UltraStor ULTRA 22C Quick Setup

Figure 1.0

ULTRA 22C Board Layout

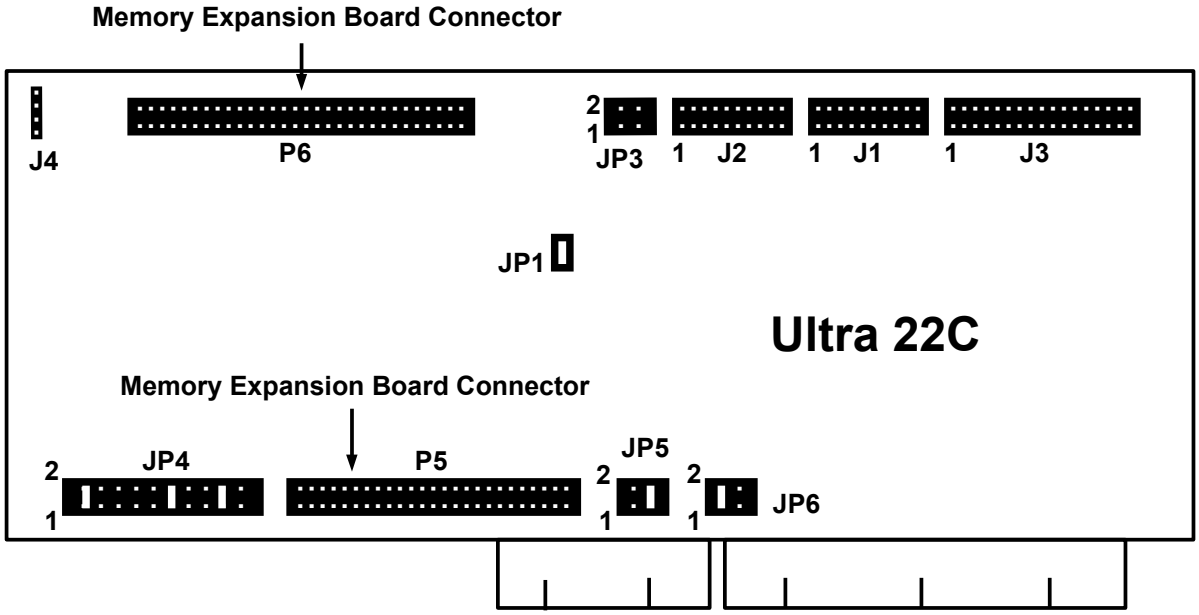

Table 1.0

Default Jumper Settings

Jumper Function	Name	Jumper Pin
Factory Use	JP1	Jumper
Factory Use	JP3	No Jumper
Factory Use	JP4	Jumper on Pin 1–2, 11–12, 17–18
Factory Use	JP5	Jumper on Pin 3–4 See Figure 1.0 for jumper configuration
Factory Use	JP6	Jumper on Pin 1–2 see Figure 1.0 for jumper configuration

ULTRA 22 EISA ESDI DISK CONTROLLER SOFTWARE PACKAGE

Please refer to UltraStor's "ULTRA 22x Installation Guide" for detailed installation procedures.

Included in the software package that comes with the ULTRA 22x controller are:

1. ULTRA 22 EISA ESDI Controller
   Utilities & Device Drivers for DOS/OS2/NETWARE

README	: This readme file
!USC0220.CFG	: ULTRA 22C configuration file. To be used when 22C is installed in an EISA system.
!USC0221.CFG	: ULTRA 22CA configuration file. To be used when 22CA is installed in an EISA system.
!USC0225.CFG	: ULTRA 22F configuration file. To be used when 22F is installed in an EISA system.
\DOS\EXFDRV.SYS	: Third floppy device driver
\DOS\EXFDRV.HLP	: Help file for the third floppy device driver
\DOS\UVDS.SYS	: DOS device driver with Virtual DMA Service support for ULTRA 22 family.
\DOS\UVDS.COM	: TSR version of UVDS.SYS
\OS2\DISK01.SYS	: Device driver for OS/2 version 1.2 or later
\NETWARE\U22_30.DSK	: NOVELL NETWARE 386 version 3.0 device driver
\NETWARE\U22_31x.DSK	: NOVELL NETWARE 386 version 3.1x device driver

2. ULTRA 22 EISA Disk Device Driver
   For SCO UNIX System V/386 Release 3.2

/hd	: Device driver and install script for primary controller

/wd1 : Device driver and install script for secondary controller

3. ULTRA 22 EISA Disk Device Driver
   For AT&T UNIX System V/386 Release 3.2
   For Primary Controller

   Device driver and install scripts for primary controller

4. ULTRA 22 EISA DISK Device Driver
   For Interactive UNIX OS Version 2.2
   System V/386 Rel 3.2

   Device driver and install scripts for primary and secondary controllers.

CONTROLLER SETUP

To simplify and comply with the EISA architecture, there are no jumpers or switches in the controller that need to be changed by the user. The configuration of the controller is done through the configuration file (!USC0220.CFG, !USC0221.CFG, or !USC0225.CFG in the \DOS diskette) that comes with the controller card and the configuration utility program that comes with the EISA system.

For ULTRA 22CA and ULTRA 22F controllers, a floppy disable jumper has been provided to solve the I/O resource conflict for systems with floppy circuit built onto the mother board.

The floppy enable/disable jumper (JP7) is located at the upper right hand side of the board:

Floppy Circuit Enable : JP7 in
Floppy Circuit Disable : JP7 out

All the other jumpers are for factory usage and must not be changed.

1. Copy the configuration file (!USC0220.CFG, !USC0221.CFG, or !USC0225.CFG) to the configuration utility diskette that comes with the system.

2. Running the configuration utility may be different from vendor to vendor. Check the vendor manual for exact procedures. The followings are examples of running the configuration utility from the configuration diskette.

   A:>cf <CR> (For MCS configuration utility)

   or

   A:>ptlecu <CR> (For Phoenix configuration utility)

3. Execute the "ADD" IO board function and select !USC0220.CFG (!USC0221.CFG, or !USC0225.CFG) file.

4. The ULTRA 22 configuration consists of the following options:

```
BIOS address : C8000/CC000/D0000/D4000/D8000/DC000/C4000
IRQ selection: IRQ10/IRQ11/IRQ12/IRQ15
               (IRQ14 is reserved for ISA mode operation)
ISA I/O port : Primary   (1F0 - 1F7, 3F6 and 3F7)
               Secondary (170 - 177, 376 and 377)
```

   The first options are the default options. Should conflict occur with other I/O cards in the system, select another alternative.

   Note: If you intend to install ULTRA 22 SCO UNIX System V/386 Device Driver for the primary controller, select IRQs other than IRQ15, e.g. IRQ10, to avoid conflict. IRQ15 is reserved by device driver WD1 for the secondary controller. IRQ11 may be used by some SCSI host adapter. IRQ12 may be reserved by some EISA systems.

5. For ULTRA 22CA and ULTRA 22F, in addition to the above options, also configure the floppy control options.

   Floppy Disk Control: Disable/Primary/Secondary
   Disable or select the floppy control circuit on the ULTRA 22CA or ULTRA 22F. This option, as well as JP7 jumper on board, controls the floppy circuit. Either one of them set to enable will enable the floppy portion of the controller card.
   Primary : (3F0 - 3F7)
   Secondary : (370 - 377)

   Third Floppy Drive Cable Selection: Single/Double Twisted Cable
   Single Twisted Cable : Third floppy jumpered to DS4
   Double Twisted Cable : Third floppy jumpered to DS2

6. Select the slot number that is intended for ULTRA 22.

7. Save the configuration and exit.

8. Power down the system, Insert the ULTRA 22 controller card into the selected slot.

Hard Disk Setup:

Up to two ESDI drives can be connected to the ULTRA 22 controller.

1. Set the correct jumpers to get the desired configuration for all the ESDI drives, e.g. select hard sector mode, spinup drive motor upon power up, and jumper the required number of sectors per track. The drive selection should be set to drive select # 2 for all the

drives (for twisted cable).

2. Connect the drive power from the system power supply. Make sure that the system power supply can support the attached ESDI drives. Otherwise, a separate power supply is needed.

3. Connect the 34 pin daisy chain flat cable to J3 connector for ULTRA 22C (or J5 connector for ULTRA 22CA and ULTRA 22F) on the controller. The edge connector near the twisted end of the cable is connected to the first drive. The other edge connector should be connected to the second drive if the second drive is to be attached.

4. Connect the 20 pin flat ribbon cable from the first drive to J1 connector for ULTRA 22C (or J6 connector for ULTRA 22CA and ULTRA 22F) on the controller. Connect another 20 pin flat cable from the second drive to J2 connector for ULTRA 22C (or J11 connector for ULTRA 22CA and ULTRA 22F) if the second drive is to be attached.

Hard Disk Drive Media Preparation:

1. Boot up the system with a DOS diskette in drive A, and load DEBUG program.

2. Follow the prompt "−" sign, type in g=C800:5 (or g=CC00:5, g=D000:5, etc) according to the BIOS address selection in the configuration setup).

3. Select the "Drive Parameter Setup" option.

4 Select the following mode for all the drives connected to the controller according to the operating system and drive characteristics.

One Spare Sector/Trk
Sector Mapping
Track Mapping
1024 Cyl. Truncation

5. For ULTRA 22C and ULTRA 22CA, also select the Caching factors for

Operating System
Segment Size
Read Ahead Segments
Cache ON/OFF
Deferred Write
Maximum Dirty Threshold

When selecting the operating system, the optimal options for the segment size, read ahead segment, defer write and dirty threshold will be displayed according to the OS selected, but the user is still able to change these values. Defer write is defaulted to the

off state. During the installation for OS/2, UNIX and NOVELL NetWare, defer write should be turned off. Defer write is recommended only if the system has Uninterrupt Power Supply (UPS) support. Hit F10 to save and F5 to confirm execution.
The utility will update the system with the correct hard disk drive's parameters and reboot from DOS.

6. After the system reboots, reload DEBUG, and enter the "Drive Preparation" menu.

7. Go to the AUTOFORMAT field, select BRIEF (or Extended), and hit "Enter" and F5 to begin the formatting of the drive.

8. Repeat step 7 for the second drive if it is applicable.

9. The drive(s) is ready for loading the operating system.

DOS Installation

There are 2 EPROMs on the ULTRA 22 EISA ESDI controller for the 16 bit BIOS code. The on-board BIOS will hook the system disk I/O service routine (INT 13) to the ULTRA 22 EISA disk I/O service routine after system power on and before booting the operating system. After boot up, the controller is operated under EISA bus master mode. There is no need for any software device driver in order to get the controller to operate under EISA Bus Master mode.

The BIOS supports up to two hard disks under DOS 4.01 or prior DOS versions, and up to 4 hard disks under DOS 5.0.

For DOS installation, follow the same procedure as you would for a regular ISA disk controller (such as ULTRA 12F) to do fdisk and format.

Since the on-board BIOS services the system hard disk activity, the performance of the disk controller may depend on the speed of the BIOS execution. Some of the EISA systems don't cache the add on card BIOS memory, which not only slows down the execution of the command transaction but also introduces more overhead to the bus master data transfer over the EISA bus, since both BIOS instruction fetch and controller data transfer have to arbitrate for the same EISA bus. One alternate solution is to use the UltraStor DOS device driver UVDS program, which will replace the BIOS disk service routine and is resident in the system memory.

In addition, the UVDS also provides the function of virtual to physical address translation if the system is running in the virtual mode of 386/486.

If you are running applications, such as MS Windows 286, MS Windows, QEMM386, or 386MAX that uses the virtual mode of the 386, you will need to use the UVDS device driver. The UVDS support the industry standard

"Virtual DMA Service". If the application supports the virtual DMA service, such as QEMM386 version 5.0 and 386MAX version 4.08 or later, include this line in the config.sys.

```
device = UVDS.SYS
```

or, if you prefer to use the TSR version of UVDS, then include

```
UVDS            (in a DOS command line)
```

The UVDS.SYS and UVDS.COM are in the DOS directory in the diskette labeled "ULTRA 22 EISA ESDI Disk Controller Utilities & Device Drivers (DOS/OS2/NETWARE)". Copy the desired file to the hard disk root directory or any other directory. If the UVDS.SYS is not in the root directory, a path must be specified in front of UVDS.SYS.

Please check the vendor of the application program to see if the "Virtual DMA Service" is supported.

If the application doesn't support the Virtual DMA Service, a virtual buffer should be allocated to overcome the virtual address problem with controller BUS Mastering data transfer. Include the following line in the config.sys

```
device = UVDS.SYS /b
```

or, the following if you prefer the TSR version:

```
UVDS /b         (in a DOS command line)
```

to enable the double buffering for the UVDS.

OS/2 Version 1.2 or later Installation

The device driver supports the IBM OS/2 1.2 or later and standard OEM edition of MS OS/2 1.21 or later. Some OEMs may modify their version of OS/2 and make the procedures listed below incompatible. If unforeseen problems occur, contact the OEMs supplying OS/2.

The device driver for OS/2 version 1.2 and later supports two controllers with up to 4 ESDI drives. One controller should be setup as primary port and the other as secondary port.

Support for LAN MANAGER 2.0 is available only with OS/2 versions 1.21 or later.

The replacement procedure for the OS/2 device driver works with IBM OS/2 1.2 or later and the standard OEM MS OS/2 version 1.21 or later.

If the OS/2 operating system has been installed using ISA controller, the only step needed is to copy the DISK01.SYS from the \OS2 directory in the diskette labeled "ULTRA 22 EISA ESDI Disk Controller Utilities and Device Drivers (DOS\OS2\NETWARE)" to the C: drive root directory. When the system reboot, OS/2 will use the ULTRA 22 DISK01.SYS for disk service which will be running the controller in the 32 bit bus master mode.

Note: During the installation, the "defer write" option needs to be turned off. After installation, the "defer write" can be turned back on. Turning "defer write" on and off can be done by running the UltraStor on-board BIOS setup utility by DOS debug.com.

1. Procedures for OS/2 Versions 1.2 or later with 3-1/2" diskette

   1) "IMPORTANT !!!" Back up the original OS/2 "Installation" diskette and use the backup copy of the diskette to do the following.

   2) Replace the OS/2 ISA disk device driver with UltraStor's device driver by copying OS2\DISK01.SYS from UltraStor's "ULTRA 22 EISA ESDI Disk Controller Utilities and Device Drivers (DOS\OS2\NETWARE)" diskette to the OS/2 "Installation" diskette.

       e.g. A>copy a:OS2\DISK01.SYS b:

   3) Boot up the system with the modified "Installation" diskette in drive A:.

   4) Proceed with the normal OS/2 installation.

   Note: Please refer to OS/2 installation guide.

2. Procedures for OS/2 Versions 1.2 or later with 5-1/4" diskette

   NOTE: If the original OS/2 "Installation" diskette already contains the file "DISK01.SYS" (such as IBM OS/2 v1.3), then follow the procedures for 3-1/2" diskettes. Else, proceed with the followings.

   1) "IMPORTANT !!!" Back up the original OS/2 "Installation" diskette and use the backup copy of the diskette to do the following.

   2) Since the "Installation" diskette does not have enough space to accommodate the UltraStor's device driver, following step is one way to get around it.

   3) Copy all *.RC@ files and FDISK.COM to a temporary diskette.

   4) Delete all *.RC@ files from the "Installation" diskette to make room for UltraStor's device driver DISK01.SYS.

5) Copy OS2\DISK01.SYS from UltraStor's "ULTRA 22 EISA ESDI Disk Controller Utilities and Device Drivers (DOS\OS2\NETWARE)" diskette to the OS/2 "Installation" diskette.

   e.g. A>copy a:OS2\DISK01.SYS b:

6) Boot up the system with the modified "Installation" diskette in drive A:.

7) Proceed with the normal OS/2 installation to insert operating diskettes #1, #2, #3, #4 and #5, until when asked to reinsert "Installation" diskette.

8) Prior to insert the "Installation" diskette,

   a) Delete FDISK.COM from the "Installation" diskette.
   b) Restore all the *.RC@ files from the temporary diskette to "Installation" diskette.
   c) Insert the "Installation" diskette to complete the installation.

9) After completion of the OS/2 installation, you may want to restore the "Installation" diskette by

   a) Delete DISK01.SYS.
   b) Restore files *.RC@ and FDISK.COM from the temporary diskette.

Procedures for LAN MANAGER Version 2.0

NOTE: LAN Manager works only with OS/2 V1.21 or later.

1. OS/2 Installation

   Follow the previously described steps to install OS/2 except:

   1. In "Preparing the Fixed Disk" menu, select "Specify your own partition", if you intend to use disk duplexing function. If there are only two hard disks in the system, either "Accept predefined partition" or choosing the maximum size for the primary partition will prevent disk mirroring setup. "Accept predefined partition" option will create a single boot partition on the entire drive 0 and the boot partition can't be mirrored under LAN Manager Version 2.0.

   2. In "Select the File System" menu, select "High Performance File System".
      Only the High Performance File System allows disk duplexing function.

   3. Proceed to complete the OS/2 installation.

2. LAN Manager Installation

   1. After OS/2 system is installed successfully. Reboot system.

   2. Insert Disk 1 LAN MANAGER "OS/2 – SETUP" diskette in drive A:. Goto OS2 Full Screen and type A:SETUP. Hit return and follow LAN MANAGER installation.

   3. In "Install LAN Manager" menu, select "Server" option and follow the installation instructions.

   4. Please refer to LAN Manager documentations for detailed LAN Manager installation description.

3. Fault Tolerance Setup

   1. After LAN MANAGER is installed successfully, goto OS/2 window. Run "FDISKPM" for partition creation and run "FTSETUP" for Fault–Tolerance System Setup.

   2. Please refer to LAN Manager documentation for detailed descriptions.

NOVELL NetWare 386 version 3.0 and 3.1x Installation

Installation of the NetWare 386 for ULTRA 22 is similar to the installation for a ISA disk controller. Instead of loading ISADISK.DSK for the ISA controller, load the U22_30.DSK (for version 3.0) or U22_31x.DSK (for version 3.1) driver during the NetWare 386 installation.

1. Copy the file U22_30.DSK (or U22_31x.DSK) under the directory \NETWARE in the diskette labeled "ULTRA 22 EISA ESDI Disk Controller Utilities and Device Drivers (DOS\OS2\NETWARE)" to the NetWare386 "System" diskette(s) or the DOS partition in the hard disk that has the NetWare386 system files.

2. Type "Server" to invoke NetWare installation.

3. Enter server name and internal network number in the NOVELL SERVER program, following the prompt ":" enter the following command to load the hard disk device driver for primary controller.

   ```
   :load U22_30                  (or U22_31x for version 3.1)
         Loading module U22_30.DSK

         ULTRA 22 as primary port in slot N1 has been loaded.
   ```

4. Reload the U22 loadable device module for secondary controller card (if applicable)

   :load U22_30 (or U22_31x for version 3.1)
      Loading module U22_30.DSK

      ULTRA 22 as secondary port in slot N2 has been loaded.

5. Load NetWare 386 "INSTALL" module
  :LOAD INSTALL

   This invokes the system installation options. The drives that are attached to the ULTRA 22 controllers will be shown under the drive options.

6. Proceed with the NetWare 386 installation procedures to do the partitioning, mirroring, mounting, volume creation and surface testing of the hard disk drives.

Note: Please refer to NOVELL NetWare 386 installation guide.

Note: During the installation, the "defer write" option needs to be turned off. It is also required that a complete NetWare partition 'surface testing' be executed if 'defer write' is intended to be used later.
      After installation, the "defer write" can be turned back on. Turning "defer write" on and off can be done by running the UltraStor on-board BIOS setup utility by DOS debug.com.

SCO UNIX System V/386 Release 3.2 Installation

Since the controller supports the ISA (task file registers) compatible mode, the installation of the UNIX operating system is the same as the installation using a regular ISA disk controller (such as ULTRA 12F). Install the operating system until the Basic Utilities and Extended Utilities have been installed.

Note: During the installation, the "defer write" option needs to be turned off. After installation, the "defer write" can be turned back on. Turning "defer write" on and off can be done by running the UltraStor on-board BIOS setup utility by DOS debug.com.

Skip the installation if you have UNIX installed using ULTRA 12F controller before. Reboot the system from UNIX. At this time the UNIX disk device driver still operates in the ISA mode. This can be verified by the device I/O location.

Device	Address		Vector
% disk	0x1F0	0x1F7	16

The following is the procedure to change the disk device driver to

UltraStor's EISA disk device driver which allows running the controller in the EISA bus master mode.

1. Login as a superuser (root)

2. Change to tmp directory

```
# cd /tmp
```

3. Insert the diskette labeled "ULTRA 22 EISA Disk Device Driver For SCO UNIX System V/386 Release 3.2" in drive A: and execute

```
# tar xvf /dev/fd048ds9        (for 360K diskette)

# tar xvf /dev/fd0135ds9       (for 720K diskette)
```

   Files 'Install','Driver.o','System','Remove' and 'Name' will be copied to the /tmp/hd directory.

4. Install and rebuild the UNIX kernel

   a. For primary controller

```
# cd hd
# ./Install
```

   b. For secondary controller

```
# cd wd1
# ./Install
```

5. During installation, when asked for the interrupt number, type in the same IRQ number that was selected by the EISA configuration utility when configuring the ULTRA 22 controller in the system. Selecting an incorrect IRQ number will cause unexpected installation failures.

6. You must relink your kernel to be able to use device 'hd' (or 'wd1'). Answer 'Y' to rebuild the kernel now, and 'Y' to boot the kernel by default, and 'N' to rebuild the kernel environment.

7. After rebuilding the kernel shutdown the system.

```
# shutdown
```

8. Reboot the system. The system will be running under EISA mode.

Device	Address	Vector
% disk	0xC80 – 0xCA0	17 (or 12,13,14)

9. If the second drive needs to be added to the UNIX system, proceed with following steps.

   Use the mkdev script file to create, partition and add file system for the second drive.

   Run sysadmsh --> system --> hardware --> hard disk to execute mkdev hd.

   Select "1.ST506" (standard disk support) for controller type.

   Select "(2)Second" drive on this controller.

   Select "(1)First" for ST506 primary controller.

   For the procedures for creating UNIX partition, scanning disk, creating filesystem, please refer to "UNIX system administration manual" for detailed procedures

   Note: Before making filesystem, scanning the entire UNIX partition is required for the kernel to record all the defects (which were marked as bad sectors by the controller low level format utility) in the drive.

   Add filesystem to the kernel

   Run sysadmsh --> filesystem --> add

   Refer to "UNIX system administration manual" for detailed procedures.

AT&T UNIX System V/386 Release 3.2 Installation

This installation procedure for AT&T UNIX System V/386 Release 3.2 can be applied to other UNIX Operating Systems which are based on the AT&T version, such as INTEL UNIX and Everex ESIX version 5.3.2.

Since the controller supports the ISA (task file registers) compatible mode, the installation of the UNIX operating system is the same as the installation using a regular ISA disk controller (such as ULTRA 12F). Install the operating system until all the Base system foundation set has been installed.

Note: During the installation, the "defer write" option needs to be turned off. After installation, the "defer write" can be turned back on. Turning "defer write" on and off can be done by running the UltraStor on-board BIOS setup utility by DOS debug.com.

Skip the installation if you have UNIX installed using ULTRA 12F controller before. Reboot the system from UNIX. At this time the UNIX disk device driver still operates in the ISA mode.

The following is the procedure to change the disk device driver to UltraStor's EISA disk device driver which allows running the controller in the EISA bus master mode. (Assume the ULTRA 22 is used as primary controller)

1. Login as a superuser (root).

2. Run installpkg utility

```
# installpkg
```

   Insert the diskette labeled "ULTRA 22 EISA Disk Device Driver For AT&T UNIX System V/386 Rel 3.2 for the Primary Controller" in the appropriate floppy drive as instructed by the Installpkg script.

3. The Installpkg will copy the ULTRA 22 device driver to the hard disk and rebuild the UNIX kernel

4. If the ULTRA 22 Disk Device Driver was installed before, it needs to be removed by using Removepkg utility. Hit ESC key to exit installpkg and run removepkg to remove the device driver.

```
# removepkg
```

   Rerun the installpkg.

5. During installation, when asked for the interrupt number, type in the same IRQ number that was selected by the EISA configuration utility when configuring the ULTRA 22 controller in the system. Selecting an incorrect IRQ number will cause unexpected installation failures.

6. Once the IRQ number has been selected, the system will rebuild the kernel. When it completes, a shutdown will be initiated automatically.

7. Reboot the system. The system will be running under EISA mode.

Interactive UNIX Operating System Version 2.2
System V/386 Release 3.2 Installation

Since the controller supports the ISA (task file registers) compatible mode, the installation of the ISC UNIX operating system is the same as the installation using a regular ISA disk controller (such as ULTRA 12F). Install the operating system until at least the "Core" and "Kernel Configuration" diskettes are installed.

Note: During the installation, the "defer write" option needs to be turned off. After installation, the "defer write" can be turned back on. Turning "defer write" on and off can be done by running the UltraStor on-board BIOS setup utility by DOS debug.com.

Skip the installation if you have UNIX installed using ULTRA 12F controller before. Reboot the system from UNIX. At this time the UNIX disk device driver still operates in the ISA mode.

The following is the procedure to change the disk device driver to UltraStor's EISA disk device driver which allows running the controller in the EISA bus master mode.

1. Login as a superuser (root)

2. Change to tmp directory

```
# cd /tmp
```

3. Insert the diskette labeled "ULTRA 22 EISA Disk Device Driver For Interactive UNIX OS Version 2.2 System V/386 Rel 3.2" in drive A: and execute

```
# tar xvf /dev/dsk/f0d9dt                (for 360K diskette)
```

   Files 'Master','dconfig','usc.h','Install','Files','Size', 'Driver.o','System','Remove','space.dsk.usc' and 'Name' will be copied to the /tmp/hd directory.

4. Install and rebuild the UNIX kernel

```
# cd usc
# ./Install
```

5. "dconfig" provides two options

   1) Display High Performance Disk Driver Configuration
   2) Configure High Performance Disk Driver
   Enter Choice [1–2,q]:

   Select option 2 to configure the ULTRA 22 driver

6. Answer "Y" when asked "Is there a primary ULTRA 22 controller ?" if the ULTRA 22 is used as primary port.
   Answer "Y" when asked "Do you have a secondary ULTRA 22 controller ?" if the ULTRA 22 is used as secondary port.

7. During installation, when asked for the interrupt number, type in the same IRQ number that was selected by the EISA configuration utility when configuring the ULTRA 22 controller in the system. Select an incorrect IRQ number will cause unexpected installation failures.

8. Answer "Y" when asked "IS THIS THE DESIRED CONFIGURATION ? "
   Enter "q" to quit the DCONFIG main menu.
   Answer "y" to save modified system files in /etc/conf.

9. The system will rebuild the kernel using the newly configured device drivers and make unix.1 (or unix.2 ....)

10. After kernel has been rebuilt, answer
    answer "y" to install the new kernel to the system,
    enter the number of seconds for shutdown user warning,
    answer "y" to shutdown and reboot with the new kernel,
    answer "y" for "Do you want to continue ?"

11. Reboot the system. The system will be running under EISA mode.