



SUN ELECTRIC CORPORATION

Model: **MGA-9000 UT**

UNIT **SETUP**

Page: 10F4

# Field Installation Instructions

INSTALLATION MUST BE PERFORMED BY QUALIFIED SUN SERVICE PERSONNEL ONLY

## INSTALLATION OVERVIEW:

The MGA-9000 UT 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 |
|--------------------|--------------|-----|----------------------|--------------|-----|
| Keyboard, 101 key  | 0552-0990-01 | 1   | 1.44 Floppy, Uniform | 0552-0072-01 | 1   |
| Keyboard Label     | 0682-1041-01 | 1   | Keyboard Cover       | 0552-0993-01 | 1   |
|                    |              |     | Install. Instruct.   | 0692-1950-01 | 1   |
| Hook, 4"           | 0124-0105-01 | 1   | Lead Hanger          | 2161-0023    | 2   |
| Regulators         | 0131-0024    | 2   | 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/Chin Lead       | 6004-0462    | 1   |
| Screws, 10-32x1/2" | 0403-1541-08 | 2   | Tach Lead (Blue)     | 6004-0566-01 | 1   |
| Velcro Loop        | 0424-0804-01 | 3 " | Quad 4/Nissan Adap.  | 6005-0181-01 | 1   |
| Velcro Hook        | 0424-0804-02 | 3"  | BMW Adapter          | 6005-0184-01 | 1   |
| Printer Ribbon     | 0528-0995    | 2   | Acura Adapter        | 6005-0184-02 | 1   |
| DOS 6.22 package   | 0552-0104-01 | 1   | Adapter Kit          | 7009-1700    | 1   |
| Brass Fitting      | 0647-0069    | 2   | Exhaust Probe Assy.  | 7009-1869    | 2   |
| Caps, Protective   | 0758-0200-01 | 2   | Trigger Pickup, Blk  | 7009-1929    | 1   |
| Black Plastic Plug | 1374-0110-01 | 6   | ID Tag, Low Scale    | 7009-2035-01 | 1   |
|                    |              |     | ID Tag, Mid Scale    | 7009-2035-02 | 1   |
|                    |              |     | Tubing (8")          | 8200-0100-1  | 1   |
|                    |              |     | Nissan 300ZX Adapter | 7009-2223-01 | 1   |

## REQUIRED TOOLS:

Complete Sun Issued Tool Kit

**INSTALLATION:** 

---

USE **STANDARD ANTI-STATIC PRECAUTIONS** WHILE **PERFORMING THIS PROCEDURE.**

1. Cut the Straps, and remove the top of the carton, top packing, and carton sides.
2. Slide the WA-9000 UT and carton base off of the pallet, and split the corners of the base carton.
3. Lean the MGA-9000 UT so that one half of the foam base can be removed.
4. Lean the PEA-9000 UT 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 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. Hang the Service Box on the side of the computer drawer.
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 UT.
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 (0424-0804-01) velcro (soft side) . Remove backing exposing adhesive, Place keyboard in its proper position and press firmly.

16. **Remove** all tape **from** the Liner printer and remove the carriage cover to gain access to the print head. **Ensure** that the printer ribbon cartridge (0528-0995) is **installed** properly **and** remove the plastic stop that secures the print head.
17. **Repeat** step 16 for the Upper Printer.
18. **Load** a package of printer paper into 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 (0403-1541-08) 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. **This** is **used** to attach the rubber strap and secure the gas bottles to the shelf.
22. **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 perspective connections.**
23. **Cut the Drain** Hose length just enough so it **does** not reach the Exhaust port outlet.
24. 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 shelf in the rear, along with all the Tach Pickups, Filters, Printer Ribbon, and the DOS 6.22 Package.**
25. Attach the regulators to the two gas bottles, **and** attach the two brass fittings to the regulators.
26. Attach the hose, with label, to the proper tanks.  
(7009-2035-01) = **Low** Cal Port / 7009-2035-02 =Mid Cal Port).
27. At this **time**, the software should be loaded as **indicated** on the Screen. **Power** the **MGA-9000 UT down** using the Circuit Breaker on the back panel **and** remove the Service Box.
28. **Reconnect cables that were disconnected in steps 6 and 7 (P-424 & P-412) . Press the** Circuit Breaker/Witch to power up the **MGA-9000 UT. The MGA-9000 UT** will perform systems test and prompt you for the Service access code. **Enter** it at this time.
29. **From the Service** Menu, select **"Manual Calibration"**. select **"Cal Port 1"** and press **"Enter"** .
30. With the **IR Pump "ON"**, connect the Flow Meter **to** the Exhaust port, **and record** the flow rate.
31. **Press "Enter"** , select **"Cal Port 2"**, and press **"Enter"**. Record the Flow rate again.
32. Disconnect the **Flow Gauge from** the exhaust port **and** connect it **to** the Mid Scale bottle. Turn the gas on **and** adjust the Regulator to match the flow of Cal Port 1 as recorded in step 30. Turn off the gas.

33. **Disconnect** the Flow Gauge **from** the Mid Scale bottle **and** connect it **to** the **Low Gas Tank**. **Turn** the gas on **and** adjust the Regulator to match the flow of **Cal Port 2**, as recorded in step 31. **Turn off** the gas and **disconnect** the **Flow Meter**.
34. Place the gas bottles **in** the **bottom** of the cabinet, **strapping** them **down** with the **Rubber Strap**. Connect the Law Scale Gas Hose **to Cal Port 2**, and Mid Scale Gas **Hose to Cal Port 1**.
35. 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**. Press the MENU key **to** return.
36. Select "Install New Data Disk". Follow the prompts on **this page to** install the unformatted data disk (0552-0072-01). When installation is **complete**, press the MENU key to return.
37. Select "**Service Exit Mode**". Clear all **Tampers** that have been set. Press the **CONT** key when done.

\*\*\*\*\*  
**\* INSTALLATION COMPLETE \***  
\*\*\*\*\*

**CHECK OUT PROCEDURE:** \_\_\_\_\_

38. **From the** "Station Menu", Perform "Gas Calibration".
39. From the "Station Menu", Perform "**Leak** Check".
40. All **other** parameters are **to** be left Blank **and** the unit is **to** remain in **LOCKOUT** until the State Representative can come **and** certify the site.

\*\*\*\*\*  
**\* CHECKOUT COMPLETE \***  
\*\*\*\*\*