, AM, or NOAA Weather)
- Frequency / NOAA Weather channel number
- Main volume and headphone volume levels
- Stereo/mono setting (FM mode-only)
- FM De-emphasis Time Constant (DTC) (FM mode-only)

Receiver Setup Overview Continued

5. Alarm configuration using the Watch Dog Dashboard
Your Watch Dog receiver contains an advanced 32-bit microprocessor and applies a number of Digital Signal Processing (DSP) techniques on various incoming signal characteristics in order to alert you if any parameters ever fall outside of their assigned thresholds (e.g. audio loss or low SNR). A number of different characteristics (see next section below) can be tied to any one of 7 possible alarm outputs (Outputs A through C are connected to the front panel LEDs and outputs D through F are connected to 4 of the General Purpose Output (GPO) pins available on the rear panel (D9 connector). Alarms are active when their underlying characteristics are no longer within their thresholds. These are all configurable by clicking the "Alarm settings" button within the **Alarm states** pane of the Dashboard.

6. Watch Dog Dashboard real-time display
Your Watch Dog receiver's microprocessor continually reads and analyzes a number of different signal characteristics and other inputs. All of these readings are located within the **Signal, Live RDS** (FM mode-only)**,** and **Alarm states** panes of the Watch Dog Dashboard:
- Signal to Noise Ratio (SNR) and Received Signal Strength (RSS)
- Multi-path % and stereo pilot indicator (both FM mode-only)
- Left and right audio level meters
- Live RDS information (FM mode-only): PI, PTY, PS, and RadioText (RT)
- Alarm states: SNR, RSS, audio loss, pilot loss (FM mode-only), RDS loss (FM mode-only), and NOAA 1,050 Hz alert tone detected (NOAA Weather mode-only)

Alternatively, for users without access to a Windows computer or for users who prefer a "command-line approach", your Watch Dog receiver also contains an advanced, in-depth command-line interface that is accessible via the Watch Dog receiver's USB port and a serial terminal program such as PuTTY. More information on this approach can be found on the Cerberus downloads page, listed below.

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More documentation is available on the Cerberus downloads page:
http://www.RFEngineers.com/WDC

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