

415U-BSR Base Station Repeater installation guide



ATTENTION

INCORRECT TERMINATION OF SUPPLY WIRES MAY CAUSE INTERNAL DAMAGE AND WILL VOID THE WARRANTY. TO ENSURE THAT YOUR 415U-BSR BASE STATION REPEATER ENJOYS A LONG LIFE, CHECK THIS USER MANUAL TO VERIFY THAT ALL CONNECTIONS ARE TERMINATED CORRECTLY BEFORE RETURNING ON POWER FOR THE FIRST TIME.

Avoid

- Operating the transmitter unless all RF Connectors are secure and any open connectors are properly terminated.
- Operating the equipment near electrical blasting caps or in an explosive atmosphere

Note: All equipment must be properly grounded for safe operation. All equipment should be serviced only by a qualified technician.

Installation

To achieve the best performance from your 415U-BSR, installation should follow accepted best practice. Install the 415U-BSR according to the figure on the following page. Take note of the following points.

- Each repeater should be powered by an independent power supply of 2.5A 12V or 24V nominal. For maximum reliability these should incorporate independent battery backup.

- Surge arrestors should be fitted to provide effective protection from Lightning damage. Surge arrestors should have a turn-on voltage of 90V. Recommended part ELPRO CSD-N-6000.
- An Ethernet Switch provides connection to the two internal repeaters and to the base Computer. For maximum reliability, choose an Ethernet Switch with dual supply capacity, and supply from each of the two independent supplies. Recommended part ELPRO EL-1050-E-T.
- Antennas should be mounted one above the other. They should be separated by at least 1m vertically, and at least 1m from the mast and or any other local obstructions. (Mounting antennas at the same level is acceptable, but could impact performance in cases where both repeaters are active)
- Take care when running RF coaxial cable to observe minimum bending radius and to not crush the cable when restraining.
- Connections between the antenna and the coaxial cable should be carefully taped to prevent ingress of moisture. We recommend that the connection be taped—first with a layer of PVC tape, next with vulcanizing tape (such as 3M™ 23 tape), and finally with another layer of PVC UV-stabilized insulating tape. The first layer of tape allows the joint to be easily inspected when troubleshooting because the vulcanizing seal can be easily removed.

