



SUN ELECTRIC CORPORATION

Model: **MGA-9000 TX**
UNIT SETUP

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Field 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 LIST:

DESCRIPTION	PART NUMBER	QTY	DESCRIPTION	PART NUMBER	QTY
Printer Paper	0528-1011-02	1	Install. Instruct.	0692-1763-01	1
Keyboard, 101 key	0552-0990-01	1	Banner, Emissions	0693-1417-01	1
1.44 Floppy, Uniform	0552-0072-01	4	Keyboard Label	0682-1041-01	1
Keyboard Cover	0552-0993-01	1			
Hook, 4"	0124-0105-01	1	Lead Hanger	2161-0023	2
Regulators	0131-0024	1	Exhaust Hose, Long	3988-0230-01	1
Rubber Strap	0144-0010-01	1	Exhaust Hose, Short	3988-0231-01	1
Filter, 75 Micron	0301-0944-01	4	Trigger Lead, Short	6004-0262-05	1
Filter, 8 Micron	0301-0945-01	4	Volt/Ohm Lead	6004-0462	1
Screws, 10-32x1/2"	0403-1541-08	2	Tach Lead (Blue)	6004-0566-01	1
Velcro Loop, 3"	0424-0804-01	1	Quad 4/Nissan Adap.	6005-0181-01	1
Velcro Hook, 3"	0424-0804-02	1	BMW Adapter	6005-0184-01	1
DOS 6.22 package	0552-0104-01	1	Acura Adapter	6005-0184-02	1
Brass Fitting	0647-0069	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, Blk	7009-1929	1
			ID Tag, Low Scale	7009-2035-03	1
			Tubing (8")	8200-0100-1	1
			Nissan 300ZX Adapter	7009-2223-01	1

REQUIRED TOOLS:

Service Box Nut Drivers Service Keys
Cal Gas bottle Flow Gauge

INSTALLATION: _____**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 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.

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

8. Check for proper AC and GROUND from the outlet that the unit is going to be using before turning the unit on.
9. Plug the tester into the A/C outlet; press the Circuit Breaker/Switch on the rear of the computer drawer.
10. Turn the front panel Operate/Standby switch to the "Operate" position.
11. Load Software using the Service Box. On early boxes this procedure is completely automatic and needs no operator assistance. On later versions this will have to be selected from the Menu. It takes 6-8 minutes for this procedure to be completed. While the software is loading, continue with the setup procedure.
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. Mount the one strip of Velcro (0424-0804-01) on the bottom of the keyboard. Now, attach the mating velcro (0424-0804-02), remove the backing, and place the keyboard in its proper position.
14. Attach the keyboard label (0682-1041-01) to the keyboard and then cover the keyboard with the keyboard cover (0552-0993-01).

15. Remove all the tape from the printer. 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. Load a package of printer paper (0528-1011-02) into the printer.
17. In the Packaging Assembly (7009-2054-02) there are 6 black plastic plugs (1374-0110-01) . Insert these into the six holes, just above casters, on the base of the tester.
18. Using the two 10-32x1/2" screws (0403-1541-08), install the two hangers (2161-0023) into the slots on the rear of the computer drawer.
19. Mount the 4" round hook (0124-0105-01) to the bottom shelf in the rear of the tester by screwing it in 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.
20. Connect the Tach Lead (6004-0566-01), 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.

NOTE: *Cut the Drain Hose so that it will not reach the Exhaust port outlet.*

21. Attach the Exhaust probes (7009-1869) to the two Exhaust Hoses (3988-0230-01, 3988-0231-01), and place the short hose in the storage drawer, along with all the Tach Pickups (6005-0181-01, 7009-1929, and 7009-2223-01) , 1.44M Floppies (0552-0072-01), Filters (0301-0944-01, 0301-0945-01), and the DOS 6.22 Package (0552-0104-01).
22. Attach the regulator (0131-0024) to the gas bottle (0271-0041), and attach the brass fitting (0647-0069) to the regulator.
23. Attach the hose with restrictor to the Cal Gas tank.
24. 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.
25. After reconnecting all cables, press the Circuit Breaker/Switch to power up the MGA-9000. The MGA-9000 will perform systems test and prompt you for the Service access code. If you know the code, enter it. If not, call Tech Support for the proper code.
26. From the Service Menu, select "Manual Calibration". Select "Cal Port 1" and press "Enter".
27. With the IR Pump "ON", connect the FlowGauge to the Exhaust port, and record the flow rate.
28. Disconnect the Flow Gauge from the exhaust port and connect it to the Cal Gas Tank. Turn the tank on and adjust the Regulator to match the flow of Cal Port 1.
29. Place the Tank in the bottom of the cabinet, strapping it down with the Tie-Down Strap. Connect the Restrictor Hose to Cal Port 1.

30. From the state Menu, select "Set Time and Date". Follow the prompts on this page to enter the correct Time and Date, including Daylight Saving Time or Standard Time.
31. From the "Station Menu", select "Three Day Calibration".
32. Follow the prompts on the screen to perform the Three Day Gas Cal.
33. All other parameters are to be left empty and the unit is to be left in LOCKOUT until the State Representative can certify the site.
34. Close and lock the Computer Drawer and secure it with the three screws.
35. Place these Installation Instructions in the back of your MGA-9000 Service Manual for future reference.

* INSTALLATION COMPLETE *
