

58503A GPS Time and Frequency Reference Receiver Option 001

Installation Note

This installation note provides assistance in upgrading the 58503A GPS Time and Frequency Reference Receiver to include the Option 001 Front Panel Display/Keypad.

For assistance, contact:

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Warning Symbols Used In This Note



Instruction manual symbol; the product will be marked with this symbol when it is necessary for the user to refer to the instruction manual.



Indicates hazardous voltages.



Indicates earth (ground) terminal.



or



Indicates terminal is connected to chassis when such connection is not apparent.



Indicates Alternating current.



Indicates Direct current.

58503A GPS TIME AND FREQUENCY REFERENCE RECEIVER

OPTION 001 FRONT PANEL DISPLAY INSTALLATION KIT

P/N 58503-67001

INSTRUMENT SERIAL NUMBERS

0000A00000 through 9999A99999

INTRODUCTION

This note will assist you in upgrading your 58503A to include the Option 001 Front Panel Display/Keypad. The instructions below are limited to the mechanical and electrical changes to be made. Other note(s) included in the kit will further assist in the upgrade (if necessary) of the firmware to complete the process. Be sure all steps in this note are complete before proceeding to any other instructions. You will be directed when it is appropriate to refer to other documentation.

A copy of the Getting Started Guide is necessary to perform this upgrade. One copy is included with each 58503A shipped. If you do not have a copy, some of the steps will not be clear. Please retrieve your copy at this time. If you cannot locate a guide, contact Symmetricom to obtain another copy as Part Number 097-59551-01 (was 59551-90001).

This procedure also assumes that the 58503A is working properly prior to making the changes. Be sure to verify that it will correctly power up and lock to GPS satellites before proceeding.

INSTALLATION NOTE

PART NUMBER: 097-58503-06

Option 001 Front Panel Display Installation Kit

KIT CONTENTS

Quantity	Description	Part Number
1	58503A Option 001 Front Panel Assy	58503-60216
1	SatStat Software	59551-13401
1	58503A Firmware Upgrade Disk	58503-13402
1	58503A Option 001 Supplemental Guide	097-58503-08 or 58503-90008
1	Installation Note	097-58503-06 or 58503-90006
1	GPS Receivers Firmware Upgrade Procedure	097-59551-13 or 59551-90013

TOOLS AND EQUIPMENT REQUIRED

TORX® T-15 Driver
1/4 inch Flat Blade Screwdriver
7 mm Nut Driver or Wire Cutter
PC-Compatible Computer with Windows 3.1 installed

PROCEDURE

FIRMWARE REVISION IDENTIFICATION

1. Make a note of the current version of firmware in your 58503A. Refer to the Getting Started Guide for assistance, if necessary.
2. **Keep this information available for the section "FIRMWARE DOWNLOAD" BELOW.**

HARDWARE INSTALLATION

1. Remove all power and connections to the 58503A.
2. Position the carrying (plastic) handle so that it is perpendicular with respect to the cover, facing upward.
3. Carefully spread the handle at the pivot points, and the handle will release from its mounting holes.
4. The front foot/trim frame is soft rubber; remove it by prying it off with your fingers.
5. Loosen two TORX® T-15 screws at the right and left edges of the rear panel to remove the rear foot/trim assembly.
6. Remove the TORX® T-15 screw at the bottom rear of the cover, and slide cover off toward the rear.
7. Remove the two TORX® T-15 screws, one on each side, recessed in the plastic shell of the

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front bezel, located between the handle pivot holes and the front of the unit.

8. Identify two metal extrusions visible within openings in the plastic, immediately above and below the screw just removed. There will be two more on the other side of the unit as well. These extrusions hold the front bezel in place by engaging the openings in the plastic.

9. Insert a flat-blade screwdriver between the plastic bezel and the underlying chassis, immediately near one of the metal extrusions. Carefully pry slightly and pull the bezel away so that the extrusion no longer completely engages the bezel.

10. Repeat this for the other extrusion on the same side of the unit. This will allow this side of the bezel to be pulled free of the metal extrusions. The other side of the bezel will fall free without using the screwdriver.

11. Disconnect the ribbon cable connecting the front panel to the main board.

12. Using the 7 mm Nut Driver, remove the ground wire (if present) connecting the existing front panel board to the chassis by disconnecting it from the mounting stud near the power supply or, if preferred, clip the wire very close to the mounting stud. This wire is no longer required.

CAUTION: *There is more than one ground wire attached to this stud. Only remove/clip the wire that leads to the front panel.*

13. Reverse the steps above to connect and install the Option 001 front panel assembly, cover, rear bezel, trim, and handle.

NOTE: Be sure to firmly seat the ribbon cable so that it snaps into the locking ears.

FIRMWARE DOWNLOAD

It may now be necessary to upgrade the firmware in the 58503A to be compatible with the Keypad/Display.

1. Locate the 58503A Firmware Upgrade Disk (P/N 58503-13402) included in this kit. Note the firmware revision number printed on the label.

2. Compare this revision to the firmware in your 58503A. If the revision on the disk is a higher number (newer version), proceed to step 3 below. Otherwise, it is not necessary to upgrade the firmware for your 58503A.

3. Locate the Firmware Upgrade Procedure (P/N 097-59551-13 or 59551-90013 included). Read and follow those instructions before proceeding to "Final Check-Out" below.

NOTE: SatStat software (P/N 59551-13401) has been included with this installation kit as a courtesy to facilitate the download process.

FINAL CHECK-OUT

This simple procedure ensures that the 58503A Option 001 upgrade has been successfully performed. After applying power, you will have about two seconds to perform step 2 below (if necessary, remove and re-connect power to re-initiate that startup sequence).

1. Apply power to the 58503A.
 2. While the letters "HP" are moving from right to left (about two seconds), press first the "SAT" key and then the "TIME" key to enter the Test/Demo mode.
 3. The words "VFD DSP TEST" will momentarily appear.
 4. The display will then show a test pattern that sequentially illuminates all 15 segments of all digits and punctuation marks in the display.
 5. When this sequence is complete, the words "DEMO MODE" will then appear.
 6. Press each key one at a time. Each keypress will:
 - a. Illuminate the LED corresponding to that key, and
 - b. Display a simulated response to the function.
- NOTE:** a. The "CLEAR ALARM" ("SHIFT", "ALT") function will not give a response in this mode; it will exit the test.
b. The values displayed are not related to the 58503A under test. They are displayed for demonstration only.
7. To exit the diagnostic, press the "SHIFT" key and then press the "ALT" key.
 8. The 58503A power-up sequence will then continue. No further tests are necessary.
 9. If the indications above do not appear, be sure to verify the following before contacting Symmetricom:
 - a) Did the firmware download properly? (Refer to Firmware Upgrade Procedure included in this kit.)
 - b) Re-check the correct connection to antenna, power, and PC as described in the Getting Started Guide.
 - c) If necessary, remove the cover and verify that the ribbon cable connection is correct and secure.

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FURTHER ASSISTANCE

If the above steps do not resolve the problem, contact Symmetricom for assistance. The 58503A may need to be shipped to Symmetricom to verify the source of the problem.