

Important Safety Information

Review the following safety precautions to avoid injury and prevent damage to this product or any products connected to it.

WARNING. To avoid injury, do not connect this product to any source that may be subject to the effects of lightning.

CAUTION. Do not apply power to the YBGPS1 antenna port. Applying power to the YBGPS1 antenna port can result in damage to the YBGPS1 and to the NetTek Analyzer Platform.

Service. Only qualified personnel should perform service procedures.

Power. Use only the power cords, desk top power supplies, batteries, or in-vehicle Power Adapters specified for the Y350C or Y400 NetTek Analyzer Platform, and certified for the country of use. Observe all ratings marked on these parts.

Intended Use. The YBGPS1 GPS Timing Reference is intended for use only with the Y350C or Y400 NetTek Analyzer Platform and NetTek YBT250 Field Transmitter & Interference Tester application module. Important safety information is contained in the user manuals for the analyzer platforms and the application modules.

Requirements

- A Y350C or Y350M NetTek Analyzer Platform with software version 1.12 or greater, or a Y400 NetTek Analyzer Platform with software version 2.204 or greater
- A NetTek YBT250 Field Transmitter & Interference Tester application module with software version 1.430 or greater

Current software is available to download from the Tektronix Web site (www.tektronix.com)

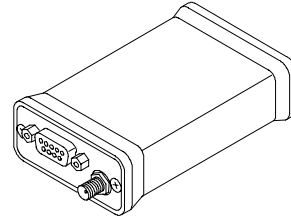
Description

The YBGPS1 GPS Timing Reference unit provides precise timing for cdmaOne and cdma2000 over the air (OTA) measurements, as well as GPS location information.

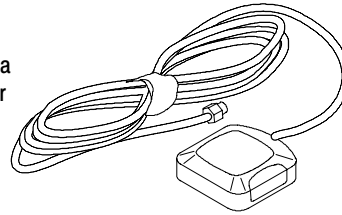
The YBGPS1 Timing Reference also improves the accuracy of YBT250 frequency measurements.

YBGPS1 Contents

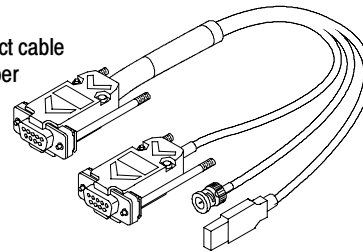
YBGPS1 GPS Timing Reference



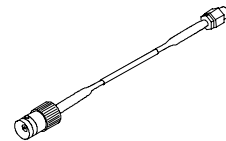
YBGPS1 GPS antenna (Tektronix part number 119-7114-00)



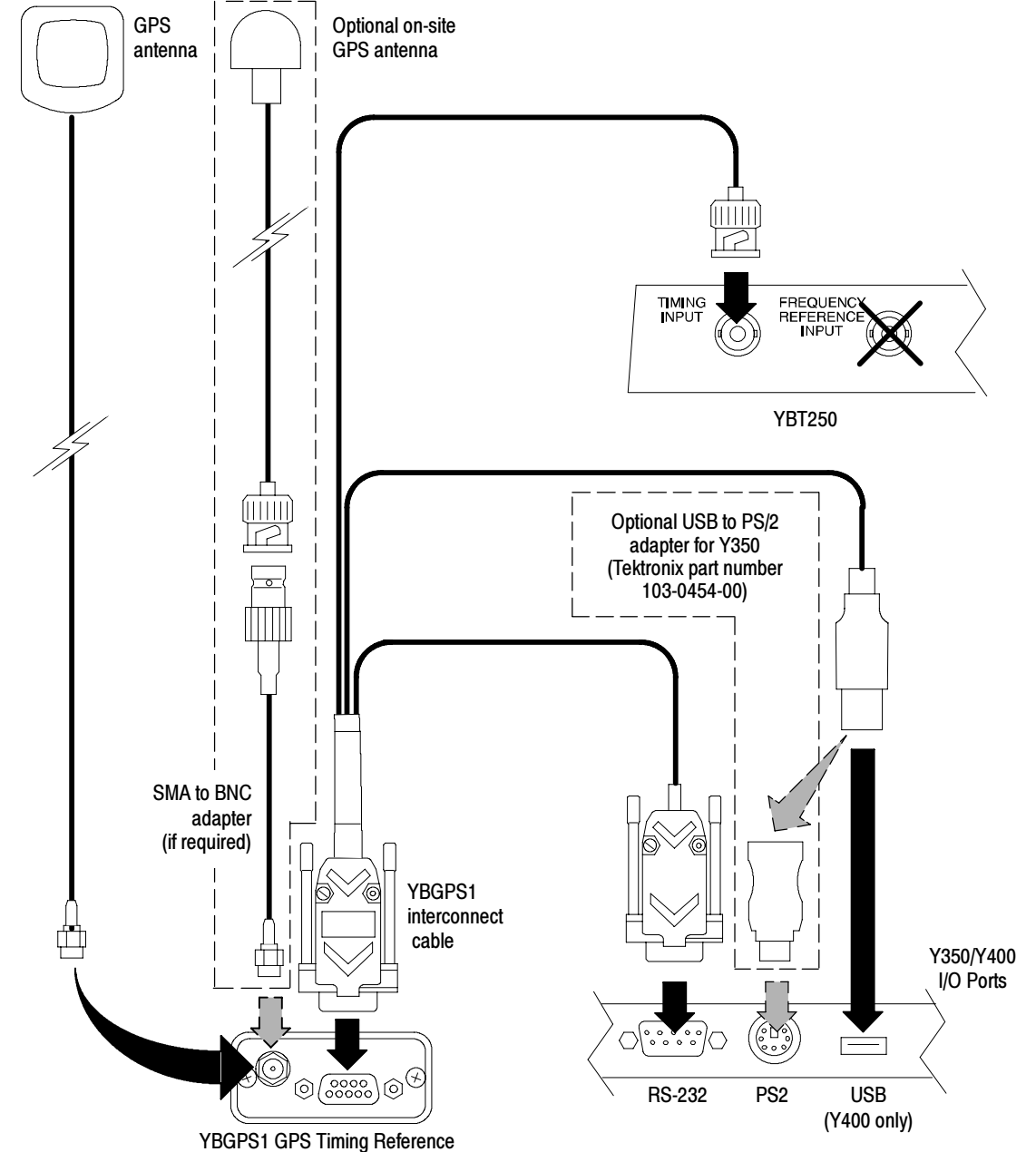
YBGPS1 interconnect cable (Tektronix part number 174-5192-00)



SMA to BNC adapter (Tektronix part number 174-5193-00)




Connecting the YBGPS1



Storing the YBGPS1

Store the YBGPS1 in the rear tilt stand or the module storage spacer of the NetTek Analyzer Platform.

Enabling the YBGPS1 with the YBT250

1. Open the YBT250 application.
2. Tap the **GPS** button  (in upper right screen area).
3. Select **Tek GPS Timing Ref** from the **GPS Receiver:** drop-down list.
4. Wait between two and four minutes for the YBGPS1 to acquire and lock onto the satellite signals. If the YBGPS1 does not lock within that time, reposition the GPS antenna to obtain a less obstructed view of the sky. Use the **GPS Satellite Signal Strength** field on the **GPS** tab to evaluate satellite signal strength while positioning the GPS antenna.
5. Tap **OK** to close the dialog box.

Usage Notes

- The YBGPS1 has two start-up modes; cold start and warm start.
 - A cold start typically requires between two and four minutes, and occurs when you use the YBGPS1 for the first time, when the NetTek Analyzer Platform real-time clock is different from the GPS satellite clock by more than 20 seconds, the last valid position provided by the YBGPS1 is greater than 100 km from the current position, or the satellite almanac data is older than 60 days.
 - A warm start typically requires between 45 seconds and two minutes, and uses GPS information saved when the instrument was last run to quickly lock onto satellites.
- If no satellite signals are acquired within four minutes (warm or cold start), try repositioning the GPS antenna for an unobstructed view of the sky. Use the **GPS** tab fields to evaluate satellite signal lock and strength.

- GPS satellite signals operate at 1.57542 GHz and approximately -135 dBm. Because of the high frequency and low signal levels, best operation is achieved when the antenna has an unobstructed view of the sky.
- GPS signals cannot be received inside buildings or enclosed structures. If you are using the YBGPS1 inside a building, place the GPS antenna as near as possible to a window.
- GPS measurements rely on the time delay between when each satellite sends out its signal and when each signal is received by the GPS receiver. GPS signals that need to bounce off of buildings to reach the antenna result in degraded accuracy and repeatability of position and timing information.
- The YBGPS1 antenna port provides +5 VDC (center positive), from 5 mA to 80 mA, for active GPS antennas. The YBGPS1 detects shorted and open GPS antenna lines.
- Do not apply power to the YBGPS1 antenna port.

Online Help

For help on setting up the YBT250 to use the YBGPS1 Timing Reference:

1. Select **Start > Help > YBT250** to open the YBT250 online help file.
2. Select the **Index** link.
3. Scroll to and select **GPS Overview** from the index link list.

Contacting Tektronix

Tektronix, Inc.
14200 SW Karl Braun Drive or P.O. Box 500
Beaverton, OR 97077
USA

For product information, sales, and technical support:

- In North America, call 1-800-833-9200.
- Worldwide, visit www.tektronix.com to find contacts in your area.

EMC Compliance

EC Declaration of Conformity - EMC

Meets intent of Directive 89/336/EEC for Electromagnetic Compatibility. Compliance was demonstrated to the following specifications as listed in the Official Journal of the European Union:

| | |
|----------------|---|
| EN 61326 | Annex D, EMC requirements for Class A electrical equipment for measurement, control, and laboratory use. ^{1, 2, 3} |
| IEC 61000-4-2 | Electrostatic discharge immunity |
| IEC 61000-4-3 | RF electromagnetic field immunity |
| IEC 61000-4-4 | Electrical fast transient/burst immunity |
| IEC 61000-4-5 | Power line surge immunity |
| IEC 61000-4-6 | Conducted RF immunity |
| IEC 61000-4-11 | Voltage dips and interruptions immunity |
| EN 61000-3-2 | AC power line harmonic emissions |
| EN 61000-3-3 | Voltage changes, fluctuations, and flicker |

Australia/New Zealand Declaration of Conformity - EMC

Complies with EMC provision of Radiocommunications Act per the following standard(s): ^{1, 2}

| | |
|-----------------|---|
| AS/NZS 2064.1/2 | Industrial, Scientific, and Medical Equipment: 1992 |
|-----------------|---|

- ¹ EMC compliance was demonstrated using high-quality shielded interface cables.
- ² Emissions that exceed the limits of this standard may occur when the instrument is connected to a test object.
- ³ Minimum Immunity test requirement.

Warranty Information

For warranty information, go to www.tektronix.com, click Support, select Look Up Tektronix Warranty, and enter YBGPS1 in the search field.

NetTek® YBGPS1 GPS Timing Reference Setup Instructions

