

# Installation Instructions

**INSTALLATION MUST BE PERFORMED  
BY  
QUALIFIED EQUISERV PERSONNEL ONLY**

## INSTALLATION OVERVIEW: \_\_\_\_\_

The Installation Instructions listed are for the SUN MACHINE 500 Serial B. The unit is shipped as a fully assembled unit with the exception of the items listed in the PARTS & ACCESSORIES LIST. To insure that the most recent release of operating software is received, the software will be added to the unit before it is shipped to the customer.

## PARTS & ACCESSORIES LIST: \_\_\_\_\_

PART NUMBER	DESCRIPTION	QTY
0002-0133-15	Test Lead Assembly	1
0301-0944-01	Filter Element, 75 Micron	1
0301-0945-01	Filter Element, 8 Micron	1
0301-0954-01	End Cap, Probe	1
0507-0025-01	Probe Assembly	1
0552-0043	Adapter, Thexton Gm/Ford Coil Terminal	1
0552-0044	Adapter, Thexton Gm Ext. Coil	1
0552-0045	Adapter, Thexton Gm Micro Pack	1
0552-0074-01	Adapter, Ford E Core	1
0552-0103-01	Pad, Mouse	1
0552-0116-01	Mouse, 3 Button Black	1
0552-0120-01	Adapter, Chry/Jeep/Eagle	1
0562-0023-02	Clip, Vinyl Coated	3
0610-3423-04	Screw, self taping #6-32 x 1/4"	3
0647-0170	Tee	1
0669-0220	Hose, Poly, 1/4 Id	1
0669-0299-01	Tubing, Probe	1
0669-0623	Hose, Vacuum, 1/8"	1
0669-0733	Hose, Vacuum, 3/16"	1
0669-0734	Hose, Vacuum, 1/4"	1
0672-0035-01	Test Clip, Wire Piercing	1
0682-1049-01	Labels, Stickers	4
0692-1617	Quick Reference Guide Secondary Kit 0120-0544	1
0692-1834-01	SEL Questionnaire	1
0692-1928-01	Product Registration Form	1
0692-2291-01	Warranty Registration Form	1
0787-0035	Cap, Exhaust Probe	1

PART NUMBER	DESCRIPTION	QTY
1-241	Washer, #8 Flat	2
1747-0101	Test Adapter Assembly, Pat Pickup	1
1747-0102	Test Adapter Assembly, HEI Pickup	1
1747-0103	Test Adapter Assembly, Pickup Toyota	1
1747-0105	Test Adapter Assembly, Pickup Isuzu/Honda	1
1-9406	Screw, 8-32 x 1/2"	2
3988-0255-01	Test Assembly, Exhaust Hose 3/16"	1
4100-5016-01	Screw, Shoulder 5/16-18	3
6002-0346	Test Lead Assembly, Jumper <sup>W</sup> /Probe	1
6002-0355	Test Adapter, Lead Assembly Isuzu/Honda	1
6004-0407	Test Lead Assembly, Temperature	1
6004-0544-02	Test Lead Assembly, Pattern Dual	2
6004-0763-02	Test Lead Assembly, Pattern Conventional	1
6004-0775-02	Adapter, Cable Assembly, DIL Y	1
6004-0819-01	Adapter, Universal Pattern Pickup	1
6005-0171-03	Test Lead Assembly, Current Pickup	1
6005-0182-02	Test Lead Assembly, Universal	1
6006-0003	Test Lead Assembly, Vacuum Hose	1
7009-1374-08	Test Lead Assembly, Timing Light	1
7009-1869-01	Test Assembly, Exhaust Probe Assembly	1
7009-2325-02	Test Lead Assembly, Trigger Pickup	1
7009-2334-03	Test Lead Assembly, Mag Probe	1
7049-0004-01	Oxygen Sensor	1
7054-0056	Adapter, Ford F1 Mag	1
7054-0057	Adapter, Chry C1 Mag	1
7054-0060	Adapter, Ford F2 Mag	1
7054-0062	Adapter, Chry C2 Mag	1
EAW0058C00A	Test Lead Assembly, Volt/Ohm Pinpoint	1
EAW0060C00A	Adapt-0-Cable	1
EAW0096C00A	Monitor, A.C. Cable	1
EERC102A	Remote Control	1
SS1495	POP (Point Of Purchase) Kit	1
TEEOS107B	Installation Instructions	1
ZEEOS107B	Operators Manual	1

#### REQUIRED TOOLS: \_\_\_\_\_

- Complete Tool Kit

#### INSTALLATION INSTRUCTIONS: \_\_\_\_\_



1. Cut straps, and remove top of carton.
2. Cut the sides of the carton at the taped seams and remove the sides.
3. Look for Software Package shipped with the unit and set aside. The software envelope is pushed into the slot cut in to the shipping carton.
4. Remove foam packing from around the sides of the unit.

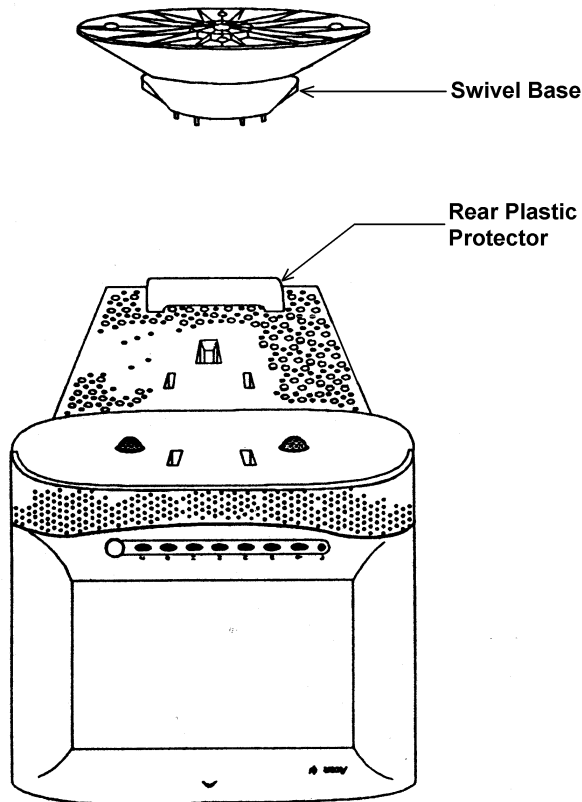
**NOTE: Steps 5 through 8 will require two or more people.**

5. Look at the foam pieces on the bottom of the unit, the longest piece should be on the left-hand side (looking at the unit from the front). On the left side break down the cardboard bottom.
6. Starting from the left side of the Tester, with the foam pieces still under unit carefully slide the unit from the pallet moving from right to the left (looking at the unit from the front).
7. Lean the Sun Machine so that half of the foam base can be removed.
8. Lean the Sun Machine so that other half of the foam base can be removed.
9. Remove tape from ALL drawers and covers.
10. Pull the keyboard, keyboard drawer, out and remove bubble wrap, slide the keyboard back in.
11. Inventory all items using the parts listed: inspect for damage. The Unit Accessories are located in the bottom drawer of the unit. The Literature Kit is located the in middle drawer.

**NOTE: Any owner's manuals or software that comes with the computer components are located in the upper drawer of the unit.**

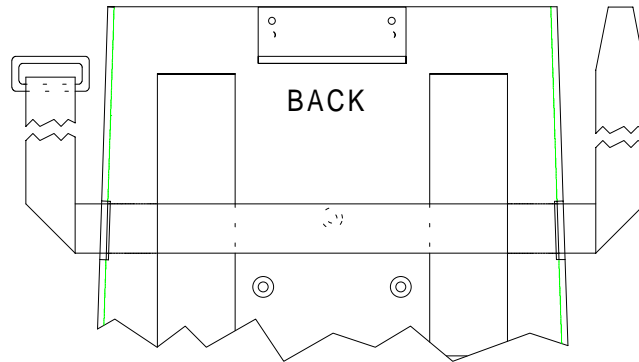
**NOTE: Any REGISTRATION CARDS for the installed software such as Microsoft® Windows 95 must be filled out and sent in by the customer to ensure compliance with any software licensing agreements.**

12. The Monitor is shipped separately from the unit. Remove the Monitor from the box and inspect the monitor for damage.
13. Remove the swivel base and the rear plastic protector from the ACER monitor and discard. Refer to figure 1, below. If you have a Sampo monitor, just remove the swivel base if attached.



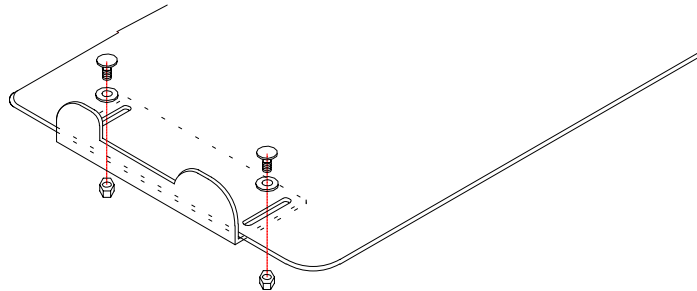
**Figure 1, Monitor Bottom View**

**NOTE: IF YOU ARE MOUNTING A 15" SAMPO MONITOR, THE BACK MOUNTING BRACKET MUST BE TURNED AROUND AS SHOWN IN FIGURE 2.**



**Figure 2, Monitor Base Plate for 15" Sampo Monitor.**

**NOTE: IF YOU ARE MOUNTING A 17" ACER MONITOR, USE THE TWO 8-32 X 1/2 SCREWS (1-9406) AND THE 2 FLAT WASHERS (1-241) THAT ARE FOUND IN THE UNIT ACCESSORIES AND MOUNT THE BRACKET AS SHOWN IN FIGURE 3.**



**Figure 3, Monitor Base Plate for 17" Acer Monitor.**

14. Place the monitor into the monitor base plate with the back of the monitor pushed snug against the back bracket. Slide the front bracket snug up to the front of the monitor and tighten the nuts of the brackets.
15. Fasten the Velcro straps over the top of the monitor and snug down.
16. Discard the A.C. Cable supplied with the Monitor. Use the A.C. Cable (EAW0096C00A) found in the unit accessories.
17. Connect monitor power cable and data cable to the unit.
18. On the back of the unit under the monitor there is a cable clamp. Use the cable clamp for the monitor data cable, leave room for the monitor to swivel left and right 90 degrees off center.
19. Locate the Mouse and install the Mouse cable end to COM 2 connector, of the connector plate on the back of the unit.
20. Locate the printer paper in the upper storage drawer. Load printer paper into paper cassette of the Printer (100 Sheets maximum). A portion of the remaining paper can be placed under the Printer.
21. Connect all Test Leads, along with the Vacuum Hose, to their respective connectors located on the boom of the Sun Machine. Store any unused leads and accessories in one of the storage drawers.
22. Locate the Oxygen Sensor (7049-0004-01) in the accessories bag, open the back panel door of the tester. Remove the Oxygen Sensor Cover from the IR Drawer, install the Oxygen Sensor into the block and connect the wiring harness to the top of the sensor. Reinstall the cover over the sensor and mounting block.

**Starting Windows 95 for the first time**

- 25. Windows 95 must be properly setup before loading any other software. Turn Computer power switch on and follow the on-screen prompts to complete the set up. steps 25 through 42 will assist with this setup.
- 26. Enter **Customer Name** (Shop Owner), **Shop Name** and select **Next >**.
- 27. Select **“I accept the Agreement”**, select **Next >**.
- 28. Enter the **OEM number** (found on the “Certificate of Authenticity”) select **Next >**.
- 29. Select **Finish**.

**NOTE: Windows 95 will ask you to enter a password. DO NOT ENTER A PASSWORD**

- 30. Enter **Shop name** under **“User Name”** field select **OK**.
- 31. When asked to confirm password select **OK**.
- 32. Select **Proper Time Zone** for your region, select **Date** and **Time Tab**. Set proper time and date, select **Apply** then select **OK**.
- 33. Add **Printer Wizard**, select **Next >**.
- 34. Select **Local printer**, select **Next >**.
- 35. Select the printer Manufacturer and Printer from the following list then select **Next >**.

Model of Installed Printer	Select Manufacturer from list	Select Printer from list
Okidata OL600E	HP	LaserJet II P
OkiPage 6E	HP	LaserJet 4 P

**Table 1 Printer Setup**

- 36. If asked to **“Keep Existing Drivers”** select **“Yes”**.
- 37. Select **“LPT1: Printer Port”**, select **Next >**.
- 38. When asked for the **“Printer Name”** select **Next >**
- 39. Select **“Yes”** for print test page, select **Finish**.
- 40. Wait for printer to print page. If the printer printed the page, select **“Yes”**. If the page did not print select **“No”** and troubleshoot accordingly.
- 41. Windows will want to restart. Select **OK** to restart windows. If windows does not restart you may have to manually restart it.
- 42. When **“Welcome to Windows”** is displayed, Windows setup is completed.

**Set Printer Properties**

- 43. Press the **Start** button on the task bar.
- 44. Highlight **Settings**.
- 45. Highlight and select **Printers**.
- 46. Depress the **right mouse button** with the cursor arrow over the printer icon for the printer previously selected, such as the HP LaserJet 4 P, on the **Printers** window.
- 47. Highlight and select **Properties** from the list.
- 48. Select the **“Details tab”**.
- 49. Select **“Port Settings”**.
- 50. For the selections find the **“Spool MS-DOS print jobs”** and **“Uncheck”** or disable spooling, then select **OK**.
- 51. Select the **OK** button on the **“Printer Properties Page”**.

52. Close the Printers window by selecting the “X” in the upper right hand corner of the window.

### Install the Video Driver and Set Monitor Display Properties

53. Depress the **right mouse button** anywhere on the desktop.
54. Select **Properties** from the pop-up menu.
55. Select the “**Settings**” tab on the “**Display Properties**” window.
56. Select the “**Advanced Properties**” button on the “**Settings**” tab.
57. Select the “**Change**” button on the “**Adapter**” tab.
58. Select the “**Have Disk**” button on the “**Select Device**” window.
59. Put the disk labeled “**STB Vision 95 tm Powergraph 64 V Windows 95 Display Support Video**” driver disk in drive A:
60. Select the “**OK**” button on the “**Install from Disk**” window to accept “**Copy manufacturer’s files from: A:\**”.
61. Select “**STB Powergraph 64 Video, with STB Vision 95**” on the “**Select Device**” window and Select “**OK**”.
62. Select the “**Apply**” button on the “**Advanced Display Properties**” window.
63. Select the “**OK**” button on the “**Advanced Display Properties**” window.
64. While still in the **Display Properties Settings** window, set the **Color Palette**, **Desktop Area**, and **Font Size** according to table 2, or the user’s preference.

Monitor Type	Color Palette	Desktop Area	Font Size
Plug-n-Play Monitor	High Color (16 bit)	1024 x 768	Small Fonts
AcerView 7156s	High Color (16 bit)	1024 x 768	Small Fonts
AcerView 7156is	High Color (16 bit)	1024 x 768	Small Fonts
AcerView 7176is	High Color (16 bit)	1024 x 768	Small Fonts

**Table 2 Monitor Resolution Setup**

65. Select the “**Apply**” button on the “**Display Properties**” window.
66. Remove the disk from drive A:
67. Select the “**Yes**” button on the “**System Settings Change**” dialog box to restart the computer.
68. Select the “**OK**” button on the “**STB Vision 95**” dialog box.
69. Select the “**OK**” button on the “**STB Vision 95 Monitor Options**” dialog box.
70. Select the “**OK**” button on the “**STB Vision 95**” dialog box.
71. Select the “**OK**” button on the “**Refresh Rate Test**” dialog box.
72. Select the “**OK**” button on the “**STB Vision 95**” dialog box.
73. Select the “**OK**” button on the “**STB Vision 95 Control Panel**”.

### Set CD-ROM Properties

74. Press the **right mouse button** over **My Computer** on the **desktop**.
75. Select **Properties** on the pop-up dialog.
76. Select the **Device Manager** tab on the **System Properties** dialog box.
77. Select the **plus sign (+)** to the left of **CD-ROM** to expand the list.
78. Select **TOSHIBA CD-ROM**.
79. Select **Properties** on the **Device Manager** tab.
80. Select **Settings** on the **TOSHIBA CD-ROM Properties** dialog box.
81. **Deselect** "**Auto insert notification**" on the **Settings** tab.
82. Select the **OK** button on the **TOSHIBA CD-ROM Properties** dialog box.
83. Repeat the above five steps (starting with step 85) for each CD-ROM installed.
84. Select the **OK** button on the **System Properties** dialog box.

### Set Power Properties

85. Select the **Start** button on the **task bar**.
86. Select **Settings**.
87. Select **Control Panel**.
88. Double-click the **Power icon**.
89. **Deselect** "**When powered by AC power**" on the **Disk Drives** tab.
90. Select the **OK** button on the **Power Properties** dialog box.
91. Close the **Control Panel** window by selecting the "**X**" in the upper right hand corner of the window.
92. Get the Sun Machine 500 software package that was set aside in step 3. Using the installation instructions provided in the software package, install the CD ROM Software into the Sun Machine 500.
93. Complete the Field Quality Control Questionnaire SEL 1403C (0692-1834-01) and follow the instructions on the form for mailing.
94. Insert these Installation Instructions in the rear of the Sun Machine 500 Service Manual for future reference.

**NOTE: *This tester is equipped with a 4-gas analyzer: see the Emissions Chapter of the Sun Machine 500 Service Manual for the calibration and checkout.***

**INSTALLATION COMPLETE**