

Solar Power and the Mobile Ground Truth System

Description

Ravenswood Solution's Mobile Ground Truth System's (MGTS, known to US government clients as "FlexTrain"), Solar Power System is transportable and self-sustaining. It is ideal for remote radio relay sites that are inaccessible for regular maintenance. The system can operate autonomously between temperatures of -20 and $+60$ °C while supporting a 90 W electrical load for three consecutive "sunless" days or up to several months of average sunlight. This performance does not require periodic maintenance.

Three solar panels and a solar controller harvest solar power, supporting a dynamic load and storing surplus power across two battery packs at 48 VDC nominal. All major components are available commercially off-the-shelf. The Solar Power System includes two weatherized enclosures: a Power enclosure and Communications enclosure. The Solar Power System does not include a tower or common-use radio equipment items, particularly a transportable tower mast, CEP (Communications Electronics Package), tower top amplifiers, backhaul Wi-Fi, or tower cabling, that are necessary for a transportable radio relay site. Existing applications of the Solar Power System borrow these tower and radio equipment items from Ravenswood Solutions' inventory.



Transportation

Ravenswood Solution's Solar Power Systems (forklift ready 90 x 28 x 34 inches, 900 pounds) can be stacked two-high in a 53-foot trailer. Aerially, the same package can be sling-loaded or unpacked with each piece staged inside the helicopter bay, leaving the container behind for a load weight of 560 pounds (suitable for a Bell 212 helicopter or larger).

For More Information:

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