Laptop Docking Station Setup Guide

Overview

This document is a guide to setting up customer-friendly areas within our branches to allow portable computer users to print. These areas should include the following:

easily-accessible AC power outlets
PC parallel port connection to black & white printer
PC parallel port connection to color laser printer
a LocalTalk connector for older Mac PowerBooks
an ethernet connection for newer PowerBooks
an analog phone line for local and 1-800 modem access
printer driver diskettes for both platforms
Acrylic Fixture to hold the Installation Guides (#988-116, see Kinko's Distribution Services 1998, page 11)
Laptop Docking Station Acrylic Fixture (available from Kinko's Distribution Services)

This document will provide step-by-step instructions on how to hook up each of these connections in the most common branch network environment - MacLAN. Instructions are also included on how to produce the printer driver diskettes that install the necessary software onto customers' computers. There are labels for these diskettes, labels for each of the different types of connections, plus a revised insert for the laptop docking station acrylic.

Background

Networking IBM compatible PCs has been difficult due to the wide variety of hardware and software options. Even if every branch had exactly the same type of network, it would still be undesirable to have to load network driver files on every customer's laptop. In addition to being difficult and tedious, we would also run the risk of messing up the customer's configuration in other ways. For these reasons, the best alternative for PCs is to print using the built in support for output through the parallel port. All that is required in the Adobe PostScript printer driver and appropriate printer description files. If the docking station is close enough, the parallel cables may run directly to the printers; for better flexibility and neatness most branches will utilize the category five cabling and RJ-45 jacks installed throughout the branch as extension cords, running the parallel port signals from the customer's laptop through the walls, across the patch panel, and back through the walls to the printer.

Macintosh computers have support for networking and printing built into the operating system, and only require the addition of the correct printer description file. They hook into the branch network exactly like the other computers in the branch - plugged into a jack which is connected to the computer services ethernet hub, they will be able to access all devices on the network.

Components

There are a few parts required to set up a Docking Station. What follows is a list of what you need for each of the components that make up a fully operational docking area. All of these parts are available through MicroAge Supplies Order Desk, 800-423-2662.

For IBM compatible black & white printing

1	Extended Systems 7000TX transmitter module (EXS-J-65010)
1	Extended Systems 7000RX receiver module (EXS-J-65015)
as req'd	eight conductor cable with RJ-45 ends (you can recycle old ShareSpool cables for this)

For IBM compatible color printing

1	Extended Systems 7000TX transmitter module (EXS-J-65010)
1	Extended Systems 7000RX receiver module (EXS-J-65015)
1	High density parallel to Centronics parallel converter cable (EXS-J-65125)
as req'd	eight conductor cable with RJ-45 ends (you can recycle old ShareSpool cables for this)

For newer Mac PowerBooks (Ethernet)

1	Asanté FriendlyNet 10Base-T Adapter (ASN-J-65640)
1	RJ-45 Ethernet Patch Cord (10'ft, BEL-J-00280)
1	empty port on the computer services ethernet hub

For older Mac PowerBooks (LocalTalk)

1 Farallon EtherWave MultiPrinter Adapter (PN 848-1)

1 empty port on the computer services ethernet hub

General Supplies

as req'd power strip (APC-Z-61515)

as req'd Laptop Docking Station Acrylic and Installation Guide Acrylic

as req'd driver diskettes produced for Mac and PC

Set Up

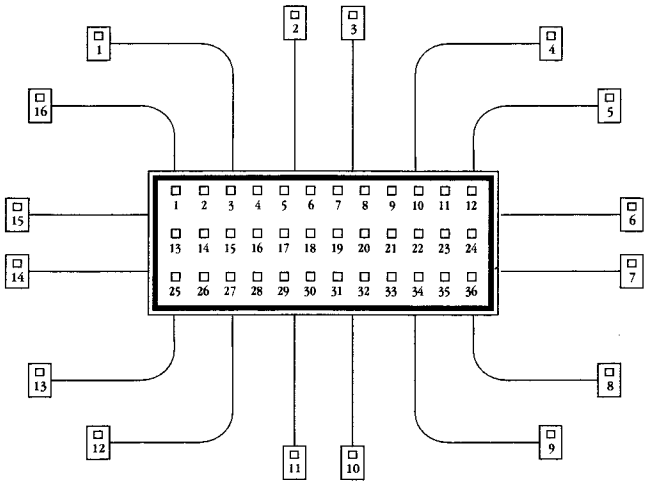
The docking station should be set up in the computer rental area close to the other computers. This will allow the rental area attendant to answer any question mobile users may have. The area should be dedicated for docking station use and kept free of clutter. There is no hook-up or time charge; the customer pays only for prints made. In addition to the connections, there should always be driver diskettes available, labeled and write protected, along with the customer guide to installing the drivers.

Assembly

IBM Compatibles

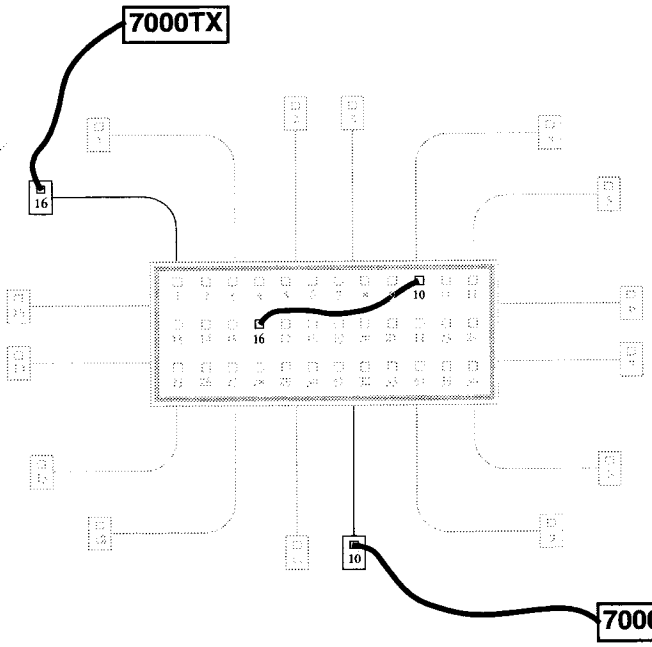
IBM compatible laptops require that their 25 pin parallel port be connected to the parallel input port on the printer. This is accomplished by building essentially a very long parallel cable using the 7000TX transmitter at one end and a 7000RX receiver at the other. They are connected with eight conductor cable and, depending on the installation, the level five cabling installed throughout the branch. It is important to realize that these connections are entirely independent from the computer services ethernet network and hub which connect the rental computers together.

If the docking station area is close to the printer area, you may choose to connect the 7000TX and 7000RX with a single length of cable. However, if the areas are too far apart or there is no way to neatly run the cable, you can use the level five cabling installed inside the walls of your branch. These cables can be thought of as pipes waiting for information to flow through them. All of these 'pipes' begin in the branch's network closet and spread out from there to all parts of the branch, ending at the jacks in the floor or wall plates. They are each identified at both ends with a letter and/or number as shown. If there are numbers only on the jacks, they should correspond to the same number on the patch panel. If there are letters in front of the numbers on the jack, they will likely be 'V' or 'D'; if this is the case the 'V' series of numbers are earmarked for 'Voice' and correspond to the jacks on the section of the patch panel labeled as such, whle the 'D' series correspond to jacks in the 'Data' section of the patch panel. There is no difference between V jacks and D jacks; the labels are merely suggested for organizational purposes. You should choose whichever jacks are most convenient.



Using eight conductor cable (or a level 5 patch cable) connect the 7000TX to a wall jack in the docking station area and note its jack number. In the same way, connect the 7000RX to the nearest available jack in the printer area, noting its number. The 7000RX also gets connected to the printer. For black and white laserprinters, the 7000RX will clip on the the 36 pin Centronics parallel port. For color printers, an adapter cable is required to convert between the large Centronics style to the smaller high-density parallel port. The 7000RX will clip onto the converter and the converter will clip onto the color printer. Remember to plug in and connect the power supply. The green light on the 7000RX should come on.

That establishes both ends of the extended parallel cable. To bridge the gap in the middle, go to the patch panel in the network closet and simply plug in a patch cable between the jack number of the 7000TX and the jack number of the 7000RX. When this is done, the green light on the 7000TX will also come on, indicating a good link all the way from the 7000TX through to the 7000RX. Label the 7000TX as either Black & White or Color as appropriate. If you forget which is which, you can temporarily unplug the cable from one of the 7000RX receivers at the printer and see which light on the 7000TX goes out. Once the 7000TX transmitters are both labeled and the lights are all on, the connections are done. The diagram at left illustrates the concept of



making the extended connections.

In this example, only one hook up is shown, while in the branch there would be two - one for black and white, the other for color. The 7000TX transmitter is plugged into wall jack number 16. Wiring in the walls of the branch bring the signal from wall jack 16 back to the patch panel jack 16. Here a patch cord connects jack 16 to jack 10. This jack is connected to its corresponding wall jack by more cabling installed in the walls of the branch, and so the signal is routed out to wall jack 10. The 7000RX, plugged into wall jack 10, receives the signal and passes it on into the printer.

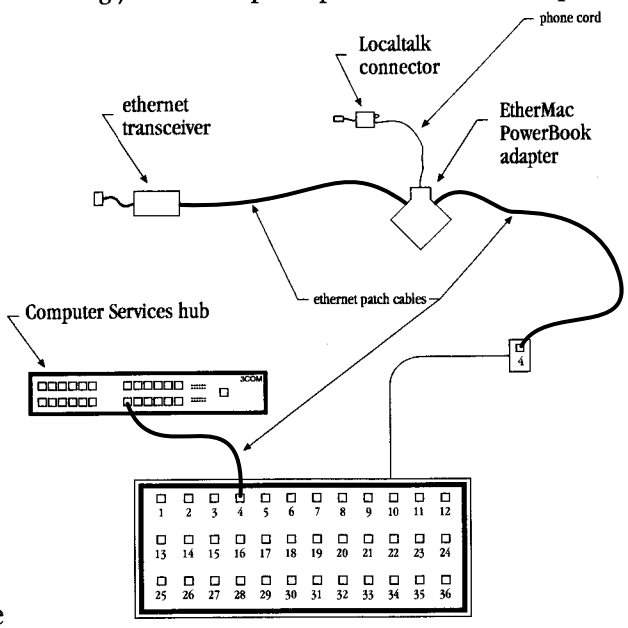
Again notice that the computer services ethernet hub is not involved in these connections. The patch panel is used only as a convenient nexus of cabling. The signal coming from the 7000TX plugged into the customer's laptop merely uses the cables and patch panel as segments of an extension cord, passing through on its way to the 7000RX and printer.

Mac PowerBooks using LocalTalk

Older Mac PowerBooks without ethernet ports can access branch printers through the use of an adapter which translates LocalTalk transmissions into EtherTalk. The adapter is connected to the branch's computer services ethernet hub in the same manner as all of the other computers in the branch. The Mac will see the printers as soon as the connector is plugged in to the printer port on the back of the PowerBook. All the customer needs is the proper PPD in the Printer Descriptions folder.

The Farallon EtherWave adapter includes a Localtalk connector and a four conductor phone cord. The LocalTalk connector is the only portion which must remain accessible to customers; the EtherMac adapter can be hidden beneath the countertop. Plug the phone cord into one of the two jacks on the Localtalk box, leaving the terminating resistor in the other jack. Run the phone cord through the acrylic, and preferably down below the surface of the counter, and then plug it into the EtherWave adapter. Be sure to plug the phone cord into the smaller, middle port on the adapter. The larger ports are for the ethernet cable which connects the adapter to the computer services ethernet hub. Connect a patch cable from either of the two ports on the EtherWave adapter to a nearby wall jack, noting the number of the jack used. Don't forget to plug in the power cord.

Finally, in the network closet, connect a network patch cable between the matching jack on the patch panel and an unused port on the computer services ethernet hub. The green link light for the port used should light when you plug in the cable, as should the light on the adapter.



Mac PowerBooks using ethernet

Newer Macs connect directly to the EtherTalk network. Some PowerBooks have a small Apple AUI port which requires a ethernet transceiver to connect to the 10Base-T cabling. Other PowerBooks have the 10Base-T jack built in a need only a live cable. Once connected, the customer must change their network setting from LocalTalk to EtherTalk using either the AppleTalk control panel or the Network control panel (depending on System software version). Also, the customer must have the correct PPD installed into the Printer Descriptions folder.

For Mac PowerBooks with an AAUI port, connect a cable to the transceiver, plug the cable into a wall jack near the docking station and note its number. (Alternatively, plug the cable into the unused ethernet port on the EtherWave adapter as illustrated above. Ethernet signals will be able to service LocalTalk Macs via the EtherWave adapter as well as those connected to the transceiver.) The transceiver should be physically secured so it is not lost. In the network closet, connect that same jack from the patch panel to the ethernet hub. Since there is no computer attached to the cable, the light on the hub will not come on. It will light up when there is a PowerBook connected. For Macs with a 10Base-T jack, simply unplug the cable from the transceiver and use the free end.

General Installation

The power strip should be placed on top on the docking station surface so it is accessible to customers without them having to crawl around on the floor looking for a power plug. Don't underestimate how much this will be appreciated. It shows respect for our customers.

The docking station acrylic is a nice way to keep the four or maybe five cables of your docking station organized and identified. They can be ordered from Kinko's Distribution Services, and also hold the driver diskettes for both Mac and PCs. The last page of this file is a tabloid size sheet which replaces the old label inside the acrylic. Print out the last page in color on 11x17 paper, laminate, trim, and cut out the holes for the cables to pass through.

To label each of the connectors, print out the label page in color. The labels are designed to be used with ID sized laminate pouches and Velcro tape to secure the laminated labels to each cable. Thread the cables through the docking station acrylic.

Driver diskettes are available now for Windows 95 and the Mac. Both diskettes are made by downloading the appropriate file from the atlantickinkos web site. Detailed instructions for the IBM are provided in the section on Creating a Windows Postscript Drivers Disk. Detailed instructions for the Mac are provided in the section on Creating a Macintosh Postscript Drivers Disk.

Using the Docking Station

Detailed instructions are provided in the Installation Guide to installing PostScript Printer Drivers, available on the atlantickinkos web site, which should be printed out and available to customers at the docking station. The guide includes step-by-step instruc tions on how to install the driver and PPD files.

Drivers are also available on the Adobe web site at ***http://www.adobe.com/prodindex/printerdrivers/main.html*** or the kinko's web site at ***http://www.kinkos.com/g-digital/drivers.html.***