HARDWARE & INSTALLATION - CONTENTS

GETTING STARTED

This is an illustration of how to connect a standard DB8/DB4 as it comes with one Mainframe and one TC Icon software Editor. We recommend reading through the entire Hardware & Installation section before operating.

Connections

8 x XLR FOR DIGITAL I/O

25PIN DSUB TO XLR

100-240V AC

DB-8

t.c. electronic

X-COUPLED ETHERNET CABLE

PC or Mac
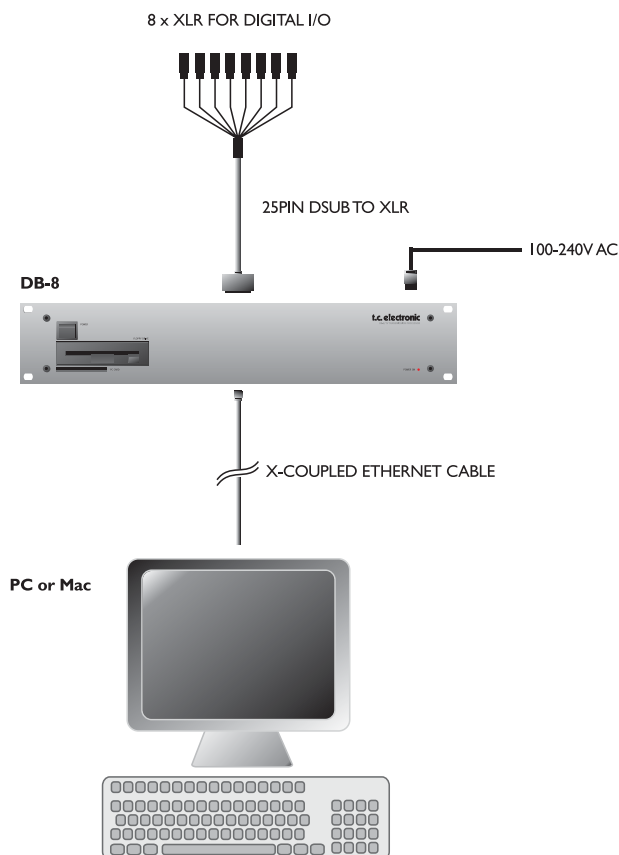
NOTE Please note that a crossed ethernet cable (supplied) must be used in this type of setup. When the system is connected to a HUB as a part of a major network non-crossed ethernet cables must be used (not supplied).

Quick setup guide
This quick setup guide applies for a simple setup as illustrated. The setup procedure requires that your PC or Mac has a network adapter installed as well as a TCP/IP protocol.

• Unpack the Mainframe and mount i a well ventilated space.
• Connect mains power, audio-connections via the supplied 25pin to XLR cable and use the supplied X-coupled ethernet cable to connect the Mainframe to your network adapter as illustrated.
• Boot computer and Mainframe.

Install the TC Icon Software Editor
Follow the intallation-instructions according to page 6 of this chapter.

• Open the TC Icon Software Editor and the following screen will appear.

t.c. electronic

TC Icon | Select | Auto | Setup

There are currently no assigned devices.

Either select the devices you wish to control on the Setup/Devices page, or press 'Assign' to let TC Icon automatically assign any detected devices.

Assign

• Press **Assign**. The System is scanned and all connected mainframes will appear on the next scrren.
• Press the mainframe you wish to access.
• That's it - you are now up and running.

NOTE Latest version of Mainframe software and latest version of the TC Icon Software Editor is supplied on the disks/CD delivered with the Mainframe and Software Editor package. However, from time to time, software updates are available. To achieve the latest software you should visit our site at www.tcelectronic.com and go to "Downloads - Software Updates - TC Icon Software Editor" and follow the instructions. You may also contact your local dealer to get the latest software.

* x.xx is the software version.

MAIN FRAME - FRONT & REAR PANEL

Mainframe Front

Power Key
Switches power On/Off.

3.5" floppy disc slot
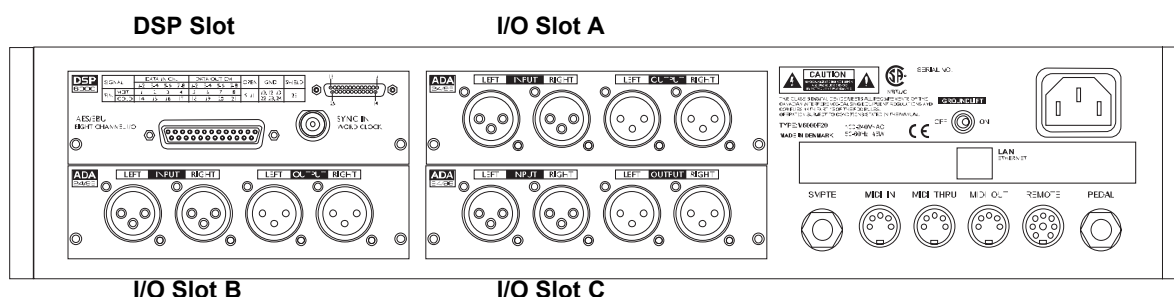For storing presets and loading software-upgrades.

PCMCIA slot
For future software facilities and handling of additional preset banks.

Power On LED
During start-up this LED is red. When the unit is ready for use, the LED will turn green.

Mainframe Rear

DSP Slot   I/O Slot A

I/O Slot B   I/O Slot C

I/O Slots A, B and C
These slots are used for I/O cards ADA 24/96.
Slots must be filled consecutively in alphabetic order.
The DSP card fits in the DSP slot only. When I/O cards are mounted, dip switches on the cards must be set accordingly. Please see page 7.

• An AES-8 card should be installed in "I/O Slot B."
• An optional AES-3 Coax card with eight 75 Ohm BNC connections is also available. Please see page 5 of this chapter for more information.

DSP Slot
The DSP card is placed in the DSP Slot.

Power In
100-230V AC. 50/60Hz - auto-select.

SMPTE
1/4" connection for SMPTE sync. Input.

Ethernet/LAN
Connection for external control devices such as a computer with installed net adaptor or the TC Icon.
The type is 32 bit PCI Ethernet interface fully compliant with IEE 802.3u 10/100 Mbps CSMA/CD standards.
The connector type is a 100Base-T RJ-45 (CN13)

Ground Lift
Use this standard chassis ground lift if you encounter problems with "hum."

MIDI In, Thru and Out
5 pin DIN connectors.

Remote
This connection is for service and test purposes only.

Pedal
General Purpose Input. Connect a TC Master Fader or a tip to ground switch. Applications vary depending on the specific algorithm.
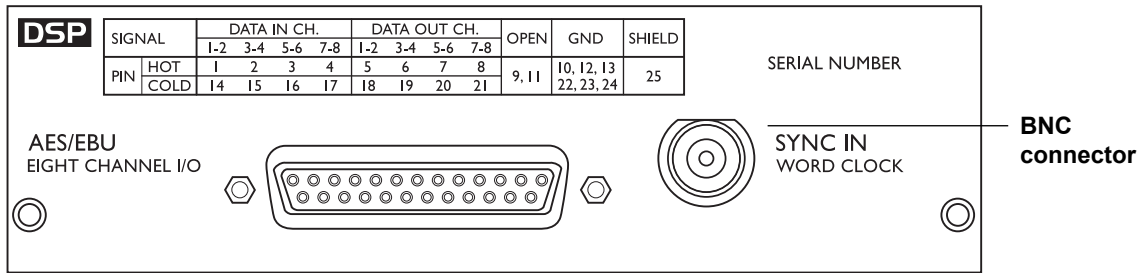
Rackmounting Advice
• The DB8/DB4 mainframe should not be placed in an environment with a temperature exceeding 50 degrees celsius.
• Do not cover the ventilation openings on the sides of the frame.

The cooling fan is activated according to the temperature inside.

DSP - CARD & CONNECTION

SIGNAL	DATA IN CH.				DATA OUT CH.				OPEN	GND	SHIELD
	1-2	3-4	5-6	7-8	1-2	3-4	5-6	7-8			
PIN HOT	1	2	3	4	5	6	7	8	9, 11	10, 12, 13 22, 23, 24	25
COLD	14	15	16	17	18	19	20	21			

AES/EBU EIGHT CHANNEL I/O

SERIAL NUMBER

SYNC IN WORD CLOCK

BNC connector

Use the supplied cable to connect the AES/EBU Inputs/Outputs.

Cable type is twisted pair (12 pairs) with common screen. Recommended impedance: 110ohm.

One end is equipped with an AES/EBU 25 pin DSub connector, the other end is equipped with four male XLR's and four female XLR's.
Male XLR's are marked with: Out - 1 to 4.
Female XLR's are marked with: IN- 1 to 4.

Extension cables must be constructed according to AES/EBU-3 standards.

Following is the pin-out:

Pin number	Cable pair number	XLR	XLR-pin	Assignment
1	1a	Female 1	2	Input 1/2 +
2	2a	Female 2	2	Input 3/4 +
3	3a	Female 3	2	Input 5/6 +
4	4a	Female 4	2	Input 7/8 +
5	5a	Male 1	2	Output 1/2 +
6	6a	Male 2	2	Output 3/4 +
7	7a	Male 3	2	Output 5/6 +
8	8a	Male 4	2	Output 7/8 +
9	No connection			No connection
10	9a	Female 1	1	Common
11	No connection			No connection
12	9b	Female 2	1	Common
13	10a	Female 3	1	Common
13	10b	Female 4	1	Common
14	1b	Female 1	3	Input 1/2 -
15	2b	Female 2	3	Input 3/4 -
16	3b	Female 3	3	Input 5/6 -
17	4b	Female 4	3	Input 7/8 -
18	5b	Male 1	3	Output 1/2 -
19	6b	Male 2	3	Output 3/4 -
20	7b	Male 3	3	Output 5/6 -
21	8b	Male 4	3	Output 7/8 -
22	11a	Male 1	1	Common
23	11b	Male 2	1	Common
24	12a	Male 3	1	Common
24	12b	Male 4	1	Common
25	Shield	no connection		Common

Note: Twisted cable pairs must be respected

Sync In Word Clock
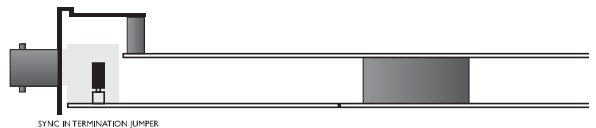For connections to external clock via the standard BNC connector (see illustration above).
When several devices are connected in a chain and synced via Word Clock, termination on the last device of the chain is necessary.
As the DB8/DB4 is expected to be the last unit in such a chain (or the only), the factory default setting on the DSP card is: TERMINATED (75ohm).
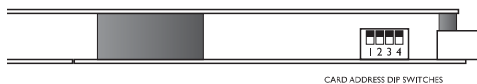
If you need to terminate the Word Clock signal elsewhere in the chain you will need to unterminate the DSP card. To do this you must remove the DSP card from the mainframe and remove the termination jumper:

• Switch off the power and disconnect main power cord.
• Loosen the two screws holding the DSP card and remove the card gently.
• Remove the terminating jumper near the BNC plug.
• Insert the card gently in the DSP slot and remount the screws.

Termination jumper

SYNC IN TERMINATION JUMPER

Pins connected via jumper : Terminated (75ohm).
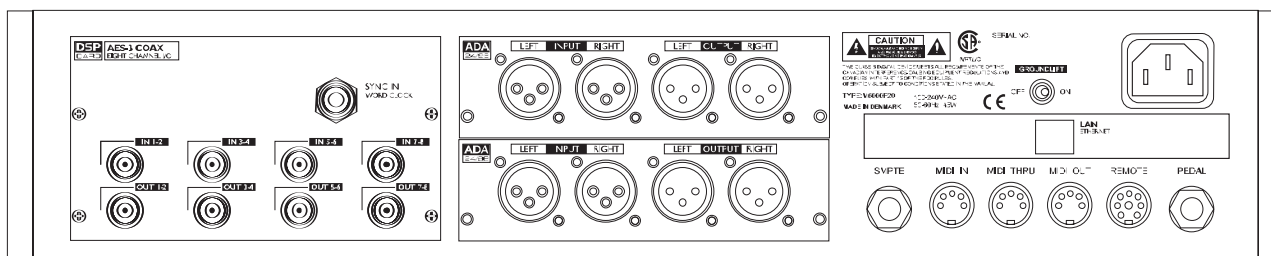Pins NOT connected via jumper : Not Terminated

CARD ADDRESS DIP SWITCHES

Dip switches 1 to 4 should ALWAYS be set to off.

General Handling
When inserting or removing any modules, avoid touching the circuit board by handling only the rear panel of the module. To minimize the static potentials that can cause damage to the electronic circuits, you should observe precautionary grounding techniques such as touching a grounded Mainframe immediately before inserting modules.
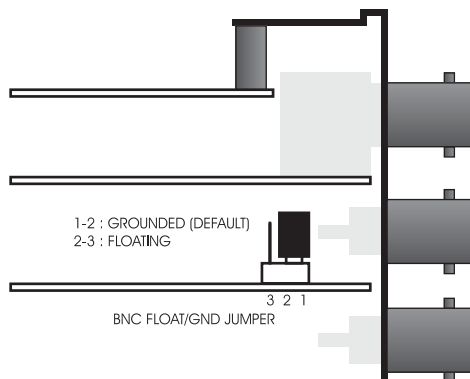
AES-3 COAX CARD

Introduction
The optional AES-3 Coax card with 8 BNC connections is especially designed for broadcast installations as they often prefer the 75 Ohm unbalanced BNC connections that support considerably longer cables.

Grounding
A jumper on the card determines grounding to chassis status. Per default the card is grounded to chassis.

If you need to change the grounding status, follow this procedure:

• Switch off the power and disconnect main power cord.
• Loosen the two screws holding the DSP card and remove the card gently.
• Move the jumper to pins:
  2-3   : Floating (not grounded)
  1-2   : Grounded (default)
• Insert the card gently in the DSP slot and remount the screws.

Hardwire Bypass at power off
At power off the frame is hardwire-bypassed via relays ensuring NO signal loss.

General Handling
When inserting or removing any modules, avoid touching the circuit board by handling only the rear panel of the module. To minimize the static potentials that can cause damage to the electronic circuits, you should observe precautionary grounding techniques such as touching a grounded Mainframe immediately before inserting modules.

1-2 : GROUNDED (DEFAULT)
2-3 : FLOATING

3 2 1
BNC FLOAT/GND JUMPER

TC ICON SOFTWARE EDITOR

The TC Icon Software Editor for PC and Mac is a fully operational software version of the TC Icon Remote. The software is free to download for evaluation BUT to actually operate a DB8/DB4 via the Editor a license for each connected mainframe must be purchased from TC Electronic.

To achieve the TC Icon Software Editor
- Download software directly from www.tcelectronic.com
- Call your local dealer
- Call TC Electronic headquarters
  +45 87427000
  or USA: 805 3731828

To purchase a Mainframe License for the TC Icon Software Editor
- Purchase directly via www.tc-now.com
- Call your local dealer
- Call TC Electronic headquarters
  +45 87427000
  or USA: 805 3731828

Installation - PC
System Requirements
- Pentium 233MHz ro better
- 32MB RAM
- Windows 95, 98, or 2000
- WinZip installed

Updating/installing the TC Icon Software Editor
Your computer probably holds the required MS Installer program and you only need download the:

TC Icon Software Editor - PC version

This is a ".msi" file type and the size of this file is approx. 775kB

- Close all other programs than your web browser and access www.tcelectronic.com
- Access: Download, Software updates
  Press TC Icon Software Editor for PC to download
- Click Finish in the Setup Wizard
- Click Close

A TC Icon shortcut will appear both on the desktop and in the Start menu.

WARNING Previous versions of the TC Icon Editor will appear in the Control Panel Add/Remove menu. To retrieve these shortcuts you must reinstall the TC Icon Editor software.

Installation including the Windows MS Installer
If you during the process described above have discovered that the required MS Installer program is NOT already on you computer you should download the:

*TC Icon Software Editor (PC only)
+Windows Installer*

This file includes both the Microsoft Installer Service as well as the TC Icon Software Editor
The size of this file is approx. 3.5MB
- Close all other programs than your web browser and access www.tcelectronic.com
- Access: Download, Software updates
  Press the Microsoft Installer Service to download
- Save the file to any location on your hard-drive
  Keep the file for future use !
- Double-click on the self-extracting file and unzip to any archive. Windows/Temp is automatically suggested.
- Windows will now ask you to restart your system.
  This is necessary to be able install the TC Icon Editor
- After restart the installation of the TC Icon Editor will proceed
- Follow the instructions

A TC Icon shortcut will appear both on the desktop and in the Start menu.

Installation - Mac
System Requirements
- Apple G3 or G4
- MacOS 9.2 or higher / OS X
- Minimum of 64MB RAM
- Stuffit Expander installed

Installation
- Close all other programs than your web browser and access www.tcelectronic.com
- Access: Download, Software updates
  Press TC Icon Software Editor for MAC
- The TC Icon Software Editor is now installed and can be accessed from your desktop.

SUBNET MASK AND TCP/IP

Introduction
If your setup is a standard DB8/DB4 with a Mainframe and a TC Icon and no other units connected you do not need to dive into this section.

The DB8/DB4 standard setup with a Mainframe and a TC Icon is a "point to point Local Area Network" (LAN) because there are only 2 items connected. This is done via the supplied Ethernet cable. Please note that the cable type (supplied) to be used for this setup is **cross-coupled**. This is the most simple LAN setup possible. As soon as several mainframes, TC Icons and/or a computer is hooked up on the network a HUB (not supplied) must be used. In this scenario standard ethernet cables (not cross-coupled) must be used.

The following section will explain a few important basic terms regarding network setups such as TCP/IP and Subnet Mask. Basic knowledge of these issues is necessary as soon as your setup consists of more than two items.

Please note that a working TCP/IP protocol must be installed on your computer before attempting to hook up the computer on the network.

Subnet Mask - TCP/IP address
### Win 95/98/NT
Subnet Mask
The Subnet Mask is a number that defines a group of computers (or Icons/Mainframes) connected to the network. All units in the group must have the same Subnet Mask. The DB8/DB4 Subnet Mask is by default 255.255.255.0 and therefore the Subnet Mask on all other units/computers must be set accordingly.

NOTE The DB8/DB4 Subnet Mask can be altered, to match your network Subnet Mask if this differs from the standard 255.255.255.0. Please see the section:
Setting Subnet Mask on the DB8/DB4.

To find the TCP/IP address and the Subnet Mask settings on your computer running Windows:
Go to Control Panel, Network, Configuration, double click on TCP/IP and you will see the following.
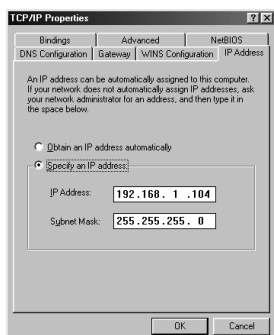
TCP/IP address
The TCP/IP address is unique to each unit connected in the network. Two units must therefore never have the same IP address.
The TC Icon default address is   : 192.168.1.125
The DB8/DB4 default address is : 192.168.1.126

If your computers IP address (or any in the network) is one of the above you have two options. Either to alter the computers IP address or to alter the IP address of the TC Icon and the Mainframe. Please see the sections:
Setting the TCP/IP address on the Mainframe.
Setting the TCP/IP address on the TC Icon.

Mac
• Go to "Control Panel - TCP/IP"
• Set Subnet Mask. Subnet Mask must be identical to the Subnet Mask used on DB8/DB4. Default Subnet Mask setting on DB8/DB4 is 255.255.255.0
• Set TCP/IP address. The first three numbers seperated by "." must be identical. The last three digits must be unique for each unit in the network.

The TC Icon default address is   : 192.168.1.125
The DB8/DB4 default address is : 192.168.1.126
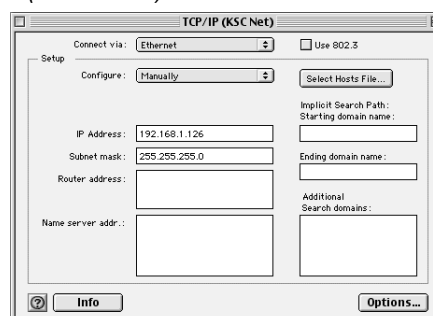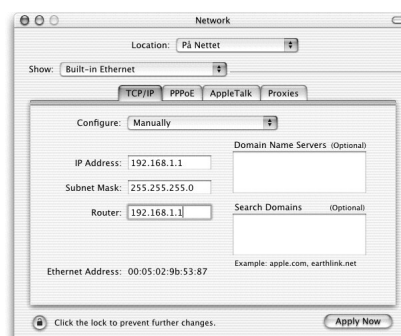
Illustration (MacOS 9.2)

Illustration (MacOS X)

REMOTE CPU - FRONT/REAR PANEL

This section describes the <u>optional</u> TC Icon hardware remote. The TC Icon consists of the Icon itself and the 19"
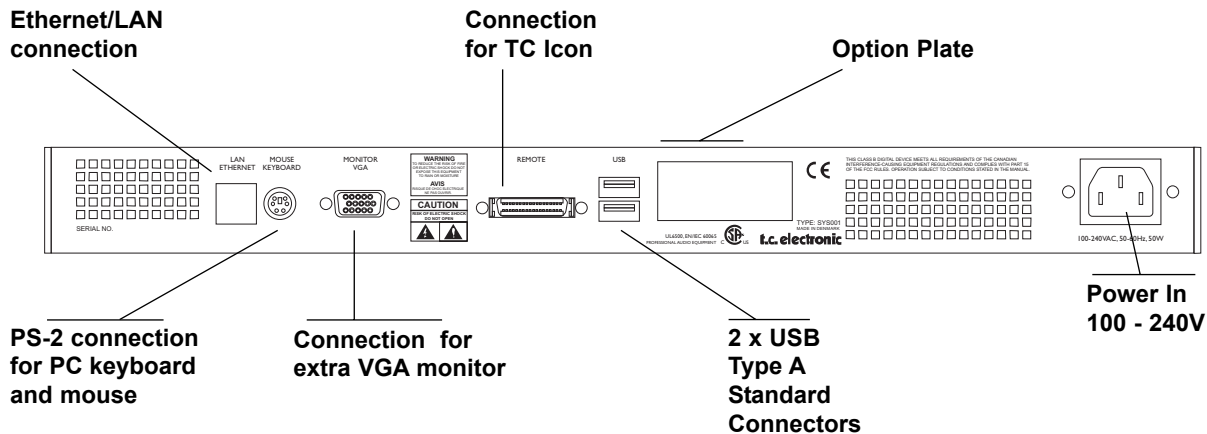Remote CPU.

Remote CPU front panel

Power Key
Switches power On/Off.

Power On LED
The LED will turn green when power is on.

Remote CPU rear panel

Ethernet Connection
32 bit PCI Ethernet interface fully compliant with IEE
802.3u 10/100 Mbps CSMA/CD standards.
The connector type is a 100Base-T RJ-45 (CN13)

Connection for PC keyboard or mouse
A standard PS2 Y-splitter must always be used when
connecting a PS2-mouse, a keyboard or both.
This cable is not supplied with the unit.

Connection for TC Icon
36 pin multi-cable connection for TC Icon.

TC Connection Cable.
Use the special TC Icon cable supplied with the
unit ONLY !

USB Connection
Use the USB connection for extra peripherals.

Monitor
By connecting a monitor via this standard 15 pin D-Sub
you can have the exact same picture as displayed on the
TC Icon, running in parallel with the Icon. Color depth is 24
bit with a screen resolution of 640 x 480 pixels at 60Hz.

Option Plate
For future upgrade options.

Power
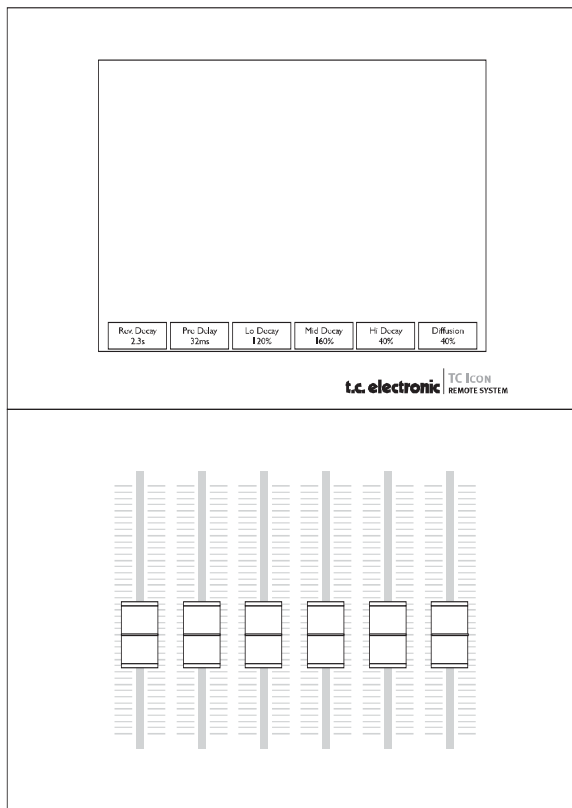Connect 100-240V AC, 50/60Hz auto-select.

Rackmounting Advice
• The CPU unit should not be placed in an environment
  with a temperature exceeding 50 degrees celsius.
• Do not cover the ventilation openings on the back of the
  Remote CPU.

The cooling fan is activated according to the
temperature inside.

TC Icon Front

TC Icon Rear

Screen
The TC Icon screen is a touch-sensitive capacitive screen. The resolution is 640 x 480 16 bit color resolution. The touch calibration as well as brightness and colors can be adjusted/selected in the TC Icon Setup menu.

Maintenance
The touch screen must be cleaned only with a soft cloth slightly moistened with water or a mild detergent solution.

⚠ **WARNING** Do not spray directly on the screen.

Faders
The Faders are touch-sensitive. The sensitivity of the Faders can be adjusted so response to movement is achieved only when operated with your finger-tips.
This way unintended movement of the Faders with e.g. a sleeve etc. will not result in changes in parameter values. The sensitivity can be adjusted in the TC Icon Setup menu.
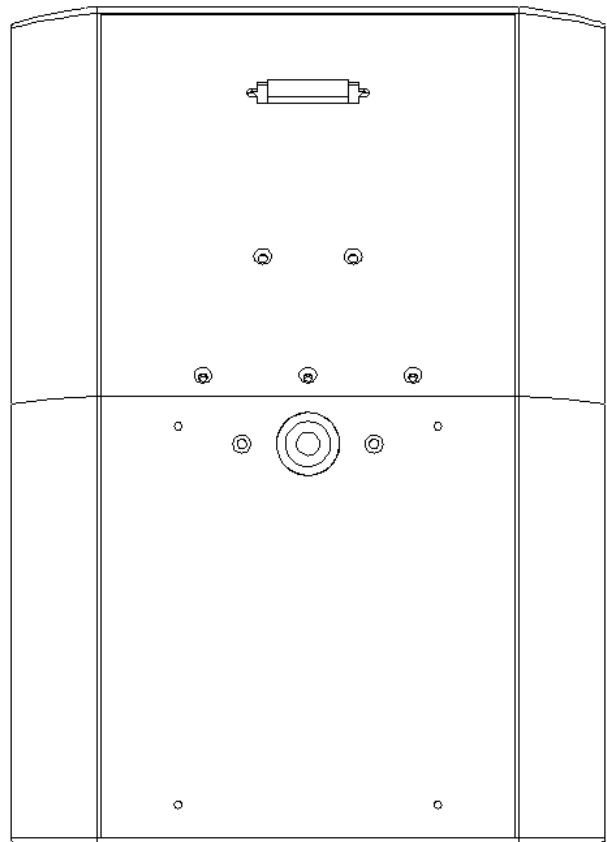
TC Connection Cable.
Use the special TC Icon cable supplied with the unit ONLY! No other cables can be used. The 7.5 meters (22 feet) cable cannot be extended as this will reduce the power for the Icon supplied via the cable!

Mic stand mounting
There are two standard threads. 3/8" and 5/8". The TC Icon can be mounted on both types without further accessories.

Mounting of plate.
Mount the supplied plate on the rear of the TC Icon, to assure stable operation when placed on a table or similar. This is easily done using the 4 screws and screwdriver supplied with the unit.

INSTALLING ADDITIONAL I/O CARDS

> **Caution!**
> The servicing instructions are for use by qualified personnel only. To reduce the risk of electric shock do not perform any servicing other than that in the operation instructions unless you are qualified to do so.
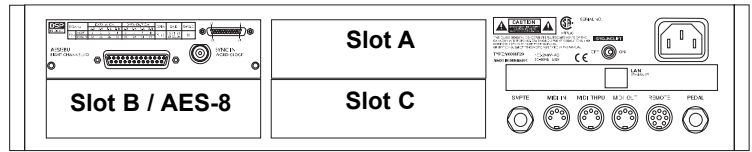
I/O Cards

I/O cards MUST be mounted in slots A, B and C consecutively starting in slot A. Dip-switches must be correctly set on the I/O cards.

	Dip 1	Dip 2	Dip 3	Dip 4
Slot A	on	off	off	off
Slot B	on	on	off	off
AES-8	off	on	off	off
Slot C	on	off	on	off

To install an ADA 24/96 or AES-8 card in your Mainframe
1. Switch OFF the unit and disconnect the main power cord.
2. Remove the DUM-1 option plate(s) or module by loosening the 2 screws.
3. Insert the card gently and mount the two screws.

NOTE ADA 24/96 cards can be mounted in slots A, B or C. The AES-8 card **must** be placed in the AES slot.

Static Electricity
As all computer hardware can be sensitive to static electricity, certain precautions must be taken to protect it from damage during storage and handling.

Storage
Non-mounted modules should always be stored in anti-static shielded bags.

General Handling
When inserting or removing any modules, avoid touching the circuit board by handling only the rear panel of the module. To minimize the static potentials that can cause damage to the electronic circuits, you should observe precautionary grounding techniques such as touching a grounded DB8/DB4 Mainframe immediately before inserting modules.

Removing Modules
Before removing any card from your Mainframe, switch off the power and unplug the main power cable. Unplug all other connections from the module before unscrewing the two screws securing the module in the Mainframe. When removing a module from a Mainframe, the card should be mounted directly in another Mainframe or placed in an antistatic shielded bag.

Mounting Modules
Before mounting modules in your, switch off the power and unplug the main power cable. Remove the dummy-panel or original module from the slot where you want to install the module. The module should then be removed from the shielded bag and mounted directly in the Mainframe by handling the rear panel of the module only. Avoid touching any components on the PCB-Board.

ADA 24/96 Parameters
To access card specific parameters via the TC Icon:
• Press **Frame, System, I/O** and **Slot A**, **Slot B** or **Slot C.**

Level In
Changes the analog nominal Input level between +6dBu and +30dBu in 6dB increments.
The analog Input level enables you to match the Mainframe Input to the Output of e.g. your mixer. If the nominal operating level your mixer is e.g. +4dBu and you select +12dBu on the Level In parameter you will have a headroom of 8dB. If you select +16dBu in the Analog In the headroom will be +12dB, and so forth.

Level Out
Changes the analog Output level between +6dBu and +24dBu in 6dB increments.

Filter
Select filter type. Chose between - Linear, Natural, Vintage, Bright and Standard (Std). Further information on these filters please read the chapter: In Depth Information.

Soft Clip
Softclip algorithm running in the 96kHz domain right after the AD conversion before the down-sampling filter.

Output Connection
Please select the type of connection you are using on the Output of the card. Select between:
Balanced or unbalanced (with signal on pin 2 or pin 3).

NOTE If you are connecting unbalanced cables to the Outputs when Outmode set to BAL, the Outputs will be muted due to the short circuit the unbalanced cables cause.

INSTALLING ADDITIONAL I/O CARDS

ADA 24/96 Bypass or Mute mode

In "Power Off" mode the DB8/DB4 with ADA 24/96 cards installed can work in two different ways. Either the Output can be muted or the Input can be bypassed directly to the Output. The default setting is "Bypass to Output mode".

To switch between these modes you must remove the ADA cards metal shield.

• Power off DB8/DB4.
• To minimize the static potentials that can cause damage to the electronic circuits, you should observe precaution ary grounding techniques such as touching a grounded DB8/DB4 Mainframe immediately before inserting/ removing modules.
• Remove the ADA card carefully.
• Remove the cover off the card by loosening the 4 Allen head screws on the metal shield, and the 2 pozi drive screws next to the busconnector.
• For MUTE mode place the jumpers on the four pins away from cut-off corner of the pinheader block.
  (see fig. 1 - pinheader block marked with frame)
• For BYPASS mode place the jumpers on the four pins closest to the cut-off corner of pinheader block.
  (see fig. 2 - pinheader block marked with frame)
• Remount metal shield and install the card in the mainframe to finish operation.
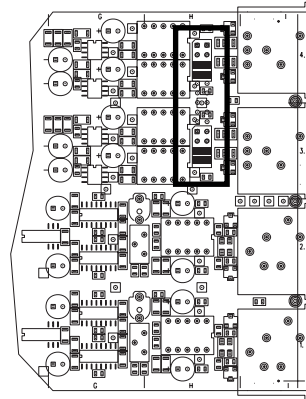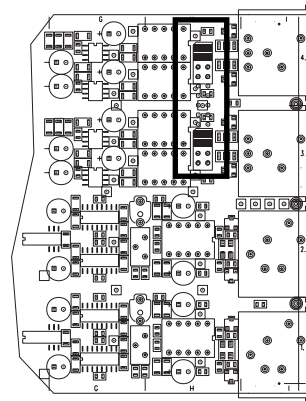
Fig 1 - Mute mode

Fig 2 - Bypass mode

UPDATING DB8/DB4 SOFTWARE

The DB8/DB4 is a constantly evolving platform and updating software is a standard procedure keeping the system up-to-date. Upgrading is easily done following the procedures below.

For general instructions on how to operate the TC Icon please see the DB8/DB4 Operation section of this manual. Basically you use your fingers to navigate like a mouse on a computer. Press "upper" and "side" tabs to select pages. Go ahead - it's easy !

Achieving the newest software
Visit our site at www.tcelectronic.com and go to "Service & Support - Software Updates - DB8/DB4" and follow the instructions.
You may also contact your local dealer to get the latest software. The local dealer will supply you with four 3.5" discs, one for each software (see above).

There are four types of software in the DB8/DB4.
#1   Frame software
#2   DSP software
#3   Software for the TC Icon
#4   Ethernet software

There is no specific software for the Remote CPU as the TC Icon and the Remote CPU are to be viewed as one inseparable unit.

NOTE It is important to upgrade the software in the correct order: First #1 Frame software, then #2 DSP software, then #3 TC Icon software, then #4 Ethernet software and then the AES-8 card software. The AES-8 card software should only be upgraded if a newer AES-8 software version than the one you are currently using is available.

Updating Frame Software
• Power OFF the DB8/DB4
• Insert floppy-disk #1 "Frame application" into the DB8/DB4
• Power ON the DB8/DB4
• Wait approximately 2 minutes while the software is copied.
• When the LED on the right side of the DB8/DB4 turns constantly green, and the floppy-drive has stopped, remove the floppy-disk.

While uploading software, the power LED will flash between green and orange. This is normal. If the LED flashes in red, please upload the software once again.

A result file called Resboot.txt will be saved on the disk, and list the result of the operation. This file can be opened with Microsoft Notepad on a standard PC.

Updating DSP Software
• Power OFF both the DB8/DB4 and the Remote CPU.
• Insert floppy-disk #2 "DSP application" into the DB8/DB4.
• Power the DB8/DB4 ON.
• Wait approximately 2 minutes while the software is copied.
• When the LED on the right side of the DB8/DB4 turns constantly green, and the floppy-drive has stopped, remove the floppy-disk

While uploading software, the power LED will flash between green and orange. This is normal. If the LED flashes in red, please upload the software once again.

A result file called Rs<serial no>.txt will be saved on the disk, and list the result of the operation. This file can be opened with Microsoft Notepad on a standard PC.

Updating TC Icon Software
• Power ON the Remote CPU (The DB8/DB4 should already be powered ON, if not, remove any floppy disk and power ON the DB8/DB4 as well).
• Insert floppy-disk #3 "TC Icon application" into the DB8/DB4.
• Access the SETUP/UPDATE page on TC Icon.
• Press the DETECT button in the big oval box.
• Press the big round button labeled: UPDATE FROM DB8/DB4 when it appears.
• Wait until the TC Icon automatically restarts.

Updating Ethernet Software
• Power OFF the DB8/DB4.
• Insert floppy-disk #4 "Ethernet application" into the DB8/DB4.
• Power ON the DB8/DB4.
• Wait approximately 2 minutes while the software is copied.
• When the LED on the right side of the DB8/DB4 turns constantly green, and the floppy-drive has stopped, remove the floppy-disk.

While uploading software, the power LED will flash between green and orange. This is normal. If the LED flashes in red, please upload the software once again.

A result file called Resboot.txt will be saved on the disk, and list the result of the operation. This file can be opened with Microsoft Notepad on a standard PC.

TIP To verify correct update-procedure has taken place, check the software version numbers both before and after an update. These version numbers are located on the Frame/System/Main/Net page.

While loading software the colour of the front LED

indicates the following status.

<u>ORANGE:</u>
The Boot software is starting and processing the control file.

<u>RED:</u>
The Boot software could not start the Ethernet or H8 main board application. Two situations could be causing this:
• An older version of software than the one already loaded is found on the disc. Power on/off to reboot.
• An error occurred while reading the disc. Either the file or the disc is corrupt. This will probably result in software failure. Create e new disc with correct software and try again.

<u>RED BLINK:</u>
The Boot software could not save the result file "Resboot.txt" on the diskette. This could be due to a write protected disc.

<u>GREEN:</u>
The Boot software has started the Ethernet and H8 main board application. If any control file has been processed see the Resboot.txt file for any errors and status.

Loading the TC Icon software is also possible via LAN (Local Area Network).
To setup your DB8/DB4 in a network and update via LAN, please refer to the following pages.

It is <u>not</u> possible to update the Mainframe-software via ethernet.

AES-8 Card Software

The AES-8 card is loaded with the latest software version when you receive the card. If you need to upgrade this software at any time follow these instructions:

• Download the latest software from www.tcelectronic.com Follow the instructions
• Power OFF both the Mainframe and the Remote CPU
• Insert the AES-8 floppy-disk into the Mainframe
• Power On the Mainframe
• Wait while the software is loaded.
• When the LED on the right side of the DB8/DB4 turns constantly green, and the floppy-drive has stopped, remove the floppy-disk

DB8/DB4 IN A LOCAL AREA NETWORK

Introduction

If your setup is a standard DB8/DB4 with a Mainframe and a TC Icon and no other units connected you do not need to dive into this section.

The DB8/DB4 standard setup with a Mainframe and a TC Icon is a "point to point Local Area Network" (LAN) because there are only 2 items connected. This is done via the supplied Ethernet cable. Please note that the cable type (supplied) to be used for this setup is **cross-coupled**. This is the most simple LAN setup possible. As soon as several mainframes, TC Icons and/or a computer is hooked up on the network a HUB (not supplied) must be used. In this scenario standard ethernet cables (not cross-coupled) must be used.

The following section will explain a few important basic terms regarding network setups such as TCP/IP and Subnet Mask. Basic knowledge of these issues is necessary as soon as your setup consists of more than two items.

Please note that a working TCP/IP protocol must be installed on your computer before attempting to hook up the computer on the network.

Explanations/illustrations in the following examples are based on a Win 95/98 operating system but will also apply for Windows NT.

## Subnet Mask - TCP/IP address

The Subnet Mask

The Subnet Mask is a number that defines a group of computers (or Icons/Mainframes) connected to the network. All units in the group must have the same Subnet Mask. The DB8/DB4 Subnet Mask is by default 255.255.255.0 and therefore the Subnet Mask on all other units/computers must be set accordingly.

> **NOTE** The DB8/DB4 Subnet Mask can be altered, to match your network Subnet Mask if this differs from the standard 255.255.255.0. Please see the section:
> **Setting Subnet Mask on the DB8/DB4.**

To find the TCP/IP address and the Subnet Mask settings on your computer:
Go to Control Panel, Network, Configuration, double click on TCP/IP and you will see the following.
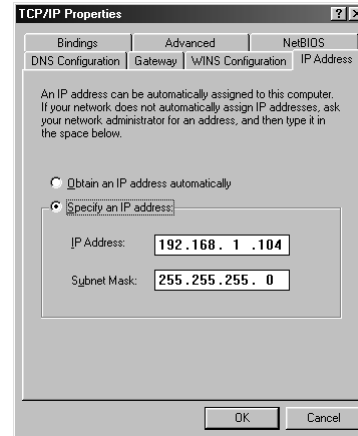
TCP/IP address

The TCP/IP address is unique to each unit connected in the network. Two units must therefore never have the same IP address.

The DB8/DB4 default address is : 192.168.1.126
The TC Icon default address is   : 192.168.1.125

If your computers IP address (or any in the network) is one of the above you have two options. Either to alter the computers IP address or to alter the IP address of the TC Icon and the Mainframe. Please see the sections:
Setting the TCP/IP address on the Mainframe.
Setting the TCP/IP address on the TC Icon.

SETTING SUBNET MASK AND TCP/IP

Setting the Subnet Mask of the Mainframe DB8/DB4 via the TC Icon
- Go to the Setup Select pages.
- Select the Main Frame on which you wish to change Subnet Mask.
- Press Subnet Mask key and type in the desired Subnet Mask.

Setting the Subnet Mask of the TC Icon

NOTE Be aware that the Subnet Mask for all connected devices must be the same. Since all Subnet Masks can be set via the TC Icon the last Subnet Mask to set must be the TC Icon Subnet Mask.

Go to the Setup Select pages.
- Select Setup - Net.
- Press the Subnet Mask key and type in the desired Subnet Mask.
- Press Enter to exit.
The Subnet Mask for the TC Icon is now set.

Setting the TCP/IP address of the TC Icon
Go to the Setup Select pages.
- Select Setup - Net.
- Press the IP Address field and type in the desired IP Address.
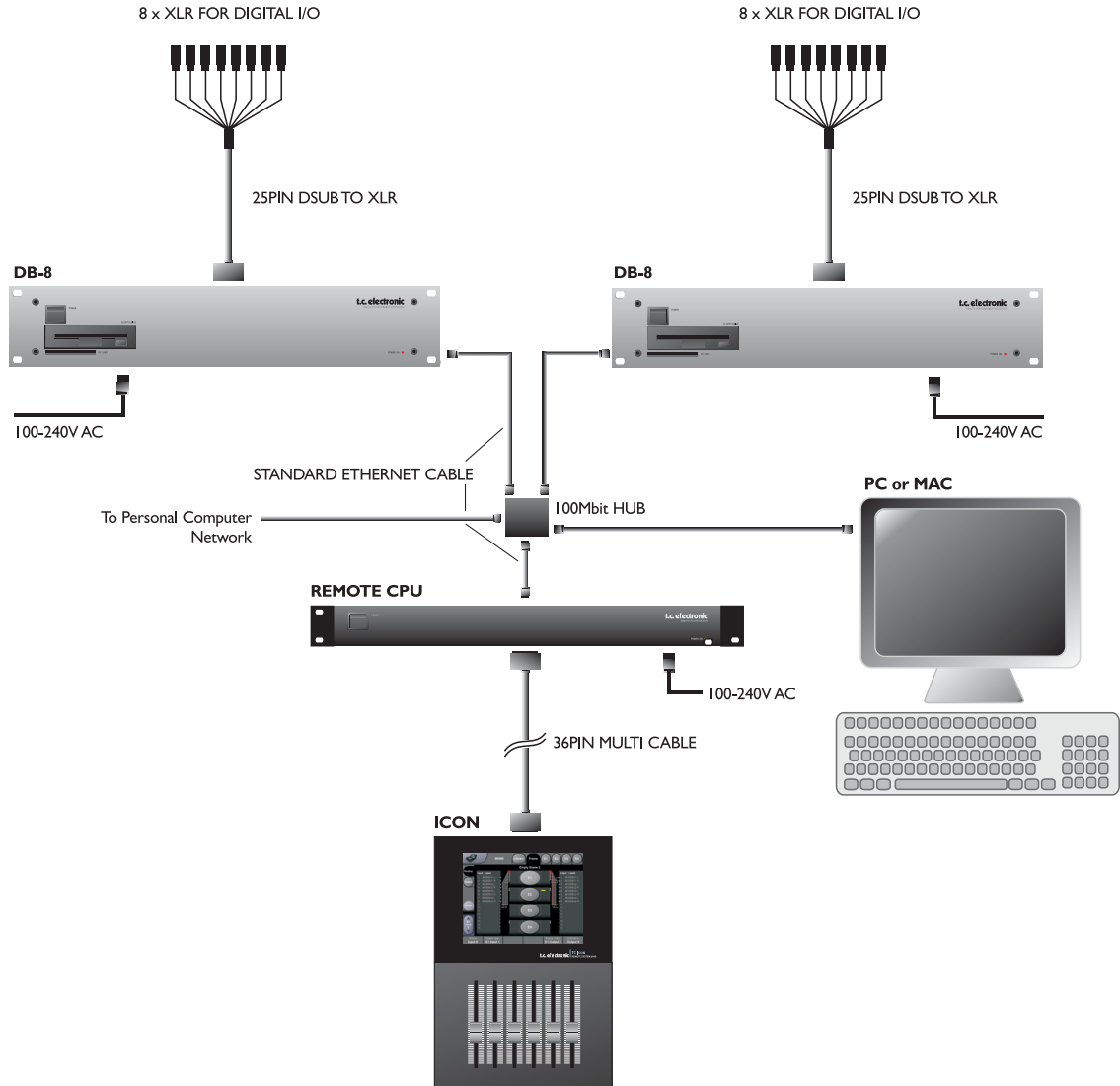- Press Enter to exit.
The TCP/IP address for the TC Icon is now set.

Setting the TCP/IP address of the Mainframe
- Go to the page:
  Frame - System - Main - Net ID page.
- Press the field: Mainframe TCP/IP address.
  The Naming display appears.
- Enter the TCP/IP and press ENTER.
The Subnet Mask for the Mainframe is now set.

DB8/DB4 IN A NETWORK

8 x XLR FOR DIGITAL I/O

8 x XLR FOR DIGITAL I/O

25PIN DSUB TO XLR

25PIN DSUB TO XLR

DB-8

DB-8

100-240V AC

100-240V AC

STANDARD ETHERNET CABLE

PC or MAC

To Personal Computer
Network

100Mbit HUB

REMOTE CPU

100-240V AC

36PIN MULTI CABLE

ICON

Hubs
For optimal performance use a 100Mbit Hub.
We recommend Hubs from 3Com and Cisco.