



Guide to U.S. Sunny Boy Communication Options

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Sunny Display

Easy and low cost monitoring of individual Sunny Boy inverters

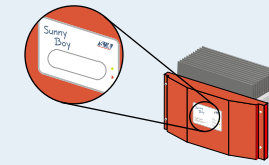
Features:

- * Displays current values, operating hours, energy yield and operating states
- * Backlighting activated by knocking on the inverter lid (when PV power present)

Hardware:

- * Sunny Boy Display (SBD) and window lid
- * Field upgradeable
- ~ Recommended for units without a communication option installed
- ~ Displays may not be used with a communication option

Example:



Direct PC Connection RS232

Easy and low cost monitoring of a single Sunny Boy inverter with the PC

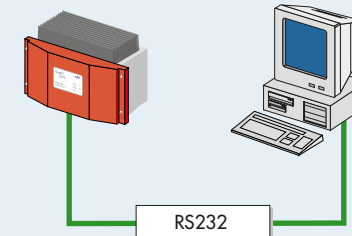
Features:

- * Monitors 1 Sunny Boy inverter
- * Max. cable length is 49 feet (15M)
- * Allows entire system to be monitored using the **Sunny Data** software
- ~ The logging of data requires that a PC is on and Sunny Data is running

Hardware:

- * RS232-N Piggy-Back option installed in each Sunny Boy
- * PC with Windows and serial interface
- ~ See RS232 Communication Tech Note

Example:



Notes on Communications

- ~ The 1800U and the 2500U support **either** an internal display unit (SBD) **or** a communication option. (Not both!)
- ~ The SB700U and the SB1100U are able to support **both** an internal display unit (SBD) **and** a communication option.
- ~ 50 ft. lengths of RS485 and RS232 cable are available from SMA America

Direct PC Connection RS485

Easy and low cost monitoring of multiple Sunny Boy inverters with the PC

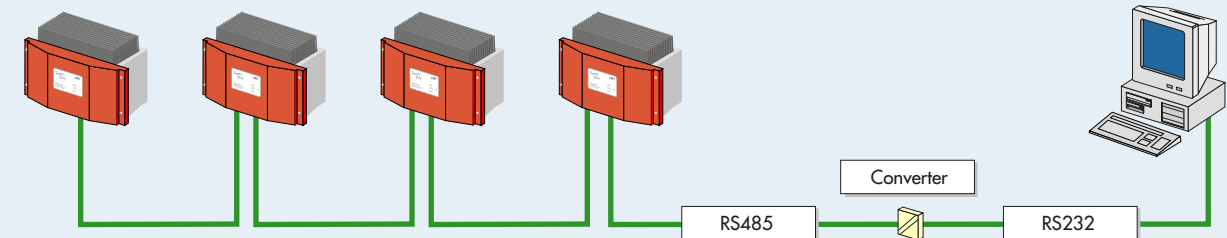
Features:

- * Monitors from 1 to 50 Sunny Boys
- * Max. total cable length is 3937 feet (1200M)
- * Allows entire system to be monitored using the **Sunny Data** software
- ~ The logging of data requires that a PC is on and Sunny Data is running

Hardware:

- * RS485-N Piggy-Back option installed in each Sunny Boy
- * PC with Windows and serial interface
- * RS485/RS232 interface converter
- ~ See RS485 Direct to PC Tech Note

Example:



Sunny Boy Control

More sophisticated monitoring of multiple Sunny Boy inverters with integrated data storage and data transmission

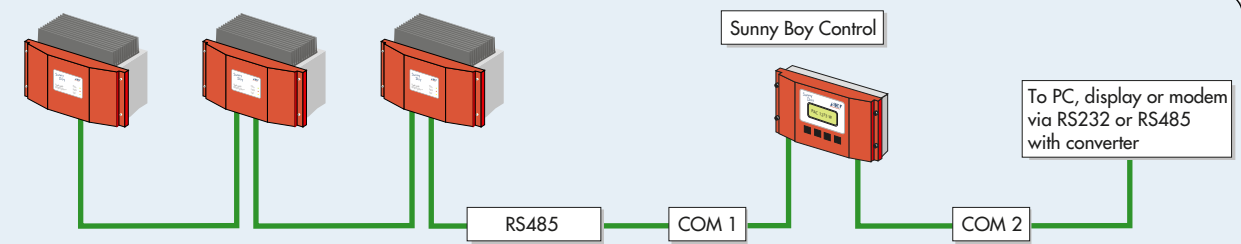
Features:

- * Monitors from 1 to 50 Sunny Boys
- * Max. total cable length is 3937 feet (1200M)
- * Allows entire system to be monitored using the **Sunny Data Control** software
- * Includes 2nd COM Port (RS232)

Hardware:

- * RS485-N Piggy-Back option installed in each Sunny Boy
- * Sunny Boy Control with RS485 option (SBC-485) installed on COM 1
- ~ See RS485 Communication Tech Note

Example:



Sunny Boy Control Plus

More sophisticated monitoring of multiple Sunny Boy inverters with integrated data storage and data transmission with the added ability to monitor and store data from additional sensors

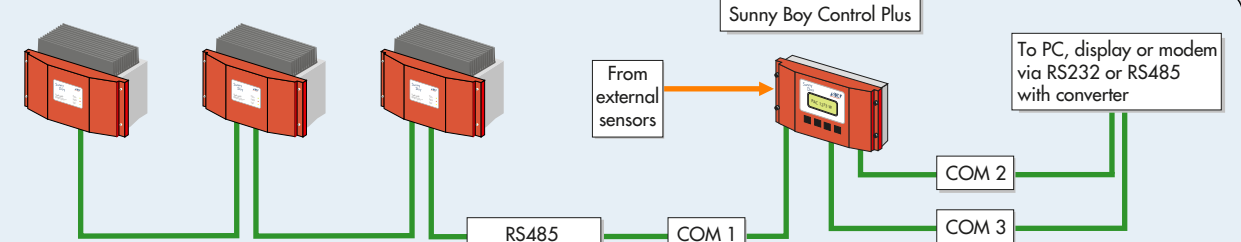
Features:

- * Monitors from 1 to 50 Sunny Boys
- * Max. total cable length is 3937 feet
- * Displays additional sensor data
- * Allows entire system to be monitored using the **Sunny Data Control** software
- * Includes 3rd COM Port (Order RS232 or RS485)

Hardware:

- * RS485-N Piggy-Back option installed in each Sunny Boy
- * Sunny Boy Control Plus with RS485 option (SBCPlus-485) installed on COM 1
- ~ See RS485 Communication Tech Note
- ~ See Modem, Beta Brite, HVG Tech Notes

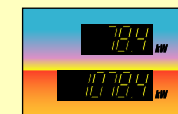
Example:



Display Options

Data gathered by the Sunny Boy Control or Sunny Boy Control Plus can be displayed on various types of external display devices ranging from the HVG or the Beta Bright, to large plasma screens.

HVG



Beta Brite



External Sensor Options

The Sunny Boy Control Plus provides the ability to collect, store and display data gathered from external devices such as thermometers, anemometers, and solar radiation sensors, etc.

Solar Radiation



Temperature



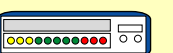
Wind Speed



Communication Options

All of the Sunny Boy Control Plus products support a variety of communication types and methods ranging from RS232, RS485 and modem connections to wireless data links which are excellent for installations where cabling is difficult or not desired.

Modem



Wireless Data

