Orpheus Basic

Quick Start Guide

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GaiaForge Technology

This guide covers initial setup, loading audio files, and configuring all four playback modes on the Orpheus Basic. For the complete manual including troubleshooting, power management details, and companion app instructions, visit gaiaforge.tech/orpheus.

Initial Setup

1. **Connect Power**
   Plug in the LiFePO4 battery using the XT60 connector. If you have a solar panel, connect it via the MC4 connectors, matching positive (+) to positive and negative (-) to negative.

2. **Power On**
   Flip the power switch. The touchscreen will display the Orpheus interface after approximately 60 seconds. If nothing happens, press the manual wake button on the enclosure.

3. **Connect Speakers**
   Attach speakers to the waterproof connectors on the enclosure. Test audio by switching to Manual Mode and playing the test tone.

4. **Set Your Location**
   Go to Settings > Astral Setup. Enter your GPS coordinates (latitude and longitude) and select your timezone. This is essential for sunrise/sunset calculations used by Astral and Seasonal modes.

5. **Verify Time**
   Check the clock displayed on screen. If incorrect, go to Settings > Time & Date to set it manually. The built-in battery-backed clock will maintain accurate time from this point forward, even when the device is powered off.

6. **Load Audio Files**
   Insert a USB flash drive containing your audio files (WAV or MP3 format). Open the Audio File Manager from the toolbar and use USB Import to copy files to the device.

Mode 1: Manual Playback

The simplest mode. Direct control over audio playback for quick tests or on-demand use.

1. **Select Manual Mode**
   Choose Manual from the mode dropdown at the top of the screen.

2. **Load Audio**
   Tap Load Audio and choose a file from the device storage.

3. **Control Playback**
   Use the Play, Pause, and Stop buttons. Adjust volume from the toolbar.

> Use case: Quick field tests, on-demand playback during observations, or verifying speakers and audio files before setting up automated schedules.

Mode 2: Interval Playback

Schedule audio to play during specific time windows throughout the day. You can create multiple intervals for different times.

1. **Select Interval Mode**
   Choose Interval from the mode dropdown.
2. **Add an Interval**
   Tap Add Interval to create a new schedule entry.
3. **Set Times**
   Set the Start Time and End Time for the playback window (e.g., 06:00 to 08:00).
4. **Choose Days**
   Select which days the interval is active: Daily, Weekdays, Weekends, or specific days of the week.
5. **Assign Audio**
   Tap Select Audio to assign one or more files. If multiple files are selected, they play in sequence and loop for the duration of the interval.
6. **Save**
   Tap Save. The interval appears in your schedule list. Tap any interval to edit it.

Example schedule for a bird ringing station:

- Morning lure: 05:30 - 07:00 (daily)
- Midday call: 12:00 - 12:30 (weekdays only)
- Evening session: 17:00 - 18:30 (daily)

Use case: Research protocols requiring playback at exact times, timed lure sessions, or scheduled announcements.

Mode 3: Astral Playback

Schedule audio relative to sunrise and sunset. Times automatically shift as day length changes with the seasons. Orpheus recalculates sunrise/sunset daily using your GPS coordinates.

1. **Select Astral Mode**
   Choose Astral from the mode dropdown.
2. **Add Astral Interval**
   Tap Add Astral Interval to create a new entry.
3. **Choose Reference Event**
   Select Sunrise or Sunset as your baseline.

4. **Set Offset**
   Set how many hours/minutes before or after the event to start playback. For example: "30 minutes before sunrise" or "1 hour after sunset."

5. **Set Duration**
   Set how long the playback window lasts.

6. **Assign Audio & Save**
   Select your audio files and tap Save.

Example schedule for a dawn chorus study:

- Dawn: Start 30 min before sunrise, play for 90 minutes
- Dusk: Start at sunset, play for 60 minutes

Use case: Dawn/dusk wildlife studies, crepuscular species research. A deployment that starts in summer will automatically adjust through autumn and winter without manual intervention.

Mode 4: Seasonal Playback

The most powerful mode. Create different playback schedules for different times of year. Each season gets its own playlist of events. Orpheus supports both natural seasons and fully custom date ranges.

Option A: Natural Seasons

1. **Select Seasonal Mode**
   Choose Seasonal from the mode dropdown.

2. **Open Season Setup**
   Ensure Custom Seasons is toggled off (this is the default). Tap Setup Natural Seasons.

3. **Edit a Season**
   You will see four season cards: Spring, Summer, Fall, and Winter. Tap Edit on any season to open its playlist editor.

4. **Build the Playlist**
   In the playlist editor, add events using the buttons:
   - Add Astral: creates a sunrise/sunset-relative event
   - Add Fixed Time: creates a specific time-of-day interval

   Add as many events as you need. Each season has its own independent playlist.

5. **Save & Repeat**
   Tap Save, then edit other seasons as needed.

Orpheus automatically switches between seasons based on the calendar date.

Option B: Custom Seasons

For research that does not align with standard seasons, such as migration windows, breeding periods, or experiment phases.

1. **Enable Custom Seasons**
   Toggle Custom Seasons to ON in the Seasonal mode screen.

2. **Add a Custom Season**
   Tap Add Custom Season. Give it a name (e.g., "Spring Migration", "Breeding Phase 1", "Control Period").

3. **Set Date Range**
   Use the calendar picker to set the start date and end date for this season.

4. **Save the Season**
   Tap Save. Your new season appears in the list.

5. **Build the Playlist**
   Tap the season to open the playlist editor. Add events using:
   - Add Astral: sunrise/sunset-relative events
   - Add Fixed Time: specific time-of-day intervals

Each event has its own audio files, times, and duration. Double-tap any event to edit it. Use Delete to remove entries.

6. **Create More Seasons**
   Add as many custom seasons as your study requires. They can overlap if needed.

Example setup for a migration study:

- Pre-Migration (Feb 15 - Mar 10): Low-intensity calls at dawn only
- Peak Migration (Mar 10 - Apr 20): Full dawn and dusk playlist, multiple species
- Post-Migration (Apr 20 - May 15): Reduced playback, monitoring calls only
- Breeding Season (May 1 - Jul 31): Territory-specific playback at set intervals

Use case: Long-term deployments spanning multiple months, migration tracking, breeding behavior studies. Custom seasons give you complete control over when each playlist is active.

Power Management

To maximize battery life, enable Deep Sleep under Settings > Power Management. When active, Orpheus will automatically shut down between scheduled playback events and wake up just before the next one. A unit with solar can run indefinitely in this mode.

You can always wake the device manually using the wake button on the enclosure, or remotely via the companion app over Bluetooth.

Quick Reference

Battery connector	XT60
Solar connector	MC4
Audio formats	WAV, MP3
WiFi hotspot SSID	Orpheus-XXXX (unique per device)
WiFi password	None (open network)
WiFi auto-off	5 minutes of inactivity
Bluetooth range	~10 meters
Boot time	~60 seconds
RTC battery life	3-6 years
Support	contact@gaiaforge.tech

Important: Some jurisdictions regulate or prohibit the use of recorded calls to attract wildlife. Ensure you have all necessary permits

and comply with local laws before deploying Orpheus in the field. GaiaForge Technology assumes no liability for misuse.