SUN ELECTRIC CORPORATION

Installation Instructions

INSTALLATION MUST BE PERFORMED BY QUALIFIED SUN SERVICE PERSONNEL ONLY

INSTALLATION OVERVIEW:

The MGA-9000 is shipped as a fully assembled unit, with the exception of the keyboard and accessories.

PARTS & ACCESSORIES LIST:

DESCRIPTION	PART NUMBER	QTY	DESCRIPTION	PART NUMBER	QTY
Literature Kit	0119-0314-01	1	1.44 Floppy, unform	0552-0072-01	1
Keyboard, 101 Key	0552-0990-01	1	Keyboard Cover	0552-0993-01	1
Keyboard Label	0682-1041-01	1	Installation Instructions	0692-1856-01	1
			Gasket	4053-0019-01	1
			Bar-code Bracket	7009-2058-01	1
Hook, 4"	0124-0105-01	1	Screws, 8-32x1/2	0403-1411-08	2
Regulators	0131-0024	2	Lead Hanger	2161-0023	2
Rubber Strap	0144-0010-01	1	Exhaust Hose, Long	3988-0230-01	1
Filter, 75 Micron	0301-0944-01	4	Exhaust Hose, Short	3988-0231-01	1
Filter, 8 Micron	0301-0945-01	4	Trigger Lead, Short	6004-0262-05	1
Screws, 10-32x1/2"	0403-1541-08	2	Volt/Ohm Lead	6004-0462	1
Velcro Loop 3"	0424-0804-01	1	Tach Lead (Blue)	6004-0566-01	1
Velcro Hook 3"	0424-0804-02	1	Modem Int. Cable	6004-0606-01	1
Printer Ribbon	0528-0995	2	Quad 4/Nissan Adapter	6005-0181-01	1
DOS 6.22 Package	0552-0104-01	1	BMW Adapter	6005-0184-01	1
Brass Fitting	0647-0069	2	Acura Adapter	6005-0184-02	1
Cable Clamp	0718-0103	1	Adapter Kit	7009-1700	1
Caps, Protective	0758-0200-01	2	Exhaust Probe Assy.	7009-1869	2
Black Plastic Plug	1374-0110-01	6	Trigger Pickup	7009-1929	1
			ID Tag, Low Scale	7009-2035-03	1
			ID Tag, Zero Scale	7009-2035-04	1
			Tubing (8")	8200-0100-1	1
			Nissan 300ZX Adapter	7009-2223-01	1

REQUIRED TOOLS:

Complete Sun Issued Tool Kit	Service Box	Service Kit
Low Scale Cal Gas	Zero/Nitrogen Cal Gas	Flow Gauge

INSTALLATION INSTRUCTIONS:

USE STANDARD ANTI STATIC PRECAUTIONS WHEN PERFORMING THIS PROCEDURE

1. Cut the Straps, and remove the top of the carton, top packing and carton sides.

2. Slide the MGA-9000 and carton base off of the pallet, and split the corners of the base carton.

3. Lean the MGA-9000 so that one half of the foam base can be removed.

4. Lean the MGA-9000 so the other half of the foam base can be removed.

5. Open the Computer Drawer and ensure the boards are seated properly in each backplane. Visually inspect all connectors, making sure they are all properly seated.

NOTE: *Connector P720 is normally not connected and is used for the PC Floppy option.*

6. Using the Service Box, plug P424 into J424 on the System Interface Board.

7. Remove P412 from the Systems Storage Board and plug the Service Box in its place. Then reconnect P412 from hard drive into the T-Connector on the Service Box. Hand the Service Box on the side of the computer drawer.

NOTE: *When connecting the Service Box, be sure to use proper orientation on the ribbon cables. The red marked side of the cable normally goes towards the front of the tester.*

8. Check for proper Ac and GROUND connections before turning the unit on.

9. Plug the tester into an A/C outlet. Push in the Circuit Breaker Switch on the rear of the computer drawer to turn on unit.

10. Place the Operate/Standby switch into the "Operate" position.

11. Load Software using the Service Box. On new units this procedure is completely automatic and needs no operator assistance.

12. Verify that the accessories listed on the first page are all present on the bottom shelf of the MGA-9000.

13. Remove the keyboard (0552-0990-01) from its box and plug the connector into the keyboard jack on the front of the tester. Attach the keyboard label (0682-1041-01) to the keyboard.

14. Attach protective skin (0552-0993-01) to keyboard, secure by peeling off backing exposing adhesive.

15. In order to mount velcro turn keyboard upside down. Peel off backing on hook side of Velcro (0424-0804-02) and attach to keyboard. Attach mating soft side Velcro (0424-0804-01). Remove backing, exposing adhesive and place keyboard in its proper position and press firmly.

16. Remove all tape from the lower printer and remove the carriage cover to gain access to the print head. Ensure that the printer ribbon cartridge is installed properly and remove the plastic stop that secures the print head.

17. Repeat the last step for the Upper Printer.

18. Load a package of printer paper (0528-0994-01) in to the lower printer.

19. Insert the 6 black plastic plugs (1374-0110-01) into the six holes, just above casters, on the base of the tester.

20. Using the two 10-32x1/2" screws (0403-1541-8), install the two hangers (2161-0023) into the slots on the rear of the computer drawer.

21. Mount the 4" round hook (0124-0105-01) to the bottom shelf in the rear of the tester by screwing it n to the weld nut located there. This is used to attach the rubber strap (0144-0010-01) and secure the gas bottles to the shelf.

22. Modem Option: Place the clamp (0718-0103) around the telephone cable. Mount clamp with hanger screw. Position screw so if disconnected from unit it will not hang closer than 18" from the floor. (See Bulletin #663)

23. Remove Bar Code Reader holster (7009-2058-01) from packing material.

24. Mount holster to left-hand side of tester between the two grey panels using hardware included (0403-0411-08). (See Figure 1)
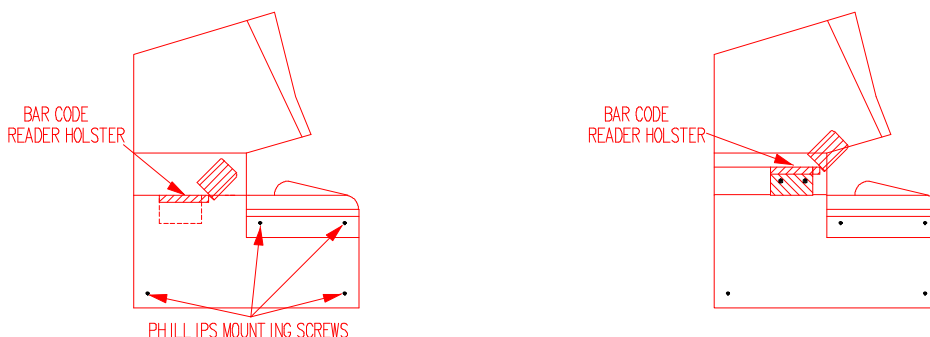

Figure 1 Location of Bar Code Reader Holster

25. Connect Bar Code Scanner (0552-0071-01) cable to serial port B on back of unit. Secure with two screws attached.

26. Install rubber gasket (4053-0019-01) around head of Bar Code Scanner.

27. Connect the Tach Lead (6004-0566), Volt/Ohm Lead (6004-0462), Leak Check Adapter (7009-1700), Drain hose for Aspirator (8200-0100-01), and Exhaust Hose (3988-0230-01) to their respective connections.

28. Cut the Drain Hose to length so that it will not reach the Exhaust Port outlet.

29. Attach the Exhaust probes (7009-1869) to the two Exhaust Hoses (3988-0230-01 and 3988-0231-01), and place the short hose in the storage shelf in the rear, along with all the Tach Pickups, Anti-Dilution Probe, Filters, Printer Ribbon, and DOS 6.22 Package.

30. Attach the regulators (0131-0024) to the two gas bottles (0271-0041 and 0271-0060-01), and attach the two brass fittings (0647-0069) to the regulators.

31. Attach the hoses with labels to the proper tanks. (7009-2035-03 = Low Cal Port 1/7009-2035-04 = Zero Cal Port)

32. At this time, the software should be loaded as indicated on the Screen. Power the MGA-9000 down using the Circuit Breaker/Switch on the back panel and remove the Service Box.

33. Reconnect cables that were disconnected in steps 5 thru 7 (P-424 and P4-12). Press the Circuit Breaker/Switch to power up the MGA-9000. The MGA will perform systems test and prompt you for the Service address code. If you know the proper code, enter it; if not, call Tech Support for the code.

34. From the Service Menu, select "Manual Calibration". Select "Cal Port 1" and press "Enter".

35. With the IR Pump "ON", connect the Flow Meter from the exhaust port and record the flow rate.

36. Press "Enter", select "Cal Port 2", and press "Enter". Record the flow rate again.

37. Disconnect the Flow Meter from the exhaust port and connect it to the Low Scale Bottle. Turn the gas on and adjust the Regulator to match the flow of Cal Port 1, as recorded in step 34. Turn off the gas and disconnect the Flow Meter.

38. Disconnect the Flow Meter from the Low Scale bottle and connect it to the Zero Gas Tank. Turn the gas on and adjust the Regulator to match the flow of Cal Port 2, as recorded in step 35. Turn off the gas and disconnect the Flow Meter.

39. Place the gas bottles in the bottom of the cabinet and secure them with the Rubber Strap. Connect the Low Scale Gas Hose to Cal Port 1, and Zero Gas Hose to Cal Port 2.

40. From the Service Menu, Select "Set Time and Date". Follow the prompts on this page to enter the correct time and date, including Daylight Savings Time or Standard Time.

CHECK OUT PROCEDURE:

NOTE:

DO NOT HOLD BAR CODE READER PERPENDICULAR (90 Degrees) TO CODE. BEST USED AT 45 DEGREE ANGLE AND POINTED AT CENTER.

CAUTION:

USE OF CONTROLS, ADJUSTMENTS, OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS INVISIBLE LIGHT EXPOSURE. (SEE LABELS FIGURE 2)

Figure 2 Bar Code Reader Warning Labels

41. With unit on, aim Scanner at sample (Figure 3) and press the trigger. Scanner should have read the symbol when:

42. You hear the beep

43. Decode LED turns green and laser turns off. If nothing happens, see service manual.

44. From the "Station Menu", perform "Gas Calibration".

45. From the "Station Menu", perform "Leak Check".

46. All other parameters are to be left blank and the unit is to remain in LOCKOUT until the State Representative can come and verify the site.

Figure 3 Bar Code Test Pattern

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** CHECK OUT COMPLETE **

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