SolarInnovate Energy Solutions

How to adjust base station communication equipment

Overview

What is base station operation?

This topic introduces the concept of base station operation, provides information to help you identify good setup locations, describes best practices for setting up the equipment, and outlines the precautions that you need to take to protect the equipment.

How do I start a base station setup?

Before starting a base station setup, the user needs to know and understand basic concepts of the base-rover setup. The location is the actual environment in which the base station will be installed. Typically, this means outside in an open sky environment (e.g. on the roof of a building or in an empty field).

Where should a base station be installed?

The location is the actual environment in which the base station will be installed. Typically, this means outside in an open sky environment (e.g. on the roof of a building or in an empty field). Figure 2 shows a typical fixed installation of several antennas, including a VeraChoke and a VeraPhase 6000, on a roof.

How does a base station work?

A base station consists of a receiver that is placed at a known (and fixed) position. The receiver tracks the same satellites that are being tracked by the rover receiver, at the same time that the rover is tracking them.

Why is base station input important?

The base stations input is thus needed to calculate an accurate and reliable position. One of the determining factors in accuracy and reliability is the baseline (i.e. the distance between the rover and base receivers).

How do I set up a GNSS base station?

For good performance, observe the following base station setup guidelines: Place the GNSS receiver in a location on the jobsite where equal range in all directions provides full coverage of the site. This is more important on larger jobsites, where the broadcast range of the base station radio may limit the operations of the system.

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