

# VBox Operations & Reference Guide

v1.0

## Initial Setup

By default, Data Recording is disabled (VBox PLUS); it can be enabled and configured through the VBox WiFi page “**Data Setup**” button. Audio recording is always enabled with no option to turn Audio Recording off, however it can be stopped for the current session.

If Data recording is not required (VBox PLUS) or not available (VBox), the unit is plug & play and does not require setup. However, using “Test Audio” is recommended to confirm that the unit is installed correctly, and it is able to receive an audio signal from the connected headphone jack.

The **Test Audio** records 10 seconds. A countdown is shown for the 10 seconds test duration. Talk on the headset, listen to ATIS/AWOS/Tower during these 10 seconds. An audio file is presented immediately which includes the 10 seconds recordings, download and listen to this file to confirm successful installation. For the **Test Data** button, once the correct format or data is received, a message is shown to indicate successful reception of data.

## Data Setup

- Garmin Text-Out  
VBox PLUS units support Garmin RS232 Text-Out for three messages (Air Data, EMS, and GPS). These messages are recorded once per second.
- General Data Recording  
VBox PLUS unit offers an option for “General” Data recording. This option records any RS232 data and saves it as is. This option is suitable for equipment that uses its own or proprietary format. Data can be Binary or ASCII. General Data option also suitable for equipment that sends CSV or other ready Text format.
- Data Manual Fetch  
Several EMS equipment offer RS232 Data feed using a manual process, by pressing a button within the EMS device itself. Manufacturers of these devices request an RS232 terminal or PC to be attached at 9600 baud, for example, and then to press a button, so the data can be sent. This option is also available, a Manual Fetch button within the VBox PLUS unit can be used to start receiving such data to save it directly to a file.

## Recording

**Recordings start 5 minutes after the unit is powered**, unless certain WiFi pages are accessed within these 5 minutes.

The pages, if accessed or used, that delay or extend the timer to start recordings are:

- 1- Test Audio Page
- 2- Generate/Download Audio files
- 3- Download Data files (VBox PLUS unit only)
- 4- Firmware Upgrade page.
- 5- Data Setup pages

These pages extend the start of all recordings until 5 minutes after any of these pages was last accessed or used. Do not keep the browser open on these pages. It is recommended to close the browser after accessing or downloading files.

Users are also able to fully stop any recordings in this session (until the next power cycle) by using the **“Stop Active Recording”** button on the main page. If clicked, the VBox unit will not initiate the recording routines until it is switched off and then back on again, so automatic recordings can be initiated. Recordings are stopped once the airplane Master Switch is off. The unit is able to record up to the instant the switch is turned off.

The VBox WiFi is always accessible while the unit is powered. In the event you would like to retrieve audio or data files immediately after a flight, access the VBox WiFi pages from your phone or tablet and manually stop the recording, so files can be generated. A message is shown when accessing certain pages if the Recording is still active.

### Flight Determination

The system determines, and flags, a set of recordings as “a flight” if recordings lasted 10 minutes or more.

### Audio Recording & Retrieval

The Audio is recorded in a raw format, and saved in very small segments (seconds) within the Audio storage integrated circuit. The Generate/Download WiFi button generates Audio files from these small segments depending on the requested option. If the system flagged the last Master On to Master Off (or Manually clicking **“Stop Active Recording”**) as a flight, then it offers the Last Flight and the Flight before that as an option to download the Audio files. Otherwise, it offers the audio in one hour segments from the Last Hour to the Last 50 hours.

## Data Recording & Retrieval

Data is grouped as flights only. So any session that lasted 10 minutes or more is flagged as a flight and the system offers the option to download the files per flight.

This is for the automatic live feed of Garmin Text-Out and General Format Recording. For the **Manual Fetch** option, all received data after clicking download are saved and presented directly.

Note: Once “Manual Fetch” is clicked, data must start within 30 seconds, and once data is being received, any 10 seconds pause of data is considered the end of data and the manual fetch is stopped then the files are presented. A **Stop Fetch** option can also be used to indicate end of data.

## Additional Notes

- For Garmin EMS Text-Out format, all three messages must be received to save data segments. The EMS Garmin unit must be configured to output at least these three messages; Air Data Message, EMS Message, GPS PVT Message.
- Click on “Stop Active Recorder” from the main WiFi page to disable the current recording session.
- The system can be restarted without the need to cycle power; use “Restart System” within the “WiFi & System Options” menu.
- Download generated audio or data files once ready. These ready to download files may be deleted on the next power cycle, depending on the storage media management routines. Files can be re-generated again.
- Any modification or changes in the Data Setup options deletes all reference to already-recorded files. If there is a need to change Data Format or method, download all data files before adjusting Data Setup options.
- It is not recommended to delete raw Audio files, let the system wrap around, however, Audio files can be deleted if required, such as when selling the airplane.