Mac Picasso523

English

A Philosophy

a Graphics Accelerator

A Legend Continuos

Imprint

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Introduction

First of all we would like to thank you for buying our MacPicasso graphics accelerator. With the MacPicasso you have the ultimate stuff and so forth....

If you need to know the technical data, please refer to the index.

A Philosophy
a Graphics Accelerator

A Legend Continuos

A legend

In 1992, Picasso graphics accelerators were first produced for Amiga computers. Picasso was the first graphics accelerator for everybody. Easy installation, low price, high solidity, all these features were not to be found before the Picasso. With this graphics accelerator, people have access to new spheres of computer working. In other words: Picasso created a new Amiga.

It seemed that many usergroups had just waited for these new possibilities User manuals were translated in more than 20 languages - sometimes we did not even know about it. During the development of Picasso we paid attention to every detail and we tried to avoid any minor mistake. Now, the excitement of users, usergroups and distributors turned the Picasso into a success story.

A Philosophy

Why did you buy a Mac? Probably because a Mac makes it easier for you to express yourself. Especially with graphics, design and DTP Mac is still the best solution because Apple makes technology working for man and not the other way round.

A legend continuos

Like his prodecessors with the Amiga, MacPicasso brings the brilliant features of the Mac into full effect. MacPicasso replaces superfluous menus with useful and supportive ones. We have removed any impediment which could stay between your idea and the realization.

You do not know much about computers? MacPicasso is especially made for you. - everybody can install it.

Yours sincerely

Hubert Neumeier

For our last jokes we beg our serious reader's kind excuse and assure: from now there will be nothing else to laugh about.
(CBM 8050 user manual)

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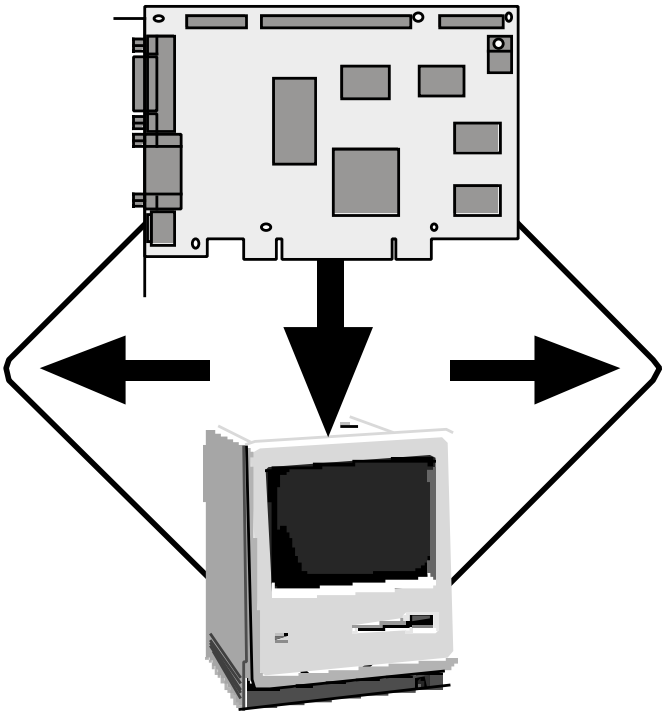
3.1 Monitors & Picasso *25*



1. Installing the Hardware

Do not be afraid ...

The installation of a graphics accelerator is easy and can be accomplished even by an absolute newcomer. Your seller may have told you may lose warranty if you open the computer but most courts have a different understanding nowa days. So do not lose courage. However, if you feel uncomfortable performing the installation, consult a qualified person.

... but do not be careless

Please follow the instruction cautiously step by step if you are going to install the graphic accelerator yourself.You may destroy (or damage??) the computer if you install the graphics accelerator when the computer is running or switched on. Therefore please follow exactly our instructions or the instructions in your computer's user manual. You will be rewarded by a tuned Mac.

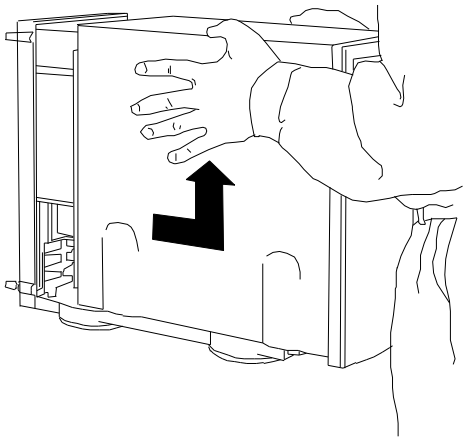
The following instruction describes the installation of MacPicasso523 in a typical PCI-Tower Appleor a typical Desktop Macintosh computer. In case your system's configuration is different one please look in your system's documentation in a chapter like "Computer Extension".

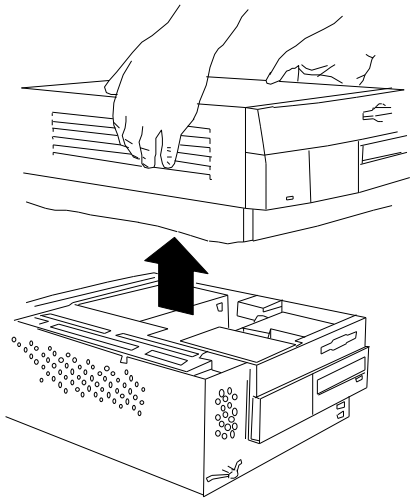
Installing the graphics accelerator

1. Switch off the computer. Please do not remove the power cable. This will help you to discharge yourself later on.

2. Displace the monitor signal cable from your computer. You may have to remove some screws.

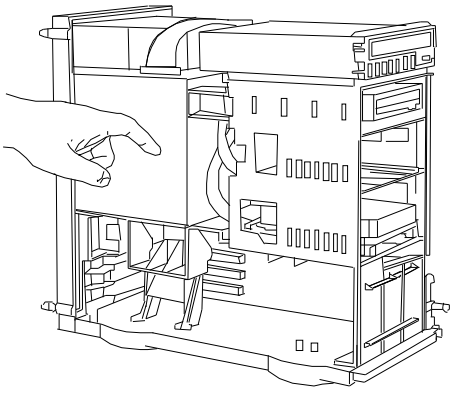
3. Displace the fixing screws from the cover and remove it. With the Umax Apus 3000 remove the handle screw and turn the computer cover upside down. Now displace the two screws from the bottom and remove the bottom. With Umax Pulsar, you should ask another person for assistance in opening the case.

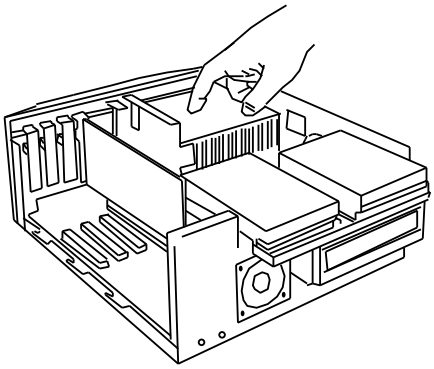




4.Touch the metal surface of the power supply unit. Do not freak out when a discharge sparks on your finger. It does, however prevent the electro-static charge from destroying your graphics accelerator or your computer.

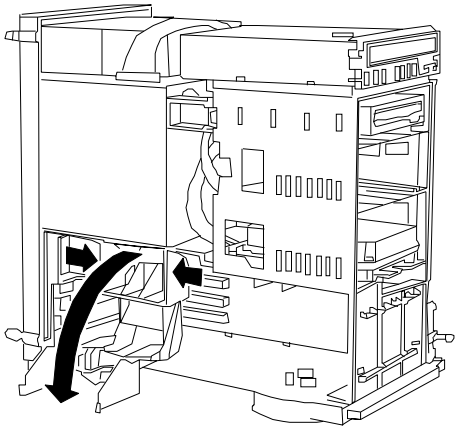
Touch the grounded power supply

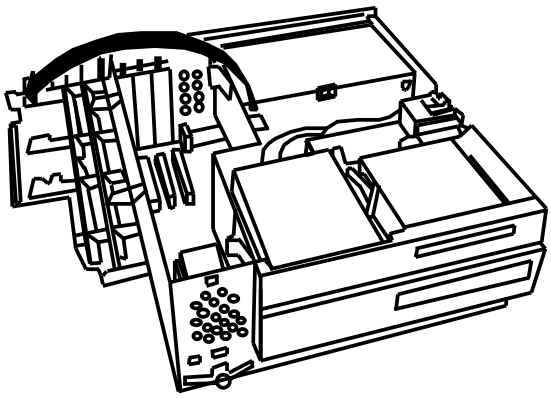




unit in order to prevent electro-static charge from destroying your graphics accelerator.

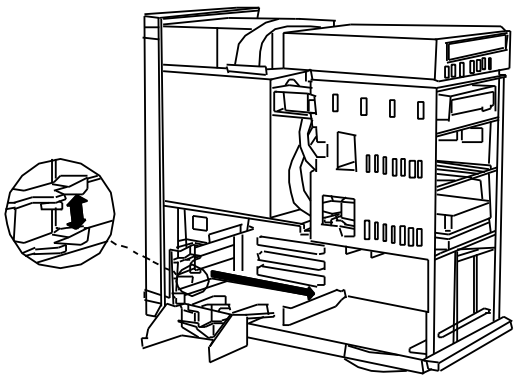
5. Turn down the auxiliary fan.



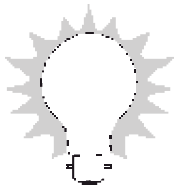


Press the plastic flaps in order to turn down the ventilator´s holding device.

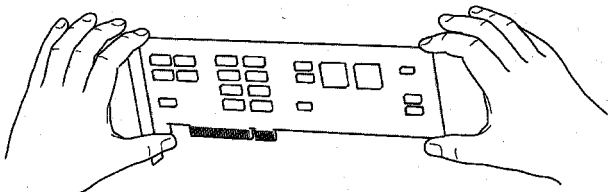
6. Remove the access cover which protects a free extension slot away from the access port. It will be replaced by MacPicasso´s slot tin together with the monitor connections.



Remove the access port cover out and away from the access port. Otherwise you cannot install the MacPicasso.

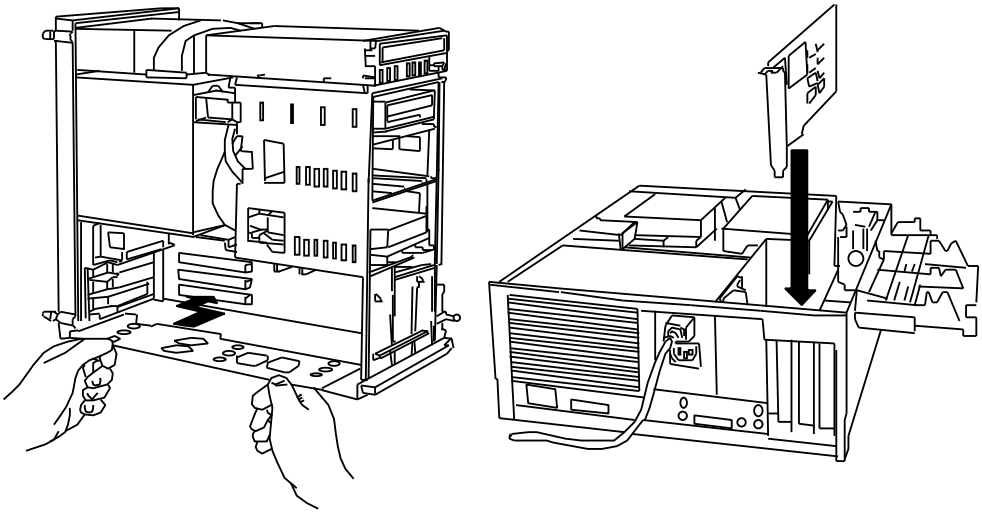


Normally, I would fix the removed access cover on the case bottom with scotch tape. However, it is important to fix the access cover firmly otherwise it may pop around in the computer and cause short cuts.



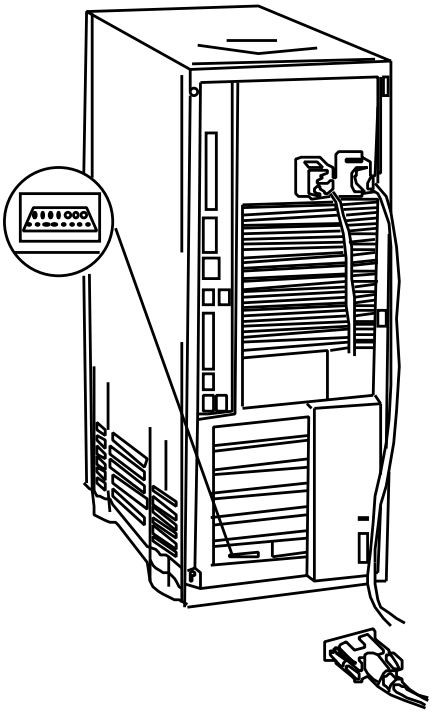
7. Hold the MacPicasso with both hands as it is shown on the picture. Do not cant the graphics accelerator in order to avoid short cuts. Put it in the free extension slot. For an Umax-Computer, MacPicasso must be installed with a screw.

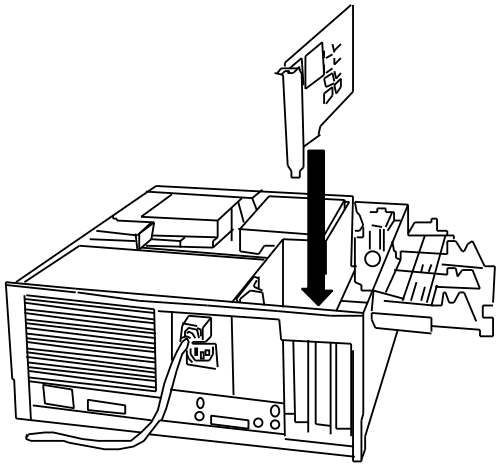
Do not use force!. The graphics accelerator should fit snugly into the exten - sion slot with a slight press. The plastic flaps that once held the access cover should now fix the MacPicasso. The MacPicasso is properly installed if the plastic flaps prevent you from removing it with one hand.



For some tower computers (such as Umax Pulsar 1500, S900), the data transport rate is different between different extension buses. Your Mac will work faster if you use a faster extension slot. Normally the higher the slot, the faster the extension slot. However, it is impossible to put the graphics accelerator in the fastest slot on top of the Umax computer because of mechanical problems of the UMAX tower case. We therefore advice you to put the MacPicasso in the second slot from above.

8. Turn up the auxiliary fan.
9. Close the computer cover.
10. Connect the monitor cable with MacPicasso

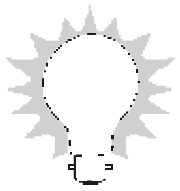


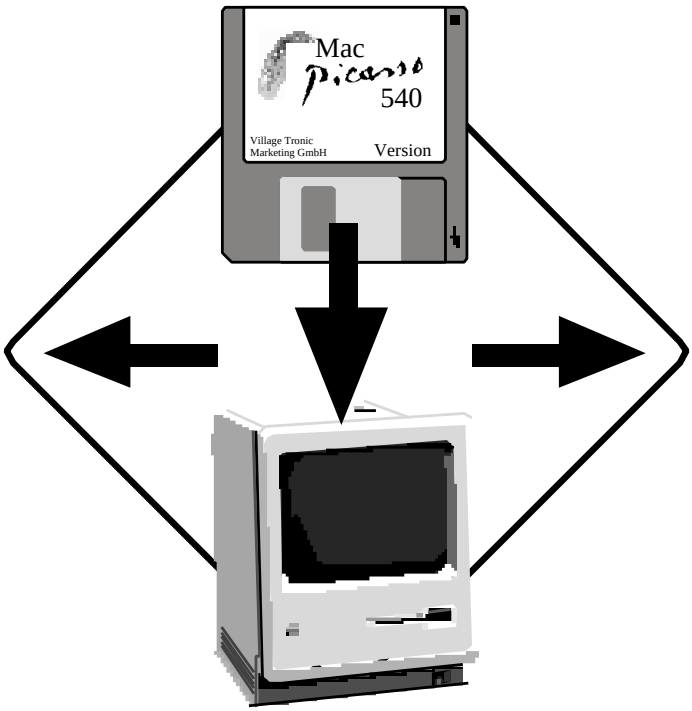


MacPicasso provides you with two monitor interfaces in order to make it easier for you to connect your monitor with it.

If you were using an adapter connecting your monitor with the computer you can normally omit it. This gives you more variety in choosing resolutions. Do not hesitate to do some

experiments. You cannot damage anything for trying out. There are more information's about resolution later in this book .

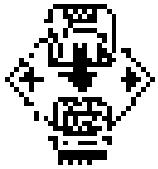




2. Installing the Software

Software installation:

1.Put the disk “Install Picasso Monitors” in the disk slot. You will see a disk symbol like this



2.Start the install program with a double click on “Install Picasso Monitors” you will see the following screen:

3. Click on “Continue”

The dialog box for standard-installation will emerge.

4. Click the button “Install”.(*)

(*) With standard installation all software components will be installed. If you click the button “Custom” you can choose the components you want to install. Others will be omitted.

A window will show you the progress of the installation:

5. After the installation you will see this window:

6. Click “Quit” in order to leave the installation program.

7. Choose “Restart” from the menu “Special” in order to activate the installed software program. The disk will be ejected so that you can remove it.

Software Concepts

There are three main parts of MacPicasso software : hardware driver, application accelerator and PicassoMonitors application. You'll find some small tools on disk.

The hardware driver runs out of a ROM chip on MacPicasso board, accelerator and PicassoMonitors are to be installed on your harddisk. Driver and accelerator do their work in the background – you'll probably never get in direct contact with them, but always use PicassoMonitors for changing resolutions, color depth and so on.

QuickDraw Accelerator

The QuickDraw Accelerator comes as a system extension called MacPicasso_Accel_PCI. MacPicasso board may be used without MacPicasso_Accel_PCI. Most of graphic operations (e.g. scrolling or moving of windows) are far slower. When high resolutions and color depth are choosen.

When the computer is started, the icon of MacPicasso_Accel_PCI will appear on the screen. If no MacPicasso accelertor is found, the icon will be crossed out. The crossed out icon will occur when the hardware is not installed or no moitor is plugged into MacPicasso's connector. Acceleration works only with 256, thousands or millions of colors. Black and White mode cannot be accelerated.

Please note, that MacPicasso_Accel_PCI only accelerates QuickDraw – you may see it as a part of QuickDraw. So it is not able to accelerate applications that do not use QuickDraw.

Driver software -- some technical aspects

The driver is the basic piece of software – without it thewhole MacPicasso would not work at all. This kind of software dedicated to the hardware and installed firmly on board, is called firmware, too.

In opposite to application software firmware drivers are ready to work as soon as the computer is switched on, even before the very first access to any disk drive. Especially the graphics card driver you can see working easily: Just displaying Mac startup screen on monitor would not be possible without a driver.

Using the driver, the MacOS, QuickDraw or any application program can take advantage of MacPicasso's special hardware features - no other software know them well enough. Picasso-Monitors functions use the driver excessivly.

To be exact: There is not only one driver built in, but two. One is a full featured driver to support MacOS or compatible systems. The other is a so called Open Firmware Driver, which is not quite as powerful as first driver, but completely independent from the CPU and OS to work with.

The MacPicasso Utilities

About MaPi_PowerSave_Enable and MaP_PowerSave_Disable

Many monitors use a power save modus. Unfortiunately some programs use this feature in a wrong way. They switch the sync signals off while you are working with your computer. This has two disadvantages:

- A program changes the display mode in an unwanted way.

- Your monitor goes into power-saving-mode (dark screen)

  though you are using your computer.

The MaPi-tools change the modes of all installed MacPicasso boards, if the board supports this. MacPicasso graphics accelerators support power saving by allowing the MacOS to switch the sync signals on and off.

About MaPi_Modes_Enable and MaP_Modes_Disable

MaPi_PowerSave_Disable disables the power saving support of the MacPicasso boards. After starting this program, the sync signals can't be switched. MaPiPowerSave_Enable reenables the power saving feature and the sync signals can be switched again.

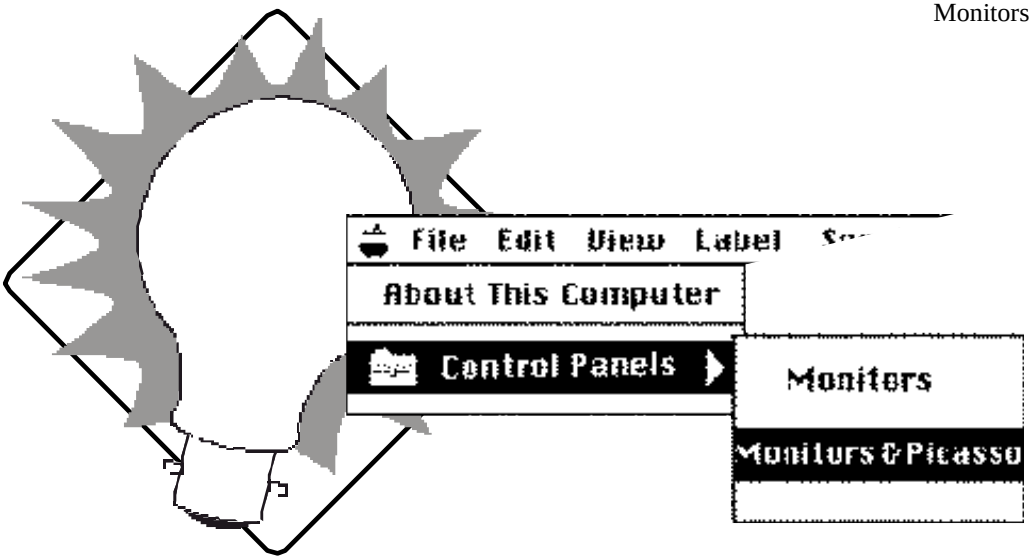
If you have a program, which changes the display mode of your MacPicasso board in a way you don't like, you may want to use MaPi_Modes_Disable. After starting this tool only the currently used display mode will be available. Thus there is no way to switch to a different display mode. Starting MaPi_Modes_Enable all display modes will be available again.

After you have changed the monitor which is connected to a MacPicasso board, the MacPicasso provides only one display mode. This display mode is the one which can be most likely

handled by your monitor. After restarting your Macintosh you can choose between all available display modes. If you start MaPi_Modes_Enable, all display modes will be available immediatly.

You may ask why in some situations the MacPicasso provides just one resolution. This is in order to guarantee you a visible picture and to protect the monitor.

In some cases it may happen that the operating system switches to an old saved resolution your monitor cannot work with. You can prevent this if you use MaPi_Modes_Enable after the first start after changing the hardware (installation of graphics card, changing the monitor) and switch to the desired resolution. If the desired resolution is already active and you do not change it, please change the depth instead.



3.1 Monitors & Picasso

Foreword

When you read in our introduction that MacPicasso 523 is a philosophy you may have thought that this is just marketing gag. In this chapter we will show you, how you can take advantage convince you that the word lifestyle is no exageration.

Probably you asked yourself sometimes:

• Why do I have a landscape format monitor athough I work with portrait documents ?

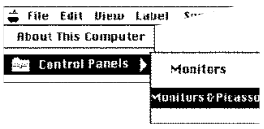
• How can I make use of the several depths of color which the Mac offers?

• What is better for me a big monitor or two smaller ones?

The idea of MacPicasso 523 that it does not decide, what is good for you. It gives you the possibilities to find yourself out what is good for you. It does not give answers it offers opportunities. You shall find out what meets your ideas and demands. You have to do some experiments in order to find out what is effective for you.

Starting Monitors & Picasso

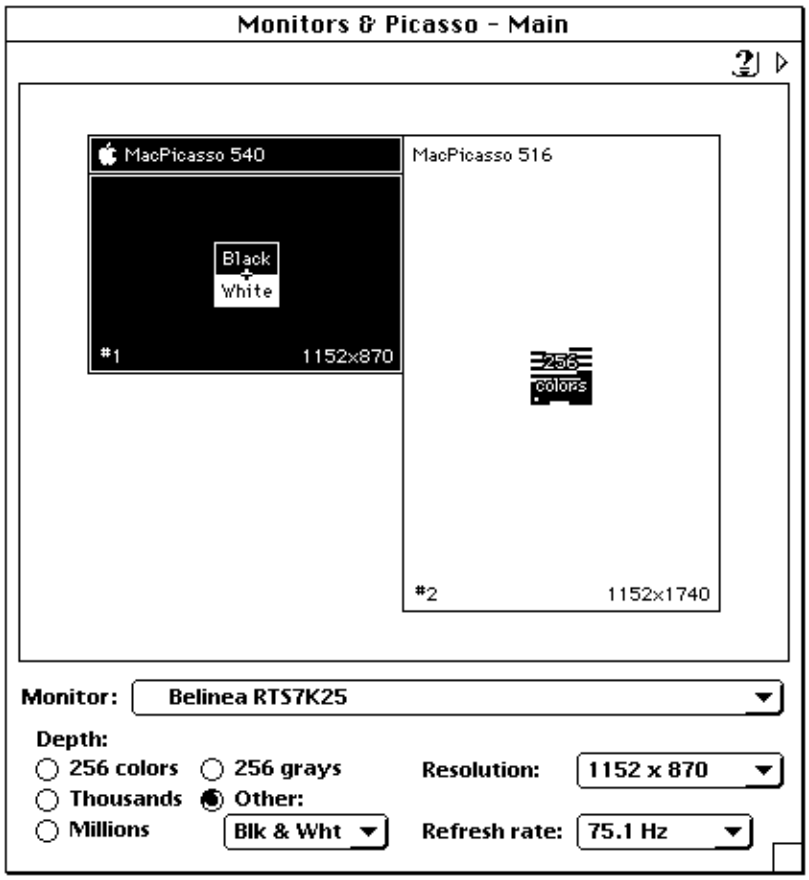
Here you have two possibilities:



1. you can start from the apple menu/control panel/Monitors & Picasso
If you like to configurate your graphics accelerator you will find Monitors & Picasso where you also find Monitors & Sound.

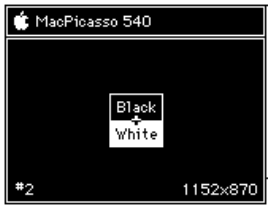
2. as autonomous program
The Installer copies the Monitors & Picasso into the control panels. However, if you like you can start it in a different way. You may start your application with a launcher. Please feel free to copy Monitors & Picasso into this folder.

Monitors & Picasso provides a good overview



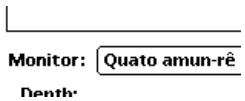
Especially if change the configuration of your graphics accelerator or your monitors or with the first installation you need a good overview. Monitors & Picasso helps you with this.

Already installed graphics accelerators



If we know the producer you will find its name in the blue or grey box that represents the monitor. At the moment MacPicasso 523 recognises Apple, ATI, Formac, IMS and of course all MacPicasso grahics accellerators.

Monitor recognition



The producer and the type of the connected monitor will be shown if:

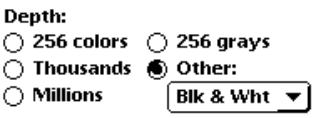
1. Your VGA monitor cooperates with DDC2b (Normally every monitor which is newer than three years.

2. You use a VGA cable with all functions (a cable with BNC connectors does not work here)

3. Your monitor is registered in our data base. If this is not the case you will find informations how to recognise your monitor at our home page.

Monitor recognition is quite useful if you want to use more than one monitor. You have to know which monitor is connected to which grahics accellerator.

Depth



The dark button under Depth shows you which depth is activated at the moment. If the button and its descrption are grey this depth cannot be use with the actual resolution. If you want to use this special depth anyway, you have to change the resolution.

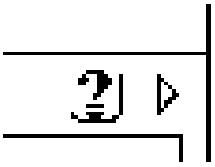
Resolution

Right beside Resolution you see the resolution which is actually in use. If you want to have an overview over all possible resolutions. Monitors and Picasso provides you with a list in a pop up menu. Just click the arrow beside the actual resolution. The number of possible resolutions depends of your graphics accelerator.

Refresh rate

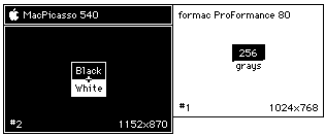
Right beside Refresh rate you see the actual refresh rate. If the letters and the backraund are grey you cannot choose an other refresh rate. If not you may try another one from the pop up menu.

Help



Help shows information if you click the help symbol. Every window has its own symbol and provides you with informations to it.

Multi monitor systems



The main window of Monitors & Picasso shows you the configuration of all monitors connected to your system. Every monitor is symbolized by a rectangle. Bottom left in the concerning rectangle is the number of the grapics accelerator. Bottom right the chosen resolution. In the title line you find the name of the graphics accelerator. The main monitor can be recognised by a symbolized menu line.

Graphics accelerators and monitors

Configurating a multi monitor system one has to find out which graphics accelerator fits to which monitor. Here the window „Another screen“ can help. It is always on the second or any other screen. It shows which graphics accelerator is connected to it.

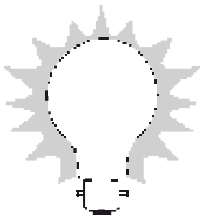
Many use different sizes of monitors and different types of graphics accelerators in a multi monitor system. Here it is usefull to connect the more powerfull graphics accelerator with the bigger monitor.

Configuration

Selecting the main monitor

You can choose the monitor you want to work with in the program Monitors & Picasso. When the program is started the important windows on the main monitor will be opened. If you want to make another monitor the main monitor you can use the window „Another screen“. In this window you can click the buttons „Work Here“ or „Make Main“. If you do so the whole backround of Monitors & Picasso will be transferred to the monitor. If you click „Make Main“ this monitor will be made the main monitor.

In the Window „Monitors & Picasso Main“ you see a symbolized menu line with an Apple symbol in it. This marks the rectangle of the main monitor. With the mouse this line can be moved to an other rectangle. Doing so this monitor becomes the main monitor.



I use a big monitor as main monitor for my work programs. The floating palettes I move to the smaller screen so that they do not hide my documents.

Selecting the monitor to work with

In the window „Monitors & Picasso Main“ the rectangle of the monitor whose configuration can be changed is dark. Klick another rectangle if you want to configurate another monitor.

Adjusting the monitors

If you install a second graphics accelerator you can use two monitors. Mac™ OS will link them together and handle them like one working place. Therefore you have to tell the system how the monitors are arranged. This can be done if you drag and move the monitor symbols in the window „Monitors & Picasso Main“ with your mouse until they have the same position as the real monitors on your desk.

Depth

In selecting the depth you can accelerate your Mac. If you work with 256 colors the Mac has to deal just with a quarter of the data it has to work with in the million colors modus. This is recognizable in the tempo the picture is displayed on screen. On the other hand not every application can work with a few colors. If you work with photos, you should use million colors. The table gives you a little overview. Just try it.

Aplication	**Program**	**Deth**
Compatibily tests, techn. Applications		b/w
Text	Word, Pagemaker	256
DTP	QuarkXPress, Freehand	thousands, millions
Image processing	Photoshop	millions

The less colors the faster the screen but in some cases one needs more colors.

Selecting depth

Down left in the „Monitors & Picasso Main“ window are several buttons with wich one can choose the depth. The less common deths are in a pop up menu under „others“.

Resolution

Apple recommends to select the resolution on all monitors in order to get 72 DPI. This modus is firmly installed in Apple´s user interface and part of an agreement. It is also the precondition for DTP programs like Quark which use the argreement in order do create an 1:1 measured view on screen. It is also necessary for multi monitor systems in order to have the same size of the windows if one moves them from one screen to another. The agreement is also important in order to have always a readable size of letters with all posible monitors and resolutions. In order to get 72 DPI you shuld use the following resolutions for the following monitor sizes.

Size	**Resolution**
12"	512 x 384
13, 14"	640 x 480
15"	800 x 600
16", 17"	832 x 624
19"	1024 x 768
21"	1152 x 870

Refresh rate

Here you have to experiment. The higher the refresh rate the less flickering the picture. But a high refresh rate provides a less sharp picture. Here you have to find the best solution for you. Generally refresh rates of 75 Hz are recommended.

In order to change the refresh rate choose the pop up menu „Refresh Rate“ . You will find a list of several possibilities. In a box the impact of the selected refresh rate will be shown. Confirm with „OK“ if you like the result or wait a few seconds until the card switches back to the previous refresh rate . You may also press Esc in order to go back to the old refresh rate.

For further informations please see the chapter „Resolutions“.

Advice: If you place two monitors together, their electric and magnetic fields may cause some impact on the pictures. You will see some lines wandering up and down the screen. Changing the refresh rate can decrease this effect.

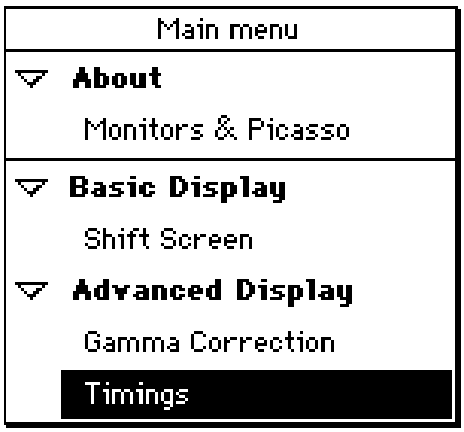
Changing resolution and refreshrate at the same time

If one of your monitors has just a few supported frequencies, it may be usefull to change resolution and refresh rate together. In that case press Alt and hold it. Than open the pop up menu „Resolution“: Now the pop up menu shows for every resolution suitable refresh rates.

Extended settings

Next to the window „Monitors & Picasso Main“ you find a little window called „Main Menu“. It has three main parts and gives you access to MacPicassos extended functions

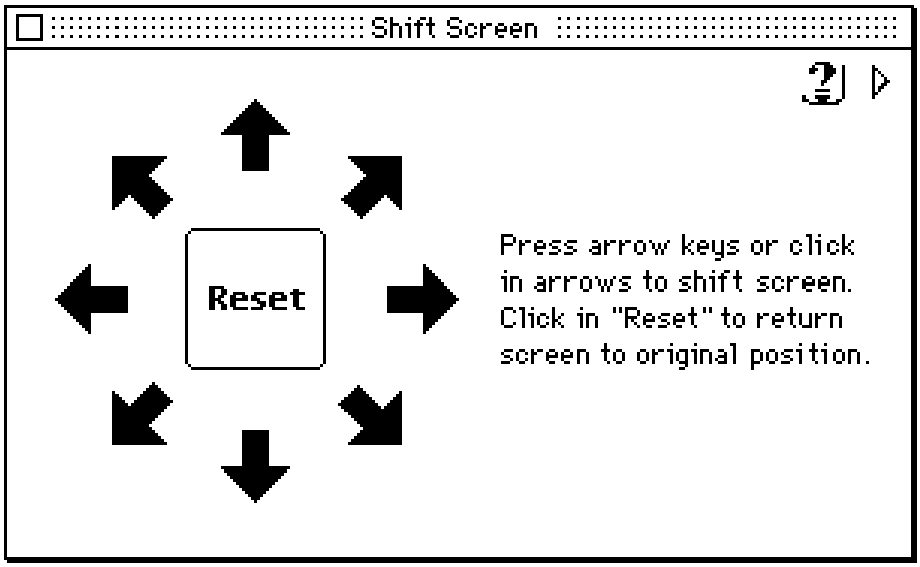
In the Part „About“ you see the program´s information box.



Shift screen

In the part „Display“ you find „Shift screen“. With this function you can move the picture on the monitor if you click the arrows. The screen will move in the direction of the arrow you click. If you click reset the picture will move back to its original position.

These parameters will be saved when you quit Monitors & Picasso. When the computer is again started it will be configu-

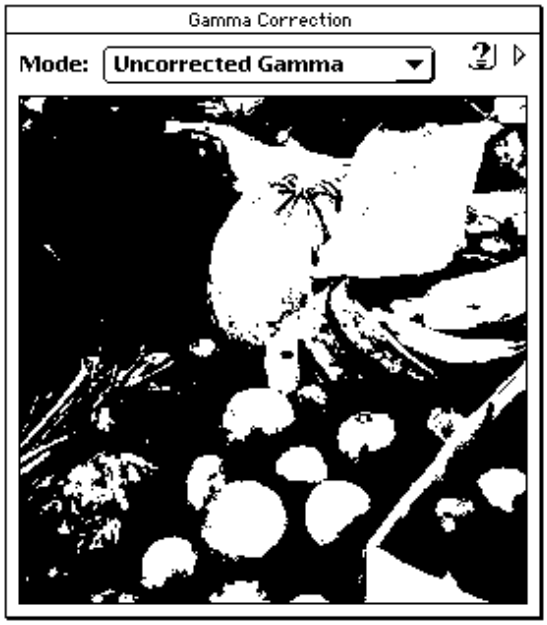


rated in the way you have selected. All data concerning these matters are included in the file „Monitors & Picasso Prefs“ in the „Village Tronic“ folder of a systrem folder named „prefrences“. If you have some trouble just remove this file and from this moment you will have the original graphic modes.

Gamma Correction

With MacPicasso 523 you have the possibility to choose gamma correction. This helps to equalize the distortion of colors caused by the monitors. If you click „Advanced Display“ in the Main Menu, you find the line gamma correction. If you click this you will see a window with a color picture and a pop up menu with the different modes of gamma correction.

Gamma correction with the MacPicasso 523 is only available up to 256 colors.



Timings

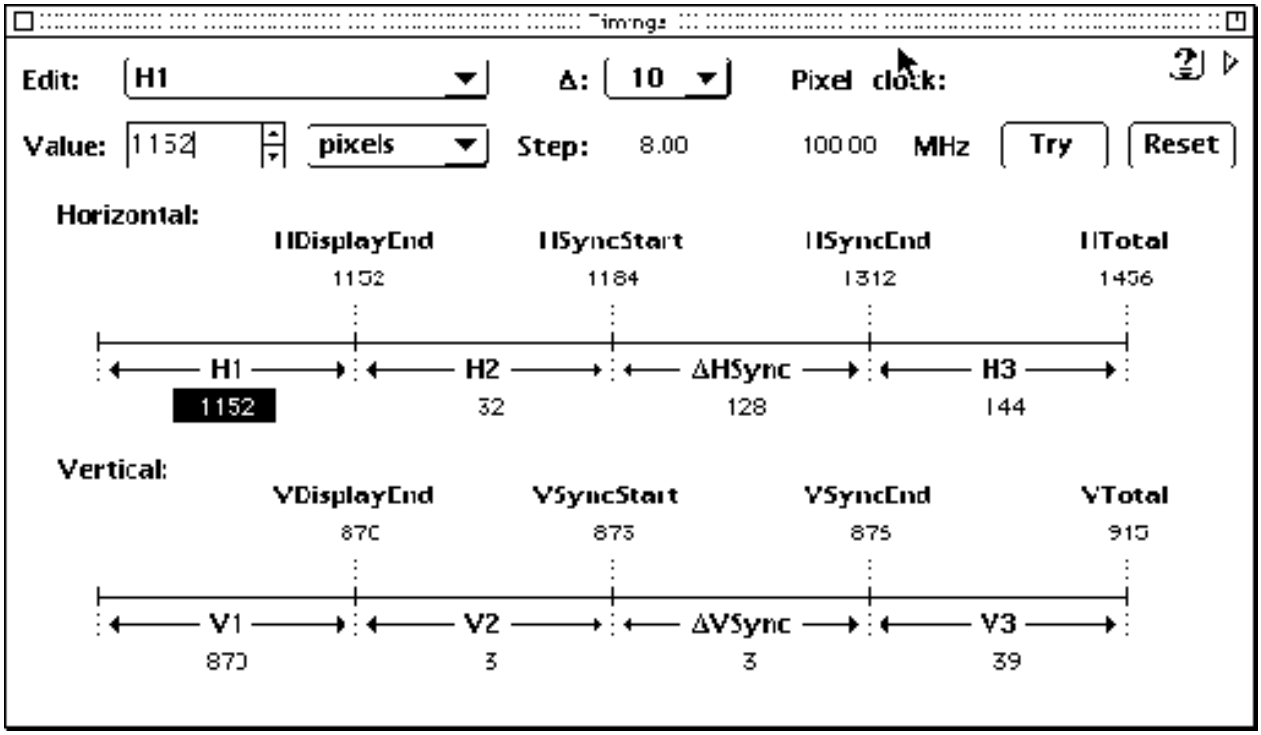
Here you have the possibility to adjust the MacPicasso´s graphic resolution to your monitor. In order to do so you can modify a raw of timing constants. Such as:

HDisplayEnd	end of a visible picture line
HSyncStart	start of the sychronization signal of a line
HSyncEnd	end of the sychronization signal of a line
Htotal	total length of a line
H1	wreadth of the picture
H2	distance between the visible picture line and the synchronization signal
ΔHsync	length of the sychronization signal
H3	distance between synchronization signal and the end of the line
VDisplayEnd	end of the picture signal
VSyncStart	start of the synchronization signal
VSyncEnd	end of the synchronization signal
Vtotal	total height of the picture
V1	height of the picture
V2	distance between picture and synchronization signal
ΔVsync	length of the synchronization signal
V3	distance between sychronization signal and the end of the line

This setting is especially for old monitors which do not have Apple specifications. Mostly monitors of old workstations have this problem. Such monitors can be used as second monitors in

multi monitor systems with a MacPicasso 523. For a single monitor system this is not possible because you need a monitor which shows a visible picture from the beginning. In order to implement the monitor please see in your monitor´s dokumentation for the data and put them into the „Timing“ window.

The Timing window



These constants can be shown in pixels, nanoseconds and microseconds. You can choose this with the second button on the line “Value” from a pop up menu. After a modification you can have a look on the new configuration if you click the button “Try”. Then you will see a window which asks you to press “k” in order to make the new configuration permanent or to press any other key in order to cancel. When you click the “Reset” button afterwards you will reactivate the original configuration.

These parameters will be saved when you quit Monitors & Picasso. When the computer is again started it will be configurated in the way you have selected. All data concerning these matters are included in the file „Monitors & Picasso Prefs“ in the „Village Tronic“ folder of a systrem folder named „prefrences“. If you have some trouble just remove this file and from this moment you will have the original graphic modus.

3.2 Resolutions

Resolution

Standards

Apple Monitors				
resolution	colors[1]	vertical refresh	horizontal refresh	typical monitor
512 x 384	b/w, 8, 16, 32	60,15 Hz	24,48 kHz	12"
640 x 480	b/w, 8, 16, 32	66,7 Hz	35,0 kHz	13" / 14“
640 x 870	b/w, 8, 16	75 Hz	68,9 kHz	15" Portrait
832 x 624	b/w, 8, 16, 32	75 Hz	49,7 kHz	16" RGB
1024 x 768	b/w, 8, 16	75 Hz	60,24 kHz	19" RGB
1152 x 870	b/w, 8, 16	75 Hz	68,7 kHz	21"

The easy way for you

Standard-VGA Monitors				
resolution	colors[1]	vertical refresh	horizontal refresh	typical monitor
640 x 480	b/w, 8, 16, 32	60 Hz	31,5 kHz	VGA
	b/w, 8, 16, 32	72 Hz	37,8 kHz	
	b/w, 8, 16, 32	75 Hz	37,8 kHz	
	b/w, 8, 16, 32	86 Hz	45 kHz	
	b/w, 8, 16, 32	100 Hz	50 kHz	
	b/w, 8, 16, 32	160 Hz	84 kHz	
800 x 600	b/w, 8, 16, 32	60 Hz	37,9 kHz	
	b/w, 8, 16, 32	72 Hz	48 kHz	
	b/w, 8, 16, 32	85 Hz	54 kHz	
	b/w, 8, 16, 32	100 Hz	62,5 kHz	
1016 x 768	b/w, 8, 16	75 Hz	60 kHz	
1024x768	b/w, 8, 16	43 Hz int	38 kHz	
	b/w, 8, 16	60 Hz	48 kHz	
	b/w, 8, 16	75 Hz	60,2 kHz	
	8	100 Hz	80 kHz	
1152 x 870	8, 16	66 Hz	61 kHz	
1280 x 1024	b/w, 8	44 Hz int.		

If you do not have space for a 21“ monitor, you may to have two smaller ones. These are chaeper than a big one and you will get more screen.

Locked Start Up Resolution

Start up-VGA				
resolution	colors[1]	vertical refresh	horizontal refresh	typical monitor
640 x 480	b/w, 8, 16, 32	60 Hz	31,5 kHz	VGA

MacPicasso supports any VGA monitor. When you switch on the Mac after installing the Mac Picasso it only offers a resolution of 640 x 480 and 60 Hz. This resolution is supported with every VGA-monitor. This procedure is neccessary because VGA monitors do not have monitorsensing like Apple monitors. It will choose the correct resolution automatically. You will have all resolutions available after a reboot.

The MacPicasso 523 offers the possibility to use the new generation of 16:9 or 16:10 monitors:

16:9 , 16:10 Resolutions				
resolution	colors[1]	vertical refresh	horizontal refresh	typical monitor
864 x 480	S/W, 8, 16, 32	75 Hz	38 kHz	
	S/W, 8, 16, 32	100 Hz	51 kHz	
1280 x 720	S/W, 8, 16	75 Hz	56 kHz	
	8	100 Hz	76 kHz	
1920 x 1080	8	47 Hz int.	53 kHz	

More display

Portrait monitors				
resolution	colors[1]	vertical refresh	horizontal refresh	typical monitor
640 x 870	b/w, 8, 16, 32	74 Hz	68,8 kHz	Apple Full Page

These monitors are for all those who work with word processing or DTP. Here almost all documents are on end (=portrait). With these-monitors you see the whole document without scrolling . For these purposes a 15” monitor has the same effect as an expensive 21” standard monitor (=horizontal format). A portrait monitor adopts the format of your document.

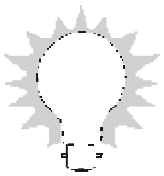
How well you can read the word on your monitor depends on the resolution. Let’s say you have a document with 80 written lines. With a 16“ resolution (832 x 624), you have 624 screen lines for 80 letters. This makes 7.8 screen lines per letter. If you have 870 screen lines it makes 10.8 screenlines per letter. It is easier to read.

Your collegue with a 21” monitor could see his whole page of document with out scrolling. The resolution of a 21“ monitor is 1152 x 870, hence 870 screen lines. With a portrait monitor, you have also 870 screen lines but just 640 in width. But since a document is mostly on end it does not matter.

Your advantage: you have a better display since your monitor is smaller and you save money and some space on your desk.

Screen doubler				
resolution	colors[1]	vertical refresh	horizontal refresh	typical monitor
640 x 960	b/w, 8, 16	67 Hz	37,5 kHz	Apple 13"
832 x 1248	b/w, 8, 16	75 Hz	49,7 kHz	Apple 16"
1024 x 1536	b/w, 8	75 Hz	60,2 kHz	Apple 19"
1152 x 1740	b/w, 8	75 Hz	68,7 kHz	Apple 21"

1. This is good for web-browsing and long pages because of a very speedy hardware scrolling.



2. With Quark you can see the whole page. Since speed screen is a portrait format it is ideal for word processing. Without speed screen you just see half of the page on your monitor. With speed screen half a document is on the whole screen. Hence it is four times enlarged and you do not have to zoom. Hence, with speed screen you will have portrait monitor quality on standard monitors.

State of the Art

100 Hz				
resolution	colors[1]	vertical refresh	horizontal refresh	typical monitor
640x480	s/w, 8, 16, 32	100 Hz	50 kHz	12“
800x600	s/w, 8, 16, 32	100 Hz	62,5 kHz	15“
1024x768	s/w, 8, 16	100 Hz	80 kHz	19“
864 x 480	S/W, 8, 16, 32	100 Hz		**16:9**
1280 x 720	S/W, 8	100 Hz		**16:9**

If you are a sensitive person you may get headaches from working with monitors. Our 100 Hz solution could help you with this. However, you should know that only high performing monitors can work properly with this speedy refresh rate.

High End				
resolution	colors[1]	vertical refresh	horizontal refresh	typical monitor
1280 x 1024	8	61 Hz	64 kHz	
	8	74 Hz	79 kHz	
1600 x 1200	8	48 Hz int.		

Normally with the high resolution of these monitors you will get more information on your screen hence you do not need huge and expensive monitors. This sounds good but keep the details in mind: High end monitors change the enlargement scale (which is normally 72 DPI) hence the document becomes smaller. With Mac monitors it has always the same size. Signs like the menu line will become especially small. The punch mask is also to become smaller so the picture is not just smaller but also more blunt.

Interlace				
resolution	colors[1]	vertical refresh	horizontal refresh	typical monitor
1024 x 768	b/w, 8, 16	43 Hz int.	38 kHz	
1280 x 1024	b/w, 8	44 Hz int.	64 kHz	
1600 x 1200	8	48Hz int.		

Using them you have two possibilities

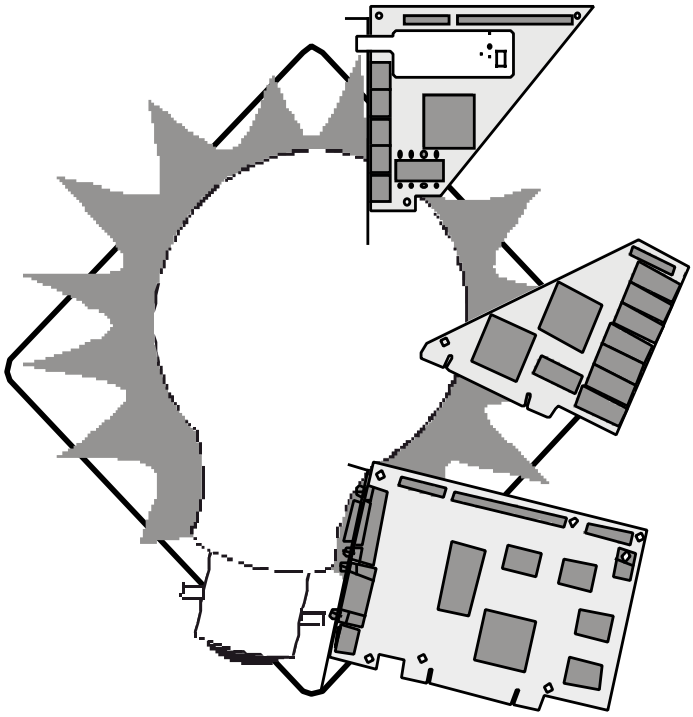
1. Old VGA monitors work with interlace just with high resolutions. Nevertheless the screen does not flicker since the phosphor can cope with such refresh rates.

2. Working with huge objects one can work with interlace. Even it flickers one can use them in order to get a quick overview.

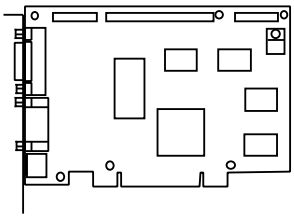
Using old Monitors

Workstation
Use „Timings“ of our software „Monitors & Picasso“

Modern Graphic accelertors are not compatible the older workstation monitor you paid a fortune for. The sync impulses and special frequencies were not supported.



3.3 MPEG, Quicktime

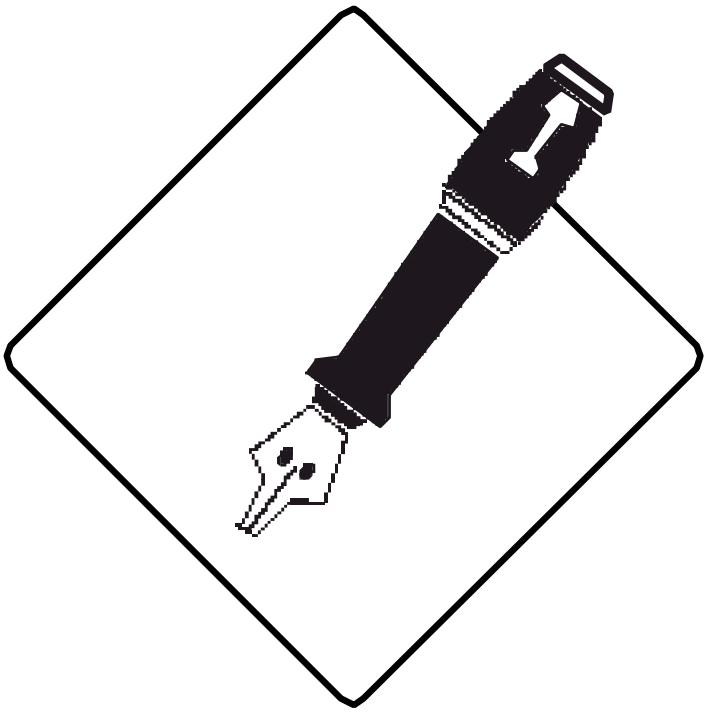


MPEG, QuickTime

System requirements:

Apple QuickTime starting with version 2.5

Apple QuickTime with MPEG extension



4. Glossary

DDC Data Display Channel

DDC transfers some data from the monitor to the computer. e.g. model, manufacturer supported resolutions. DDC just works if the monitor is connected to the VGA input, if it supports DDC and if the connecting cable is fully equipped.

Depth

Depth means the number of colors simultaneously utilizable colors. The supported number depends on the graphics accelerator you use.

There are the following possibilities:

Million colors. 16 million colors (=16.777.216) can be represented at the same time. This modus is also called 24-Bit or 32-Bit modus.

Thousands of colors. 32 thousand (=32.768) can be represented at the same time. This modus is also called the 16-Bit modus or High-Color

256 colors. You can use a selection of 256 colors out of 16 million (s.a.) colors. This modus is also called the 8-Bit modus.

256 shades of gray. You can use al selection of 256 shades of gray.

16 colors. A selection of 16 colors out of 16 million (s.a.) is in use. This modus is also called the 4-Bit modus.

16 shades of gray. A selection of 16 shades of gray out of 256 (s.a.) is used.

4 colors. A selection of 4 colors out 16 million (s.a.) can be used. This modus is also called the 2-Bit modus.

4 shades of gray. A selection of 4 shades of gray out of 256 (s.a.) is used.

B/W. Just the colors black and white are used. This mode is also called the 1-Bit mode.

Gamma correction

The Gamma correction is necessary in order to get the original colors on the screen. The monitors nowadays in use are not able to represent colors linear to the signal voltage. Therefore a printout would show different colors than the monitor. If for example a color is to be represented on the screen with an intensity of 50 percent, the screen would show it in a different intensity. The gamma correction has to equalize this difference.

Popup menu

You will find popup menus under symbols with a downward looking arrow.

Menu line

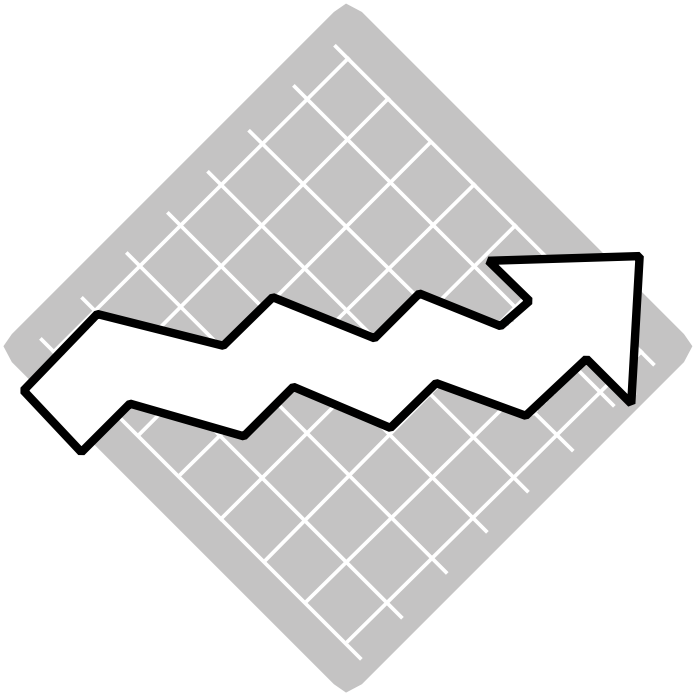
This is the line just under the top edge of the screen.

Refresh rate

Refresh rate means the number of pictures shown per second. (one picture per second = 1 Hz) For ergonomic reasons the refresh rate should not be less than 75 Hz.

Resolution

Resolution means the number of the pixels on the screen. For example horizontal 832 pixels, vertical 624 pixels.



5. Technical data

MacPicasso basic card

memory:

• 2 MB graphic memory

RAMDAC:

• gamma corretion up to 256 colors

• 135 MHz max. Pixel Clock

Resolutions:

• 320 x 256 to 1920 x 1080 visible

• maximum resolution thousands of colors: 1152 x 870, 75 Hz

• maximum resolution millions of colors. 832 x 624, 75 Hz

• timings and resolutions can be configurated for special monitors

For further informations please see chapter Resolutions.

Monitor support:

• monitor synchronisation: separate sync.

• monitor connector for VGA monitors

• automatic recognition of Plug-N-Play monitors (DDC2B)

connectors:

• 15 pin HD-SUB-D, fem, VGA monitor connector

Special features:

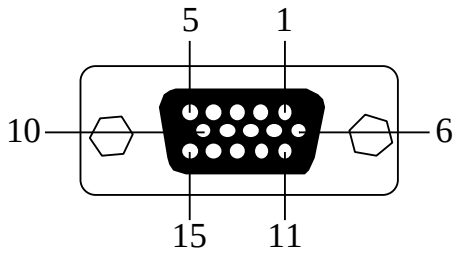
• Screen doubler = DTP Autoscrolling

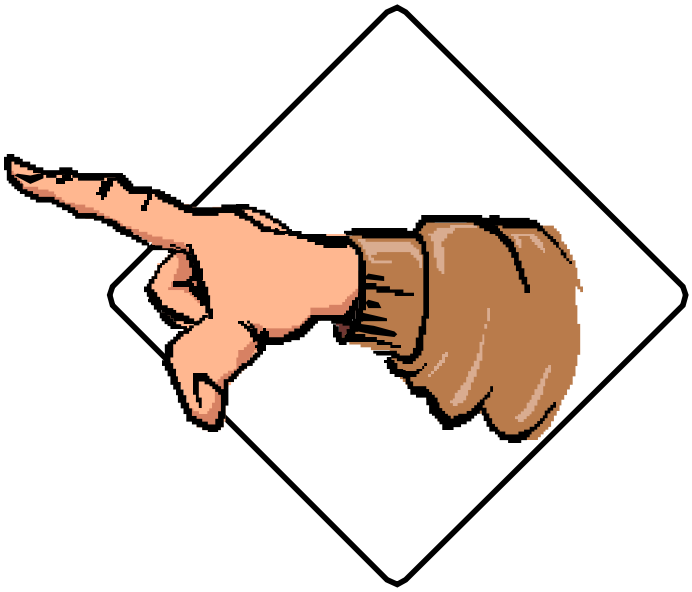
• Picasso Monitors: control paneel for more overview and easy control

Pin assignments for Monitor connectors

VGA: 15 pin HD-Sub-D-plug

01 red, (analog)
02 green (analog)
03 blue (analog)
04 nc
05 ground
06 red ground
07 green ground
08 blue ground
08 nc
09 nc
10 Sync ground
11 nc
12 SDA (TTL) DDC 2 data
13 H-Sync (TTL)
14 V-Sync (TTL) DDC 2 clock
15 SCL (TTL) DDC2 clock





6. Advice

How to contact us

If you have any problems or questions and cannot find an answer or solution in this manual, please consult your dealer first. In case he cannot help you consult your distributor. If he cannot help you please feel free to contact our support line:

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For lawyers and pirates

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Since it seems to be a new sort of entertainment for many to fight in court to be confirmed that any mistake they made was originally not their fault we affirm that this manual was made with the highest thoroughness. However, mistakes or misunderstanding cannot be totally ruled out (especially not by law). Neither Village Tronic GmbH nor the editors can be held responsible for wrong statements or data or any sort of misunderstanding.
We regret anyway any problem you may have with the MacPicasso and we will be thankful for your feedback.

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