

AITech

Vision for Multimedia



Scan Converter Installation Guide

Software on supplied disks

Please note: The software included with your scan converter is **OPTIONAL**. It is not needed to make the scan converter work properly. This software is a screen control utility only. It is not a driver.

If you have not installed the software and you are having trouble making your scan converter work properly, installing the software will not help. It is recommended that you install your scan converter and have it working before you decide if you need to install the software - in most cases it is not needed.

Installation

There are three parts to setting up your scan converter - hardware installation, system setup, and software installation. Please note that there is extensive help on the AITech Web site (www.aitech.com).

HARDWARE INSTALLATION

1) CONNECTIONS

There are four connections necessary to hook up your scan converter. First shut your system down, turn it off and follow the instructions below.

- 1) Remove the cable connection from your monitor at the VGA card on the rear of your computer (Figure 4). (Does not apply to laptop installation.)
 - 2) Attach the 15-pin "D" connector attached to the Pocket Scan Converter 2000 to the VGA port on the computer (Figures 3, 4, 5).
 - 3) Attach the VGA cable from your monitor to the side of the Pocket Scan Converter 2000. [Not Required] (Does not apply to laptop installation.)
 - 4) Attach the video cable from the scan converter to the TV (discussed below).
 - 5) Finally attach the power adapter to the scan converter (figure 3).
- Check to see which type of *inputs* your TV or Display device offers. See the pictures of connector types later in this document if you are unsure.



Figure 1 -The image above shows the rear panel of a television set. Note the labeling of the three connectors associated with the scan converter installation. You may have only one or two of these connectors on your TV.

- If your TV, VCR, or camcorder uses either the "RCA" or "S-VHS" connectors, you **MUST** select which input you want to use. **FOR EXAMPLE:**

Your TV has an "RCA" style VIDEO IN connector. The TV **must** be switched to the **VIDEO IN** (sometimes VIDEO1, Aux, Input, Vid, Line, Line In, etc.) mode selection. Pressing an **INPUT**, **VIDEO**, or similar button on the device or it's **remote control** most often does this switching. There is a chart on our Web site listing many brands and their method of switching. In some rare cases the switching is done automatically.

IF YOU ARE UNSURE HOW TO MAKE THIS SELECTION, READ THE TV's MANUAL FOR HELP.



Figure 2 - Image showing the installation of the composite (RCA) video cable and the S-Video cable. Note: this is for illustration only - you will normally install one cable only.

- If your TV has **only** the "F" type connector, then you must use your **VCR** or obtain an **RF Modulator**. Most VCRs have a built in RF Modulator; this is the F connector labeled **Out, To TV** or **RF Out**.

An RF modulator has a **Composite** video input and has an "F" style output connector. The output connects **directly** to the **antenna** or cable input on your TV. Be **sure** that the channel **selected** on the TV **matches** the switch setting selected on the VCR or **modulator** (channel 3 or 4).

NOTE!!! An RF modulator is not the same device as the common video game connector box! Be sure that you are using a true RF modulator when attempting this kind of connection. . See the VCRs manual for details on using it to show the output of the scan converter. The MultiPro CTV and the 1108 have a **built-in** RF Modulator eliminating the need for the purchase of a separate unit.

2) Verify Installation

- Verify that **all** the cables are connected according to the installation instructions.

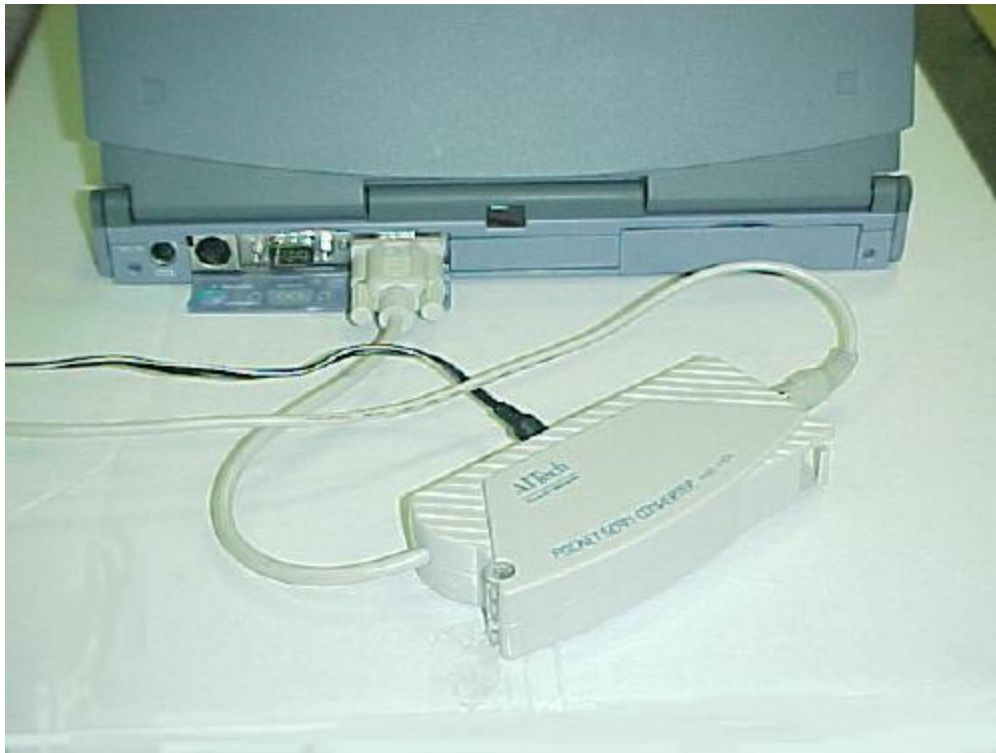


Figure 3 - The image above shows a typical Pocket Scan Converter 2000 installation on a laptop computer. If you are using a desktop computer your installation will differ only in the placement of the VGA card connector on the back of the computer and the need to plug your monitor cable into the scan converter VGA pass through connector.

- Verify that the Scan Converter has **power**, and that the **Power Adapter** is functioning. Be sure to check the power **light** on the scan converter. Note that the **Pro PC/TV 1** and

the **1108** have an automatic power-off function and the power LED will not be on when there is no VGA input. This means that when you turn off the computer these units will turn themselves off automatically. If you try to test the 1108 or the Pro PC/TV 1 right out of the box (not connected to an operating computer) the power LED will **NOT** light. If you have a laptop computer and the external VGA output has not been turned on (see below) your power light will not be lit. If necessary, a Volt-Ohm Meter can be used to measure the **output** voltage of the power adapter. The typical **non-loaded** voltage is **12-15VDC**.



***Figure 4** - The image above shows a close up of the monitor VGA connector at the rear of a computer after it has been removed from the video card VGA connector.*



Figure 5 - The image above shows a close up of the VGA connector at the rear of a computer. The Pocket Scan Converter 2000 VGA connector is positioned for plugging into the computer VGA connector.

3) LAPTOP USERS

- Make sure that the **laptop** computer has been switched to **External VGA** display mode. You will **know** you are in this **mode** because the **laptop** display will go **blank**. If you are not sure how to do this please refer to the manual for the computer. The following are some typical ways to switch video modes on a laptop.
 1. **HOTKEYS** - The majority of **laptop** computers use a **HOTKEY** combination to **switch** the computer among it's supported video display modes. An "**Fn**" key is typically used in combination with a function key (F1-F10 - usually has a monitor icon or the lettering **CRT/LCD**). There is a chart on our Web site listing many brands and their method of switching.
 2. **SOFTWARE**- There may be a **tab** in the **Display Properties** or a listing in the **Start/Programs** menu for your laptop. **Some** laptops require making this setting in the **BIOS Setup**. Refer to your laptop manual for details.
 3. **AUTO-DETECT** - Some laptops try to **auto-detect** if there is a monitor attached to the external VGA port, and will switch to the VGA mode if there is one attached when you boot up the laptop.

- **SCREEN MOVEMENT** - If you need to reposition the TV image on your TV please note that most laptop computers will **not** allow the screen to be moved while the LCD or internal display is active. This is a safety device to protect the LCD panels, and is not correctable on most computers. To get around this, the internal display must be disabled. With the LCD panel disabled - the external VGA port will usually respond to the screen movement commands.
- **DRIVE COMPRESSION** - Programs such as Stacker, DoubleSpace and DriveSpace prohibit use of the screen control software and the TSR's for scan converters from functioning properly. The solution is to completely remove the compression software from the system's hard drive or not use the screen control utility.

4) CONNECTOR TYPES:

Your TV **will** have one or **more** of the following connectors for inputting a TV signal.

<p>✘ Nie można wyświetlić połączanego obrazu. Plik mógł zostać przeniesiony lub usunięty albo zmieniono jego nazwę. Sprawdź, czy łącze wskazuje poprawny plik i lokalizację.</p>	<p>✘ Nie można wyświetlić połączanego obrazu. Plik mógł zostać przeniesiony lub usunięty albo zmieniono jego nazwę. Sprawdź, czy łącze wskazuje poprawny plik i lokalizację.</p>	<p>✘ Nie można wyświetlić połączanego obrazu. Plik mógł zostać przeniesiony lub usunięty albo zmieniono jego nazwę. Sprawdź, czy łącze wskazuje poprawny plik i lokalizację.</p>
<p>"F" CONNECTORS</p>	<p>RCA CONNECTORS</p>	<p>S-VIDEO CONNECTOR</p>

Figure 6 - pictures of connectors

"F" Connector - This is a **Threaded** connector used for the **antenna**, and Cable TV connectors. This is a **standard** connector for TV's, and VCR's. The **"F"** connector is for **RF** (Radio Frequency or broadcast) signals **ONLY**. **RF** signals combine the **VIDEO** and **AUDIO** information into **one signal** on a high frequency **RF carrier**.

RCA Connector - is the industry standard for audio and video connectors on consumer electronics devices.

S-video - (separated video) is a standard that has separated the **composite** video signal into its component parts.

SYSTEM SETUP - if you have a MultiPro Plus or Pocket Scan Converter 2000, you can skip this section.

Basic Settings

The scan converter requires four basic settings in Windows. These settings will be made differently depending on whether you use Windows 3.x or Win95/98. For Windows 3.x follow the instructions in the User's Manual. In Windows 95/98 you must make the three (shown settings shown below):

Desktop area = 640x480

Color Palette = 256 colors

Monitor type = Standard VGA 640x480

Scan rate - 60 Hertz (Hz)

WRITE DOWN ALL ORIGINAL SETTINGS BEFORE YOU CHANGE THEM.

With the release of Windows 98, there are now some 4 or 5 different versions and ways to make adjustments to the operating system. There were at least 3 releases of Win95 and now with Win98 Beta and the final release there were differences in making some settings.

Some of these differences are addressed in the setup procedures shown below. If you do not see the exact screen captures for your version of the operating system you should be able to get the general idea of what you need to do with the information that is available here.

All releases have the same main dialog boxes - some of the buttons to get to them may be different and you may see some Wizard boxes added in Win98 that were not there in Win95. Again, the dialog boxes where you make the important changes are substantially the same.

Right click a blank area on your desk top - you should see the menu shown below.



Figure 7 - right click menu for desktop

Click the **Properties** selection at the bottom of the menu as shown above.

Desktop Area and Color

The graphics below illustrate the settings that must be made in Windows 95/98. The illustrations show a Windows 98 installation. Note the setting for 256 colors in the **Color Palette** as well as the setting for 640x480 for the **Screen Area**.

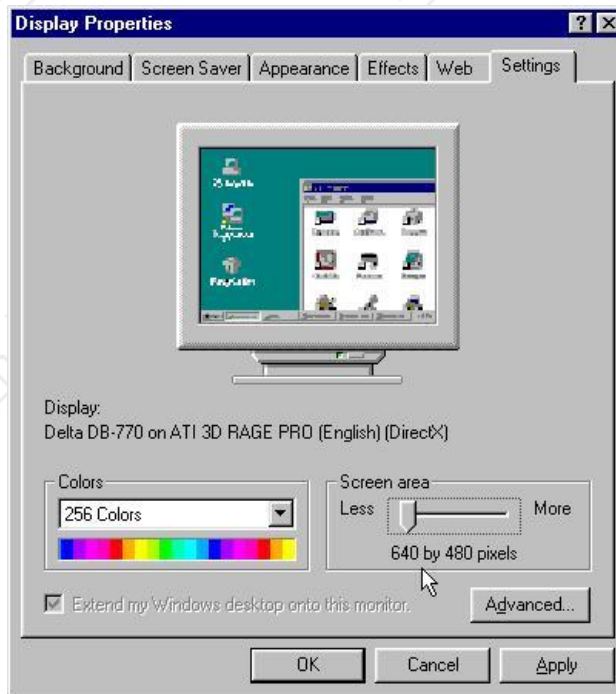


Figure 8 - Display Properties showing Color and Screen Size settings

Refresh Rate

You should have four or more tabs showing (figure 8). Click the **Settings** tab. The setting for the **Color Palette** is on the lower left, and next to it on the right is the setting for **Desktop Area**. Set these as directed above and shown in figure 8. You may have a tab that says **Scan Rate** or **Refresh Rate** or one with a manufacturer's name on it. Check this tab to see if there is a setting for the scan rate. Set this for **60 Hz**. In Windows 98 click on the **Advanced** button (figure 8) to see the dialog box below. Click the down arrow in the **Refresh Rate** box. Select 60 Hz. If there is no setting for 60 Hz, select **Adapter default**.

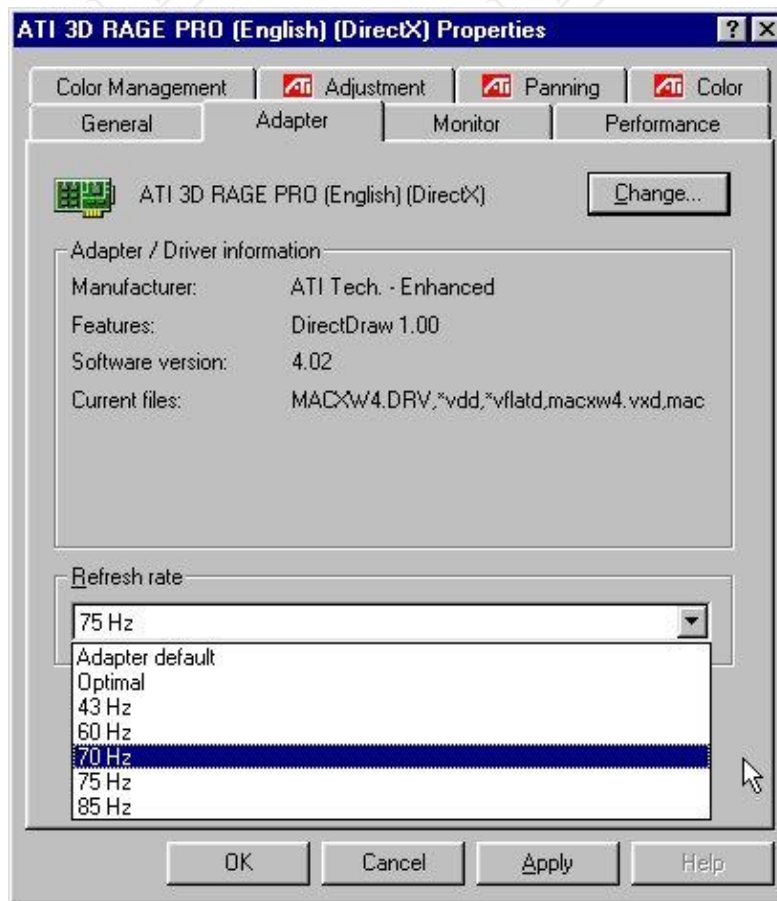


Figure 9 - Windows 98 Advanced dialog box showing the Adapter card and the Refresh Rate setting

To change your monitor type, click on the **Monitor** tab. Note the current monitor setting is shown next to the icon at the top left of the card (figure 10) and in the Wizard box in figure 11.

Monitor Type

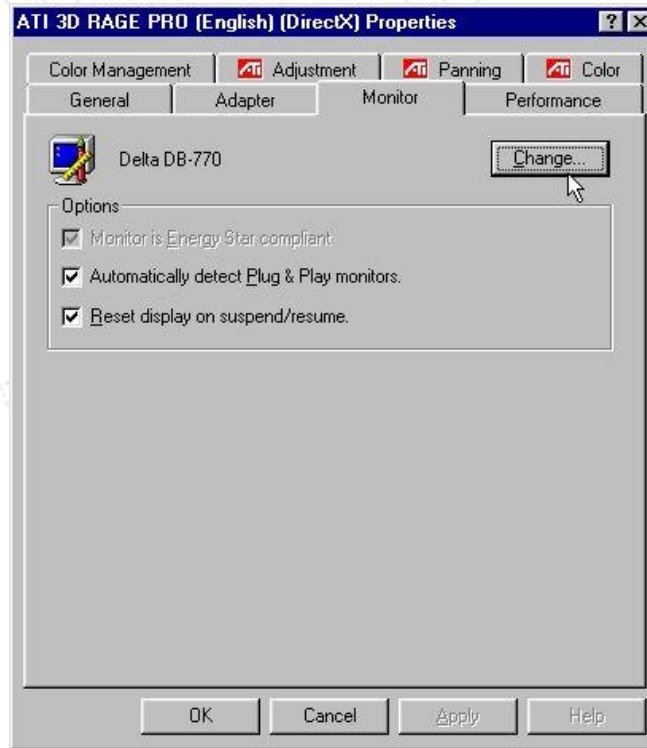
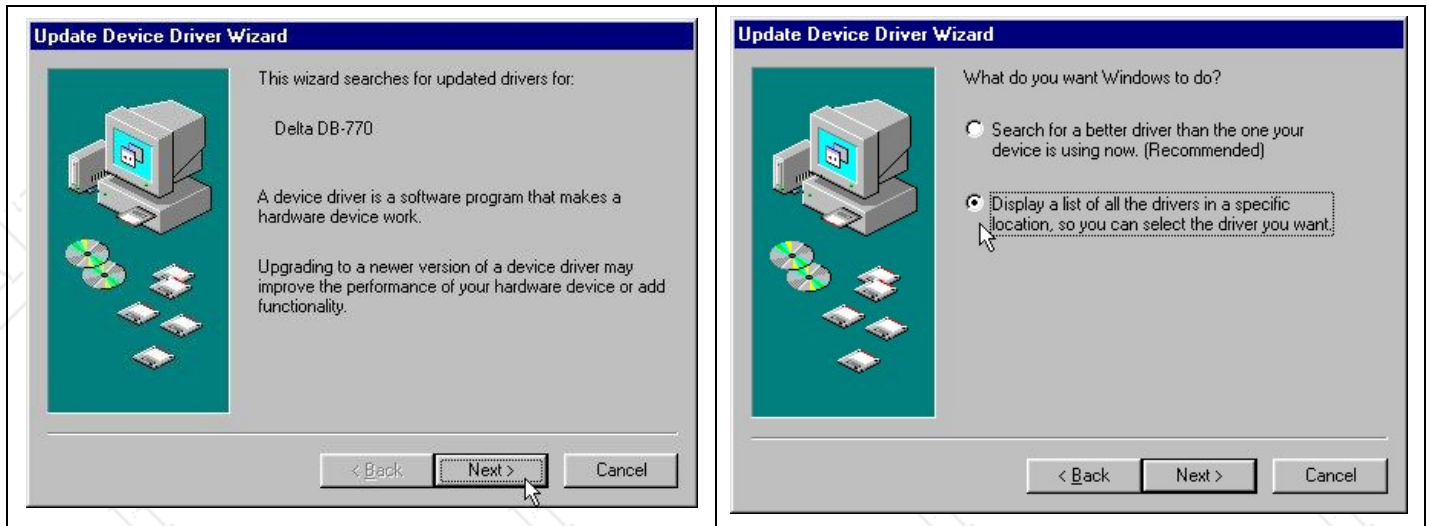


Figure 10 - Monitor card - click change

Click the Change button on the Monitor card to access the change dialog box. Windows 98 will give you two Wizard boxes before you come to the change monitor box settings (figure 13).



Figures 11 and 12 - Wizard boxes - click next and then click the bottom radio button

Click the Radio Button "Display a list of all the drivers in a specific location, so you can select the driver you want".



Figure 13 - Windows 98 Update Wizard (Win 95 Change Display Type) showing how to change display type.

For the original version of Win95 click on **Change Display Type** and set the **Monitor Type** to **Standard VGA 640x480**. In the newer versions of Windows 95 use the **Advanced Properties** button. Windows 98 has an **Advanced** button (see above). In Windows 95/98 you will find a drop down box at the bottom of the **Adapter** card. Click on the down arrow. You may see a listing of scan rates, select 60 Hz, or select **Adapter Default**.

TV/VCR Setup

You **must** set the TV for the proper source. Normally the TV is looking for input from the antenna or cable connection. You must set it to look at the **auxiliary** input on the rear of the TV. This is where you have connected your scan converter cable. This setting may be in a menu or via on a button on the remote. In either case you usually **need** the remote to make this setting. If you are connecting to a VCR you must select **its** external input. This is done with the remote or the VCR's menu system, or with a special channel such as 00. In either case you may have to refer to the unit's manual for proper setup. Refer to your TV or VCR manual to determine how to switch your equipment to the video mode. One clue is that you **must NOT** see a channel number on your TV screen - it must have something like: video, line, aux, etc. Please refer to a separate document on TV/VCR video mode switching. Please Reference There is a chart on our Web site listing many brands and their method of switching.

Laptop Setup

If you are using a **laptop** computer you must set the computer to output the video signal to the **external** monitor port. This is usually done with the **Fn** key and one of the **F1...F12** keys. The key is usually labeled **LCD/CRT** or **CRT** or has an icon of a computer monitor. There is a chart on our Web site listing many brands and their method of switching.

This hot key combination (Fn+F#) usually has three settings:

- a) internal only (**LCD**)
- b) both internal and external (**Simultaneous** or **Dual Display mode**)
- c) external only (**CRT**).

When set to the external display (CRT) mode, the LCD screen will go **black**. This is the mode in which you want to do your testing. Refer to your laptop manual for proper settings for the VGA port. For further information refer to your manual or contact the laptop maker's tech support. There is a chart on our Web site listing many brands and their method of switching.

VGA Pass-through

Connecting a VGA monitor to the scan converter is not necessary for operation of the unit.

The VGA **pass-through** is **not required** to use the scan converter. If using this device with a laptop, a VGA monitor may **not be wanted** or **available**. If you are experiencing a **problem** with your VGA monitor attached to the VGA pass through on your scan converter, there may be something **wrong** with the unit. You should be able to view your monitor just as you did **before** the scan converter was **attached**. Please call our tech support line or visit our Web site for further information and instructions.

Software Installation and Use

Note: The software included with your scan converter is optional software for sizing and moving the TV image. It is not needed to operate the scan converter. It is not necessary to install the software included on the supplied diskette to use your scan converter. It will not correct any problems that you may be having. Refer back to the **Hardware Installation** section and **System Setup** to correct any problems.

This software gives you a screen control utility that allows you to position the TV image right,

left, up and down. It can also resize the image to better fit on your TV screen. In most cases this software is not needed. Most modern TV's no longer need any position correction. The sizing can best be done in Windows itself or within specific applications.

Sizing can be done in three ways:

1. Some applications have sizing capabilities (i.e. PowerPoint)
2. Running programs in a window then, then sizing and positioning the window
3. Using the Aitech software

There is much information on our Web site (www.aitech.com) regarding this sizing issue.

Installing the Software

To install your scan converter software in Windows 95 or 98 follow the steps outlined below.

1. Insert Scan Converter Screen Control Utility disk into your floppy drive.
2. Click **Start - Run** - then **type a:\setup.exe** on the prompt line -- then click **OK**



Figure 14 - Run dialog box

3. Proceed through the installation until you see the dialog box shown below. If you are living in the USA or Canada you will leave this selection in the default position of NTSC. If you are anywhere else in the world you will likely choose PAL.



Figure 15 - select TV standard

4. Click **Next** to continue...
5. The next dialog box you see will be the **Options** box shown below.

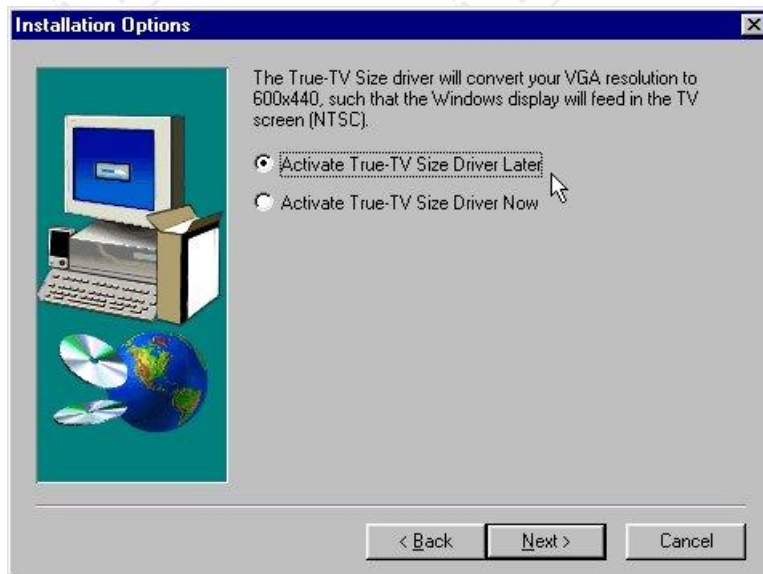


Figure 16 - click NEXT - do not change

Click **Next** to continue...

DO NOT CLICK THE "Activate True-TV Size Driver Now" selection.

Note: this option has been removed in later versions.

You can determine later if this option is needed. Clicking the *Activate Now* option can cause an incomplete installation if your video driver is not supported by the True-TV driver.

6. Continue with the installation of the software until it is complete.

Running the Software

Update the Driver

Updating the display driver changes your previous setting of 640x480 to 600x440. This shrinks the image (noticeable on monitor) to better fit the image on your TV screen. When you want to return to normal computer use when done with the scan converter do a Restore Driver (described below).

1. Click *Start - Programs - AITech Scan Converter - Update Display Driver* - Click **OK**



Figure 17 - Update Driver dialog

2. Click **OK**.

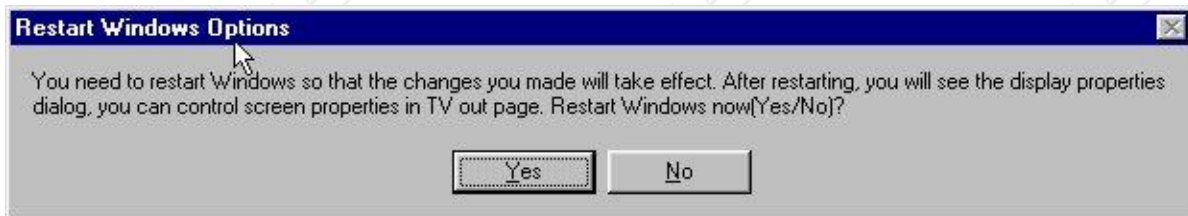


Figure 18 - Restart dialog

3. Note the message says you must restart to make these changes take effect. Click **Yes** to update the driver.

4. If your system has a video driver that is not supported by the True-TV Size driver you will see the warning box below.



Figure 19 - Update warning

At this stage you have two options - leave things as they are and work around any size issue you may have; or change to the Standard VGA driver so you can use the True-TV Size driver. Please see the document on our Web site dealing with sizing issues. If you decide to change your video display driver so you can resize your TV image, you **MUST** write down this current setting before changing to the Standard VGA Driver. If you change this setting and do not know what the old setting is **DO NOT** call AITech Tech Support because we cannot help you. You must call the maker of your computer system to find out what the original setting is so you can set it back.

WRITE DOWN ALL SETTINGS BEFORE MAKING ANY CHANGES.

Restore the Driver

When you are ready to set your system back to regular use restore the driver to its original settings.

1. Click *Start - Programs - AITech Scan Converter - Restore Display Driver* - Click **OK**



Figure 20 - Restore dialog

2. Click **OK** to continue

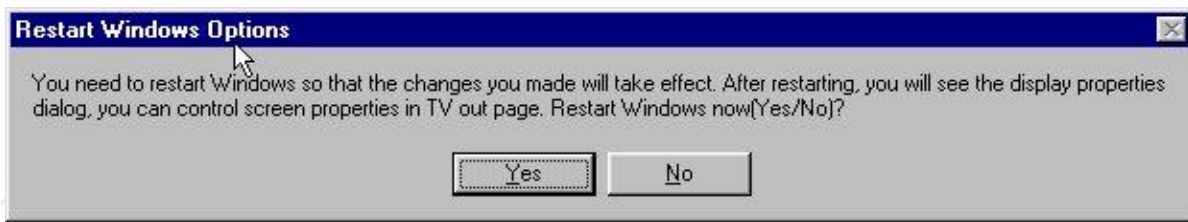


Figure 21 - Restart dialog

3. Note the message says you must restart to make these changes take effect. Click **Yes** to update the driver

If you try to restore the driver when the AITech driver is not installed you will get a warning box similar to the one shown below.



Figure 22 - Warning

4. Click **NO** because you do not want to proceed doing something that is not recommended.

Position Controls

To bring up the position controls **right** click on a **blank area** of your desk top - click **Properties** at the bottom of the menu - click on the TV Out Tab as shown below.

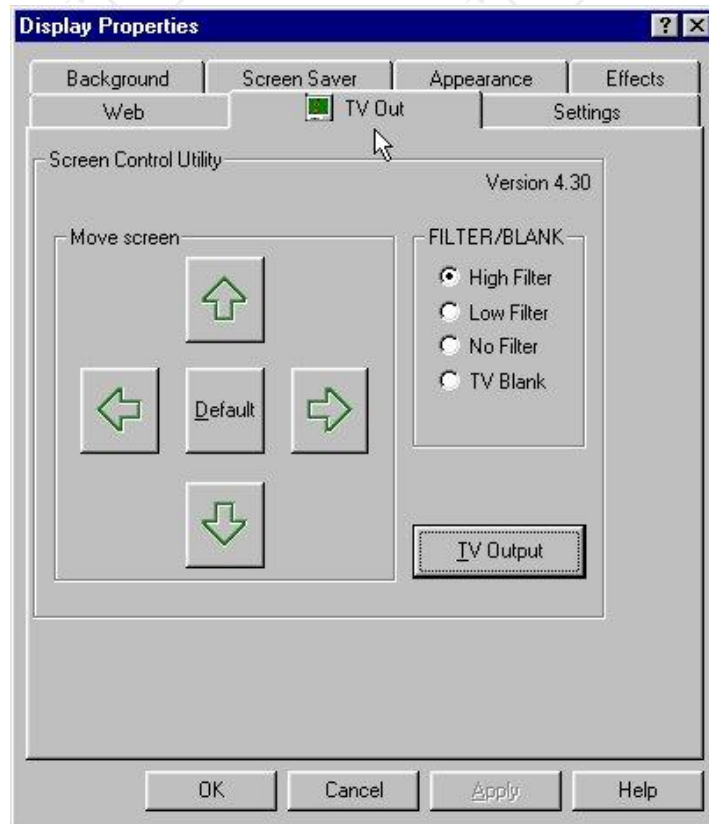


Figure 23 - TV Out card

It is **not** recommended that you use the TV out button. This will make several changes to your system without you being able to note the current settings. If you have read the *System Setup* section and followed those instructions you have already made the necessary changes to enable your scan converter to work properly for you.

Television Image Quality

It is important for you, the new owner of an AITech scan converter, to understand that your \$200 television cannot do the work of a \$3,000 (or even \$2,000) VGA computer monitor. A (relatively) inexpensive TV does not have the bandwidth (electronic capability) to display the fine text used in Windows and Windows applications. The text you see under the Windows 95/98 desktop icons is the finest text you will see in Windows. Unfortunately this is the first thing you see when you test out your new scan converter. Please use your scan converter for the purpose you purchased it for before you decide that the output to the TV is not what you think it should be.

General

You are probably looking at the **very fine** text that is under the folders and icons on the Windows **Desktop**. This text is about the **finest** text you will find displayed in Windows. A TV does **not** have the capability of **displaying** fine text clearly on the screen. If it did we would **all** be using cheap TV's on our computers **instead** of expensive VGA monitors. What you see **displayed** on your TV screen is a **function** of that TV. **Some** TV's are **better** than others, and this is **not** always a **function** of the **cost** of that TV. There are several **controls** in the TV that can **enhance** the **display** you see. Adjusting for color, sharpness, contrast, and brightness can help enhance the image coming from the computer.

A VGA **monitor** of a given size will **cost** ten to **fifteen times** that of a **TV**. A 21 inch TV costs about \$200 while a 21 inch monitor will cost you about \$3,000. The TV does **not** have the ability (**band width**) to make the changes that would allow you to see fine text clearly. You can opt for using **large text** within Windows. In most cases this display ability will **not** be a **problem** for you. Most likely you will be using this for **presentations** using applications like PowerPoint, or you will be playing **games**, showing **pictures**, working with **graphics**, or surfing the **web**. For these applications your scan converter will work well for you. It is only in the applications such as word processing, databases work and the like that you will have a problem with the fine text. This can be **corrected** by choosing **large** block or bold **fonts** for your presentation.

There are several things you can do to enhance the fonts on your system if you need to make presentations with programs that have smaller fonts.

Internet Explorer 4.0

You can select a **larger** font for displaying the Internet pages you are showing on the TV. Click **View - Fonts** - and select a larger font to your liking. Note that **Medium** is the default font size for the normal screen view.

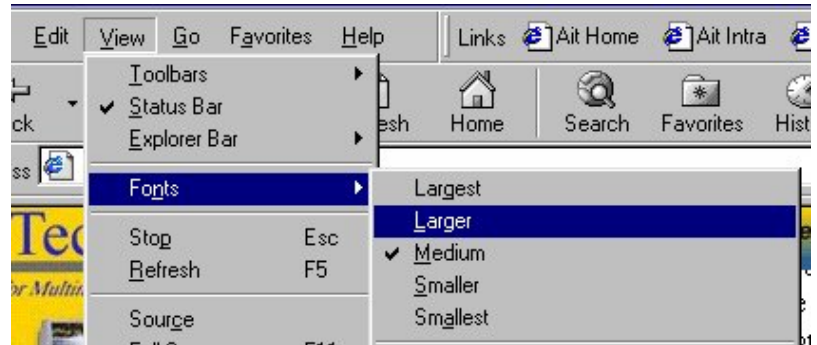


Figure 24 - Setting font size in IE 4.0

Windows 95/98 Desktop

In Windows you can specify the font you use for the different areas of the Windows Desktop. To get to your **Display Properties** just **right** click a **blank** area of your desktop - click Properties at the bottom of the menu - and click the **Appearance** tab at the top of the dialog box as shown below.

Please note the graphic to the left that shows you how to set the font for the different areas of the Windows. Note the **Item** list shown dropping off the bottom. This list will allow you to **change** the appearance of virtually all areas of your desktop. For the purpose of these instructions you will only be interested in changing the **font** size for the **Icons**.



Figure 25 - Selecting Icon properties

The graphic to the left shows you how to change the size of the font. Select the size you think will work and click the **Apply** button. If this setting is not suitable for your needs choose one higher or lower that you like better. Note that the default font size is 8 point text. Standard printed text is 12 point. The list goes up to 18 point text but this setting may be too large. Click the **OK** button when you find a font size that you like.

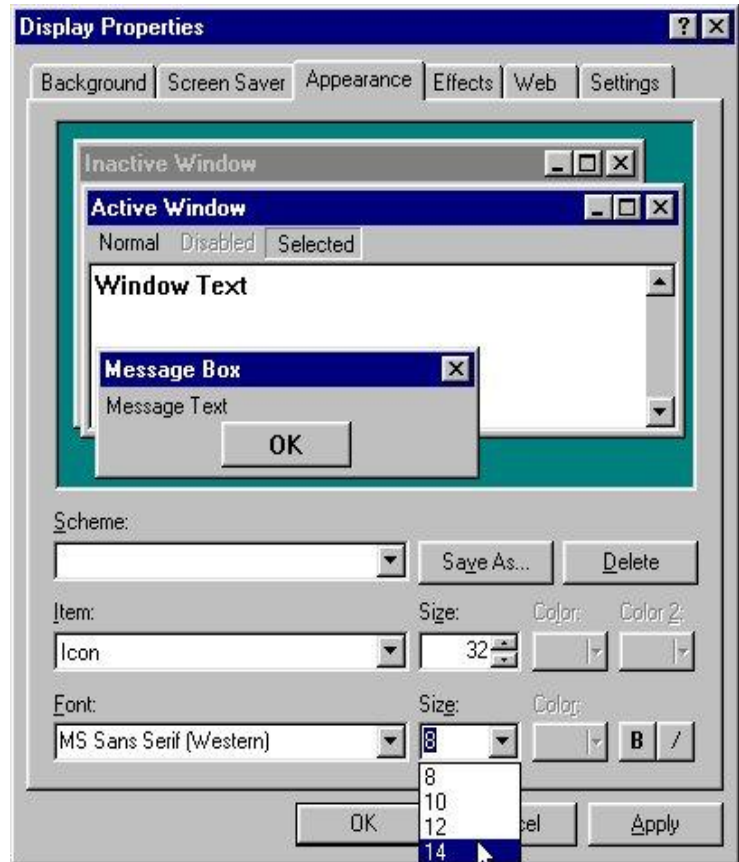


Figure 26 - Setting Icon font size

Macintosh Installation

Installing the Pocket Scan Converter 2000 on a Macintosh requires the use of the two supplied adapters. Note that one is longer than the other. The longer adapter is connected between the Macintosh and the scan converter (#1 below); the shorter adapter connects between the Mac monitor and the Pocket Scan Converter 2000 VGA output connector (#2 below). Note that some Macintosh models may not require the use of both of these adapters.

- 1) Connect your Pocket Scan Converter 2000 cable to the VGA Out side of the shorter adapter. The Mac In side of this connector attaches to the monitor connection on your Macintosh computer.



Figure 6 - Showing how to connect the Macintosh **input** adapter to the Pocket Scan Converter 2000 cable. The Mac In side of this connector connects to your Macintosh VGA (monitor) output connector

- 2) Connect the VGA IN side of the longer Mac adapter to the side of the Pocket Scan Converter 2000 on the VGA Out (VGA connector). Your Macintosh monitor cable then connects to the Mac Out side of the longer adapter.

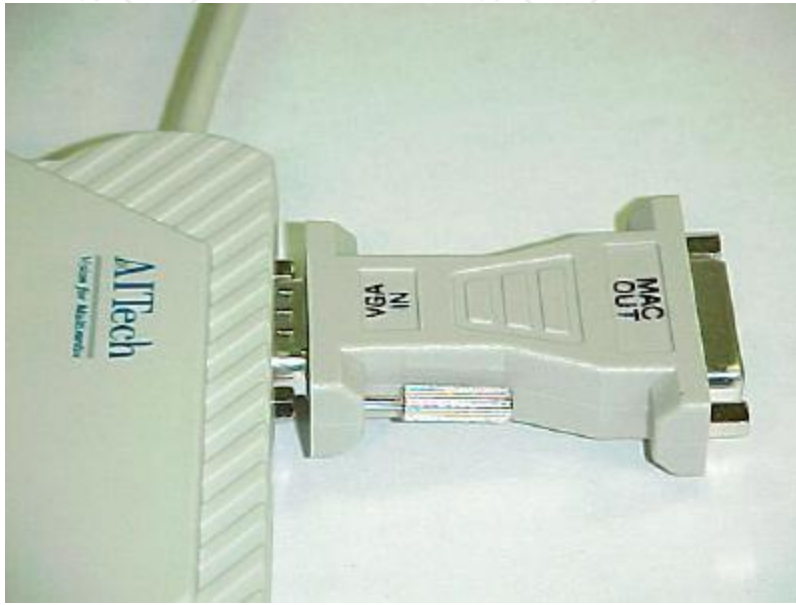


Figure 7 (below) - Shows how the Macintosh **output** adapter attaches to the VGA Out connector on the Pocket Scan Converter 2000. Connect your Mac monitor to the Mac Out side of the adapter.