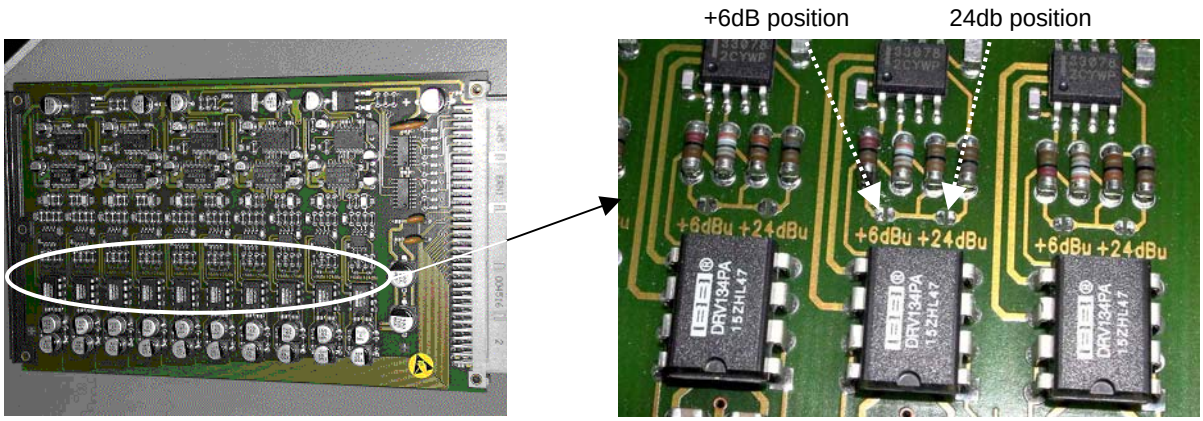
D/A Converter 1.949.688.00

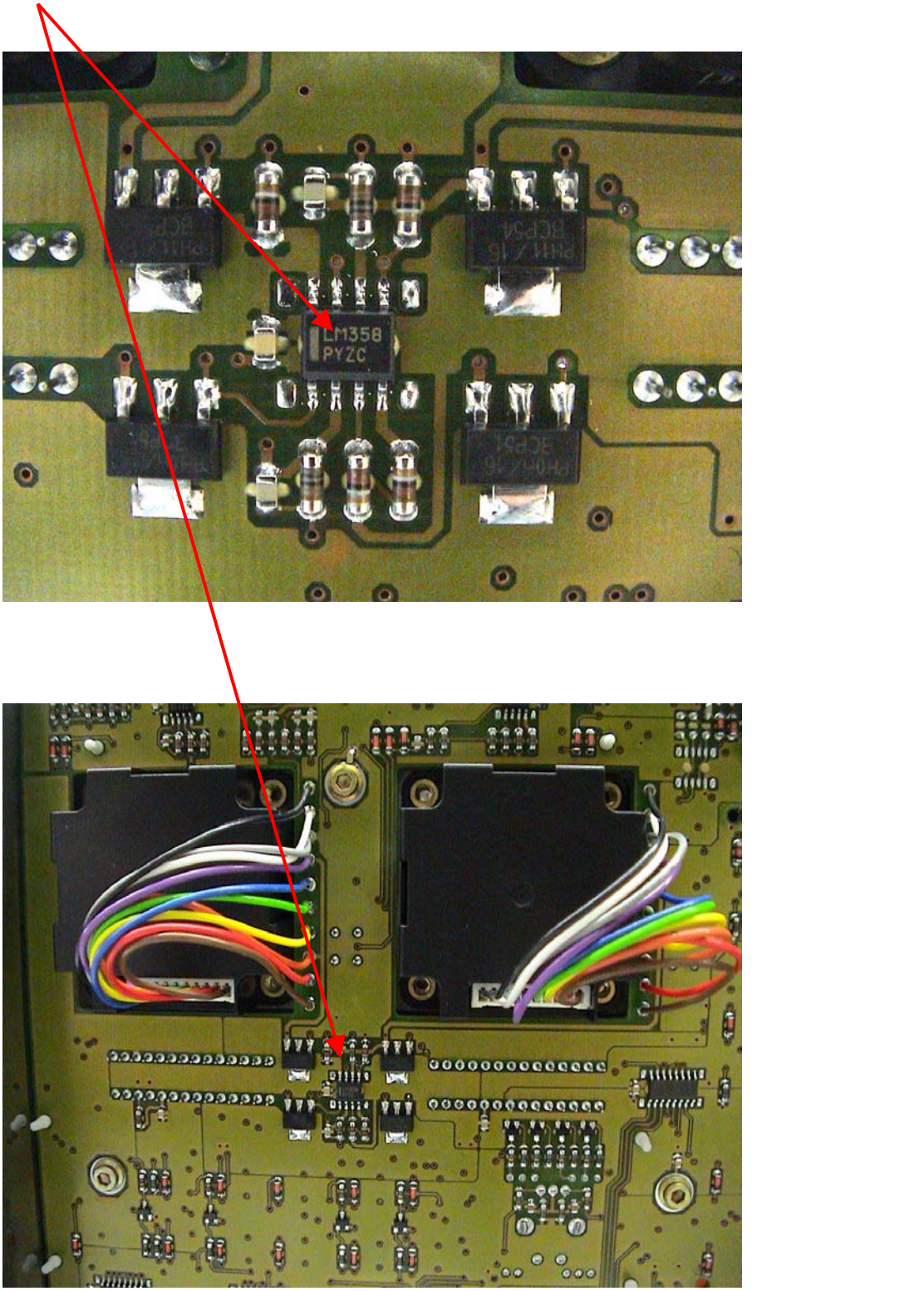
The D/A Converter can be configured to the following standard levels, by connecting the corresponding "soldering jumpers" on the converter boards (separate for each channel).

Output Level (digital full scale)	*jumper configuration*
15dBu	no jumper connected (default)
6 dBu	"6dBu " connected
24 dBu	"24 dBu " connected



Vista 7 Center Frontboard (Bottom) 1.949.125.00

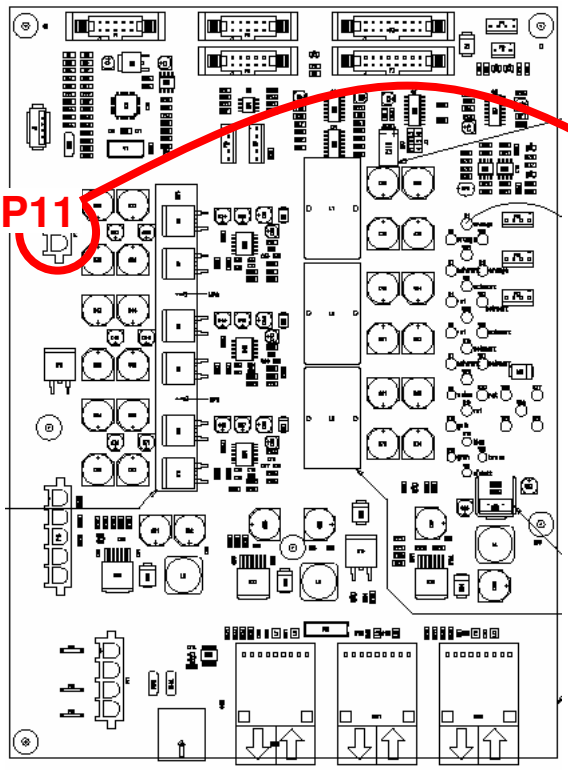
Modification 16.7.2002 (to Index "A")
IC 16 : TL062 replaced with LM 358 D. (plus 2 x 100nF between AGND and Chassis)



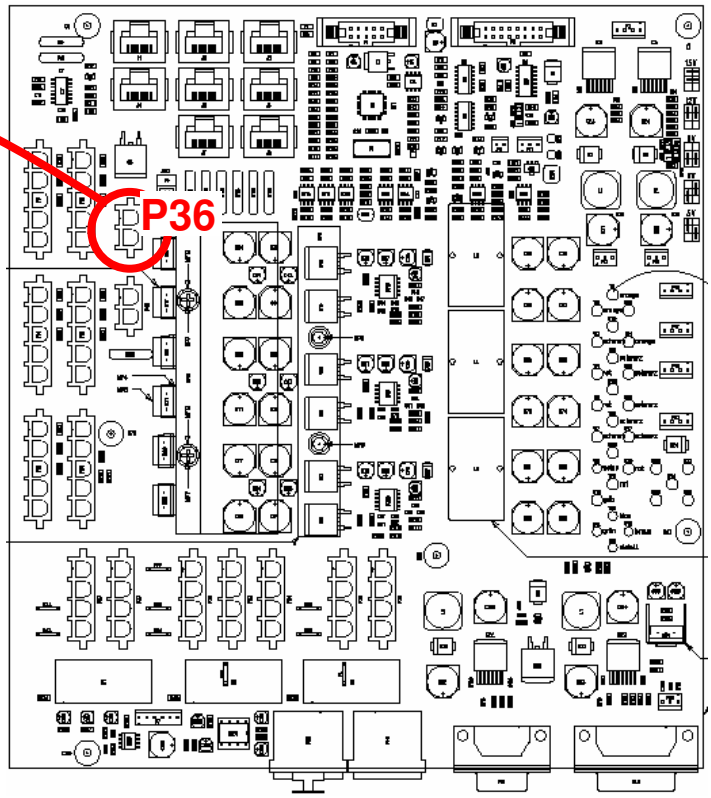
Redundant Supply of Red. Distribution Board 1.949.152.00

The redundant PC of the Vista 8 is currently supplied from a single supply. In case of a defect supply of the redundant PC, not only the redundant system would fail, but also the main PC because signals are switched on the redundant distribution board.

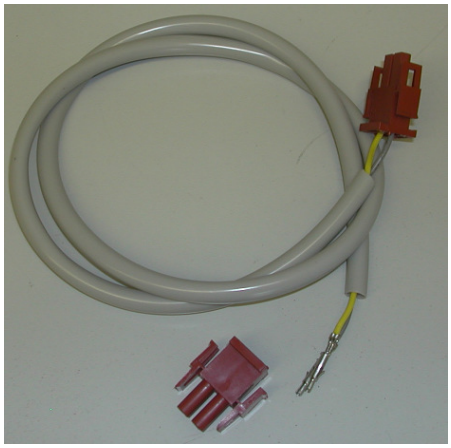
The following connection with the main distribution board (1.949.150.81) provides a redundant 24V supply for the 1.949.152.00 board as well for the whole redundant PC.



1.949.152.00 Distribution Board Redundant



1.949.150.81 Distribution Board



Installation Note for Cable 1.949.020.93 : For easier installation it is recommended to mount the second connector after the cable is in place. The wiring is 1:1 (pin 1-1 and 2-2)

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Vista Service News July 2005

Current Software Version V3.5.02

A V3.5.02 maintenance release replaces the 3.5.01. It includes an additional bug fix (boot error) for Vista 8 systems with redundant PCs. The update package with installation notes is available on our ftp (access for representatives only with their standard login and password) : ftp://reps@ftp.studer.ch/Products/Vista/

Vista 8 Keyboard

Some users reported a problem when entering labels with the Vista 8 keyboard. The problem was first limited to systems with redundant PCs, but did recently also occur on standard Vista 8 systems. The resulting effect are wrong letters and control characters when fast typing, in rare cases the control characters were misinterpreted as system functions. The problem has been identified as compatibility issue of the used I/O components (keyboard, trackball, KVM switch).
A redesigned keyboard is in work. A short-term solution is the use of a standard PS/2 keyboard instead of the built-in one, we also did provide a number of modified keyboards 1.949.155/100 for systems with redundant PCs.

Vista PC Motherboard and 'Capacitor Plague'

There was a known quality problem in 2002 which affected PC motherboards of different brands, due to problems of electrolytic capacitors from Taiwanese manufacturers. Refer to the following web pages for more detailed information about the 'capacitor plague' history, identification of the problem and replacement strategies :

http://en.wikipedia.org/wiki/Capacitor_Plague
http://www.spectrum.ieee.org/WEBONLY/resource/feb03/ncap.html

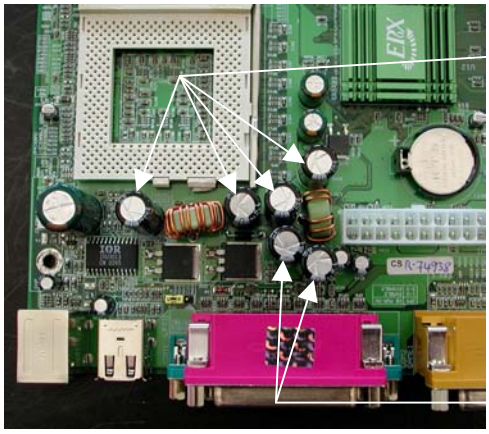
We did recently identify 3 boards in Vista systems (shipped at different dates) which showed the symptom with domed capacitor tops (see picture at left). As a result of the dramatically reduced value of these capacitors (part of the on-board DC-DC converter) the PC did not start anymore.

The boards could be repaired by replacing the defect capacitors.

Although there is no indication that the problem will show up in the large base of installed Vista systems, we will proceed as follows :

- all future Vista shipments will include motherboards with replaced capacitors (see modification below). In the near future a second generation PC system with a new motherboard will be introduced.
- a visual inspection of the motherboard should be done whenever there is a boot or freeze problem of the Vista PC system, a check is also recommended as a preventive step of regular maintenance.
  If there are any capacitors with bulged or domed tops (see examples above or on web links) or if there are any leaking capacitors, Studer can either provide suitable replacement capacitors (see following instruction), or can arrange a replacement of the board.
- please be aware that there are many other reasons for booting and system stability problems (e.g. temperature conditions or power supply). If there are no visual signs of the capacitor problems, the replacement is only one of many steps to be considered.

Replacement of the critical capacitors on Vista Motherboard (EPoX EP-3PTA, Studer Part No 89.20.1122)



2200 uF
6.3V / 105 ºC

1500 uF
6.3V / 105 ºC

Replacement of the capacitors should be left to qualified personnel with the proper tools. A 6-layer board can be damaged when not carefully removing and inserting components !

The indicated capacitors (1500 and 2200 uF) should be replaced with high quality components with the same specifications. The Studer replacement kit includes 6 capacitors of 2200 uF for replacement of the original 1500 and 2200 uF ones.

Please contact the Product Support in Regensdorf for the availability of modification kits or additional information: support@studer.ch

VGA Matrox G200 MMS 89.20.1131

There are 2 slightly different versions of the Matrox Quad Video Adapter cards in use for Vista systems.

The first generation systems were shipped with a Matrox "G2+/QUADP-PL",
later systems were equipped with a "G2+/QUADP-PL-9" with new software drivers.

new version

1st generation card

If 1st generation cards are replaced with the new type, or if a new image is restored to a Vista with the 1st generation cards, the operating system (Windows 2000) will recognize the mismatch of registered and installed card and will require some actions as described below.

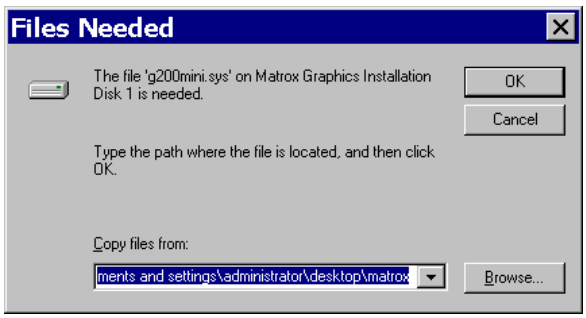
Starting a 1st generation system with new G2+/QUADP-PL-9 card(s) for the first time

After replacing a QUADP-PL with a QUADP-PL-9 card in a 1st generation system, and booting the system for the first time :

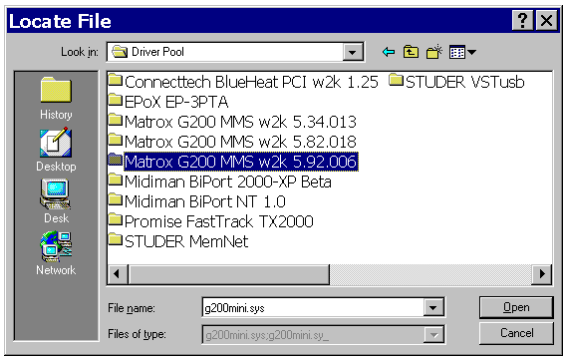
- The new hardware will be detected and a window "Digital Signature not found" appears, asking whether to continue with the installation -> confirm with **YES**
- The window "Found New Hardware Wizard" appears, indicating that the corresponding driver has been installed. -> confirm with **FINISH**.
- When asked to restart the system, choose **NO**. The above installation process will then be repeated for each port of the new card(s). If no new hardware is found anymore, reboot the system. The upgrade process is finished.

Starting a current system with old G2+/QUADP-PL card(s) for the first time

After restoring a new image (with new drivers) onto a 1st generation system with QUADP-PL card(s), and booting the system for the first time :

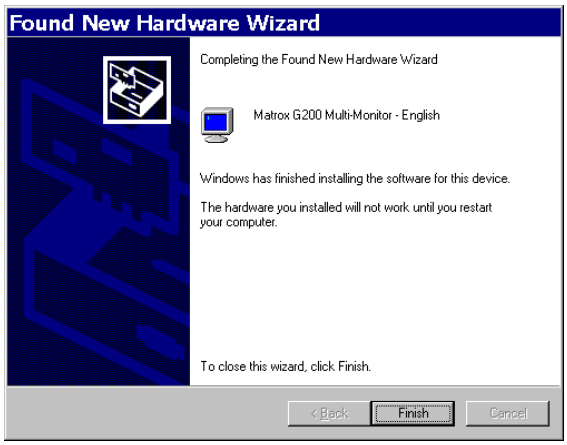


The new hardware will be detected and a corresponding driver is requested. Click to **Browse** for selecting the driver at the correct location ....

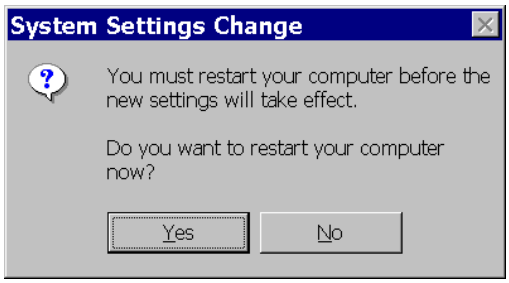


.... which is C:\WinNT\Driver Pool\
Matrox G200 MMS w2k 5.92.006

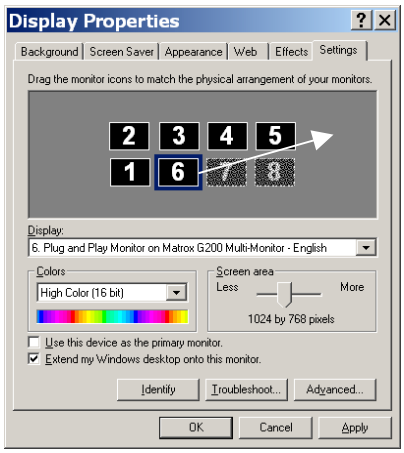
Confirm with **Open**



The window "Found New Hardware Wizard" appears, indicating that the corresponding driver has been installed. -> confirm with **FINISH**.



When asked to restart the system, choose **NO**. The above installation process will then be repeated for each port of the new card(s). If no new hardware is found anymore, reboot the system.



After a restart, verify the correct arrangement of the newly detected card. Right-Click the desktop, choose "properties" and "settings" and arrange the fader bay monitors in a row, and the control bay monitor at the bottom left position.
The configuration at right would not be correct, monitor 6 needs to be placed at the right of monitor 5.

If the desktop icons should appear on another TFT than the control bay one, select „VistaMouseLoader“ in the Start-Programs-Startup menu. The mouse can now be moved over all TFTs (leave main monitor at top) and drag the icons to the correct place. Click "VistaMouseLoader" once more, the mouse driver should again be "locked" to the main TFT.

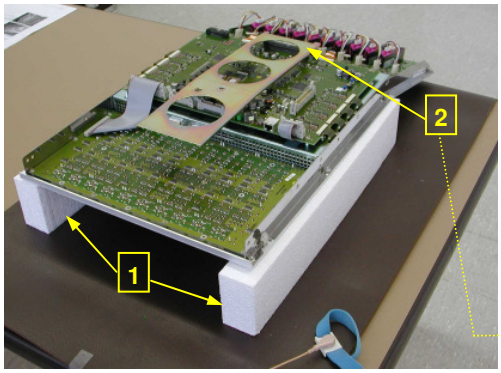
Vista Touch Panel

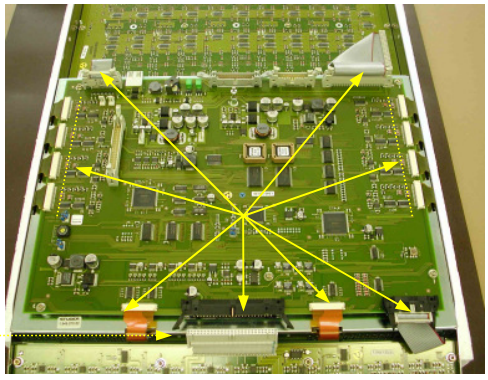
In case of a broken touch panel or defect touch rows or columns, a replacement of the touch panel is required. The following instruction applies to all Vista Fader Bays. The exchange is usually done at the factory, but may also be carried out by qualified service personnel .

Required Material

1.949.070.20-V	Replacement Touch Panel
4 x 27.10.0355	55mm M3 spacer pins for placing the disassembled bay in service position
	Mounting base for safe disassembling of the bay
	Tools : Hex screwdrivers size 2.5/3, fork wrench size 5.5

Disassembling the Fader Bay

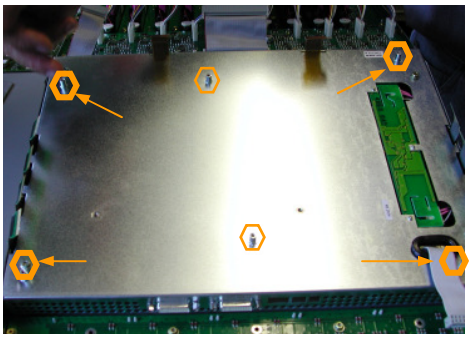


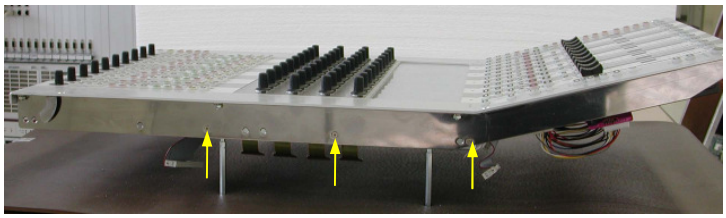


Remove the fader bay from the desk (see also Vista service instructions) and place it in disassembling position, with the controller board on top. Take care not to damage the encoder knobs or faders (move them to top position first).
Use styrofoam or similar elements (1) which do not scratch the surface but give a proper stable support, for placing the bay upside down on a flat surface.
De-install the support leg (2)

and all flat ribbon cables and flex prints connected to the controller board. Be careful when loosening the lock mechanism of the flexprint connectors.

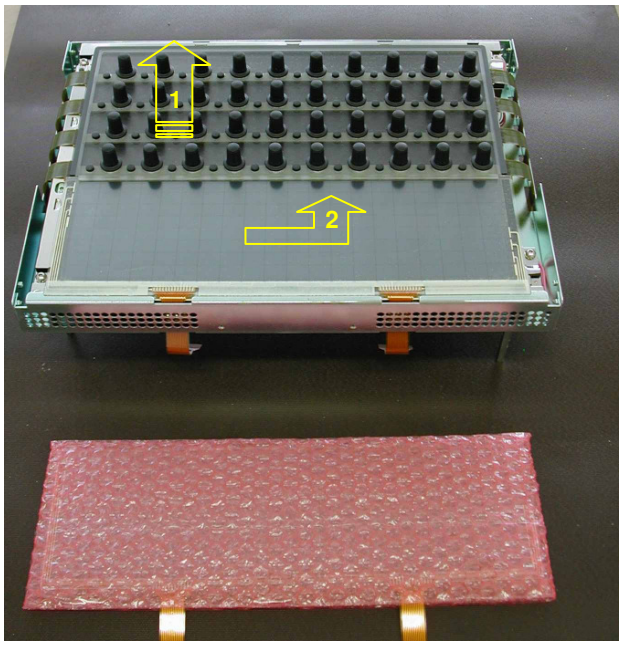
Remove the controller board (5 screws and bolt) and put it in a ESD safe place





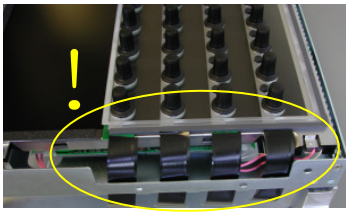
Mount the 4 service spacer bolts in place of the removed controller board.
Place the bay in normal position (standing on the service bolts) and remove the 3 screws on each side of the TFT/Touch module

Replacing the Touch Panel

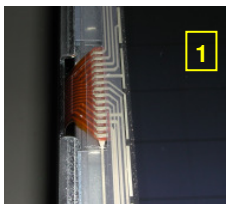


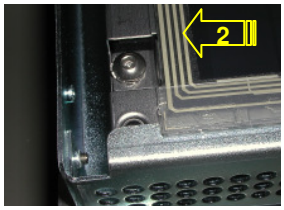
Carefully lift the fader bay frame away, leaving the TFT/Touch module free.

Slowly move back the Vistonics part (1), so that the touch panel can be lifted up and removed (2). Take care to move the TFT only as far as necessary for removing the touch panel, so that the TFT flexprints are not bent too strong and are not damaged by the metal frame.

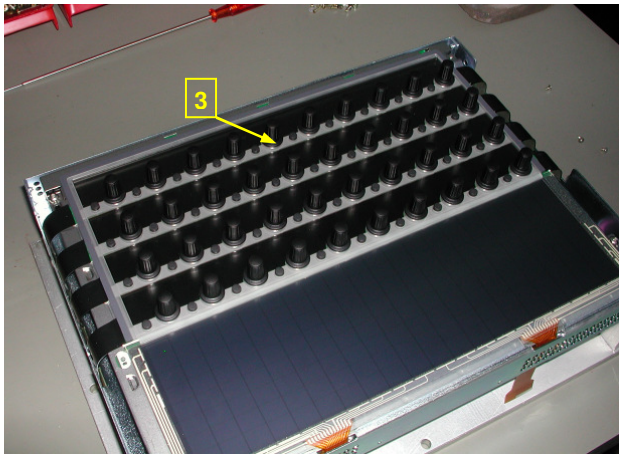


Clean the surface from dust, remove the protection foils from the new touch panel, insert the flexprints first (1) and place the new panel in its final position. It should firmly sit on the lower end (2) and be centered against the TFT.





Verify that there is no dust between touch panel and TFT surface. Clean carefully with compressed air if required.

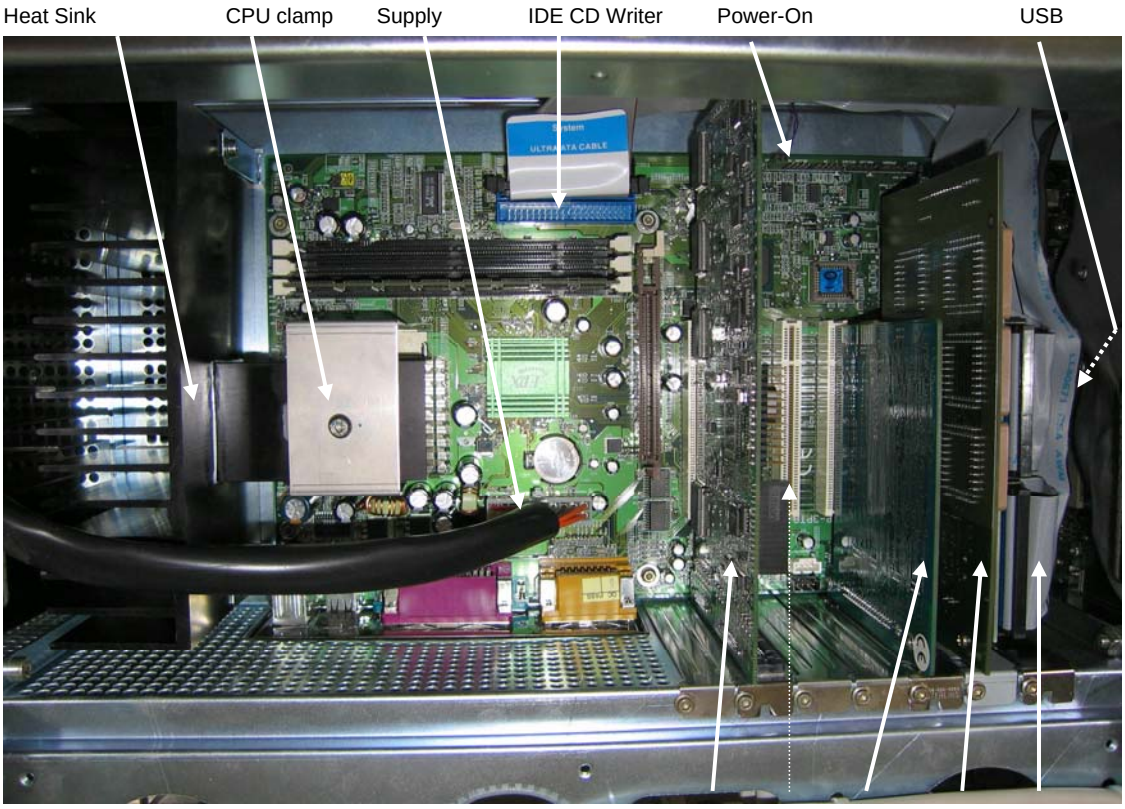


Check that the rubber frame arount the TFT is correctly in place (3) and put the bay frame back onto the TFT/Touch module. Mind the corners of the touch panel !

Reassemble the Fader Bay

Perform the steps from attaching the TFT/Touch module with the 3+3 screws to installing the controller board and mechanical parts in reverse order.

Vista Desks: Exchange of EPoX Motherboard 89.20.1122



The exchange of an EPoX motherboard in a Vista desk should only be performed by qualified personnel, considering standard ESD and installation prerequisites. Proceed as follows:

- switch off desk and remove all mains connectors
- make sure to clearly document PCI card connections (optical interface, monitors and serial interfaces), as well as PS/2 and COM ports. Disconnect the cables.
- remove IDE harddisk cables on the RAID card
- remove all PCI cards
- disconnect all cables to the mainboard (supply, USB flat ribbon cable, IDE cable to CD Writer, power on signal)

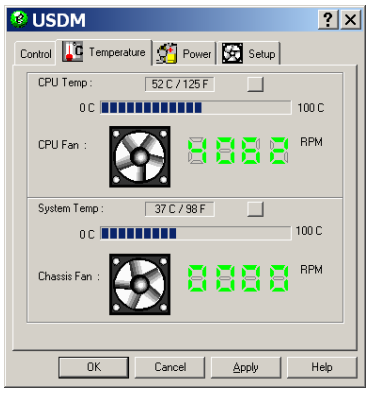
- remove the clamp which mounts the heat sink to the CPU (take care to loosen counternut if present, before turning out the screw. Disassemble the heat sink from the chassis of the desk.
- unscrew the motherboard from the chassis and lift it out of the desk.

When replacing with a new board, move all separate components (CPU, Memory Modules) to the new Board. Refer to Motherboard Manual for installation notes.

- Install new board in reverse above order
  - Take care when reattaching the CPU. Add thermal paste if required, and carefully tighten the screw. Adding too much force to the clamp might damage the CPU socket by ripping off the hook !
  - The USB flat ribbon cable is directly plugged to motherboard pins. Take care that connector in not shifted, and cable leaves in direction of mainboard center.

- After having installed a new board, check if BIOS is correctly configured for Vista use.

- For verifying correct thermal contact of the heat sink, the EPoX Diagnostic Tool can be started (USDM in Control Panels, see picture at right). Verify that the system reaches a stable CPU temperature in the 45 .. 55 ºC range.



Vista PC Motherboard and 'Capacitor Plague'

There was a known quality problem in 2002 which affected PC motherboards of different brands, due to problems of electrolytic capacitors from Taiwanese manufacturers. Refer to the following web pages for more detailed information about the 'capacitor plague' history, identification of the problem and replacement strategies :

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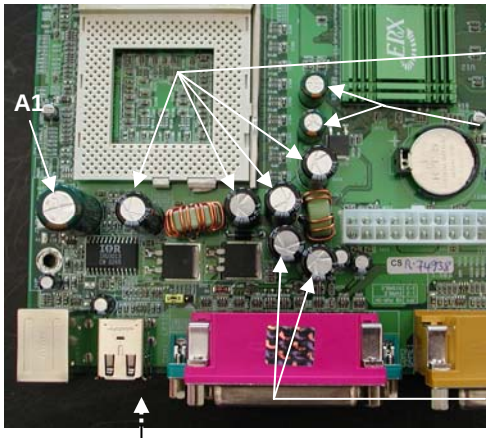
We did identify some boards in Vista systems (shipped at different dates) which showed the symptom with domed capacitor tops (see picture at left). As a result of the dramatically reduced value of these capacitors (part of the on-board DC-DC converter) the PC did not start anymore.

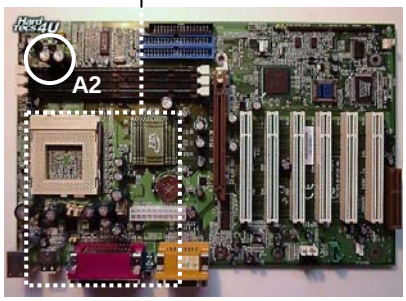
The boards could be repaired by replacing the defect capacitors.

Although there is no indication that the problem will show up in the large base of installed Vista systems, we will proceed as follows :

- all future Vista shipments will include motherboards with replaced capacitors (see modification below). In the near future a second generation PC system with a new motherboard will be introduced.
- a visual inspection of the motherboard should be done whenever there is a boot or freeze problem of the Vista PC system, a check is also recommended as a preventive step of regular maintenance.
  If there are any capacitors with bulged or domed tops (see examples above or on web links) or if there are any leaking capacitors, Studer can either provide suitable replacement capacitors (see following instruction), or can arrange a replacement of the board.
- please be aware that there are many other reasons for booting and system stability problems (e.g. loss of BIOS data due to empty battery, temperature conditions or power supply). If there are no visual signs of the capacitor problems, the replacement is only one of many steps to be considered.

Replacement of the critical capacitors on Vista Motherboard (EPoX EP-3PTA, Studer Part No 89.20.1122-E)





2200 uF
6.3V / 105 ºC

1000 uF
6.3V / 105 ºC
(replace both with a single 2200 uF C)

1500 uF
6.3V / 105 ºC

Replacement of the capacitors should be left to qualified personnel with the proper tools. A 6-layer board can be damaged when not carefully removing and inserting components !

The indicated capacitors (1000, 1500 and 2200 uF) should be replaced with high quality components with the same specifications. The Studer replacement kit includes 7 capacitors of 2200 uF for replacement of the original 1000, 1500 and 2200 uF ones (7 x 10.597.680.05)

Further capacitors showed the effect in rare cases only, but will be generally replaced since autumn 2007 as well :
1 capacitor 3900 uF (see A1)
-> with 10.597.680.06 (3300uF)
2 capacitors near RAM module (see A2)
-> with 2 x 10.597.680.05 (2200 uF)

Please contact the Product Support in Regensdorf for the availability of kits or additional information: support@studer.ch

Vista Service News November 2005

Current Software Version V3.5.03

The currently shipped version is V3.5.03 which was introduced a month ago. The upgrade package can be downloaded from our ftp site, access to ftp://ftp.studer.ch/Products/Vista/ is provided with the standard distributor password.

Vista PC Motherboard

A new generation of PC components will be introduced in November. It greatly improves the performance and overall feel of the console - especially when using dynamic automation. It includes a new motherboard, processor and Serial ATA hard disks. It is planned to offer an upgrade PC kit for current systems later this year. Details will follow.

In the meantime there were some repairs of motherboards with defect capacitors (see July service information), all boards were modified successfully. The replacements were handled case by case, either by sending new capacitors for on-site exchange, or by providing modified boards for an express exchange. Please do not hesitate to contact us if you should need support, refer also to Service Note 2005-10 for more details.

Vista 8 Keyboard

The final solution for the known keyboard problem is still in progress - a new index-81 board has been developped and approved with standard desks, it is currently optimized for redundant control systems. New systems leave with approved current keyboards (standard systems) or with "revision /100" keyboards (for redundant systems).
As soon as the new index-81 keyboard is released we will inform further.

D21m MicLine In Card 1.949.427.00

The input of The Mic/Line In Card may be damaged when phantom power is switched on and the input signal is short circuited. This may e.g. happen when using patch bays with connectors causing a temporary short circuit during the plugging (was reported from bantam connectors). The revision "B" modification improves the input specifications by replacing 4 diodes (see service note 2005-11).

Studer ships Rev "B" cards since 10.10.2005. We will provide new diodes or exchange cards for systems in critical environment. Please contact support@studer.ch with a corresponding request and reference to the system (Vista serial number).
In case of defect cards please use the repair procedure by requesting an RMA number from sales administration for standard repair or advance replacement.

D21m MADI and MADI HD Card 1.949.430/431 and 1.949.411/413

The AES transmitter outputs on stagebox might not be within the specifications regarding phase shift to the reference clock. Also there were reports about failing microphone control when connecting stageboxes at a MADI AUX port . Both problems are fixed with new firmware 1.949.971.22.
The new firmware needs to be reprogrammed at the factory, the status of the boards will increase to index-22 (431/413) or index-23 (430/411). If a customer system should be affected, please contact support@studer.ch to arrange an upgrade.

recent application and service notes, available on the Vista ftp server :

AN 2005-01 Signaling - Stereo to mono
SN 2005-08 VGA Cards
SN 2005-09 Touch Replacement
SN 2005-10 Motherboard EpoX EP-3PT
SN 2005-11 D21 MicLine Card