

SpotCell™ 612 Adaptive Repeater Quick Installation Guide

If required, more detailed information on installing the SpotCell™ 612 system can be found in the User Manual. The User Manual is available for downloading at: www.spotwave.com/2003/support/

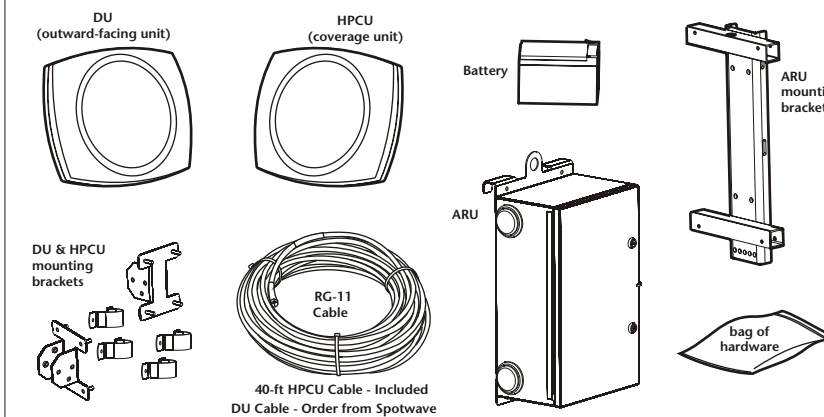


IMPORTANT

The AC power connection for the SpotCell 612 system must be completed by a licensed electrician in full accordance with electrical code requirements. All work on electrical utility poles must be done only by those trained for such work.

Parts List

- Donor Unit (DU)
- Battery
- High Power Coverage Unit (HPCU)
- Adaptive Repeater Unit (ARU)
- RG-11 Cables
- Mounting kit

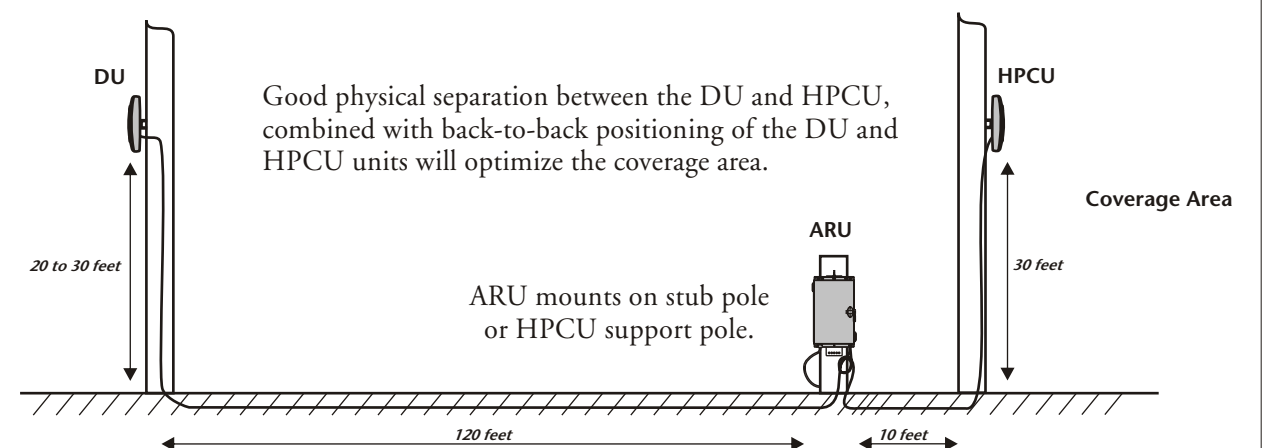


Customer Provided Material

Parts or material that is not included but which is required to install the SpotCell 612 system are:

- 110-V AC electrical hook-up for ARU,
- Ground bonding material for grounding the ARU, DU and HPCU (cable, ground rods, etc.),
- DU and HPCU support poles,
- ARU support pedestal (if needed),
- Material such as steel bands for attaching to non-wooden supports, or where fastening with screws is not permitted.

Typical SpotCell 612 Deployment



www.spotwave.com

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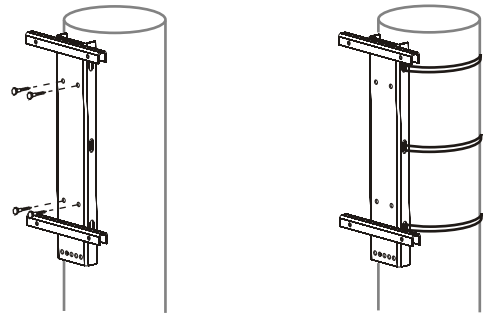
WARNING

For your safety beware of overhead power lines and underground power and gas lines, and motor vehicle traffic. Failure to maintain a safe distance from power lines or contact with gas lines could result in death or serious injury. Ensure that all appropriate safety measures are practiced at all times.

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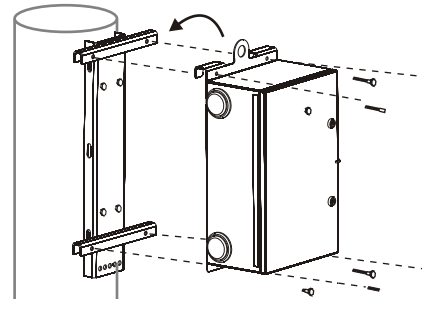
1. Install ARU bracket

Mount the ARU bracket on a support at least 25-ft from the planned HPCU location. Attach the bracket with either the provided screws or alternatively with steel bands.



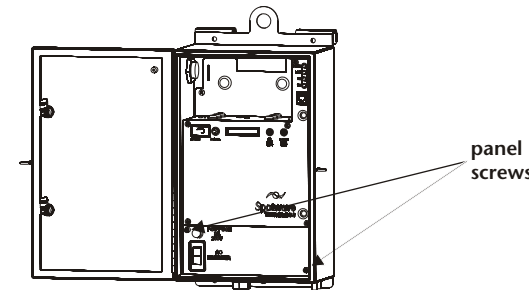
2. Attach ARU

Place the ARU on the mounting bracket. An eye bolt on the ARU is provided to attach a lift rope if required. Fasten the ARU to the bracket with the provided hardware.



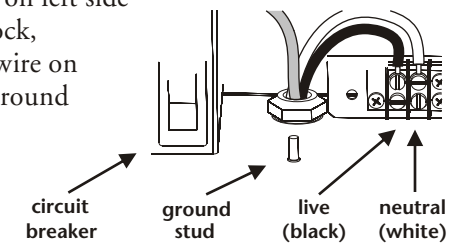
3. Remove ARU front panel

Using an Allen wrench open the ARU door, and remove the two front screws and front cover panel.



4. Connect AC power

Ensure AC power line is de-energized (OFF), and ARU circuit breaker is in the open (OFF) position. Loosen dome nut of 3/4" conduit fitting on cabinet bottom. Route AC power conduit or cable through fitting. Tighten dome nut until mild resistance is felt, plus 1/4-turn more (1/2-turn for armored cable). Terminate live (black) wire on left side of connector block, neutral (white) wire on right side, and ground (green) wire on ground stud.



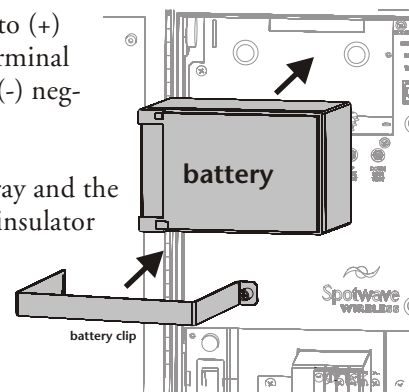
5. Install back-up battery

Loosen the battery clip screw and remove the clip.

Connect red wire to (+) positive battery terminal and black wire to (-) negative terminal.

Place battery on tray and the provided thermal insulator behind battery.

Replace battery clip.



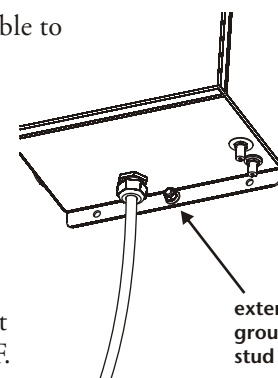
6. Replace panel & connect ground cable

Replace front panel and re-fasten panel screws.

Connect ground bonding cable to external ground stud on the bottom of the ARU.

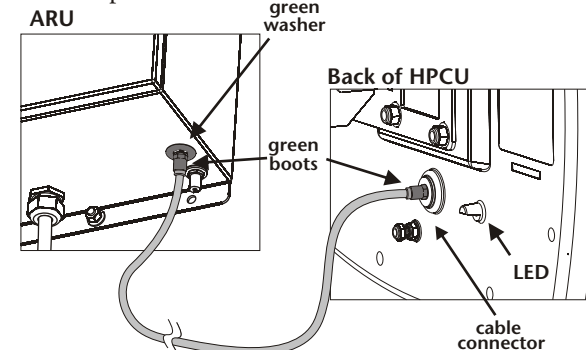
Follow local and national electrical code requirements for bonding ground cable to a suitable ground.

Energize AC power cable but leave the circuit breaker OFF.



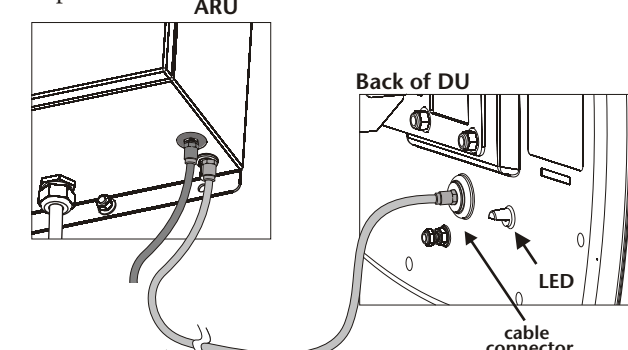
7. Connect ARU - HPCU Coaxial Cable

Using 40-ft RG-11 coaxial cable with green boots, connect HPCU to ARU green RF port. Install coaxial cable as specified.



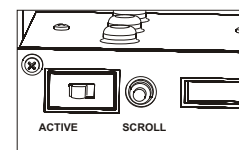
8. Install ARU - DU Coaxial Cable

Connect DU to ARU with RG-11 cable (160-ft typical) ordered from Spotwave. Use back ARU RF port. Install as specified.



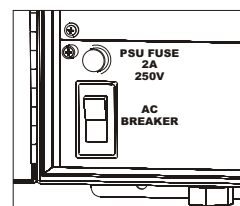
9. Set to Install mode & power up

Set ARU to INSTALL mode by setting ARU mode switch to right position (opposite ACTIVE).



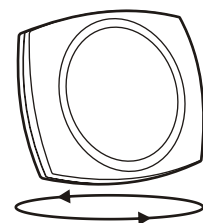
Set ARU circuit breaker to closed (ON) position.

The HPCU LED shows GREEN when it has proper DC power.



10. Determine DU alignment

First Rotation - At location where downlink signal into DU is best, hold the DU vertical facing away from you. Slowly rotate it in a complete circle. Ignore the LED.



Second Rotation - Repeat 360-dg rotation. Take note of where LED shows GREEN - this is the direction DU must face for maximum downlink signal strength.

11. Mount DU and HPCU

Fasten DU mount to support pipe then attach DU. Align DU to the GREEN direction determined by Step 10 (or as specified in the installation service order).

Locate and aim HPCU for coverage. Mount HPCU (same hardware as DU). HPCU and DU must not face each other.



12. Set the system to Active mode

Set ARU to ACTIVE with mode switch. Press SCROLL button until LCD shows 'Signal Strength/Coverage' bar graph display. Optimize alignment for maximum coverage potential (5 bars on lower display).



13. DU and HPCU grounding & checklist

1. Bond DU and HPCU units to ground. Follow electrical code requirements.
2. Ensure that there are drip loops on RG-11 at DU and HPCU, unless cable routing is from below.
3. Complete the installation report.
4. Ensure ARU door is properly closed and locked.