

# Teatro



## TS-1 Touchscreen Installation and Operation

10/2006

designed by



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Touchscreen TS-1 with Teatro's main screen



Touchscreen TS-1 with special „buttons only“ screen

## Introduction

The TS-1 Touchscreen can be used to control the Teatro software in places where the usual PC, monitor, mouse and keyboard setup is not possible or not desired. The touchscreen offers control about the audio playback process similar to a remote control for tapemachines or CD/Cart Players.

The usage of the Teatro software together with the touchscreen, offers the best combination in modern and flexible audio playback for Live, Theater, TV:

- The PC software can be extended with additional program modules. Therefore this system has big advantages compared to a „stand alone“ system with a fixed operating system which in most cases can not be upgraded with additional features.
- The touchscreen makes it possible to control the PC and it's software as if it would be a „stand alone“ system, while there is no need to additionally use the PC mouse and keyboard.

The following pages will describe the installation and the operation of the touchscreen. If you have worked with Teatro previously you will notice that many of the functions on the touchscreen are identical to functions within the Teatro software.

The touchscreen hardware comes in two different versions. One is the RS232 version and the second one is the USB version. Both version follow a different cabling strategy, so please make sure you read the section that describes your type of touchscreen hardware!

If you have ideas for additional functions of the software of the touchscreen just let us know: [info@ros-software.de](mailto:info@ros-software.de)

### **Caution!**

**The installation of the touchscreen is not very complicated, but it is highly recommended that you read this manual before you start with the installation. This will help you to prevent problems with the cabling and the driver setup!**

## Installing the Touchscreen (RS232 version)

There are two basic ways to use the touchscreen together with Teatro:

### Configuration with a single monitor only

Teatro uses only the touchscreen as the main monitor. In this setup it is only possible to display the normal Teatro main screen OR the special touchscreen operation display. It is possible to switch between these two displays with the R8 hardware button located on the touchscreen or the „Touchscreen“ button located within Teatro's mainscreen.

### Configuration with two monitors

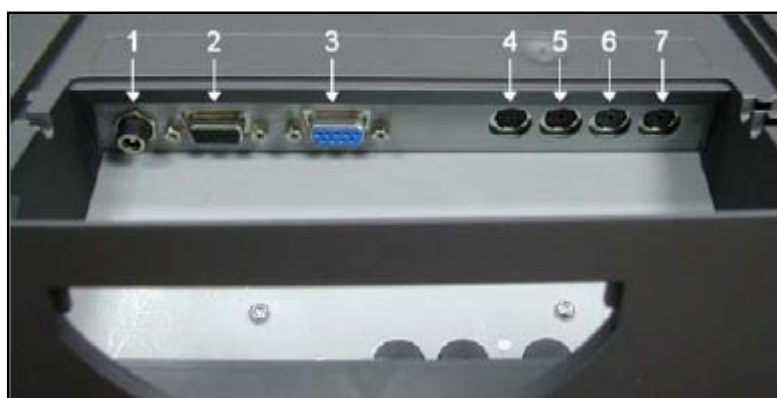
Teatro displays its mainscreen on the usual PC monitor and at the same time shows the special touchscreen operation screen on the touchscreen TFT display. This is only possible if the PC is equipped with a special double-head graphics card (for example the Matrox G450/550). If this is the case, the usual PC monitor must be connected to output 1 and the touchscreen must be connected to output 2 of the double-head graphics card.

Both configurations will be discussed further on the following pages.

## Connections (RS232 version)

On the bottom of the touchscreen hardware you will find the following connectors:

1. Power Supply
2. VGA
3. RS-232
4. to PC's keyboard connector  
(black cable that also has a Y-branch with a green and a purple connector !!!)
5. from PC Keyboard
6. unused
7. unused

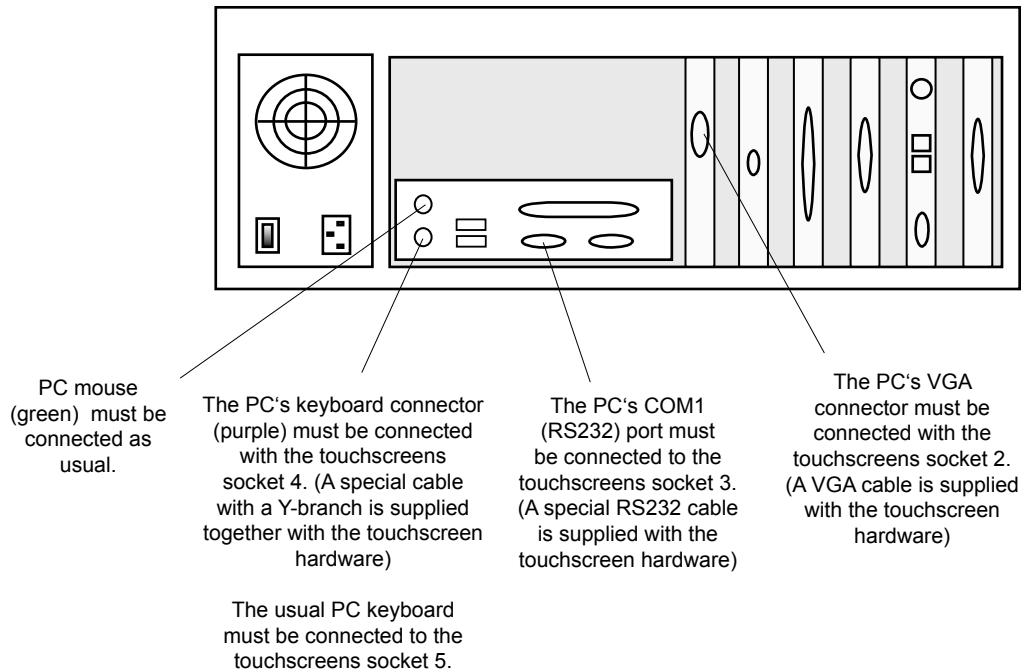


The bottom of the touchscreen has a couple of holes, channels and covers to mount all cables and lead them to the external equipment in a proper fashion!



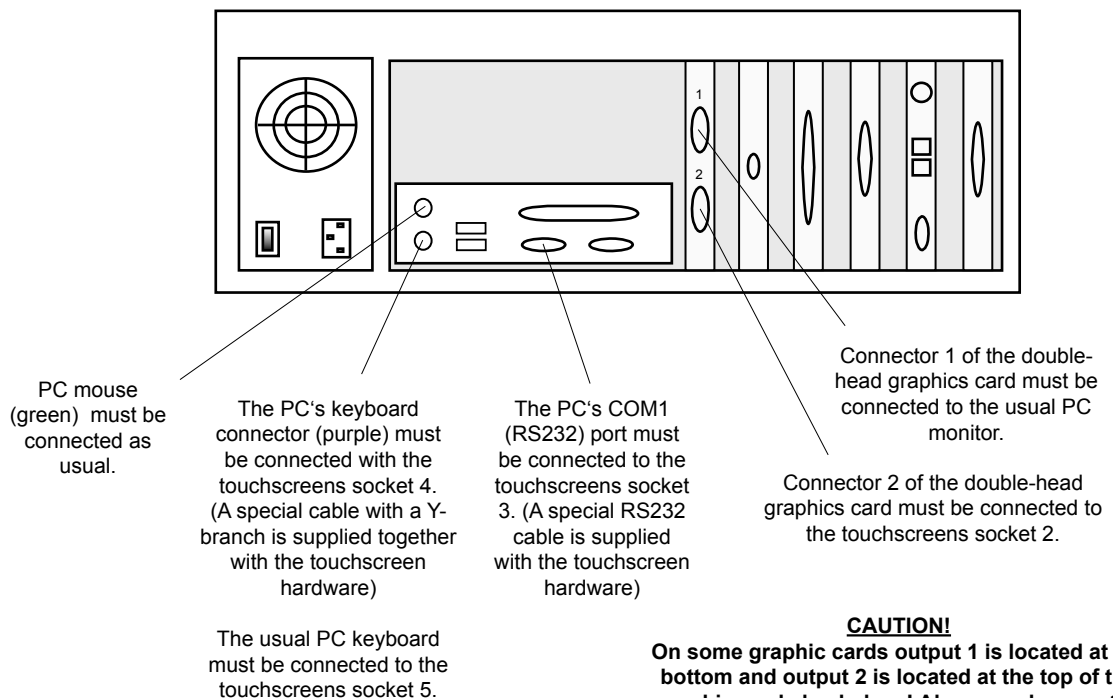
## Configuration with a single monitor only (RS232 version)

When using Teatro with the touchscreen only, the following connections have to be made.



## Configuration with two monitors (RS232 version)

When using Teatro with the usual PC monitor plus the touchscreens TFT display, the following connections have to be made.



### **CAUTION!**

On some graphic cards output 1 is located at the bottom and output 2 is located at the top of the graphic cards backplane! Always make sure the normal PC monitor is connected to output 1 and the touchscreen is connected to output 2!

## Installing the Touchscreen (USB version)

There are two basic ways to use the touchscreen together with Teatro:

### Configuration with a single monitor only

Teatro uses only the touchscreen as the main monitor. In this setup it is only possible to display the normal Teatro main screen OR the special touchscreen operation display. It is possible to switch between these two displays with the „Close“ button located on the touchscreen or the „Touchscreen“ button located within Teatro's mainscreen.

### Configuration with two monitors

Teatro displays its mainscreen on the usual PC monitor and at the same time shows the special touchscreen operation screen on the touchscreen TFT display. This is only possible if the PC is equipped with a special double-head graphics card (for example the Matrox G450/550). If this is the case, the usual PC monitor must be connected to output 1 and the touchscreen must be connected to output 2 of the double-head graphics card.

Both configurations will be discussed further on the following pages.

## Connections (USB version)

On the bottom of the touchscreen hardware you will find the following connectors:

1. Power Supply
2. to PC VGA connector
3. to PC USB connector
4. for additional USB Devices
5. not used
6. not used



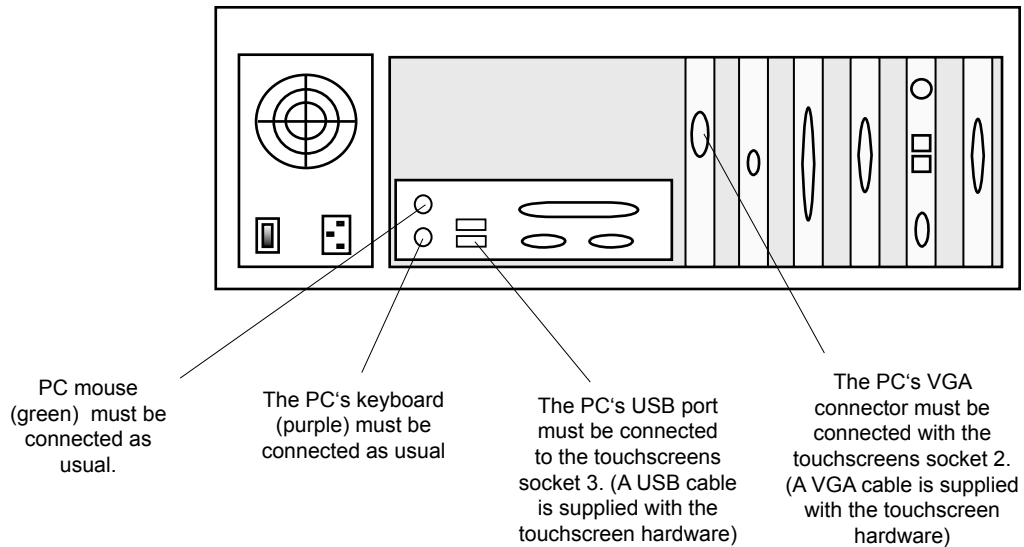
The bottom of the touchscreen has a couple of holes, channels and covers to mount all cables and lead them to the external equipment in a proper fashion!





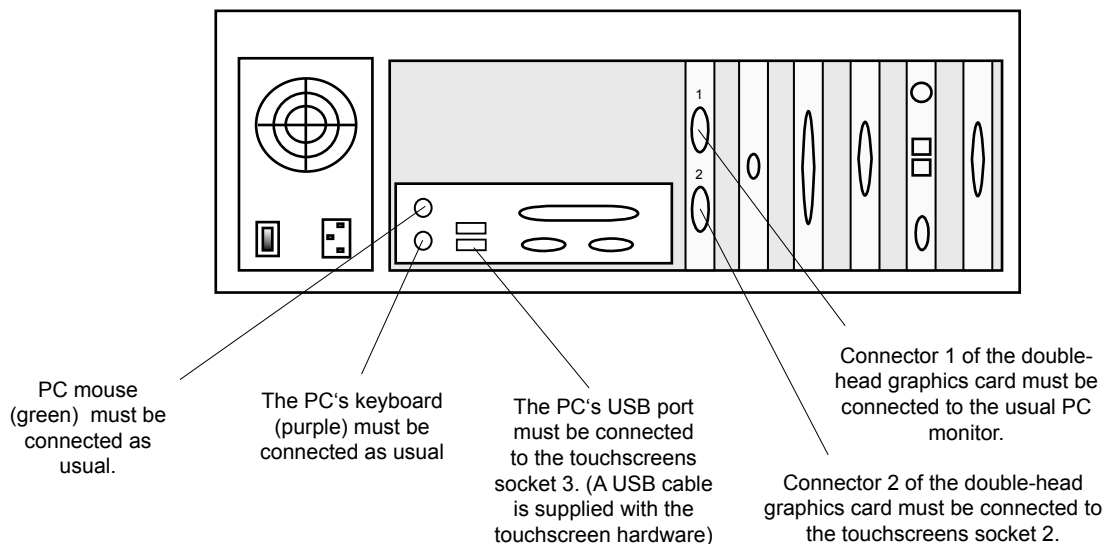
## Configuration with a single monitor only (USB version)

When using Teatro with the touchscreen only, the following connections have to be made.



## Configuration with two monitors (USB version)

When using Teatro with the usual PC monitor plus the touchscreens TFT display, the following connections have to be made.



### **CAUTION!**

On some graphic cards output 1 is located at the bottom and output 2 is located at the top of the graphic cards backplane! Always make sure the normal PC monitor is connected to output 1 and the touchscreen is connected to output 2!

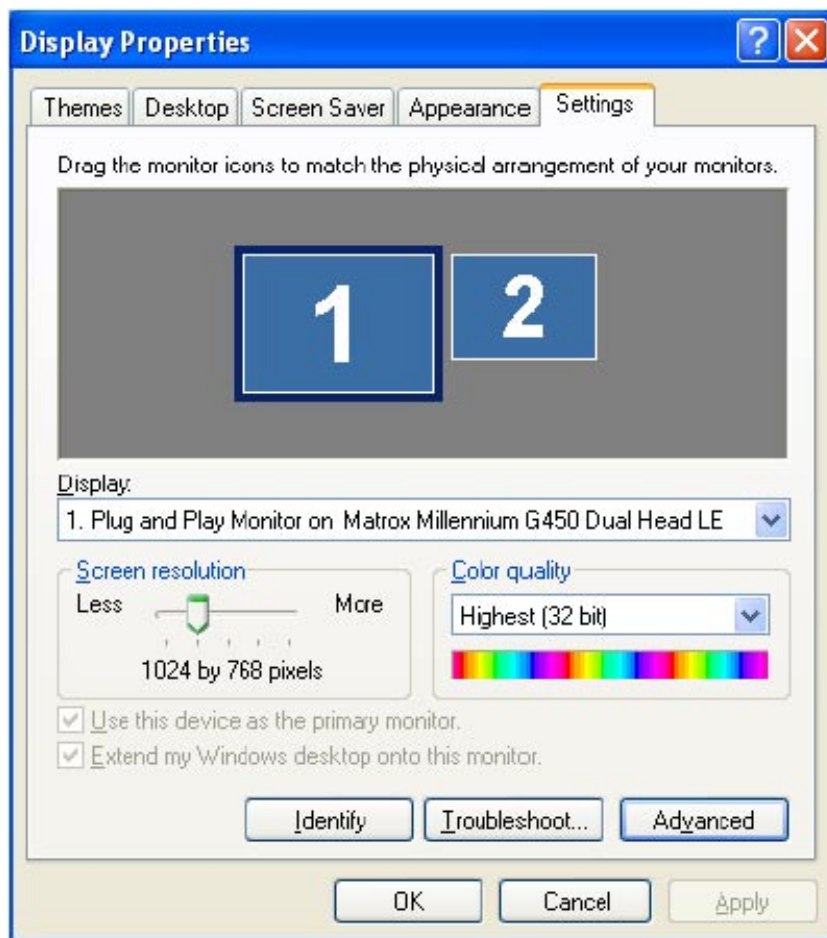
## Graphics card setup

When using a double-head graphics card, some additional settings must be made within WindowsXP, to make sure both monitors will receive the proper information.

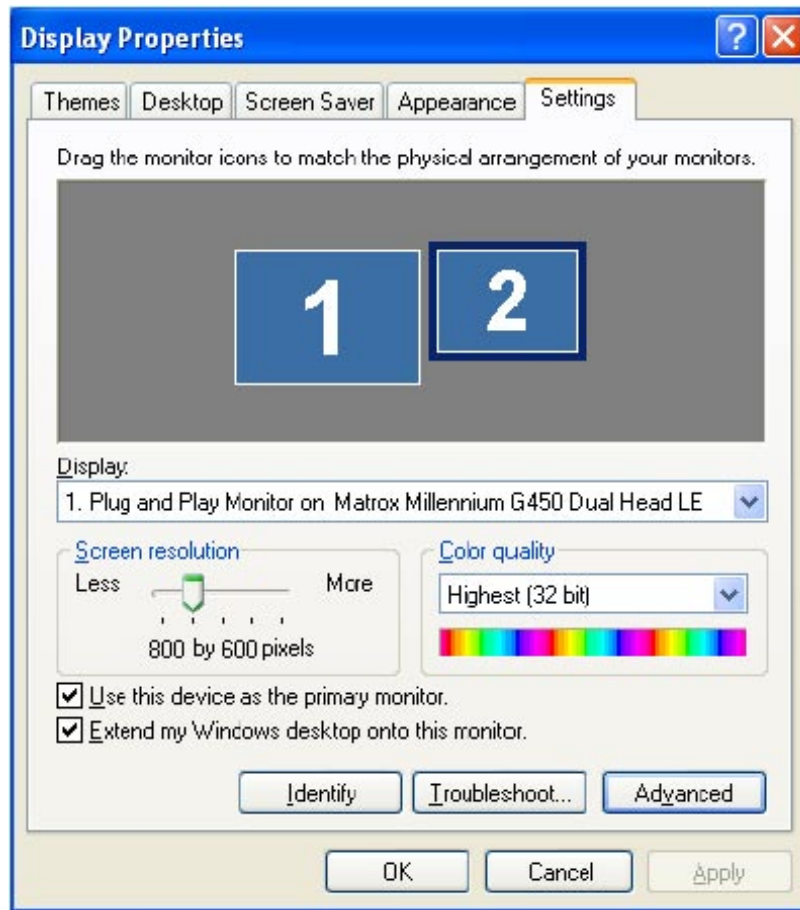
If a Matrox G450/G550 was installed in the PC, WindowsXP will automatically detect this type of card and will install its own set of graphic drivers. It is also possible to install the original Matrox drivers which came on a CD together with the graphics card.

After installing the drivers, the following settings must be made within WindowsXP:

- Open the „System“ dialog and double-click the „Display“ Icon.
- Select the „Settings“ tab with the two monitor symbols:



- Select monitor 1 and set the recommended resolution to 1024x768 (or higher).
- Select „Advanced“ and „Monitor“ and select the recommended frequency for your monitor.
- Apply the frequency selection with „OK“.



- Now select monitor 2
- Select the option „Extend my Windows desktop onto this monitor“ and confirm with „Apply“.
- Set the maximum resolution for your type of touchscreen. The 12" touchscreen can be set to 800x600 and the 15" touchscreen can be set to 1024x768.
- Select „Advanced“ and „Monitor“ and select the recommended frequency for the touchscreen to 60Hz.
- Apply the frequency selection with „OK“.
- Now if you select „Identify“, Windows will display a big „1“ on your PC monitor and a big „2“ on the touchscreen display. This will indicate that all your settings are properly made and the configuration was successful.

In the next step we will install the additional touchscreen driver (see next page...)

## Installalling the touchscreen driver

For additional functions of the touchscreen it is necessary to install the touchscreen driver software. The driver software can be found on the Teatro CD in the folder D:\Elotouch Drivers

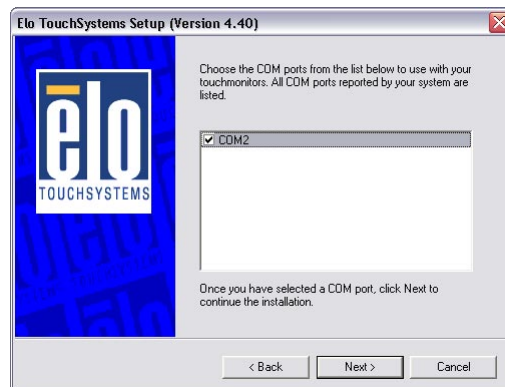
- Start the setup by double-clicking the file „EloSetup.exe“
- In the first dialog select the option „Install Serial Touchscreen Driver“ or „Install USB Touchscreen Driver“ and confirm with „Next >“



- Confirm the usual license agreement dialog with „YES“
- In the following dialog select „Auto-detect Elo devices“ (RS232 Touchscreen only) and confirm with „Next >“



- The next dialog will show at which COM port the touchscreen was detected. Usually this will be COM1 or COM2
- If the COM port is not checked yet, select the COM port and confirm „Next >“ twice



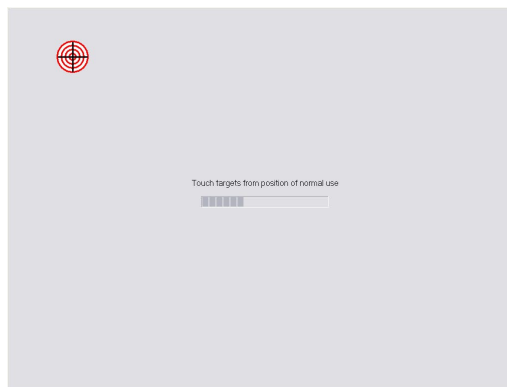
- The driver software will now install and you have the option to launch the calibration dialog:



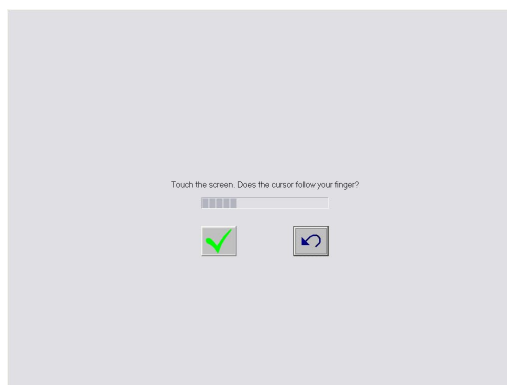
**CAUTION! VERY IMPORTANT WHEN USING 2 MONITORS!**

If the setup screen shown below will NOT be displayed on the touchscreen but on the normal PC monitor, you have to push the „ESC“ button on the PC keyboard once. This will move the calibration screen from the monitor to the touchscreen!!!

- You will see three screens with a red area which have to be touched/selected with your finger.



- On the final screen you have to check if the mousepointer (arrow) follows your finger if you touch and move your finger on the touchscreen surface.



- Finally confirm the calibration dialog with the checked button to the left.
- The calibration is now finished and some final options have to be made in the touchscreen configuration dialog (see next page).

## Additional touchscreen driver settings

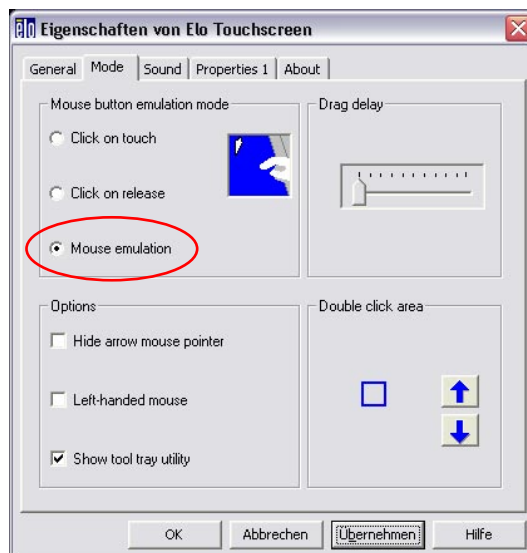
The touchscreen properties dialog can be accessed through the WindowsXP „System“ dialog or you can select the system tray icon:

- Move the mousecursor to the upper or lower screen (depending on where your taskbar is located) of your main monitor.
- In the system tray you will find the „Elo“ icon which has to be double-clicked to open the properties dialog.



The properties dialog can also be used to carry out the touchscreen calibration again, if this should be necessary!

- Select „Mode“ and make the following settings:

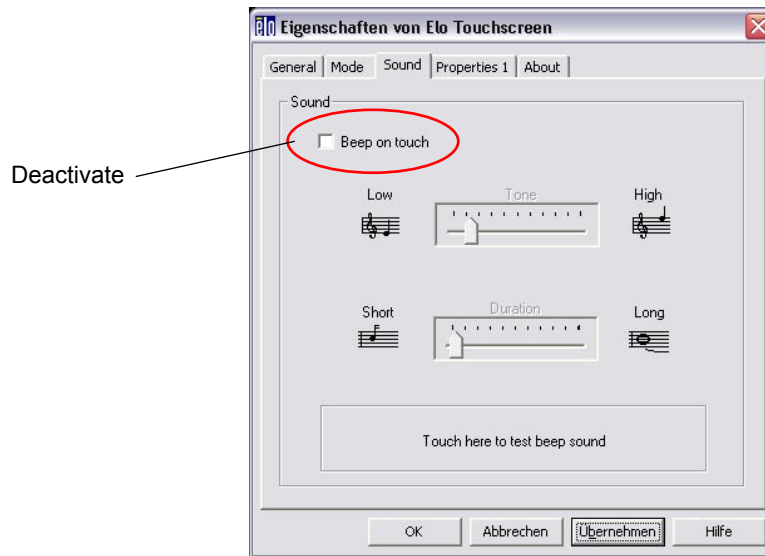


- Make sure you select „Mouse emulation“, otherwise Teatros „Play while hold“ function will not work with the touchscreen.

### WARNING!!!

YOU SHOULD NEVER SELECT THE OPTION „Hide arrow mouse pointer“, BECAUSE YOU WILL NO LONGER BE ABLE TO CONTROL WINDOWS WITH YOUR MOUSE !!!!!!!!!!!

- Select „Sound“ and switch off the option „Beep on touch“, otherwise the PC will always generate a beep sound whenever you touch the screen.



The touchscreen setup is now finished. On the next page we will describe how to set the brightness, contrast and color etc. of the touchscreen.

## Touchscreen display settings (12.1" Touchscreen)

Like other monitors, the touchscreen has options to change the brightness, contrast, color etc. The buttons for these settings are located on the bottom side of the touchscreen:

Description of the buttons:

1. Menu up
2. Menu down
3. Touchscreen ON/OFF
4. Select right
5. Select left



Push button number 1 (Menu up) or button number 2 (Menu down) to access the setup screen:

Push button 1 (Menu up) or button 2 (Menu down) to select one of the options and then use buttons 4 and 5 to access the option.



Use button 4 or 5 to change the value of the selected option.



The buttons 1 or 2 will bring you back to the previous overview screen. To apply and save your changes you must finally select „Save Exit“.

Button 3 can be used to put the touchscreen in stand-by mode. If you have pushed this button during the setup accidentally, push this button again and wait a few seconds until the touchscreen goes on again.



## Touchscreen display settings (15" Touchscreen)

Like other monitors, the touchscreen has options to change the brightness, contrast, color etc. The buttons for these settings are located on the bottom side of the touchscreen:



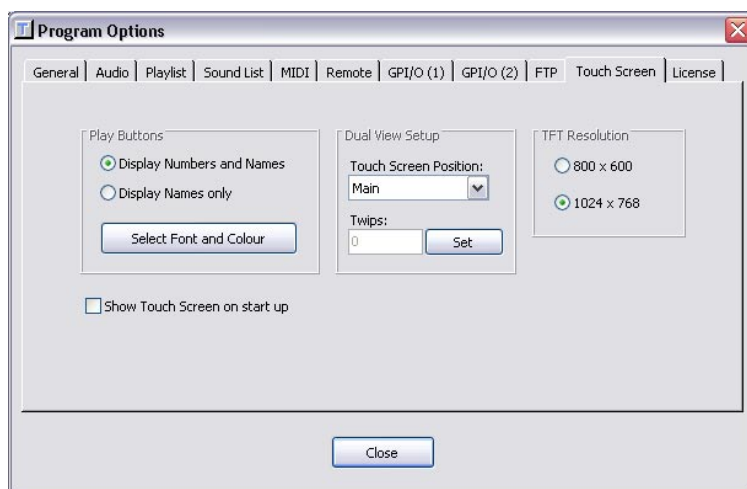
Description of the buttons:

- Menu - The Menu button must be used to call up the options menu
- Up/Down - The Up/Down buttons will select the available options
- Select - Select must be used to confirm the changes

When all changes are done, the „Save“ function must be used to store the changes permanently.

## Touchscreen options within Teatro

In Teatros „Options“ dialog you will find the „Touch Screen“ setup with additional options.



### Display Numbers and Names

The play buttons on the touchscreen will display the number of the playback channel plus the name of the selected sound in that channel.

### Display Names only

The play buttons will only display the name of the selected sound.

### Select Font and Colour

The font for the play buttons can be changed. The following parameters are available: Font, Size, Bold, Italic and colour.

### Show Touch Screen on start up

When launching Teatro the display will be switch directly to the special touchscreen display. Otherwise the usual Teatro main screen will be displayed.

### Dual View Setup

Teatro can be used with a single monitor/touch screen or it can be used with a monitor and a touch screen together.

When using a touch screen only and the touch screen display is visible, the Teatro main screen is hidden under the touch screen display. If you need to make any changes on the Teatro main screen you must close the touch screen with the „Close“ button. After making the changes you can open up the touch screen again with the „Touch Screen“ button on the Teatro main screen.

It may be much more comfortable to use Teatro with a normal monitor and additionally connect a hardware touch screen for the usage as a remote controller. In this case the following settings are necessary:

- The PC must be equipped with a second graphics card or a „Dual Head“ card (e.g. Matrox) to connect a second display.
- The Windows desktop must be extended to the second display (i.e. the touch screen). This can be done in the Windows setup dialog for the display and monitor settings. It is sufficient to set the second display to a 800x600 resolution when using the 12 inch TFT screen and 1024x768 resolution when using the 15" TFT screen , because this is also the size of

Teatro's touch screen dialog.

- In the setup dialog for the Dual Head graphics card it is necessary to set the graphic mode to „Dual View“.

The following settings must be done in order to make Teatro's touch screen dialog visible on the second display.

#### Touch Screen Position

The touch screen will be visible on the second display simply because Teatro puts the left edge of the touch screen dialog next to the right edge of Teatro's main page. For a proper placement of the touch screen dialog the following settings can be made:

- Main: The touch screen will be placed on the same display as the Teatro main page. This setting must be used, when using only one display.
- Auto: Teatro calculates the position for the touch screen dialog on the second display.  
(We can not guarantee that this will work in all Windows versions and with all graphics cards, as we have only tested this with nVidia and Matrox cards under Windows XP. If problems occur, please try the „Manual“ setting).
- Manual: The position for the touch screen dialog on the second display can also be set manually using the „Twips“ field.  
„Twips“ is the Windows internal scale factor and converts to: Pixel x 15 = Twips, thus a horizontal resolution of 1024 pixel are 15360 Twips in Windows terms. The „Set“ button will move the touch screen to the new position.

#### TFT Resolution

The TFT resolution must be set according to which type of TFT display is used with Teatro. A resolution of 800x600 must be set for the 12.1" TFT screen and a resolution of 1024x768 must be set for the 15" TFT screen. This setting will scale the size of some of the screen elements such as the PLAY buttons.

## Additional information

### Hardware

The Teatro touchscreen TS-1 comes with a pressure sensitive TFT display of the newest generation. The TFT display itself was built and supplied by the renowned company „Elo TouchSystems“ ([www.elotouch.com](http://www.elotouch.com)).

You may know that older touchscreens in earlier years could only detect the touch of a finger while measuring the resistance of the skin, which in some cases could lead to a situation where it was not possible to detect the touch properly and generate errors while using the touchscreen.

Newer touchscreens like the one we are using with Teatro can really measure the amount of pressure that is being generated while touching the surface of the screen. This also means that you should not apply very soft pressures, which will make it possible that the touch will not be detected.

### Usage of the touchscreen

It is not necessary to touch the screen with your finger. You can also use your fingernails or a plastic pencil like the ones you use with a Palm Organizer.

**Never use very hard or sharp objects like pens, pencils, nails, screws or screw-drivers !!!**

### Maintenance

- Switch off the touchscreen before cleaning.
- Remove dust and dirt by wiping the touchscreen with a soft, clean, lintfree cloth.
- Moisten a soft cloth with an ammonia-based glass cleaner and use it to remove fingerprints and smudges.
- Do not apply liquid or aerosol spray cleaners directly on the screen or cabinet.

### Handling

- Protect your touchmonitor from extremely low or high temperatures.
- Keep your touchmonitor dry. Do not wash it with a wet cloth or pour fluid into it.
- Protect your touchmonitor from being bumped or dropped.
- Keep your touchmonitor away from dust, sand and dirt.
- Keep your touchmonitor away from humid environments.