

# Melco Network PCI and ISA Boards Installation Instructions

## Introduction

Melco's EMC line of embroidery machines uses a feature known as the *Melco Network* that provides communication between EDS and the machines. This network was implemented in EDS II, EDS III, and ENS. Originally, the *Melco Network* consisted of software and an ISA networking board that plugged into the user's PC. Computers produced in recent years contain PCI connectors rather than ISA connectors. For this reason Melco has developed a Melco Network PCI board (which plugs into PCI connectors) that provides the same functionality as the Melco Network ISA board. This document provides installation/configuration instructions for both of these network boards.

## Melco Network PCI Board Installation Instructions



The Melco Network PCI board is compatible with the following Windows operating systems:

- Windows 98
- Windows ME
- Windows 2000
- Windows XP

Please note that to use the Melco Network PCI board, you must be running ENS Version 2.0.002 or higher, either installed from the standalone ENS CD or from the DesignShop CD (Version 4.02.038, Release 060403.0, or higher). The Melco Network PCI board does not communicate with EDS III or earlier versions of ENS.

Follow the procedures below to install the Melco Network PCI board.

### Installing the Melco Network PCI Board

1. Shut down and turn off the computer, then remove the case from the computer.
2. Discharge any static charge in your body by touching a non-painted area of the computer frame.
3. Locate an empty PCI slot and remove the blank plate for the slot.

4. Install the Melco Network PCI board into the computer and secure it with a holding screw.
5. You are now finished installing the Melco Network PCI board and can replace the computer case.

### Driver Installation Instructions

At this point you will need to install the driver for the Melco Network PCI board. This driver is available on the ENS Installation CD (Version 2.00.002 and higher) or the DesignShop Installation CD (Version 4.02.038, Release 060403.0, or higher).

1. Turn on your computer.
2. Your computer will display a message stating that new hardware has been found. Click **OK** to proceed to the *New Hardware Wizard*.
3. Insert the ENS or DesignShop CD. The CD provides the driver for the Melco Network PCI board.
4. The first screen in the wizard will ask you to choose a method to search for the board driver. Select the recommended option - (**Search for the best driver for your device**).
5. Click the **Next** button.
6. On the next screen, make sure the **Floppy Drive** box is unchecked, then check the **CD ROM** box.
7. Click the **Next** button.
8. The driver for the Melco Network PCI board will now be installed. After the installation is complete, remove the ENS or DesignShop CD, then restart your computer.

### ENS Installation

If you do not have ENS Version 2.00.002 or higher installed on your computer, complete the following steps to install it. (If you installed ENS when installing DesignShop, you can continue to the next section if it was DesignShop Version 4.02.038, Release 060403.0, or higher).

#### Installation from ENS CD (Version 2.00.002 or higher)

1. Make sure you have an ENS, DesignShop or EDS IV dongle attached to your computer. You will not be able to install ENS on your computer without one of these dongles. **NOTE:** If you are only running EDS III, you will need an ENS dongle to run ENS Version 2.00.002 or higher.
2. Insert the ENS Installation CD.
3. The ENS Setup program should begin automatically. If the Setup program does not start automatically, click on **Start->Run** and type **D:\SETUP** (where D: is the drive letter of the CD ROM drive) and click **OK**.
4. After the ENS installation is complete, restart your computer.

#### Installation from the DesignShop CD (Ver. 4.02.038, Rel. 060403.0, or higher)

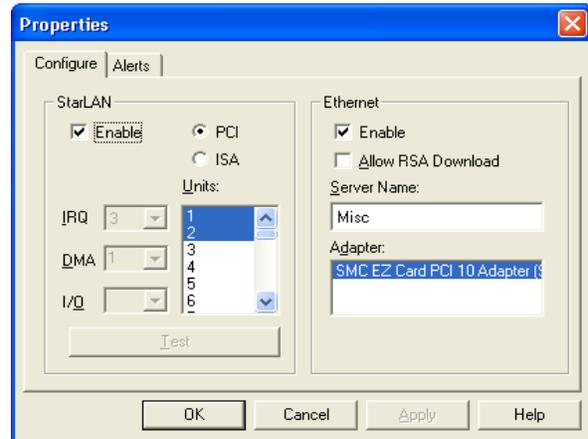
(These instructions assume you have already installed DesignShop)

1. Make sure you have a DesignShop dongle attached to your computer, then insert the DesignShop CD.
2. The DesignShop Setup program should begin automatically. If the Setup program does not start automatically, click on **Start->Run** and type **D:\SETUP** (where D: is the drive letter of the CD ROM drive) and click **OK**.
3. Follow the onscreen instructions. When you are asked to select the components you wish to install, make sure ENS is selected (you can de-select all other components).
4. After the ENS installation is complete, restart your computer.

## ENS Settings

You now need to enable the Melco Network PCI board in ENS.

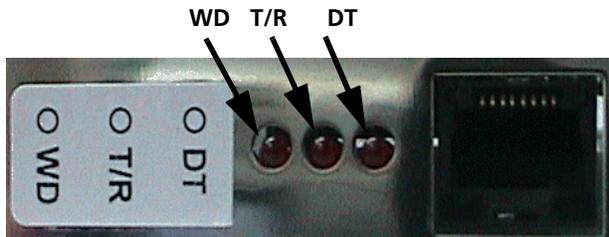
1. Click on **START->Programs->Melco Apps->ENS** to start ENS (or you can access ENS from DesignShop).
2. Select **Tools->Properties**.
3. Make sure the **StarLAN Enable** box is checked (enables StarLAN).  
If you are not using Ethernet functionality, it is recommended that you disable Ethernet (uncheck **Ethernet Enable** box) in ENS.
4. Click the **PCI** radio button.
5. Select the unit number for each of your EMC machines.
6. Click **OK**.



## Troubleshooting Guide

If after following the installation instructions you receive an error that the Melco Network PCI board does not work, or it will not see the EMC peripheral correctly, follow the steps below to determine the problem.

There are three LEDs on the back of the Melco Network PCI board. These lights are the *WD* (Watch Dog) light, the *T/R* light and the *DT* light. There is a sticker on the board to identify the lights.



1. When the PCB is installed in the computer and the computer is first turned on, the *WD* light will flash off and on. If this light does not come on at all, try a different slot in the computer to ensure the slot is good. If it does not come on in a different slot, the Melco Network PCI board will need to be replaced. (**NOTE:** The *WD* light will flash off and on until it connects with ENS properly. Once ENS is opened and everything is configured properly, the *WD* light will come on solid and stay this way until the computer is turned off and back on again.)
2. If the *WD* light never becomes solid (it continues to flash) when going into ENS, an error is generated, or a window is displayed that states the Melco Network PCI board is not functioning, check the following:
  - a.) *Ensure the drivers are installed.* Right-click the **My Computer** icon on your desktop, then select **Properties** from the popup menu. Click the **Hardware** tab and click the **Device Manager** button. Check the **Device Manager Window** for the proper listing of the Melco Network PCI board (will be under Melco in the list) and that it does not have problems. If needed, re-install the board using the installation instructions.
  - b.) If re-installing the PCB and drivers does not fix the problem, go to a DOS prompt or Command Window (click the Windows **Start** button, then select **Accessories->Command Prompt** in the menu). Change to the drive with the ENS CD (type **E:**, where **E** is the letter of

your CD-ROM drive, then press ENTER). Type "wdregins" and press ENTER. This runs a program that puts the proper registry entries into the registry to load and call the drivers needed for the PCB to operate. It will display the results.

*Windows 2000 and XP will display:*

Creating driver entry... Failed

Starting driver entry... Failed

If the results say FAILED, this means the proper registry entries are there and loading correctly. If the results say OK, then it means the driver installation and registry entries were completed successfully for the first time.

*Windows 98 and ME will display:*

Creating driver entry... OK

Starting driver entry... Failed

WinDriver already exists in Win-98 registry

Dynamic Loading of (SYS) driver not available for WIN 98.

This is a Windows 98 limitation. Please reboot the system.

For a reboot free installation on 98, use the -VXD option

This display will always be the same in Windows 98 or ME. This is normal. The top line where it creates the driver entry must always say OK. This indicates the command was successful. The computer must be restarted for the changes to take effect.

- c.) Check to ensure that in **Tools->Properties** of ENS, **StarLan** is enabled (**Enable** box is checked) and **PCI** is checked. After making changes to these settings, exit ENS and re-open it to ensure these settings take effect. There should be no error messages when re-opening ENS.
3. If the Melco Network PCI board seems to be installed properly but it will not communicate with the EMC peripherals, check the following. (**NOTE:** When the PCI PCB is communicating with an EMC peripheral the *DT* light will flicker. It only flickers when transmitting data. This should occur during download of the RSA file, the download of designs, and it should flicker when it is polling the machines connected to it for their status. It is normal for this light to be bright and then dim. What is not normal is for it to never flicker off and on.)
    - a.) Check that ENS has the proper unit number(s) enabled for the peripheral(s) and that the peripheral has the same unit number enabled in it.
    - b.) Check that a proper Melco StarLan Network cable is used. A telephone cable will not work.
  4. Disregard the *T/R* light. This light comes on when transmitting and off when receiving but is so dim it is not recognizable. This is normal operation for the *T/R* light.

If you continue to experience a problem with your board after completing this troubleshooting guide, contact Melco Service.

## Melco Network ISA Board Installation Instructions

The Melco Network ISA board is compatible with the following Windows operating systems:

- Windows 95
- Windows 98
- Windows ME

The following steps are preliminary Windows 95/98© and Windows Millennium setup steps; they should be completed before you install DesignShop or ENS into a computer. These steps will help to

determine the best settings for a Melco Network ISA board in a particular computer, and then reserve these settings so the Plug and Play feature of Windows cannot interfere with them.

### Setup Steps

1. Click on **Start->Settings->Control panel**; double-click **System**, and click **Device Manager** tab.
2. Click the **Properties** button; you will see a list of IRQs currently in use.
3. Look for the numbers missing from the list and write them down for IRQ.
4. Click on the **Direct memory access (DMA)** button.
5. Look for 00, 01, and 03 under **Setting** and write down the ones not on the list for DMA.
6. Click on the **Reserve Resources** tab above and click **Add**.
7. Select a number between 9 and 15 that was noted in step 3 and type it in for IRQ. Click **OK**.
8. The number you typed in will appear under **Setting**.
9. Click on the Direct memory access (DMA) button above and click **Add**.
10. Select a number that was noted in step 5 and type it in for DMA. Click **OK**.
11. The number you typed in will appear under **Setting**.
12. Click on the **Input/output (I/O)** button and click **Add**.
13. Type in 03e0 for the start value and 03e7 for the end value and click **OK**.

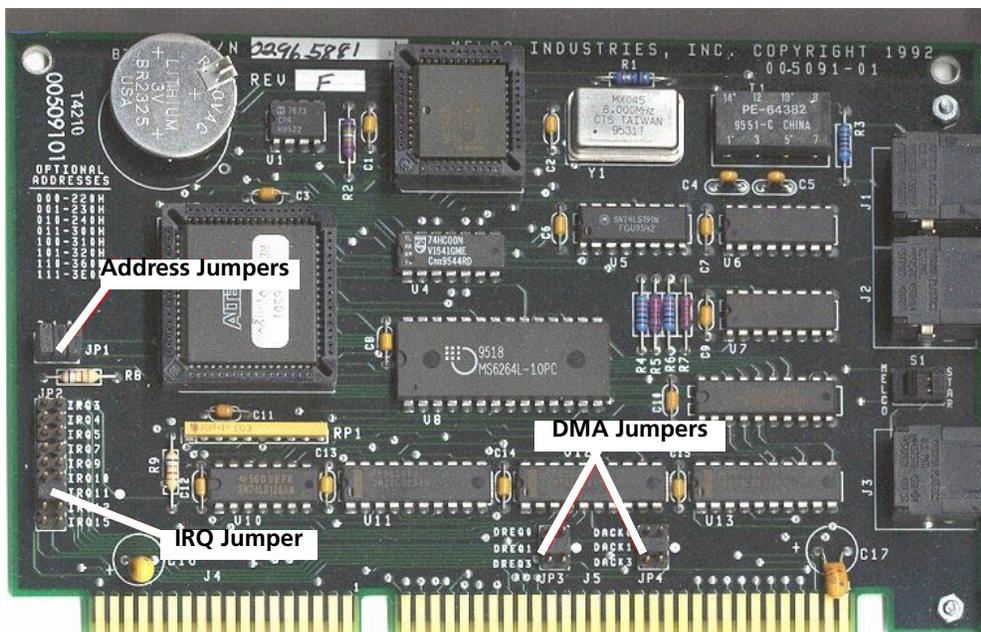
**NOTE:** If the Melco Network ISA board is already installed in the computer, it may display a Resource Conflict Warning error. Click **OK**; the conflict it is seeing is normally with the Melco Network ISA. The I/O Address is the only resource used by the Melco Network ISA board that Windows will detect. If the Melco Network ISA board is not installed, and a Resource Conflict Warning error is displayed, answer **OK**. This will force the Plug and Play device using this address to use another, freeing up 03e0. This is a vary rare occurrence as address 03e0 is normally available in most computers.

14. Click **OK** on the Computer Properties window. If Windows asks to quit and restart, click **NO**.
15. Click **OK** or **Close** on the Device Manager window.
16. Close the control panel.
17. Click **Start->Programs->Melco Apps->Config**. Then click on the **Hardware** button.
18. Under Network, select the IRQ that was selected in step 7 and enter it for IRQ.
19. Under Network, select the DMA that was selected in step 10 and enter it for DMA.
20. Under Network, select the I/O start address from step 13 and enter it for I/O Base.

### Installing the Melco Network ISA Board

1. Shut down and turn off the computer and remove the case off of the computer.
2. Discharge any static charge in your body by touching a non-painted area of the computer frame.
3. Remove the screw that holds the Melco Network ISA board in place and remove the network board. If installing for the first time, locate an empty ISA expansion slot and remove the blank plate for the slot.
4. Set the IRQ jumper to the IRQ set in step 7 of *Setup Steps*.
5. Set the DMA jumpers (DREQ and DACK) to the DMA set in step 10 of *Setup Steps*.

6. Set the I/O base Jumpers (JP1) to the I/O base set in step 13 of *Setup Steps*. There are three jumpers for the I/O base setting. Address 3e0 is the default setting (jumpers 2,1,0 ON) and can be left alone if this is the address to be used.
7. Install the Melco Network ISA board into the computer and secure it with a holding screw.
8. You are now finished configuring the Melco Network ISA board but it is recommended that you check to see that the embroidery software is communicating with the peripheral(s) before the computer case is re-installed. Further servicing may be required. If you are not able to establish communication to the peripheral(s), there may be a conflict in the computer CMOS setup if your computer mother board is Plug and Play compatible (most Pentium computers are). To determine if your mother board is Plug and Play compatible, consult the computer manual or contact your computer vendor. If your computer IS Plug and Play compatible, you must reserve your network board IRQ and DMA settings for a Legacy ISA board (in CMOS) usually under PnP/PCI config depending on the computer. For further information, see the note at the bottom of this procedure.



The I/O base jumpers (JP1 with numbers 2, 1, and 0 above each jumper) are located above the IRQ jumper.

There is a small switch between two of the RJ-45 peripheral jacks (J2 and J3) labeled S1. This switch is labeled with the words MELCO and STAR printed on the PCB. This switch **MUST** be switched to the MELCO side.

The peripheral cable needs to be plugged into either J1 or J2 (the jacks that are close together). The peripheral will **NOT** come online if it is plugged into the J3 jack (the J3 jack is separated from the other J1 and J2 jacks).

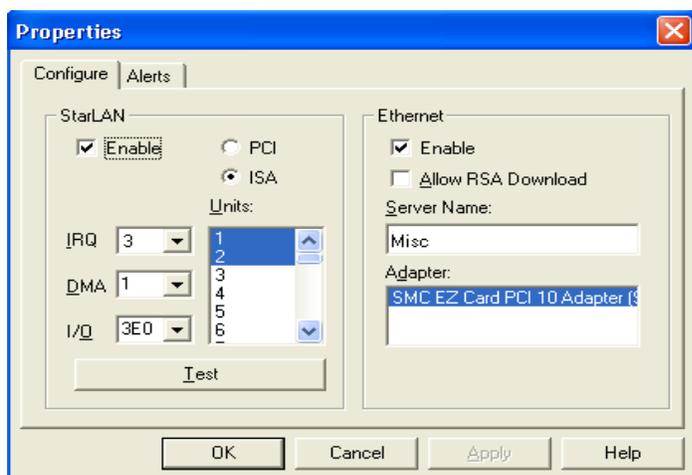
**NOTE:** The settings (IRQ and DMA) that are reserved in the Windows Device Manager must also be reserved in **CMOS** on Pentium computers. With most computers, this is done by pressing the delete key when prompted shortly after the computer power is turned on. Once in CMOS, select PnP or PCI config. If RESOURCES CONTROLLED BY is set to AUTO, change it to MANUAL using PageUp or PageDown keys. Then set the IRQ and DMA setting for the network card from PnP to LEGACY ISA using PageUp or PageDown keys. Consult the computer or

mother board manual (or computer vendor) if further help is needed with the CMOS setup.

## ENS Settings

1. If you have not done so, install ENS.
2. Start ENS: Click on **Start->Programs->Melco Apps->ENS**.
3. Open the Properties page (select **Tools->Properties**).
4. Make sure the **StarLAN Enable** box is checked (enables StarLAN).
5. If you are not using Ethernet functionality, it is recommended that you disable Ethernet (uncheck Ethernet Enable box) in ENS.
6. Click the **ISA** radio button.
7. Set the **IRQ** to the setting selected in step 7 of *Setup Steps*.
8. Set the **DMA** to the setting selected in step 10 of *Setup Steps*.
9. Set the **I/O** to the setting selected in step 13 of *Setup Steps*.
10. Select the unit number for each of your EMC machines.
11. Click on **Apply**, and then click on **OK** to close the Properties window.

Settings for properties in ENS should look similar to the following picture.



**Important note for users running EDS III AND ENS:** If you are using EDS III and ENS, you need to disable StarLAN in EDS III. To do this, click the Windows **Start** button, then select **Programs->Melco Apps->Config**. Click the **Hardware** button. In the **Network** area, make sure the **Enable StarLAN** box is unchecked.