



SUN ELECTRIC CORPORATION

**Model: MGA-9000 New Mexico
(NM)
Unit Setup**

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Installation Instructions

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

INSTALLATION OVERVIEW: _____

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

PARTS & ACCESSORIES LIST: _____

PART NUMBER	DESCRIPTION	QTY
0124-0105-01	Hook	1
0131-0024	Gas Bottle Regulator	2
0144-0010-01	Rubber Tie Down Strap	1
0271-0062-01	Low Scale, Calibration Gas	Local
0271-0066-01	Mid Scale, Calibration Gas	Local
0301-0944-01	Filter Element, 75 Micron	4
0301-0945-01	Filter Element, 8 Micron	4
0424-0804-01	Velcro Loop	1
0424-0804-02	Velcro Hook	1
0507-0025-01	Anti-Dilution Exhaust Probe	1
0528-0994-01	Printer Paper	1
0528-0995	Ribbon, Printer	2
0552-0072-01	1.44 Meg Floppy Unformatted	1
0552-0104-01	DOS Software Version 6.22	1
0552-0990-01	Keyboard, 101 Style AT/XT	1
0552-0993-01	Protector, Keyboard	1
0647-0069	Brass Fitting	2
0682-0808-01	Label, Service Call	1
0682-1041-01	Label, Keyboard	1
0692-1928-01	Product Registration Form	1
0692-2291-01	Product and Warranty Registration	1
0692-2358-01	Operators Manual	1
0692-2363-01	Installation Instructions	1
0692-2377-01	QR Card	1
0693-1417-01	Smog Banner	1
0718-0103	Modem Cable Clamp	1
0758-0200-01	Plug, Metal Protector	2
1374-0110-01	Hole Plug	6
2161-0023	Lead Hanger	2
3988-0230-01	Hose Assy, Exhaust 3/16	1

PART NUMBER	DESCRIPTION	QTY
3988-0231-01	Hose Assy, Exhaust Dual 3/16	1
6004-0262-05	Cable Assy, Trigger Pickup	1
6004-0462	Test Lead	1
6004-0566-01	Cable Assy, Tach Lead	1
6004-0606-01	Cable, External Modem	1
6004-0614-01	Antenna Cable	1
6005-0181-01	Adapter Assy, Nissan Pulsar/Quad 4	1
6005-0184-01	Adapter, Rpm, BMW	1
6005-0184-02	Adapter, Rpm, Acura	1
7009-1700	Adapter Kit (Leak Check Adapter)	1
7009-1869	Probe Exhaust Assy.	2
7009-1929	Trigger Pickup Assy.	1
7009-2035-01	Hose, Low Scale Gas ID Tag	1
7009-2035-02	Hose, Mid Scale Gas ID Tag	1
7009-2037-01	Antenna, RPM (figure 8)	1
7009-2058-01	Bar Code Reader Bracket	1
7009-2223-01	Adapter, Rpm, Nissan 300ZX Turbo	1
EAK0046C10A	Bar Code Reader with Cable	1

REQUIRED TOOLS: _____

- SERVICE BOX (0001-0062-09) MID GAS BOTTLE (0271-0066-01)
- LOW GAS BOTTLE (0271-0062-01) FLOW METER (7009-1731)
- ANTI-STATIC KIT SERVICE KEYS (from Technical Support)
- COMPLETE TOOL KIT

INSTALLATION INSTRUCTIONS: _____



1. Cut the Straps, and remove the top of the carton, top packing, and carton sides.
2. Slide the MGA-9000C NM and carton base off of the pallet, and split the corners of the base carton.
3. Lean the MGA-9000C NM so that one half of the foam base can be removed.
4. Lean the MGA-9000C NM 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, ensuring sure they are all properly connected.

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

6. Using the Service Box, plug 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. Hang the Service Box on the side of the Computer Drawer.
8. Check for proper AC and GROUND connections at the outlet before turning the unit on.
9. Place the Operate/Standby switch into the operate position.

10. Remove the Keyboard from its box and plug the connector into the Keyboard jack on the front of the tester. Mount one strip of Velcro on the bottom of the Keyboard. Now, attach the mating Velcro, remove the backing, and place the Keyboard in its proper position.
11. Turn the Keyboard over and verify that the Dip Switches are correct. SW1 should be "OFF", SW2 can be in either position.
12. Plug the tester into an A/C outlet. Press the Circuit Breaker/Switch on the rear of the Computer Drawer.
13. Load Software using the Service Box by pressing **4** from the Menu; on virgin hard drives this will be automatic.
14. Verify that the parts and accessories listed are all present on the bottom shelf of the MGA-9000C NM.
15. 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.
16. Perform the same procedure to the Upper Printer.
17. Load a package of printer paper into the lower Printer.
18. Insert the 6 Hole Plugs (1374-0110-01) into the six holes, just above the casters, on the base of the tester.
19. Using the two 8-32x1/2" screws (0403-1451-08), install the two hangers (2161-0023) into the slots on the rear of the Computer Drawer.
20. Using the two 1/4"-20 Keps Nuts (supplied with the tester), mount the 4" round hook (0124-0105-01) to the bottom shelf in the rear of the tester. This is used to attach the rubber cord and secure the gas bottles to the shelf.
21. Place the Modem Cable Clamp (0718-0103) around the Modem Cable. Mount Clamp with hanger screw. Position Clamp so if the Modem Cable disconnected from unit it will not hang closer than 18" from the floor. (See bulletin #663)
22. Connect the Tach Lead, Antenna Lead, Volt/Ohm Lead, Leak Check Adapter, Drain Hose for Aspirator, and Exhaust Hose to their respective connections.
23. Connect the Bar Code Reader (EAK0046C10A) to the rear panel port labeled "Serial Port A".
24. Cut the Drain Hose just enough so it does not reach the Exhaust Port Outlet.
25. Attach the Exhaust Probes to the two Exhaust Hoses, 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 the DOS 6.22 Package.
26. Attach the regulators to the two gas bottles, and attach the two brass fittings (0647-0060) to the regulators.
27. Attach the hose, with label, to the proper tanks.
28. At this time, the software should be loaded as indicated on the Screen. Power the MGA-9000C NM down using the Circuit Breaker/Switch on the back panel and remove the Service Box.
29. After reconnecting all cables, press the Circuit Breaker/Switch to power up the MGA-9000C NM. The MGA will perform systems test and prompt you for the Service access code. Enter it.
30. From the Service Menu, select "Manual Calibration". Select "Cal Port 1" and press **↵**.
31. With the IR Pump "ON", connect the Flow Gauge to the Exhaust Port, and record the flow rate.
32. Press **↵**, select "Cal Port 2", and press **↵**. Record the Flow rate again.
33. Disconnect the Flow Gauge from the Exhaust Port and connect it to the Mid Gas Tank. Turn the tank on and adjust the Regulator to match the flow of Cal Port 1.
34. Disconnect the Flow Gauge from the Mid Gas Tank and connect it to the Low Gas Tank. Turn the tank on and adjust the Regulator to match the flow of Cal Port 2.

35. Place the Tanks in the bottom of the cabinet, strapping them down with the Tie-Down Strap. Connect the Mid Gas Hose to Cal Port 1, and the Low Gas Hose to Cal Port 2.
36. Press → , then **<MENU>** to return back to the Service Menu.
37. Select "Audit Functions", then select "Reset Date and Time". Follow the prompts on this page to enter the correct time and date, including Daylight Saving Time or Standard Time.
38. Press **<MENU>** twice to return back to the Service Menu.
39. Select "Device Setup" from the Service Menu. Follow the prompts to enable the proper options for this MGA-9000C NM.
40. Press **<MENU>** to return back to the Service Menu. Select "Service Mode Exit".
41. From the Main Menu Select "Analyzer Maintenance".
42. From the "Analyzer Maintenance Menu", select "Three Day Gas Calibration and Leak Check".
43. Follow the prompts on the screen to perform the Three Day Gas Calibration and Leak Check.
44. All other parameters are to be left empty and the unit is to be left in LOCKOUT until the State Representative can come and certify the site.
45. Fill out the Quality Control Questionnaire and send it back to the address listed on it.
46. Present operators manual to the customer.

SET UP COMPLETE