

Part 5

MENU LCD Mode

Overview

The 328XD menu pages allow configuration of Digital I/O, MIDI setup, Snapshots and User Setups.

There are 19 Menu pages, accessed by pressing the MENU switch:

- 328XD Info
- User Options
- MIDI Controllers
- MIDI Ctl Presets
- MIDI Dump Out
- MIDI Dump In
- Tape Trim Setup
- Tape Port Select
- SPDIF I/P Setup
- AES/EBU I/P Set.
- SPDIF O/P Setup
- AES/EBU O/P Set.
- Tape Mach Setup
- Clock Source Sel
- Snapshot Setup
- Automation Setup
- Chan Copy Setup
- Chan Link Setup
- User Setups

The Menus

Use either the ▲▼ cursor keys or the PARAM encoder to select the Menu page you wish to use and then press ENTER to edit the chosen menu.

5.1 - 328XD INFO

This menu provides information about the software and hardware installed in the 328XD.

Navigate the 328XD Info menu with the ▲▼ cursor keys.

- **Release:** the software version installed.

```
< 328XD Info >
Release:  V1.000
```

- **Build:** build number of the installed software.

- **ISurf:** Digital 328XD Input Surface software version.

```
< 328XD Info >
ISurf Ver: V1.20
```

- **MSurf:** Digital 328XD Master Surface software version.

```
< 328XD Info >
MSurf Ver: V1.20
```

The latest software revision is available for download from the Soundcraft website.

5.2 - USER OPTIONS

Press ENTER to open the User Options menu, and then use the ▲▼ cursor keys to select the parameter(s) you wish to adjust, and the PARAM encoder to change the settings.

- **MIDI Channel**

```
< User Options >
MIDI Channel:  1
```

This sets the MIDI Channel on which the 328XD transmits and receives MIDI Program Change messages FOR SNAPSHOT AUTOMATION ONLY (see **Section 4 Part 1**). Other MIDI commands transmitted or received by the 328XD such as automation data, MIDI Timecode or MMC commands are unaffected by this setting.

- **OMNI mode**

```
< User Options >
OMNI mode    : ON
```

This setting allows the 328XD either to receive or not to receive MIDI Program Changes on all 16 MIDI Channels FOR SNAPSHOT AUTOMATION ONLY. As above, other MIDI commands transmitted or received by the 328XD such as automation data, MIDI timecode or MMC commands are unaffected by this setting.

Set OMNI mode to ON if you wish 328XD Snapshot recall to respond to incoming MIDI Program Changes on all 16 MIDI channels. Set OMNI Mode to OFF if you wish the 328XD to respond only to the MIDI channel selected in the above menu.

Note that when a Snapshot with MIDI Recall set to ON is recalled manually, MIDI Program Changes are transmitted on the MIDI Channel setting in the menu above, regardless of the OMNI mode setting. For more information see **Section 3J Part 2**.

- **Device ID**

```
< User Options >
Device ID: 1
```

When requesting data dumps from a remote source with MIDI System Exclusive messages, the 328XD device ID must be set correctly. By default this is set to ID 1 and for most purposes is best left at this value. If you use linked consoles, the device IDs should be set differently, however, so that the remote device is able to send System Exclusive commands to each desk individually. The Device ID can be set to any value between 1 and 127. Note that the Device ID is stored within a User Setup and is retained on power down.

- **SOLO Ch Sel** SOLO follows channel SELECT

```
< User Options >
SOLO Ch Sel : ON
```

When set to ON, this useful setting instructs the channel SELECT switch and consequently the E-Strip and Select Panel to become active for a channel when it is soloed. When set to OFF, soloing a channel will not automatically SELECT the channel.

This setting is stored as part of a User Setup, and is stored on power down.

- **SOLO AutoC** SOLO AutoCancel

```
< User Options >
SOLO AutoC : OFF
```

When set to ON, soloing a channel will deselect SOLO for any other currently soloed channels. When set to OFF, any number of channels can be soloed simultaneously.

This setting is stored as part of a User Setup, and is stored on power down.

- **Bank->Select: ON/OFF** (SELECT follows Fader Bank selection: ON/OFF)

```
< User Options >
Bank->Select: OFF
```

By default this setting is set to OFF, so that selecting a different BANK does not affect which channel is selected. By setting this to ON, the console will have a memory of which SELECT switch is active for BANK SELECT 1-16 and BANK SELECT 17-32. When returning to the opposing BANK, the channel SELECTed when last in that BANK will return to being the active SELECTed channel.

As an example, set Bank->Select to ON. Press BANK SELECT 1-16, and press the channel SELECT switch for Analogue Input channel 16. Then press BANK SELECT 17-32 and press the channel SELECT switch for Digital Input channel 17. The SELECTed channel will then follow any BANK SELECT adjustment made.

Note that the Bank->Select is stored as part of a user setup and is stored on power down.

- **SYSEX Rx**

Besides the MIDI data required for automation of the console, the 328XD can also

respond to MIDI System Exclusive (Sysex) data transmitted from a computer based software editor package, for example, to increase control possibilities.

The 328XD menu functions which can be controlled via Sysex are:

MIDI DUMP OUT	enabling the remote source to request a MIDI dump from the console (see Section 3J Part 5.5)
CLOCK SOURCE SEL	enabling the remote source to alter the 328XD clock source / internal sampling rate (see Section 3J Part 5.14)
AUTOMATION	enabling the remote source to configure the 328XD automation mode and enable / disable automation (see Section 3J Part 5.16, Section 4)
AES/EBU SETUP	enabling the remote source to configure the AES/EBU input and output routing (see Section 3J Part 5.10 / 5.12)
S/PDIF SETUP	enabling the remote source to configure the S/PDIF input and output routing (see Section 3J Part 5.9 / 5.11)
AUX OPTICAL OUT	enabling the remote source to configure the signal transmitted from the Auxiliary Optical Output (see Section 3J Part 5.8)

In addition, the 328XD also has predefined Sysex strings to allow a suitable connected software package to instruct the desk to return its set Sysex Device ID, recall the Factory Default settings and dump the current values of all the 328XD's automatable parameters.

```
< User Options >
SYSEX Rx      : ON
```

With the SYSEX Rx switch set to ON, when any of the above Sysex instructions is received at the 328XD MIDI In port, the console will automatically respond as requested. With the SYSEX Rx switch set to OFF, all incoming Sysex requests are ignored.

The default setting is SYSEX Rx: ON.

Note that SYSEX Rx is stored as part of a user setup and is stored on power down.

For more information on the MIDI System Exclusive implementation of the console, consult **Appendix A3**.

• SYSEX Tx

In the following circumstances, the 328XD can be set to transmit MIDI System Exclusive strings to inform a connected computer based editor that configuration of the console has been altered manually:

CLOCK SOURCE SEL	enabling the remote source to be aware that the 328XD wordclock source has altered (see Section 3J Part 5.14)
CLOCK LOSS	enabling the remote source to learn that the current 328XD external clock source is no longer valid (see Section 3J Part 5.14)

AUTOMATION SETUP	enabling the remote source to know that the automation mode has been altered locally (see Section 3J Part 5.16, Section 4)
AES/EBU SETUP	enabling the remote source to know of an AES/EBU input / output routing change (see Section 3J Part 5.10 / 5.12)
S/PDIF SETUP	enabling the remote source to know of an S/PDIF input / output routing change (see Section 3J Part 5.9 / 5.11)
AUX OPTICAL OUT	enabling the remote source to learn of a change made to the Auxiliary Optical Output configuration (see Section 3J Part 5.8)

```
< User Options >
SYSEX Tx      : ON
```

With the SYSEX Tx switch set to ON, Sysex instructions will be transmitted from the 328XD MIDI Out port when configuration is changed locally. With the SYSEX Tx switch set to OFF, no Sysex data is transmitted.

The default setting is SYSEX Tx: ON.

Note that MIDI System Exclusive dumps may still be initiated from the MIDI Dump Out menu regardless of the state of the SYSEX Tx switch (see **Section 3J Part 5.5**).

Note that for true bi-directional communication with a computer based 328XD editor, both the SYSEX Tx and SYSEX Rx switches should be enabled. It is not necessary to enable either of these switches to dynamically automate the 328XD via MIDI, however.

Note that SYSEX Tx is stored as part of a User Setup and is stored on power down.

For more information on the MIDI System Exclusive implementation of the console, consult **Appendix A3**.

• Flip Bank 1

```
< User Options >
Flip bank 1 :OFF
```

This setting allows the controls of BANK SELECT 1-16 channels 1-8 to be 'flipped' with the controls of BANK SELECT 17-32 channels 17-24.

When Flip Bank 1 is set to 'ON' and the BANK SELECT 1-16 switch is selected, faders 1-8 and their associated SELECT switches control Digital Inputs 17-24 and not Analogue Inputs 1-8 as would be the case under normal operation. Control of Analogue Inputs 1-8 is then accessed from faders 1-8 and the associated SELECT switches of BANK SELECT 17-32.

It is important to note that when Flip Bank 1 is set to ON, the DIRECT OUT setting remains active for channel SELECT switches 1-8 of BANK SELECT 1-16. In this way, Digital Inputs 17-24 can be routed directly to Digital Outputs 17-24. As the TDIF and ADAT outputs are simultaneously active regardless of the input setting in the Tape Port Select menu (see **Section 3J Part 5.8**), in this way 8 ADAT channels can be easily dubbed onto 8 TDIF channels or vice versa. With both Flip Bank 1 and Flip Bank 2 active (see below), a 16channel digital transfer can be made.

To configure this for Digital Channels 17-24, set Flip Bank 1 to ON, and activate DIRECT OUT for channels 1-8 of BANK SELECT 1-16. Digital Inputs 17-24 are now routed directly post-fade to both ADAT and TDIF Digital Outputs 17-24.

Note that Flip Bank 1 is stored as part of a User Setup and is stored on power down.

- **Flip Bank 2**

```
< User Options >
Flip bank 2 :OFF
```

This setting allows the controls of BANK SELECT 1-16 channels 9-16 to be 'flipped' with the controls of BANK SELECT 17-32 channels 25-32.

Operation is as Flip Bank 1 (above) but instead for analogue channels 9-16 and digital input channels 24-32.

Note that Flip Bank 2 is stored as part of a User Setup and is stored on power down.

- **Direct**

The 16 digital direct output channels accessible from the TDIF ports and ADAT output ports can be globally set to be pre-EQ, pre-fade or post-fade sends. Three settings are available:

PRE EQ: direct sends derived PRE-EQ, PRE-COMPRESSION and PRE-FADE

PRE FADE: direct sends derived POST-EQ, POST-COMPRESSION and PRE-FADE

POST FADE: direct sends derived POST-EQ, POST-COMPRESSION and POST-FADE

The default setting is POST FADE.

```
< User Options >
Direct:POST-FADE
```

The digital inputs can also be routed in two blocks of 8 channels to the direct output channels. To configure this, see the sections on Flip Banks 1 and 2 on the previous page.

Note that the DIRECT OUT switch must be enabled for an analogue input channel in order for the digital output channel to transmit the direct send. When disabled, Group outputs are transmitted (see Section 3C for more information). The settings above affect the input channel direct sends only and do not affect any digital Group outputs.

Note that Direct is stored as part of a user Setup and is stored on power down.

- **LCD Contrast**

The contrast of the 328XD's main LCD display can be altered to allow it to be read easily from different operating angles. Use the PARAM encoder to set the LCD Contrast value between 0 and 63.

```
<Display Setup>
LCD Contrast: 63
```

Note that this setting is stored within a User Setup and on power down.

- **LED Brightness**

The brightness of all LEDs on the surface of the 328XD, including illuminated switches and meters, can be altered. Use the PARAM encoder to set the value to between 0 (off) and 255 (full). The default setting is 255.

```
<Display Setup>
LED Bright: 255
```

Note that this setting is stored within a User Setup and on power down.

- **Osc Dest**

```
< User Options >
Osc Dest: STE2
```

The 328XD has an in built Oscillator which can be assigned to a number of different destinations for calibration purposes.

The destination choices are **NOWHERE** (default), **STE-1**, **STE-2**, **FX-1** and **FX-2**, provided that the S/PDIF or AES/EBU input has not already been routed to the destination. In this event only the available destinations will be displayed. Routing the Oscillator to a Stereo Input will override the analogue signal present and routing the oscillator to a FX Return channel will override the FX Return signal.

- **WClock Term**

```
< User Options >
WClock Term: 75
```

Wordclock termination can be enabled with this software switch. Use the PARAM encoder to select between 75 to enable and NONE to disable wordclock termination. The default setting is NONE.

Note that WClock term is stored as part of a User Setup and is stored on power down.

- **Phase**

```
< User Options >
Phase: DA88/V4
```

The Phase setting allows the user to adjust the phase relationship between the internal clock and the clock transmitted at the BNC wordclock output, to compensate for some older Tape Machines which require a different setting.

Under normal circumstances, the Phase setting should be left to the default setting of 382 (labeled DA88/V4). The setting of 380 (DA88/OLD) must be used for Tascam DA88 machines with a system board of version 1-3.

For any other connected non-Tascam tape machine or computer audio card, the default setting of DA88/V4 should be used.

Note that Phase is stored as part of a User Setup and is also stored on power down.

- **PLL Mode**

```
< User Options >
PLL Mode :FAST
```

This menu enables the configuration of how the 328XD's internal Phase Locked Loop (PLL) locks to external clocks from BNC or AES/EBU sources (see **Section 3J Part 5.14**).

Use the PARAM encoder to select between SLOW and FAST PLL modes. The default mode is the fast PLL. The PLL mode should be left set to the fast setting when connecting the 328XD into most setups.

Some configurations, in particular those involving older equipment, may require the PLL Mode to be set to the slow setting in order for the 328XD to correct jitter related problems. The jitter rejection is good, but changes in sample frequency due to jitter will be tracked more slowly than when the 328XD is operating in the fast PLL mode. If you experience clicks in the audio output stream of digitally connected devices, try setting the PLL mode to SLOW.

Note that PLL mode is stored as part of a User Setup and is stored on power down.

5.3 - MIDI CONTROLLERS

A fourth bank can be accessed by pressing whichever BANK SELECT switch is currently illuminated. This puts the console into MIDI Controller mode, in which the 16 faders, the 16 rotary encoders of the E-Strip and the 16 Mute and 16 Solo switches act as 64 user definable, automatable MIDI Controllers. Each physical control can be assigned a specific MIDI Continuous Controller number and MIDI Channel - the faders and encoders have a fixed range of 0-127 and the switches a fixed range of 0-1.

Note that this bank is for remote control of external MIDI devices such as the audio mixer within software sequencer packages only and is not to be confused with configuration of internal 328XD parameters. For detailed information on automation of the internal 328XD parameters, consult **Section 3J Part 5.16** and **Section 4** of the User Guide. The MIDI Controller Bank can also be automated. For more information, consult **Section 3J Part 5.16**.

Configuration of the controllers is carried out using the MIDI Controllers menu. Once defined, the assigned MIDI Control Changes can be stored to one of 64 MIDI Controller Presets for recall at a later stage.

Setting MIDI Controller parameters

Press ENTER to enter the MIDI Controllers menu pages.

```
Controller No: 1
Chan: 1      Id:OFF
```

The LCD display will show the following 3 parameters:

- **Controller No: 1-64**

Select the physical controller to be defined using the ▲▼ cursor keys.

Controllers 1-16 are the 16 Faders

Controllers 17-32 are the 16 rotary encoders of the E-Strip

Controllers 33-48 are the 16 Solo switches

Controllers 49-64 are the 16 Mute switches

- **Chan: 1-16**

Enter the MIDI channel on which the selected physical control is to transmit the Continuous Controller, selected using the ◀▶ cursor keys to highlight and the PARAM encoder to adjust.

- ID: OFF - 127

Enter the number of the MIDI Continuous Controller number which the physical control is to transmit, selected using the ◀ ▶ cursor keys to highlight and the PARAM encoder to adjust.

Storing and naming MIDI Controller Setups

Once you have set up your MIDI Controllers you can store the settings as a MIDI Controller Preset for later recall.

- Press ENTER while in the MIDI Controllers page.
- Both the YES and NO buttons will flash.
- The LCD will display:

```
Store To Preset?
1: <Empty>
```

- Use the ▲ ▼ cursor keys or the PARAM encoder to select the MIDI Controller Preset library location number you wish to use, and then press YES to save the settings or NO to abort and return to the MIDI Controllers menu.

When confirming the store process, you will be prompted to enter a name for the MIDI Controller Preset.

The LCD display will read:

```
<MIDI Preset  1>
ID :MIDI PRES 01
```

Now use the ◀ ▶ cursor keys to select the character you want to change, and the PARAM encoder to select the character.

Characters can be deleted in the following ways:

- To delete the selected character and move the cursor one character to the right, press and hold the ◀ cursor key and press the ▶ cursor key once for each character to be deleted
- To delete the selected character and move the cursor one character to the left, press and hold the ▶ cursor key and press the ◀ cursor key once for each character to be deleted

Once you are happy with your choice press ENTER to store the new name or NO to abort.

To rename the preset at a later date you must highlight the preset within the MIDI Ctl Presets menu and press the ◀ and ▶ FUNCTION cursor keys simultaneously. Naming is done in the same way.

5.4 - MIDI CTL PRESETS

There are 64 MIDI Controller Preset library locations that can be used for storing custom MIDI Controller setups. The MIDI Ctl Presets menu enables you to select from the list of 64 locations a previously stored preset for recall or editing. MIDI Controller Presets can also be downloaded from the Soundcraft website and loaded into the console via a MIDI System Exclusive dump. Once loaded, they will be accessible from the MIDI Ctl Presets menu.



The current values of all 64 MIDI Controllers can be transmitted by pressing the ◀ and ▶ function keys simultaneously while the LCD is in the MIDI Controllers menu

Recalling MIDI Controller Presets

Highlight the MIDI Ctl Presets menu and press ENTER to enter the MIDI Controller Presets menu page.

```
1:MIDI PRES 01
2:<Empty>
```

Use the ▲▼ cursor keys or the PARAM encoder to select the Preset you wish to recall.

Press ENTER to recall the chosen Preset. The MIDI Controller Preset will now be loaded into the MIDI Controllers menu, which the LCD will automatically display.

To make any alterations or to rename and store the Preset to a different location, see the section above, MIDI Controllers.

5.5 - MIDI DUMP OUT

Two types of MIDI dump can be made from the 328XD, as MIDI System Exclusive data or MIDI Continuous Controller data.

System Exclusive Dumps:

Stored Snapshots, User Setups and all Presets can be dumped from the 328XD MIDI Out port as MIDI System Exclusive data to be recorded and stored externally on a MIDI data filer or within a MIDI sequencer package. Once recorded on the remote source, using the MIDI Dump In menu (see below) the presets can be restored to the 328XD.

Continuous Controller Dumps:

Alternatively, all 328XD automatable parameters or any defined MIDI Controllers within the MIDI Controller Bank can also be dumped as a list of Continuous Controller values. To restore these dumps to the 328XD, ensure that the console is in the correct automation mode (see **Section 3J Part 5.16**) simply playback the recorded data.

The following dumps can be selected:

- **All Data** transmits a dump of all Snapshots/User Setups and all MIDI Controller, Dynamics and FX Presets in a single sysex dump
- **All Snaps** transmits a sysex dump of all stored Snapshots
- **One Snap** transmits a single selected Snapshot as sysex data
- **FX Presets** transmits all stored FX Presets as sysex data
- **Ctl Presets** transmits all stored MIDI Controller Presets as sysex data
- **One Preset** transmits a single selected FX, Dynamics or MIDI Controller Preset as sysex data
- **Controllers** transmits the current values of the faders, encoders and switches of the MIDI Controller bank as MIDI Continuous Controller data
- **Automation** transmits all current values of all 328XD automatable objects as MIDI Continuous Controller data

NOTE: Only the stored FX User Presets can be dumped from the console as sysex data, and not the Factory Presets.

NOTE: All dump types can be requested from the console via MIDI System Exclusive messages. For more information consult **Appendix A3**.

Let's look at them individually.

Press ENTER to enter the MIDI Dump Out menu page.

Use the PARAM encoder to scroll through the different dump types

All Data

```
<MIDI Dump Out>
Mode: All Data
```

Executing this dump will transmit all data currently stored within the 328XD as MIDI System Exclusive data from the 328XD MIDI Out port.

Select the All Data dump and press ENTER to start the dump.

When complete the LCD display will show:

```
Dumping Data....
Dump Finished
```

To abort press EXIT. The LCD display will read:

```
Dumping Data....
Aborted!
```

Note that when this dump is returned to the console, the Snapshot and Preset locations will be restored. Any locations to which you have stored Snapshots or Presets since the dump out was made will be overwritten on returning the dump to the console. Empty locations within the dump will not overwrite Snapshot or Preset locations.

All Snaps

```
<MIDI Dump Out>
Mode: All Snaps
```

Executing this dump will dump all Snapshots currently stored within the 328XD as MIDI System Exclusive data from the MIDI Out port.

Select the All Snaps dump and press ENTER to start the dumping process.

When complete the LCD display will show:

```
Dumping Data....
Dump Finished
```

To abort press EXIT. The LCD display will read:

```
Dumping Data....
Aborted!
```

Note that when this dump is returned to the console, the Snapshot locations will be restored. Any locations to which you have stored Snapshots since the dump out was made will be overwritten on returning the dump to the console. Empty locations within the dump will not overwrite Snapshot locations.

One Snap

```
<MIDI Dump Out>
Mode: One Snap
```

A single Snapshot can be selected to be dumped as MIDI System Exclusive data from the MIDI Out port.

Select the One Snap dump with the PARAM encoder and press the ▼ cursor key once to view the list of currently stored Snapshots.

Use the ▲▼ cursor keys or the PARAM encoder to select the Snapshot you wish to dump. To return to the MIDI Dump Out menu, simply scroll to the top of the list.

Press ENTER to start the dumping process.

When complete the LCD display will show:

```
Dumping Data....
Dump Finished
```

To abort press EXIT. The LCD display will read:

```
Dumping Data....
Aborted!
```

Note that when this dump is returned to the console, the location to which the Snapshot should be stored will be prompted for on the LCD.

FX Presets

```
<MIDI Dump Out>
Mode: FX Presets
```

All stored Lexicon FX Presets can be dumped as MIDI System Exclusive data from the MIDI Out port.

Executing this dump will transmit all FX Presets currently stored within the 328XD as System Exclusive data from the 328XD MIDI Out port. All Preset locations are stored within the dump so that dumping the data back to the console will restore the FX Presets to their original location.

Select the FX Presets dump and press ENTER to start the dumping process.

When complete the LCD display will show:

```
Dumping Data....
Dump Finished
```

To abort press EXIT. The LCD display will read:

```
Dumping Data....
Aborted!
```

Note that when this dump is returned to the console, the location to which the FX Preset should be stored will be prompted for on the LCD.

Ctl Presets

```
<MIDI Dump Out>
Mode: Ctl Presets
```

All stored MIDI Controller Presets can be dumped as MIDI System Exclusive data from the MIDI Out port.

Executing this dump will transmit all MIDI Controller Presets currently stored within the 328XD as System Exclusive data from the 328XD MIDI Out port. All Preset locations are stored within the dump so that dumping the data back to the console will restore the FX Presets to their original location.

Select the Ctl Presets dump and press ENTER to start the dumping process.

When complete the LCD display will show:

```
Dumping Data....
Dump Finished
```

To abort press EXIT. The LCD display will read:

```
Dumping Data....
Aborted!
```

Note that when this dump is returned to the console, the MIDI Controller Preset locations will be restored. Any locations to which you have stored MIDI Controller Presets since the dump out was made will be overwritten on returning the dump to the console. Empty locations within the dump will not overwrite MIDI Controller Preset locations.

One Preset

```
<MIDI Dump Out>
Mode: One Preset
```

A single stored FX, Dynamics or MIDI Controller Preset can be selected to be dumped as MIDI System Exclusive data from the MIDI Out port.

Select the One Preset dump with the PARAM encoder and press the ▼ cursor key once to view the list of currently stored Presets.

Use the ▲▼ cursor keys or the PARAM encoder to select the Preset you wish to dump. To return to the MIDI Dump Out menu, simply scroll to the top of the list.

Press ENTER to start the dumping process.

When complete the LCD display will show:

```
Dumping Data....
Dump Finished
```

To abort press EXIT. The LCD display will read:

```
Dumping Data....
Aborted!
```

Note that when this dump is returned to the console, the location to which the MIDI Controller Preset should be stored will be prompted for on the LCD.

Controllers

```
<MIDI Dump Out>
Mode: Controllers
```

All assigned IDs and values of the MIDI Controller bank can be transmitted as a string of MIDI Continuous Controller values to be recorded into a sequencer or to synchronize a connected MIDI device.

Select the Controllers dump with the PARAM encoder and press ENTER to start the dump.

When complete, the LCD will return to the dump out screen.

The Controllers dump cannot be aborted.

To dump the parameters accurately, the MIDI Controllers should not be adjusted while the dump is in progress.

Automation

```
<MIDI Dump Out>
Mode: Automation
```

All of the 328XD's internal automatable parameters can be transmitted as a string of MIDI Continuous Controller values.

This dump is particularly useful to make at the beginning of a 328XD automation track within a MIDI sequencer. It has the same effect as transmitting a MIDI Program Change to the console to recall a Snapshot, synchronizing the 328XD with the beginning of the track. The advantage of the Automation dump over a Snapshot recall is that the dumped data can be continually adjusted within the appropriate sequencer editing pages. To interpret the MIDI Continuous Controller values of a recorded Automation dump, refer to the MIDI automation specifications at the back of this manual.

Select the Controllers dump with the PARAM encoder and press ENTER to start the dump.

The Automation dump takes about 20 seconds to complete and cannot be aborted.

To dump the parameters accurately, the console surface parameters and FX Settings should not be adjusted while the dump is in progress.

5.6 - MIDI DUMP IN

Previously dumped MIDI System Exclusive data can be dumped back into the 328XD from a MIDI device via the 328XD MIDI In port.

NOTE: It is not necessary to set the console to receive a MIDI Dump In when transmitting a previously dumped Automation or Controllers dump back to the console (see **Section 3J Part 5.5**). It is, however, necessary to set the automation mode correctly (see **Section 3J Part 5.16**).

Highlight the MIDI Dump In menu and press ENTER.

The LCD display will now read:

```
Waiting For Data
```

Start playback of the MIDI device to start the dumping process. The 328XD will interpret which dump is being played back to the desk.

The dumps for All Data, All Snaps, FX Preset, and MIDI Preset, retain the locations to which they were stored when dumped out. On returning the dump to the console, Snapshots, Setups and Presets will be written to their associated locations, overwriting any subsequently stored data. Locations which contain new data but were left empty when the dump was made will not be overwritten when the dump is restored to the console.

Having loaded a dump of a single Preset, Snapshot or User Setup back into the console, a prompt message will appear requesting the location to which information needs to be stored. Select the required memory location with the PARAM encoder and press YES to confirm.

The MIDI Dump In process can be aborted at any time by pressing EXIT. The LCD will display:

```
Waiting For Data
Aborted!
```

Press EXIT again to return to the main Menu pages.

5.7 - TAPE TRIM SETUP

The Tape Trim Setup menu allows the level of the 16 Tape inputs to be boosted or cut individually or globally.

Global Adjustment

Highlight the Tape Trim Setup menu and press ENTER.

The LCD display will show:

```
<Tape Trim Set.>
Set All Trims ?
```

Both the YES and the NO keys will flash.

To set all of the Tape Trims globally press YES.

The LCD will display the current Global offset to the Tape Trims. By default this is set to +0.0dB.

NOTE: On entering the Global Tape Trim Setup menu, the offset value will be destructively written to the individual Tape Trim settings (see below). If you wish to preserve the Tape Trim setting for any channel(s) but adjust others, you should use the individual Tape Trim settings to configure.

The LCD will now display:

```
<Tape Trim Set.>
Global: 0.0dB
```

You can now use the PARAM encoder to adjust the input level of the Tape inputs. The level can be adjusted from -12dB to +6dB.

Once you have set the levels to your satisfaction press EXIT to exit the menu.

Individual Adjustment

Highlight the Tape Trim Setup menu and press ENTER.

The LCD display will show:

```
<Tape Trim Set.>
Set All Trims ?
```

Both the YES and the NO keys will flash.

To set the Tape Trims individually press the NO button.

The LCD display will now read:

```
<Tape Trim Set.>
CH17: + 6.0dB
```

You can now use the ▲▼ cursor keys to select the Tape channel you want to adjust the input level on (Ch 17 - 32) and the PARAM encoder to adjust the level.

The level can be adjusted from -12dB to +6dB.

Once you have set the levels to your satisfaction press EXIT to exit the menu.

NOTE: Tape trim levels are not copied with a Channel Copy (See **Section 3J Part 5.17**).

5.8 - TAPE PORT SELECT

Both ADAT and TDIF outputs for Digital Outputs 17-24 and 25-32 are permanently active, but each 8 channel input can only be active for either TDIF or ADAT. The Tape Port Select menu is where this option is configured.

The Auxiliary Optical Output can be set to derive an 8 channel ADAT Optical format output from either the 8 Group Outputs or from a combination of the MIX bus, AUX 1, 2, 3 and 4 sends and FX 1 & 2 sends. Alternatively it can be switched to transmit an S/PDIF signal, duplicating the signal at the coaxial S/PDIF output.

Configuring TAPE 17-24 (8 TRK A), TAPE 25-32 (8TRK B) and AUX OPTICAL.

Highlight the Tape Port Select menu and press ENTER.

Use the ▲▼ cursor keys to select the ADAT/TDIF input selection page for Digital Input channels 17-24

Use the PARAM encoder to select either ADAT or TDIF to match the input device to be connected.

```
<Tape Ch17->24 >
Bank Source:TDIF
```

Use the ▼ cursor key to set the input and output Wordlength for Digital Input channels 17-24

The Wordlength can be set to 16, 20 or 24 bit. The output is dithered for selections of 16 and 20 bit and undithered when set to 24 bit.

Use the PARAM encoder to select the appropriate Wordlength for the device that is being connected.

```
<Tape Ch17->24 >
Wordlength: 24
```

Use the ▼ cursor key to select the next page to set the Sample Rate Flag for Digital Input channels 17-24. This page is only available if TDIF has been selected as the active input port in the ADAT/TDIF select page. If ADAT has been selected, the page is not displayed. The Sample Rate Flag must be set to the same sample rate at which the 328XD is operating, whether set to internal or external clock. To check this setting, enter the Clock Source Sel menu (See **Section 3J Part 5.14**).

Use the PARAM encoder to set the Sample Rate.

```
<Tape Ch17->24 >
S/Rate Flag:48k0
```

Use the ▲▼ cursor keys to select the ADAT/TDIF input selection page for Digital Input channels 25-32

Use the PARAM encoder to select either ADAT or TDIF to match the device to be connected.

```
<Tape Ch25->32 >
Bank Source:TDIF
```

Use the ▼ cursor key to set the input and output wordlength for Digital Input channels 25-32

The wordlength can be set to 16, 20 or 24 bit. The output is dithered for selections of 16 and 20 bit and undithered when set to 24 bit.

Use the PARAM encoder to select the appropriate wordlength for the device that is being connected.

```
<Tape Ch25->32 >
Wordlength: 24
```

Use the ▼ cursor key to select the next page to set the Sample Rate Flag for Digital Input channels 25-32. This page is only available if TDIF has been selected as the active input port in the ADAT/TDIF select page. If ADAT has been selected, the page is not displayed. The Sample Rate Flag must be set to the same sample rate at which the 328XD is operating, whether set to internal or external clock. To check this setting, enter the Clock Source Sel menu.

Use the PARAM encoder to set the sample rate.

```
<Tape Ch25->32 >
S/Rate Flag:48k0
```

Use the ▼ cursor key to set the signal transmitted from the Auxiliary Optical output

Use the PARAM encoder to select between:

```
< Aux Optical >
Send Src:AUX/MIX
```

- **Aux/Mix**

The 328XD's 4 Aux sends, 2 FX sends and Mix L, R will be sent to the Aux Optical Out for connecting to external equipment that uses ADAT Optical inputs. The channels are mapped in the following way:

Aux ADAT Output Channel	Signal
1	Mix Bus Left
2	Mix Bus Right
3	Aux Send 1
4	Aux Send 2
5	Aux Send 3
6	Aux Send 4
7	FX Send 1
8	FX Send 2

- **Group**

```
< Aux Optical >
Send Src: GROUP
```

Group outputs 1-8 will be sent to the Aux Optical Out for connecting to external equipment that uses ADAT Optical inputs.

The ADAT format output is a 24 bit undithered signal.

Use the ▼ cursor to navigate to menus allowing configuration of wordlength (16, 20, 24 bit) and dither on/off. Note that this option is only available when using the Auxilliary Optical Output in ADAT format (Aux/Mix or Group).

- **S/PDIF**

When selected, the signal configured to be transmitted from the coaxial S/PDIF output (see **Section 3J Part 5.11**) is duplicated at the Aux Optical Out in optical S/PDIF format. This S/PDIF format output follows all the configuration options as set in the SPDIF O/P Setup menu including wordlength and Sample Rate Flag settings.

5.9 - SPDIF I/P SETUP

The coaxial S/PDIF digital stereo input can be routed to a number of different control destinations.

Highlight the SPDIF I/P Setup menu and press ENTER

```
< SPDIF Input >
Route To: STE 1
```

Use the PARAM encoder to select one of the following destinations:

- **NOWHERE** The S/PDIF digital stereo input is not routed
- **STE 1** The S/PDIF digital stereo input is routed to the STE-1 input
- **STE 2** The S/PDIF digital stereo input is routed to the STE-2 input
- **FX 1** The S/PDIF digital stereo input is routed to the FX-1 Return
- **FX 2** The S/PDIF digital stereo input is routed to the FX-2 Return
- **2TRK** The S/PDIF digital stereo input is routed to the 2 Track input

Note that the AES/EBU input and Internal Oscillator can also be routed to the above destinations. If either of these signals has been routed already, the destination will not appear in the list.

Routing the S/PDIF input to a Stereo Input or to the 2TRK input will override the analogue signal present. Similarly, routing the S/PDIF input to an FX Return will override the FX Return signal.

The 328XD S/PDIF Input is fitted with Sample Rate Conversion and is capable of rectifying signals with sampling rate between 20kHz - 100kHz. Consequently the wordclock of a device connected to the 328XD S/PDIF Input need not be synchronized with the 328XD wordclock.

Press EXIT to return to the main menu pages.

5.10 - AES/EBU I/P SETUP

Similarly, the AES/EBU digital stereo input can be routed to a number of different destinations.

Highlight the AES/EBU I/P Setup menu and press the ENTER

```
<AES/EBU Input >
Route To: STE 2
```

Use the PARAM encoder to select one of the following destinations:

- **NOWHERE** The AES/EBU digital stereo input is not routed
- **STE 1** The AES/EBU digital stereo input is routed to the STE-1 input
- **STE 2** The AES/EBU digital stereo input is routed to the STE-2 input
- **FX 1** The AES/EBU digital stereo input is routed to the FX-1 Return
- **FX 2** The AES/EBU digital stereo input is routed to the FX-2 Return
- **2TRK** The AES/EBU digital stereo input is routed to the 2 Track input

Note that the S/PDIF input and Internal Oscillator can also be routed to the above destinations. If one of these signals has been routed already, the destination will not appear in the list.

Routing the AES/EBU input to a Stereo Input or to the 2TRK input will override the analogue signal present. Similarly, routing the AES/EBU input to an FX Return will override the FX Return signal.

NOTE: The AES/EBU input device should be connected and correctly synchronized to the same wordclock source as the 328XD BEFORE SELECTING THE DESTINATION CHANNEL. If the 328XD is set to operate on its Internal clock, for example, the AES/EBU device must be set to client to the 328XD. Under normal circumstances, this will be done by connecting the 328XD AES/EBU output to the AES/EBU input of the external device which must be set to lock to the clock present at its AES/EBU input. Most CD players and DAT recorders cannot be synchronized to an external clock source when in play mode. Consequently, in this situation the 328XD should be set to synchronize to the wordclock present at its AES/EBU input.

Press EXIT/NO to return to the main menu pages.

5.11 - SPDIF O/P SETUP

The coaxial S/PDIF digital stereo output on the back of the 328XD can be set to derive its signal from a number of different sources.

Highlight the SPDIF O/P Setup menu and press ENTER.

```
< SPDIF Output >
Src From: MIX
```

Use the PARAM encoder to select one of the following sources.

- **NOWHERE** The S/PDIF digital stereo output signal is sourced from nowhere
- **MIX** The S/PDIF digital stereo output signal is sourced from the stereo MIX output
- **AUX 1/2** The S/PDIF digital stereo output signal is sourced from the output of AUX sends 1/2

- **AUX 3/4** The S/PDIF digital stereo output signal is sourced from the output of AUX sends 3/4
- **FX 1/2** The S/PDIF digital stereo output signal is sourced from the output of FX sends 1/2
- **GRP1/2** The S/PDIF digital stereo output signal is sourced from Group outputs 1 and 2
- **GRP3/4** The S/PDIF digital stereo output signal is sourced from Group outputs 3 and 4
- **GRP5/6** The S/PDIF digital stereo output signal is sourced from Group outputs 5 and 6
- **GRP7/8** The S/PDIF digital stereo output signal is sourced from Group outputs 7 and 8
- **CRM** The S/PDIF digital stereo output signal is sourced from the Control Room Output

Wordclock is transmitted within the audio stream from the S/PDIF output. If you connect the S/PDIF output to a device that requires to be synchronized, you should ensure that this is done. Check your equipment documentation for more information. When NOWHERE is selected, wordclock is still transmitted at the S/PDIF output, ensuring that connected devices do not lose sync.

Use the ▼ cursor key to check the wordlength of the S/PDIF output stream.

Using the PARAM encoder, the S/PDIF output wordlength can be set to 16, 20 or 24 bit. The output is dithered for selections of 16 and 20 bit and undithered when set to 24 bit. You should ensure that this is set to the wordlength that the external device requires.

```
< SPDIF Output >
Wordlength: 24
```

Use the ▼ cursor key to check the Status Bits of the S/PDIF output stream.

The Status Bits pages allow configuration of two flags within the S/PDIF stream that must be set correctly to allow a receiving device to interpret its incoming S/PDIF signal.

Under normal circumstances, if the 328XD is set to Internal Wordclock, the Status bits should remain at the default setting of AUTO.

```
< SPDIF Output >
Status Bits: AUTO
```

If the 328XD is set to client to an external wordclock source, you must either check that the S/PDIF output stream Status Bits are set manually, or set the External Sample rate correctly in the Clock Source Sel menu (See **Section 3J Part 5.14**). To set the flags manually, select Status Bits: MAN with the PARAM encoder.

```
< SPDIF Output >
Status Bits: MAN
```

Press the ▼ cursor key to set the status bits of the S/PDIF output stream.

The Status Bits pages allow configuration of two flags within the S/PDIF stream that must be set correctly to allow a receiving device to interpret the incoming S/PDIF signal.

Under normal circumstances, if the 328XD is set to Internal Wordclock (see **Section 3J Part 5.14**), the Status bits should remain at the default setting of AUTO.

If the 328XD is set to client to an external wordclock source, you should check that the S/PDIF output stream Status Bits are set correctly. To set the flags manually, select Status Bits: MAN with the PARAM encoder. You will now be able to access the Status Bit menu pages by pressing the ▼ cursor key.

The Sample Rate Flag must be set to the same sample rate at which the 328XD is operating. The options are 44.1kHz, 48kHz and UNDF (Undefined).

```
< SPDIF Output >
S/Rate Flag: 48k
```

If the 328XD is set to synchronize to external wordclock at a frequency of 48kHz, you must set the S/PDIF Output Sample Rate Flag to 48kHz. A setting of Undefined can be selected if the external S/PDIF device requires it. Consult the documentation for your S/PDIF device for more information.

Note that when the Status Bits setting is set to AUTO, and the 328XD is set to synchronize to an external clock source, the External Sample Rate settings should be checked. From this the S/PDIF output sample rate flag will be determined. See **Section 3J Part 5.14**).

Press the ▼ cursor key to set the Pro Flag.

The S/PDIF output can be configured to transmit an AES/EBU format signal, although mechanically the connections remain S/PDIF specification.

```
< SPDIF Output >
Pro Flag: OFF
```

To transmit an AES/EBU format signal from the coaxial S/PDIF output, set the Pro Flag to ON with the PARAM encoder. If the signal is to remain in the S/PDIF format, ensure that the Pro Flag is set to OFF.

Press EXIT to leave the S/PDIF O/P menu.

NOTE: If S/PDIF has been set to be the signal present at the Aux Optical Out port, the signal will be configured by the settings made in the SPDIF O/P Setup menu.

5.12 - AES/EBU O/P SETUP

The AES/EBU digital stereo output on the back of the 328XD can be set to derive its signal from a number of different sources.

Highlight the AES/EBU O/P menu and press ENTER.

```
<AES/EBU Output>
Src From: GRP1/2
```

Use the PARAM encoder to select one of the following sources.

- **NOWHERE** The AES/EBU digital stereo output signal is sourced from nowhere.
- **MIX** The AES/EBU digital stereo output signal is sourced from the stereo MIX output.
- **AUX 1/2** The AES/EBU digital stereo output signal is sourced from the output of AUX sends 1/2.

- **AUX 3/4** The AES/EBU digital stereo output signal is sourced from the output of AUX sends 3/4.
- **FX 1/2** The AES/EBU digital stereo output signal is sourced from the output of FX sends 1/2.
- **GRP1/2** The AES/EBU digital stereo output signal is sourced from Group outputs 1 and 2.
- **GRP3/4** The AES/EBU digital stereo output signal is sourced from Group outputs 3 and 4.
- **GRP5/6** The AES/EBU digital stereo output signal is sourced from Group outputs 5 and 6.
- **GRP7/8** The AES/EBU digital stereo output signal is sourced from Group outputs 7 and 8.
- **CRM** The AES/EBU digital stereo output signal is sourced from the Control Room Output.

Wordclock is transmitted along with the audio stream from the AES/EBU output. If you connect the AES/EBU output to a device that requires to be synchronized, you should ensure that this is done. Check your equipment documentation for more information. When NOWHERE is selected, wordclock is still transmitted at the AES/EBU output, ensuring that connected devices do not lose sync.

Use the ▼ cursor key to check the wordlength of the AES/EBU output stream.

```
<AES/EBU Output>
Wordlength: 24
```

Using the PARAM encoder, the AES/EBU output wordlength can be set to 16, 20 or 24 bit. The output is dithered for selections of 16 and 20 bit and undithered when set to 24 bit. You should ensure that this is set to the wordlength that the external device requires.

Press the ▼ cursor key to set the status bits of the AES/EBU output stream.

The Status Bits pages allow configuration of two flags within the AES/EBU stream that must be set correctly to allow a receiving device to interpret incoming AES/EBU signal.

Under normal circumstances, if the 328XD is set to Internal Wordclock (see **Section 3J Part 5.14**), the Status bits should remain at the default setting of AUTO.

```
<AES/EBU Output>
Status Bits: AUTO
```

If the 328XD is set to client to an external wordclock source, you must either check that the AES/EBU output stream Status Bits are set manually, or set the External Sample Rate correctly in the Clock Source Sel menu (See **Section 3J Part 5.14**). To set the flags manually, select Status Bits: MAN with the PARAM encoder. You will now be able to access the Status Bit menu pages by pressing the ▼ cursor key.

```
<AES/EBU Output>
Status Bits: MAN
```

The Sample Rate Flag must be set to the same sample rate at which the 328XD is operating. The options are 32kHz, 44.1kHz, 48kHz and UNDF (Undefined).

```
<AES/EBU Output>
S/Rate Flag: 48k
```

If the 328XD is set to synchronize to external wordclock at a frequency of 48kHz, you must set the AES/EBU Output Sample Rate Flag to 48kHz. A setting of Undefined can be selected if the external AES/EBU device requires it. Consult the documentation for your AES/EBU device for more information.

Note that when the Status Bits setting is set to AUTO, and the 328XD is set to synchronize to an external clock source, the External Sample Rate setting should be checked from this the AES/EBU output sample rate flag will be determined. (See **Section 3J Part 5.14**).

Press the ▼ cursor key to set the Pro Flag.

The AES/EBU output can be configured to transmit an S/PDIF format signal, although mechanically the connections remain AES/EBU specification.

```
<AES/EBU Output>
Pro Flag: ON
```

To transmit an S/PDIF format signal from the AES/EBU output, set the Pro Flag to OFF with the PARAM encoder. If the signal is to remain in the AES/EBU format, ensure that the Pro Flag is set to ON.

Press EXIT to leave the AES/EBU O/P menu.

5.13 - TAPE MACH SETUP

The 328XD's Transport Control section can be used to control the transport of external recording devices using both the MMC (MIDI Machine Control) or RS 422 (Sony 9-Pin) protocols.

Highlight the Tape Mach Setup menu and press ENTER.

You can now use the ▲▼ cursor keys or the PARAM encoder to scroll through the LCD display and choose any of the following pages:

- Custom Machine
- MMC Closed Loop
- Alesis A12
- Alesis BRC
- Tascam DTRS
- Tascam MMC-38
- Fostex D Series
- Fostex G Series
- Fostex RD8
- Fostex EX Series
- Sony 9 Pin
- EMU Darwin

Nine preset Tape Machine types are listed which are generated from a configuration of the Custom Machine selection, but compensate for any deviation from the MMC standard specification. If your machine is not listed, you should select either MMC Closed Loop or Custom Machine for MMC control, or Sony 9 Pin. Unless you wish to employ remote transport control of a connected tape machine or wish the 328XD to display timecode, it is

not necessary to configure this menu in order for the 328XD to operate with digital tape machines.

CUSTOM MACHINE

If your Tape Machine is not listed, or you wish to use the 328XD Transport Controls with a computer based software sequencer package, you should select Custom Machine with the PARAM encoder.

```
<Tape Mach Type>
Custom Machine
```

The Custom Machine option allows configuration of the following sub menus:

- **Timecode Source:** MIDI Timecode or Longitudinal Timecode (SMPTE)
- **Status:** Timecode Master or Client
- **MIDI:** MIDI Note On / MIDI Machine Control / None
- **Frame Rate:** Timecode Frame Rate
- **Loc 1/2:** LOCATE 1 and LOCATE 2 timecode setting
- **Off:** Timecode offset

Timecode Source

```
<Custom Machine>
Timecode src:MTC
```

When configured as a Timecode Client, the 328XD timecode display can show either MTC (MIDI Timecode) received at the MIDI In port or LTC/SMPTE received at the SMPTE In port. If your external device offers a MTC or LTC output, connect the correct cables and set the menu accordingly with the PARAM encoder. If your external device offers both MTC and LTC outputs, the choice of which to use is yours. If you are using the MIDI In port to receive automation data also, however, it may be wiser to use the LTC input to receive timecode.

Press the ▼ cursor key to set the Timecode Master/Client status.

Status

```
<Custom Machine>
Status: Master
```

The 328XD internal Timecode generator can be set to transmit MIDI Timecode from the MIDI Out port by configuring it as a Master Timecode device. If you wish the 328XD to generate MIDI Timecode, set the Status to MASTER with the PARAM encoder. If you wish the 328XD to client to incoming LTC or MTC as defined in the Timecode Source menu (see above), set the Timecode Status menu to CLIENT with the PARAM encoder. Set the Status to CLIENT if you do not wish to use Timecode.

Press the ▼ cursor key to configure the MIDI setup.

MIDI

```
<Custom Machine>
MIDI: MMC
```

The 328XD Transport Controls can be set to transmit either MIDI Machine Control commands or MIDI Note On commands. If your external device is set to receive MMC commands, use the PARAM encoder to select MMC.

If you are using the 328XD in conjunction with a computer based software sequencer package that will respond to MIDI Note On transport messages, Note On can be selected with the PARAM encoder.

```
<Custom Machine>
MIDI:      Note On
```

Setting the 328XD Transport controls to Note On enables you to configure a Note On message for each of the transport controls. Nine extra submenu pages are revealed by pressing the ▼ cursor key. Use the ▲▼ cursor keys to navigate between these submenus.

For each control, Note On commands with MIDI note numbers ranging from C-2 - G8 (MIDI Note numbers 00-127, 00H-7FH) can be selected.

```
<Custom Machine>
Play:      Bb5
```

By default the transport controls are set to:

Command	Displayed MIDI Note	MIDI Note Number
Play	Bb5	94 (5EH)
Stop	B5	95 (5FH)
Record	A5	93 (5DH)
Rewind	G5	91 (5BH)
Fast Forward	G#5	92 (5CH)
Locate 1	F6	102 (66H)
Locate 2	F#6	103 (67H)
Shift Key	C6	96 (60H)

The Shift Key is required by some sequencer packages.

```
<Custom Machine>
Shift key:  C6
```

When defined, the associated Shift Key Note On command is transmitted immediately before the Note On command assigned to each transport control. This allows the sequencer to distinguish between a MIDI Note On received from an attached MIDI keyboard and the transport command transmitted by the 328XD. The Shift Key can also be set to OFF, if not required.

You should consult your sequencer manual to configure the sequencer to respond to the note numbers that you have programmed.

In addition, the LOC1 and LOC2 switches can be set to transmit predefined MIDI System Exclusive messages, enabling remote switching of the active fader bank within Digidesign ProTools. Set Loc 1 to 'PTL +1' and Loc 2 to 'PTL -1' to enable this. When using the 328XD MIDI Controller Bank, the LOC1 and LOC2 switches can then be used to select which set of ProTools faders is controlled by the 328XD. Consult the downloadable 328XD ProTools guide for further information.

The ninth MIDI Note On menu selects the MIDI channel on which the MIDI Note On messages are to be transmitted.

```
<Custom Machine>
MIDI channel: 1
```

Press the ▼ cursor key to set the Timecode Frame Rate.

Frame Rate

```
<Custom Machine>
Frame Rate:24
```

The timecode frame rate must be set to comply with the frame rate to which the remote device is also set, regardless of Timecode Master/Client status. Use the PARAM encoder to set this.

The Frame Rate can be set to 24, 25, 30 drop or 30 non-drop frames/second.

The default setting is 25fps.

Press the ▼ cursor key to set Locate point 1.

Loc 1

```
<Custom Machine>
Loc1:00:00:00:00
```

When the LOC1 switch is pressed, it will transmit a single timecode reference point as a single MIDI Timecode frame, so that an attached tape recorder or MIDI sequencer can respond and locate to that point. By default this is set to a value of 00:00:00:00. Use the ◀ and ▶ cursor keys to navigate and the PARAM encoder to adjust as required.

Note that the timecode reference point will not be transmitted when the transport controls are set to MIDI Note On.

Press the ▼ cursor key to set Locate point 2.

Loc 2

```
<Custom Machine>
Loc2:00:00:00:00
```

When the LOC2 switch is pressed, it will transmit a single timecode reference point as a single MIDI Timecode frame, so that an attached tape recorder or MIDI sequencer can respond and locate to that point. By default this is set to a value of 00:00:00:00. Use the ◀ and ▶ cursor keys to navigate and the PARAM encoder to adjust as required.

Note that the timecode reference point will not be transmitted when the transport controls are set to MIDI Note On.

Press the ▼ cursor key to set the Timecode Offset value.

Off

```
<Custom Machine>
Off: +00:00:00:00
```

An offset, definable to the frame, can be applied to the displayed Timecode, if required. The offset can be positive (adds to the Timecode display) or negative (subtracts from the Timecode display).

To configure the offset, use the ◀ and ▶ cursor keys to navigate between +/-, hours, minutes, seconds and frames and the PARAM encoder.

When an offset has been applied, Snapshots stored while Timecode is running in the display will be assigned a Timecode address with the offset applied (see **Section 3J - Part 2**).



Pressing the ◀ and ▶ FUNCTION keys while this page is active in the LCD will reset the Locate 1 Timecode address to 00:00:00:00.



Pressing the ◀ and ▶ FUNCTION keys while this page is active in the LCD will reset the Locate 2 Timecode address to 00:00:00:00.



Pressing the ◀ and ▶ FUNCTION keys while this page is active in the LCD will reset the Timecode Offset value to + 00:00:00:00.

With Loc to Snap set to ON (see **Section 3J - Part 2.5**), when a Snapshot is recalled, the transmitted Timecode address will have the offset applied.

When ST01 or ST02 are pressed with the Timecode display running (see **Section 3J - Part 2.5**), the Locate point will be stored with the offset applied.

Press the EXIT to return to the main **Tape Mach Setup** menu

MMC Closed Loop

To configure the 328XD for use with a standard MMC capable device, MMC Closed Loop should be selected as the Tape Machine Type.

```
<Tape Mach Type>
MMC Closed Loop
```

The console automatically acts as a Timecode Client device, but transmits MMC commands to the Timecode Master device. MIDI cables must be connected both ways between the 328XD and Tape Machine. After the 328XD has transmitted an MMC command, it will wait until it receives an 'MMC command received' message from the connected Tape Machine before fully illuminating the pressed transport control.

Timecode Source

```
MMC Closed Loop
Timecode Src:MTC
```

When configured as a Timecode Client, the 328XD Timecode Display can show either MTC (MIDI Timecode) received at the MIDI In port or LTC/SMPTE received at the SMPTE In port. If your external device offers a MTC or LTC output, connect the correct cables and set the menu accordingly with the PARAM encoder.

Press the ▼ cursor key to set the Timecode Frame Rate.

Frame Rate

```
MMC Closed Loop
Frame Rate: 24
```

The Timecode frame rate must be set to comply with the frame rate to which the remote device is set, regardless of Timecode Master/Client status. Use the PARAM encoder to adjust.

The Frame Rate can be set to 24, 25, 30 drop or 30 non-drop frames/second.

Press the ▼ cursor key to set Locate point 1.

Loc1

```
MMC Closed Loop
Loc1:00:00:00:00
```

When the LOC1 switch is pressed, it will transmit a single timecode reference point as a single MIDI Timecode frame, so that an attached tape recorder can respond and locate to that point. By default this is set to a value of 00:00:00:00. Use the ◀ and ▶ cursor keys to navigate and the PARAM encoder to adjust as required.

Note that the timecode reference point will not be transmitted when the transport controls are set to MIDI NOTE ON.



Pressing the ◀ and ▶ FUNCTION keys while this page is active in the LCD will reset the Locate 1 Timecode address to 00:00:00:00.

Press the ▼ cursor key to set Locate point 2.

Loc2

```
MMC Closed Loop
Loc2:00:00:00:00
```

When the LOC2 switch is pressed, it will transmit a single timecode reference point as a single MIDI Timecode frame, so that an attached tape recorder can respond and locate to that point. By default this is set to a value of 00:00:00:00. Use the ◀ and ▶ cursor keys to navigate and the PARAM encoder to adjust as required.

Press the ▼ cursor key to set the Timecode Offset value.

Off

```
MMC Closed Loop
Off:+00:00:00:00
```

An offset, definable to the frame, can be applied to the displayed Timecode, if required. The offset can be positive (adds to the Timecode display) or negative (subtracts from the Timecode display).

To configure the offset, use the ◀ and ▶ cursor keys to navigate between +/-, hours, minutes, seconds and frames and the PARAM encoder to adjust.

When an offset has been applied, Snapshots stored while Timecode is running in the display will be assigned a Timecode address with the offset applied (see **Section 3J - Part 2**).

With Loc to Snap set to ON (see **Section 3J - Part 2.5**), when a Snapshot is recalled, the transmitted Timecode address will have the offset applied.

When ST01 or ST02 are pressed with the Timecode display running (see **Section 3J - Part 2.5**), the Locate point will be stored with the offset applied.

Press EXIT to return to the main **Tape Mach Setup** menu.

ALESIS AI2

```
<Tape Mach Type>
Alesis AI2
```

The Transport Control section of the 328XD can be easily configured to control the transport of an Alesis ADAT in conjunction with the Alesis AI2 synchronizer, which provides MIDI to Alesis ADAT Sync conversion enabling the ADAT to interpret MMC commands from the 328XD.

Press ENTER to enter the **Alesis AI-2** setup page.

Consult the MMC Closed Loop section on page 120 for a description of the parameters available.

Press EXIT to return to the main **Tape Mach Setup** menu or use the ▲ and ▼ cursor keys to configure timecode and locate options, as described in the MMC Closed Loop section above.



Pressing the ◀ and ▶ FUNCTION keys while this page is active in the LCD will reset the Locate 2 Timecode address to 00:00:00:00.



Pressing the ◀ and ▶ FUNCTION keys while this page is active in the LCD will reset the Timecode Offset value to +00:00:00:00.

ALESIS BRC

The Transport Control section of the 328XD can be easily configured to control the transport of an Alesis ADAT in conjunction with the Alesis BRC, which provides MIDI to Alesis ADAT sync conversion enabling the ADAT to interpret MMC commands from the 328XD.

Press ENTER to enter the **Alesis BRC** setup page.

```
<Tape Mach Type>
Alesis BRC
```

Consult the MMC Closed Loop section on page 120 for a description of the parameters available.

Press EXIT to return to the main **Tape Mach Setup** menu or use the ▲ and ▼ cursor keys to configure timecode and locate options, as described in the MMC Closed Loop section above.

TASCAM DTRS

The Transport Control section of the 328XD can be easily configured to control the transport of a Tascam DA7HR, DA88, DA98 or DA98HR DTRS machine.

Press ENTER to enter the **Tascam DTRS** setup page.

```
<Tape Mach Type>
Tascam DTRS
```

NOTE: In order to receive MMC (MIDI Machine Control) commands from the 328XD a DA88 must be fitted with an SY-88 Synchronization board.

Consult the MMC Closed Loop section on page 120 for a description of the parameters available.

Press EXIT to return to the main **Tape Mach Setup** menu or use the ▲ and ▼ cursor keys to configure timecode and locate options, as described in the MMC Closed Loop section above.

TASCAM MMC-38

The Transport Control section of the 328XD can be easily configured to control the transport of a Tascam DA38 machine with the MMC-38 expansion unit connected.

Press ENTER button to enter the **Tascam MMC-38** setup page.

```
<Tape Mach Type>
Tascam MMC-38
```

Consult the MMC Closed Loop section on page 120 for a description of the parameters available.

Press EXIT to return to the main **Tape Mach Setup** menu or use the ▲ and ▼ cursor keys to configure timecode and locate options, as described in the MMC Closed Loop section above.

FOSTEX D SERIES

The Transport Control section of the 328XD can be used to control the transport of a Fostex D80, D90, D108, D160, D160 v2, D824 or D1624 hard disk recorder.

Press ENTER to enter the **Fostex D Series** setup page.

```
<Tape Mach Type>
Fostex D Series
```

Consult the MMC Closed Loop section on page 120 for a description of the parameters available.

Press EXIT to return to the main **Tape Mach Setup** menu or use the ▲ and ▼ cursor keys to configure timecode and locate options, as described in the MMC Closed Loop section above.

FOSTEX G SERIES

The Transport Control section of the 328XD can be easily configured to control the transport of a Fostex G16 or G24 tape machine in conjunction with the appropriate MMC interface, which provides the MIDI Interface for the G16 or G24 allowing it to receive MMC commands from the 328XD.

Press ENTER button to enter the **Fostex G Series** setup page.

```
<Tape Mach Type>
Fostex G Series
```

Consult the MMC Closed Loop section on page 120 for a description of the parameters available.

Press EXIT to return to the main **Tape Mach Setup** menu or use the ▲ and ▼ cursor keys to configure timecode and locate options, as described in the MMC Closed Loop section above.

FOSTEX RD8

The Transport Control section of the 328XD can be easily configured to control the transport of a Fostex RD8.

Press ENTER button to enter the **Fostex RD8** setup page.

```
<Tape Mach Type>
Fostex RD8
```

Consult the MMC Closed Loop section on page 120 for a description of the parameters available.

Press EXIT to return to the main **Tape Mach Setup** menu or use the ▲ and ▼ cursor keys to configure timecode and locate options, as described in the MMC Closed Loop section above.

FOSTEX EX SERIES

The Transport Control section of the 328XD can be easily configured to control the transport of a Fostex EX Series recording machine.

Press ENTER to enter the **Fostex EX Series** setup page.

```
<Tape Mach Type>
Fostex EX Series
```

Consult the MMC Closed Loop section on page 120 for a description of the parameters available.

Press EXIT to return to the main **Tape Mach Setup** menu or use the ▲ and ▼ cursor keys to configure timecode and locate options, as described in the MMC Closed Loop section above.

SONY 9 PIN

The Transport Control section of the 328XD can be easily configured to control the transport of machines conforming to the Sony 9 Pin (RS 422) protocol.

Press ENTER to enter the **Sony 9 Pin** setup page.

```
<Tape Mach Type>
Sony 9 Pin
```

Consult the MMC Closed Loop section above for a description of the parameters available.

Press EXIT to return to the main **Tape Mach Setup** menu or use the ▲ and ▼ cursor keys to configure timecode and locate options, as described in the MMC Closed Loop section above.

EMU DARWIN

The Transport Control section of the 328XD can be easily configured to control an EMU Darwin recorder.

Press ENTER to enter the **EMU Darwin** setup page.

```
<Tape Mach Type>
EMU Darwin
```

Consult the MMC Closed Loop section on page 120 for a description of the parameters available.

Press EXIT to return to the main **Tape Mach Setup** menu or use the ▲ and ▼ cursor keys to configure timecode and locate options, as described in the MMC Closed Loop section above.

5.14 - CLOCK SOURCE SELECT

It is essential that the correct Wordclock source is chosen when linking the 328XD with other digital audio devices.

Highlight the Clock Source Select menu and press ENTER.

Use the PARAM encoder to select the Clock source, the choices are as follows:

- Internal: 48 kHz
- Internal: 44.1 kHz
- External: WClock (Wordclock)

- External: AES/EBU
- External: SClock (Digidesign Superclock)
- External: ADAT 1
- External: ADAT 2

NOTE: As the 328XD coaxial S/PDIF input is fitted with Sample Rate Conversion, it is not possible or necessary to synchronize the 328XD internal clock with an external S/PDIF source.

When set to Internal clock at a frequency of either 44.1kHz, or 48kHz, ALL digital devices connected must be set to synchronize to this clock. Consult the documentation supplied with your other devices for additional configuration information.

```
<Wordclock Src.>
Internal: 48.0kHz
```

The 328XD should be set to synchronize to an External clock option if an external source is set to be the clock master for the system.

```
<Wordclock Src.>
External: WClock
```

The 328XD can be set to synchronize to Digidesign Superclock (256 x Wordclock), if present at the BNC wordclock input.

```
<Wordclock Src.>
External: SClock
```

The 328XD can also be set to synchronize to the AES/EBU and ADAT 1 and 2 inputs.

The S/PDIF input cannot be used as a clock source as it is fitted with a sample rate converter.

Press the ▼ cursor key to set the External Sample Rate setting.

If the 328XD is set to client to an External clock source, and wordclock is lost, a warning message indicating this will be displayed on the LCD. The 328XD can revert to Internal clock, but in order to try to limit problems caused as a result of the loss, the sample frequency to which the console will revert can be set. Set the External Sample Rate to 44.1kHz or 48kHz with the PARAM encoder.

```
<Wordclock Src.>
Default: 48.0kHz
```

When the 328XD is acting as a wordclock client, it is important to set the External Sample Rate here to ensure that other console settings are calculated correctly.

Press the ▼ cursor key to set how the console will react to a loss of wordclock.

When external wordclock is lost, the 328XD can be set either to revert to Internal Clock at the sample rate defined above (INTERNAL) or wait for a stable clock to return at the client input (SEARCH). In SEARCH mode, the 328XD will revert to the Default Internal clock at the set frequency but will automatically sync to the external source when it returns.

Set the On Loss mode to Internal or Search with the PARAM encoder.

```
<Wordclock Src.>
On Loss: Internal
```

```
<Wordclock Src.>
On Loss: Search
```

Press EXIT to return to the main menu pages.

Note to Tascam DA88 users.

If you are using DA88 machines it is important that you establish which system boards are installed. There are two different Phase settings used on the TDIF interface of the DA88 depending on their generation, and it is important that the 328XD is set up correctly to the same Phase settings otherwise the audio data may be corrupted. The Phase setting is found in the User Options menu (see **Section 3J Part 5.2**).

For DA88s with system board version 4, a setting of 382 (DA88/V4) should be set.

For DA88s with system board version 1, 2 or 3, a setting of 380 (DA88/OLD) should be used.

A combination of two DA88s of version 4 or a combination of DA88s of versions 1, 2 or 3 should not present problems if the clock phase is set correctly in the User Options menu.

NOTE: A DA88 version 4 model CANNOT be used with TDIF connections to the 328XD simultaneously with a DA88 version 1, 2 or 3. You should contact your Tascam distributor if you wish to upgrade the older machine.

5.15 - SNAPSHOT SETUP

The Snapshot Setup menu controls the settings for 328XD Snapshots.

Highlight the Snapshot Setup menu and press ENTER.

Use the ▲▼ cursor keys to access the following pages.

- MIDI Recall
- Write Protect
- Snap to Time
- Loc to Snap
- Sort by Time

MIDI Recall

The Snapshot Setup MIDI Recall ON/OFF switch does not function as a global 'enable MIDI recall of stored snapshots' switch. Instead, when set to ON, a subsequently stored snapshot will be saved with MIDI Recall by assigned MIDI Program Change enabled. When MIDI Recall is set to OFF, subsequently stored snapshots will be saved with MIDI Recall by assigned MIDI Program Change disabled. This setting also affects whether a User Setup is stored with MIDI Recall ON or OFF (see **Section 3J Part 5.19**).

For more information on recall of Snapshots from MIDI Program Change messages, consult **Section 4 Part 1**.

Use the PARAM encoder to set MIDI Recall by assigned MIDI Program Change to ON or OFF.

```
<Snapshot Setup>
MIDI Recall:  ON
```

This function is not to be confused with the recall of Snapshots against MTC (MIDI Timecode). For a full explanation of this function see the '**Snap to Time**' function below.

Press the ▼ cursor key to set the Write Protect parameters.

Write Protect

In the same way as the Snapshot Setup MIDI Recall switch described above, when set to ON the Write Protect function only has effect on subsequently stored Snapshots.

For more information on how a Snapshot operates when Write Protect is enabled see **Section 3G**.

Using the PARAM encoder set Snapshot Write Protect to ON or OFF, as required.

```
<Snapshot Setup>
Write Prot:  ON
```

Press the ▼ cursor key to set how Snapshots respond to Timecode.

Snap to Time

This function allows Snapshots to be recalled against incoming MTC/LTC or internally generated Timecode.

Unlike the MIDI Recall and Write Protect settings, 'Snap to Time' is a global setting and takes effect immediately when set to ON.

If Snap to Time is set to ON, Snapshots that have been assigned a Timecode address will be recalled against incoming MTC or LTC Timecode. See **Section 3G** for more information about assigning Timecode addresses to Snapshots. In this way, incoming Timecode from a Tape Machine can trigger the recall of Snapshots stored within the 328XD, enabling Timecode Snapshot automation.

If OFF is selected then Snapshots with pre-programmed Timecode addresses will not be recalled against incoming Timecode.

Use the PARAM encoder to switch Snap to Time ON or OFF, as required.

```
<Snapshot Setup>
Snap to Time: ON
```

Press the ▼ cursor key to set the Loc to Snap option.

Loc to Snap

With this function switched ON, when a Snapshot is manually recalled using the RECALL button in the SNAPSHOT CONTROL panel, the associated Timecode address (if set) will be transmitted as an MMC command from the MIDI Out port. In this way a connected Tape Machine can automatically locate to the point in a recording with which the Snapshot is associated.

See **Section 3G** for more information about assigning Timecode addresses to Snapshots.

Use the PARAM encoder to set Loc to Snap ON or OFF.

```
<Snapshot Setup>
Loc to Snap :OFF
```

Press the ▼ cursor key to set how the Snapshot list is displayed.

Sort by Time

If this function is set to ON the currently stored Snapshots will be arranged in ascending order according to their respective associated timecode values (if set), and not according to their numerical positions.



Viewing Snapshots by assigned timecode address is particularly useful when wishing to automate Snapshots against incoming or internally generated timecode. For more information on timecode based Snapshot automation see **Section 4 Part 1**.

Switching this function to OFF will return the list of currently stored Snapshots to being displayed by their previous numerical positions.

Press the SNAPSHOT button so that the LCD displays the list of Snapshots to see the effect of this setting.

Use the PARAM encoder to set Sort by Time to On or OFF, as required.

```
<Snapshot Setup>
Sort by Time: OFF
```

Press EXIT to return to the main menu.

5.16 - AUTOMATION SETUP

NOTE: Please refer to **Section 4 - Automation Techniques** for more detailed information.

This menu configures how the 328XD sends and receives Dynamic Automation MIDI data for recording to and playback from a MIDI recording device, allowing full automation of every setting on the console.

Another automation mode offered by the 328XD is automation of the MIDI Controller Bank, a fourth bank offering control of audio sequencer mixers and other external MIDI devices from the 328XD. This bank has no control of internal 328XD parameters. Please note that it is important to separate in your mind this bank from the 328XD 1-16, 17-32 and Master Banks. For more information on the MIDI Controller Bank, see **Section 3J Part 5.3**.

Press ENTER to enter the Automation Setup menu.

There are two pages in the Automation setup menu which can be selected between using the ▲▼ cursor keys:

- **MIDI Dynauto**
- **Mode**

The READ ONLY, WRITE ONLY, UPDATE and READ/WRITE automation modes allow for automation of the 328XD's internal parameters, such as fader levels, pan positions, EQ settings, routing and Dynamics and FX parameters.

When in the CONTROLLER automation mode, automation of all 'internal' parameters is disabled and the user definable MIDI Controller Bank becomes an automatable surface. This mode can be used if you wish to configure the 328XD's MIDI Controller Bank to be an automatable control surface for a sequencer package.

MIDI Dynauto

When MIDI Dynauto is set to ON, the 328XD will respond to and transmit MIDI automation data, as set in the Mode menu (see next page)

When set to OFF the 328XD will not transmit or respond to incoming MIDI automation data, regardless of the Automation Mode set on next page.

Use the PARAM encoder to set MIDI Dynauto to ON or OFF.

```
<Automation Set>
MIDI Dynauto: ON
```

Press ▼ cursor key to set the Automation Mode.

Mode

Use the PARAM encoder to select the different modes:

- **READ ONLY** (328XD internal parameter automation mode)

```
<Automation Set>
Mode: READ ONLY
```

In READ ONLY mode the 328XD will respond to incoming automation data being sent from a MIDI recording device, but will not transmit any automation data from the MIDI Out port.

This mode is useful for playing back an automated mix for final mix down without the danger of any new data being accidentally recorded.

- **WRITE ONLY** (328XD internal parameter automation mode)

```
<Automation Set>
Mode: WRITE ONLY
```

In WRITE ONLY mode the 328XD will only transmit automation data from the MIDI Out port. It will not respond to automation data coming back from a MIDI recording device.

This mode is useful for applications where more than one version of the same event might need to be recorded for later comparison e.g. the stereo 'fade-out' at the end of a song. A number of different 'takes' of the stereo fade-out could be quickly recorded to separate tracks of a MIDI recorder without any prerecorded versions being sent back to the 328XD.

- **UPDATE** (328XD internal parameter automation mode)

```
<Automation Set>
Mode: UPDATE
```

UPDATE mode sets all controls to act as in READ ONLY mode, described above. Adjusting any console control will instantly put that control individually into WRITE ONLY mode (see above), ignoring any incoming MIDI automation data specific to it. Any unadjusted parameters continue to respond to incoming MIDI data at the MIDI In port.

Any adjusted controls will not enter a 'read' state mode until READ ONLY or READ/WRITE mode is reselected.

While UPDATE mode is selected, the data received at the MIDI In port is duplicated at the MIDI Out port, although data relating to 'updated' controls is replaced with the new automation data. In this way, UPDATE mode allows on the fly alteration of previously recorded MIDI data.

As incoming data is merged with the outgoing data, to avoid any duplication of data any section of an automation take that is updated should be deleted and replaced with the updated automation pass.

NOTE: When in UPDATE mode you should not attempt to grab a fader and adjust it when the motor is on. Instead you should put the E-Strip into LEVEL mode and automate using the rotary encoders.

- **READ/WRITE** (328XD internal parameter automation mode)

```
<Automation Set>
Mode: READ/WRITE
```

Selecting READ/WRITE will put the console into a true bi-directional automation mode.



When the LCD is in VALUE mode, pressing the ◀ and ▶ FUNCTION keys simultaneously will toggle the automation mode between READ ONLY and READ/WRITE. As 328XD automation employs the use of a number of MIDI Continuous Controllers, you should be careful not to alter the setup of any other connected MIDI equipment by moving a 328XD fader, for example. Having recorded an automation take in READ/WRITE mode into a sequencer, you can put the desk quickly and easily back into READ ONLY mode to ensure that MIDI data is received but not transmitted.

Automation data is transmitted from the MIDI Out port and the console is set to respond to data received at the MIDI In port.

- **CONTROLLER** (328XD MIDI Controller Bank automation mode)

```
<Automation Set>
Mode: CONTROLLER
```

Select CONTROLLER mode if you wish to disable automation of 328XD 'internal' parameters and instead enable automation of the MIDI Controller Bank for bi-directional communication with the audio mixer within a software sequencer package, for example.

Use the PARAM encoder to set the Automation Mode and press EXIT/NO to return to the main menu.

5.17 - CHAN COPY SETUP

The Channel Copy Setup menu is used to set up which channel settings will be duplicated when copying settings from one channel to another.

Highlight the Channel Copy Setup menu and press ENTER.

The following pages can be accessed using the ▲▼ cursor keys, and selected ON/OFF using the PARAM encoder.

- **Fader** Fader position copy status (default ON)
- **EQ :** EQ settings copy status (default ON)
- **Aux/FX** Aux send 1-4 and FX send 1-2 settings copy status (default ON)
- **Group/Mix** Group and MIX routing selection copy status (default ON)
- **Dynamics** Dynamics settings copy status (default OFF)
- **Pan & Phase** Pan position and phase status copy status (default OFF)

Note that Tape Trims are not copied with Channel Copy (See **Section 3J Part 5.7**).

Copying Channels

As an example lets assume we want to copy the settings we have made to a backing vocalist on Channel 5 to three other backing vocalists on Channels 6, 7 and 8.

- Press the MENU button and using the ▲▼ cursor keys or the PARAM encoder, select the **Chan Copy Setup** menu.
- Press ENTER and use the ▲▼ cursor keys select the channel settings and the PARAM encoder to set them to ON (will be copied) or OFF (will not be copied).

```
< Copy Setup >
Copy Fader : ON
```

- Hold down the channel SELECT button for Analogue Input Channel 5 (backing vocalist 1).
- Now press the channel SELECT buttons for the channels to which you wish to copy the settings i.e. Analogue Input Channel 6, 7 and 8 (backing vocalists 2, 3 and 4)

While still holding the source channel SELECT switch, you can deselect copied channels to return them to their previous, uncopied state. Once the SELECT switch for the source channel has been released, however, channel parameters are copied destructively.

Pressing UNDO will clear a Channel Copy.

Press EXIT to return to the main menu.

5.18 - CHAN LINK SETUP

The Channel Link Setup menu is used to configure which channel settings will be duplicated when linking two channels together. This mode is most commonly used for creating stereo pairs of channels.

NOTE: Only adjacent ODD/EVEN numbered channels can be linked i.e. 1-2, 3-4, 5-6 etc. Settings will always be copied from the ODD numbered (left hand) channel.

NOTE: Alterations made to the Chan Link Setup menu will have effect only on subsequently linked channels.

Highlight the Channel Link Setup menu and press ENTER.

The following pages can be accessed using the ▲▼ cursor keys, and selected ON/OFF using the PARAM encoder.

- **Fader** Fader position link status (default ON)
- **EQ** EQ settings link status (default ON)
- **Aux/FX** Aux send 1-4 and FX send 1-2 settings link status (default ON)
- **Group/Mix** Group and MIX routing selection link status (default ON)
- **Dynamics** Dynamics settings link status (default ON)
- **Pan & Phase** Pan position and phase status link status (default OFF)

Linking Channels

As an example lets assume we want to link two over head microphones on a drum kit, so that they operate as a stereo pair.

We will assume that the left side overhead microphone is on Channel 1 and the right side over head microphone on Channel 2.

- Press and hold the CHANNEL/GROUP LINK button and then press the channel SELECT button for either Analogue Input Channel 1 or Channel 2.
- Now release the channel SELECT and CHANNEL/GROUP LINK switches. The parameters set in the Chan Link Setup menu will now be linked for Analogue Input Channels 1 and 2. Adjusting a parameter on one of the linked channels will automatically adjust the same parameter to the same value for the other channel.

Note that the current parameter settings of the odd channel which are set to be linked (see below) will be instantly copied to the even channel of the stereo linked pair.

To configure which channel parameters will be linked, press the MENU button and using the ▲▼ cursor keys or the PARAM encoder, select the **Chan Link Setup** menu.

Press ENTER and use the ▲▼ cursor keys to select the channel settings and the PARAM encoder to set them to ON (will be copied) or OFF (will not be copied).

```
< Link Setup >
Link Fader : ON
```



Generally when linking adjacent channels to make a stereo pair, it is preferable to leave the 'Pan & Phase' setting to the default state of OFF to maintain the stereo position of the 2 channels that are being linked.

NOTE: When faders are linked, you should move only one of the pair simultaneously. The 'client' fader will follow. Any determinable lag in the client fader is not present at audio level.

Press EXIT to return to the main menu.

5.19 - USER SETUPS

The 328XD has 27 User Setup memory locations. A User Setup is similar to a Snapshot in that it stores console parameters, although the User Setup will also store the majority of menu settings. Recall of a User Setup will therefore restore all aspects of the console at the point it was stored, including Wordclock and Tape Port configuration. 26 User Setup locations can be stored to, User Setup #27 being the non-erasable Factory Default settings. Recalling the Factory Default settings from this menu has the same function of the soft reset available on boot up (see **Section 3J Part 6**).

Unlike Snapshots, a User Setup cannot be assigned a Timecode address for recall against Timecode or for transmitting a locate point to a Tape Machine on recall. Write Protect is always enabled.

User Setups 1-26 can be recalled remotely with the use of MIDI Program Changes.

The On Loss and Default settings found in the Clock Source Select menu are not stored in a User Setup.

Storing User Setups

User Setups are stored with the Snapshot STORE button when the User Setups menu is active in the LCD. It is consequently not possible to store to a Snapshot location when the LCD is displaying the list of User Setups.

- Press the MENU button.
- Use the ▲▼ cursor keys or the PARAM encoder to scroll through the MENU options until you reach User Setups.
- Press ENTER to enter the User Setups library.
- Use the ▲▼ cursor keys or the PARAM encoder to select an empty library location.

```
1:<Empty>
2:<Empty>
```

- Press the STORE button in the SNAPSHOT CONTROL panel to store the User Setup.

If you are overwriting a User Setup, the LCD will display a prompt for confirmation.

```
Confirm Store ?
SETUP#01
```

Press YES to confirm.

Recalling User Setups

User Setups are recalled with the Snapshot RECALL button when the User Setups menu is active in the LCD. Snapshot recall is consequently disabled when the LCD is displaying the list of User Setups.

- Press the MENU button.
- Use the ▲▼ cursor keys or the PARAM encoder to scroll through the MENU options until you reach User Setups.
- Press ENTER to enter the User Setups library.
- Use the ▲▼ cursor keys or the PARAM encoder to select a User Setup that you would like to recall.

Press the RECALL button in the SNAPSHOTS panel to recall the User Setup. The LCD will indicate that the User Setup has been recalled.

If MIDI Recall is set to ON for the User Setup, the appropriate MIDI Program Change message will be transmitted from the MIDI Out port when the User Setup is recalled manually.

Recalling the Factory Default settings

When recalled, User Setup #27 will restore the console to its Factory Default configuration, without deleting any stored Snapshots, Presets or User Setups. Recalling the Factory Default settings in this way is identical to the soft reset on booting (see **Section 3J Part 6**). Returning the console to its factory default state by recalling User Setup #27 will not erase currently stored Snapshots, User Setups or Presets.

- Press the MENU button.
- Use the ▲▼ cursor keys or the PARAM encoder to scroll through the MENU options until you reach User Setups.
- Press ENTER to enter the User Setups library.
- Use the ▲▼ cursor keys or the PARAM encoder to select User Setup #27: Factory Defaults.

```
26:<Empty>
27:Factory Def
```

Press the RECALL button in the SNAPSHOTS panel to recall the Factory Default settings.

```
Recalled Factory
defaults
```

The LCD will indicate that the User Setup has been recalled.

A MIDI Program Change is not transmitted from the MIDI Out port when User Setup #27: Factory Defaults is recalled manually. Similarly User Setup #27 cannot be remotely recalled from a MIDI Program Change message received at the MIDI In port. Instead a MIDI System Exclusive message may be used (see **Appendix A-3**).

Naming User Setups

- Press the MENU button.
- Use the ▲▼ cursor keys or the PARAM encoder to scroll through the MENU options until you reach User Setups.
- Press ENTER.

- Use the ▲▼ cursor keys or the PARAM encoder to select a User Setup that you would like to name.
- Press the ENTER button and the LCD display will read

```

SETUP#01
ID :SETUP#01

```

- You may now enter a 12 character name using the ◀▶ cursor keys to navigate and the PARAM encoder to select the letter or number you want to use.
- When you are finished, press the ENTER key to store the name.

Characters can be deleted in the following ways:

- To delete the selected character and move the cursor one character to the right, press and hold the ◀ cursor key and press the ▶ cursor key once for each character to be deleted.
- To delete the selected character and move the cursor one character to the left, press and hold the ▶ cursor key and press the ◀ cursor key once for each character to be deleted.

Enabling User Setup MIDI Recall

User Setup locations are assigned MIDI Program Changes as follows:

User Setup No.	MIDI Program Change
1	100 (64H)
2	101 (65H)
...	...
25	124 (7CH)
26	125 (7DH)
27	Not recallable

With MIDI Recall set to ON, the User Setup will transmit the MIDI Program Change from the MIDI Out port when manually recalled. The User Setup can also be remotely recalled when its associated MIDI Program Change is received at the MIDI In port.

To set MIDI Recall ON or OFF for a User Setup,

- Press the MENU button.
- Use the ▲▼ cursor keys or the PARAM encoder to scroll through the MENU options until you reach User Setups.
- Press ENTER to enter the User Setups library.
- Use the ▲▼ cursor keys or the PARAM encoder to select the User Setup and press ENTER to edit the parameters.
- Use the ▲▼ cursor keys to select the MIDI Recall page:

```

SETUP#01
MIDI Recall: ON

```

- Use the PARAM encoder to set MIDI Recall to ON or OFF

NOTE: User Setup #27, the Factory Default Settings can be recalled with an appropriate MIDI System Exclusive message (See **Appendix A3**).

User Setup Scope

In addition to the parameters stored within a Snapshot (see **Section 3C**) the following menu based settings are stored within a User Setup:

User Options menu:

- MIDI Channel
- OMNI Mode status
- Device ID
- Sysex Rx status
- Sysex Tx status
- Solo Channel Select status
- Solo AutoCancel status
- Bank -> Select status
- Flip Bank 1 status
- Flip Bank 2 status
- PLL Mode
- Wordclock Term
- Phase
- Direct Out mode
- LCD Contrast
- LED Brightness
- Oscillator Destination

Tape Port Select menu:

- Bank source (channels 17-24)
- Wordlength (channels 17-24)
- S/Rate Flag (channels 17-24)
- Bank source (channels 25-32)
- Wordlength (channels 25-32)
- S/Rate Flag (channels 25-32)
- Auxiliary Optical Output source
- Auxiliary Optical Output wordlength

S/PDIF Input setup menu:

- S/PDIF Input destination

AES/EBU Input setup menu:

- AES/EBU Input destination

S/PDIF Output setup menu:

- S/PDIF Output source
- S/PDIF Output wordlength
- S/PDIF Output status bits

AES/EBU Output setup menu:

- AES/EBU Output source
- AES/EBU Output wordlength
- AES/EBU Output status bits

Tape machine setup:

- Tape Machine Type
- Timecode Source
- Timecode status
- MIDI Mode
- MIDI Note On commands
- Timecode Frame Rate
- Locate 1 Timecode address
- Locate 2 Timecode address
- Offset value

Clock Source Select:

- Clock source
- External Sample Rate
- Clock loss action

Snapshot Setup:

- MIDI Recall status
- Write Protect status
- Snapshot to Time status
- Locate to Snap status
- Sort by Time status

Automation Setup:

- MIDI Dynauto status
- Automation mode

Channel Copy Setup:

- Copy Fader status
- Copy EQ status
- Copy Auxes status
- Copy Group / Mix routing status
- Copy Dynamics status
- Copy Pan & Phase status

Channel Link Setup:

- Link Fader status
- Link EQ status
- Link Auxes status
- Link Group / Mix routing status
- Link Dynamics status
- Link Pan & Phase status

The above settings are also retained at power down.

NOTE: As with Snapshots, Solo switch status, Solo mode (AFL/PFL) and position of the Solo trim fader are not stored and recalled at User Setup level. In addition, monitor path, DYNAMICS ON METERS, DYNAMICS ON E-STRIP, and BANK STRIP switch statuses are not stored.