

Turn power off and remove the module. Be sure that jumpers are installed at W1, W2, W3, W4-B, W5, W6-A, and W8. Be sure that W7 is open.

This completes the test and calibration of the Antenna Interface module.


2.5.7. Option Modules Calibration

Each of the plug-in modules on the rear panel, except for the Antenna Interface module (P/N 23411147), has its own manual supplement. If calibration of a module may be required, the procedures to do this will be included in the supplement. This is also the case for the oscillator and PCB, located in the front of the receiver on the right side. Refer to these manual supplements for instructions.

2.5.8. PCB Locations

When the tests and calibrations are complete, install the PCBs and modules in the receiver in the order shown below.

SUBASSY	LOCATION	DESCRIPTION
1	A2XA1	23310989, DC-to-DC Converter
2	A2XA2	10312798, Data Processor
3	A2XA3	10310952, Signal Controller
4	A2XA4	10310873, Signal Processor
5	A2XA5	10312676, Oscillator Control Card
NOTE: Connect cable assembly P/N 11511138 from J2 on the Signal Controller to J1 on the Signal Processor.		
6	A3XA1	(option slot, interface)
7	A3XA2	(option slot, interface)
8	A3XA3	(option slot, interface)
9	A3XA4	(option slot, input/output)
10	A3XA5	(option slot, input/output)
11	A3XA6	23411147, Antenna Interface
12	A1	10911944, Front Panel Assembly

 **NOTE:** Connect the cable from the Data Processor to J1 on the Front Panel I/O assembly.

Carefully install the covers, securing each with the two, 4-40 by 5/16 inch, flathead Phillips screws, provided.

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Originator	<i>[Signature]</i>
Quality	<i>9/28/99</i>
Operations	<i>[Signature]</i>
Datum Austin, Approved	<i>8/19/99</i>

FORMAL RELEASE

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2200A, 2201A, 2202 & 2105 SOFTWARE UPGRADE INSTRUCTION

1. **PURPOSE**
To provide instruction for removal of the existing EPROMs' and installation of the "New" EPROMs' with the upgraded Y2K compliant software.

2. **SCOPE**
Applicable to models 2105, 2200A, 2201A and 2202 enhanced data processors.

3. **INSTRUCTION**

A. Before powering down the receiver, it is recommended to record user/site specific settings such as:

- 1) Receiver Position
- 2) Receiver Setup
 - a. Include items: (example: record SV select mode, time/frequency mode, receiver masks, user PPS offset if used, PRN track list if used, OSC set-up if used)

NOTE: These settings may be taken from the front panel display or by RS232 Commands for models 2200A and 2201A. Models 2202 and 2105 require settings to be taken by RS232 commands. Refer to the instruction manual for assistance.

- 3) Alarm Settings
- 4) Option module Settings

B. Power down the unit.

WARNING: These instructions are to be used only by qualified personnel. To reduce the risk of electrical shock, do not perform any servicing other than that contained in this procedure unless you are qualified to do so.

CAUTION: Disconnect all power to the unit before removing or installing any printed circuit boards or cables. All handling of internal assemblies must be performed at an ESD static station. Failure to do so may result in damage to the unit.

C. Lower the front panel of the model 2201A and 2200A to expose the three main printed circuit boards in the unit.

On the rear panel of the model 2105 and 2202, remove the four screws holding the panel on. The panel is located in the middle section of the unit and cover the three main circuit boards.

D. Remove the Enhanced Data Processor board, part number 10312798 (board with the ribbon cable attached to the front panel of the 2201A and 2200A. The ribbon cable is bundled with a tie wrap in the 2105 and 2202).

E. Using a small screwdriver or IC puller, remove the EPROMs' designated as U14 and U15.

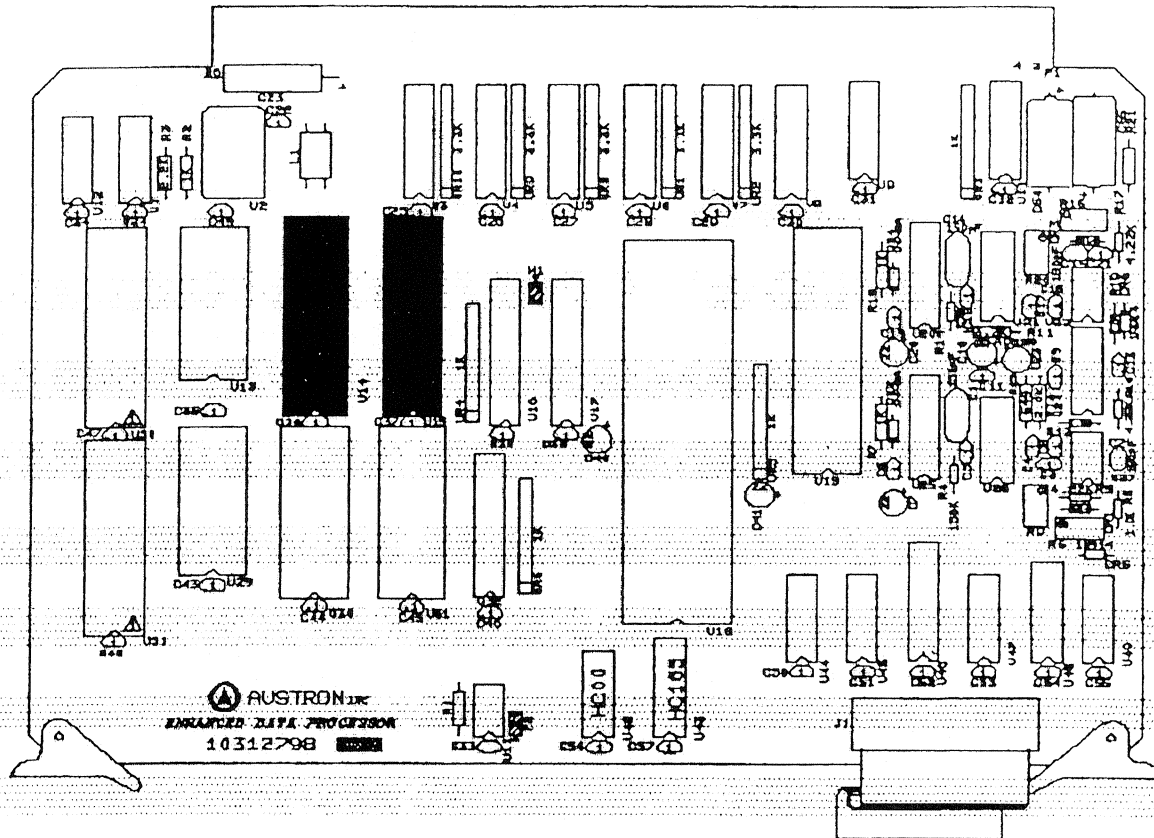
F. Replace U14 and U15 EPROMs' per the following table:

MODEL	EPROM PART NUMBER	
	U14	U15
2105	76012751-002-1	76012751-003-1
2200A	76012777-002-1	76012777-003-1
2201A	76012781-002-1	76012781-003-1
2202	76012542-002-1	76012542-003-1

- G. Reassemble the receiver and apply power.
- H. Verify all settings that were recorded in step A and change as necessary.
- I. All alarms should clear within 1 to 4 hours.

4. **REFERENCE DOCUMENTS**
 Process Control, 15109109-100-2

Shaded areas are the location of the EPROM's



If this procedure is not clear or if you have any questions,
 Please contact the **AUSTRON SERVICE DEPARTMENT.**
 (512) 721-4032

2202 Troubleshooting Guide

****Note: If using VT-100 Emulation use of FP mode is OK!!!**

1. Not able to communicate, verify:
 - a. 9 pin on front of system is 9600,8,N,1.
 - b. 25 pin in back of systems is 2400,8,N,1 and requires null modem.

What else?

2. Verify system is tracking:
 - a. From command prompt send command **TRSTAT**.
 - b. Also, form command prompt send command **FP**.
Should have a list of PRN#'s with A(acquiring) &/or T(tracking).
How many satellites are being tracked?
 - c. From command prompt send command **FP** then **M,0,4,1**.
This is a constantly updating AGC screen.
Status = B2CF - tracking multiple satellites.
F2CF - only one satellite being tracked.
AGC is a hexadecimal #. First # should be a 0,1,2 and should be changing.
The DATA bit should be 0 or 1 and change.
****If AGC is not changing it is a good indication that the antenna is not passing satellite information.**
****If DATA bit is not changing it is a good indication of RF interference or the signal processor is not processing information.**

3. Verify correct system parameters:
 - a. From command prompt send command **ITF**. Current mode should be COCO(Code/Code). To change send command **MODE COCO**.
 - b. From command prompt send command **OSC**. Status should be LOCKED.
 - c. From command prompt send command **TFLOOP**. Mode should be LOCKED.
 - d. From command prompt send command **SVSEL**. Mode should be AU(Automatic). To change send command **SVSEL AU**.
 - e. From command prompt send command **FP**.
Mode : Automatic
Stat : Sequence
Freq : Code 1PPS : UTC/Code
PRN's : should list multiple satellites and indicate A(acquiring)
 or T(tracking).

(Stat will be cold start, warm start, or sequence. What do you do if it's not sequence?)

**Verify position fix is correct and complete. Troubleshoot as a tracking problem.

- f. From command prompt send command **MASK**. All should be NO.
(Should be set to track multiple satellites. Track highest elev should be NO.)

4. To check alarms:

- a. From command prompt send command **ALARM**.

5. If GPS system is not tracking verify:

- a. 15 volts at antenna jack of antenna module.
- b. 10 MHz at antenna jack of antenna module.
- c. If present same check at connector to antenna.

6. Verify ET:

- a. From command prompt send command **ET or ITF**. ET should be very close to 5 volts +/-.

