



Choosing a Marsh Bird Call Broadcast Unit

Below is our best advice for purchasing a marsh bird call broadcast unit, to be used during the MMP marsh bird surveys. I have included what we purchase as an example. Our choices were based on what we considered a reasonable combination of affordability, reliability and functionality and does not necessarily reflect the best available on the market.

Height of Broadcast Unit: The broadcast unit needs to be held 1m above the ground to ensure the calls carry throughout the survey area. This will require the unit to be held and aimed toward the survey area. We recommend fixing the speakers to a tripod or other stable object in advance to prevent them from moving during your surveys. This has the added benefit that surveyors' hands are free to record bird detections.

Volume: A minimum required volume of approximately 4 watts is necessary to ensure the broadcasted calls carry throughout the survey area. This should give you between 70 - 90 decibels (db) of volume; 90 db is better but 70 db is sufficient and more affordable. If you cannot determine the wattage or decibel range for the unit, you can test it yourself. Have one person stand with the unit and play the calls while another stands 100 m away. If the listener can hear the Least Bittern call, then the system is loud enough. Also, don't hesitate to ask for permission to test equipment within an electronics store – they may have a decibel meter.

Skip Protection: Skip protection is an anti-shock memory system which stores 40 to 70 seconds of music before playing. Because CD skipping interrupts the broadcast survey and affects standardized survey length, skip protection is necessary if using a CD player. Skip protection is included on most reasonably priced portable CD players (e.g. Sony Discman) but may not be included on CD stereos.

Portable Broadcast Unit: An iPod connected to external amplified speakers functions well in the field and uses few batteries. We recommend the simplest iPod model (iPod Shuffle) - it is compact, easy to use and is available for about \$69.00 CDN. Other options include other brands of .mp3 players and portable CD players. However, ensure that you test these other options prior to use by having a friend stand 100 m away and ensure they can hear the broadcast calls. In our experience, not all .mp3 player and portable CD players have sufficient sound projection for this task.

Amplified Speakers: An “amplified” speaker means it has its own power source (e.g. batteries). Passive speakers, ones without batteries, are not loud enough. We recommend Nexxtech portable fold-up amplified speakers (model no. 4013249), available at The Source (Radio Shack in the US) for \$34.99. These are not the loudest but they provide

enough power and are easy to handle. Another option is to use old computer speakers which can be taped together. Keep in mind that the power is directly related to the size and number of batteries; the more and larger the batteries the greater the power and the less often you have to replace them.

Batteries/Charging Unit: Unfortunately there is no way to avoid the use of batteries for broadcast surveys (even if you use an iPod, the speakers will still need batteries). Also, poor batteries decrease broadcast unit volume, thus we recommend that you use high quality batteries and that you replace the batteries prior to each survey. Feel free to try rechargeable batteries but test them before each survey and let us know how well they work. Please dispose of batteries appropriately. If using an iPod or other .mP3 player, please make sure to charge the unit before each survey. Unfortunately if the power dies, it usually means going home to charge the unit and coming back to do surveys another time.

Alternative broadcast means: Please do not attempt to broadcast bird calls from your vehicle. Vehicle stereos distort the calls and you cannot safely aim the broadcast unit (your car) toward the marsh.