

# Black Rail ARU/Remote Broadcast deployment

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## Preparatory work

1. Program the FoxPro NX4 game caller according to the [Black Rail FoxPro NX4 game caller programming SOP](#).
  - a. This will need to be done only once at the beginning of the season.
2. Program the SongMeter ARU according to the [Black Rail Song Meter 2+ \(ARU\) programming](#).
3. Program the remote broadcaster timer according to the [Black Rail remote broadcast unit timer programming SOP](#)
4. Charge battery pack, if necessary.
  - a. Charge the 12V pack using an appropriate (12V/500mA) AC/DC adapter. Charge with the toggle switch on the battery pack set to I (Input). The battery pack charges only on I (Input). If using the original AC/DC charging adapter, a complete charge is indicated by a green LED on the charger (a red LED indicates the unit is charging).



## 5. Prep the remote broadcast unit for field deployment

- a. We have labeled the two barrel jacks coming from the timer to avoid confusion. Connect the timer to the charged 12V battery pack via the barrel jack labeled 12V. Flip the toggle switch on the battery pack to O (Output).
- b. Connect the timer to the FoxPro NX4 game caller via the 12V barrel jack labeled BC (for broadcast).
- c. Center the FoxPro NX4 game caller in the case. The forward and rear speakers should align well with the openings on each end of the enclosure.


- d. Confirm volume and speaker settings on the FoxPro NX4 game caller. Both speakers of the game caller should be operational in open marsh and only the forward speaker operational when broadcasting from the edge of open water or upland habitat.
- e. Carefully close and latch the case, ensuring the lid aligns well with, and sits snugly on, the case bottom.

## Field deployment

### 1. Install the T-post, with attached SongMeter ARU, at the sampling location

- a. When surrounded completely by marsh, the front speaker of the game caller should face magnetic North. This also means the microphones of the SongMeter (ARU) will align with magnetic North and South.
- b. When located on the edge of open water or upland habitat, the front speaker of the game caller should face the center of appropriate marsh habitat.

### 2. Mount and secure the remote broadcast unit case to the T-post

- a. Open the remote broadcast unit case and confirm solid connections between timer and 12V battery pack and FoxPro NX4 game caller.
- b. Confirm the timer is in automatic mode. If **AUTO** is indicated along the bottom of the display, proceed to the next step. If a  icon is indicated along the bottom of the display, press the **MANUAL** button once to put the timer in automatic mode and display **AUTO**.
- c. Record the FoxPro NX4 unit number on the deployment data sheet.
- d. Carefully close and latch the case, ensuring the lid aligns well with, and sits snugly on, the case bottom.
- e. Secure the unit using the security cable and combination lock.
- f. Record the orientation of the game caller on the deployment data sheet.

### 3. Install microphones

- a. Attach microphones directly to the left and right microphone input connectors on the Song Meter. The connectors are keyed. Thus, the microphone should first be pushed into the connector when oriented correctly, and then locked into place by rotating the locking ring on the microphone clockwise.
- b. These microphones are fragile—they should be removed during transport to and from the field.

### 4. Power up the SongMeter ARU

- a. Remove front panel from SongMeter (ARU).
- b. Flip **Power Source** switch to **Internal**.
- c. If programmed correctly, it will begin recording at 10 PM on the current day.
- d. Replace front panel on SongMeter (ARU).
- e. Ensure rubber rain flap is covering top seam of the SongMeter (ARU).

### 5. Record the ARU (SM2) unit number, broadcast start date, sequence, and site identification information on deployment data sheet

### 6. Return for human survey at some point...