# Network Station Installation Guide

IBM PC

CORVUS

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# OMNINET™ Network Station Installation Guide

IBM

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This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. As temporarily permitted by regulation it has not been tested for compliance with the limits for Class A computing devices pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

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# Table of Contents

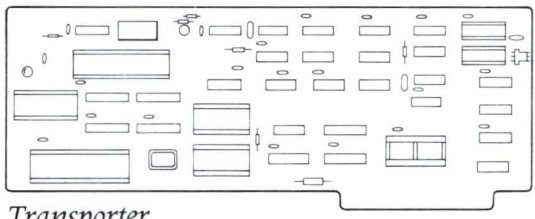
# Introduction

This guide tells you how to add your IBM Personal Computer to a Corvus OMNINET network. Before beginning this guide, you should complete the DISK SERVER INSTALLATION GUIDE which tells you how to set up your OMNINET network and attach your disk system and disk server to the network.

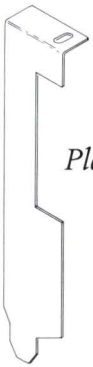
# Hardware Required

You will need the following items to set up your IBM Personal Computer as an OMNINET network station:

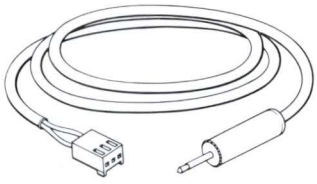
- Corvus transporter card for the IBM PC
- Small metal plate
- Tap cable
- Tap box



*Transporter*



*Plate*



*Tap Cable*

*Tap Box*

If your computer is farther than 15 feet (4.5 m) from the OMNINET cable, you will need the following additional items:

- Two tap boxes
- New piece of OMNINET cable twice as long as the distance from the existing OMNINET cable to your computer

# Installing a Network Tap

It is very easy to turn your IBM Personal Computer into an OMNINET network station. The first step is to tap into the network. This section tells you how to make a tap.

## 1. Measure the distance from your computer to the OMNINET cable.

If your computer is farther than 15 feet (4.5 m) from the OMNINET cable, go to the "Extending Your OMNINET Cable" section of this guide on page 17. If the computer is within 15 feet of the cable, go on to step 2.

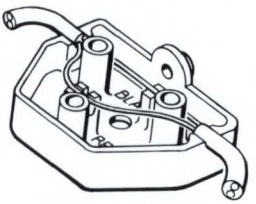
## 2. Remove insulation from the OMNINET cable.

Find the point on the OMNINET cable which is closest to your computer. Use a knife to cut through the outer insulation of the cable. Remove about 2 inches (5 cm) of this insulation but do not cut the inner wires or remove their insulation.

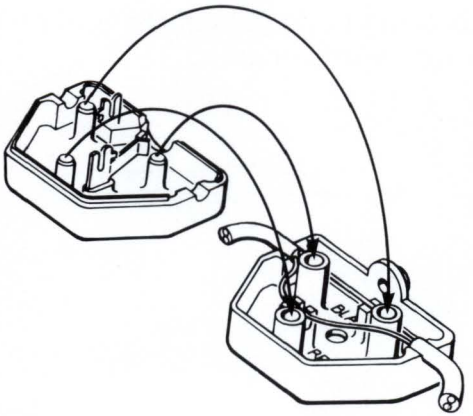
## 3. Pull apart a tap box.

## 4. Insert the cable wires into the tap box.

In one half of the tap box 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.



## 5. Close the tap box.

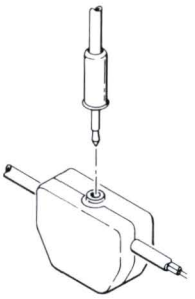


*Connecting Your*

# IBM PC to the Network

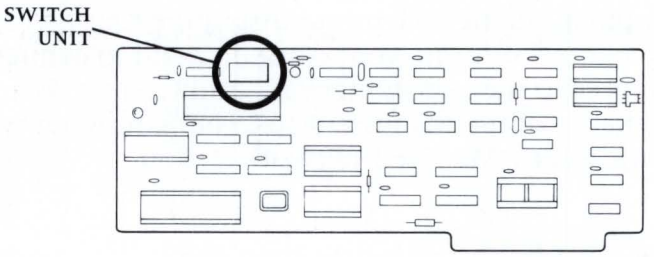
Once you have created a network tap for your computer, the next step is to install the Corvus transporter card into your computer and to connect a tap cable to the transporter card and tap box. When you have completed these steps, your computer will be set up as an OMNINET network station.

## 1. Plug a tap cable into the tap box for your computer.



## 2. Set the device address for your computer.

Hold the Corvus transporter card with the metal "fingers" down. At the top left of the card is a switch unit.




*Transporter Card and Switch Unit*

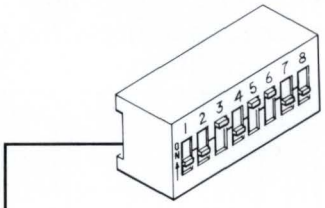
Choose an address from 0 to 63 for your computer. The address you choose must be different from the addresses of all other devices on your network. Set your address on the switches. The table below shows you the switch settings for each address. Set switches 7 and 8 to the OFF position.

| 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.

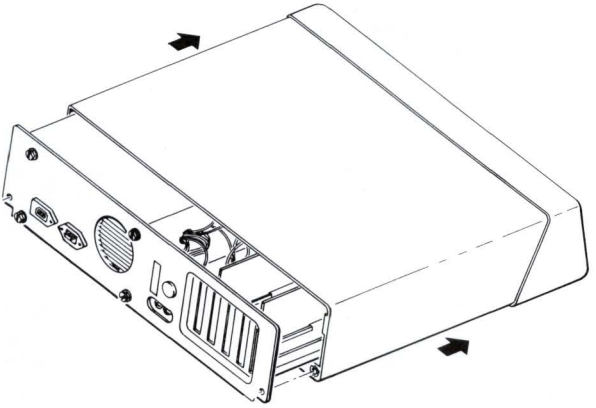



| Address | Switch Setting | | | | | | Address | Switch Setting | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | | 1 | 2 | 3 | 4 | 5 | 6 |
| 0 | ↑ | ↑ | ↑ | ↑ | ↑ | ↑ | 32 | ↑ | ↑ | ↑ | ↑ | ↑ | — |
| 1 | — | ↑ | ↑ | ↑ | ↑ | ↑ | 33 | — | ↑ | ↑ | ↑ | ↑ | — |
| 2 | ↑ | — | ↑ | ↑ | ↑ | ↑ | 34 | ↑ | — | ↑ | ↑ | ↑ | — |
| 3 | — | — | ↑ | ↑ | ↑ | ↑ | 35 | — | — | ↑ | ↑ | ↑ | — |
| 4 | ↑ | ↑ | — | ↑ | ↑ | ↑ | 36 | ↑ | ↑ | — | ↑ | ↑ | — |
| 5 | — | ↑ | — | ↑ | ↑ | ↑ | 37 | — | ↑ | — | ↑ | ↑ | — |
| 6 | ↑ | — | — | ↑ | ↑ | ↑ | 38 | ↑ | — | — | ↑ | ↑ | — |
| 7 | — | — | — | ↑ | ↑ | ↑ | 39 | — | — | — | ↑ | ↑ | — |
| 8 | ↑ | ↑ | ↑ | — | ↑ | ↑ | 40 | ↑ | ↑ | ↑ | — | ↑ | — |
| 9 | — | ↑ | ↑ | — | ↑ | ↑ | 41 | — | ↑ | ↑ | — | ↑ | — |
| 10 | ↑ | — | ↑ | — | ↑ | ↑ | 42 | ↑ | — | ↑ | — | ↑ | — |
| 11 | — | — | ↑ | — | ↑ | ↑ | 43 | — | — | ↑ | — | ↑ | — |
| 12 | ↑ | ↑ | — | — | ↑ | ↑ | 44 | ↑ | ↑ | — | — | ↑ | — |
| 13 | — | ↑ | — | — | ↑ | ↑ | | | | | | | |
| 14 | ↑ | — | — | | | | | | | | | | |
| 15 | — | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | |

*A Sample Address*

3. Unscrew the screws which hold the cover on your computer.

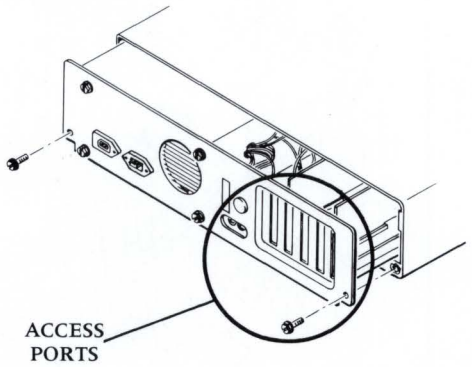
4. Pull the cover of the computer forward.



*Removing the Cover from the IBM*

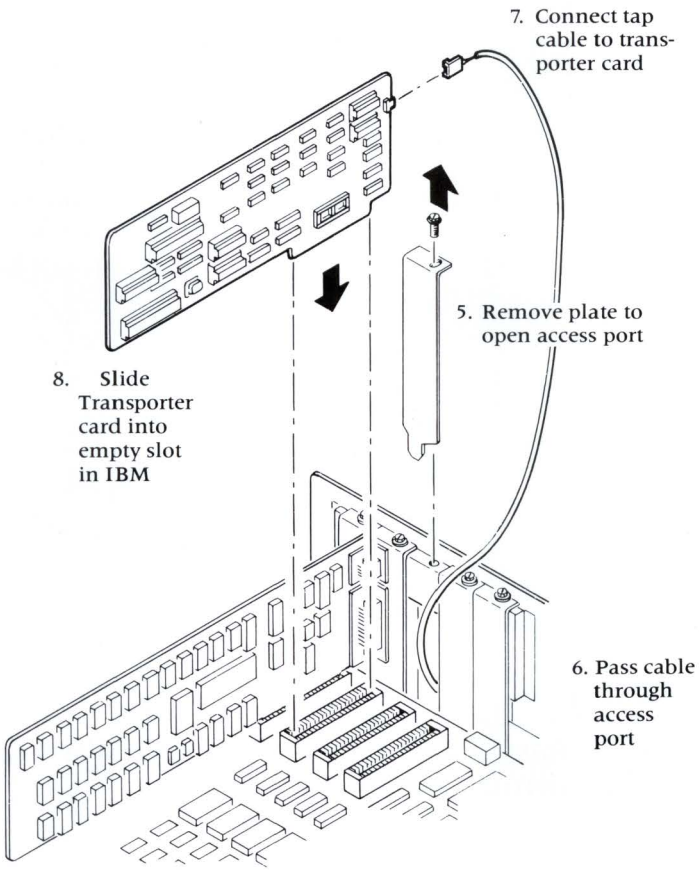
## 5. Open an access port in the back of your computer.

On the back of your computer are five access plates next to five slots on the computer's circuit board. Find an unused slot and unscrew the top screw from the metal plate which is closest to the slot. Remove the plate by sliding it upward.




## 6. Pass the free end of the tap cable through the access port.

# 7. Connect the tap cable to the transporter card.

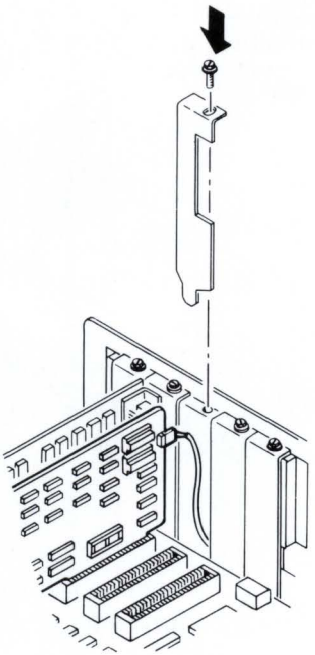



*Installing the Transporter Card into the Computer*

## 8. Put the transporter card into the empty slot in your computer.

## 9. Close the access port.

Put the metal plate which came with your transporter card in place of the one you took out. Use the screw which you took out before to hold the plate in place.



*Closing the Access Port*

## 10. Put the cover back on the computer and put back the screws.

You have now finished setting up your IBM computer as a network station.

Where to go from here:

- If you have not yet initialized your Corvus disk system, go to the DISK INITIALIZATION GUIDE FOR THE IBM.
- If you already have a working OMNINET network, go to the SYSTEM MANAGER'S GUIDE FOR THE IBM.

# Extending Your OMNINET Cable

This section tells you how to extend your OMNINET cable. Follow these steps only if your computer is farther than 15 feet (4.5 m) from the cable.

## 1. Cut the OMNINET cable.

Find the point on the OMNINET cable which is closest to your computer. Cut the cable at this point.

## 2. Measure and cut a piece of twisted-pair cable.

Measure the distance from your computer to the point where you just cut the OMNINET cable. Double this distance and cut a piece of cable of this length from a roll of cable like the OMNINET cable. This piece of cable will become an extension of the OMNINET cable.

The length of the piece of cable plus the length of the OMNINET cable must not be more than 1000 feet (305 m). If you need to make this length greater than 1000 feet, you will need an Active Junction Box, available from your Corvus dealer.

## 3. Remove insulation from both ends of the new piece of cable.

Cut off 1.5 inches (4 cm) of outer insulation from the ends of the piece of cable that you made in step 2. Don't take the insulation off the inner wires.

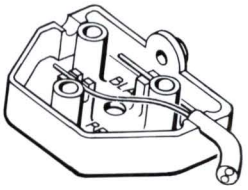
## 4. Remove the insulation from the cut ends of the OMNINET cable.

Cut off 1.5 inches (4 cm) of outer insulation from each cut end of the OMNINET cable. Don't take the insulation off the inner wires.

## 5. Pull apart a tap box.

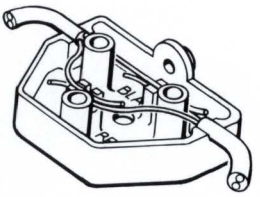
## 6. Connect one end of the new piece of cable to the tap box.

In one half of the tap box are two wire guides. Push the black wire at one end of the piece of cable into the "BLACK" wire guide. Push the red wire into the "RED" wire guide.



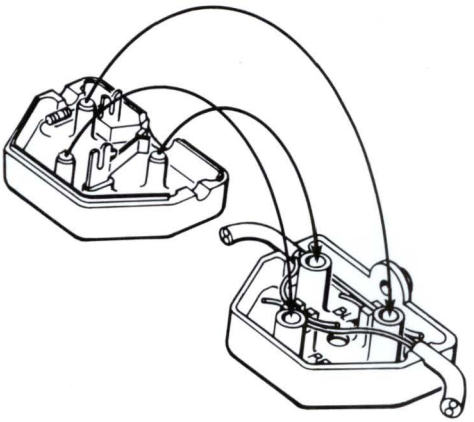
## 7. Connect a cut end of the OMNINET cable to the tap box.

Push the black and red wires from one of the cut ends of the OMNINET cable into the "BLACK" and "RED" wire guides on top of the wires from the cable piece. Make sure that both red wires are together in the "RED" wire guide and both black wires are together in the "BLACK" wire guide.



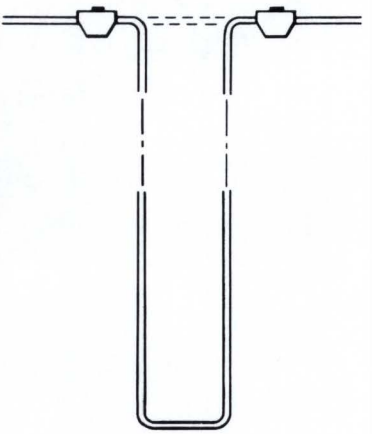
*A Cable Splice*

## 8. Close the tap box.



## 9. Repeat the splicing procedure.

Use a second tap box and follow instructions 5 through 8 for the remaining free ends of the OMNINET cable and cable piece. When you are done you will have created a large loop in the OMNINET cable.



*A Loop in the OMNINET Cable*

## 10. Go to step 2 on page 5.