TEXT,C,55
TRANTOR T130 SCSI HOST ADAPTER

HARDWARE INSTALLATION GUIDE

1.0 INTRODUCTION

This guide describes the installation and operation of
the Trantor T130 SCSI host adapter card
(hereafter referred to as "host adapter)" for the IBM
PC/XT/AT, 80386/80486  and other compatible computer
systems.

1.1 Hardware

Your Trantor SCSI (Small Computer System Interface)
host adapter  has been designed to provide high-
performance control of virtually any SCSI device.
Some of the important features include:

.  Standardised SCSI interface,permitting the use of
   most SCSI devices.
.  Both  internal and external connectors, for use with
   SCSI interface pinouts for ease of cabling
   (see below for details).
.  Supports  1/0-mapped data transfer at any one of 4
   addresses, BIOS ROM mapping at any one of 4
   addresses (plus disable) and zero-wait-state
   operation for high-speed performance.

1.2 Checklist

you should have received the following items in your
Trantor host adapter kit:

*  T130 SCSI host adapter card
*  Software distribution diskette(s)
*  Hardware Installation Guide (this document)
*  User Guide for the included software
*  Product Registration card

If you find that anything is missing, please contact
your dealer immediately.

1.3 Software Overview.

The distribution diskette with your host
adapter contains a number of files of interest.
These are fully described in the software User Guide,

but there is one file to be aware of when installing
the hardware:

READ.ME
A text file which may be included, containing
up-to-date information since this guide was printed.
It is important that you look for this file and, if it
exists, read it carefully.

2.0 HARDWARE INSTALLATION

The Trantor T130 SCSI host adapter will fit into any
available adapter slot in your computer. If you  plan
to use internally-mounted SCSI devices, we recommend
installing the T130 in a slot near the drive mounting
locations.
Before beginning installation, please read through
this procedure thoroughly.  Also review your computer
system's manual for the procedures covering adapter
card installation and cover removal and replacement.
Have the appropriate hand tools available so that you
can remove your computer's cover and install the card.

1.   Before proceeding turn off and unplug your
      computer to avoid the risk of dangerous
      electrical shock or damage to your equipment.
2.   Remove your computer systems's cover .This
      is typically done by removing 5 or 6 screws
      at the rear of the system, then sliding the cover
      FORWARD  and off.  Refer to your computer
      manufacturer's user manual for details if you're
      unsure of this procedure.
3.   Check the switch and jumper settings on your card,
      as required.  For most installations, the factory
      default settings should be correct, but see
      section 3 for set-up details.
4.   Choose available expansion slot for installation
      of the host adapter.  The card may normally
      be used in any available 8-bit or 16 bit slot,
      but on some IBM XT computers, slot #8 may not
      allow the host adapter to function properly.
      When choosing a slot keep in mind that a SCSI
      devices that you wish to use.  Therefore it's
      usually a good idea to put the host adapter in a
      slot nearest these devices, to make sure the cable
      will reach and to minimise clutter.  Its also a
      good idea to put the host adapter into an 8 bit
      slot (if available) on an AT-type or 80386/80486
      computer to avoid tying up one of the 16 bit slot

which may be needed by other devices

5.  If you require the appropriate SCSI interface
cable (either internal or external) to connect the
host adapter card to your SCSI device, contact
your dealer for assistance.  If you plan to use
the host adapter with internally mounted SCSI
devices connect your SCSI interface ribbon cable
to the Host Adapter's internal connector (on the
top edge of the card)  Note that the cable may
be hooked up one of two ways: make sure that line
1 of the cable is oriented towards the Pin 1 end
of the J2 connector (Pin 1 is at the lower left
corner of the T130 connector)  The number "1" is
silk screened on the board adjacent to Pin 1.
Normally line 1 of the cable should have a
coloured stripe for easy identification.

6.  Remove the blank back-cover plate at the chosen
slot position and save the bracket screw (You'll
need it in a moment).
Carefully insert the host adapter card into the
slot and align the edge connector on the card
with the connector in the computer.  Apply firm
downward pressure on the card as you insert it in
the slot, being careful to avoid bending the card
or jamming it on any nearby protusions in the
chassis Re-use the screw removed with the blank
cover plate to fasten the host adapter securely
into place. UNLESS THE EDGE CONNECTOR ON THE CARD
IS PROPERLY INSERTED INTO THE CONNECTOR IN THE
COMPUTER IT IS POSSIBLE THAT NEITHER THE CARD
NOR THE COMPUTER WILL WORK PROPERLY(and may even
suffer damage).  Double-check your work carefully!
If you installed an internal-device ribbon cable
SCSI devices (step 5) make sure that the cable
does not rub against any sharp points on
adjacently-mounted cards in your  computer and
that it is positioned so that it will not snag
your computer's top cover when it is slid back
into place.
7.  If you plan to connect more than one SCSi DEVICE
to your adapter card simultaneously, make sure
that the each devices "address" (device number)
is different (between 0 and 7, a bootable devices
must be set to address 0.1 or 2) This is essential
to prevent conflicts when the host adapter
communicates with the devices.  Also note on the
SCSI connector of each device, which end of the
connector is the"pin 1" end.  Most SCSI devices

have a 50 - pin connector, and it is possible to
connect a cable backwards if you don't identify
the correct end.  The device(S) should have a labe
on the circuit board near the connector
indicating either the pin-1 end or the pin-50
end; consult the devices manual if you can't
identify the correct end yourself.  The cable
which connects the device(s) to the host adapter
card should have a coloured stripe on one side;
the stripe indicates pin 1 of the cable.
8.   If you are using an externally-mounted SCSI
device, connect your SCSI interface cable to the
25-pin connector at the rear of the host adapter
card. Be careful to avoid connecting the SCSI
cable to one of the parallel printer ports on the
back of the computer. These use the same type of
connector, and are easily confused. Conversely,
never plug a parallel printer (or other parallel
device) into a host adapter.
9.   If you are using an internally-mounted SCSI
device, install it into an available drive bay per
manufacturer's instructions. Connect the power and
SCSI interface cables, being careful to route both
cables around any sharp edges or protrusions, and
keeping the cables out of the way of the cover.
10.  This completes the hardware installation of your
SCSI subsystem. Once the host adapter is properly
installed, replace the computer's cover and plug
the computer in.
11.  Proceed with software installation, hard disk
partitioning/formatting (if applicable) and system
checkout, following the instructions in your
software User Guide.

3.0 SWITCH AND JUMPER SETTINGS

Although the default settings will work in most
installations, you may find it necessary to change the
factory switch and jumper settings of your T130 SCSI
Host Adapter. These switches and jumpers set the card
address, interrupt channel and other functions.

Note however that you should only change the settings
on the card if you absolutely understand what you are
doing. The following information is not intended for,
and is not written for, novice users. In some cases,
changing the settings on the card also necessitates
changing the settings in the software.

In the following instructions, switch blocks and jumper blocks are mentioned. The default position for all switches on the T130 is OFF.

Summary of Switch Settings:
The various switches (1-8) are assigned as follows, and are detailed below:

SW 1  I/O address 1
SW 2  I/O address 2
SW 3  ROM address 1
SW 4  ROM address 2
SW 5  ROM address 3
SW 6  BIOS ROM disable
SW 7  RESERVED
SW 8  RESERVED

Card Address (SW1/SW2):
The T130 will work at one of four I/O addresses.
Switches 1 and 2 select this address.

| I/O Address | SW 1 | SW 2 |
|---|---|---|
| 350h | OFF | OFF |
| 340h | OFF | ON |
| 250h | ON | OFF |
| 240h | ON | ON |

Note; the T130 uses a single 8k address range beginning at the address selected by the switches.

BIOS ROM Address (SW3/SW4/SW5):
The T130 BIOS ROM will work at one of four addresses.
Switches 3, 4 and 5 select this address.

| ROM Address | SW 3 | SW 4 | SW5 |
|---|---|---|---|
| Disabled | OFF | OFF | OFF |
| CA000h | OFF | OFF | ON |
| CE000h | OFF | ON | OFF |
| DA000h | OFF | ON | ON |
| DE000h | ON | OFF | OFF |
| RESERVED | ON | OFF | ON |
| RESERVED | ON | ON | OFF |
| RESERVED | ON | ON | ON |

Note; the T130's ROM uses a single 8k address range beginning at the address selected by the switches.

BIOS ROM Boot Disable (SW6):
If you wish to disable the T130's ability to boot from
a device at SCSI address 0,1 or 2, set this switch to
the on position.

Boot ROM      SW6
Enabled      OFF
Disabled     ON

Reserved Switches:
Switches 7 and 8 are reserved and should remain in the
off position at all times.

Zero Wait-State Operation (JP2):
The T130 may be configured to operate with zero wait-
states if Jumper JP2 is in place (the default setting).
Using zero wait-states permits significantly faster
operation of SCSI hard disk or other fast drives, but
should only be enabled for AT or faster computers. For
proper operation in an XT class computer, leave this
Jumper off. "Zero Wait-State" does not refer to the
zero wait-state memory in your computer; rather, it
refers to the speed of the bus itself. Do not put this
Jumper in place if you suspect that there are problems
with the operation of the host adapter until you are
sure that the zero wait-state operation is functioning
correctly.

Zero Wait-State Operation      JP2
Enabled                ON
Disabled               OFF

Jumper Block JP3:
This Jumper block is used for optional interrupt
selection - interrupts are not used by Trantor
software, therefore the Jumper included with the T130
is set for 'No Interrupt' setting. If required by other
software, Interrupts 3,5 and 7 are available via jumper
settings on Jumper Block JP3 as follows:

IRQ3    Pin (2)  Y  (4)  N  (6)  N
        Pin (1)  Y  (3)  N  (5)  N

IRQ5    Pin (2)  N  (4)  Y  (6)  N
        Pin (1)  N  (3)  Y  (5)  N

IRQ7    Pin (2)  N  (4)  N  (6)  Y
        Pin (1)  N  (3)  N  (5)  Y

No
Interrupt Pin (2)   Y   (4)  Y   (6)  N
         Pin (1)   N   (3)  N   (5)  N

    or   Pin (2)   N   (4)  N   (6)  N
         Pin (1)   N   (3)  N   (5)  N

Jumper Block JP4:
JP4 is used for connecting a hard disk LED activity
light. Typically this LED is present on the front panel
of your computer's case. Simply connect the appropriate
wire from your computer to this location. The top two
pins should be used if your computer has a 2-wire
connector.