

MatchBox Firmware Programming and Testing 4/11/93

This note describes the procedure that should be followed for programming the MatchBox firmware and MatchBox testing.

Warning

WARNING

Always disconnect the mains power from the MatchBox before removing the casing.

Never use the MatchBox with the case removed.

Diskette

A diskette is supplied which contains the MatchBox firmware along with the flash and ttm50tst utilities along with the matchbox test program. The flash and ttm50tst utilities use iserver to run code on the MatchBox Transputer. The matchbox test program is used when the MatchBox is connected to an Adaptec PC SCSI card as described below.

Serial Number

Please write the serial number of the MatchBox on the outside of the box. The serial number can be found on the MatchBox chassis.

Please also write the MatchBox firmware version number on the box. This is printed on the diskette label and is also displayed during the test procedure.

PC Hosted Tests

With J1 fitted the MatchBox Transputer can be booted from a PC Transputer Motherboard. Reset can be applied either by switching the MatchBox off and on again or by connecting a Motherboard TRAM site reset signal to HD15 and setting the HD14 jumpers.

Run check and mtest:

```
> check | mtest -1
```

Run the TTM50 test program:

```
A:\> ttm50tst
```

which can also be run continuously:

```
A:\> ttm50tst -c
```

Programming the Firmware

With the MatchBox still being booted from the PC, connect the 12V flash EPROM power using HD13.

Program the flash EPROM using flash:

```
A:\> flash matchbox.hex
```

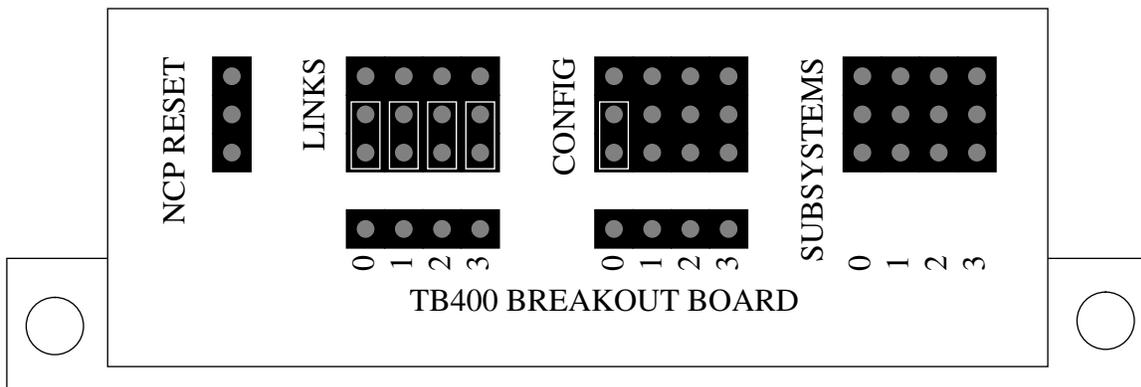
Disconnect the 12V power using HD13 and remove J1 to allow the MatchBox to boot from ROM.

Testing the SCSI Connection

Both the PC and the MatchBox should be switched off.

Set the MatchBox SCSI ID to 5.

Loopback all of the Transputer links and also the configuration link. This can be done by fitting a TB400 hedgehog in the 37-way D connector with link jumpers on links 0 to 3 and config 0 as shown:



Connect the MatchBox SCSI to the PC Adaptec SCSI card and terminate the SCSI bus at the MatchBox using a SCSI terminator.

Switch on the MatchBox. The second MatchBox LED should flash once.

Switch on the PC. When the Adaptec ASPI manager is loaded, a line like the fol-

lowing should be displayed:

```
Host Adapter #0 - SCSI ID 5 - LUN 0: TRANST MatchBox 1.01
```

The number at the end is the MatchBox firmware version number.

Run the matchbox program:

```
A:\> matchbox
```

This also can be run continuously:

```
A:\> matchbox -c
```

PARAstation Testing

Each MatchBox should be tested with a PARAstation. Currently this is done by Andrew at Transtech.