

## 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, as an example, what we purchase. 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.

**We recommend using a Sony Discman portable CD player with external amplified speakers.** Please read on for additional information.

**Height of Broadcast Unit:** The broadcast unit needs to be above the ground or boat to ensure the calls carry throughout the survey area. This will require the unit to be held and aimed toward the survey area.

**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 or music before playing. Because CD skipping interrupts the broadcast survey and affects standardized survey length, skip protection is necessary. Skip protection is included on most reasonably priced portable CD players (e.g. Sony Discman) but may not be included on CD stereos.

**Portable CD Player (Sony Discman):** A Discman connected to external amplified speakers functions well in the field and uses few batteries. We recommend the simplest Sony Discman model (D-EJ010) - it is compact, sturdy, has a 90 day warranty and is available for about \$49.99 CDN.

**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 fold-out speakers (model no. 4013249), available at The Source (Radio Shack in the US) for \$29.99. These are not the loudest but they provide enough power and are easy to handle. Another option is using 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. For convenience you may also want to purchase a headphone extension cord (Nexxtech, model no. 4202559) to increase the length of wire between the Discman and speakers; by doing so you can place the Discman in your pocket.

**CD Stereo or “Boom Box”:** CD stereos have adequate volume, but are more cumbersome to carry or balance in a boat. Also, CD stereos may not have anti-shock memory, thus to prevent skipping you will need an assistant to hold the unit. A complete unit sells for about \$39.99 CDN and will require 6 to 8 large batteries.

**Batteries:** Unfortunately there is no way to avoid the use of batteries for broadcast surveys. 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.

**Alternative broadcast means:** We do not recommend that you attempt to broadcast bird calls from your vehicle. It is our experience that vehicle stereos distort the calls. Also, you cannot safely aim the broadcast unit (your car) toward the marsh.