

USB Weather Processor/XM Receiver Installation and Configuration

Installation

1. Select a location for the processor and receiver. (Horizon HX only requires WxWorx receiver) The location should not expose the processor or receiver to excessive heat or water, and should not be near transmitting antennas, such as those for communication radios.

The units may be mounted in any orientation. Normally the processor and receiver are mounted together, but if necessary, the base for the receiver may be removed from the case of the processor.

2. Secure the processor (gold box) to the airframe using appropriate hardware through the mounting flanges. Vibration isolation is not required.
3. Slide the receiver unit (black) onto the black mounting tray and lock it in position.
4. Connect USB cable from receiver to the processor USB port. Coil up the excess cable, and wire tie it securely so that it can not interfere with moving parts of the aircraft, such as the flight controls. Insert and secure the USB cable to the processor using wire ties or other means as you deem appropriate.
5. Mount the antenna in a location that provides it with an unobstructed view of the sky. The antenna is not weather-proof, so it should be mounted in the interior of the airplane. The small size of the antenna makes it practical to mount on the glare shield without obscuring the pilot's view.
6. Route and secure the antenna cable through the airplane. Connect it to the "RF IN" port on the receiver (black box)

Caution: In the next step the power leads are wired to the aircraft power. Be absolutely certain that power is provided with the correct polarity.

7. Uncover the "Power" port on the receiver and plug the small power lead connector into the "Power" port. Secure in place using the connector's mechanism.
8. Attach the power (red) and ground (black) leads to the airplane's power bus. An in-line fuse (yellow casing) is provided so no other fuse or breaker is required for the receiver.

9. Wire the supplied 9 pin D-sub connector cable using supplied connector definitions diagram. Note that the weather receiver/processor must be wired to a display unit high-speed serial port. For the EFIS Horizon display unit, serial ports 1 and 2 are high-speed ports. If the display unit has a GPS or ARINC module, only Serial Port 2 can be used. For the Sport, the weather processor will be wired to Serial Port 4.

10. Install the strain-relief hardware onto the 9-pin D-sub connector. Plug and secure this connector onto the d-sub port on the processor box.

Configuring the Display Units for XM Weather

The display unit(s) will need to be configured to communicate with the weather processor via the high speed serial port to which it has been wired. To configure the serial port, select the "SET MENU" using the display unit softkeys. Select General Setup. Configure the port that has been wired to the weather processor/module as follows:

Serial Rate: 115200
Serial Input: Weather
Serial Output: Weather

The Serial Output is configured only on the display unit with both transmit and receive wires to the processor box. On other display units, the Serial Output can be set to Off, although the serial input must be configured, as does the serial rate, to allow this display unit to receive weather data. After making these changes, push SAVE. User-settings should be backed up using the USB memory stick whenever significant changes are made to the configuration of the system.

On Horizon HX, communication is over USB. To configure the USB port, select the "SET MENU" using the display unit softkeys. Select General Setup. Configure USB Weather to On. The receiver is ready for activation. Proceed with Activating the Weather Receiver.

Testing the Weather Receiver/Processor

1. Apply power to the display unit and receiver/processor. Using the softkeys, select the "Set Menu", and then "General Setup". Observe the serial counter is increasing on all display units that are wired to receive weather data. Disconnect power to the weather receiver/processor, and verify these counters stop increasing. If they continue to increase, the serial port is incorrectly wired.

2. Verification of the serial data to the weather receiver/processor is performed by the activation step that follows.

Activating the Weather Receiver/Processor

The receiver will need to be activated using the Radio ID before any weather data will be displayed. Activation requires use of a display unit wired to the receiver/processor. The activation procedure must be performed within 24 hours of starting the service or requesting an activation refresh. If more than 24 hours have passed, request a refresh from XM radio by phone or on the XM radio web site (refresh.xmradio.com).

This procedure may require as long as 30 minutes. Be sure your aircraft battery is sufficiently charged to allow powering the EFIS for this period of time.

1. To activate the receiver, power-up the processor, receiver, and the display unit. If you have more than one display unit, ***use the display unit with both serial input and output wires to the weather processor box.***
2. On the display unit, use the softkeys to select the SET MENU, followed by "Display Unit Maintenance". Scroll down to "Weather Status". Highlight "Weather Status" using a knob, push the knob, and turn the knob one click. A new settings page will appear with information about the processor and receiver.
3. This new settings page includes a line called "Connection". Confirm this shows "Receiver Detected". If this is not shown, verify power is being provided to the weather receiver, and that the USB cable connection is secure.
4. Confirm that the "Tuner Status" indicates "Good" signal quality. This will probably require moving the airplane outside of a metal hangar. If unable to get "Good" signal quality, check the antenna connection, and its mounting location.
5. Turn on activation mode by changing the "Activation Mode" setting from "Off" to "On". The Radio Status line will change to "Activation Mode." Within approximately 20 minutes, the Service Level line will change to Aviator or Aviator Lite, corresponding to the level of service you have ordered. When this occurs, turn "Activation Mode" back to "Off". The Radio Status line should change to "Configured" after a few seconds. If "Configured" is not displayed after 30 seconds, the serial output to the weather receiver/processor is not functioning, and must be corrected.

This completes the activation procedure. If the receiver ever loses activation status, this procedure can be repeated to re-activate the receiver.

Using the Weather Data

Weather data will now appear when "RADAR" is selected via the softkeys from the map page, when valid GPS position is provided to the EFIS. The arc and north up map views will display Nexrad and other weather data. Metars data will appear on the airports details when selected from the map. The status of the weather is also shown on the map page, in the lower left corner.