CORVUS SYSTEMS

Utility Server Installation Guide

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Part Number: 7100-03392
Document Number: USI/70-11/1.4
Release Date: June, 1983
Revision: A

FCC NOTICE

This equipment complies with the requirements in Part 15 of FCC Rules for a A computing device. Operation of this equipment in a residential area may cause unacceptable interference to radio and TV reception requiring the operator to take whatever steps are necessary to correct the interference.

NOTICE

Corvus Systems, Inc. reserves the right to make changes in the product described in this manual at any time without notice. Revised manuals will be published as needed and may be purchased from authorized Corvus Systems dealers.

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Table of Contents

Introduction

This guide tells you how to attach a Corvus utility server to your OMNINET™ network.

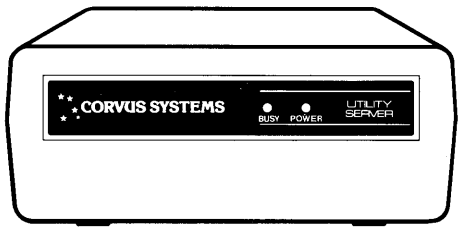
Once installed, the Corvus utility server lets you use your network more efficiently. With the proper software, the utility server lets every station on your network share the services of printers or other devices.

You already should have a working OMNINET network before you begin this guide.

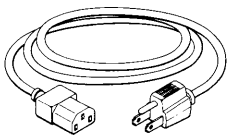
Hardware Required

You will need these items to install your utility server:

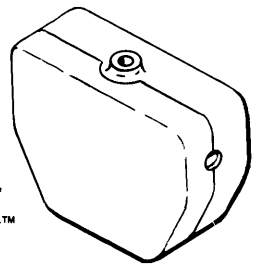
- Utility Server
- Power Cord
- Corvus Tap Box™
- Tap Cable



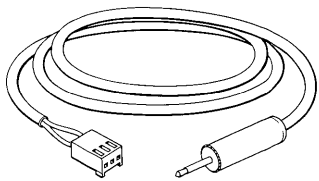
Utility Server



Power Cord



Corvus Tap Box™



Tap Cable

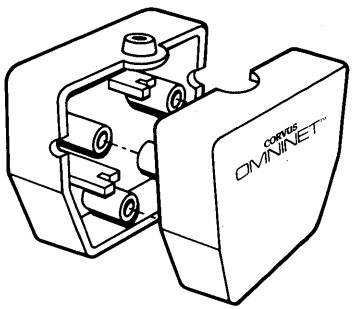
Installing a Network Tap

Your first step in installing a utility server is to tap into your network. Follow these steps to make a tap.

1. Remove insulation from the OMNINET cable.

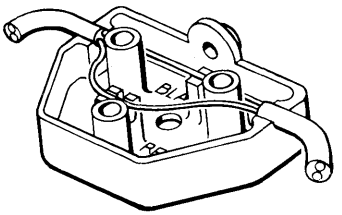
Find a point on the OMNINET cable close to where your utility server will be. Use a knife to cut through the outer insulation of the cable. Take off about 2 inches (5 cm) of this insulation but do not cut the inner wires or remove their insulation.

2. Open a tap box.

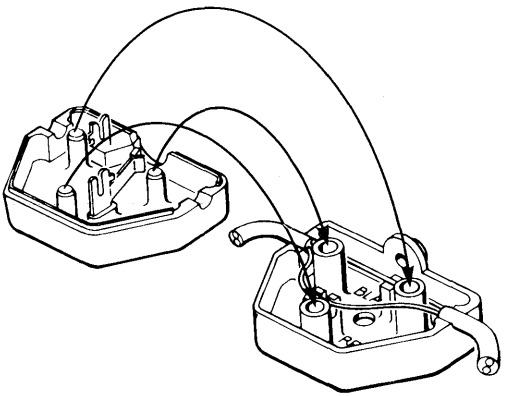


3. Put the cable wires into the tap box.

In one of the tap box halves are two wire guides. Push the black wire from the OMNINET cable into the BLACK wire guide and the red wire into the RED wire guide.



4. Close the tap box.



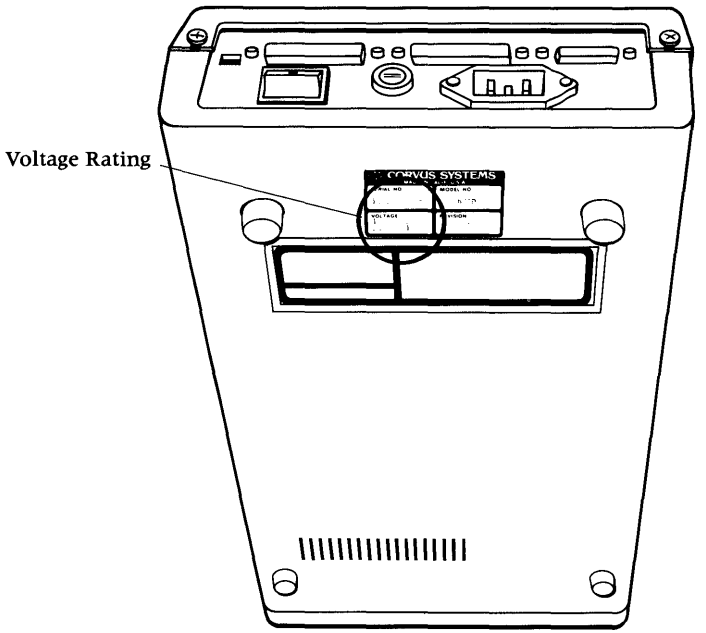
You now have installed a network tap for your utility server. Go to the next section of this manual.

Connecting Your Utility Server to the Network

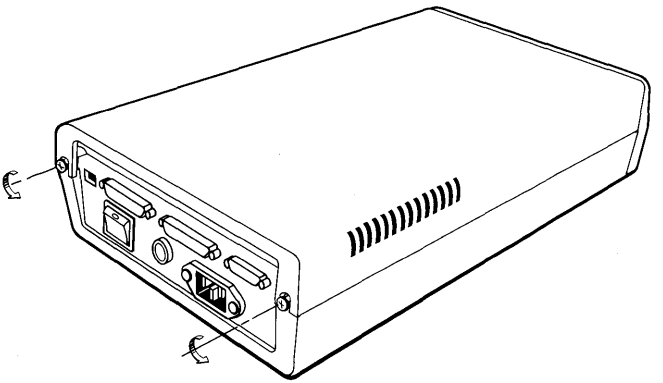
Once you have a network tap for your utility server, your next task is to attach the server to the tap.

1.

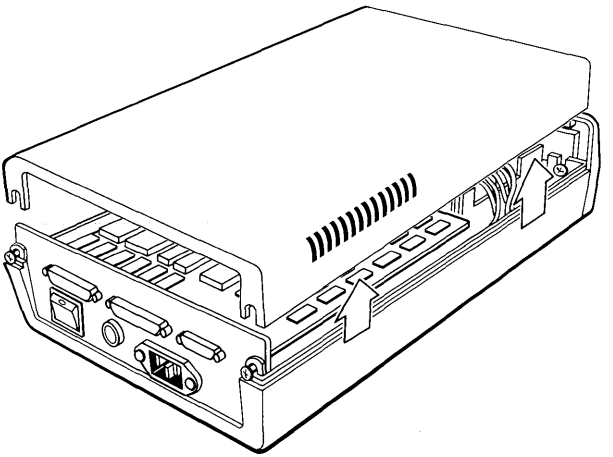
On the bottom of your utility server is a label that gives the voltage rating of the server. If the rating does not match your local voltage, contact your Corvus dealer.



2. Loosen the screws on the back of the utility server.

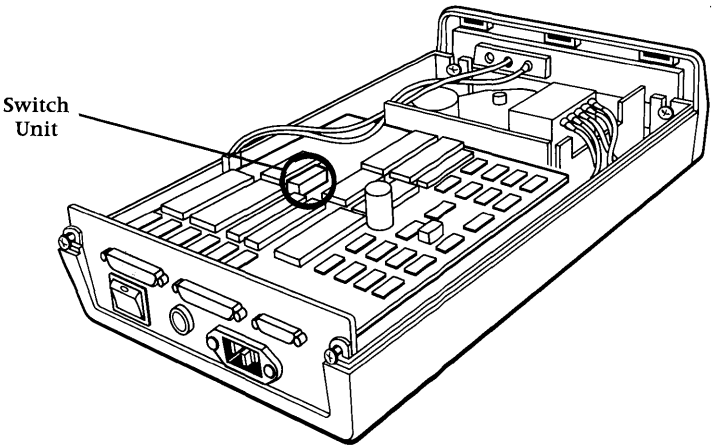


3. Lift the top off the utility server.



4. Set the network address for your server.

Face the back of the utility server. Slightly to the left of center on the utility server circuit board is a switch unit.



Utility Server
Circuit Board & Switch Unit

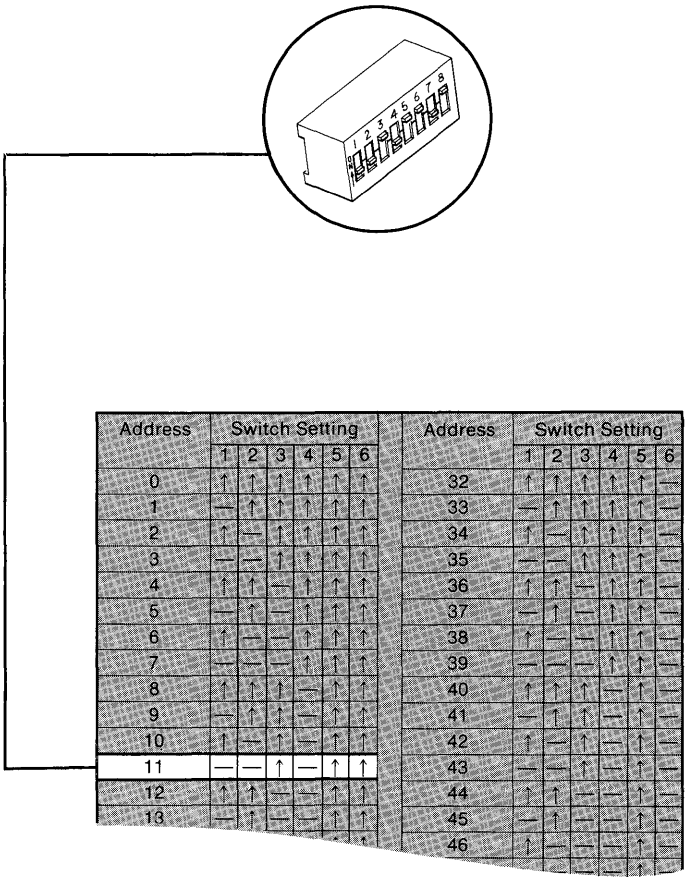
Choose an address from 0 to 63 for your utility server. The address you choose must be different from the addresses of all other devices on your network. Write down your choice on a piece of paper and tape it to the outside of your server. Set the switches for your chosen address as shown in the table below.

Address	Switch Setting						Address	Switch Setting					
	1	2	3	4	5	6		1	2	3	4	5	6
0	↑	↑	↑	↑	↑	↑	32	↑	↑	↑	↑	↑	—
1	—	↑	↑	↑	↑	↑	33	—	↑	↑	↑	↑	—
2	↑	—	↑	↑	↑	↑	34	↑	—	↑	↑	↑	—
3	—	—	↑	↑	↑	↑	35	—	—	↑	↑	↑	—
4	↑	↑	—	↑	↑	↑	36	↑	↑	—	↑	↑	—
5	—	↑	—	↑	↑	↑	37	—	↑	—	↑	↑	—
6	↑	—	—	↑	↑	↑	38	↑	—	—	↑	↑	—
7	—	—	—	↑	↑	↑	39	—	—	—	↑	↑	—
8	↑	↑	↑	—	↑	↑	40	↑	↑	↑	—	↑	—
9	—	↑	↑	—	↑	↑	41	—	↑	↑	—	↑	—
10	↑	—	↑	—	↑	↑	42	↑	—	↑	—	↑	—
11	—	—	↑	—	↑	↑	43	—	—	↑	—	↑	—
12	↑	↑	—	—	↑	↑	44	↑	↑	—	—	↑	—
13	—	↑	—	—	↑	↑	45	—	↑	—	—	↑	—
14	↑	—	—	—	↑	↑	46	↑	—	—	—	↑	—
15	—	—	—	—	↑	↑	47	—	—	—	—	↑	—
16	↑	↑	↑	↑	—	↑	48	↑	↑	↑	↑	—	—
17	—	↑	↑	↑	—	↑	49	—	↑	↑	↑	—	—
18	↑	—	↑	↑	—	↑	50	↑	—	↑	↑	—	—
19	—	—	↑	↑	—	↑	51	—	—	↑	↑	—	—
20	↑	↑	—	↑	—	↑	52	↑	↑	—	↑	—	—
21	—	↑	—	↑	—	↑	53	—	↑	—	↑	—	—
22	↑	—	—	↑	—	↑	54	↑	—	—	↑	—	—
23	—	—	—	↑	—	↑	55	—	—	—	↑	—	—
24	↑	↑	↑	—	—	↑	56	↑	↑	↑	—	—	—
25	—	↑	↑	—	—	↑	57	—	↑	↑	—	—	—
26	↑	—	↑	—	—	↑	58	↑	—	↑	—	—	—
27	—	—	↑	—	—	↑	59	—	—	↑	—	—	—
28	↑	↑	—	—	—	↑	60	↑	↑	—	—	—	—
29	—	↑	—	—	—	↑	61	—	↑	—	—	—	—
30	↑	—	—	—	—	↑	62	↑	—	—	—	—	—
31	—	—	—	—	—	↑	63	—	—	—	—	—	—
	1	2	3	4	5	6		1	2	3	4	5	6
Address	Switch Setting						Address	Switch Setting					

↑ = on
— = off

Network Device Addresses and Switch Settings

The sketch below shows a sample switch setting. This is just an example. You must choose your own address.

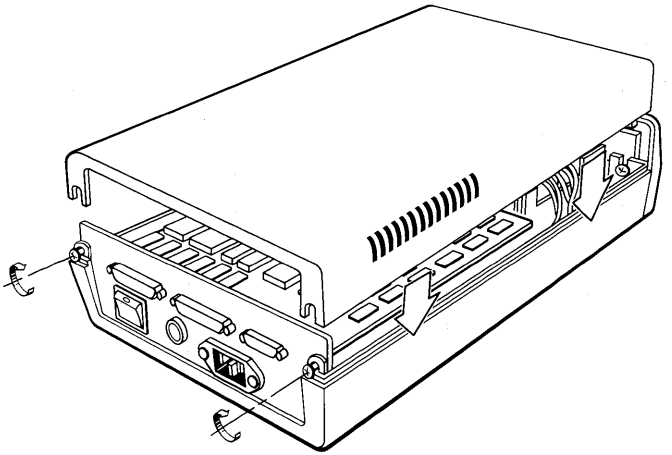


Address	Switch Setting						Address	Switch Setting					
	1	2	3	4	5	6		1	2	3	4	5	6
0	↑	↑	↑	↑	↑	↑	32	↑	↑	↑	↑	↑	—
1	—	↑	↑	↑	↑	↑	33	—	↑	↑	↑	↑	—
2	↑	—	↑	↑	↑	↑	34	↑	—	↑	↑	↑	—
3	—	—	↑	↑	↑	↑	35	—	—	↑	↑	↑	—
4	↑	↑	—	↑	↑	↑	36	↑	↑	—	↑	↑	—
5	—	↑	—	↑	↑	↑	37	—	↑	—	↑	↑	—
6	↑	—	—	↑	↑	↑	38	↑	—	—	↑	↑	—
7	—	—	—	↑	↑	↑	39	—	—	—	↑	↑	—
8	↑	↑	↑	—	↑	↑	40	↑	↑	↑	—	↑	—
9	—	↑	↑	—	↑	↑	41	—	↑	↑	—	↑	—
10	↑	—	↑	—	↑	↑	42	↑	—	↑	—	↑	—
11	—	—	↑	—	↑	↑	43	—	—	↑	—	↑	—
12	↑	↑	—	—	↑	↑	44	↑	↑	—	—	↑	—
13	—	↑	—	—	↑	↑	45	—	↑	—	—	↑	—
							46	↑	—	—	—	↑	—

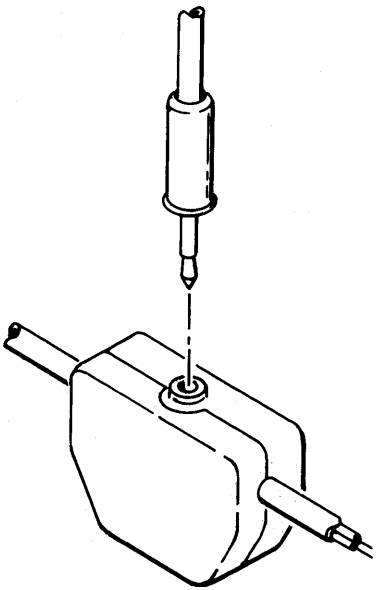
A Sample Address

Switches 7 and 8 are not used for setting the network address. Set switch 7 off and switch 8 on.

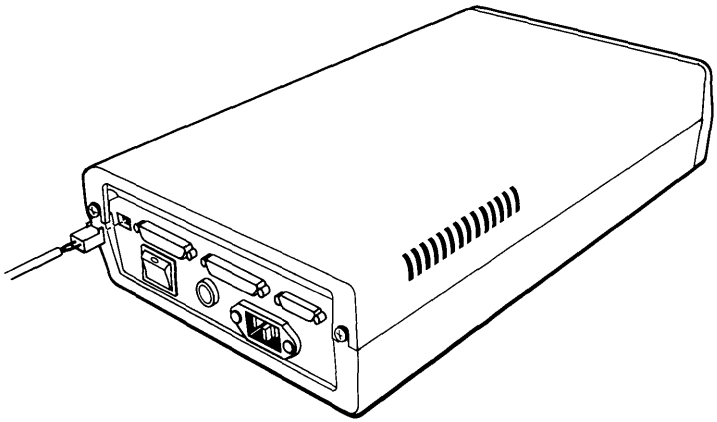
5. Replace the cover on the utility server and tighten the screws.



6. Plug a tap cable into the tap box for your server.



7. Connect the tap cable to the utility server.

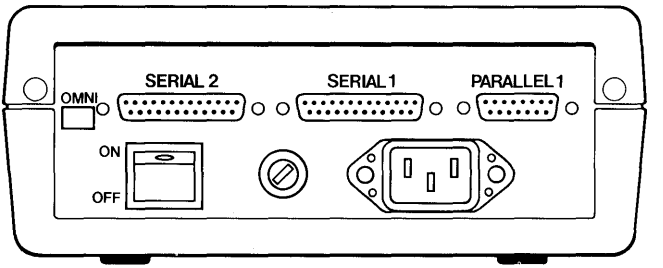


8. Attach devices to the utility server.

On the back of the utility server are three ports for attaching devices such as printers and modems. The SERIAL 1 and SERIAL 2 ports are RS-232C ports for connecting serial type devices. To connect a device to one of these ports, you'll need a cable with an RS-232C male plug at one end and a connector suitable for your device at the other end. "The RS-232C Serial Interface" section describes the RS-232C pins that the utility server uses.

The PARALLEL 1 port on the back of the utility server connects a parallel printer. A cable for this port must have a 15-pin male connector at one end and a connector suitable for your printer at the other end. "The Parallel Interface" section describes the pins on the PARALLEL port.

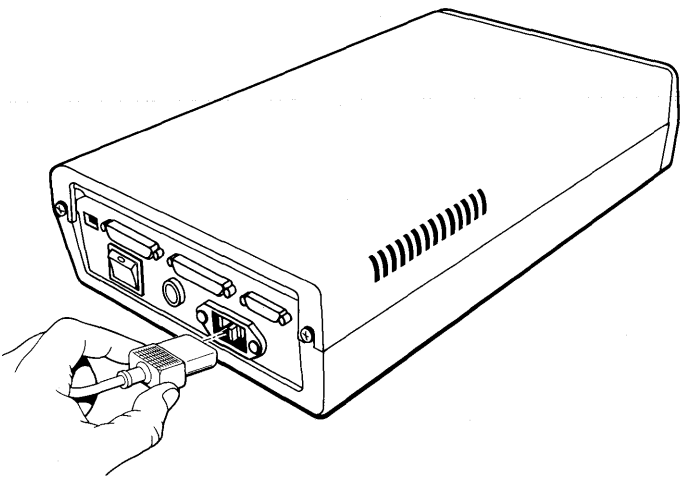
A cable for the PARALLEL port is available from Corvus. See your Corvus dealer to find out if this cable will work with your printer.



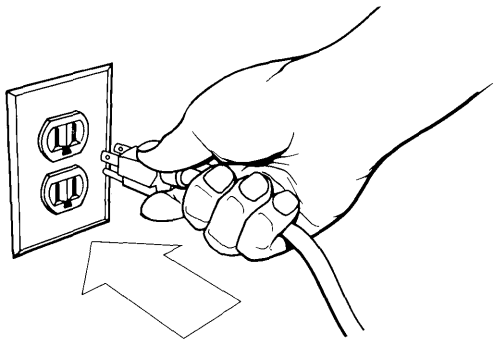
Utility Server
Back Panel

When you have all the cables you need, attach them to your server and to the devices you wish to serve. Cables attach to the server in one way only. If a cable plug will not go into its socket, turn it over and try again.

9. Attach the power cord to the server.



10. Plug the power cord into the wall.



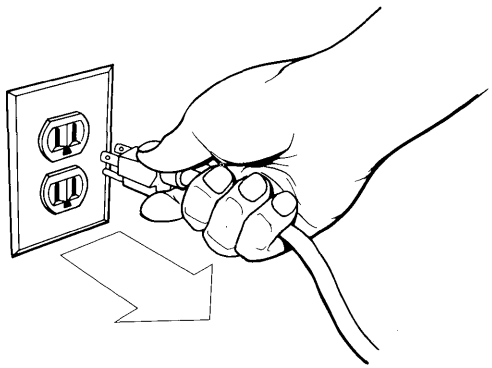
You now have finished installing your utility server. From here, go to the Utility Server Manager's Guide for your computer and the type of service you want.

Replacing the Fuse

Your utility server has a slow-blow fuse to protect the server from harm. If the fuse burns out, you will have to replace it. The server will not work without a fuse.

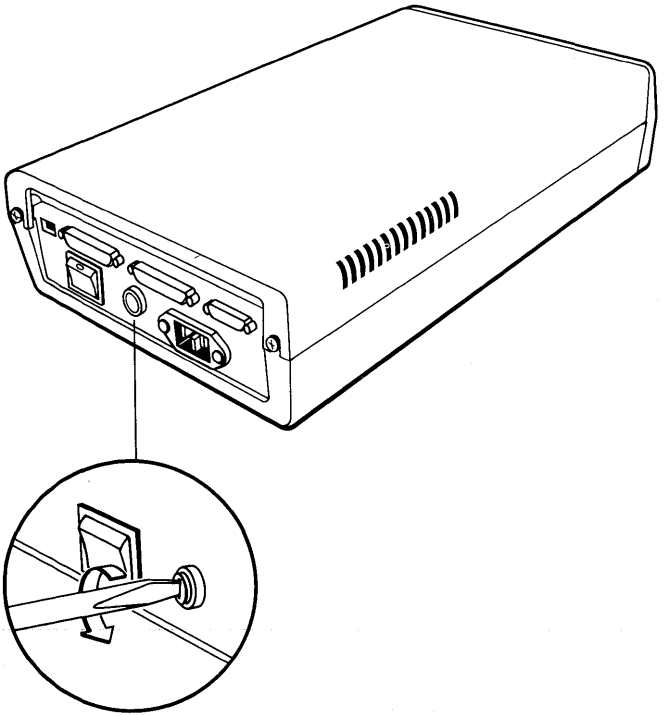
1. **TURN OFF your utility server and unplug it.**

Never change your fuse when the server is plugged in. You could get a severe electrical shock.

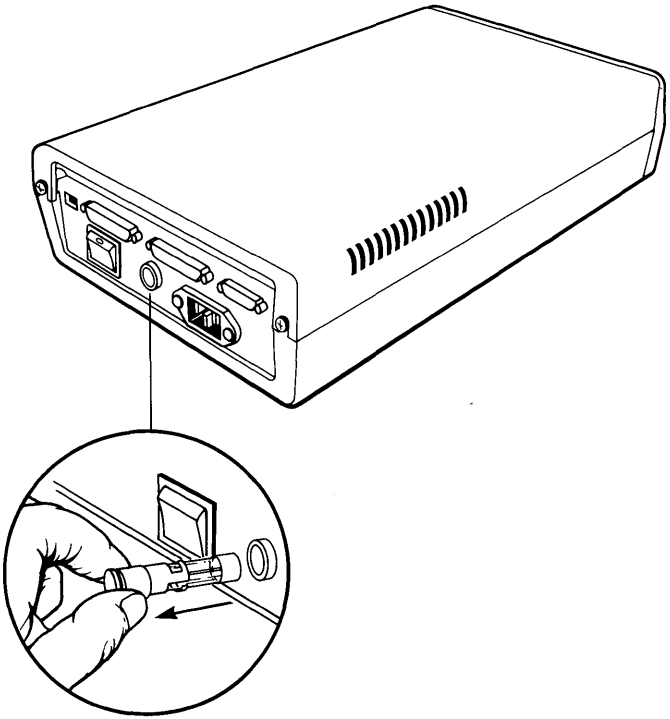


2. Unlatch the fuse cylinder.

On the back of the utility server is a circular fuse holder. With a screwdriver, push the central cylinder in and turn it counter-clockwise. The cylinder will pop out.



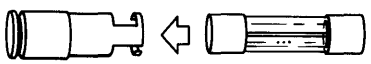
3. Remove the cylinder from the fuse holder.



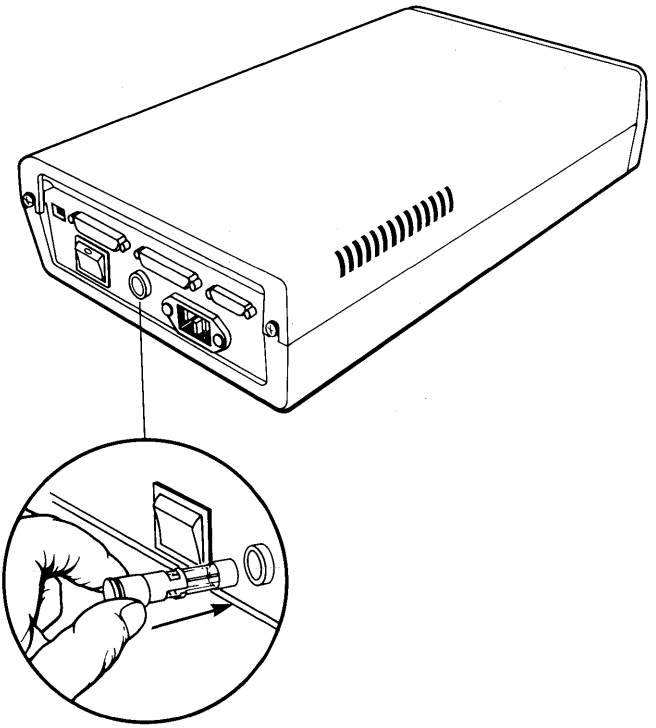
4. Put a new fuse into the fuse cylinder.

The utility server uses one of the following slow-blow fuses depending on its voltage setting:

100v and 120v . . . 0.5 amp
220v and 240v . . . 0.25 amp

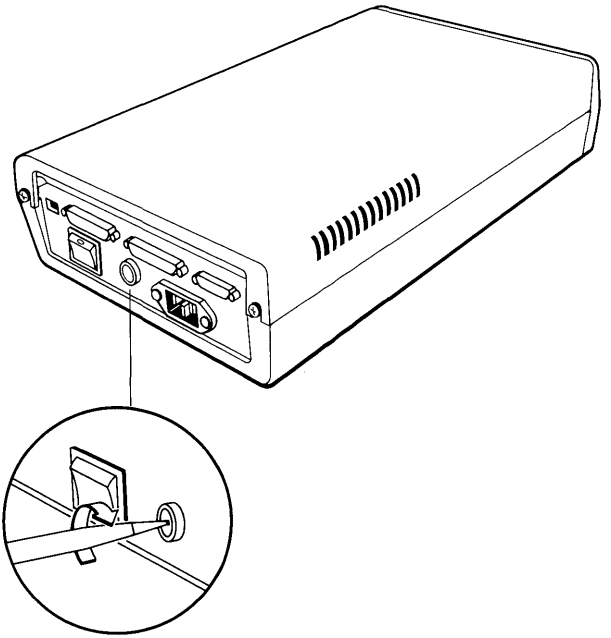


5. Put the fuse cylinder back into the fuse holder.



6. Latch the cylinder in place.

With a screwdriver, push the cylinder in and turn it clockwise.



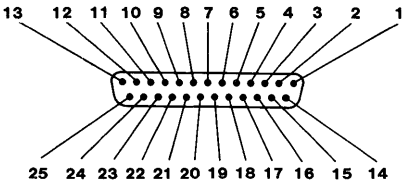
You now have finished changing the fuse on your utility server.

The RS-232C Serial Interface

The utility server is a piece of data communications equipment. Its serial ports are RS-232C connectors. The serial interface uses the RS-232C pins described below.

Pin	Signal Name	Source	Function
1	Protective ground	None	Grounds chassis
2	Transmitted data	Slave device	Carries serial data from the slave device to the utility server.
3	Received data	Utility server	Carries serial data from the utility server to the slave device.
4	Request to send	Slave device	
5	Clear to send	Utility server	
6	Data set ready	Utility server	When high (+12 volts), indicates that the utility server is on-line. When low (−12 volts), indicates that the utility server is off-line.
7	Signal ground	None	Provides return path for data and control signals.

Pin	Signal Name	Source	Function
8	Carrier detect	Utility server	When high (+12 volts), indicates that the utility server is on-line. When low (−12 volts), indicates that the utility server is off-line.
20	Data terminal ready	Slave device	When high (+12 volts), indicates that the slave device is on-line. When low (−12 volts), indicates that the slave device is off-line.



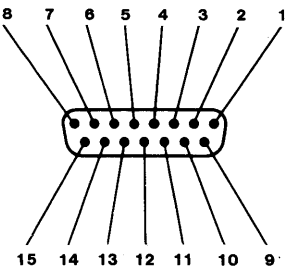
RS-232C Port

The Parallel Interface

The parallel printer port on the back of your utility server uses the 15 pins described below. A signal name with a bar over it is active when low; a signal name without a bar is active when high.

Pin	Signal Name	Source	Function
1	$\overline{\text{STROBE}}$	Utility server	Provides a 0.5-μsec pulse that clocks data from the utility server into the printer logic.
2	DATA 1	Utility server	Transmit data bits 1 through 8. A high voltage represents a binary 1, a low represents a binary 0.
3	DATA 2		
4	DATA 3		
5	DATA 4		
6	DATA 5		
7	DATA 6		
8	DATA 7		
9	DATA 8		
10	$\overline{\text{ACKNLG}}$	Printer	Indicates with a low pulse that a data byte has been received and that the printer is ready to accept another character.

Pin	Signal Name	Source	Function
11	BUSY	Printer	When high, indicates that the printer cannot receive data. When low, indicates the printer can receive data. The signal becomes high during: a. Data entry. b. Printing or printhead's moving time. c. Off-line state. d. Error state.
12	PE	Printer	When high, indicates that the printer is out of paper.
13	SLCT	Printer	When high, indicates that the printer is selected.
14	OV	None	Logic ground.
15	$\overline{\text{ERROR}}$	Printer	When low, indicates an error condition.



The PARALLEL 1 Port