BarcoMed® 2MP Family
Imaging Boards

Software Installation Guidelines
for Windows Systems

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CONTENTS

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PRODUCT OVERVIEWS

2MP2H Product Overview

Introduction

The BarcoMed 2MP2H Imaging Board delivers a quality 1200 x 1600 pixel image with 1024 simultaneous shades of gray for medical imaging applications.

Features of the BarcoMed 2MP2H

- Dual Head Configuration
- 1200 x 1600 resolution at 75 Hz
- 10 bit Input DAC, 10 bit Output DAC
- 32MB Video Memory (VRAM)
- Portrait or Landscape Mode
- 1024 Simultaneous shades of gray
- Hardware cursor
- Single slot PCI card
- Display Properties Control Panel to dynamically change display settings
- Control Panel support for the English (U.S.), Dutch, German, Japanese, Korean, Simplified Chinese and Traditional Chinese languages

Minimum System Requirements

- PCI slot with no obstructions
- PCI 2.1 and/or 2.2 Compliant System
- Pentium II 266 MHz with 128 MB RAM (Pentium 800MHz with 256 MB RAM for cineloops)
- VGA compatible high resolution displays or a separate VGA card and display
- NT 4.0 SP4 and above, Windows 2000 SP1 and above, or Windows XP

Supported Resolutions For Each Head of the 2MP2H

- 1600x1200 @ 80 Hz
- 1600x1200 @ 75 Hz

- 1280x1024 @ 75 Hz
- **1200x1600 @ 75 Hz (primary)**
- 1200x1600 @ 74 Hz
- 1200x1600 @ 66 Hz
- 1024x768 @ 75 Hz
- 1024x1280 @ 70 Hz
- 800x600 @ 75 Hz

The following resolution is also available when the OS is booted in VGA mode.

- 640x480 @ 75 Hz

2MP2 Product Overview

Introduction

The BarcoMed 2MP2 Graphics Controller delivers a quality 1200 x 1600 pixel image with 256 simultaneous shades of gray for medical imaging applications.

Features of the BarcoMed 2MP2

- Dual Head Configuration
- 1200 x 1600 resolution at 75 Hz
- 10 bit input DAC
- 4 MB Video Memory (VRAM)
- Portrait or Landscape Mode
- 256 Simultaneous shades of gray from a Palette of 1024
- Fully compatible with the BarcoMed 2MP1NT
- Hardware cursor
- Single slot PCI card
- Display Properties Control Panel to dynamically change display settings
- Control Panel support for the English (U.S.), Dutch, German, Japanese, Korean, Simplified Chinese and Traditional Chinese languages

Minimum System Requirements

- PCI slot with no obstructions
- PCI 2.1 Compliant System
- VGA compatible high resolution displays or a separate VGA card and display
- NT 4.0 SP4 and above, Windows 2000 SP1 and above, or Windows XP

Supported Resolutions For Each Head of the 2MP2

- 1600x1200 @ 80 Hz
- 1280x1024 @ 75 Hz
- 1200x1600 @ 66 Hz
- 1200x1600 @ 74 Hz
- **1200x1600 @ 75 Hz (primary)**

- 1024x768 @ 75 Hz
- 1024x1280 @ 67 Hz
- 1024x1280 @ 70 Hz
- 800x600 @ 75 Hz
- 640x480 @ 75 HZ

2MP1NT Product Overview

Introduction

The BarcoMed 2MP1NT Graphics Controller delivers a quality 1200 x 1600 pixel image with 256 simultaneous shades of gray for medical imaging applications.

Features of the BarcoMed 2MP1NT

- Single Head Configuration
- 1200 x 1600 resolution at 75 Hz
- 10 bit input DAC
- 4 MB Video Memory (VRAM)
- Portrait or Landscape Mode
- 256 Simultaneous shades of gray from a Palette of 1024
- Fully compatible with the BarcoMed 2MP2
- Hardware cursor
- Single slot PCI card
- Display Properties Control Panel to dynamically change display settings
- Control Panel support for the English (U.S.), Dutch, German, Japanese, Korean, Simplified Chinese and Traditional Chinese languages

Minimum System Requirements

- PCI slot with no obstructions
- PCI 2.1 Compliant System
- VGA compatible high resolution displays or a separate VGA card and display
- NT 4.0 SP4 and above, Windows 2000 SP1 and above, or Windows XP

Supported Resolutions

- 1600x1200 @ 80 Hz
- 1280x1024 @ 75 Hz
- 1200x1600 @ 66 Hz
- 1200x1600 @ 74 Hz
- **1200x1600 @ 75 Hz (primary)**

- 1024x768 @ 75 Hz
- 1024x1280 @ 67 Hz
- 1024x1280 @ 70 Hz
- 800x600 @ 75 Hz
- 640x480 @ 75 HZ

2MP1 Product Overview

Introduction

The BarcoMed 2MP1 Imaging Board delivers a quality 1200 x 1600 pixel image with 256 simultaneous shades of gray for medical imaging applications.

Features of the BarcoMed 2MP1

- 10 bit input DAC
- 4 MB Video Memory (VRAM)
- Portrait or Landscape Mode
- 256 Simultaneous shades of gray from a Palette of 1024
- Hardware cursor
- Single slot PCI card
- Cost Effective Single Head
- Display Properties Control Panel to dynamically change display settings
- Control Panel support for the English (U.S.), Dutch, German, Japanese, Korean, Simplified Chinese and Traditional Chinese languages

Minimum system requirements

- PCI slot with no obstructions
- Multi-sync display or separate VGA card and display
- NT 4.0 SP4 and above, Windows 2000 SP1 and above, or Windows XP

Supported resolutions

- 1920x1080 @ 60 Hz
- 1920x1080 @ 72 Hz
- 1600x1024 @ 76 Hz
- 1600x1200 @ 60 Hz
- 1600x1200 @ 70 Hz
- 1600x1200 @ 75 Hz
- 1600x1200 @ 80 Hz
- 1600x1200 @ 83 Hz
- 1280x1024 @ 60 Hz

- 1280x1024 @ 75 Hz
- 1280x1024 @ 76 Hz
- 1280x1024 @ 85 Hz
- 1200x1600 @ 66 Hz
- 1200x1600 @ 74 Hz
- **1200x1600 @ 75 Hz (Primary)**
- 1152x864 @ 60 Hz
- 1152x864 @ 70 Hz
- 1152x864 @ 75 Hz
- 1152x864 @ 85 Hz
- 1024x768 @ 60 Hz
- 1024x768 @ 70 Hz
- 1024x768 @ 75 Hz
- 1024x768 @ 85 Hz
- 800x600 @ 60 Hz
- 800x600 @ 72 Hz
- 800x600 @ 75 Hz
- 800x600 @ 85 Hz
- 640x480 @ 60 Hz
- 640x480 @ 72 Hz
- 640x480 @ 75 Hz
- 640x480 @ 85 Hz

SOFTWARE INSTALLATION

Overview

The BarcoMed 2MP Family Software Installation section has been divided into three sections, one for each of the three supported versions of the Windows operating system. They are: Windows NT 4.0, Windows 2000 and Windows XP.

Because of Windows 2000's and Windows XP's Plug and Play features and their ability to support multiple types of imaging boards simultaneously, those sections have been further subdivided by the various BarcoMed imaging board models. Since Windows NT 4.0 supports only one type of imaging board at a time, the process for installing the drivers for the BarcoMed imaging boards is identical regardless of which model you are using.

In addition to the device drivers for your BarcoMed imaging boards, your BarcoMed Software CD also includes several additional tools. They are: The Barco Metheus Configuration Tab, the Barco Metheus Hardware Configuration Tab and the Barco Metheus DPMS Screen Saver. The Barco Metheus Configuration Tab and the Barco Metheus Hardware Configuration Tab are automatically installed with BarcoMed imaging board drivers. The Barco Metheus Configuration Tab helps you manage the special features of your BarcoMed imaging boards. The Barco Metheus Hardware Configuration Tab gathers information about the BarcoMed imaging boards and your system that is useful when diagnosing problems. The Barco Metheus Hardware Configuration Tab can also be used to update the firmware on the AURA video chipset based BarcoMed imaging boards. The Barco Metheus DPMS (Display Power Management Signaling) Screen Saver is an optional tool which must be installed separately. The Barco Metheus DPMS Screen Saver allows the user to set power and monitor saving features for medical monitors driven by BarcoMed Imaging Boards. At the end of the workday, the monitor will enter certain DPMS states as requested by the imaging board. This is accomplished through standardized signals between the monitor and imaging board. Instructions for installing the Barco Metheus DPMS Screen Saver are included in the chapter on the Barco Metheus DPMS Screen Saver.

Installing the Windows NT 4.0 Driver for the BarcoMed 2MP2H, 2MP2, 2MP1NT or 2MP1 Boards

SPECIAL NOTE: Prior to installing the BarcoMed drivers you MUST install the BarcoMed Imaging Board(s), connect the monitor(s) to the card(s), and turn the monitor(s) on. Refer to the Hardware Installation Guide that came with your BarcoMed Imaging Board(s) for instructions on installing the BarcoMed Imaging Board(s) and connecting them to the monitor(s).

To install the BarcoMed 2MP2H, 2MP2, 2MP1NT or 2MP1 Windows NT Display Driver, log on using an account with administrator privileges. Insert the BarcoMed Driver Media into your machine's appropriate drive and follow these steps:

1. Open the "Display Properties Control Panel" by right clicking on the desktop, then select "Properties".

2. Click on the **"Settings"** Tab.

3. Select **"Display Type"**.

4. Select **"Change"**.

5. Select **"Have Disk"**.

6. Select the correct drive from the drive menu and click on **"OK"**.

7. Select the appropriate BarcoMed product and click on **"OK"**.

8. You will see a message saying that this is a Third Party Driver and asking if you wish to proceed. Click on **"Yes"**.

9. The driver files will be copied onto your system.

10. You will receive a message saying the driver is successfully installed. Click on **"OK"**.

11. Close the **"Display Type"** dialogue box.

12. Close the **"Display Properties"** dialogue box.

13. You will be asked if you want to restart your computer. Select **"Yes"**.

14. When the system comes back up, select **"NT Version 4.00 (VGA Mode)."** Log on using an account with administrator privileges.

15. The **"Invalid Display Settings"** dialog box will appear with the following message: " A new graphics driver has been installed. The default display resolution from the driver has been temporarily used by the system. Please use the Display option in the Windows NT Control Panel to select your preferred display resolution." Click **"OK"**.

16. The **"Display Properties"** dialog box will appear. (See figure 1 on the next page.)

17. Under the **"Settings"** tab, select **"List all Modes"**.

18. Select the desired resolution from the list.

   For example:
   "1200x1600x256" at 75Hz. Click "OK."

   NOTE: If you have multiple single-headed imaging boards (2MP1s & 2MP1NTs), the resolution will be the size of your "virtual desktop."

   For example: if you have 2 displays running at "1200x1600x256 at 75Hz" you would select the following resolution: "2400x1600x256 at 75Hz".

19. Select the **"Test"** button and click on **"OK"** to test the display. You will be asked if it displayed correctly. If the test pattern displays correctly, select **"Yes"**. If not, try selecting another mode from the **"List all Modes"** button.

20. In order to apply your changes, type **"<Ctrl> + Enter"**. Restart your computer when prompted.

21. When your system comes back up select the **"NT Version 4.00"** option (NOT the VGA Mode option). Log on as usual.

22. Continue on to the section, **"BARCO Metheus Configuration Tab"**, if you wish to further configure the driver.
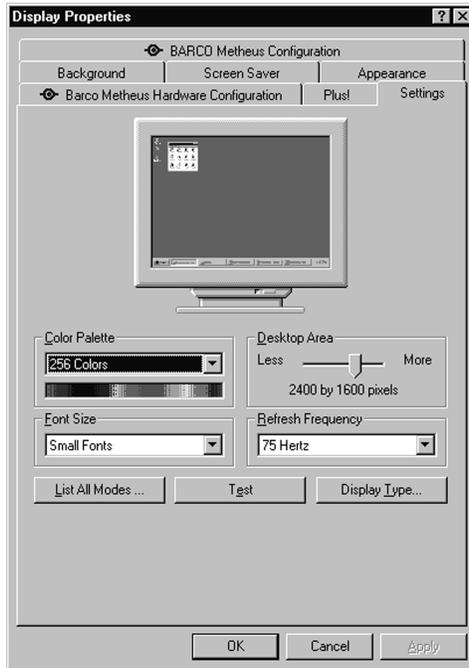
Figure 1: Windows NT 4.0 Display Control Panel Settings Tab.

Note: In the system shown above there were two BarcoMed 2MP1NT imaging boards installed and no 3rd party VGA card. Your configuration may be different.

Planning Your Barcomed Windows 2000 Installation

Because of Windows 2000's Plug and Play features, it is very important to carefully plan your BarcoMed Board Hardware and Software installation and install the device drivers in the same sequence that the boards are installed in the PCI slots.

When installing BarcoMed Imaging Boards for the first time in a Windows 2000 System, Windows 2000 Plug and Play Software identifies the BarcoMed boards by the Video Chipset utilized on each boards. The Table below shows the BarcoMed Board, the Chip Set utilized by the board and the driver Windows 2000 Plug and Play selects for each imaging board.

BarcoMed Board Model	Chip Set Utilized	Driver Selected by Windows 2000 Plug and Play
2MP2H	BarcoView AURA	Video Controller or Video Controller (VGA Compatible)
2MP2	Cirrus Logic Laguna 5465	Cirrus Logic Laguna 5465
2MP1NT	Cirrus Logic Laguna 5465	Cirrus Logic Laguna 5465
2MP1	Imagine Number 9	Imagine Number 9 Series 128

If you have previously installed drivers for the BarcoMed Imaging Boards in your Windows 2000 System, Windows 2000 should correctly identify the board by their correct BarcoMed name. However, while updating the drivers to a new version or reinstalling the current driver Windows 2000 may identify the BarcoMed Imaging Boards by their Video Chipset.

If you choose to install multiple types of BarcoMed Imaging Boards in your computer it is important to carefully note which PCI slot each board is in and then install the drivers for each type of board based on the PCI slot they are installed in. **If you are using the VGA Capabilities of a BarcoMed Imaging Board it is important to install the driver for this board and set its resolution first.**

Installing the Windows 2000 Driver for the BarcoMed 2MP2H

SPECIAL NOTE: Prior to installing the BarcoMed drivers you MUST install the BarcoMed Imaging Board(s), connect the monitor(s) to the card(s), and turn the monitor(s) on. Refer to the Hardware Installation Guide that came with your BarcoMed Imaging Board (s) for instructions on installing the BarcoMed Imaging Board (s) and connecting them to the monitor(s).

The following driver installation instructions presume that Windows 2000 is already installed on your system. If you need to install or reinstall Windows 2000 on your system you must first remove the BarcoMed Imaging Boards and use a 3rd party VGA card and VGA monitor during the Windows 2000 installation process.

Initial BarcoMed Display Driver Installation

To install the BarcoMed 2MP2H Windows Display Driver for the first time follow the steps below, if you are reinstalling the drivers or installing a new driver release skip to the next section:

1. Install the BarcoMed 2MP2H Imaging Board(s) into your machine. Please refer to the hardware installation guide that came with your BarcoMed Imaging Board(s) for more information.

2. Boot the machine, and press **F8** when the system displays "Starting Windows…"

3. Select **"Enable VGA Mode"**. If you do not boot in VGA mode, the system will boot normally and load the default Windows 2000 VGA Compatible Driver. At this point you can either:

    a) reboot in VGA mode if you are using the 2MP2H as your VGA card or

    b) connect a multi-sync monitor and continue with the rest of the instructions.

4. Log in with an account with administrator privileges.

5. For each 2MP2H board you have installed, Windows 2000 will automatically launch the "Found New Hardware Wizard".
Click **"Next"** to continue using the "Found New Hardware Wizard".

6. The Wizard will now install the hardware device drivers. If you are using the VGA capabilities of the BarcoMed 2MP2H the Wizard will list the BarcoMed 2MP2H as a "Video Controller (VGA Compatible)". Otherwise each BarcoMed 2MP2H board will be listed simply as "Video Controller". Select the radio button beside

"Display a list of the known drivers for this device so that I can choose a specific driver". Click **"Next"**.

7. In the "Hardware Type" page of the wizard, highlight **"Display Adapters"** and then click "**Next**".

8. In the "Select a Device Driver" page of the wizard click **"Have Disk"**. Insert your BarcoMed Software CD into the appropriate device drive or browse to the location of your driver and Click **"OK"**.

9. Select "BarcoMed 2MP2H " in the "Select a Device Driver" window. Click "**Next**".

10. The "Start Device Driver Installation" dialog box will appear. Click "**Next**".

11. Windows will warn you that a digital signature was not found. Click **"Yes"** to continue the installation.

12. When the drivers have finished installing, click **"Finish"** on the "Completing Found New Hardware Wizard" page.

   If you are installing a single BarcoMed 2MP2H Imaging Board, Windows 2000 will now prompt you to reboot your system. Click **"Yes"**. Boot normally and login with an account with administrator privileges. (If you are using a 3rd party VGA card Windows may not prompt you to reboot the system. However, you must reboot the system prior to attempting to extend your desktop to the BarcoMed 2MP2H and setting its resolution.) To set the resolution of your display skip to the **"Setting the Resolution of ..."** section of this chapter.

   If you have multiple BarcoMed 2MP2H Imaging Boards installed, the "Found New Hardware Wizard" will automatically run again for each additional BarcoMed 2MP2H Board installed. Follow the steps below to install the drivers for each additional board.

13. Windows 2000 Plug and Play will automatically locate the drivers for the second BarcoMed 2MP2H board. When Windows warns you that a digital signature was not found, click **"Yes"** to continue the installation.

14. When the drivers have finished installing, click **"Finish"** on the "Completing Found New Hardware Wizard" page.

15. Windows will now prompt you to reboot your system. Click **"Yes"**. Boot normally and login with an account with administrator privileges.

Reinstalling or Updating your BarcoMed Drivers

To reinstall your current BarcoMed Display Driver or install a new version of the BarcoMed Display Driver follow the steps below:

1. Right click on an empty space of the desktop and select **"Properties"**. Select the **"Settings"** tab. Now select the **rectangle** that represents the BarcoMed 2MP2H Imaging Board whose driver you wish to reinstall or update.

2. Click on the **"Advanced"** Button.

3. Select the **"Adapter"** tab and then click on the **"Properties"** button.

4. Select the **"Driver"** tab and then click on the **"Update Date Driver"** button. The "Upgrade Device Driver" Wizard will start. Click **"Next"** to continue.

5. Select the radio button beside "Display a list of the known drivers for this device so that I can choose a specific driver". Click **"Next"**.

6. In the "Hardware Type" page of the wizard, highlight **"Display Adapters"** and then click "**Next**".

7. In the "Select a Device Driver" page of the wizard click **"Have Disk"**. Insert your BARCOMED Driver Media or browse to the location of your driver and Click **"OK"**.

8. Select "BarcoMed 2MP2H " in the "Select a Device Driver" window. Click "**Next**".

9. The "Start Device Driver Installation" dialog box will appear. Click "**Next**".

10. Windows will warn you that a digital signature was not found. Click **"Yes"** to continue the installation.

11. When the drivers are installed, click **"Finish"** on the update driver wizard and click **"Close"** on the properties page for the device. Reboot your system when asked, even if you are reinstalling or updating the drivers for multiple BarcoMed 2MP2H boards in your system .

12. Boot normally and login with an account with administrator privileges. Repeat steps **1-12** until you have reinstalled or updated the drivers for all of the BarcoMed Imaging Boards.

Setting the Resolution of Your High Resolution Monitor

1. To set the resolution for your high resolution monitor(s), right click on an empty space of the desktop and select **"Properties"**. Select the **"Settings"** tab (see Figure 2 later in this chapter). Now select the **rectangle** that represents the BarcoMed 2MP2H Imaging Board you are working with. **SPECIAL NOTE:** If you are using the VGA capabilities of your BarcoMed 2MP2H Imaging Board, the resolution for that board will still be set to a VGA resolution of "640 x 480" pixels. If the BarcoMed 2MP2H Imaging

Board is not running VGA, the device may not be enabled yet. To enable the device check the "Extend my Windows desktop onto this monitor" **checkbox**. Click the **"Apply"** button.

2. Click on the **"Advanced"** Button.

3. Select the **"Adapter"** tab and then click on the **"List All Modes…"** button. Select the resolution and refresh rate that your high resolution monitor supports from the dialog box and click **"OK"**. **Note:** The number of heads that the imaging board can support will multiply the X resolution of your mode. For example: The BarcoMed 2MP2H Imaging Board supports two high resolution monitors. If the resolution of each display is 1200 x 16000, Windows 2000 will display the resolution as 2400 x 1600. If necessary you can change the number of display panels later by using the Barco Metheus Configuration Tab.   Click **"OK"** on the bottom of the Adapter Control Panel. If the **"OK"** button on the bottom of the Adapter Control Panel is not visible, press **"CTRL"+"Enter"** to select **"OK"**.

4. Click **"OK"** in the "Windows will now apply your new desktop settings" dialog box. Your high resolution display(s) should now synchronize and display the Windows desktop.

5. Click **"Yes"** when asked, "Your desktop has been reconfigured. Do you want to keep these settings?"
Repeat steps 1 – 5 for each monitor/display panel on all the BarcoMed Imaging Boards installed in your system.
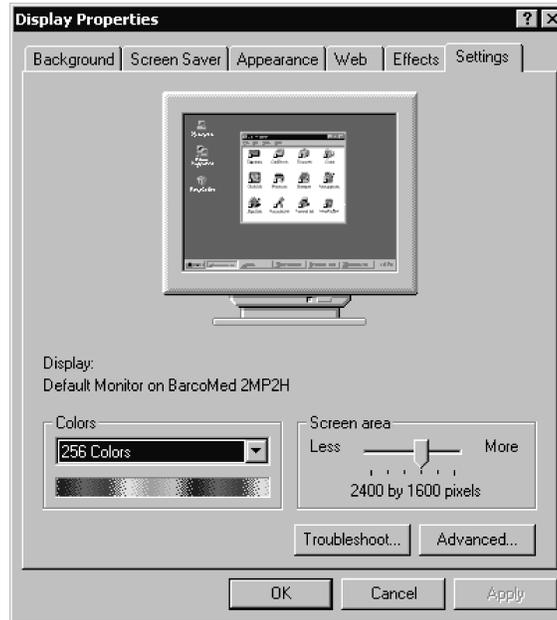
Figure 2: Windows 2000 Display Properties Control Panel

In the system shown above there was only one BarcoMed 2MP2H Imaging Board installed and no 3rd party VGA card. Your configuration may look different.

Installing DualView under Windows 2000

DualView allows a dual headed imaging board with a single graphics chip to display two separate desktops, one for each monitor instead of a single virtual desktop that spans across both monitors. The following two figures illustrate the difference between running without and with DualView enabled under Windows 2000. DualView is a feature that is supported by Windows XP. However, BARCO has provided a means for the user to enable this functionality while running Windows 2000.
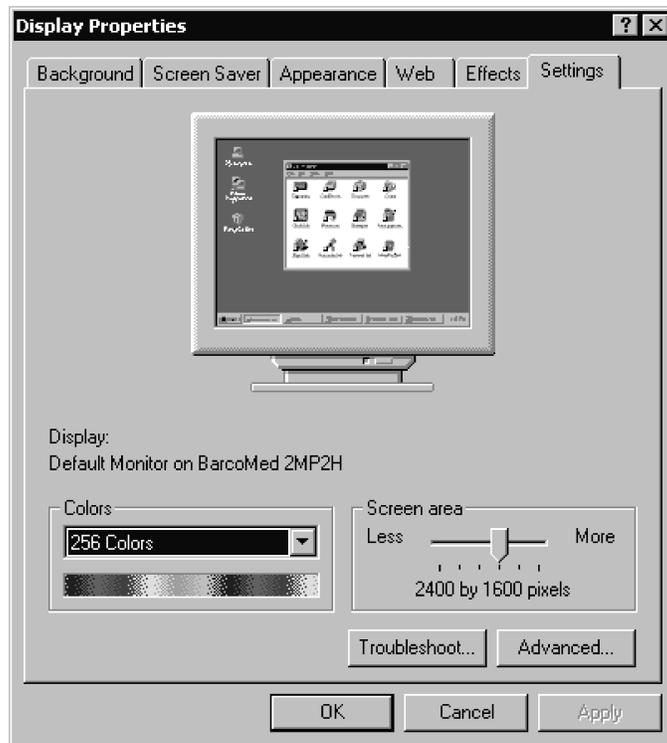
*Figure 3: Windows 2000 Display Properties Control Panel
with DualView disabled*

In the system shown in Figure 3 above there is oneBarcoMed 2MP2H Imaging Board installed with DualView disabled. Your configuration may look different.
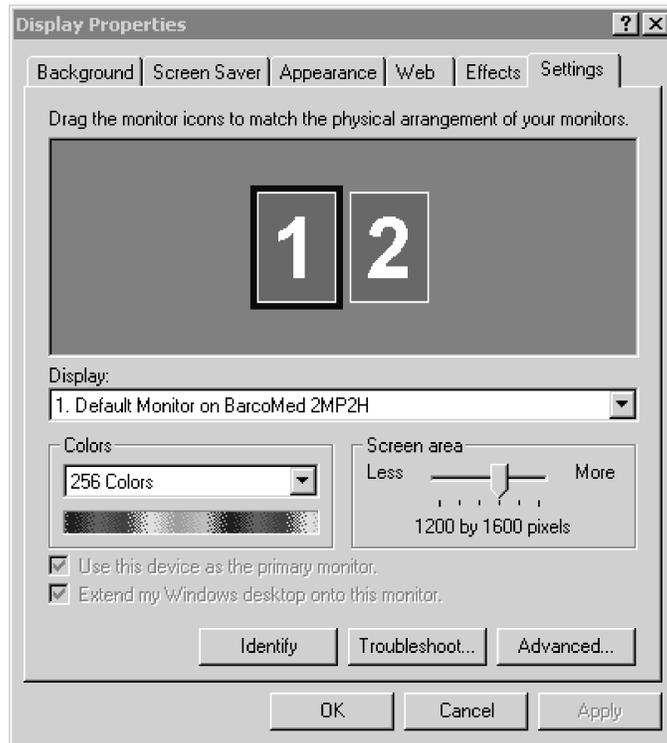
*Figure 4 : Windows 2000 Display Properties Control Panel
with DualView enabled*

In the system shown in Figure 4 above there is oneBarcoMed 2MP2H Imaging Board installed with DualView enabled. Your configuration may look different.

This feature can be enabled on any system with a BarcoMed 2MP2H by following the steps listed below.

1. Follow the instructions in the section **"Initial BarcoMed Display Driver Installation"** to install the BarcoMed 2MP2H driver for each 2MP2H graphics board installed in the system.

2. Double-click the **"Add/Remove Hardware"** icon in the Microsoft Control Panel. The "Add/Remove Hardware Wizard" appears.

3. Click **"Next"**.

4. In the "Choose a Hardware Task" page of the wizard select the radio button beside **"Add/Troubleshoot a device",** and click

"Next". Windows will now search for a new Plug and Play hardware device to install. When Windows fails to find a new Plug and Play hardware device, the "Choose a Hardware Device" page of the wizard will appear.

5. Select **"Add a new device",** and click **"Next"**.

6. In the "Find New Hardware" page of the wizard select the radio button beside "**No, I want to select the hardware from a list"** and click **"Next"**.

7. In the "Hardware Type" page of the wizard, highlight **"Display Adapters"** and then click "**Next**".

8. In the "Select a Device Driver" page of the wizard select **"BARCO Metheus"** in the Manufacturers column and **"BarcoMed 2MP2H"** in the Models column. Click **"Next"**.

9. The **"**Start Hardware Installation" dialog box appears. Click **"Next".**

10. Windows will warn you that a digital signature was not found. Click **"Yes"** to continue the installation. .

11. When the drivers have finished copying, click **"Finish"** on the "Completing Found New Hardware Wizard" page to complete the installation.

12. Windows may now prompt you to reboot your system. Click **"Yes"**. Boot normally and log on using an account with administrator privileges.

Repeat steps 1 – 12 above for each 2MP2H board for which you want to have the DualView feature enabled.

Setting the resolution of your high resolution monitor with DualView enabled

Once you have completed the installation of the separate screens with DualView, you need to set the resolution for each display. Both screens of each imaging board cannot be enabled at the same time unless their display properties match.

1. To set the resolution of your high resolution monitor(s) under DualView, **open** the "Display Properties Control Panel" by **right clicking** on the desktop, then select **"Properties".**

2. Select the **"Settings"** tab (see Figure 4 earlier in this chapter). Now select the **rectangle** that represents the head of the BarcoMed 2MP2H Imaging Board you are working with. **SPECIAL NOTE:** If you are using the VGA capabilities of your BarcoMed 2MP2H Imaging Board, the resolution for that board will still be set to a VGA resolution of "640 x 480" pixels. If the BarcoMed 2MP2H Imaging Board is not running VGA, the device may not be

enabled yet. To enable the device check the **"Extend my Windows desktop onto this monitor"** checkbox. Click the **"Apply"** button.

3. Detach one of the displays by right clicking on it and deselecting **"Attached"**. Click the **"Apply"** button.

4. For the display which is still attached click on the **"Advanced"** Button.

5. Select the **"Adapter"** tab and then click on the **"List All Modes…"** button. Select the resolution and refresh rate that your high resolution monitor supports from the dialog box and click **"OK"**.

6. **Note:** In the Adapter box, the Adapter string shows if this display is the First View or the Second View on the Imaging Board. Please make a note of this, so that you can arrange the displays in the correct order later.

7. Drag the heads into the proper position in the window on the **"Settings**" tab, so that the arrangement in the window on the **"Settings"** tab matches the physical arrangement of your configuration.

8. Click **"OK"** on the bottom of the Adapter Control Panel. If the **"OK"** button on the bottom of the Adapter Control Panel is not visible, press **"CTRL"+"Enter"** to select **"OK"**.

9. Click **"OK"** in the "Windows will now apply your new desktop settings" dialog box. Your high resolution display(s) should now synchronize and display the Windows desktop.

10. Click **"Yes"** when asked, "Your desktop has been reconfigured. Do you want to keep these settings?"

11. To set the resolution of the Second View of your BarcoMed 2MP2H, bring up the **"Display Properties Control Panel"** again and select the **"Settings"** tab.

12. Attach the display you detached in step 2 above, by right clicking on it and selecting **"Attached"**.

13. Now repeat steps 3 – 10 above for this display.

If you are using a Quad Head Configuration repeat all of the above steps for each of the two displays connected to the second imaging board.

Special note: After installing DualView use the Barco Metheus Configuration Control Panel to verify or change your system settings.

Disabling DualView under Windows 2000

DualView can be disabled on a BarcoMed 2MP2H through the Monitor Configuration section of the Barco Metheus Configuration Tab by following the steps listed below.

1) Open the "Display Properties Control Panel" by right clicking on the desktop, then select **"Properties"**.

2) Click on **"Settings"** tab. Double click on the rectangle that represents the BarcoMed 2MP you are working with to bring up its property page. Click on the **"BARCO Metheus Configuration"** tab.

3. Select **"Diable DualView"** from the "Monitor Configuration" drop down menu (see figure 5, below). Click **"OK"**, twice. Your system will automatically shutdown and restart.

Figure 5: Barco Metheus Configuration Tab – Disabling DualView

4. When your machine comes back up, you will need to re-set up your high resolution monitors with the desired display settings.

If you wish to Disable DualView on more than one BarcoMed 2MP2H repeat steps 1 – 4 above for each board.

Re-enabling DualView under Windows 2000

If you have disabled DualView using the method described on the previous page and decide you want to re-enable it. Following the steps listed below.

1) Open the "Display Properties Control Panel" by right clicking on the desktop, then select **"Properties"**.

2) Click on **"Settings"** tab. Double click on the rectangle that represents the BarcoMed 2MP you are working with to bring up its property page. Click on the **"BARCO Metheus Configuration"** tab.

3. Select **"Diable DualView"** from the "Monitor Configuration" drop down menu (see figure 6, below). Click **"OK"**, twice. Your system will automatically shutdown and restart.

Figure 6: Barco Metheus Configuration Tab – Enabling DualView

4. When your machine comes back up, you will need to re-set up your high resolution monitors with the desired display settings.

If you wish to re-Enable DualView on more than one BarcoMed 2MP2H repeat steps 1 – 4 above for each board.

Installing the Windows 2000 driver for the BarcoMed 2MP2

SPECIAL NOTE: Prior to installing the BarcoMed drivers you MUST install the BarcoMed Imaging Board(s), connect the monitor(s) to the card(s), and turn the monitor(s) on. Refer to the Hardware Installation Guide that came with your BarcoMed Imaging Board(s) for instructions on installing the BarcoMed Imaging Board(s) and connecting them to the monitor(s).

To install the BarcoMed 2MP2 Windows 2000 Display Driver follow these steps:

1) Install the BarcoMed 2MP2 adapter(s) into the machine. Refer to the hardware installation manual for more information.

2) Boot the machine, and press **"F8"** when the system displays "Starting Windows …"

3. Select **"Enable VGA Mode"**. If you do not boot in VGA mode, the system will boot normally and load the default Windows 2000 VGA Compatible Driver. This driver is not compatible with most high resolution monitors, and you may not be able to see any video output on the monitor. At this point you can either:

   a) reboot in VGA mode if you are using the 2MP2 as your VGA card or

   b) connect a VGA capable monitor and continue with the rest of the instructions.

4) Log on using an account with administrative privileges.

5) **Right click** on the **"My Computer"** Icon.

6) Select **"Manage"** from the pull down list. The Computer Management Dialog box will appear.

7) On the left side of the dialog box, Select **"Device Manager"** from "System Tools."

8) On the right side of the dialog box, click the **"+"** next to Display adapters to expand the list of adapters.

9) For each BarcoMed 2MP2 Imaging Board, two display adapters will be listed. The display adapters will be listed as "Cirrus Logic Laguna 5465" or "BarcoMed 2MP2". See Figure 7 on the next page for information on which display adapters should be used when installing the drivers.
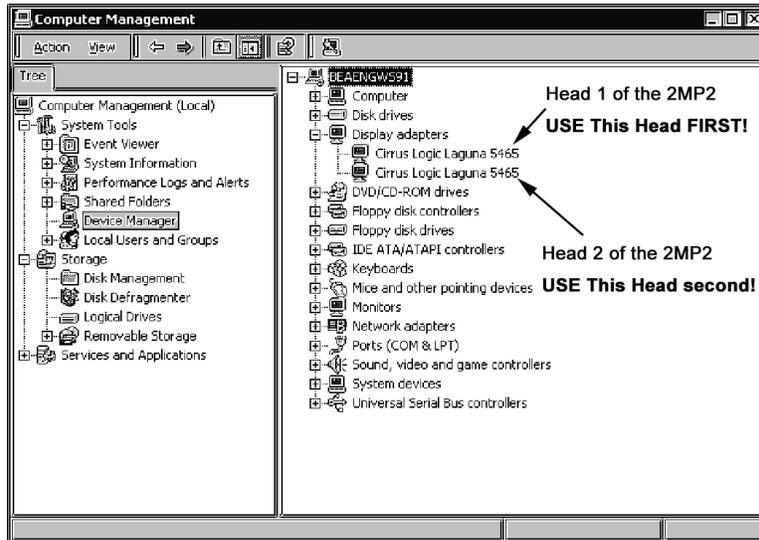
Figure 7: Windows 2000 Display Adapters Window

In the example above there was one BarcoMed 2MP2 installed in the system and NO 3rd party VGA card. The first "Cirrus Logic Laguna 5465" shown is the primary head on the BarcoMed 2MP2. Use this device first when installing the BarcoMed 2MP2 driver. The second "Cirrus Logic Laguna 5465" shown is is the secondary head on the BarcoMed 2MP2 and must be installed second.

10) Double Click on the **first display adapter** to open its properties page.

11) Select the **"Driver"** tab and click the **"Update Driver"** button. The "Upgrade Device Driver" Wizard will start. Click **"Next"** to continue.

12) Select the **"Radio Button"** beside "Display a list of the known drivers for this device so that I can choose a specific driver." Click **"Next"**.

13) In the "Select a Device Driver" page of the wizard click "Have Disk." Insert your driver disk or browse to the location of your driver and Click **"OK"**. Select **"2MP2"** in the "Select a Device Driver" window. Click **"Next"**.

14) An "Update Driver Warning" dialog box may appear saying:

"Installing this device driver is not recommended because Windows cannot verify that it is compatible with your hardware. If the driver is not compatible, your hardware will

not work correctly and your computer may become unstable or stop working completely. Do you want to continue installing this driver?"

Click **"Yes"**.

15) A "Start Device Driver Installation" dialog box will appear. Click **"Next"**.

16) Windows will warn you that a digital signature was not found. Click **"Yes"** to continue the installation.

17) When the drivers are installed, click **"Finish"** on the update driver wizard and close the properties page for the device. **Do NOT reboot** your system when asked until you have installed all of the adapters associated with all of the BarcoMed 2MP2 boards installed in your system. Repeat steps 11 – 17 until you have installed all of the adapters.

Setting the resolution of your high resolution monitor

1. Reboot in **VGA Mode** and log on using an account with administrative privileges.   If you do not reboot in VGA Mode Windows 2000 may select a resolution that is not compatible with your high resolution monitor and you will then need to reboot in VGA Mode.

2. To set the resolution for your monitor, open the "Display Properties Control Panel" by right clicking on the desktop, then select **"Properties"**.

3. Select the **"Settings"** tab (see Figure 8 on the next page). For each BarcoMed 2MP2 imaging board installed, there will be two rectangles representing the two heads supported by each Barco 2MP2 to select from. Select the **rectangle** that represents the first head of the BarcoMed 2MP2 Imaging Board you are working with. **SPECIAL NOTE:** If the you are using the VGA capabilities of your BarcoMed 2MP2 Imaging Board, the resolution for that board will still be set to a VGA resolution of "640 x 480" pixels. If the BarcoMed 2MP2 Imaging Board is not running VGA, the device may not be enabled yet. To enable the device check the "Extend my Windows desktop into this monitor" **checkbox**. Click the **"Apply"** button.

4. Click on the **"Advanced"** Button.

5. Select the **"Adapter"** tab and then click on the **"List All Modes…"** button. Select the resolution and refresh rate that your monitor supports from the dialog box and click **"OK"**.   Click **"OK"** on the bottom of the Adapter Control Panel. If the **"OK"** button on the bottom of the Adapter Control Panel is not visible, press the **"Tab Key"** once and then press **"Enter"**.

6. Click **"OK"** in the "Windows will now apply your new desktop settings" dialog box. Your high resolution display(s) should now synchronize and display the Windows desktop.

7. Click **"Yes"** when asked, "Your desktop has been reconfigured. Do you want to keep these settings?" Repeat steps 1 – 7 for each monitor on all the BarcoMed Imaging Boards installed in your system.

8. When you have set the resolution for all of your high resolution monitors, restart your computer and boot normally.
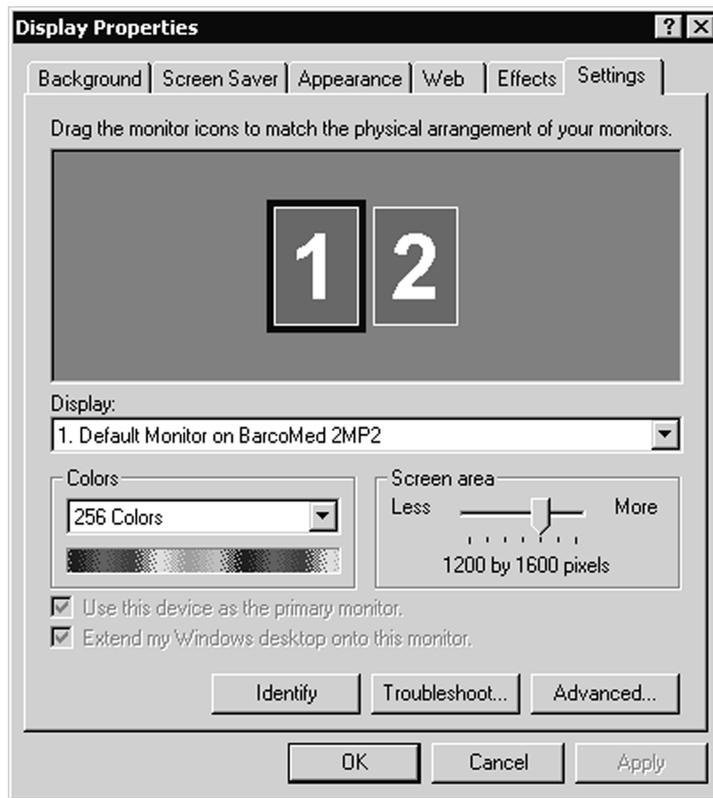

Figure 8: Windows 2000 Display Properties Window for the 2MP2 after the drivers have been installed and the resolution set.

Note: The system shown above had one 2MP2 installed and no 3rd party VGA Card. Your configuration may be different. The monitor marked "1" is the first head of the 2MP2 and the monitor marked "2" is the second head of the 2MP2.

Page 34

Installing the Windows 2000 driver for the BarcoMed 2MP1NT

SPECIAL NOTE: Prior to installing the BarcoMed drivers you MUST install the BarcoMed Imaging Board(s), connect the monitor(s) to the card(s), and turn the monitor(s) on. Refer to the Hardware Installation Guide that came with your BarcoMed Imaging Board(s) for instructions on installing the BarcoMed Imaging Board(s) and connecting them to the monitor(s).

To install the BarcoMed 2MP1NT Windows 2000 Display Driver follow these steps:

1) Install the BarcoMed 2MP1NT adapter(s) into the machine. Refer to the hardware installation manual for more information.

2) Boot the machine, and press **"F8"** when the system displays "Starting Windows …"

3. Select **"Enable VGA Mode"**. If you do not boot in VGA mode, the system will boot normally and load the default Windows 2000 VGA Compatible Driver. This driver is not compatible with most high resolution monitors, and you may not be able to see any video output on the monitor. At this point you can either:

   a) reboot in VGA mode if you are using the 2MP1NT as your VGA card or

   b) connect a VGA capable monitor and continue with the rest of the instructions.

4) Log on using an account with administrative privileges.

5) **Right click** on the **"My Computer"** Icon.

6) Select **"Manage"** from the pull down list. The Computer Management Dialog box will appear.

7) On the left side of the dialog box, Select **"Device Manager"** from "System Tools."

8) On the right side of the dialog box, click the **"+"** next to Display adapters to expand the list of adapters.

9) For each BarcoMed 2MP1NT Imaging Board, two display adapters will be listed.   The display adapters will be listed as "Cirrus Logic Laguna 5465" or "BarcoMed 2MP1NT".   However only one display adapter is enabled on the Imaging Board itself. See Figure 9 on the next page for information on which display adapters should be used when installing the drivers.
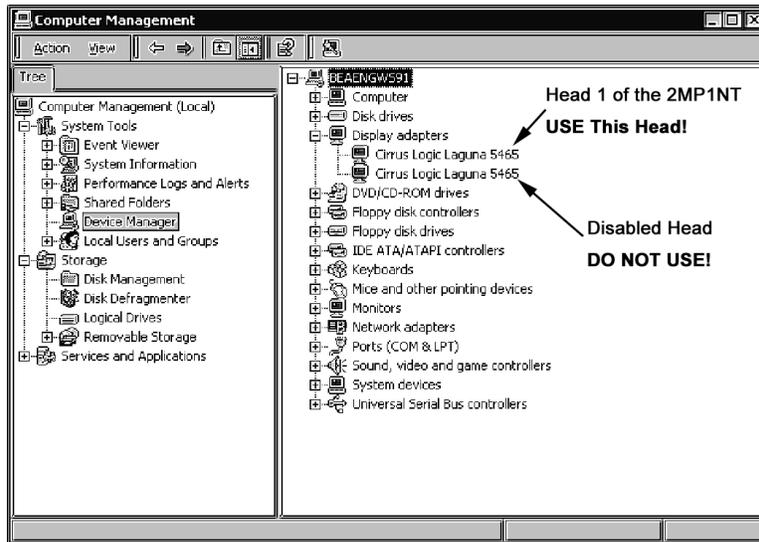
Figure 9: Windows 2000 Display Adapters Window

In the example above there was one BarcoMed 2MP1NT installed in the system and NO 3rd party VGA card. The first "Cirrus Logic Laguna 5465" shown is the functional head on the BarcoMed 2MP1NT. Use this as the device when installing the BarcoMed 2MP1NT driver. The second "Cirrus Logic Laguna 5465" shown is disabled on the BarcoMed 2MP1NT and must **NOT** be used. After installing the driver and rebooting this second device will no longer be listed under the "Display adapters" in the Computer Management Control Panel and will not be visible in the Windows 2000 Display Control Panel.

10) Double Click on the **first display adapter** to open its properties page.

11) Select the **"Driver"** tab and click the **"Update Driver"** button. The "Upgrade Device Driver" Wizard will start. Click **"Next"** to continue.

12) Select the **"Radio Button"** beside "Display a list of the known drivers for this device so that I can choose a specific driver." Click **"Next"**.

13) In the "Select a Device Driver" page of the wizard click "Have Disk." Insert your driver disk or browse to the location of your driver and Click **"OK"**. Select **"2MP1NT"** in the "Select a Device Driver" window. Click **"Next"**.

14) An "Update Driver Warning" dialog box may appear saying:

> "Installing this device driver is not recommended because Windows cannot verify that it is compatible with your hardware. If the driver is not compatible, your hardware will not work correctly and your computer may become unstable or stop working completely. Do you want to continue installing this driver?"

Click **"Yes"**.

15) A "Start Device Driver Installation" dialog box will appear. Click **"Next"**.

16) Windows will warn you that a digital signature was not found. Click **"Yes"** to continue the installation.

17) When the drivers are installed, click **"Finish"** on the update driver wizard and close the properties page for the device. If you are installing multiple BarcoMed 2MP1NT Imaging Boards in your system **reboot** your system in **VGA Mode** when asked. Repeat steps 11 – 17 until you have installed all of the adapters.

Setting the resolution of your high resolution monitor

1. Reboot in **VGA Mode** and login using an account with administrative privileges. If you do not reboot in VGA Mode Windows 2000 may select a resolution that is not compatible with your high resolution monitor and you will then need to reboot in VGA Mode.

2. To set the resolution for you monitor, open the "Display Properties Control Panel" by **right clicking** on the desktop, then select **"Properties"**.

3. Select the **"Settings"** tab (see Figure 10 on the next page). If you are using a single BarcoMed 2MP1NT and no 3rd party VGA card, there will be only a single desktop to select from. If you are using multiple 2MP1NT's select the **rectangle** that represents the BarcoMed 2MP1NT Imaging Board you are working with. **SPECIAL NOTE:** If the you are using the VGA capabilities of your BarcoMed 2MP1NT Imaging Board, the resolution for that board will still be set to a VGA resolution of "640 x 480" pixels. If the BarcoMed 2MP1NT Imaging Board is not running VGA, the device may not be enabled yet. To enable the device check the "Extend my Windows desktop into this monitor" **checkbox**. Click the **"Apply"** button.

4. Click on the **"Advanced"** Button.

5. Select the **"Adapter"** tab and then click on the **"List All Modes…"** button. Select the resolution and refresh rate that your monitor supports from the dialog box and click **"OK"**. Click **"OK"** on the

bottom of the Adapter Control Panel. If the **"OK"** button on the bottom of the Adapter Control Panel is not visible, press the **"Tab Key"** once and then press **"Enter"**.

6. Click **"OK"** in the "Windows will now apply your new desktop settings" dialog box. Your high resolution display(s) should now synchronize and display the Windows desktop.

7. Click **"Yes"** when asked, "Your desktop has been reconfigured. Do you want to keep these settings?" Repeat steps 1 – 6 for each monitor on all the BarcoMed Imaging Boards installed in your system. You will need to extend your desktop to each additional monitor connected to a BarcoMed 2MP1NT prior to setting its resolution.

8. When you have set the resolution for all of your high resolution monitors, restart your computer and boot normally.
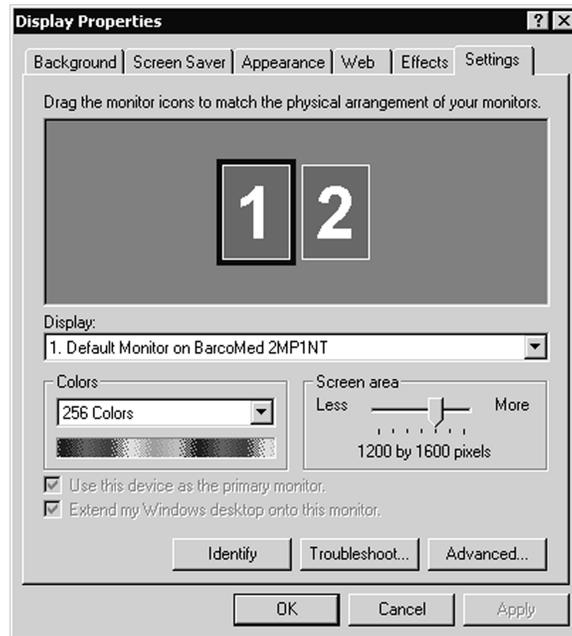

Figure 10: Windows 2000 Display Properties Settings Tab for the 2MP1NT after the divers have been installed and the resolution set.

Note: The system shown had one BarcoMed 2MP1NT imaging board installed with VGA enabled. Your configuration may be different.

Installing the Windows 2000 driver for the BarcoMed 2MP1

SPECIAL NOTE: Prior to installing the BarcoMed drivers you MUST install the BarcoMed Imaging Board(s), connect the monitor(s) to the card(s), and turn the monitor(s) on. Refer to the Hardware Installation Guide that came with your BarcoMed Imaging Board(s) for instructions on installing the BarcoMed Imaging Board(s) and connecting them to the monitor(s).

To install the BarcoMed 2MP1 Windows Display Driver follow these steps:

1) Install the BarcoMed 2MP1 adapter(s) into the machine. Please refer to the hardware installation guide for more information.

2) Boot the machine, and press **F8** when the system displays "Starting Windows…"

3) Select **"Enable VGA Mode"**. If you do not boot in VGA mode, the system will boot normally and load the "Number Nine Visual Technologies Imagine Series 128". This driver is not compatible with Grayscale 2MP Portrait monitors, and you will not be able to see any video output on the monitor. At this point you can either:

   a) reboot in VGA mode if you are using the 2MP1 as your VGA card or

   b) connect a VGA capable high resolution monitor and continue with the rest of the instructions.

   Log on using an account with administrative privileges.

5) **Right** click on the "My Computer" Icon.

6) Select **"Manage"** from the pull down list. The Computer Management Dialog box will appear.

7) On the left side of the dialog box, Select **"Device Manager"** from "System Tools".

8) On the right side of the dialog box, click the **"+"** next to Display adapters to expand the list of adapters.

9) For each BarcoMed 2MP1 board, one display adapter will be listed. They will be listed as either "VGA" or "Number Nine Visual Technologies Imagine".

10) Double Click on the **first** "Number Nine Visual Technologies Imagine" display adapter to open its properties page. See Figure 11 on the next page.
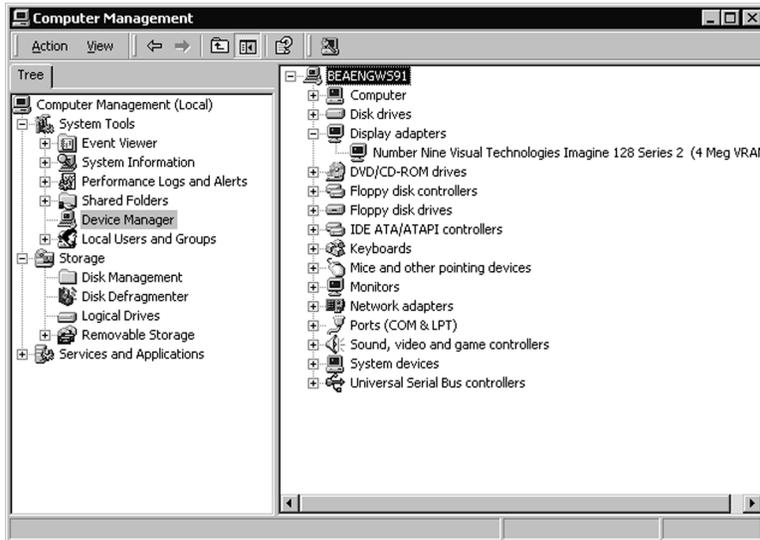
Figure 11: Windows 2000 Display Adapters Window

> **Note:** In the example above there was one BarcoMed 2MP1 installed in the system and NO 3rd party VGA card. Windows 2000 Plug and Play Software identified this board by the Video Chipset used.

11) Select the **"Driver"** tab and click update driver. The "Upgrade Device Driver" Wizard will start. Click **"Next"** to continue.

12) Select the **"Radio Button"** beside "Display a list of the known drivers for this device so that I can choose a specific driver". Click **"Next"**.

13) In the "Select a Device Driver" page of the wizard click "Have Disk." Insert your driver disk or browse to the location of your driver and Click **"OK"**. Select **"BarcoMed 2MP1"** in the "Select a Device Driver" window. Click Next.

14) An "Update Driver Warning" dialog box may appear saying:

> "Installing this device driver is not recommended because Windows cannot verify that it is compatible with your hardware. If the driver is not compatible, your hardware will not work correctly and your computer may become unstable or stop working completely. Do you want to continue installing this driver?"

Click **"Yes"**.

15. A "Start Device Driver Installation" dialog box will appear. Click **"Next"**.

16. Windows will warn you that a digital signature was not found. Click **"Yes"** to continue the installation.

17. When the drivers are installed, click **"Finish"** on the update driver wizard and close the properties page for the device. If you are installing multiple BarcoMed 2MP1 boards in your system do **not** reboot your system when asked. Repeat steps 11 – 16 until you have installed all the of the adapters. When you have installed all of your BarcoMed 2MP1 boards reboot the system when prompted.

Setting the resolution of your high resolution monitor

1) Reboot in **VGA Mode** and login using an account with administrative privileges. If you do not reboot in VGA Mode Windows 2000 may select a resolution that is not compatible with your high resolution monitor and you will then need to reboot in VGA Mode.

2) To set the resolution for you monitor, right click on an empty space of the desktop and select **"Properties"**. Select the **"Settings"** tab (see Figure 12 on the next page). If you are using a single BarcoMed 2MP1 and no 3rd party VGA card, there will be only a single desktop to select from. If you are using multiple 2MP1's select the **rectangle** that represents the BarcoMed 2MP1 Imaging Board you are working with. **SPECIAL NOTE:** If the you are using the VGA capabilities of your BarcoMed 2MP1 Imaging Board, the resolution for that board will still be set to a VGA resolution of "640 x 480" pixels. If the BarcoMed 2MP1 Imaging Board is not running VGA, the device may not be enabled yet. To enable the device check the "Extend my Windows desktop into this monitor" **checkbox**. Click the **"Apply"** button.

3) Click on the **"Advanced"** Button.

4) Select the **"Adapter"** tab and then click on the **"List All Modes…"** button. Select the resolution and refresh rate that your monitor supports from the dialog box and click **"OK"**. Click **"OK"** on the bottom of the Adapter Control Panel. If the **"OK"** button on the bottom of the Adapter Control Panel is not visible, press the **"Tab Key"** once and then press **"Enter"**.

5) Click **"OK"** in the "Windows will now apply your new desktop settings" dialog box. Your high resolution display(s) should now synchronize and display the Windows desktop.

6) Click **"Yes"** when asked, "Your desktop has been reconfigured. Do you want to keep these settings?" Repeat steps 1 – 6 for each

monitor on all the BarcoMed Imaging Boards installed in your system.

7) When you have set the resolution for all of your high resolution
   monitors, restart your computer and boot normally.
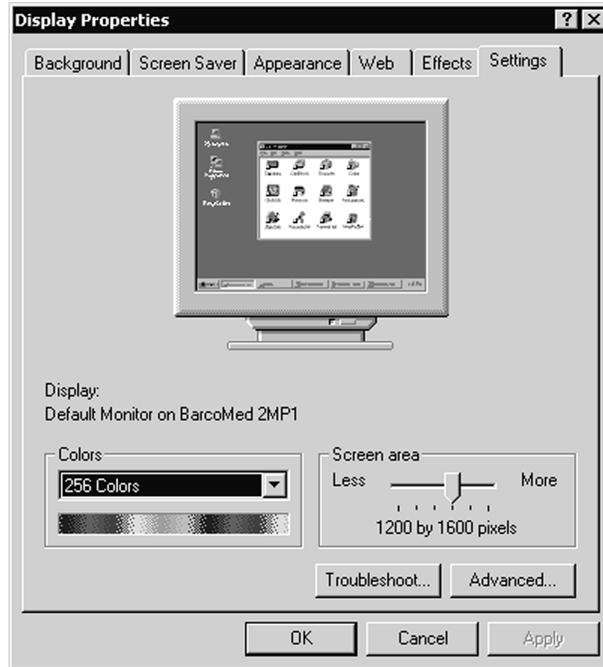

Figure 12: Display Properties Window for the 2MP1

Note: The system shown above had a single BarcoMed 2MP1 and no
3rd VGA card installed. Your configuration may be different.

Planning Your Barcomed Windows XP Installation

Because of Windows XP's Plug and Play features, it is very important to carefully plan your BarcoMed Board Hardware and Software installation and install the device drivers in the same sequence that the boards are installed in the PCI slots.

When installing BarcoMed Imaging Boards for the first time in a Windows XP System, Windows XP Plug and Play Software identifies the BarcoMed boards by the Video Chipset utilized on each boards. The Table below shows the BarcoMed Board, the Chip Set utilized by the board and the driver Windows XP Plug and Play selects for each imaging board.

BarcoMed Board Model	Chip Set Utilized	Driver Selected by Windows 2000 Plug and Play
2MP2H	BarcoView AURA	Video Controller or Video Controller (VGA Compatible)
2MP2	Cirrus Logic Laguna 5465	Cirrus Logic Laguna 5465
2MP1NT	Cirrus Logic Laguna 5465	Cirrus Logic Laguna 5465
2MP1	Imagine Number 9	Imagine Number 9 Series 128

If you have previously installed drivers for the BarcoMed Imaging Boards in your Windows XP System, Windows XP should correctly identify the board by their correct BarcoMed name. However, while updating the drivers to a new version or reinstalling the current driver Windows XP may identify the BarcoMed Imaging Boards by their Video Chipset.

If you choose to install multiple types of BarcoMed Imaging Boards in your computer it is important to carefully note which PCI slot each board is in and then install the drivers for each type of board based on the PCI slot they are installed in. **If you are using the VGA Capabilities of a BarcoMed Imaging Board it is important to install the driver for this board and set its resolution first.**

Installing the Windows XP Driver for the BarcoMed 2MP2H

SPECIAL NOTE: Prior to installing the BarcoMed drivers you MUST install the BarcoMed Imaging Board(s), connect the monitor(s) to the boards(s), and turn the monitor(s) on. Refer to the Hardware Installation Guide that came with your BarcoMed Imaging Board (s) for instructions on installing the BarcoMed Imaging Board (s) and connecting them to the monitor(s).

To install the BarcoMed 2MP2H Windows Display Driver, log on to Windows XP using an account with administrator privileges and follow these steps:

1. Install the BarcoMed 2MP2H Imaging Board(s) into your machine. Please refer to the hardware installation guide that came with your BarcoMed Imaging Board (s) for more information.

2. Boot the machine and log on using an account with administrative privileges.

3. Windows XP will do a thorough inspection of your system and will announce that it has found new hardware. This may take several minutes. Please be patient.

4. Close any informational balloons that Windows XP may open in the lower right hand corner of the monitor.

5. Windows XP will automatically launch the "Found New Hardware Wizard".

6. Insert the BarcoMed software CD into your computer's CD drive. Select the radio button beside "Install the software automatically (Recommended)". Click **"Next"**.

7. Windows XP will now search the computer and CD for the correct driver. When Windows XP has found the BarcoMed 2MP2H driver it will warn you that the software "has not passed Windows Logo testing to verify its compatibility with Windows XP." Click **"Continue Anyway"** to install the drivers.

8. When Windows XP has finished installing the drivers, click **"Finish"** on the "Found New Hardware Wizard".

If you are installing more than one BarcoMed 2MP2H board in your system, Windows will automatically detect them and launch the found New Hardware Wizard for each board installed. Repeat steps 6 – 8 until you have installed the drivers for all of the BarcoMed 2MP2H boards in your system. Prior to installing the drivers for any additional imaging boards we strongly recommend that you set the resolution for the monitors connected to the first boards installed.

Setting the resolution of your high resolution monitor

By default DualView is enabled when you install the BarcoMed Windows XP driver. DualView is a Windows XP feature that allows a dual headed imaging board with a single graphics chip to display two separate desktops, one for each monitor instead of a single virtual desktop that spans across both monitors. If you wish to disable DualView, you can do so through the Monitor Configuation settings of the Barco Metheus Configuration Tab. Instructions for disabling DualView can be found at the end of this chapter.

1. To set the resolution for your monitor, open the "Display Properties Control Panel" by right clicking on the desktop, then select "Properties".

2. Select the **"Settings"** tab. (see Figure 13 on the next page). Now select the **rectangle** that represents the BarcoMed 2MP2H Imaging Board you are working with. **SPECIAL NOTE:** If the you are using the VGA capabilities of your BarcoMed 2MP2H Imaging Board, the resolution for that board will still be set to a VGA resolution of "640 x 480" pixels. If the BarcoMed 2MP2H Imaging Board is not running VGA, the device may not be enabled yet. To enable the device check the "Extend my Windows desktop into this monitor" **checkbox**. Click the **"Apply"** button.

3. Click on the **"Advanced"** Button.

4. Select the **"Adapter"** tab and then click on the **"List All Modes…"** button. Select the resolution and refresh rate that your monitor supports from the dialog box and click **"OK"**.

5. Click **"Apply"** on the bottom of the Adapter Control Panel. If the **"OK"** button on the bottom of the Adapter Control Panel is not visible, press the **"Tab Key"** once and then press **"Enter"**.

6. Click **"OK"** in the "Windows will now apply your new desktop settings" dialog box. Your high resolution display(s) should now synchronize and display the Windows desktop.

7. Click **"Yes"** if asked, "Your desktop has been reconfigured. Do you want to keep these settings?" Windows XP will only ask this question for the first monitor on each BarcoMed 2MP2H board. Repeat steps 1 – 6 for each monitor on all the BarcoMed Imaging Boards installed in your system.
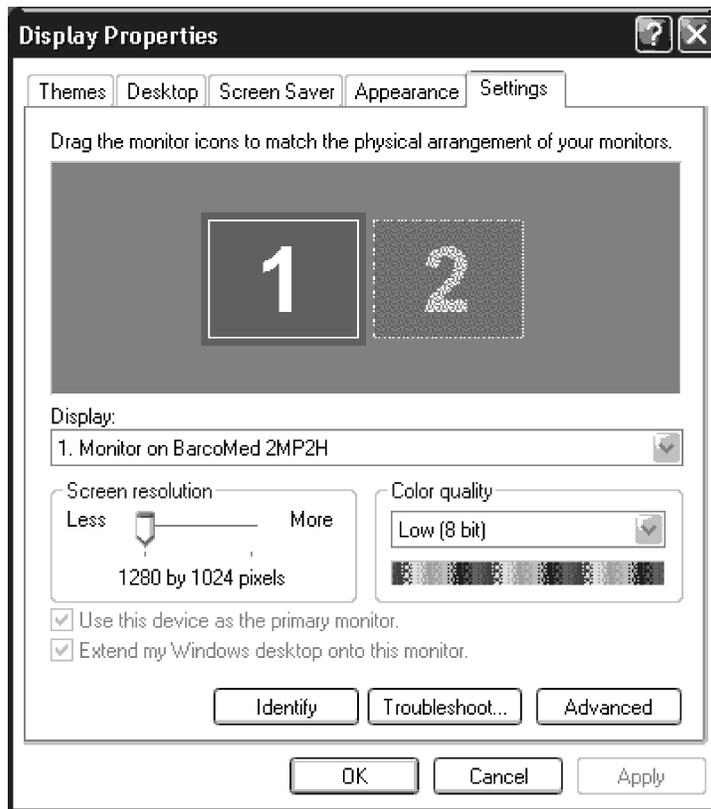
Figure 13: Windows XP Display Properties Settings Tab for the 2MP2H

> **Note:** The system shown above has only one 2MP2H installed and no 3rd party VGA card. Your configuration may be different.

Disabling DualView under Windows XP

DualView can be disabled on a BarcoMed Imaging Board through the Monitor Configuration section of the Barco Metheus Configuration Tab by following the steps listed below.

1. Open the "Display Properties Control Panel" by right clicking on the desktop, then select "**Properties**".

2. Click on **"Settings"** tab. Double click on the rectangle that represents the BarcoMed Imaging Board you are working with to bring up its property page. Click on the "BARCO Metheus Configuration" tab.

3. Select **"Disable DualView"** from the "Monitor Configuration" drop down menu (see figure 14, below). Click **"OK"**, twice. Your system will automatically shutdown and restart.

Figure 14: Barco Metheus Configuration Tab – Disabling DualView

4. When your machine comes back up, you will need to re-set up your high resolution monitor with the desired display settings.

If you wish to Disable DualView on more than one BarcoMed 2MP2H Imaging Board repeat steps 1 – 4 above for each board.

Re-enabling DualView under Windows XP

If you have disabled DualView using the method described on the previous page and decide you want to re-enable it. Following the steps listed below.

1) Open the "Display Properties Control Panel" by right clicking on the desktop, then select **"Properties"**.

2) Click on **"Settings"** tab. Double click on the rectangle that represents the BarcoMed Imaging Board you are working with to bring up its property page. Click on the "BARCO Metheus Configuration" tab.

3. Select **"Enable DualView"** from the "Monitor Configuration" drop down menu (see figure 15 below). Click **"OK"**, twice. Your system will automatically shutdown and restart.

Figure 15: Barco Metheus Configuration Tab – Enabling DualView

4. When your machine comes back up, you will need to re-set up your high resolution monitor with the desired display settings.

If you wish to re-enable DualView on more than one BarcoMed 2MP2H Imaging Board repeat steps 1 – 4 above for each board.

Installing the Windows XP driver for the BarcoMed 2MP2

SPECIAL NOTE: Prior to installing the BarcoMed drivers you MUST install the BarcoMed Imaging Board(s), connect the monitor(s) to the card(s), and turn the monitor(s) on. Refer to the Hardware Installation Guide that came with your BarcoMed Imaging Board(s) for instructions on installing the BarcoMed Imaging Board(s) and connecting them to the monitor(s).

To install the BarcoMed 2MP2 Windows XP Display Driver follow these steps:

1. Install the BarcoMed 2MP2 adapter(s) into the machine. Refer to the hardware installation manual for more information.

2. Boot the machine and log on using an account with administrative privileges.

3. Windows XP will automatically load the drivers for the "Cirrus Logic Laguna 5465", the chipset used on the BarcoMed 2MP2 imaging board. To install the BarcoMed 2MP2 drivers, right click on an empty space of the desktop and select **"Properties"**.

4. Select the **"Settings"** tab (see Figure 16 on the next page). For each BarcoMed 2MP2 imaging board installed, there will be two rectangles representing the two heads supported by each Barco 2MP2 to select from. Double click on the **rectangle** that represents the first head of the BarcoMed 2MP2 Imaging Board you are working with to open its properties page.

5. Select the **"Adapter"** tab and click the **"Properties"** button. The "BarcoMed 2MP2 Properties" page will open.

6. Select the **"Driver"** tab and click the **"Update Driver..."** button. The "Hardware Update" Wizard will start.

7. Select the **"Radio Button"** beside "Install from a list or specified location (Advanced)". Click **"Next"**.

8. On the "Please choose your search and installation options." page of the Hardware Update Wizard, select the **"Radio Button"** beside "Don't search, I will choose the driver to install". Click **"Next"**.

9. In the "Select a Device Driver" page of the wizard click "Have Disk." Insert your driver disk and select the correct device from the "Copy manufacturer's files from" drop down menu or browse to the location of your driver and Click **"OK"**. Select **"2MP2"** in the "Select a Device Driver" window. Click **"Next"**.

10. When Windows XP has begun installing the BarcoMed 2MP2 driver it will warn you that the software "has not passed Windows

Logo testing to verify its compatibility with Windows XP." Click **"Continue Anyway"** to install the drivers.

11. When the drivers are installed, click **"Finish"** on the update driver wizard and close the properties page for the device. If you are installing multiple BarcoMed boards **you must reboot** your system when asked and set the resolution of the first monitor controlled by the first BarcoMed 2MP2. You can then install the remaining adapters associated with all of the BarcoMed 2MP2 boards installed in your system. Repeat steps 3 – 11 until you have installed all of the adapters.
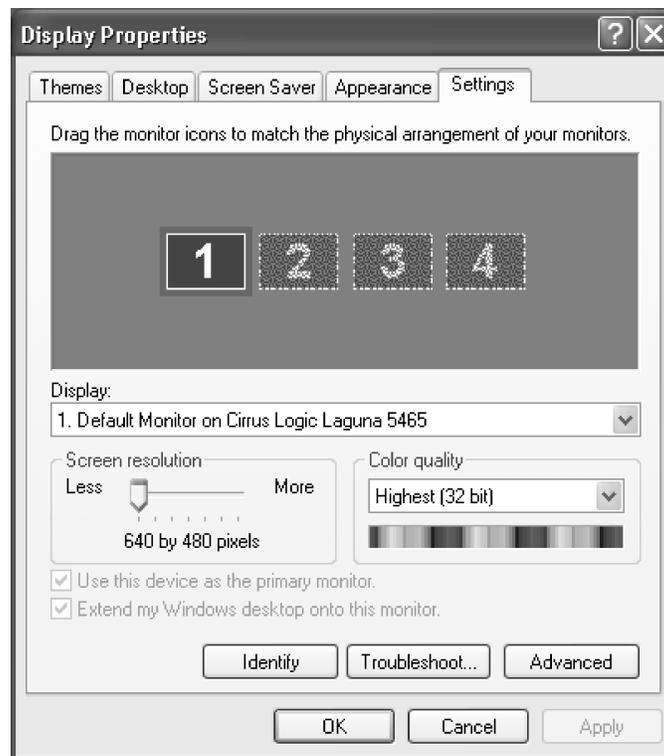
Figure 16: Windows XP Display Properties Settings Tab before the BarcoMed 2MP2 drivers have been installed.

Note: In the example above there were two BarcoMed 2MP2 installed in the system and NO 3rd party VGA card. The first rectangle, "1", shown is the primary head on the BarcoMed 2MP2. Use this device first when installing the BarcoMed 2MP2 driver. The second rectangle "2" shown is is the secondary head on the BarcoMed 2MP2 and must

be installed only after you have rebooted and set the resolution for the first head. Rectangles 3 & 4 represent the two heads on the second BarcoMed 2MP2 board.

Setting the resolution of your high resolution monitor

1) Reboot in **VGA Mode** and login using an account with administrative privileges. If you do not reboot in VGA Mode Windows XP may select a resolution that is not compatible with your high resolution monitor and you will then need to reboot in VGA Mode.

2) To set the resolution for your monitor, open the "Display Properties Control Panel" by right clicking on the desktop. Select "Properties" (see Figure 17 on the next page). For each BarcoMed 2MP2 imaging board installed, there will two rectangles representing the two heads supported by each Barco 2MP2. to select from. Select the **rectangle** that represents the first head of the BarcoMed 2MP2 Imaging Board you are working with. **SPECIAL NOTE:** If you are using the VGA capabilities of your BarcoMed 2MP2 Imaging Board, the resolution for that board will still be set to a VGA resolution of "640 x 480" pixels. If the BarcoMed 2MP2 Imaging Board is not running VGA, the device may not be enabled yet. To enable the device check the "Extend my Windows desktop into this monitor" **checkbox**. Click the **"Apply"** button.

3) Click on the **"Advanced"** Button.

4) Select the **"Adapter"** tab and then click on the **"List All Modes…"** button. Select the resolution and refresh rate that your monitor supports from the dialog box and click **"OK"**. Click **"OK"** on the bottom of the Adapter Control Panel. If the **"OK"** button on the bottom of the Adapter Control Panel is not visible, press the **"Tab Key"** once and then press **"Enter"**.

5) Click **"OK"** in the "Windows will now apply your new desktop settings" dialog box. Your high resolution display(s) should now synchronize and display the Windows desktop.

6) Click **"Yes"** when asked, "Your desktop has been reconfigured. Do you want to keep these settings?" Repeat steps 1 – 6 for each monitor on all the BarcoMed Imaging Boards installed in your system.

7) When you have set the resolution for all of your high resolution monitors, restart your computer and boot normally.
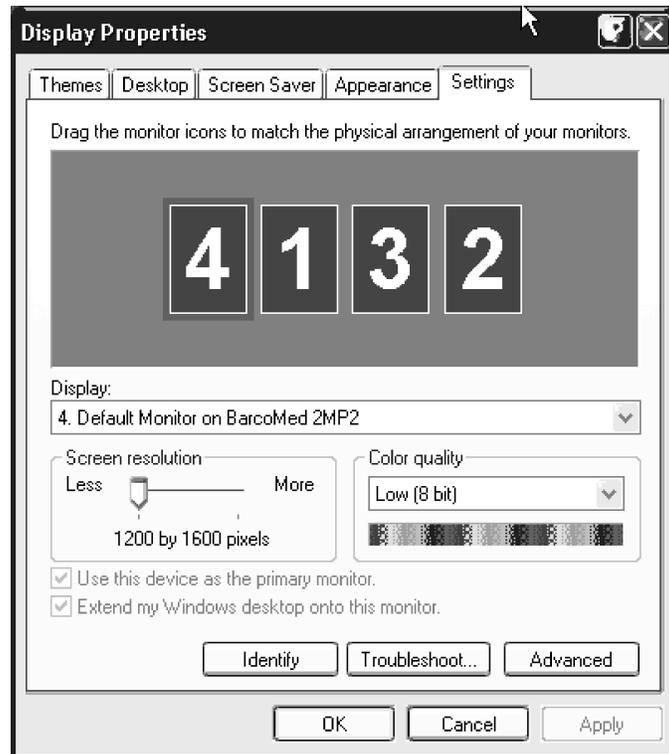
*Figure 17: Windows XP Display Properties Settings Tab after the
BarcoMed 2MP2 drivers have been installed and the resolution set.*

Note: The system shown above had two 2MP2s installed and no 3rd
party VGA Card. Your configuration may be different.

Installing the Windows XP driver for the BarcoMed 2MP1NT

SPECIAL NOTE: Prior to installing the BarcoMed drivers you MUST install the BarcoMed Imaging Board(s), connect the monitor(s) to the card(s), and turn the monitor(s) on. Refer to the Hardware Installation Guide that came with your BarcoMed Imaging Board(s) for instructions on installing the BarcoMed Imaging Board(s) and connecting them to the monitor(s).

To install the BarcoMed 2MP1NT Windows XP Display Driver follow these steps:

1. Install the BarcoMed 2MP1NT adapter(s) into the machine. Refer to the hardware installation manual for more information.

2. Boot the machine and log on using an account with administrative privileges.

3. Windows XP will automatically load the drivers for the "Cirrus Logic Laguna 5465", the chipset used on the BarcoMed 2MP1NT imaging board. To install the BarcoMed 2MP1NT drivers, right click on the desktop and select **"Properties"**.

4. Select the **"Settings"** tab (see Figure 18 on the next page). For each BarcoMed 2MP1NT imaging board installed, there will two rectangles representing the two display adapters installed on each Barco 2MP1NT. However only one display adapter is enabled. Double click on the **rectangle** that represents the first display adapter of the BarcoMed 2MP1NT Imaging Board you are working with to open its properties page.

5. Select the **"Adapter"** tab and click the **"Properties"** button. The "BarcoMed 2MP1NT Properties" page will open.

6. Select the **"Driver"** tab and click the **"Update Driver..."** button. The "Hardware Update" Wizard will start.

7. Select the **"Radio Button"** beside "Install from a list or specified location (Advanced)". Click **"Next"**.

8. On the "Please choose your search and installation options." page of the Hardware Update Wizard, select the **"Radio Button"** beside "Don't search, I will choose the driver to install". Click **"Next"**.

9. In the "Select a Device Driver" page of the wizard click "Have Disk." Insert your driver disk and select the correct device from the "Copy manufacturer's files from" drop down menu or browse to the location of your driver and Click **"OK"**. Select **"2MP1NT"** in the "Select a Device Driver" window. Click **"Next"**.

10. When Windows XP has begun installing the BarcoMed 2MP1NT driver it will warn you that the software "has not passed Windows

Logo testing to verify its compatibility with Windows XP." Click **"Continue Anyway"** to install the drivers.

11. When the drivers are installed, click **"Finish"** on the update driver wizard and close the properties page for the device. If you are installing multiple BarcoMed 2MP1NT Imaging Boards in your system **reboot** your system in **VGA Mode** when asked.   Repeat steps 3 – 11 until you have installed all of the adapters.
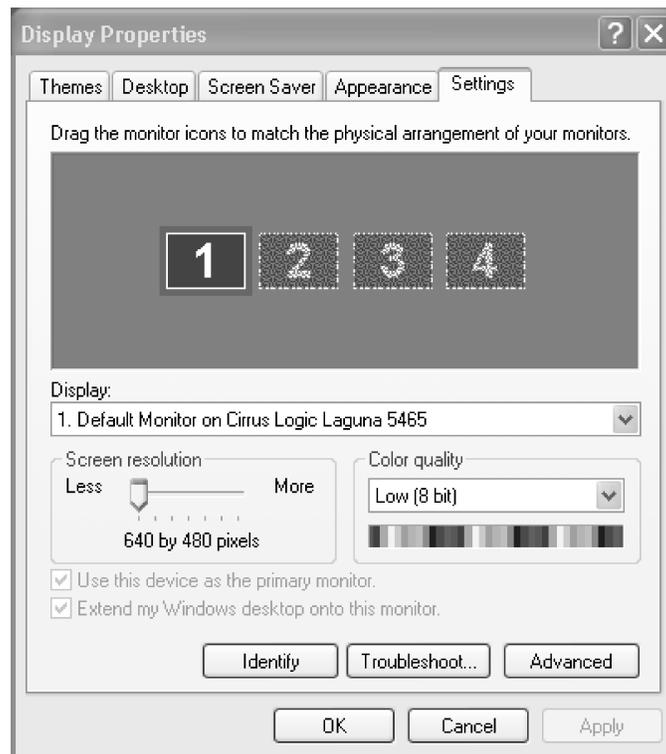
Figure 18: Windows XP Display Properties Setting Tab before the Barcomed 2MP1NT drivers have been installed.

Note: The system above has two BarcoMed 2MP1NT installed and NO 3rd party VGA card. The first rectangle, "1", shown is the primary head on the first BarcoMed 2MP1NT.   Use this device first when installing the BarcoMed 2MP1NTdriver. The second rectangle, "2", shown is disabled on the BarcoMed 2MP1NT and must **NOT** be used. After installing the driver and rebooting this second device will not be visible in the Windows XP Display Control Panel and will no longer be listed under the "Display adapters" in the Computer Management

Control Panel. Rectangles "3" and "4" represent the primary and disabled heads on the second BarcoMed 2MP1NT installed in this system. Your configuration may be different.

Setting the resolution of your high resolution monitor

1. Reboot in **VGA Mode** and log on using an account with administrative privileges.   If you do not reboot in VGA Mode Windows XP may select a resolution that is not compatible with your high resolution monitor and you will then need to reboot in VGA Mode.

2. To set the resolution for you monitor, **right click** on an empty space of the desktop and select **"Properties"**.

3. Select the **"Settings"** tab (see Figure 19 on the next page). If you are using a single BarcoMed 2MP1NT and no 3rd party VGA card, there will be only a single desktop to select from. If you are using multiple 2MP1NT's select the **rectangle** that represents the BarcoMed 2MP1NT Imaging Board you are working with.
   SPECIAL NOTE: If the you are using the VGA capabilities of your BarcoMed 2MP1NT Imaging Board, the resolution for that board will still be set to a VGA resolution of "640 x 480" pixels. If the BarcoMed 2MP1NT Imaging Board is not running VGA, the device may not be enabled yet. To enable the device check the "Extend my Windows desktop into this monitor" **checkbox**. Click the **"Apply"** button.

4. Click on the **"Advanced"** Button.

5. Select the **"Adapter"** tab and then click on the **"List All Modes…"** button. Select the resolution and refresh rate that your monitor supports from the dialog box and click **"OK"**.   Click **"OK"** on the bottom of the Adapter Control Panel. If the **"OK"** button on the bottom of the Adapter Control Panel is not visible, press the **"Tab Key"** once and then press **"Enter"**.

6. Click **"OK"** in the "Windows will now apply your new desktop settings" dialog box. Your high resolution display(s) should now synchronize and display the Windows desktop.

7. Click **"Yes"** when asked, "Your desktop has been reconfigured. Do you want to keep these settings?" Repeat steps 1 – 7 for each monitor on all the BarcoMed Imaging Boards installed in your system. You will need to extend your desktop to each additional monitor connected to a BarcoMed 2MP1NT prior to setting its resolution.

8. When you have set the resolution for all of your high resolution monitors, restart your computer and boot normally.
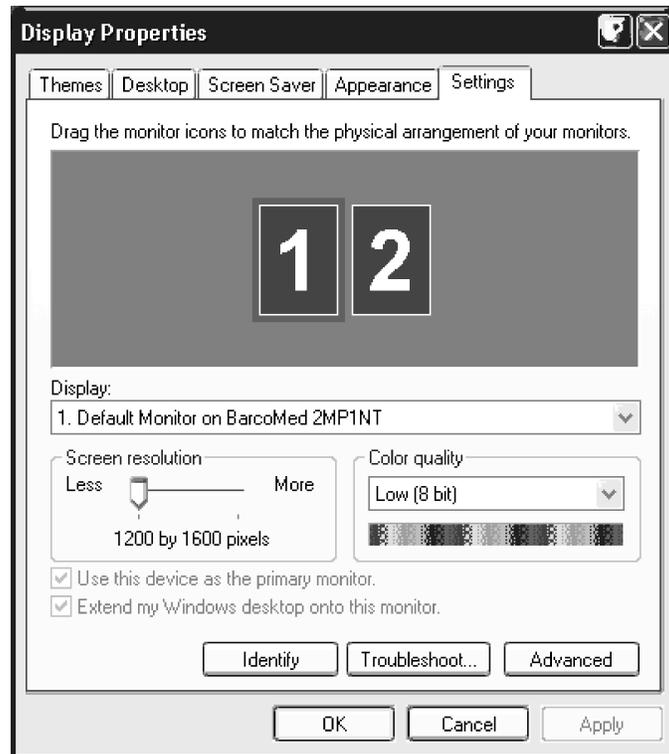
Figure 19: Windows XP Display Properties Settings Tab after the BarcoMed 2MP1NT drivers have been installed and the resolution set.

Note: The system shown above has one BarcoMed 2MP1NT Imaging Board installed with VGA enabled. Your configuration may be different.

Installing the Windows XP driver for the BarcoMed 2MP1

SPECIAL NOTE: Prior to installing the BarcoMed drivers you MUST install the BarcoMed Imaging Board(s), connect the monitor(s) to the card(s), and turn the monitor(s) on. Refer to the Hardware Installation Guide that came with your BarcoMed Imaging Board(s) for instructions on installing the BarcoMed Imaging Board(s) and connecting them to the monitor(s).

To install the BarcoMed 2MP1 Windows XP Display Driver follow these steps:

1. Install the BarcoMed 2MP1 imaging board(s) into the machine. Refer to the hardware installation manual for more information.

2. Boot the machine and log on using an account with administrative privileges.

3. Windows XP will automatically load the drivers for the "Number Nine Visual Technologies Imagine 128 Series 2", the video chipset used on the BarcoMed 2MP1 imaging board. To install the BarcoMed 2MP1 drivers, open the "Display Properties Control Panel" by r**ight clicking** on the desktop, then select **"Properties"**.

4. Select the **"Settings"** tab (see Figure 20 on the next page). For each BarcoMed 2MP1 imaging board installed, there will one rectangle representing each BarcoMed 2MP1 installed. **Double click** on the rectangle that represents the first BarcoMed 2MP1 Imaging Board you are working with to open its properties page.

5. Select the **"Adapter"** tab and click the **"Properties"** button. The "BarcoMed 2MP1 Properties" page will open.

6. Select the **"Driver"** tab and click the **"Update Driver..."** button. Windows XP will launch the "Hardware Update" Wizard.

7. Select the **"Radio Button"** beside "Install from a list or specified location (Advanced)". Click **"Next"**.

8. In the "Please choose your search and installation options." page of the Hardware Update Wizard, select the **"Radio Button"** beside "Don't search, I will choose the driver to install" and click **"Next"**.

9. In the "Select a Device Driver" page of the wizard click **"Have Disk"**. Insert your driver disk and select the correct device from the "Copy manufacturer's files from" drop down menu or browse to the location of your driver and click **"OK"**. Select **"2MP1"** in the "Select a Device Driver" window. Click **"Next"**.

10. When Windows XP has begun to install the BarcoMed 2MP1 driver it will warn you that the software "has not passed Windows Logo

testing to verify its compatibility with Windows XP." Click **"Continue Anyway"** to continue installing the drivers.

11. When the drivers have been installed, click **"Finish"** on the update driver wizard and **close** the properties page for the device.

12. Windows XP will now advise you that "Your hardware settings have changed. You must restart your computer for these changes to take effect. Do you want to restart your computer now?" If you are using the VGA capabilities of your 2MP1 click **"Yes"**. **Reboot** your system in **VGA Mode** and immediately set the resolution for this monitor. If you are using a 3rd party VGA card you can finishing installing all of your BarcoMed 2MP1 boards prior to rebooting. To install multiple BarcoMed 2MP1 Imaging Boards in your system repeat steps 3 – 12 until you have installed drivers for all of theBarcoMed imaging boards in your system. Reboot your system normally as necessary.
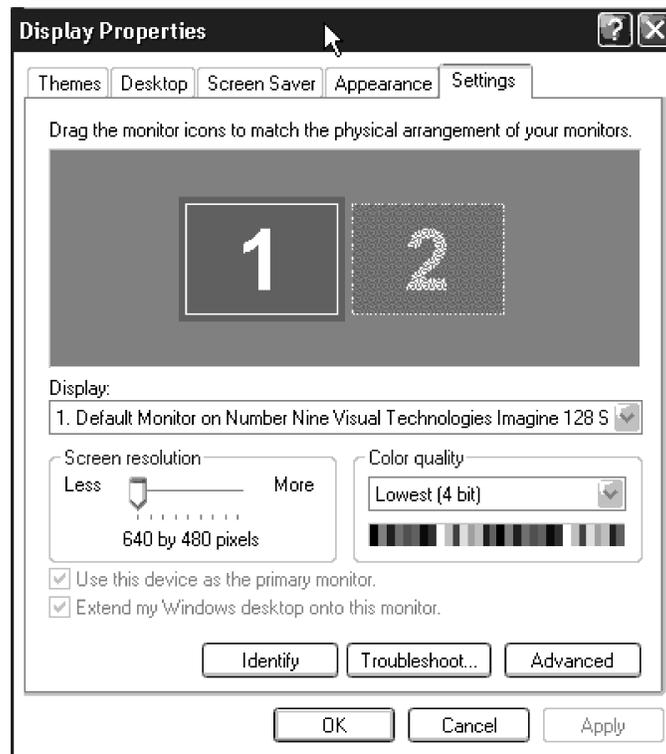

Figure 20: Windows XP Display Properties Setting Tab before the Barcomed 2MP1 drivers have been installed.

Note: The system shown in figure 18 has two BarcoMed 2MP1 installed and NO 3rd party VGA card. The first rectangle, "1", shown is the primary head which is on the first BarcoMed 2MP1. Use this device first when installing the BarcoMed 2MP1driver. Rectangle "2" the head on the second BarcoMed 2MP1 installed in this system. Your configuration may be different.

Setting the resolution of your high resolution monitor

SPECIAL NOTE: If you are using the VGA capabilities of your 2MP1 you **must** reboot in **VGA Mode**. If you do not reboot in VGA Mode Windows XP may select a resolution that is not compatible with your high resolution monitor and you will then need to reboot in VGA Mode. If you have multiple BarcoMed 2MP1 boards installed you only need to boot in VGA mode when setting the resolution for the first monitor installed. If you are using a 3rd party VGA card reboot normally and log on using an account with administrative privileges.

To set the resolution for you monitor follow these steps:

1. Log on using an account with administrative privileges**.**

2. Open the "Display Properties Control Panel" by right clicking on the desktop, then select "Properties".

3. Select the **"Settings"** tab (see Figure 21 on the next page). If you are using a single BarcoMed 2MP1 and no 3rd party VGA card, there will be only a single desktop to select from. If you are setting the resolution for additional BarcoMed 2MP1's select the **rectangle** that represents the BarcoMed 2MP1 imaging board you are working with.
   SPECIAL NOTE: If the you are using the VGA capabilities of your BarcoMed 2MP1 Imaging Board, the resolution for that board will still be set to a VGA resolution of "640 x 480" pixels. If the BarcoMed 2MP1 Imaging Board is not running VGA, the device may not be enabled yet. To enable the device check the "Extend my Windows desktop into this monitor" **checkbox**. Click the **"Apply"** button.

4. Click on the **"Advanced"** Button.

5. Select the **"Adapter"** tab and then click on the **"List All Modes…"** button. Select the resolution and refresh rate that your monitor supports from the dialog box and click **"OK"**. Click **"OK"** on the bottom of the Adapter Control Panel. If the **"OK"** button on the bottom of the Adapter Control Panel is not visible, press the **"Tab Key"** once and then press **"Enter"**.

6. Click **"OK"** in the "Windows will now apply your new desktop settings" dialog box. Your high resolution display(s) should now synchronize and display the Windows desktop.

7. Click **"Yes"** when asked, "Your desktop has been reconfigured. Do you want to keep these settings?" Repeat steps 1 – 7 for each monitor on all the BarcoMed Imaging Boards installed in your system. You will need to extend your desktop to each additional monitor connected to a BarcoMed 2MP1 prior to setting its resolution.

8. When you have set the resolution for all of your high resolution monitors, restart your computer and boot normally.
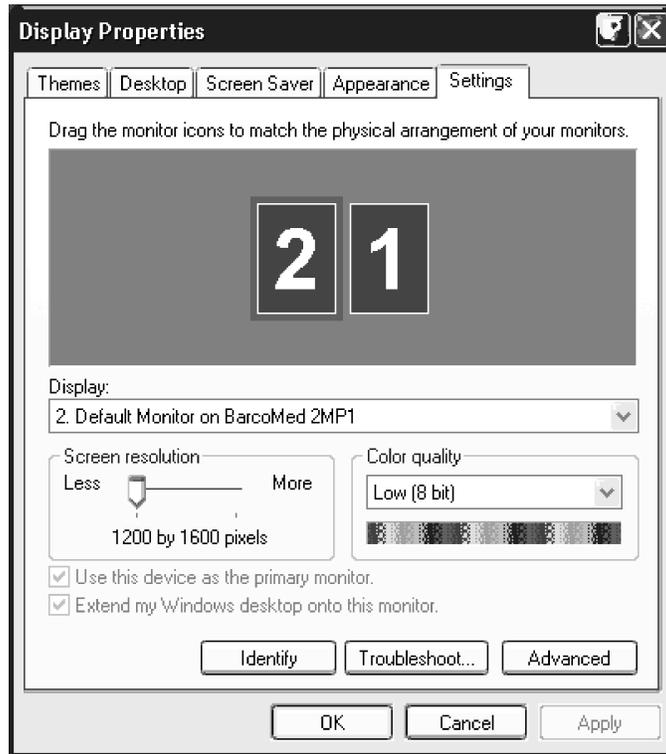

Figure 21: Windows XP Display Properties Settings Tab after the BarcoMed 2MP1 drivers have been installed and the resolution set.

Note: The system shown in figure 19 has two BarcoMed 2MP1s installed, one with VGA enabled. Your configuration may be different.

BARCO METHEUS CONFIGURATION TAB

Introduction

After the BarcoMed 2MP Windows Display Driver is installed, a new Display Properties tab is available for configuring special features of the BarcoMed 2MP board. Please note that you must have logged on to Windows using an account with administrator privileges in order to use the BARCO Metheus Control Panel to change any display settings.

1) Open the "Display Properties Control Panel" by right clicking on the desktop, then select "Properties"..

2) Under Windows NT 4.0, Click on the "BARCO Metheus Configuration" Tab. (see figure 22, below).

Under Windows 2000, click on "Settings" tab. Double click on the rectangle that represents the BarcoMed 2MP to bring up its property page. Click on the "BARCO Metheus Configuration" tab (see figure 23, on the next page).

Under Windows XP, click on "Settings" tab. Double click on the rectangle that represents the BarcoMed 2MP to bring up its property page. Click on the "BARCO Metheus Configuration" tab (see figure 24, on the next page).
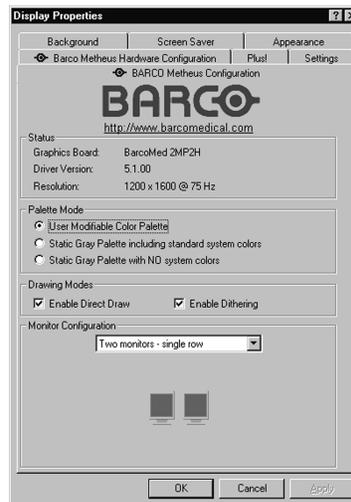

Figure 22: Configuration Tab under Windows NT 4.0

Figure 23: Configuration Tab under Windows 2000

Figure 24: Configuration Tab under Windows XP

Status

Displays the current BarcoMed Imaging Board, driver, and the currently selected display resolution.

Graphics Board

This displays the current BarcoMed Imaging Board.

Driver Version

This displays the current BarcoMed driver version.

Resolution

This displays the currently selected display resolution.

Palette Mode

You can choose one of the following Palette Modes:

UserModifiable Color Palette

This option allows applications to modify the palette contents dynamically. As indicated by the picture below, this mode reserves the first 10 and last 10 entries in the palette for the Windows operating system, but applications can manipulate the middle 236 entries. This is the standard palette mode as configured by Windows.

```
0          9                                    246        255
+----------+------------------------------------+----------+
| system   |    remaining palette values        | system   |
| colors   |                                    | colors   |
+----------+------------------------------------+----------+
     ^
palette entry 6 has
RGB value of
(0,128,128)
```
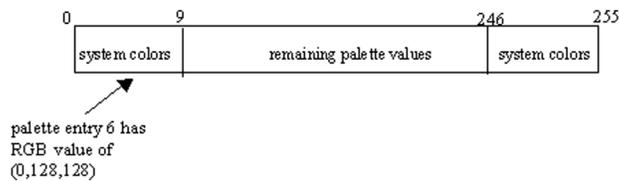
Static Gray Palette including standard system colors

This option sets the palette to be a static set of 256 gray values. Therefore, applications are denied the ability to dynamically change or allocate palette entries. This prevents palette conflicts between applications, which can cause image color values to appear distorted in the background application.

As shown in the next picture, the 20 standard system colors are converted from RGB to gray values. The rest of the 236 entries from

index 10 to 245 contain the missing gray values so that the palette has the full 256 gray values within it.
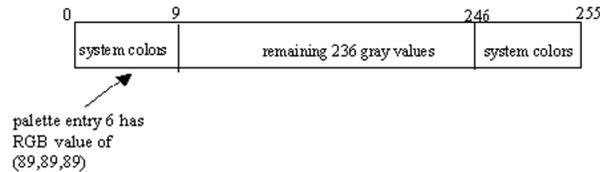
Please note that dithering is not permitted while in this mode. The Enable Dithering check box will be grayed-out, and dithering will be automatically disabled regardless of whether this check box is checked. This complies with the Windows standard interface method. If you are unsure whether or not your application requires this "Static Gray Palette including Standard System Colors" mode, contact your application provider.

Static Gray Palette with NO system colors

This option sets the palette to be a static linear ramp of 256 shades of gray. Therefore, applications are denied the ability to dynamically change or allocate palette entries. This prevents palette conflicts between applications, which can cause image color values to appear distorted in the background application.

As shown in the picture below, each of the 256 entries in the palette has an RGB value of (i, i, i) where i is the index from 0 to 255.

If you wish to use a static gray palette we recommend using the "Static Gray Palette including Standard System Colors" option instead of this one. This is due to the fact that some applications assume that the first and last 10 entries of the palette are the standard system colors. In this palette mode, these entries are made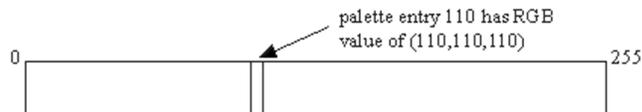 up from entries in the bottom or the top of the gray ramp. Please note that dithering is not permitted while in this mode. The Enable Dithering check box will be grayed-out, and dithering will be automatically disabled regardless of whether this check box is checked. This complies with the Windows standard interface method. If you are unsure whether or not

your application requires this "Static Gray Palette with NO System colors" mode, contact your application provider.

Drawing Modes

You can choose one or both of the following Drawing Modes:

Enable DirectDraw

This option allows the user to enable or disable DirectDraw. DirectDraw is a software interface that provides direct access to display devices while maintaining compatibility with the Windows graphics device interface (GDI). DirectDraw provides a device-independent way for applications to gain access to the hardware features of specific display devices. If you enable DirectDraw, your application will have the choice of using DirectDraw or GDI. If you disable DirectDraw, your application will use GDI instead of DirectDraw. Please note that in any case, your application can always use BarcoMed driver functions (i.e. WinBarco) or other graphics extensions (such as OpenGL).

Enable Dithering

This option allows the user to enable or disable dithering. Dithering is a technique for increasing the perceived range of colors in an image at the cost of spatial resolution. Adjacent pixels are assigned differing color values; when viewed from a distance, these colors seem to blend into a single intermediate color. The technique is similar to the half-toning used in black-and-white publications to achieve shades of gray. Please note that this option is only available when the User Modifiable Palette Mode is selected. This is because dithering is only supported under Windows when the display is palletized. If either the "Static Gray Palette including Standard System Colors" mode or the "Static Gray Palette with NO System colors" mode is selected, the "Enable Dithering" check box will be grayed-out, and dithering will be automatically disabled regardless of whether this check box is checked. This complies with the Windows standard interface method.

Monitor Configuration

This option allows you to select the number of monitors that the current display boards should drive, as well as how the monitors should be positioned. For example, if the current board installation is capable of driving four heads, but you only have three monitors which are placed in a single row, then you can select the "Three monitors –

one row" option from the pull-down list. This would cause the Windows virtual desktop to be resized to fit on the three monitors, and you can move your cursor horizontally from one screen to the other.

If "Custom Configuration" is displayed, it means that the current monitor configuration was set via the registry and it doesn't agree with any of the configurations that the display control panel supports. Contact Barco Medical Imaging Systems for further information.

Languages supported

The Barco Metheus Configuration Tab supports the following languages:

English (U.S) (default)
Dutch
German
Korean
Japanese
Simplified Chinese
Traditional Chinese

To change between the languages select the correct region via the Regional Settings Control Panel in your machine's Start > Settings > Control Panel.

BARCO METHEUS HARDWARE CONFIGURATION TAB

Introduction

The BARCO Metheus Hardware Configuration Tab is used for gathering information about BarcoMed imaging boards. For all BarcoMed imaging boards it will display PCI information. In addition for BarcoMed imaging boards based on the AURA video chipset it will also display information about the Firmware installed on the board.

BarcoMed Board Types		
AURA Boards	**Non-AURA Boards**	**BARCO Metheus Hardware Configuration Tab Support**
2MP2H		PCI and Firmware Information
3MP2FH		PCI and Firmware Information
5MP2AURA		PCI and Firmware Information
	2MP1	PCI Information Only
	2MP1NT	PCI Information Only
	2MP2	PCI Information Only
	4MP2	PCI Information Only
	5MP1H	PCI Information Only
	5MP2	PCI Information Only

To access the BARCO Metheus Hardware Configuration Tab do the following:

1. Open the "Display Properties Control Panel" by right clicking on the desktop, then select "Properties".

2. Under Windows NT 4.0, Click on the "BARCO Metheus Hardware Configuration" Tab. (see figure 25, below).

   Under Windows XP and Windows 2000, click on the "Settings" tab. Double click on the rectangle that represents the BarcoMed 2MP2H to bring up its property page. Click on the "BARCO Metheus Hardware Configuration" tab (see figure 26, on the next page).

Figure 25: BARCO Metheus Hardware Configuration Tab under Windows NT 4.0

Figure 26: BARCO Metheus Hardware Configuration Tab under Windows 2000 and Windows XP

Using The BARCO Metheus Hardware Configuration Tab

Device

Displays the current BarcoMed Imaging Board, driver, and the currently selected display resolution.

Identify Device: This button is for BarcoView Metheus internal use only and is greyed out.

PCI Information

Device ID: Displays the device's PCI Device ID number.

Vendor ID: Displays the device manufacturer's PCI Vendor ID number.

Subsystem ID: Displays the device's PCI Subsystem ID number.

SubsystemVendorID: Displays the device's PCI Subsystem Vendor ID number.

VGA Status: Displays whether the VGA capabilities of the BarcoMed board are enabled or disabled.

Firmware Information

Product Name: Displays the name of the BarcoMed imaging board installed in the selected PCI slot.

Serial Number: Displays the serial number of the BarcoMed imaging board installed in the selected PCI slot.

VGA Bios Version: Displays the VGA Bios version for the BarcoMed imaging board installed in the selected PCI slot.

Firmware Version: Displays the firmware version for the BarcoMed imaging board installed in the selected PCI slot.

Hardware Version: Displays the Hardware Version for the BarcoMed imaging board installed in the selected PCI slot.

"Advanced ..." Button: By clicking on this button, the user can display more information about the BarcoMed imaging board installed in the selected PCI slot.

"Generate Report" Button: Clicking this button will produce two reports. It will first run the Windows Diagnostics program which will generate a report that is saved to a text file. For Windows XP and Windows 2000, this file will be saved on the c:\ drive and it will be named BarcoMetheusReport.txt. For Windows NT 4.0, this file will be saved on the desktop and it will have the same name as the machine for which the report is being generated. The other report that is generated contains information about the Barco display adapters installed in the system and will be named BarcoMedDeviceInfo.txt. This report will be saved on the desktop. These files can be emailed to our customer support department when reporting a problem. To locate the closest BarcoView Support office, see the Support section on www.barcomedical.com. If your system is connected to the internet and a web browser is installed you can click on the link at the top of the BARCO Metheus Hardware Configuration Tab to get to our web site.

"Update Device..." Button: Clicking this button will run the BarcoMed Hardware Configuration Wizard. This program allows the user to flash update the firmware stored in the ROM of the currently selected BarcoMed imaging board. The BarcoMed Hardware Configuration Wizard is a "wizard style" application that uses dialog boxes to guide the user through the flash update procedure. The user will be prompted to select a firmware update file to use for the update therefore you will need a firmware update file for your specific BarcoMed imaging board in order to update it's firmware. This file will be provided by BarcoView if and when a firmware update is required.

Special Note: The BarcoMed Hardware Configuration Wizard is applicable only for AURA-based imaging boards.

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BARCO METHEUS DPMS OVERVIEW

Introduction

The Barco Metheus DPMS (Display Power Management Signaling) Screen Saver allows the user to set power and monitor saving features for medical monitors driven by BarcoMed Imaging Boards. At the end of the workday, the monitor will enter certain DPMS states as requested by the imaging board. This is accomplished through standardized signals between the monitor and imaging board.

The default DPMS state is the Off state. In addition to simply entering the Off state after the work day, the user can specify that the monitor first go through two other DPMS states before going into Off state. These two other states are Stand-By and Suspend. The user can specify how much time should be spent in each state in the "Amount of Time in each DPMS Power State" section.

A valuable feature of the Barco Metheus DPMS Screen Saver is that it will automatically ensure that CRT based monitors are warmed up for the start of the work day. All CRT based monitors require some warm-up time before they are at full performance.

On Barco CORONIS displays, the I-GUARD will stabilize the image within a few seconds after the monitor returns to the active state, thus eliminating the need for a warm-up period at the beginning of the workday.

On CRT based monitors, such as the Barco MGD series, a "regular" screen saver can be invoked during user inactivity during the workday. This "regular" screen saver and its settings can be chosen from the "Screen Saver During Work Day" section. We recommend using an all black screen saver, such as the "Barco Metheus Blank Screen" saver, for the longest phosphor life.

On LCD based monitors, such as the Barco CORONIS displays, it is not necessary to invoke a screen saver as there is no CRT phosphor to preserve.   However, one can extend the life of the backlight in the LCD monitor, in addition to realizing great power savings, during period of user inactivity by using DPMS to quickly enter the Off state. We recommend setting the work day to be as short as possible to get the maximum power savings on CORONIS displays.

The Barco Metheus DPMS Screen Saver can also be used when no one is logged on.

BarcoMetheus DPMS Screen Saver Options

From the "Barco Metheus DPMS Screen Saver Control Panel" you can change many DPMS screen saver elements simultaneously. The DPMS screen saver elements in each scheme are work schedule, work day screen saver, DPMS settings after workday, and many additional options.

Current Scheme

Lists the three "DEFAULT" schemes which you can use as they are. Or you can modify them to meet your office's schedule.

Save As

Saves your current Barco Metheus DPMS Screen Saver settings. The name you specify will appear in the Scheme list so you can easily restore these settings later.

Delete

Deletes the scheme that is selected in the Scheme box.

Work Schedule

Select the begin and end times for each workday. If the system is not expected to be used, leave both start and end workday times as the same time.

Begin Work Day

The "Begin Work Day" time is the time after which the system is expected to start being used. During the workday, the screen saver selected by the user in the "Screen Saver During Work Day" section is used during user inactivity.

End Work Day

The "End Work Day" time is the time after which the system is not expected to be used any more for that day. After the workday, the display is set to one of the DPMS states (Stand-By, Suspend, or Off) by the imaging board during user inactivity.

Screen Saver During Work Day

On CRT based monitors, such as the Barco MGD series, a "regular" screen saver can be invoked during user inactivity during the

workday. This "regular" screen saver and its settings can be chosen from the "Screen Saver During Work Day" section. We recommend using an all black screen saver, such as the "Barco Metheus Blank Screen" saver, for the longest phosphor life.

On LCD based monitors, such as the Barco CORONIS displays, it is not necessary to invoke a screen saver as there is no CRT phosphor to preserve. However, one can extend the life of the backlight in the LCD monitor, in addition to realizing great power savings, during period of user inactivity by quickly entering the Off state. We recommend setting the work day to be as short as possible to get the maximum power savings on CORONIS displays.

Available Savers

Lists the available screen savers.

Settings

Changes settings for the selected screen saver.

DPMS Settings After Work Day

If you have an imaging board that supports DPMS calls, then you will be able to set the DPMS Settings for after the work day. Otherwise, a text box will be displayed tell you why DPMS functions are not available.

Amount of Time in each DPMS State

After the workday, the monitor will be placed into one of the following DPMS Power States: Stand-By, Suspend, or Off. The default setting is for the monitor to directly go into the Off State and spend no time in the Stand-By or Suspend states. If the user wishes to go into the Stand-By or Suspend states before going into the Off state, select the required amount of time for each state.

If requested, the monitor will first go into Stand-By state, then into Suspend state, and then into Off state. The properties of DPMS states are listed in the following table:

DPMS State	Power Savings	Monitor Recovery Time
On	None	N/A
Stand-by	Minimal	Short
Suspend	Substantial	Longer
Off	Maximum	Longest

Monitor Settings

Select the amount of time the monitor requires to warm-up. Since all CRT based monitors require some warm-up time before they are at full performance, this ensures that the monitor is ready for use at the beginning of the workday.

If you have a Barco Medical Monitor, select "Barco Quick Start." If a non-Barco monitor is being used, select the amount of time it takes your monitor to warm up via the "Monitor Setting" section. Contact your monitor vendor for this warm-up time.

On Barco CORONIS displays, the I-GUARD will stabilize the image within a few seconds after the monitor returns to the active state so there is no need for a warm-up time period.

Use As Logon Screen Saver

Check the box to use the Barco Metheus DPMS Screen Saver when no one is logged into the system.

Uncheck the box to use the default screen saver when no one is logged into the system.

Installing the BarcoMetheus DPMS Screen Saver

To install the DPMS Screen Saver, you must have the Microsoft Windows Installer program installed on your system. To verify that it is installed use Windows Explorer to search for the following file: **"msiexec.exe"**. If you do not find this file, you can install it from the BarcoMed Software CD by following the steps below. If the Windows Installer is installed on your system skip to step 6 below.

1. Insert the BarcoMed Software CD in your system's CD drive.

2. Use Windows Explorer to navigate to the following folder: **[CD drive]:\DPMS_ScreenSaver**\:
   On Windows NT 4.0 systems install the Windows Installer by double clicking on the file **"instmsiw.exe"**.
   On Windows 2000 and Windows XP systems install the Windows Installer by double clicking on the file **"instmsia.exe"**.
3. Restart your system if prompted to do so.
4. Now install the DPMS Screen Saver by double clicking on the file:
5. **"[CD drive]:\DPMS_ScreenSaver\setup.exe"**. This will launch the Windows Installer which will guide you through the DPMS install process. Click **"Next"** to continue.
6. The "Customer Information" page will appear. The Installer will automatically fill in the blanks using the information entered when Windows was installed on your system. You may change this information if you wish. We recommend that you install DPMS for all users of the computer. Click **"Next"** to continue.
7. The "Setup Type" page will now appear. Choose **"Typical"** to install the default schemes with English names. Choose **"Custom"** to install the default schemes with either Dutch or German names. Currently the default schemes are not supported in the Japanese, Korean and Chinese languages. W e recommend that the users of these three languages install the English default schemes and then rename and save them into their language in the DPMS configuration screen. Click **"Next"** to continue.
8. The "Ready to Install Program" page will now appear, click **"Install"** to install DPMS.
9. When the Windows Installer has finished installing DPMS, the "Installshield Wizard Completed" page will appear, click **"Finish"** to exit the program.

Getting started with the BarcoMetheus DPMS Screen Saver

The easiest way to get started is to select an existing Scheme and then modify it with your preferences. Schemes are separated into two kinds, DEFAULT (global) and PRIVATE (personal).

Upon installation, three default schemes are installed and no private schemes are installed.

Default schemes are visible to all users of the system. However, they can be modified only by users with administrator privileges. If a user who does not have administrator privileges tries to save a scheme using an existing default scheme name, an error message is

Page 77

displayed saying "you must have administrator rights to modify a default scheme." If an administrator saves a scheme using an existing default scheme name, a message is displayed to tell the user that the modification is saved to a default scheme and will be visible to all users. If the administrator saves a scheme using a new name, then the user is asked if the scheme should be saved as a default scheme or a private scheme. Since there is no distinction between how a default scheme and a private scheme is displayed, it is highly recommended that the user use a different naming convention to distinguish the two (i.e. use "DEFAULT: ..." for default schemes).

Private schemes are shared and visible to all users of the system. Users who do not have administrator privileges can create, modify or delete private schemes. However, only the user who created them can modify or delete them. When the delete button is pressed, the user is asked to confirm the delete request.

Using the BarcoMetheus DPMS Screen Saver

To set up the Barco Metheus DPMS Screen Saver using one of the three default schemes, please do the following:

1. Open the "Display Properties Control Panel" by right clicking on an empty space of the desktop and then select the **"Screen Saver"** tab. (See figures 27, 28 and 29.)

2. Select the **"BarcoMetheus DPMS Screen Saver"** in the "Screen Saver" drop down menu if it is not already selected.

3. Click on the **"Settings"** button. The "Barco Metheus DPMS Screen Saver Control Panel" will open. (See figure 30.)

4. Use the default schemes by selecting one of the three default schemes. Click **"OK"**. Then Click **"OK"** again.

   Note: If you make any changes to any of the settings of one of the three default schemes, the Current Scheme field will blank and you MUST SAVE your changes by clicking on the **"Save As ..."** button. When you click on the **"Save As ..."** button, the name of the last scheme you used will be automatically displayed, you can then choose to use that scheme name or enter a new name. After the you have saved the scheme, then click OK and the new scheme will be in effect.

Figure 27: Windows NT 4.0 Screen Saver Tab

Figure 28: Windows 2000 Screen Saver Tab

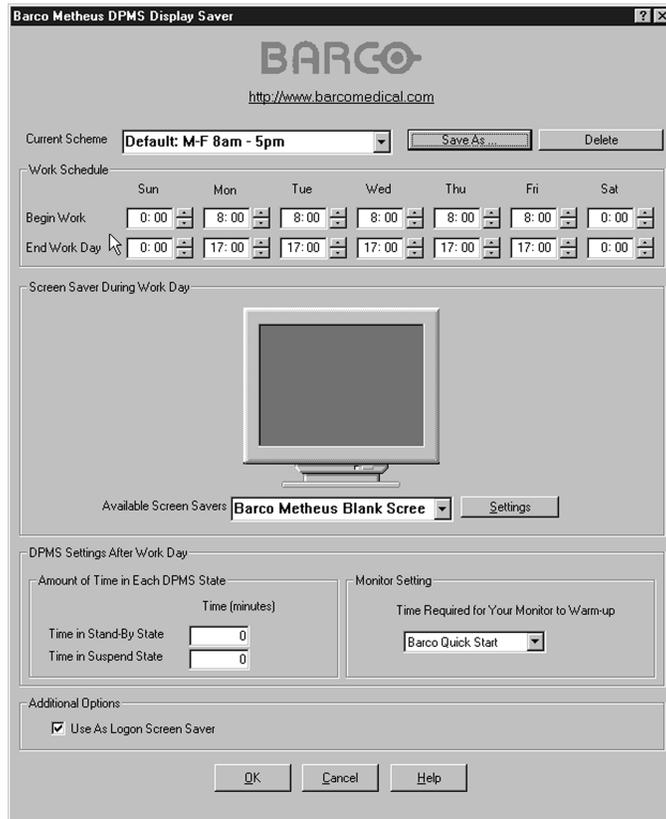*Figure 29: Windows XP Screen Saver Tab*

Figure 30: Barco Metheus DPMS Setting Control Panel

To create a new scheme by modifying one of the three default schemes please do the following.

1. Open the "Display Properties Control Panel" by right clicking on the desktop and then select the **"Screen Saver"** tab.

2. Select the **"BarcoMetheus DPMS Screen Saver"** in the "Screen Saver" drop down menu if it is not already selected.

3. Click on the **"Settings"** button. The "Barco Metheus DPMS Screen Saver Control Panel" will open.

4. Select one of the default schemes from the "Current Scheme" drop down menu.

5. Set the Work Schedule by setting the beginning and ending time of your workday for each day of the week.

6. Select the screen saver you wish use during the workday in the "Screen Saver During Work Day" section.

7. Select the amount of time you wish to spend in the Stand-By and Suspend states after the workday has ended. Please note that after the time specified has elapsed when you are in Stand-By or Suspend, you will automatically go into the Off state.

8. Select the amount of time it takes for your monitor to warm up. If you have a Barco Medical Monitor, select **"Barco Quick Start"**. If you are using a non-Barco monitor, select the amount of time it takes your monitor to warm up via the "Monitor Setting" section. Contact your monitor vendor for this warm-up time. On Barco CORONIS displays, the I-GUARD will stabilize the image within a few seconds after the monitor returns to the active state, thus eliminating the need for a warm-up period at the beginning of the workday.

9. If you wish to use this DPMS screen saver as the screen saver at logon time, check the **"Use As Logon Screen Saver"** box in the "Additional Options" section.

10. Save your preferences by pressing the **"Save As"** button and entering a new profile name in the **"Save Profile Setting"** dialog box.

11. Apply your new scheme by clicking **"OK".**

12. Click **"OK"** again to close the "Display Properties Control Panel".

Uninstalling DPMS

To remove DPMS screen saver from your system do the following:

For Windows NT 4.0 Systems

1. Launch the Windows Control Panel.

2. Then double click the **"Add/Remove Programs Icon"**.

3. Highlight **"DPMS Screen Saver"** in the Dialog Box. Click the **"Add/Remove"** button.

4. The Windows Installer will ask if you are sure you want to remove this program, click **"Yes"**.

5. When the Windows Installer has finished removing the program, click **"OK"** to exit the Add/Remove Program Properties dialog box.

6. Close the "Control Panel" window.

For Windows 2000 and Windows XP Systems

1. Launch the Windows Control Panel.

2. Then double click the on **"Add/Remove Programs"**.

3. Highlight **"DPMS Screen Saver"** in the "Currently Installed Programs" window. Click the **"Change/Remove"** button.

4. The Windows Installer will ask if you are sure you want to remove this program, click **"Yes"**.

5. When the Windows Installer has finished removing the program, click **"Close"** to exit the Add/Remove Program Control Panel.

6. Close the "Control Panel" window.