DYNACORD

Reference
– Manual

Advanced Digital Drums & Sampler

ADD-two

Introduction

Dear customer,

We would like to take this opportunity to thank you for the confidence you have placed in our firm and in our product, and we hope that it will be of tremendous use to you. In buying this equipment, you have acquired a product which is both extremely valuable and highly developed in view of the technical situation today. The product reflects the experience DYNACORD has accumulated over many years in the field of electronic music. However, to limit the ADD-two with all its complex functions to an acceptable size, DYNACORD has developed a special custom-built IC, the so called "DYNACHIP".

This chip is responsible for the complete processing and management of the sound data and is therefore the "heart" of this unit. In spite of the microprocessor and the DYNACHIP, an instruction manual is still necessary, and so we would like to give you just a little bit of useful advice for using this equipment and the instruction manual.

We all know what usually happens with instruction manuals. You unpack the equipment, plug it in, because you are curious to see whether it fulfills all your expectations, you begin to turn all the knobs and you get a little depressed if the first result is not satisfactory. After trying in vain for some time, you suddenly remember the instruction manual. This is taken out of the bottom of the box and, lo and behold, it contains the answer to the problem.

So that this does not happen to you, we would like to urge you to at least read the short guide before you turn on the equipment, so that you can get a general view of its functions and use. The first chapter contains useful tips about damage during transport, the warranty, mains voltage, precaution instructions for dealing with floppy disks and disk drives. In the second chapter you will find a short description of the equipment with its most important features and functions. In chapter three you will then find a short description of all connections and the control elements. For amateur musicians, and even for professionals, there are many useful tips in chapter four on the connection of the unit to your existing equipment. In chapter five you will learn something about playing with PRESET SOUNDS. If you then want to go into more detail, the following chapters contain detailed descriptions of all commands and features. The ADD-two short guide puts a valuable aid at your disposal which contains specially worked-out and practice-related examples. In the appendix you will find

the specifications, MIDI- and SCSI-specifications and the program data format. And to conclude this introduction let us point out that despite it having been revised several times and despite checking all details extremely carefully, some mistakes may be unavoidable and we cannot be held responsible for possible misinterpretations which occur because of this instruction manual.

Straubing, June 10, 1989

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After unpacking

Please check that your unit has not been damaged during transport. Despite correct packing, the equipment might have been damaged on its way to you, because of inappropriate handling. If you do discover any transportation damage, please report it to the firm which delivered the equipment to you. Complaints made later might not necessarily be considered!

Next, using the following list, check whether the standard accessories in the box are complete.

The complete set should include:

1 unit ADD-two

1 detachable power cord

1 set of demo sound disks (2 disks)

1 reference manual

1 short guide

1 set warranty papers

Transport and handling

In buying the ADD-two you have acquired a piece of equipment based on microcomputer technology in which a lot of know-how and technology has been invested. Analog and digital technology have been combined in this equipment according to the latest technical criteria.

We should like to recommend, that you treat this piece of equipment very carefully like any other High-Tech product. The best thing would be to treat it like a very valuable acoustic instrument.

The disk drive and controls can be damaged through vibration and knocks. Knocks could also cause the loosening of plug connections and screws which could then lead to malfunctions inside the unit.

Please do not use the equipment in extremely damp conditions or under extreme temperatures.

When the equipment is in use, place it on a stable surface and make sure that it cannot slip. Do not place drinks on the equipment. Liquid could get into the equipment and could cause serious malfunctions in the disk drive or inside the equipment.

The ADD-two is meant to be mounted in a rack and it is certainly advantageous to make use of this possibility, because the equipment then withstands the influences of ambient conditions.

Mains connection 90 - 250 VAC

Before you connect the equipment to the mains, please make sure that the AC outlet is in order according to the guidelines of the local safety regulations. It is your responsibility that the equipment is earthed and installed properly. DYNACORD is not responsible for any defects or damage caused by defective power cables or by improper earthing.

If you cannot check this yourself, have this done by an authorized specialist.

Important:

Mains voltage adaption is not necessary because the unit adjusts to the mains voltage from 90 through 250 VAC itself.

Please note that due to the automatic detection of the actual mains voltage a delayed switching on may occur on pushing the power button, and depending on the actual mains voltage involved, may lead to delays of up to three seconds.

Mains

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very loudly because of unskillful or multiple earthing. This humming is caused by equalizing currents, which flow on the shields of the AF-lines. The amount of these equalizing currents depends on the potential differences of the individual ground connections. Especially old electric installations are susceptible to hum problems.

Many musicians try to solve this problem by cutting off the earthing contact on the plug of the equipment in question. Defective equipment can place the hole system under mains voltage and this can cause highly dangerous conditions.

At this point we must warn you expressly not to use this common method!

For this reason DYNACORD has provided every unit with a ground-lift-switch, which does not entail the disadvantage of the above-mentioned method. Here the earthed conductor stays on the chassis as before, but the circuit ground is separated from the chassis.

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In certain cases however, a humming noise can still occur. For instance this would be the case, if you connect the inputs and outputs of the ADD-two via the same mixing console to be able to sample and monitor simultaneously. This is a classical case of hum loop which can be avoided, if you simply use headphones for monitoring.

If you do nevertheless want to monitor via the system, you would then have to cut off the shield on one side of the input- or output-cable. However the cable on which the shield is cut off should be clearly marked. You could cause unnecessary problems if you use such a cable in another part of your system at any time.

Diskette care and handling information

In the following paragraph you will be given a short introduction about dealing with, storage and treatment of floppy disks.

Please read this paragraph extremely carefully because if you take the following advice you will avoid many a problem.

A basic rule to follow is that the disk drive in the ADD-two needs 3.5" High Density micro-floppy disks. We expressly point out that no DS/DD disks can be used, because HD-disks give a higher density and contain an additional cut out in the casing, which enables the disk drive to recognize the type of disk.

However, to be able to save any sound data on disks, these must be formatted beforehand. This formatting enables the microprocessor to recognize what is on the disk and where.

ATTENTION! Before you format a disk, make sure again, that an empty disk or one which is to be erased is in the disk drive, because the formatting process will erase all data on the disk irretrievably.

The formatting of a disk is described in chapter IX in detail.

Floppy disks contain a magnetizable plastic foil. For this reason it is very important to keep diskettes which are already recorded away from strong magnetic fields, which are, for example, produced by loudspeakers, transformers, motors and TV sets, in order to avoid accidental erasure.

For the storage of such disks, diskette boxes can be obtained in special shops for computer accessories. These boxes however do not protect the diskettes from magnetic fields. In these boxes the diskettes can be arranged clearly, kept dry and away from dust. If you take a closer look at a disk, you will notice a U- shaped metal part on one side of the disk,

which serves to protect it from dust and to stop the magnetic foil underneath being touched. Please avoid pushing this automatic shutter unnecessarily to one side because it shortens the life of the disk.

Check also that when the unit is switched off, that the disk drive is not in operation (drive LED is off).

When saving or loading a disk, please remember that it must not be taken out of the drive until the red LED on the drive has gone off.

To protect a recorded disk, put the Write Protect Tab in position "Read Only".

IMPORTANT: Please always make a backup copy of every disk. In this way you avoid destroying the saved sounds and samples by accident.

Description of a Floppy disk

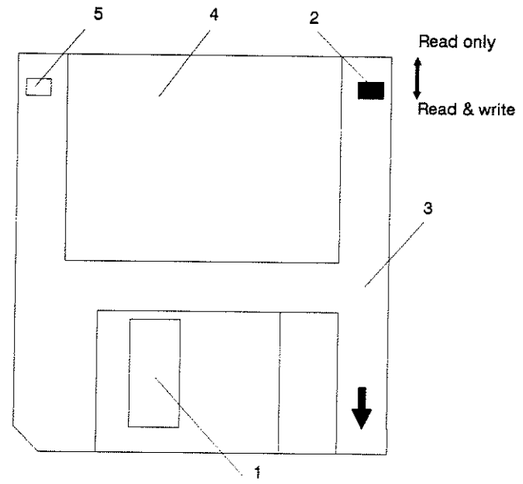

Abb. 1 - 3.5" High Density Diskette

1. Read/Write window
2. Write Protect Tab
   open: read only
   closed: read and write
3. Protective plastic carrier
4. Label
5. Additional hole at High Density disks

Disk Drive

The Disk Drive built in the ADD-two is a precision device and must not be exposed to knocks or shocks. Avoid contact with liquid and dust because otherwise the safe functioning of the ADD-two is no longer guaranteed.

Cleaning

To clean the unit it is best to use a soft cloth and a neutral detergent.

Solvents such as nitro diluter should not be used under any circumstances because it may corrode the varnish of the unit.

Warranty

SERVICE AND MAINTENANCE

DYNACORD products are highquality products. Extensive and strict inspections of all components received ensure perfect and consistent quality of all parts and final product.

Prior to leaving our factory, the units are subjected to an endurance test for several hours. Within the scope of our general conditions of sale we are garanting a warranty of 24 months on our products. This warranty does not apply to defects or damages caused by unauthorized repair or to damages due to misuse.

If the unit becomes defective, please apply to the nearest qualified service shop or to your dealer or importer.

"Funkschutzzeugnis"

"VDE"- regulations

This product is manufactured to comply with the VDE rules of "VDE 0860".

BESCHEINIGUNG DES HERSTELLERS

Hiermit wird bescheinigt, daß das Gerät

ADD-two

in Übereinstimmung mit den Bestimmungen der VDE 0871 B, Amtsblatt 163/1984, Vfg. 1046 funkentstört ist.

Der Deutschen Bundespost wurde das Inverkehrbringen angezeigt und die Berechtigung zur Überprüfung der Serie auf Einhaltung der Bestimmungen eingeräumt.

DYNACORD ELECTRONIC-UND GERÄTEBAU GMBH&CO.KG

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Short description of the unit

Main features

- Mono-Sampling, Inputs with volume control and gain switching, 22.05 or 44.1 kHz sampling rate
- Memory expandable up to 4 MWords (= 8 MByte)
- Playback resolution 20 bit
- 16 independent voices
- 2-times oversampling (88.2kHz playback sample rate)
- Dynamic voice allocation
- 8 trigger inputs
- Sound fusion
- Crossfading
- Loop-smoothing
- Built-in digital mixing desk
- Disk Drive for 2 MByte unformatted
- Stereo output
- 6 AUX outputs
- Stereo effect return with adjustable level
- Jack for headphones
- MIDI IN/THRU/OUT
- SCSI-Interface
- Automatic switching of mains voltage between 90 and 250 VAC
- Disks from other products are readable

The ADD-two is a drum sampler with which any natural sounds can be recorded, edited, played back and saved in CD-quality. This equipment has been installed in an 19" chassis, so that it can stand up to be taken on the road. At the front on the left hand side is the sampling input jack with the corresponding volume control and a built-in push-pull switch for the best possible dynamic range of the input amplifier, and the headphones jack with its volume control. Above a 3.5" disk drive which can store 2 MBytes (unformatted), which serves for saving and loading all data belonging to a sample, drum or mix as well as the global parameters.

A very important feature of the ADD-two is that it can be used to read floppy disks from other manufacturers.

At the front on the right hand side is the control field with integrated 2 x 16 digit LCD-display and a stepped encoder for changing the parameters. In order to adapt the display to various viewing angles there is an additional contrast control right next to the display as well.

At the rear panel is the SCSI-port (Small Computer System Interface) via which, for example, a hard disk, a computer, or a CD-ROM can be connected. This provides a much wider storage capacity or sound library. For looping in of an effect unit (like DRP 20), a stereo return with a corresponding volume control at the back is also provided. Now a standard feature of any professional equipment, a MIDI-Interface with MIDI IN/THRU/OUT is, of course, also provided.

Onto the 8 trigger inputs pads, trigger microphones etc. can be connected, whose levels can be matched in a wide range with a level switch (LO/HI) and a sensitivity control (SENS).

Furthermore two foot pedal connectors (PEDAL 1 and 2) and a REMOTE connector are available for connection of optional units (like REMOTE PAD, FR5).

The ADD-two actually consists of two units: on the one hand it includes a particularly valuable sampler, on the other hand an eight channel digital mixing console. The most significant special features of this sampler are firstly, the DYNAMIC VOICE ALLOCATION, which always provides the maximum number of possible channels using an intelligent selection algorithm controlled by a microprocessor, and secondly by avoiding the so called "machine gun effect" when repeating the same sound quickly because each sound can fade without interruption. You can choose between two different sampling rates (22.05 kHz; 44.1 kHz) with which you can adapt the actual storage capacity individually to the requirements of the sound to be sampled. The basic model of the ADD-two includes a storage capacity of 1 MWord (= 2MByte), which can be increased up to 4 MWords (= 8 MBytes) using the DRAM extension cards. The resolution of the built-in A/D-converter is 16 bits, which corresponds to the sound quality of a CD-player.

To stop the reduction of the resolution through the playback of the 16 independent voices, a custom-built IC, the so-called "DYNACHIP," was developed for this purpose, which includes an internal calculation power of 24 bits in order to show possible overloading, and 20 bit D/A-converters, to guarantee a resolution of 16 bits per channel when 16 channels are being played at the same time. The 2-times oversampling means that you can transpose a sound being sampled with maximum sampling rate up 3 octaves.

THE CONTROLS

External design

The ADD-two is a 19" model with two height units (HU); it can be used standing alone or built into a 19" standard rack. When buying a rack, check that the bending moment exerted on the front panel is not too high. For this reason, the ADD-two should be supported at the back using suitable mounting hardware or should be installed on runners. Please also ensure that the ventilation is sufficient.

The front panel

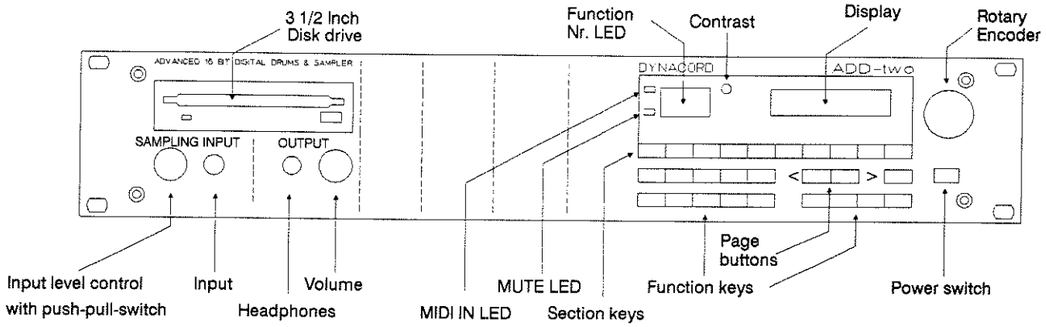


Abb. 1 - ADD-two front panel

Stepped Encoder

The stepped encoder is used to adjust the various parameters for a channel. If the button FUNCTION/VALUE is pressed at the same time, the function of the display is switched to the next position.

The Display

This two line alpha-numerical Liquid Crystal display (LCD) can show 16 letters, figures or symbols per line. The contrast can be adjusted with the control which is on the left. Because it is also lit, the display can be seen well in the dark.

The MUTE-LED

This light emitting diode shows that the outputs AUX 1 to 6 and the master outputs left and right are muted while the signal on the PHONES jack remains. This function is excellent for "live" pre listening of chosen programs without the signal being heard over the PA.

The Keypad

The upper-most row of the keypad is for choosing the individual sections. Underneath are the function keys with which the functions appearing on the 2-digit seven segment display can be selected. If the button FUNCTION/VALUE is pressed at the same time, the value of the corresponding parameter can be entered and read out on the LCD directly.

On the right hand side next to the function keys are the control buttons, with which the functions required can be executed.

Input level control with push-pull-switch

This control is to adapt the level of the sound source to the ADD-two as well as possible. Using the push-pull-switch a rough preselection of the expected signal level for the sample- recording can be made.

Sampling Input

The sound source to be sample-recorded can be connected on these inputs via a 1/4" 2-conductor plug.

For sampling of natural sounds use only high quality microphones and do the sampling the same way you would make a good tape recording.

Volume control

This volume control determines the amplitude of the output signal on MASTER L/R and also controls the volume of the PHONES output. This control does not affect the AUX 1-6 outputs.

Phones

Stereo-headphones can be connected onto this 1/4" stereo jack. The left channel is on the tip of the plug, the right channel on the ring and the sleeve is the common ground. Please do not use a 2-conductor (MONO) plug, because otherwise the headphone output amplifier could be damaged by being shorted through the longer shaft of the mono plug.

The power switch

This is used to switch the unit on and off.

The equipment recognizes automatically mains voltages between 90 and 250 VAC and adjusts itself accordingly.

Rear panel

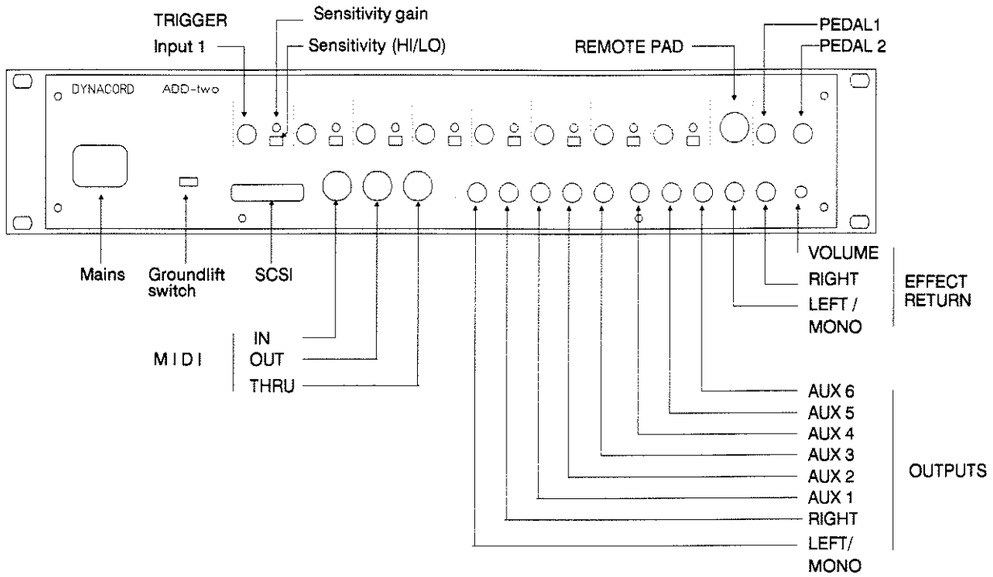


Abb. 2 - ADD-two rear panel

EFFECT RETURN control (stereo)

This control adjusts the effect portion which is mixed with the original signal

EFFECT RETURN L/R/MONO

A stereo return signal coming from a reverb unit or echo chamber can be fed in via these 1/4" jacks. If only a mono signal is plugged into the left input, the left input signal will return to both the left and right channels.

Audio OUTPUTS AUX 1 through 6

The signals coming from the built-in digital mixer are fed to these 1/4" mono jacks. The signal is unbalanced; the maximum output level is +6 dBu (1.55 V); the output impedance is 1 kOhm. This means that it is no problem at all to connect to almost all line inputs of subsequent mixing consoles, tape recorders or signal processors and similar equipment.

Audio OUTPUTS MASTER L/R/MONO

These 1/4" mono jacks provide the MASTER mix signals left and right (adjusted through parameter PAN) and the effect returns. If only one of the two jacks is connected, the signal will be played back in mono. The signal is unbalanced; the maximum output level is +6 dBu (1.55 V); the output impedance is 1 kOhm. The volume of the signal is determined by the control OUTPUT VOLUME on the front.

MIDI connectors IN-OUT-THRU

MIDI equipment like master-keyboards, sequencers etc. can be connected to these 5-conductor DIN-jacks. These jacks are wired according to international MIDI norm. You will find more details about this in the chapter XIII (MIDI).

The ground lift switch CIRCUIT ⊥ TO CHASSIS

With this switch you can separate the circuit ground from the chassis ground (position "UNGROUNDED"). Especially when mounted into 19" racks with metal runners strange hum loops often occur (via the conducting front panels and AF-cables). But these can be prevented without internal changes in the unit by using this switch. If the unit is not mounted in a rack or is mounted in an insulated rack, the switch should be put in the position "GROUNDED", because otherwise humming and other interference may occur.

Mains supply

Here, the power cord, delivered with the equipment, can be plugged in and connected to a grounded AC outlet.

PAD 1 (to PAD 8)

On these 1/4" jacks INPUT the drum pads or the trigger microphones etc. can be connected, with which you trigger the instruments, which are assigned to the inputs via the program.

The trigger inputs have a dynamic response, that means that the drum sound will vary according to the type and parameter assignment to the velocity. The sensitivity can be adapted by the LO/HI switch and the trim control SENS.

REMOTE

Here you can put in the optinal REMOTE Pad, which allows a switching up and down of the program by the drummer with the stick or so.

PEDAL 1 (PEDAL 2)

Here the user can plug in the optinal foot control FR5.

Connection with your system

This chapter describes the basic connections of the ADD-two with your existing Audio system and with other equipment.

The Audio Outputs

The ADD-two has 9 Audio outputs all together. These are divided into 3 main groups:

a) Audio Outputs AUX 1 through 6

Six 1/4" mono jacks are provided onto which effect units or an additional mixing console can be connected. The signal amplitudes of these outputs are programmed via the controls SEND 1 and SEND 2 in the 16 built-in channels.

b) Audio Outputs MASTER R/L/MONO

There is a choice between three 1/4" mono jacks on which the MASTER signal can be taken either in stereo (RIGHT-LEFT) or without PAN as a MONO signal. The stereo image is determined by the programming of the parameter PAN while the volume depends on the programming of the parameter VOLUME and on the position of the control OUTPUT VOLUME together. Here for example a PA mixing console can be connected

whereby only two channels or a stereo return need to be used in the console for the complete drum mixdown.

c) Audio output PHONES

A 1/4" stereo jack is provided on the front panel of the ADD-two for connection of a stereo headphone and to listen to the ADD-two in stereo. The stereo image is determined by the programming of the parameter PAN while the volume depends on the programming of the parameter VOLUME and on the position of the control OUTPUT VOLUME together. The impedance of the stereo headphone can be from 8 to 2000 Ohms. For the creation and changing of new sounds and sequences without disturbing other people, a mute function via the button MUTE on the front panel can be activated, which switches off audio outputs apart from the output PHONES.

NOTE: It is normal to hear a click in the headphones when switching between sampling and playback modes.

The MIDI connectors MIDI IN - OUT - THRU

MIDI is the acronym for MUSICAL INSTRUMENT DIGITAL INTERFACE and refers to the possibility of the exchange of information between different units which are all connected via MIDI. MIDI is a normalized interface on whose 5-pole DIN-sockets MIDI signals can be sent and received. The ADD-two possesses three different MIDI jacks with the following descriptions:

MIDI-OUT: This jack sends out MIDI information.

This output can be switched via software as second THRU output. Please also look at the chapter MIDI.

MIDI-IN:

Receives out MIDI information from other MIDI instruments or computers.

MIDI-THRU:

"Passes on" all received MIDI information.

The MIDI interface is defined in such a way that via a MIDI connection, consisting of a 5-pole DIN norm cable, 16 different channels can be transmitted almost simultaneously.

In order to use all the variations fully, which arise from the possibility of sending and receiving 16 different informations at the same time, the MIDI system offers three different modes: OMNI-MODE, POLY-MODE and MONO-MODE.

OMNI-MODE: The receiving units ignore all MIDI channel commands in this mode, but carry out all other MIDI commands which they receive. Sending MIDI units "pack" all MIDI commands to the basic MIDI channel. This is the "lowest" mode step, because although all data are transmitted, they cannot be assigned to special channels.

POLY-MODE: In this mode, receiving MIDI units only react to commands which are assigned to the MIDI channel number which has been preselected as receiving channel on the receiving unit. Sending units can give their commands different channel numbers. This mode step is somewhat higher than with OMNI because particular channels, i.e. in which something should be changed, can be addressed individually without influencing the others.

MONO-MODE: Every voice present in a receiving MIDI unit can be addressed in mono with a MIDI channel. This is the most complex mode which is currently only possible with very few pieces of equipment.

The MIDI connection is always completely independent of the audio connections. The MIDI input lines are completely separated from the circuit ground by opto-couplers, so that no hum loops can occur through MIDI. The length of the MIDI cables should not exceed 15 m. Only shielded microphone cable with 5-pole DIN plugs should be used. Unlike the usual microphone wiring, pin 4 and 5 must be soldered, pin 2 is the shield.

In the appendix sheet you can find further technical details for the MIDI technology for input and output of data and their data format.

SCSI interface

SCSI interface

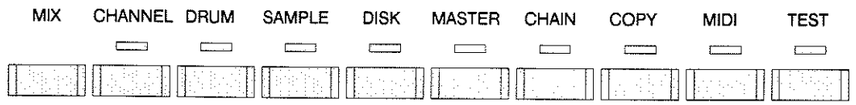
A computer or a Hard Disk with built-in SCSI interface can be connected to this multipin socket. The length of the cable should not exceed 6 m. The SCSI device must have terminating resistors, or a termination connector must be used (see SCSI drive manual for details). Up to 7 SCSI drives may be connected, but if more than 1 SCSI drive is used, only the first and last drive in the chain should have termination.

CONVENTIONS

SECTIONS

There are nine SECTIONS, named as follows:

MIX / CHANNEL / DRUM / SAMPLE / DISK / MASTER / CHAIN / COPY / MIDI



Sections are directly selected by pushing their associated switches on the front panel. The LED above the switch of the currently active section is lit (not at section MIX). When the MIX section is active, all the section LEDs are off.

FUNCTIONS

Within each SECTION there are a number of FUNCTIONS, each labeled with a number. Each FUNCTION within an active SECTION is selected by entering its corresponding number from 0 to 9 on the numeric keypad. The two-place LED numeric display shows at all times the number of the currently selected FUNCTION. If the number of a function is made of only one digit, this digit will be displayed in the right LED, while the left LED will be blank. In this case, the function will be activated by entering only one digit on the numeric keypad. If the function requires two digits, the first stroke on the keypad sets the left digit and replaces the right digit by a horizontal bar. The second stroke sets the right digit and activates the selected function. If an invalid number is selected, the nearest lower valid value is entered instead. If more than 4 seconds elapse between the first and second digit entry, or if any key other than the numeric keypad is selected in between digits, the display returns to its original value and no new function is selected. Alternatively, a FUNCTION can be selected with the stepped encoder while the FUNCTION/VALUE switch is held down. In this case, the displayed value increments for each clockwise step, and decrements for each counterclockwise step. The function belonging to the displayed value will be selected on releasing the FUNCTION/VALUE switch.

PAGES

Each function has one or more PAGES sequentially accessed with the left and right arrow switches (and). These buttons will repeat if held down. If a new function is selected, the first page of the new function will automatically be selected. If a new function has the same number of pages as the previous function (i.e. ENV 1 to ENV 2), the same function remains active. If the same function as the one which is currently being selected is entered on the keypad again, the page will be reset to the first page of that function.

VALUES

The current VALUE of a parameter is displayed on the LCD within each relevant page. An underline under the left most digit of a VALUE indicates that this value can be edited within the current page. VALUES or settings are normally edited with the stepped encoder knob. In the case of switches (ON /OFF), each stroke on the + ON/-OFF button switches the setting, or turning the encoder right will turn it on, the encoder left will turn it off. In addition, values can be entered on the numeric keypad while the FUNCTION/VALUE switch is held down. In this case, the digits entered on the numerical keypad replace the value's digit from the left to the right. The displayed value is entered only when as many digits as are displayed have been entered. If the value is out of range, the highest possible value is entered instead. In most cases, changing a parameter's value acts immediately on the selected parameter. In some cases, it is necessary to initiate the parameter change after its new value has been set by selecting the GO button. In this case, the display always prompts the user with a message such as: GO = OK.

Once a parameter of a MIX or DRUM has been modified, the EDIT LED (the dot to the right of the numeric LED display) turns ON to indicate that the settings now differ from the version stored in memory. The EDIT LED stays on even if the parameters are set back to their initial values. Once a MIX or DRUM has been edited (= EDIT LED ON), the user must store the edited version if he wishes to retain the edition. This is done for the MIX settings by selecting the SAVE MIX function in the MIX section (function 99), and for the DRUM by selecting the SAVE DRUM function in the DRUM section (function 70). In addition, the display will ask if the current mix and associated sounds (if they have been edited too) should be saved or not before they are replaced by the new selection. This request happens, if the currently selected mix has been edited but not saved (EDIT LED ON), and the user tries to select another mix.

The COMPARE switch is used to alternate between the stored and edited versions of the current MIX and its associated sounds. When the COMPARE function is on, the EDIT LED flashes and no parameters can be edited.

Except when specified otherwise, when a SECTION is selected for the first time after power on, the FUNCTION number 0 with the top most page in its list is selected. Further access to this SECTION will automatically re-selectet the last accessed FUNCTION and PAGE within this SECTION.

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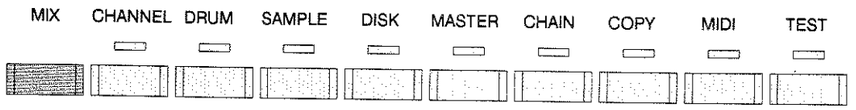
MIX SELECTION SECTION



The MIX selection section has 51 FUNCTIONS numbered from 00 to 50 which directly correspond to the 50 available mixes (01 to 50) and the default mix (00). A mix is comparable with a preset sound, on which all parameters which belong to the sound and all adjustments have already been made. It is called a mix since it is able to contain a "mix" of up to 16 drums that can be combined with different volumes, pannings, etc. The top page of the functions, SELECT MIX XX, is always selected when the function is entered. The following 10 pages each are used to edit a digit of the currently selected program's name. The Function NAME MIX SET (98) is used to assign a name to a set of 50 MIXES, the function SAVE MIX (99) is used to save the current mix settings.

The name of the function DEFAULT MIX (00) cannot be edited, but a single channel/drum can be triggered from any drum pad input.

FUNCTIONS **PAGES** **< <** **> >**

00 DEFAULT MIX

01 MIX 01

Change 1st digit of MIX 01
Change 2nd digit of MIX 01
Change 3rd digit of MIX 01
Change 4th digit of MIX 01
Change 5th digit of MIX 01
Change 6th digit of MIX 01
Change 7th digit of MIX 01
Change 8th digit of MIX 01
Change 9th digit of MIX 01
Change 10th digit of MIX 01

50 MIX 50

Change 1st digit of MIX 50
Change 2nd digit of MIX 50
Change 3rd digit of MIX 50
Change 4th digit of MIX 50
Change 5th digit of MIX 50
Change 6th digit of MIX 50
Change 7th digit of MIX 50
Change 8th digit of MIX 50
Change 9th digit of MIX 50
Change 10th digit of MIX 50

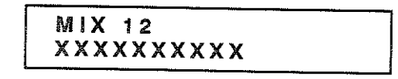
98 NAME MIX SET

Change 1st digit of MIX SET
Change 2nd digit of MIX SET
Change 3rd digit of MIX SET
Change 4th digit of MIX SET
Change 5th digit of MIX SET
Change 6th digit of MIX SET
Change 7th digit of MIX SET
Change 8th digit of MIX SET
Change 9th digit of MIX SET
Change 10th digit of MIX SET

99 SAVE MIX

SAVE MIX TO

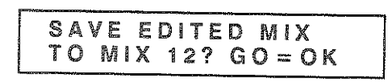
When the MIX SELECTION SECTION is entered, the last selected FUNCTION is automatically re-selected (= currently selected mix number). If for example mix number 12 is active, selecting the MIX SELECTION SECTION brings the first page of FUNCTION 12 with the following display:



Where XXXXXXXXXX is the name of mix 12. Within this section, the function number (= mix number) can be selected in two ways:

1) By selecting the two digit number on the numeric keypad: in this case, the selected mix is recalled (= the ADD-two sound changes) when both digits have been entered.

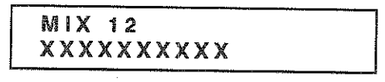
2) By selecting the number with the stepped encoder. The selected mix becomes active (= the ADD-two sound changes) as soon as the encoder is turned. If the user tries to change a MIX which is currently edited and has not been stored, the display will show:



Pressing any key other than GO will select the new mix without saving the edited one. If GO is pressed and if any of the sounds associated with the previous mix have been edited and not saved, the display will say:

Pressing GO will save the edited sounds and the edited mix, pressing any other key will select the new mix without saving the previous sounds (although the previous mix's channel settings will have been stored).

When the page switch is pushed while displaying a mix (= select "CHANGE 1st DIGIT OF MIX 12" page) the display changes to:



The underlined letter can now be changed with the stepped encoder. Numerical values within the program's name can be directly entered with the keypad while the FUNCTION/VALUE is held down. The program's name is saved in the edit buffer, and is only saved if the mix is stored. The next letter can be selected by pushing > > again.

While any mix is selected (00-50), the upper line of the display will show CLIP if any of the eight outputs have clipped. The word CLIP will be followed by any of the following: LR123456, representing which of the eight outputs clipped.

Key:

L = Left channel

R = Right channel

1 = AUX 1

2 = AUX 2

3 = AUX 3

4 = AUX 4

5 = AUX 5

6 = AUX 6

If clipping occurs often, it may be necessary to decrease the programmed volume level of some of the mix channels. The master volume knob will not affect the clip indicators.

DEFAULT MIX FUNCTION

00

```
MIX 00
DEFAULT MIX
```

When the default MIX is selected, all channel settings are set to default, and any drum or sample can be assigned to any channel, like any other mix. The default mix differs from other mixes because when editing a sample, any sample in memory can be selected, instead of only the samples used in the current mix. The default mix is automatically selected when sampling a new sample, and the new sample is assigned to channel 1 so that it can be played immediately after sampling. Also, when selecting a sample to edit while the default sample is in use, any sample that is selected will be assigned to channel 1 so that it can be played while editing.

NAME MIX SET FUNCTION

98

```
NAME MIX SET
XXXXXXXXXX
```

This function is used to assign a 10 digit name to the current set of 50 mixes (01 to 50) present in the ADD-two memory, along with the sounds. This name will be used to identify mix sets when they are stored in a SCSI drive.

This name will also be associated with MIDI and chain data that is stored on a SCSI drive.

The mix set name will also be stored on floppy when performing a save all to floppy operation. This feature is used to autoload a mix set from SCSI each time the ADD-two is turned on by saving the mixset name on a floppy, and having the floppy inserted when power is turned on. The ADD-two will load the floppy, and then will search the SCSI drive for a mixset with the same name that was stored on the floppy. If it finds it, it will be loaded.

SAVE MIX FUNCTION

99

```
SAVE EDITED MIX
TO MIX 12? GO=OK
```

This function is used to save in the ADD-two memory the current setting of the mix and its 16 channels. If there were any edited sounds in the current mix, the following display will occur after pressing GO:

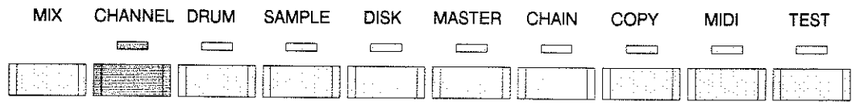
99

```
SAVE EDITED
DRUMS?GO=OK
```

Pressing GO will save all of the edited sounds used in the saved mix. If the mix and any edited sounds are saved, the edit dot will turn off, and the page will return to the first mix page of the current mix number (display the current mix name). If GO is not pressed from this page, the mix's channels will be saved, but the edited sounds will not be saved.

This page is intentionally left blank!

CHANNEL SELECTION/EDIT SECTION



As a short cut to function 0 (SELECT CHANNEL), holding the CHANNEL SELECTION/EDIT button and turning the encoder scans through the sixteen channels of the currently selected mix. The currently selected channel number, from 1 to 16, is displayed on the LCD. Selecting the CHANNEL SELECTION/EDIT from any page of another section reselects the last accessed CHANNEL, FUNCTION and PAGE. The functions and pages within the CHANNEL SELECTION/EDIT are:

FUNCTION **PAGES** << >>

0 SELECT CHANNEL

1 SELECT DRUM OR SAMPLE

SELECT CHANNEL INPUT
SELECT DRUM OR SAMPLE

2 MUTE ON/OFF

3 VOLUME

4 PANNING

5 EFFECT SEND 1

EFFECT SEND 1 VOLUME
EFFECT SEND 1 PRE or POST FADER
EFFECT SEND 1 BUS DESTINATION

6 EFFECT SEND 2

EFFECT SEND 2 VOLUME
EFFECT SEND 2 PRE or POST FADER
EFFECT SEND 2 BUS DESTINATION

7 PITCH SETTING

OCTAVE TRANSPOSITION
SEMITONE TRANSPOSITION
DETUNE AMOUNT
DETUNE MODE

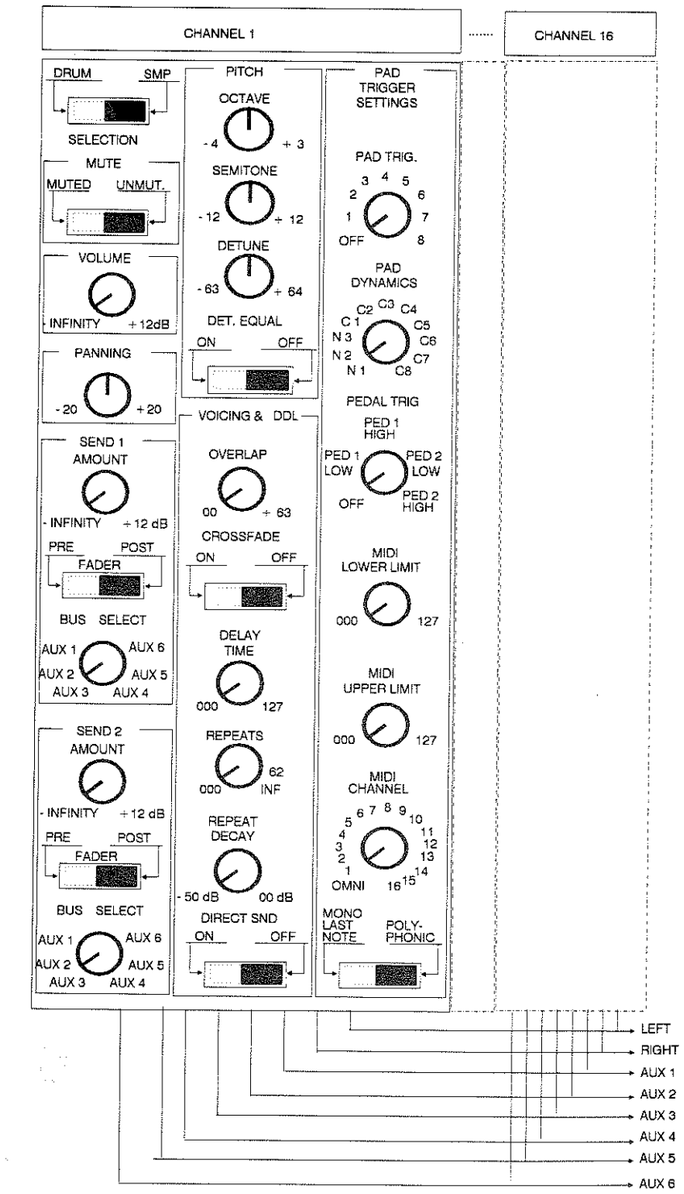
8 TRIGGER SETTINGS

PAD TRIGGER
TRIGGER DYNAMIC RESPONSE
PEDAL TRIGGER
LOWER MIDI NOTE LIMIT
UPPER MIDI NOTE LIMIT
MIDI CHANNEL
MIDI VOICE ASSIGN

9 VOICING & DDL

DRUM OVERLAP AMOUNT
CROSSFADE ON/OFF
DELAY TIME
NUMBER OF REPEATS
REPEAT DECAY
DIRECT SOUND ON/OFF

INTERNAL STRUCTURE OF THE BUILT-IN DIGITAL MIXING CONSOLE



SELECT/EDIT CHANNEL FUNCTION

0

```
CHANNEL NUMBER
X
```

This page is used to select the channel number 1 through 16.

SELECT DRUM OR SAMPLE FUNCTION

SELECT DRUM OR SAMPLE page:

1

```
CH Y IN: DRUM
XXXXXXXXXX
```

XXXXXXXXXX is the name of the drum currently associated with the selected CHANNEL. The sound can be changed with the stepped encoder. Y is the current active channel (values from 1 to 16).

If the CHANNEL INPUT TYPE page (described below) had SAMPLE selected, the SELECT DRUM page will look like this:

1

```
CH Y IN: SAMPLE
XXXXXXXXXX
```

This indicates that a sample is going directly to a channel instead of a drum. In this case, it is as if a single sample was routed through a sound with no envelopes, modulation, etc.

SELECT CHANNEL INPUT TYPE page:

1

```
CH Y IN: SAMPLE
XXXXXXXXXX
```

This page is used to select whether the input of a channel should be a sample or a drum. With the two arrow buttons you can switch between the first and the second line. In the first line you can select: DRUM or SAMPLE. In the second line the name of DRUM or SAMPLE is chosen. The stepped encoder can be used to switch between DRUM or SAMPLE in the first line, in the second line the name of the wanted DRUM or SAMPLE is chosen.

If a channel does not have anything assigned as a signal input, the display will read:

1

```
CH Y IN: SAMPLE
no input
```

This means that this channel is inactive.

CHANNEL MUTE ON/OFF FUNCTION

2

```
CHANNEL Y MUTE
MUTED
```

This function is used to turn on or off the current CHANNEL (CHANNEL Y in this example). When a CHANNEL mute is MUTED, it is removed from its mix (like if its volume was set at 0). When a CHANNEL mute is UNMUTED, it is routed through the mix. The MUTED/UNMUTED status can be changed with the stepped encoder or with the ON+/OFF- switch.

VOLUME FUNCTION

3

```
CHANNEL Y VOLUME
+XXdB
```

This page is used to set the volume of the currently selected CHANNEL (CHANNEL Y). The range is from -INFINITY to +12dB. The value can be selected with the stepped encoder or with the keypad while the switch FUNCTION/VALUE is held down.

PANNING FUNCTION

4

```
CHANNEL Y PAN
+XX
```

This page is used to set the panning position of the current CHANNEL on the stereo output. The range is from -20 (full left) to +20 (full right) (00 = center). The value can be selected with the stepped encoder or with the keypad while the switch FUNCTION/VALUE is held down. The ON+/OFF- button switches the side (left to right or right to left).

EFFECT SEND 1 & 2 FUNCTION

EFFECT SEND 1 VOLUME page:

5 `CHANNEL Y SEND 1 VOLUME -XX dB`

This page is used to set the effect send 1 amount. The range is from -INFINITY to +12. When set to -INFINITY, the send is off. The value can be selected with the step encoder or with the keypad while the switch FUNCTION/VALUE is held down. Y is the current active channel.

EFFECT SEND 2 VOLUME page:

6 `CHANNEL Y SEND 2 VOLUME -XX dB`

This page is used to set the effect send 2 amount. The range is from -INFINITY to +12. When set to -INFINITY, the send is off. The value can be selected with the step encoder or with the keypad while the switch FUNCTION/VALUE is held down. Y is the current active channel.

EFFECT SEND 1 PRE / POST FADER page:

5 `CHANNEL Y SEND 1 PREFADER`

This page is used to set the effect send 1 to be pre or post fader (= pre or post the volume control). The status can be switched with the stepped encoder, or with the ON+/OFF- switch. Y is the current active channel.

EFFECT SEND 2 PRE / POST FADER page:

6 `CHANNEL Y SEND 2 PRE FADER`

This page is used to set the effect send 2 to be pre or post fader (= pre or post the volume control). The status can be switched with the stepped encoder, or with the ON+/OFF- switch. Y is the current active channel.

EFFECT SEND 1 AUX DESTINATION page:

5 `CHANNEL Y SEND 1 GOES TO AUX X`

This page is used to select to which of the six output AUX the effect 1 send will be sent. The value for AUX 1 through 6 can be selected with the stepped encoder, or with the keypad while the switch FUNCTION/VALUE is held down. Y is the current active channel.

EFFECT SEND 2 AUX DESTINATION page:

6 `CHANNEL Y SEND 2 GOES TO AUX X`

This page is used to select to which of the six output AUX the effect 2 send will be sent. The value for AUX 1 through 6 can be selected with the stepped encoder, or with the keypad while the switch FUNCTION/VALUE is held down. Y is the current active channel.

PITCH FUNCTION

All of the pitch functions effectively change the relative keyboard position of the channel being edited. This means that transposing down one octave will not just shift all samples in the sound down in pitch by one octave, but will play the samples that are assigned to the range one octave below (the same as playing on the keyboard one octave down).

OCTAVE TRANSPOSITION page:

7 `CHANNEL Y OCTAVE +X`

This function is used to transpose the selected CHANNEL by octave increments. The range is from -4 to +3 octaves. The value can be selected with the stepped encoder or with the keypad while the switch FUNCTION/VALUE is held down. The ON+/OFF- switch can be used at any time to change the sign of the value.

SEMITONE TRANSPOSITION page:

7

```
CHANNEL Y
SEMITONE +XX
```

This function is used to transpose the selected CHANNEL by semitone increments. The range is from -12 to + 12. The value can be selected with the stepped encoder, or with the keypad while the switch FUNCTION/VALUE is held down. The ON+/OFF- switch can be used at any time to change the sign of the value.

DETUNE page:

7

```
CHANNEL Y DETUNE
          +XX
```

This function is used to detune the selected CHANNEL over a range of -1/4 tone to +1/4 tone on 127 steps (= 0.794 cent resolution) in the NORMAL DETUNE mode, and +10 Hz to -10 Hz on 127 steps (= 0.1587 Hz resolution) in the EQUAL BEATING mode. The displayed value is from -63 to +64. The value can be selected with the stepped encoder or with the keypad while the switch FUNCTION/VALUE is held down. The ON+/OFF- switch can be used at any time to change the sign of the value.

DETUNE MODE page:

7

```
CHANNEL Y EQUAL
DETUNE OFF
```

This function is used to select the detune mode for the current CHANNEL between NORMAL and EQUAL BEATING. The current status can be changed with the stepped encoder or with the ON+/OFF- switch. Equal detune off is what occurs on most synthesizers and samplers: If a voice is slightly detuned from another voice, the higher the pitch, the faster the beating. With equal detune on, the beat frequency stays constant over the entire frequency range.

TRIGGER SETTINGS

PAD TRIGGER page:

8

```
CHANNEL Y PAD
TRIGGER: XXXX
```

This page is used to select which one of the eight pad trigger inputs will trigger the drum associated with this channel. The choice is from 1 through 8, or NONE.

TRIGGER DYNAMIC RESPONSE page:

8

```
CHANNEL Y
DYNAMICS: XXXXXX
```

This page selects the dynamic curve which will be used in between the trigger source and the drum connected to this channel. The choices are: NORM1, NORM2, NORM3, and CURVE1 through 8. The NORM 1 to 3 curves are standard response curves. CURVE1 through 8 are user definable and are setup in the MASTER section. The trigger generated by the pedals are not affected by the dynamic curve.

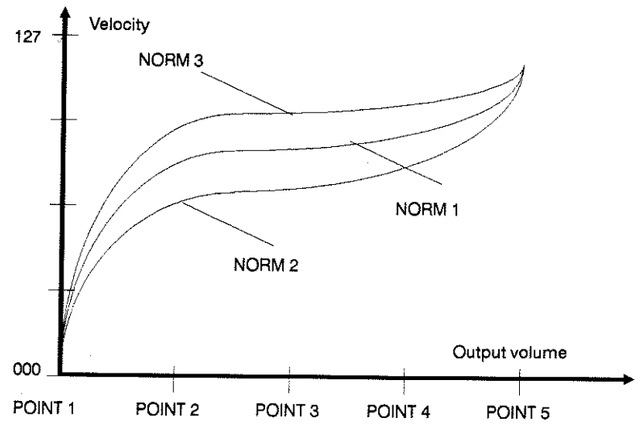


Abb. 2 - Plot of the NORM 1, NORM 2 and NORM 3 curves

PEDAL TRIGGER page:

8 `CHANNEL Y`
`XXXXXXXXXXXXXXXX`

This page is used to select which position (HIGH or LOW) of which pedal (1 or 2) will generate a trigger for the current channel. The choices are: PEDAL TRIG OFF, PEDAL1 TRIG LOW, PEDAL1 TRIG HIGH, PEDAL2 TRIG LOW, PEDAL2 TRIG HIGH. The amplitude of the trigger is proportional to the velocity of the pedal.

LOWER MIDI NOTE LIMIT page:

8 `CHANNEL Y LOWER`
`LIMIT: XXX C#-2`

This page is used to set the lowest MIDI note number for which the currently selected channel will play. The range is from 0 to 127 (60 = middle C). The value can be selected with the stepped encoder or with the keypad while the switch FUNCTION/VALUE is held down. To the right of the key number, the display shows the note name associated with the selected key number.

UPPER MIDI NOTE LIMIT page:

8 `CHANNEL Y UPPER`
`LIMIT: XXX F#4`

This page is used to set the upper MIDI note number for which the currently selected channel will play. The range is from 0 to 127 (60 = middle C). The value can be selected with the stepped encoder, or with the keypad while the switch FUNCTION/VALUE is held down. To the right of the key number, the display shows the note name associated with the selected key number.

MIDI CHANNEL page:

8 `CHANNEL Y`
`MIDI CHAN: XXXX`

This page is used to set to which MIDI channel the currently selected channel will respond. The value can be from 1 through 16 with an extra

position for OMNI (= channel independent). The value can be selected with the stepped encoder, or with the keypad while the switch FUNCTION/VALUE is held down. With the keypad, selecting 00 selects OMNI.

KEY-MODE FUNCTION

You can choose between two possibilities to determine the priority of the voice assignment. If in the polyphonic mode and the same note is played several times, each new note played is given a new voice. In this way, the overlap portion is determined with OVERLAP AMOUNT. If the overlap portion is adjusted to +63, each single tone can end. In this way you achieve a sound which sounds very full. However, if it is adjusted to 00, the note before will be interrupted. This mode is the same as with a piano, when playing a note a second time interrupts the ending of the note played before. The extent to which the tones overlap will be adjusted with OVERLAP AMOUNT.

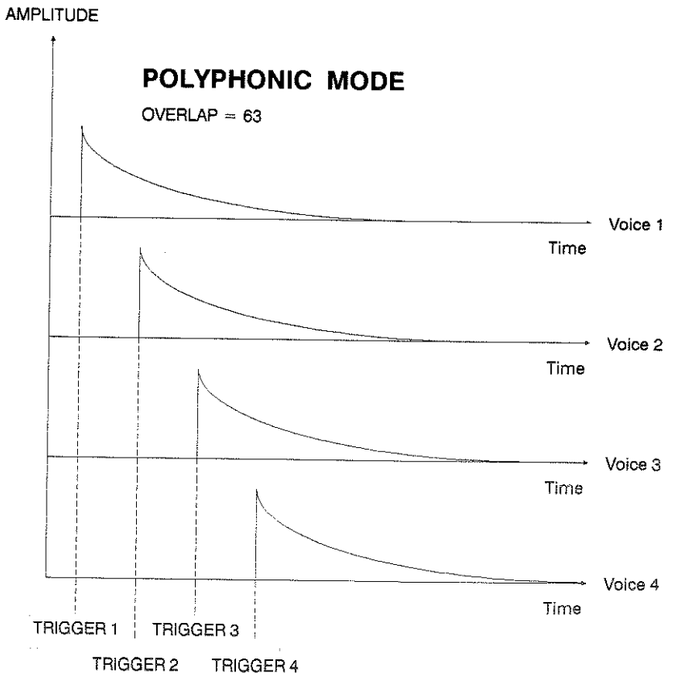


Abb. 3 - Polyphonic mode

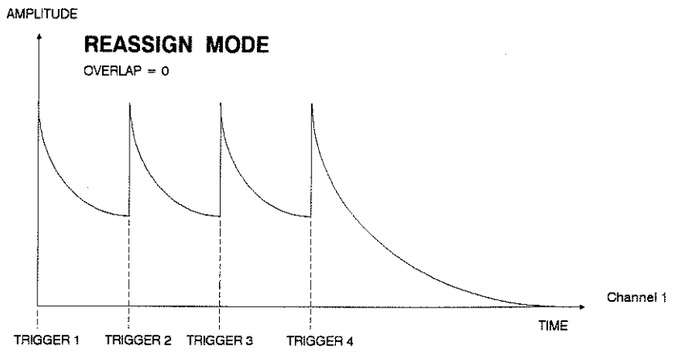


Abb. 4 - Reassign mode

If MONO LAST NOTE is chosen, each new note played will turn the gate off of any other notes being played in this channel.

MIDI VOICE ASSIGNEMENT page:

8 | CHANNEL Y ASSIGN
MONO LAST NOTE |

This page is used to choose the voice assignment for the selected channel between POLYPHONIC and MONO LAST NOTE priority. This parameter only has effect on drums triggered via MIDI, since a pad is only able to trigger monophonically anyway. The status can be changes with the step encoder.

VOICING AND DDL FUNCTION

DRUM OVERLAP page:

9 | CHANNEL Y RETRIG
OVERLAP: XX |

This page is used to set the amount of overlap between a note that is sustaining and a new retrigger of the same note in POLYPHONIC MODE, or any new note in either mono mode. The range is from 0 (no overlap = reassign mode) to 63 (maximal overlap time = rotate mode). The value can be selected with the stepped encoder or with the keypad while the switch FUNCTION/VALUE is held down.

CROSSFADE ON/OFF page:

9 | CHANNEL Y
CROSSFADE: ON |

This function is used to turn ON or OFF the crossfade feature for the currently selected channel. The ON/OFF status can be changed with the stepped encoder or with the ON + /OFF-switch. When crossfade is ON, the selected channel's dynamic control will be routed through a table to generate a dynamic curve that decreases in volume as the velocity increases (reverse dynamics). When combined with a channel that has crossfade OFF and the same MIDI note and channel assignments, the two channels will crossfade.

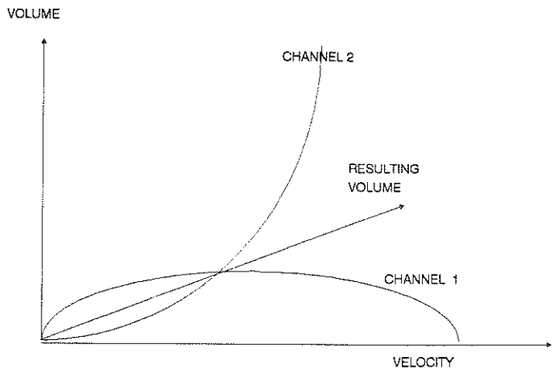


Abb. 5 - Channel crossfade

DELAY TIME page:

9

```
CHANNEL Y
DELAY TIME: XXX
```

This page sets the delay time between trigger repeats. The range is from 0 to 1 second on 128 steps.

NUMBER OF REPEATS page:

9

```
CHANNEL Y NUMBER
OF REPEATS: XX
```

This page sets the number of trigger repeats. The range is from 0 to 62 plus an extra step for an infinite number of repeats.

REPEAT DECAY page:

9

```
CHANNEL Y REPEAT
DECAY: -XXdB
```

This page sets the amplitude attenuation between successive repeats. The range is from 0 (no attenuation) to -50dB.

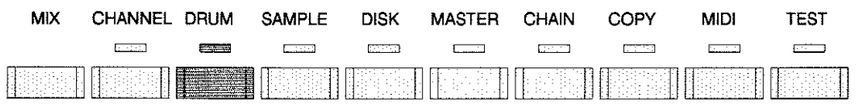
DIRECT SOUND ON/OFF page:

9

```
CHANNEL Y DIRECT
SOUND: XXX
```

This page selects if the initial drum (ON) or only the repetition (OFF) should be played. If the number of repeats is set to 0, this control will have no effect (the initial drum will always play).

DRUM EDIT SECTION



Holding this section switch down while turning the encoder scans through the sixteen drums currently associated with the 16 channels. A channel with no input, or with a sample as input, is skipped. Selecting the DRUM SELECT/EDIT from any page of another section reselects the last accessed sound, function, and page. The functions and pages within the DRUM EDIT section are:

FUNCTION **PAGES** **<<** **>>**

00 SELECT CHANNEL DRUMS

01 SET SOFT SAMPLE

Soft sample 01 name
Soft sample 01 direction
Soft sample 01 start point
Soft sample 01 volume
Soft sample 01 MIDI note reference

02 SET MEDIUM SAMPLE

Medium sample 01 threshold
Medium sample 01 name
Medium sample 01 direction
Medium sample 01 start point
Medium sample 01 volume
Medium sample 01 MIDI note reference

03 SET LOUD SAMPLE

Loud sample 01 threshold
Loud sample 01 name
Loud sample 01 direction
Loud sample 01 start point
Loud sample 01 volume
Loud sample 01 MIDI note reference

31 ENV 1

ENV 1 attack time
ENV 1 decay time
ENV 1 sustain level
ENV 1 sustain decay time
ENV 1 release time
ENV 1 amplitude
ENV 1 Gate time
ENV 1 Time track ON/OFF

32 ENV 2

ENV 2 attack time
ENV 2 decay time
ENV 2 sustain level
ENV 2 sustain decay time
ENV 2 release time
ENV 2 amplitude
ENV 2 Gate time
ENV 2 Time track ON/OFF

33 ENV 3

ENV 3 attack time
ENV 3 decay time
ENV 3 sustain level
ENV 3 sustain decay time
ENV 3 release time
ENV 3 amplitude
ENV 3 Gate time
ENV 3 Time track ON/OFF

40 RAMP GENERATOR

Ramp speed

41 LFO 1

LFO 1 wave
LFO 1 speed
LFO 1 Amplitude
LFO 1 retriggering

42 LFO 2

LFO 2 wave
LFO 2 speed
LFO 2 Amplitude
LFO 2 retriggering

43 TRACKING GENERATOR

Tracking generator input
Tracking generator point 1
Tracking generator point 2
Tracking generator point 3
Tracking generator point 4
Tracking generator point 5

44 SAMPLE SELECTION MODULATION

By velocity

45 SAMPLE START POINT MODULATION

By velocity

46 PITCH MODULATIONBy note number

By wheel

By ENV 1
By LFO 1

47 VOLUME MODULATION

By velocity
By Pedal 2
By Tracking Generator

48 PANNING MODULATION

By pedal 2
By ENV 2
By LFO 2

49 EFFECT SEND 1 MODULATION

By velocity
By trigger rate

50 EFFECT SEND 2 MODULATION

By velocity
By trigger rate

51 ENVELOPE 1 MODULATION

Release mod by pedal 1

52 ENVELOPE 2 MODULATION

Release mod by pedal 1

53 ENVELOPE 3 MODULATION

Release mod by pedal 1
Release mod by trigger rate
Attack mod by velocity

54 LFO 1 MODULATION

Amplitude mod by ramp generator

55 LFO 2 MODULATION

Amplitude mod by ramp generator

61 ASSIGNABLE MODULATION 1

Modulation 1 source
Modulation 1 destination
Modulation 1 amplitude
Modulation 1 gate on/off

62 ASSIGNABLE MODULATION 2

Modulation 2 source
Modulation 2 destination
Modulation 2 amplitude
Modulation 2 gate on/off

63 ASSIGNABLE MODULATION 3

Modulation 3 source
Modulation 3 destination
Modulation 3 amplitude
Modulation 3 gate on/off

64 ASSIGNABLE MODULATION 4

Modulation 4 source
Modulation 4 destination
Modulation 4 amplitude
Modulation 4 gate on/off

65 ASSIGNABLE MODULATION 5

Modulation 5 source
Modulation 5 destination
Modulation 5 amplitude
Modulation 5 gate on/off

66 ASSIGNABLE MODULATION 6

Modulation 6 source
Modulation 6 destination
Modulation 6 amplitude
Modulation 6 gate on/off

67 ASSIGNABLE MODULATION 7

Modulation 7 source
Modulation 7 destination
Modulation 7 amplitude
Modulation 7 gate on/off

68 ASSIGNABLE MODULATION 8

Modulation 8 source
Modulation 8 destination
Modulation 8 amplitude
Modulation 8 gate on/off

70 SAVE DRUM

71 RENAME DRUM

1st DIGIT OF DRUM NAME
2nd DIGIT OF DRUM NAME
3rd DIGIT OF DRUM NAME
4th DIGIT OF DRUM NAME
5th DIGIT OF DRUM NAME
6th DIGIT OF DRUM NAME
7th DIGIT OF DRUM NAME
8th DIGIT OF DRUM NAME
9th DIGIT OF DRUM NAME
10th DIGIT OF DRUM NAME

72 RESET DRUM TO DEFAULT

Reset to default

80 DELETE A DRUM

The function numbers are set in an ascending order, but are not continuous. This is intentional because it allows for keeping the number of repetitive functions such as ENV 1, ENV 2, ENV 3 or ASSIGNABLE MOD 1 through 8 related to their numerical index (ENV 1 is function 31, ENV 2 is function 32, ENV 3 is function 33, etc.). This makes it easier to memorize the function number for such repetitive functions.

SELECT CHANNEL DRUM FUNCTION

00 | SELECT DRUM OF CH: Y:XXXXXXXXXX

This function has the same purpose as when holding the DRUM button while turning the encoder. Using the stepped encoder, any of the sixteen drums currently assigned to the sixteen channels can be selected (1-16). The name of the drum (XXXXXXXXXX) will be shown next to the channel number (Y). Only the channels which have drums assigned to them will appear in the display.

The FUNCTION/VALUE button can be held and the encoder moved in any of the following drum pages of each channel. In all of the following examples, Y represents the current channel that the drum being edited is assigned to.

SET SOFT SAMPLE FUNCTION

SELECT SOFT SAMPLE page:

01 | Y: SOFT SAMPLE XXXXXXXXXX

This page is used to select a sample for the SOFT sample of the currently selected sample group. The sample can be chosen from all of the samples

present in the ADD-Two memory. The stepped encoder is used to scan through the sample name list. The display will read "no sample" if no sample is assigned.

SELECT SOFT SAMPLE DIRECTION page:

01 `Y: SOFT SAMPLE`
`DIRECTION: FORW`

This page sets the playback direction of the selected sample. The direction can be inverted by moving the stepped encoder or with the ON/OFF button.

SELECT SOFT SAMPLE START POINT page:

01 `Y: SOFT SAMPLE`
`START: XXX`

This page is used to adjust the start point of the soft sample in increments of 441 words (=10 ms @ 44.1kHz). The range is from 0 to 127. This control is useful when used in conjunction with the sample start point modulation. For instance the start point can be shifted, dependent on the velocity, in whatever region it has been adjusted. In this way you can achieve a very good imitation of the behavior of a tom:

Hard key stroke ---- start point towards beginning of sample. In this way the high frequencies are also transmitted.

Soft key stroke ---- start point towards end of sample, the high frequencies are not transmitted, the sound is softer.

SELECT SOFT SAMPLE VOLUME page:

01 `Y: SOFT SAMPLE`
`VOLUME: -XXdB`

This page is used to attenuate the volume of the soft sample. The range is -50 dB through 0 dB on 1 dB steps.

SOFT SAMPLE MIDI NOTE REFERENCE page:

01 `Y: SOFT SAMPLE`
`MIDI REF: XXX`

This page sets the MIDI note number for which the soft sample will play at its original pitch (when the sample was recorded).

SET MEDIUM SAMPLE FUNCTION

MEDIUM SAMPLE THRESHOLD page:

02 `Y: MEDIUM SAMPLE`
`THRESHOLD: XX`

This page is used to select the threshold level at which the low and medium samples will switch. The range is from 1 to 15, and OFF. The lower the number, the lower amount of control (velocity, for example) is required to switch from the soft to the medium sample. If the threshold is set to OFF, the medium sample is never played.

SELECT MEDIUM SAMPLE page:

02 `Y: MEDIUM SAMPLE`
`XXXXXXXXXX`

This page operates like the SELECT SOFT SAMPLE page.

SELECT MEDIUM SAMPLE DIRECTION page:

02 `Y: MEDIUM SAMPLE`
`DIRECTION: FORW`

This page operates like the SELECT SOFT SAMPLE DIRECTION page.

SELECT MEDIUM SAMPLE START POINT page:

02 | Y: MEDIUM SAMPLE
START: XXX

This page operates like the SELECT SOFT SAMPLE START POINT page.

SELECT MEDIUM SAMPLE VOLUME page:

02 | Y: MEDIUM SAMPLE
VOLUME: -XXdB

This page operates like the SELECT SOFT SAMPLE VOLUME page.

MEDIUM SAMPLE MIDI NOTE REFERENCE page:

02 | Y: MEDIUM SAMPLE
MIDI REF: XXX

This page operates like the SOFT SAMPLE MIDI NOTE REFERENCE page.

SET LOUD SAMPLE FUNCTION

LOUD SAMPLE THRESHOLD page:

03 | Y: LOUD SAMPLE
THRESHOLD: XX

This page operates like the MEDIUM SAMPLE THRESHOLD page. The loud threshold should be set above the medium threshold for normal operation.

SELECT LOUD SAMPLE page:

03 | Y: LOUD SAMPLE
XXXXXXXXXX

This page operates like the SELECT SOFT SAMPLE page.

SELECT LOUD SAMPLE DIRECTION page:

03 | Y: LOUD SAMPLE
DIRECTION: FORW

This page operates like the SELECT SOFT SAMPLE DIRECTION page.

SELECT LOUD SAMPLE START POINT page:

03 | Y: LOUD SAMPLE
START: XXX

This page operates like the SELECT SOFT SAMPLE START POINT page.

SELECT LOUD SAMPLE VOLUME page:

03 | Y: LOUD SAMPLE
VOLUME: -XXdB

This page operates like the SELECT SOFT SAMPLE VOLUME page.

This page operates like the SELECT SOFT SAMPLE VOLUME page.

LOUD SAMPLE MIDI NOTE REFERENCE page:

03 | Y: LOUD SAMPLE
MIDI REF: XXX

This page operates like the SOFT SAMPLE MIDI NOTE REFERENCE page.

ENVELOPE 1 FUNCTION

The following drawing, shows all the sections of the socalled ADSR-ENVELOPE, on which the description here after regards to.

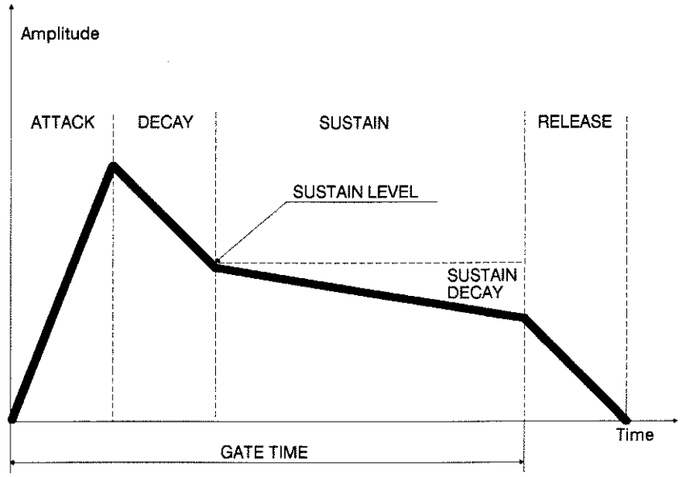


Abb. 1 - ADSR-Envelope

ENV1 ATTACK TIME page:

31 `Y: ENVELOPE 1`
`ATTACK XX`

This page sets the attack time of envelope 1. The range is 0 to 99 with the corresponding time going from 0 milliseconds to 30 seconds on an logarithmic scale.

ENV 1 DECAY TIME page:

31 `Y: ENVELOPE 1`
`DECAY XX`

This page sets the decay time of envelope 1. The range is 0 to 99 with the corresponding time going from 0 milliseconds to 60 seconds on an logarithmic scale.

ENV 1 SUSTAIN LEVEL page:

31 `Y: ENVELOPE 1`
`SUSTAIN LEVEL XX`

This page sets the initial sustain level of envelope 1. The range is 0 to 99 on a linear scale, with 99 being maximum level.

ENV 1 SUSTAIN DECAY TIME page:

31 `Y: ENVELOPE 1`
`SUSTAIN DECAY XX`

This page sets the sustain decay time of envelope 1. The sustain decay time sets the time it takes for the envelope to go from the initial sustain level to 0 while the gate is on. The range is 0 to 99 with the corresponding time going from 0 milliseconds to infinity on an logarithmic scale (except the last step). When set to 99, the envelope will stay at the sustain level until the note is released.

ENV 1 RELEASE TIME page:

31 `Y: ENVELOPE 1`
`RELEASE XX`

This page sets the release time of envelope 1. Release time means the time which the envelope needs to go back to 0 after releasing a note. The range is 0 to 99 with the corresponding time going from 0 milliseconds to 60 seconds on an logarithmic scale.

ENV 1 AMPLITUDE page:

31

```
Y: ENVELOPE 1
AMPLITUDE  XX
```

This page sets the amplitude of envelope 1. The range is 0 to 99 on a linear scale, with 99 being maximum amplitude.

ENV 1 GATE TIME page:

31

```
Y: ENVELOPE 1
GATE TIME  XX
```

This page sets the gate time of envelope 1. The gate time sets the minimum time the gate is held high and is used to let a sample play from beginning to end without holding a key down. The range is 0 to 50 with the corresponding time going from 0 milliseconds to 1.5 minutes on an logarithmic scale.

ENV 1 TIME TRACKING ON/OFF page:

31

```
Y: ENVELOPE 1
TIME TRACK OFF
```

When the time tracking function is ON, the envelope parameters related to time (ATTACK, DECAY, DECAY RELEASE, GATE TIME, and RELEASE) change with the pitch of the sample so that the relation between the sample and the envelope shape remains constant. This function can be used e.g. for a piano to sustain the low notes longer than the high ones.

ENVELOPE 2 & 3 FUNCTIONS

The pages for envelopes 2 and 3 are identical to the one for envelope 1. Envelopes 1 and 2 are general purpose envelopes that can be used for any modulation. Envelope 3 is used to control the volume of the drum.

RAMP GENERATOR FUNCTION

The ramp generator creates a simple envelope that has only one parameter: Attack speed. Every time a new note is played, the ramp generator resets to 0 and ramps upward to maximum at the speed determined in the following page. The maximum will be reached (even if the note is released beforehand) unless a new note is played, which will restart the ramp generator at 0. This feature is useful for delayed vibrato effects.

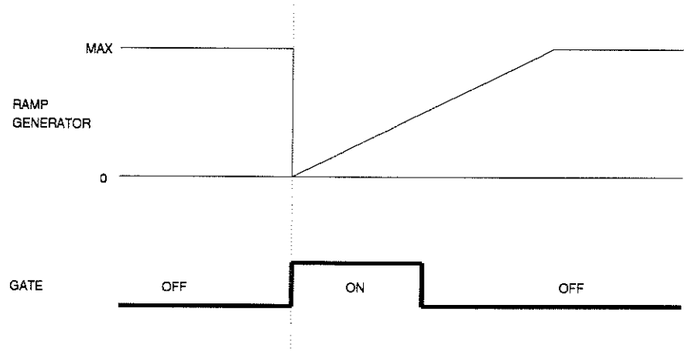


Abb. 2 - Darstellung der RAMP GENERATOR Funktion

RAMP SPEED page:

40

```
Y:RAMP GENERATOR
SPEED: XX
```

This page is used to adjust the rise speed of the ramp generator. The range is 0 to 50 with 0 equal to 10 milliseconds and 50 equal to 60 seconds on an logarithmic scale.

LFO 1 FUNCTIONS

LFO 1 WAVE page:

41 | Y: LFO 1 WAVE:
DOWN SAWTOOTH

This page sets the waveshape of LFO 1. The choices are: SINE WAVE, TRIANGLE, UP SAWTOOTH, DOWN SAWTOOTH, SQUARE, RANDOM, and NOISE.

LFO 1 SPEED page:

41 | Y: LFO 1
SPEED: XX

This page sets the speed of LFO 1. The range is from 0 to 50, with 0 equal to a 12 second cycle, and 50 equal to a 20 ms cycle. The scaling is logarithmic.

LFO 1 AMPLITUDE page:

41 | Y: LFO 1
AMPLITUDE: XX

This page sets the amplitude of LFO 1. The range is from 0 to 50 on a linear scale, with 0 being off, and 50 being maximum amplitude.

LFO 1 RETRIGGERING page:

41 | Y: LFO 1 TRIGGER
XXXXXXXXXXXX

This page determines the retriggering mode for LFO 1. The choices are FREE RUN, SYNCHRONIZED, RETRIGGER, and SYNC & RETRIGGER. When in FREE RUN mode, each of the 16 voices have their own LFOs. When in SYNCHRONIZED mode, all voices playing this sound will have their LFOs synched together. The amplitude of each LFO for each voice is still independent, but the speed is locked. This means that modulating

the speed of the LFO by an envelope generator will have no effect on the LFO. When in RETRIGGER mode, the LFO will restart at zero for every new trigger (new note played). When in SYNC&RETRIGGER, the functions of both are combined.

LFO 1 has a default modulation assignment to pitch, which means that this LFO should be used to adjust the vibrato speed via the mod wheel (unless this modulation has been edited out of the drum).

LFO 2 FUNCTIONS

The pages for LFO 2 (function 42) are identical to the ones for LFO 1.

TRACKING GENERATOR FUNCTION

The tracking generator is used to reshape any modulation source in a nonlinear fashion. It can be used to change a velocity curve, alter the waveform of an LFO, etc.

TRACKING GENERATOR INPUT page:

43 | Y:TRACKING INPUT
XXXXXXXXXXXXXXXX

This page is used to select which modulation source will be feeding the tracking generator. The choices are: NOTE NUMBER (MIDI note), VELOCITY, RELEASE VELOCITY, PRESSURE, MODULATION WHEEL, PITCH BEND WHEEL, SUSTAIN PEDAL, ENVELOPE 1, ENVELOPE 2, ENVELOPE 3, LFO 1, LFO 2, RAMP GENERATOR, TRACK GENERATOR, RANDOM GENERATOR, TRIG RATE FOLLOW, MIDI CONTROL A, MIDI CONTROL B, PEDAL 1, and PEDAL 2. The stepped encoder is used to scan through the list of sources.

TRACKING GENERATOR POINT 1 page:

43

Y: TRACK POINTS
XX XX XX XX XX

This page is used to adjust the value of the first point of the tracking generator. The range is 0 to 60 on a linear scale, with 60 being maximum.

TRACKING GENERATOR POINT 2 through 5 pages:

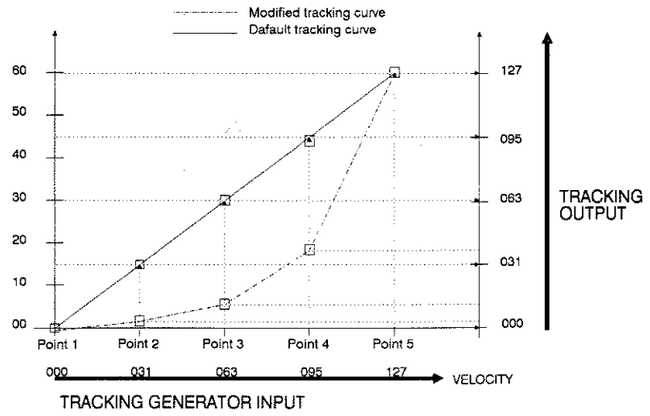


Abb. 3 - Tracking generator

The pages for the tracking generators 2,3,4, & 5 points are identical to the previous page, with the cursor moving by and under the selected point.

SAMPLE SELECTION MODULATION FUNCTION

SAMPLE SELECTION BY VELOCITY page:

44

Y: SAMPLE SELECT
BY VELOCITY: +XX

This page sets the amplitude of modulation from the velocity to the sample selection. The range is from -99 to +99.

SAMPLE START POINT MODULATION FUNCTION

SAMPLE START POINT BY VELOCITY page:

45

Y: SAMPLE START
BY VELOCITY: +XX

This page sets the amplitude of modulation from the velocity to the sample start point. The range is from -99 to +99. Here the start point moves towards the end point at positive values and towards the start point at negative values.

PITCH MODULATION FUNCTION

PITCH MODULATION BY NOTE NUMBER page:

46

Y: PITCH BY
NOTE NUMBER: ON

Turns ON or OFF the note number to pitch modulation (keyboard tracking ON/OFF). When ON the pitch tracks the note number on a chromatic scale (this is the most common choice if playing from MIDI). When off, all notes will play the sample at the same pitch.

PITCH MODULATION BY WHEEL page:

46

```
Y: PITCH BY
PITCH WHEEL: +XX
```

This page sets the amplitude of modulation from the pitch wheel (MIDI pitch bend) to the pitch. The range is from -12 to +12 in chromatic steps.

PITCH MODULATION BY ENV1 page:

46

```
Y: PITCH BY
ENVELOPE 1: +XX
```

This page sets the amplitude of modulation from envelope 1 to the pitch. The range is from -99 to +99.

PITCH MODULATION BY LFO1 page:

46

```
Y: PITCH BY
LFO 1: +XX
```

This page sets the amplitude of modulation from LFO 1 to the pitch. The range is from -99 to +99.

VOLUME MODULATION FUNCTION

VOLUME MODULATION BY VELOCITY page:

47

```
Y: VOLUME BY
VELOCITY: +XX
```

This page sets the amplitude of modulation from velocity to the volume. The range is from -99 to +99.

PANNING MODULATION FUNCTION

PANNING MODULATION BY PRESSURE (AFTER TOUCH) page:

48

```
Y: PANNING BY
PRESSURE: +XX
```

This page sets the amplitude of modulation from pressure (after touch) to the panning position. The range is from -99 to +99.

PANNING MODULATION BY ENV 2 page:

48

```
Y: PANNING BY
ENVELOPE 2: +XX
```

This page sets the amplitude of modulation from envelope 2 to the panning position. The range is from -99 to +99.

PANNING MODULATION BY LFO 2 page:

48

```
Y: PANNING BY
LFO 2: +XX
```

This page sets the amplitude of modulation from LFO 2 to the panning position. The range is from -99 to +99.

SEND 1 MODULATION FUNCTION

SEND 1 MODULATION BY VELOCITY page:

49

```
Y: SEND 1 BY
VELOCITY: +XX
```

This page sets the amplitude of modulation from velocity to the effect send 1. The range is from -99 to +99. This function can be used to

reverberate particular sounds depending on velocity or to change the echo portion depending on velocity, etc.

SEND 1 MODULATION BY PRESSURE page:

49

```
Y: SEND 1 BY
PRESSURE: +XX
```

This page sets the amplitude of modulation from pressure to the effect send 1. The range is from -99 to +99.

SEND 2 MODULATION FUNCTION

SEND 2 MODULATION BY VELOCITY page:

50

```
Y: SEND 2 BY
VELOCITY: +XX
```

This page sets the amplitude of modulation from velocity to the effect send 2. The range is from -99 to +99.

SEND 2 MODULATION BY TRIGGER RATE page:

50

```
Y: SEND 2 BY
TRIG RATE: +XX
```

This page sets the amplitude of modulation from trigger rate to the effect send 2. The range is from -99 to +99.

ENVELOPE 1 MODULATION FUNCTION

ENV 1 RELEASE TIME MODULATION BY PEDAL 1 page:

51

```
Y: ENV1 RELEASE
BY PEDAL 1: +XX
```

This page sets the amplitude of modulation from the pedal 1 (MIDI controller 64) to envelope 1 of the release time. The range is from -99 to + 99.

ENVELOPE 2 MODULATION FUNCTION

ENV 2 RELEASE TIME MODULATION BY PEDAL 1 page:

52

```
Y: ENV2 RELEASE
BY PEDAL 1: +XX
```

This page sets the amplitude of modulation from the pedal 1 (MIDI controller 64) to envelope 2 of the release time. The range is from -99 to +99.

ENVELOPE 3 MODULATION FUNCTION

ENV 3 RELEASE TIME MODULATION BY SUSTAIN PEDAL page:

53

```
Y: ENV3 RELEASE
BY PEDAL 1: +XX
```

This page sets the amplitude of modulation from the pedal 1 (MIDI controller 64) to envelope 3 of the release time. The range is from -99 to +99.

ENV 3 ATTACK TIME MODULATION BY VELOCITY page:

53

```
Y: ENV3 ATTACK
BY VELOCITY: +XX
```

This page sets the amplitude of modulation from velocity to envelope 3 attack time. The range is from -99 to +99.

LFO 1 MODULATION FUNCTION

LFO1 AMPLITUDE MODULATION BY RAMP GENERATOR page:

54

```
Y: LFO1 AMPLITUDE
BY RAMP GEN: +XX
```

This page sets the amplitude of modulation from the ramp generator to LFO 1 amplitude. The range is from -99 to +99.

LFO 2 MODULATION FUNCTION

LFO 2 AMPLITUDE MODULATION BY RAMP GENERATOR page:

55

```
Y:LFO2 AMPLITUDE
BY RAMP GEN: +XX
```

This page sets the amplitude of modulation from the ramp generator to LFO 2 amplitude. The range is from -99 to +99.

ASSIGNABLE MODULATION 1 SOURCE page:

61

```
Y: MOD 1 SOURCE:
XXXXXXXXXXXXXXXX
```

This page is used to select the modulation source for the assignable modulation path 1. The choices are: NOTE NUMBER (MIDI note), VELOCITY, RELEASE VELOCITY, PRESSURE, MODULATION WHEEL, PITCH BEND WHEEL, SUSTAIN PEDAL, ENVELOPE 1, ENVELOPE 2, ENVELOPE 3, LFO 1, LFO 2, RAMP GENERATOR, TRACKING GENERATOR, RANDOM GENERATOR, TRIG RATE FOLLOW, MIDI CONTROL A, MIDI CONTROL B, PEDAL 1, and PEDAL 2. The stepped encoder is used to scan through the list of sources.

ASSIGNABLE MODULATION 1 DESTINATION page:

61

```
Y: MOD 1 DEST:
XXXXXXXXXXXXXXXX
```

This page is used to select the modulation destination for the assignable modulation path 1. The choices are: PITCH, PANNING, VOLUME, SEND 1 VOLUME, SEND 2 VOLUME, SAMPLE SELECT, SAMPLE START, ENV 1 ATTACK, ENV 1 DECAY, ENV 1 SUST DECAY, ENV 1 RELEASE, ENV 1 AMPLITUDE, ENV 2 ATTACK, ENV 2 DECAY, ENV 2 SUST DECAY, ENV 2 RELEASE, ENV 2 AMPLITUDE, ENV 3 ATTACK, ENV 3 DECAY, ENV 3 SUST DECAY, ENV 3 RELEASE, ENV 3 AMPLITUDE, LFO 1 SPEED, LFO 1 AMPLITUDE, LFO 2 SPEED, and LFO 2 AMPLITUDE. The stepped encoder is used to scan through the list of destinations.

The following drawing shows all the possibilities to assign any source to any destination. Each crossing of the lines is a separate possibility.

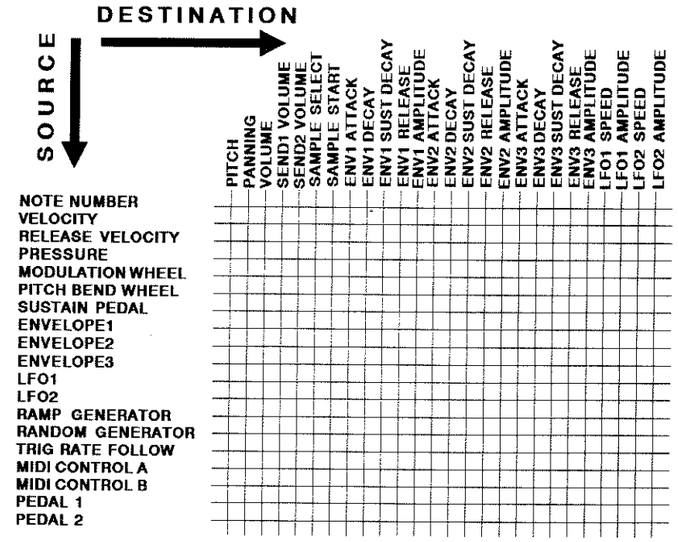


Abb. 4 - Modulation matrix

ASSIGNABLE MODULATION 1 AMPLITUDE page:

61

```
Y: MOD 1
AMPLITUDE: +XX
```

This page sets the amplitude of the modulation path. The range is from -99 to +99.

ASSIGNABLE MODULATION 1 GATE page:

61

```
Y: MOD 1 GATE:
ON
```

This page determines whether or not the modulation will be gated. With the stepped encoder (or buttons +ON/-OFF) it can be switched ON and OFF.

ASSIGNABLE MODULATION 2 THROUGH 8 FUNCTIONS

All the assignable modulation paths 2 (62) through 8 (68) are set as shown above for modulation path 1.

SAVE DRUM FUNCTION

70

```
SAVE DRUM GO=OK
CH: Y:XXXXXXXXXX
```

This function is used to store the drum that is assigned to the displayed channel into memory. The drum is only stored when the GO button is selected. If GO is pressed after changing the name of the drum (next function) to a unique drum name, a new drum is created with the new name. If the name of the drum already exists as another drum, or the drum name was not changed, and GO is pressed, the old drum will be replaced with the new one.

RENAME DRUM FUNCTION

71

```
RENAME DRUM OF
CH: Y:XXXXXXXXXX
```

The ten pages of this function are used to set the ten digits of a new name for the current drum. The alphabet can be scanned through with the stepped encoder. Like all other editable parameters of the drum, the drum's name is changed in the edit buffer, and must be stored with SAVE DRUM (70) in order for it not to be lost when a new drum or mix is selected.

RESET DRUM TO DEFAULT FUNCTION

72

```
Y:RESET DRUM TO
DEFAULT      GO=OK
```

Pushing the GO button will reset the drum under edition on the selected channel to simple default settings, i.e., no assignable modulation, simple sustaining envelopes, etc. The sample selections will not be altered.

DELETE A DRUM FUNCTION

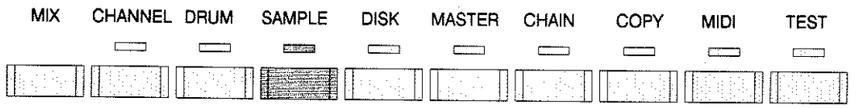
80

```
DELETE DRUM:
XXXXXXXXXX GO=OK
```

This page is used to delete any drum currently in memory. The stepped encoder can be used to select the desired drum. Pushing the GO button will delete the selected drum (XXXXXXXXXX in this example). If a channel was using a drum that was deleted, it will use the closest named drum instead. From this function, holding the DRUM button while turning the encoder does nothing.

This page is intentionally left blank !

SAMPLE SECTION



FUNCTION **PAGES** < < > >

0 RECORD A NEW SAMPLE

Set sampling frequency
Set threshold
Set sample length
Set sample time
Audio monitor ON/OFF

1 RE-RECORD A SAMPLE

Select sample to re-record
Set sampling frequency
Set threshold
Set sample length
Set sample time
Audio monitor ON/OFF

2 EDIT SAMPLE

Select sample to edit
Sample fine tuning
Start point (4 pages)
1st loop mode
1st loop tuning
1st loop point (4 pages)
1st end point (4 pages)
2nd loop mode

2nd loop tuning
2nd loop point (4 pages)
2nd end point (4 pages)
Smoothing 1st loop
Smoothing 2nd loop
Trim sample
Optimize volume

3 FUSION

Mono/stereo
Set fusion length
Set fusion time

4 CALCULATE SAMPLE

Select harmonic
Harmonic amplitude

5 ERASE SAMPLE

Select sample to erase
Erase all memory

6 RENAME SAMPLE

Select sample to rename
Change 1st digit
Change 2nd digit
Change 3rd digit
Change 4th digit
Change 5th digit
Change 6th digit
Change 7th digit
Change 8th digit
Change 9th digit
Change 10th digit

7 SAMPLE INFO

Get free memory size
Get sample size and rate
Get sample use info

A sample can be recorded in one of two modes:

- RECORD A NEW SAMPLE
- RE-RECORD A SAMPLE

When the RECORD A NEW SAMPLE mode is used, a default name is automatically assigned to the newly recorded sample. The name is NEW XX, with XX being a number equal to the highest NEW sample present in memory plus one. If the RECORD A NEW SAMPLE is used over and over, successive samples NEW XX, NEW XX + 1, NEW XX + 2, etc., are created until the memory is full. When this mode is selected, the current MIX is automatically replaced by the default MIX made of a single CHANNEL (same as MIX 00). This channel has itself a default DRUM assigned to it which uses a single sample NEW XX, with XX being the highest number available in the sample list. The parameter settings of the default MIX and SOUND are such that the sample is not altered in any way when MIDI note 60 (middle C) is played. This means that once the new sample has been recorded, the user can play it back immediately on the pads or with the test button. The user can then appreciate the result of his recording and the effect of the pitch change by playing along the keyboard. If the user decides to keep the sample by pressing YES when asked, he can then continue recording additional samples, each with a new name (NEW XX, NEW XX + 1, etc.). If the user does not wish to keep a sample (by pressing NO when asked), the next recorded sample will have the same name as the previous one, so it is erased.

When the RE-RECORD A SAMPLE mode is selected, the user can select which sample will be replaced by a newly recorded sample. The list of selectable samples is made of all the samples used in the currently selected MIX. With this mode, the current mix is not replaced by a default setting, and the newly recorded sample will be affected by the settings of the sound and channel like its previous version was. Once the sample has been recorded, the user can play it on the pad (or with the test button) with all the modulations, MIDI range limitations, pitch transposition, etc., which affected the original sample. If MIX 00 is chosen before entering RE-RECORD A SAMPLE, the default MIX will allow any sample to be selected and automatically be assigned to the pads for playing and resampling as described above.

RECORD A NEW SAMPLE FUNCTION

SAMPLING FREQUENCY page:

0

```
SAMP RATE GO=OK
44.1 kHz
```

This page sets up the sampling frequency. The choices are 22.05 kHz and 44.1 kHz.

The sampling will start if the GO button is selected and the signal has reached the threshold level.

SET THRESHOLD page:

0

```
THRESHOLD GO=OK
= = = = = = | = = = =
```

This page is used to adjust the threshold at which the sampling will start. The vertical line shows the current level of the threshold, while the horizontal lines of the display act as VU meters monitoring the signal. The sampling will start after the GO button has been selected and the signal has reached the threshold level. If the threshold is set at minimum

```
SAMPLING NOW....
▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬▬
```

```
WAITING THRESHOLD
▬▬▬▬▬▬
```

Threshold

Abb. 1 - Description of the Display

(extreme left), the sampling will start as soon as the GO button is selected, regardless of whether or not a signal is present.

SET SAMPLE LENGTH page:

0

```
SAMPLE LENGTH
XXXXKWORDS GO=OK
```

The sample length can be set from 1KWord (23.22 ms @ 44.1kHz sampling) to the maximum available memory size. The sample size will change to reflect changes in the sampling time. The sampling will start if the GO button is selected and the signal has reached the threshold level.

SET SAMPLE TIME page:

0

```
SAMPLE TIME
XXX.XXXSEC GO=OK
```

The sampling time can be set by increments of 92.88 ms from 23.22 ms with the sampling frequency set at 44.1 kHz (correspond to a size increase of 4KW), and by increments of 185.76 ms from 46.44 ms with the sampling frequency set at 22.05 kHz. The maximum time permitted depends on the size of the free ADD-two memory. The sampling time will change to reflect changes in the sample size and sampling frequency. The number of seconds can be entered with the keypad while holding the VALUE/FUNCTION button. The sampling will start if the GO button is selected and the signal has reached the threshold level.

AUDIO MONITOR ON/OFF page:

0

```
AUDIO MONITOR:
OFF GO=OK
```

When the audio monitor option is ON, the sampled signal will be present on the right and left outputs while it is being sampled. This signal is the exact same signal which is being stored in sample memory, and will reflect any saturation or distortion introduced by the analog to digital conversion process if the input level is too high. When the audio monitor is OFF, all the outputs but the headphones are turned off while the sampling is going on.

RE-RECORD A SAMPLE FUNCTION

SELECT SAMPLE TO RE-RECORD page:

1

```
RE-RECORD SAMPLE:
XXXXXXXXXX
```

The sample to be re-recorded can be selected with the stepped encoder from the list of samples used in the currently selected MIX. When the desired sample is displayed, the sample operation can be started by pushing the GO button from any of the following pages. After the record is completed, the original sample will be erased and the memory will be re-packed. The size of the original sample is not available when determining the free memory size. Otherwise, another step would have to be provided between this page and the start of the recording to allow time for re-packing the memory. Like when sampling a new sample, the user is given a choice to keep or discard the newly recorded sample. If it is kept, the sample it replaces is deleted, and the new sample is given the name of the deleted sample. If it is not, the original sample remains and the new sample is deleted.

The remaining pages of the RE-RECORD SAMPLE function are identical to the pages of the RECORD NEW SAMPLE function. They can only be accessed if a sample has been selected to be re-recorded.

RECORDING SAMPLES

Once the GO button has been selected from any of the record new sample or re-record sample pages, the following display appears (X = 0 or 1):

X

```
WAITING THRESH..
= = = = =   |
```

The encoder can still be used to move the threshold up or down while waiting for the threshold to be reached, and any other section, function, or page can be selected to abort the sampling. Once the threshold has been reached, the display will change to:

X

```
SAMPLING NOW....
= = = = = = = = | = =
```

The lower display is still showing the VU level of the sampling input, and any button can be pressed to abort the sampling before the end has been reached. If the sampling was aborted, its length will be automatically adjusted to the new length. In either case, after sampling the display will change to:

X

```
KEEP SAMPLE?
GO=YES, 0=NO
```

This page is used to verify whether or not the user wants to keep the sample that was just created. While this page is being displayed, the test button or a Pad can be used to playback the newly recorded sample. If recording a NEW sample, pressing YES will save the sample and cause the next sample created to be called NEW +1. Pressing NO will delete the new sample, which causes the next sample created to have the same NEW number. If RE-RECORDING a sample, pressing YES will then erase the old sample and keep the new one, pressing NO will erase the new sample and keep the old one. In any case, after pressing YES or NO, the display returns to the page present before the GO button (sample start) was selected.

EDIT SAMPLE FUNCTION

Depending on the loop modes, this function can have anywhere from 16 to 30 pages. The pages are described below.

SELECT SAMPLE TO EDIT page:

2

```
EDIT SAMPLE:
XXXXXXXXXX
```

The name of the sample to be edited can be selected from the list of samples used in the current mix with the stepped encoder. If the default mix is selected (mix 00), any sample can be selected to be edited, and will automatically be assigned to a channel.

SAMPLE START, END, and LOOP POINT manipulation:

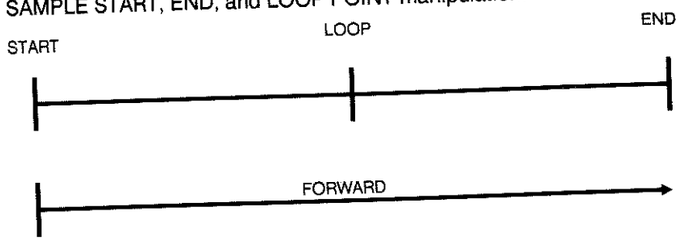


Abb. 2 - Sample START, LOOP and END point

Because of the large size of the address values, each of the address edition control are split into three pages.

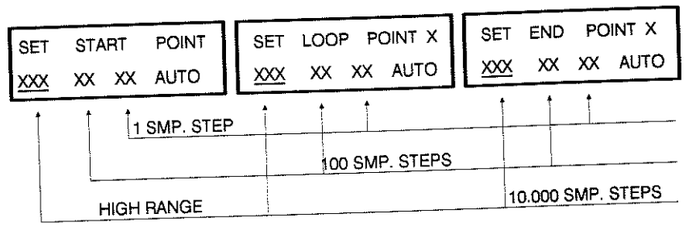


Abb. 3 - START-, LOOP- and END-points decimal

Each page adjusts a section of the complete address. The HIGH RANGE page puts the cursor under the third most significant digit of the address, and the stepped encoder (or keypad) can be used to adjust the top three digits only. The two following pages move the cursor under the two following double digits and adjust them. The ADD-two can still be played while the addresses are being changed. The active MIX remains the last selected one. When the start or end address has been adjusted, the unused section of the sample is not erased. This allows the user to recover the original sample whenever desired.

If the user does not care about the unused section he can choose to permanently erase it by using the trim sample operation in the TRIM SAMPLE page. This will free the memory space used by the unused sample section.

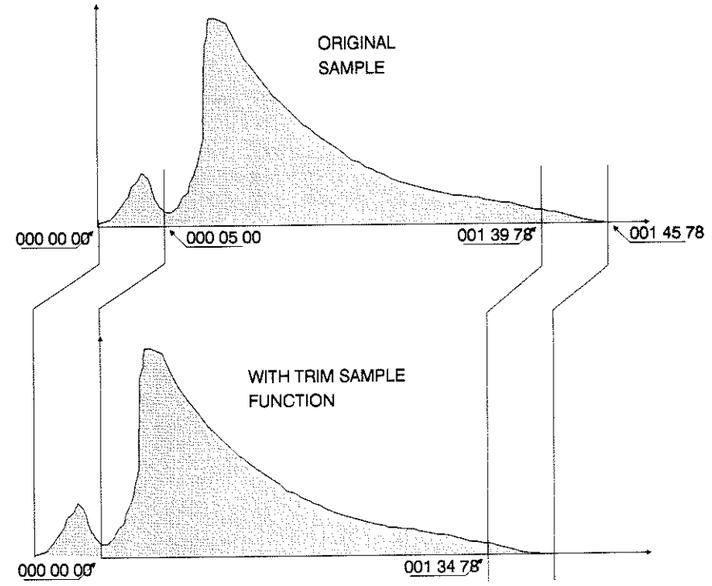


Abb. 4 - Plot of the TRIM SAMPLE function

SAMPLE FINE TUNING page:

2

SAMPLE FINE TUNE
+XX

This page is used to adjust the initial pitch tuning of a sample. The range is plus and minus one quarter tone on 127 steps (0.794 cents resolution from -63 to +64).

START POINT page:

2

```
SET START POINT
XXX XX XX AUTO
```

This is one of four pages. The start point of the selected sample can be moved forward by as small as one sample increments up to the end point. The displayed number is relative to the start address of the sample in memory and is therefore not affected by the position of the sample within the memory space. The first page allows movement in 10,000 sample steps. The second page allows movement in 100 sample steps. The third page allows movement in 1 sample steps. When the fourth page is selected (cursor under AUTO), the encoder will allow movement in steps that move the start point to the nearest zero crossing of the sample.

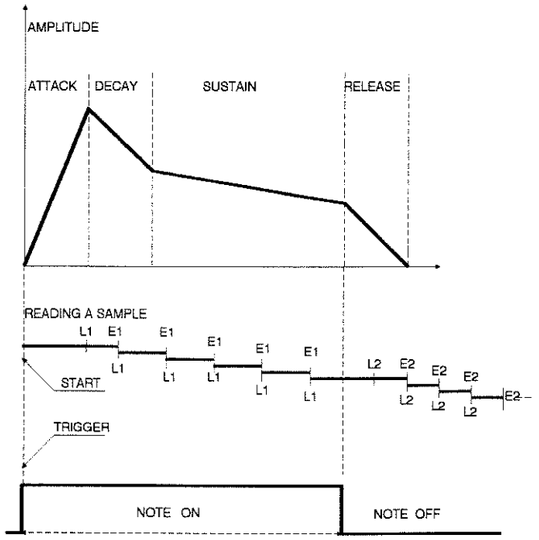


Abb. 5 - Plot of the possible LOOP MODI

1ST LOOP MODE page:

2

```
SET LOOP 1 MODE
BACK & FORTH
```

This page is used to select the first loop mode. The choices are OFF, FORWARD, and BACK & FORTH.

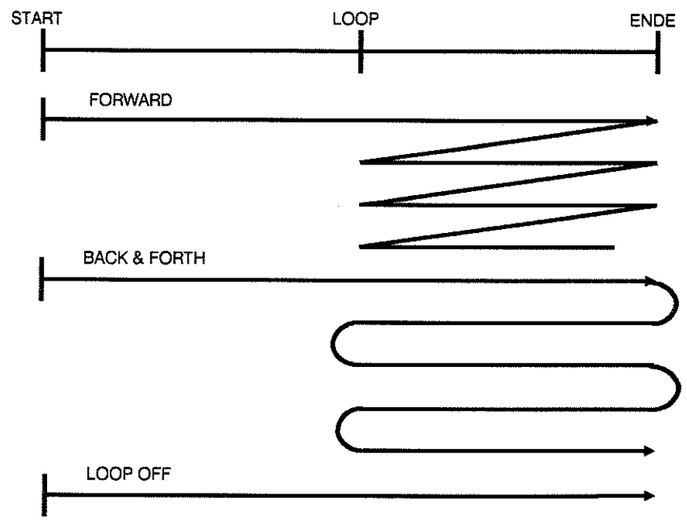


Abb. 6 - LOOP FORWARD, LOOP BACK & FORTH and LOOP OFF

The first loop is used if it is desired to have the sample loop differently while a note is sustained than when it is released. If the first loop is set off, both the sustain and release loop will be dependent on the second loop settings (described later), and the following nine pages will be skipped.

1ST LOOP TUNING page:

2

```
LOOP 1 FINE TUNE
+XX
```

This page is used to adjust the fine tuning of the first loop. The range is plus and minus one quarter tone on 127 steps (0.794 cents resolution from -63 to +64). It is an offset from the sample fine tuning value set in the second page to insure that the loop will be in tune.

1ST LOOP POINT page:

2 | SET LOOP POINT 1
XXX XX XX AUTO

This is one of four pages. The first loop point of the selected sample can be moved down (toward the start point) by as small as one sample increments as low as the start address. The first loop point cannot be moved above the first end point. The displayed number is relative to the start address of the sample in memory and is therefore not affected by the position of the sample within the memory space. The four pages function as in the set start point function. This setting will not have any effect if the first loop mode is off.

1ST END POINT page:

2 | SET END POINT 1
XXX XX XX AUTO

This is one of four pages. The end point of the selected sample can be moved down (toward the start point) by as small as one sample increment as low as the start address. The end point cannot be moved below the loop point. The displayed number is relative to the start address of the sample in memory and is therefore not affected by the position of the sample within the memory space. The four pages function as in the set start point function.

2ND LOOP MODE page:

2 | SET LOOP 2 MODE
BACK & FORTH

This page is used to select the second loop mode. The choices are OFF, FORWARD, and BACK & FORTH. The 1st loop loops continuously as long as a key is held down (or as long as the gate time is on). When a key is released, the sample plays on till the second end point and plays the second loop indefinitely (the volume envelope will fade it out). If the first loop mode is off, the second loop's values are used for the sustain and release loops, if the 2nd loop mode is on. If the first loop mode is on, the second loop is only for the release loop. If the 2nd loop mode is off, the following five pages will be skipped.

2ND LOOP TUNING page:

2 | LOOP 2 FINE TUNE
+XX

This page is used to adjust the fine tuning of the second loop. The range is plus and minus one quarter tone on 127 steps (0.794 cents resolution from -63 to +64). It is an offset from the sample fine tuning value set in the second page to insure that the loop will be in tune.

2ND LOOP POINT page:

2 | SET LOOP POINT 2
XXX XX XX AUTO

This is one of four pages. The second loop point of the selected sample can be moved down (toward the start point) by as small as one sample increments as low as the start address. The second loop point cannot be moved above the second end point. The displayed number is relative to the start address of the sample in memory and is therefore not affected by the position of the sample within the memory space. The four pages function as in the set start point function. This setting will not have any effect if the loop address is equal to the end address, or if the second loop mode is off.

2ND END POINT page:

2 | SET END POINT 2
XXX XX XX AUTO

This is one of four pages. The end point of the selected sample can be moved down (toward the start point) by as small as one sample increments as low as the start address. This end point cannot be moved below the first or second loop point, or the first end point. The displayed number is relative to the start address of the sample in memory and is therefore not affected by the position of the sample within the memory space. The four pages function as in the set start point function. If both loop modes are off, this will be the 10th through 13th pages (due to the skipped looping pages). If both loop modes are on, this will be the twenty second through twenty fifth pages.

SMOOTHING 1ST LOOP page:

2

```
SMOOTH 1ST LOOP
OVER XX K GO=OK
```

This page is accessible only if the 1st loop is on. The value XX is the sample length in Kwords over which the smoothing function will act. XX can be set from 00 K to a maximum value determined by the distance between the relative position of the start and 1st and 2nd loops and end points. For reasonable results this value should be 20 K minimum. In addition to this the LOOP SMOOTHING should be performed before TRIM SAMPLE. The maximum length is the largest of the 3 following values: 1st LOOP - START or 1st END - 1st LOOP or 2nd LOOP - 1st END. The absolute maximum value is 64 K, or 1.5 seconds for a sample recorded at 44.1 kHz and played back at its original pitch. The smoothing operation is started by selecting the GO button. The time required to complete the operation will increase for longer length. The smoothing function can be called over and over on the same sample.

Once the sample has been smoothed, it cannot be returned to its previous state. Therefore it is necessary to make a backup of all original samples.

The smoothing is generated by crossfading the samples at the loop points.

SMOOTHING 2ND LOOP page:

2

```
SMOOTH 2ND LOOP
OVER XX K GO=OK
```

The 2nd loop smoothing operates like the 1st one with the maximum length determined by the largest of the 2 following values: 2nd LOOP - 1st END or 2nd END - 2nd LOOP. If the second loop is off, this page will not appear.

TRIM SAMPLE page:

2

```
TRIM SAMPLE
GO=OK
```

If the GO button is selected, the sample data present before the START point (if any) and after the 2nd END point (if any), will be deleted and the sample memory will be packed. The sample pointers will be adjusted to reflect their new limits, i.e., the new start point will read 000 00 00.

Once the sample has been processed with TRIM SAMPLE, it cannot be returned to its previous state. Therefore it is necessary to make a backup of all original samples.

OPTIMIZE SAMPLE VOLUME page:

2

```
OPTIMIZE SAMPLE
VOLUME    GO=OK
```

If the GO button is selected, the sample amplitude will be increased to the maximum dynamic range of the 16bit memory. This function can be used for later correction of a not fully modulated sample.

FUSION

SET FUSION MODE page:

3

```
FUSION MODE:
MONO      GO=OK
```

This page is used to create a new sample which is the recording of the sound(s) generated by the ADD-two in its current setting. The encoder can be used to select whether the fusion should be in stereo (creates two samples) or mono (creates on sample).

SET FUSION LENGTH page:

3

```
FUSION LENGTH
XXXXKWORDS GO=OK
```

The sample length can be set from 1KWord (23.22 ms @ 44.1 kHz sampling) to the maximum available memory size. The sample size will change to reflect changes in the sampling time.

SET FUSION TIME page:

3

```
FUSION TIME
XXX.XXXSEC GO=OK
```

The value XXX.XXX is the sample length to record in seconds. This value for the fusion time can be set from 23.22 ms, to a maximum determined by the size of the available sample memory in 4 Kword steps (92.88 milliseconds). The sampling frequency for fusion is set at 44.1 kHz to limit the aliasing effect. Once the GO button has been selected from any of the three above pages, the display changes to:

3

```
PLAY TO START
FUSION 0=ABORT
```

When the note or notes is/are selected (or the TEST button is pressed), the resulting sound is sampled. While the resampling is being done, the ADD-two outputs will play exactly what is being sampled. Any additional notes played, or modulation occurring while fusing will be recorded. If the 0 button is pressed before a note is played, no resampling will have occurred, and the newly selected function will display. After a note has been played, the resampling will begin and the display will change to:

3

```
FUSING SOUNDS
STOP WITH 0
```

When the sample has been completed, the display changes to its previously displayed page. If the fusion is aborted with 0, the new sample will have a length relative to the point at which 0 was pressed.

CALCULATE SAMPLE FUNCTION

The calculate sample function is used to create a new sample using additive synthesis. Up to 64 harmonics can be selected at adjustable amplitudes to determine the waveshape of the new sample. The sine wave which is fixed programmed in the ADD-two is used for this. The sample that is created consists of two cycles of the waveform looping.

SELECT HARMONIC page:

4

```
CALC SAMP GO=OK
HARM: 01 AMP: 99
```

The encoder can be used to select a harmonic from 1 to 64. The selected harmonic's amplitude is shown in the lower right of the display.

HARMONIC AMPLITUDE page:

4

```
CALC SAMP GO=OK
HARM: 01 AMP: 99
```

The encoder can be used to select the amplitude of the displayed harmonic from 00 (off) to 99 (maximum). Each step of amplitude corresponds to 0.5dB. Having more than one harmonic with an amplitude of 99 may result in clipping the waveform. Pressing GO from either of the two pages above will cause the sample to be calculated. The new sample will be called NEW XX, with XX equal to the lowest available new sample number.

ERASE SAMPLE FUNCTION

ERASE SAMPLE page:

5

```
ERASE SAMPLE
XXXXXXXXXX GO=OK
```

The stepped encoder is used to scan through all the available samples. The sample is erased when the GO button is selected. If the sample was not the last sample in memory, it will take a little while for the sample to be erased while the memory is re-packed. When entering this page, the selected sample is the last selected sample in the SAMPLE EDIT function.

ERASE ALL MEMORY page:

5

```
ERASE ALL OF
MEMORY?  GO=OK
```

This page is used to clear the ADD-two's memory to its state when power is turned on (no drums, samples, or mixes). If GO is pressed, the display changes to:

5

```
ERASE ALL MIXES,
DRUMS, SAMPLES?
```

This page requires that GO be pressed again, to insure that this procedure does not occur accidentaly. When GO is pressed, all memory will be cleared, and the display will return to MIX 1, TONE MIX.

```
ALL OF MEMORY
IS NOW EMPTY
```

This display occurs only for a few seconds.

RENAME SAMPLE FUNCTION

SELECT SAMPLE TO RENAME page:

6

```
RENAME SAMPLE
XXXXXXXXXX
```

This page is used to select which sample is to be renamed. The stepped encoder is used to scan through all the available samples in the ADD-two memory if in the default mix, or the samples that are used if in any other mix.

CHANGE DIGIT pages:

6

```
RENAME SAMPLE TO
XXXXXXXXXX GO=OK
```

The ten pages are used to select each of the 10 digits of the sample to be renamed. The new name is finally assigned when the GO button is pushed. If the name is the same as any other sample in memory and GO is pressed, then the display will read:

6

```
DUPLICATE SAMPLE
NAME. NOT STORED
```

This display will appear for 3 seconds, and then the previous page will appear again. The new name will not be stored until a unique name is chosen and GO is pressed.

SAMPLE INFO FUNCTION

GET FREE SAMPLE MEMORY SIZE page:

7

```
AVAILABLE MEMORY
XXXX K WORDS
```

This page shows the ADD-two free sample memory size in Kwords.

GET SAMPLE SIZE AND RATE page:

7

```
SMP XXXXXXXXXX
SIZE YYYYK/44kHz
```

This page gives the size in Kwords, and the sampling frequency of the sample XXXXXXXXXX. The sample can be selected with the stepped encoder from the list of available samples.

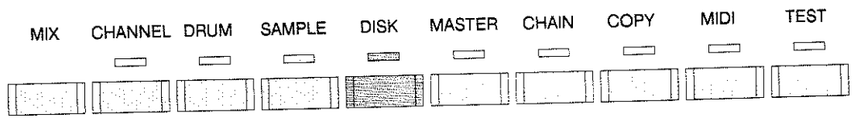
GET SAMPLE USE INFO page:

7

```
SMP XXXXXXXXXX
UNUSED
```

This page shows if the selected sample is used or not in any of the sounds or mixes present in the ADD-two memory. The display says: "USED" or "UNUSED".

DISK SECTION



The disk section is used to transfer data between the disk drive and the ADD-two memory. Because the ADD-two memory can be as much as 8 megabytes (4 megawords @16 bits per word), up to 6 disks may be required to store the whole memory content. In this case, all of the disks of a group containing a single memory setup are assigned a common ID number which indicates that those diskettes are linked. This number is a large randomly generated value (16 bits), designed to minimize the chances of ever assigning the same number to different disk groups. In addition, each disk of a group contains its position number in the group and the total number of disks in the group.

The DISK SECTION has 7 FUNCTIONS, each with the following pages:

FUNCTIONS	PAGES << >>
0 LOAD FROM DISK	
	Load all from disk
	Load complete MIX from disk
	Load MIX from disk
	Load drum and samples from disk
	Load drum from disk
	Load sample from disk
	Load S-900 samples
	Load chain from disk
	Load MIDI settings from disk

1 LOAD FROM SCSI

Load MIX set from SCSI
Load complete MIX from SCSI
Load MIX from SCSI
Load drum and samples from SCSI
Load drum from SCSI
Load sample from SCSI
Load chain from SCSI
Load MIDI settings from SCSI

2 SAVE TO DISK

Save all to disk
Save complete MIX to disk
Save MIX to disk
Save drum and samples to disk
Save drum to disk
Save sample to disk
Save chain to disk
Save MIDI settings to disk

3 SAVE TO SCSI

Save MIX set to SCSI
Save complete MIX to SCSI
Save MIX to SCSI
Save drum and samples to SCSI
Save drum to SCSI
Save sample to SCSI
Save chain to SCSI
Save MIDI settings to SCSI

4 DELETE

Delete MIX from disk
Delete drum from disk
Delete sample from disk
Delete MIX set from SCSI
Delete MIX from SCSI
Delete drum from SCSI
Delete sample from SCSI
Delete chain from SCSI
Delete MIDI setting from SCSI

5 NAME DISK

1st digit
2nd digit
3rd digit
4th digit
5th digit
6th digit
7th digit
8th digit
9th digit
10th digit
11th digit
12th digit
13th digit
14th digit
15th digit
16th digit

6 DISK INFO

Display disk free space
Display # of disks in group & group ID

7 DISK UTILITIES

Format disk
Back up SCSI on disk

Reload SCSI from disks
Park SCSI drive
Format SCSI

8 SELECT SCSI

Select SCSI device 1 - 7
Modify ADD-two ID#

LOAD FROM DISK FUNCTION

The LOAD FROM DISK function is used to load data from diskette into the ADD-two memory. If there is no diskette in the built in disk drive, trying to select any of the LOAD FROM DISK functions will bring the following error message:

If the diskette in the drive is not properly formatted, the display shows:

When these or any error messages occur, the user must correct the source of the problem and re-selectet the function. The user can also choose to leave the function by selecting another section or function number.

LOAD ALL FROM DISK page:

This page allows entry into the LOAD ALL function of the disk.

Entering this page allows the user to load all 50 mixes present on the diskette (or diskette set) with all of their associated drums and samples as well as the chain and MIDI setting data into the ADD-two memory. All mixes, drums, and samples present in the ADD-two prior to the load will be written over. After pushing GO the display will change the following if the disk set has more than 1 disk:

Where XX is the diskettes required to complete the LOAD ALL process. Pushing GO causes the following display:

Pushing GO again starts the loading. This intermediary step is provided so that the user can abort the load operation (by selecting any function) in case the user does not have the required diskettes.

Where XXXXXXXXXXXXXXX is the name given to the diskette, followed by the name of each file loaded. If any of the requested mixes includes samples which are stored across more than one diskette, the same additional displays as in the LOAD SAMPLE FROM DISK page shown below will occur. In this last case, and if the page is left before completing the sequence of expected diskettes, the incompletely loaded mixes are left with default settings. If the size of the drums and samples associated with the mixes are too large to fit into the ADD-two total memory space, the following message appears (this will occur if a set of diskettes had been made from a ADD-two with more memory than the one presently used).

When the loading is finished, the display returns to the first message.

LOAD COMPLETE MIX FROM DISK page:

This page allows entry into the LOAD COMPLETE MIX function of the disk. After pushing GO, the display will change to one of the following:

0 DISK:LOAD CMPMIX
XXXXXXXXXX GO=OK

In this example, this page is used to load the mix named XXXXXXXXXX and all its associated drums and samples from the diskette into one of the ADD-two mix locations. The stepped encoder is used to scan through all the mixes available on the diskette.

0 DISK:LOAD CMPMIX
NONE

The message will appear if there are no mixes on the diskette. If there are available mixes on the diskette after pushing GO, the display will change to one of the following:

0 PUT MIX IN YY?
GO=OK

Where YY is the mix location where the selected mix should be loaded. YY can be set from 01 to 50 with the stepped encoder.

0 ERROR!
NOT ENOUGH MEM

This message will appear if the ADD-two has the max. number of drums or samples on board or if the samples on the diskette were made with an ADD-two with more memory than the one presently used. If there is available space in the ADD-two memory after pushing GO, the following message will appear:

0 DISK: LOADING
XXXXXXXXXX

This function loads all drums and samples associated with the mix. If a drum or sample used in the mix already exists in the ADD-two's memory, that drum or sample will not be loaded from disk. If the requested mix includes samples to be loaded which are stored across more than one diskette, the same additional displays as in the LOAD SAMPLE FROM DISK page described below will occur.

When the loading is finished, the display returns to the first message. The function can be left by selecting another section, function number, or page at any time except while the loading is taking place. Once the mix has been loaded it becomes the new current mix.

LOAD MIX FROM DISK page:

0 DISK: LOAD MIX
GO=OK

This page allows entry into the LOAD MIX function of the disk. After pushing GO the display changes to one of the following:

0 DISK:LOAD MIX
XXXXXXXXXX GO=OK

This page is used to load the mix named XXXXXXXXXX and its 16 associated channel set ups from the diskette into one of the ADD-two mix locations. The stepped encoder is used to scan through all the mixes available on the diskette.

0 DISK:LOAD MIX
NONE

The message will appear if there are no mixes on the diskette.

If there are available mixes on the diskette after pushing GO, the display will change to the following:

0 PUT MIX IN YY?
GO=OK

Where YY is the mix location where the selected mix will be loaded. YY can be set from 01 to 50 with the stepped encoder (or numeric keypad while FUNCTION/VALUE switch is held down). The transfer is started by pushing GO, which results in the following display:

0 DISK: LOADING
XXXXXXXXXX

When the loading is completed, the display returns to the first message. If the drums and/or samples associated with the newly loaded mix are not present in the ADD-two memory, the missing drums and samples will be replaced with the available drums and samples having the closest name spelling. The function can be left by selecting another section, function number or page at any time except while the loading is taking place. Once the mix has been loaded it becomes the new current mix.

LOAD DRUM AND SAMPLES FROM DISK page:

0 | DISKLOAD DRM+SMP
GO=OK

This page allows entry into the LOAD DRUM and SAMPLES function of the disk. After pushing GO the display changes to one of the following:

0 | DISKLOAD DRM+SMP
XXXXXXXXXX GO=OK

This page allows the user to load the drum named XXXXXXXXXX and all of the samples associated with this drum. The stepped encoder is used to scan through all the drums available on the disk.

0 | DISKLOAD DRM+SMP
NONE

This message will appear if there are no drums available on the diskette.

After pushing GO, the display changes to one of the following:

0 | REPLACE WITH
SAME NAME? GO=OK

This message is displayed if a drum with the same name is already present in the ADD-two memory. After pushing GO, if there is enough ADD-two free memory space the requested drum will be loaded and the original drum with the same name will be written over.

0 | ERROR!
NOT ENOUGH MEM

This message is displayed if there is no available space for the drum and its samples in the ADD-two free memory space. If some of the samples associated with the selected drum are already present in the ADD-two memory, those samples are not loaded, and their sizes are not taken into consideration for determining if the free memory space is sufficient.

DISK: LOADING
XXXXXXXXXX

This message is displayed if the drum name is unique and there is enough ADD-two free memory space to load it. Any samples used in the drum that are already in the ADD-two's memory will not be loaded. If the selected drum includes samples which are stored across more than one diskette, the same additional displays as in the LOAD SAMPLE FROM DISK page described below will occur. In this last case, when loading is finished, the display returns to the first message. The function can be left by selecting another section, function number, or page at any time except while the loading is taking place. Once the drum has been loaded it can be selected from the SELECT DRUM function of the CHANNEL SELECT/EDIT section.

LOAD DRUM FROM DISK page:

0 | DISK: LOAD DRUM
GO=OK

This page allows entry into the LOAD DRUM function of the disk. After pushing GO the display changes to one of the following:

0 | DISK: LOAD DRUM
XXXXXXXXXX GO=OK

This page allows the user to load the drum named XXXXXXXXXX from the built in disk drive into the ADD-two memory. The stepped encoder is used to scan through all the drums available on the diskette.

If there are no drums available on the diskette the message on the right will appear.

0 | DISK: LOAD DRUM
NONE

If drums are available after pushing GO, the display changes to one of the following:

0 | REPLACE WITH
SAME NAME? GO = OK

This message is displayed if a drum with the same name is already present in the ADD-two memory. After pushing GO, if there is enough ADD-two free memory space the requested drum will be loaded and the original drum with the same name will be written over.

0 | ERROR!
NOT ENOUGH MEM

This message is displayed if there is no available space for the drum in the ADD-two free memory space.

0 | DISK: LOADING
XXXXXXXXXX

This message is displayed if the drum name is unique and there is enough ADD-two free memory space to load it. When loading is finished the display returns to the first message. The function can be left by selecting another section, function number, or page at any time except while the loading is taking place. once the drum has been loaded it can be selected from the SELECT DRUM function of the CHANNEL SELECT/EDIT section. If the samples associated with the drum are not present in the ADD-two memory, they will be replaced with the samples having the closest name spelling. This last point allows the ADD-two to automatically replace missing samples with a similar type as long as the user takes care to start all similar samples with the same generic letters (i.e. CYM for cymbals in "CYM-RIDE", "CYM-CRASH"...).

LOAD SAMPLE FROM DISK page:

0 | DISK: LOAD SMP
GO = OK

This page allows entry into the LOAD SAMPLE function of the disk. After pushing GO the display changes to one of the following:

0 | READ AKAI DISKS?
GO if no. 0 = OK

After pushing button 0, samples can be loaded directly from an AKAI S900 disk. The display will read:

0 | DISK: READ AKAI
DISKETTES GO = OK

After pushing GO the display will change the following:

0 | AKAI: LOAD SMP
XXXXXXXXXX GO = OK

This page allows the user to load the sample named XXXXXXXXXX from a AKAI S900 disk from the built in disk drive into the ADD-two memory. The stepped encoder is used to scan through all the samples available on the disk. Apart from the sample data, the loop points are also read. After pushing GO, the display changes to the following:

0 | AKAI: LOADING
XXXXXXXXXX

After loading, the display will return to its previous state.

0 | DISK: LOAD SMP
XXXXXXXXXX GO = OK

This page allows the user to load the sample named XXXXXXXXXX from the built in disk drive into the ADD-two memory. The stepped encoder is used to scan through all the samples available on the disk.

If samples are available after pushing GO, the display changes to one of the following:

0 | REPLACE WITH
SAME NAME? GO = OK

This message is displayed if a sample with the same name is already present in the ADD-two memory. The transfer is started after the GO switch is pressed. The original sample is written over if the disk allows this operation.

0 | ERROR!
NOT ENOUGH MEM |

This message is displayed if the sample is too large for the available ADD-two free memory space.

0 | THIS SMP IS ON
XX DISKS GO=OK |

If the sample requested is stored across more than one diskette, this message is displayed, where XX is the number of diskettes the sample is stored. Pushing GO starts the loading. This intermediary step is provided so that the user can abort the load operation (by selecting another function) in case the user does not have the necessary diskettes.

0 | DISK: LOADING
XXXXXXXXXX |

If the the sample name is unique, does not span across more than one diskette, and is small enough to fit into the available ADD-two free memory, this message is displayed.

If any additional diskettes are requested, the display changes to the following:

0 | INSERT DISK XX
OF YY THEN GO |

Where YY is the total number of the diskettes in the sequence, and XX is the number of the requested diskette. If the new inserted diskette is not the expected one, the display changes to:

0 | WRONG DISK. TRY
NEW DISK THEN GO |

The user must then insert the right disk or can abort the load operation (by selecting another function) in case he does not find the right disk. In the last case, whatever part of the sample has been loaded so far is erased from the ADD-two memory.

When the loading is completed, the display returns to the first display. The page can be left by selecting another section, function number, or page at any time except while the loading is taking place. Once the sample has been successfully loaded it can be selected from the SELECT SAMPLE function of the DRUM SELECT/EDIT section.

LOAD CHAIN FROM DISK page:

0 | DISK: LOAD CHAIN
GO=OK |

This page allows entry into the LOAD CHAIN function of the disk. After pushing GO the display changes to the following:

0 | DISK: LOADING
CHAIN |

This page is used to load chain data from the diskette into the ADD-two memory.

LOAD MIDI SETTINGS FROM DISK page:

0 | DISK: LOAD MIDI
GO=OK |

This page allows entry into the LOAD MIDI function of the disk. After pushing GO the display changes to the following:

0 | DISK: LOADING
MIDI SETTING |

This page is used to load the MIDI setting data from the diskette into the ADD-two memory.

The following parameters are stored with the MIDI settings:

- Test switches note numbers
- Test switches velocity
- Test switches channels
- Basic MIDI channel
- MIDI program change
- MIDI echo
- Controller A controller number
- Controller B controller number
- Pedal 1 controller number
- Pedal 2 controller number
- Default MIDI channel on/off
- Default channel 1 - 16 MIDI channel
- ADD-two SCSI ID number
- Pedal 1 low note number
- Pedal 1 low note MIDI channel
- Pedal 1 high note number
- Pedal 1 high note MIDI channel
- Pedal 2 low note number
- Pedal 2 low note MIDI channel
- Pedal 2 high note number
- Pedal 2 high note MIDI channel
- Pad 1 - 8 note number
- Pad 1 - 8 MIDI channel
- Pad 1 - 8 threshold
- Pad 1 - 8 mask time
- Pad 1 - 8 dynamic accuracy
- Pedal1low threshold
- Pedal1low amplitude
- Pedal1low dynamics
- Pedal1high threshold
- Pedal1high amplitude
- Pedal1high dynamics
- Pedal 2 low threshold
- Pedal 2 low amplitude
- Pedal 2 low dynamics
- Pedal 2 high threshold
- Pedal 2 high amplitude
- Pedal 2 high dynamics
- Dynamics curve 1 - 8 points 1 - 5
- Crosstalk rejection

LOAD FROM SCSI FUNCTION

The LOAD FROM SCSI function is used to load data from the external device connected to the SCSI port into the ADD-two internal memory.

If no device is connected to the SCSI port, trying to select the LOAD FROM SCSI function will bring the following error message:

LOAD MIX SET FROM SCSI page:

Selecting the load mix set from SCSI page brings the following display:

Pressing GO loads in the directory, causing the first set name to be displayed:

This page is used to load a set of 50 mixes with their associated drums and samples as well as a chain set up and the MIDI data settings. The set's name (XXXXXXXXXX in this example) is selected with the stepped encoder. All of the ADD-two memory is written over.

After pushing GO, the display change to:

Pressing GO again will start the loading, and the display will change to:

LOAD COMPLETE MIX FROM SCSI page:

Selecting the load complete mix from SCSI page brings the following display:

Pressing go loads in the directory, causing the first mix name to be displayed:

1 SCSI: YYYYYYYYYY
XXXXXXXXXX GO=OK

In this example, this page is used to load the mix named XXXXXXXXXX from mix set YYYYYYYYYY, and all of its associated drums and samples from the SCSI drive into one of the ADD-two mix locations. The stepped encoder is used to scan through all of the mixes available on the drive.

After pushing GO, the display changes to:

1 PUT MIX IN YY?
GO=OK

Where YY is the mix location where the selected mix should be loaded. YY can be set from 01 to 50 with the stepped encoder. YY will default to the mix location the mix existed in when it was saved. The transfer is started by pushing GO. The following message appears then:

1 SCSI: LOADING
XXXXXXXXXX

When the loading is finished, the display returns to the previous message. The function can be left by selecting an other section, function number, or page at any time except while the loading is taking place. Once the mix has been loaded, it become the new current mix.

LOAD MIX FROM SCSI page:

1 SCSI: LOAD MIX
GO=OK

Pressing go loads in the directory, causing the first mix name to be displayed:

1 SCSI: YYYYYYYYYY
XXXXXXXXXX GO=OK

In this example, this page is used to load the mix named XXXXXXXXXX from mix set YYYYYYYYYY, and its sixteen associated channels from the SCSI drive into one of the ADD-two mix locations. The stepped encoder is used to scan through all the mixes available on the drive. After pushing GO, the display change to:

1 PUT MIX IN YY?
GO=OK

Where YY is the mix location where the selected mix should be loaded. YY can be set from 01 to 50 with the stepped encoder. YY will default to the mix location the mix existed in when it was saved. The transfer is started by pushing GO. The following message appears then:

1 SCSI: LOADING
XXXXXXXXXX

When the loading is completed, the display returns to the previous message. If the drum and/or samples associated with the newly loaded mix are not present in the ADD-two memory, the missing drums and samples will be replaced with the available drums and samples having the closest name spelling. The function can be left by selecting another section, function number, or page at any time except while the loading is taking place. Once the mix has been loaded, it becomes the new current mix.

LOAD DRUMS AND SAMPLES FROM SCSI page:

Selecting load drum and samples from SCSI page brings the following display:

1 SCSILOAD DRM+SMP
GO=OK

Pressing go loads in the directory, causing the first drum name to be displayed:

1 SCSI: YYYYYYYYYY
XXXXXXXXXX GO=OK

In this example, this page is used to load the drum named XXXXXXXXXX from the mix set YYYYYYYYYY, and all of the samples associated with this drum. The stepped encoder is used to scan through all the drums available on the SCSI drive. Once the desired drum name is on the display, the transfer is started by pushing GO.

1 REPLACE WITH
SAME NAME? GO=OK

If a drum with the same name is already present in the ADD-two memory, this display will appear. In this case, the requested drum will be loaded after pushing GO and the original drum with the same name will then be deleted from the ADD-two memory.

If the selected drum name is unique, this message will appear while the new drum and samples are being loaded. Only samples that do not already exist in the ADD-two's memory will be loaded.

1 SCSI: LOADING
XXXXXXXXXX

When the loading is finished, the display returns to the previous page. The function can be left by selecting another section, function number, or page at any time except while the loading is taking place. Once the drum has been loaded, it can be selected from the SELECT DRUM function of the CHANNEL section.

LOAD DRUM FROM SCSI page:

Selecting the load drum from SCSI page brings the following display:

1 SCSI: LOAD DRUM
GO=OK

Pressing GO loads in the directory, causing the first drum name to be displayed:

1 SCSI: YYYYYYYYYY
XXXXXXXXXX GO=OK

In this example, this page is used to load the drum named XXXXXXXXXX of mix set YYYYYYYYYY from the SCSI drive into the ADD-two memory. The stepped encoder is used to scan through all the drums available on the external drive. Once the desired drum name is on the display, the transfer is started by pushing GO.

1 REPLACE WITH
SAME NAME? GO=OK

If a drum with the same name is already present in the ADD-two memory, this display will appear. In this case, the requested drum will be loaded and the original drum with the same name will then be deleted from the ADD-two memory. If the selected drum name is unique, or after pushing GO from the upper display, the following message will appear while the new drum is being loaded:

1 SCSI: LOADING
XXXXXXXXXX

When the loading is completed, the display returns to the previous page. The function can be left by selecting another section, function number, or page at any time except while the loading is taking place. Once the drum has been loaded, it can be selected from the SELECT DRUM function of the CHANNEL SELECTION/EDIT section. If the samples associated with the drum are not present in the ADD-two memory, they will be replaced with the samples having the closest name spelling.

LOAD SAMPLE FROM SCSI page:

Selecting the load sample from SCSI page brings the following display:

1 SCSI:LOAD SMP
GO=OK

Pressing GO loads in the directory, causing the first sample name to be displayed:

1 SCSI:LOAD SMP
XXXXXXXXXX GO=OK

In this example, this page is used to load the sample named XXXXXXXXXX. The stepped encoder is used to scan through all the samples available on the SCSI drive. Once the desired sample name is on the display, the transfer is started by pushing GO. If a sample with the same name is already present in the ADD-two memory, the following display will appear:

1 REPLACE WITH
SAME NAME? GO=OK

If GO is pushed, the requested sample will be loaded and the original sample with the same name will be deleted from the ADD-two memory. If the selected sample name is unique, or after pressing the GO button, the following message will appear while the new sample is being loaded:

1 SCSI: LOADING
XXXXXXXXXX

When the loading is finished, the display returns to the previous display. The function can be left by selecting another section, function number, or page at any time except while the loading is taking place. Once the sample has been loaded it can be selected from the SELECT SAMPLE function of the DRUM SELECT/EDIT section.

LOAD CHAIN FROM SCSI page:

This page is used to load chain data from the SCSI drive. The following display will appear when entering this page:

1 SCSI: LOAD CHAIN
GO=OK

After pressing the GO button, the display changes to the following:

1 SCSI: LOAD CHAIN
XXXXXXXXXX GO=OK

Where XXXXXXXXXX is the name of the mixset to load from. The stepped encoder is used to scan through all of the mixsets available on the drive. The transfer is started by pushing the GO button. Afterwards, the display reads:

1 SCSI: CHAIN DATA
LOADED

LOAD MIDI SETTINGS FROM SCSI page:

This page is used to load midi settings from the SCSI drive. The following display will appear when entering this page:

1 SCSI: LOAD MIDI
GO=OK

After pressing the GO button, the display changes to the following:

1 SCSI: LOAD MIDI
XXXXXXXXXX GO=OK

Where XXXXXXXXXX is the name of the mixset to load from. The stepped encoder is used to scan through all of the mixsets available on the drive. The transfer is started by pushing the GO button. Afterwards, the display reads:

1 SCSI: MIDI
SETTINGS LOADED

SAVE TO DISK FUNCTION

The SAVE TO DISK function is used to save data from the ADD-two memory onto a diskette. If there is no diskette in the built in disk drive (or a bad diskette), trying to select the SAVE TO DISK function will bring the same error message as in the LOAD FROM DISK function. If the diskette in the drive is write protected, selecting the SAVE TO DISK function will produce the following error message:

2 ERROR: DISK IS
WRITE PROTECTED

SAVE ALL TO DISK page:

This page is used to save all (max. 50) mixes present in the ADD-two along with their channels, drums, and samples, as well as the CHAIN and MIDI SETTINGS onto a diskette. The data present on the diskette will be written over. The following message will appear after the GO button is pressed:

Where XX is the number of diskettes required to save the entire ADD-two memory. After the GO button is pressed, the user is asked to successively insert all the diskettes of the disk set starting with diskette one. During the data transfer the display becomes:

If the disk is unformatted, it will be formatted automatically before saving files. The following message appears if the first diskette has files loaded on it:

This step helps to prevent any loss of information. The user can now exit this function by pressing any function of page button, pressing GO starts the SAVE ALL operation.

SAVE COMPLETE MIX TO DISK page:

This page is used to save the mix named XXXXXXXXXX along with its eight associated channels, drums and samples onto the disk. The program's name is selected with the stepped encoder.

After the GO switch has been pressed, one of the following displays appear:

Where YYYYYYYYYY is the name and ZZ is the number of the mix which will be replaced by XXXXXXXXX. YYYYYYYYYY will be the same as XXXXXXXXXX if the same named mix is already on the disk. ZZ can be changed with the stepped encoder if the same named mix does not exist on the disk.

Each drum and sample associated with the selected mix which are duplicated on the disk will be replaced. If the save operation can be performed, the following message will be displayed.

SAVE MIX TO DISK page:

This page is used to save the mix named XXXXXXXXXX along with its sixteen associated channels onto a diskette. The program's name is selected with the stepped encoder. After the GO switch has been pressed one of the following displays appear:

Where YYYYYYYYYY is the name of the mix stored on the disk which will be replaced by XXXXXXXXX. YYYYYYYYYY will be the same as XXXXXXXXXX if the same named mix is already on the disk. YYYYYYYYYY and ZZ can be changed with the stepped encoder. After the GO switch has been selected the display shows:

SAVE DRUM AND SAMPLES TO DISK page:

This page is used to save the drum named XXXXXXXXXX along with all its related samples onto the disk. The drum's name is selected with the stepped encoder. Like in the SAVE SAMPLE TO DISK page, the display may request an additional disk. If a drum with the same name is already present on the disk, the following message appears:

If any samples associated with the selected drum are already present on the disk, they will be replaced. If the save operation can be performed, the following display appears after the GO switch has been selected:

SAVE DRUM TO DISK page:

This page is used to save the drum named XXXXXXXXXX onto the disk. The drum's name is selected with the stepped encoder. Like in the SAVE SAMPLE TO DISK page, the display may request an additional disk or not allow the operation if the ADD-two memory size is exceeded. If the selected drum's name is already present on the disk, the following message appears:

If the save operation can be performed, the following display appears after the GO switch has been selected:

SAVE SAMPLE TO DISK page:

This page is used to save the sample named XXXXXXXXXX onto the disk(s). The sample's name is selected with the stepped encoder.

If the size of the selected sample plus the size of the data already stored on the disk set is above the size of the ADD-two internal memory (= the disk set could not be loaded into the ADD-two), the following display will appear:

The transfer is started by pushing GO. If the selected sample's name is already present on the disk, the following message will appear:

If the size of the selected sample is too large to fit on the disk or disks set free space, an additional disk is requested which will be appended to the current disk set. But this is only possible if the maximum place in the ADD-two internal memory (2/4/6/8 Mbyte, depending on the RAM extension) is not exceeded.

If the GO button is pressed, the following message appears:

The new disk is automatically formatted. After the sample has been stored, the display requests the user to successively insert all of the disks of the disk set in order to update the data common to the set (number of disks, data size, etc...).

While the save operation is going on the following display appears:

SAVE CHAIN TO DISK page:

This page is used to save the current chain setting onto the disk. After the GO switch has been selected, the following display appears:

SAVE MIDI SETTINGS TO DISK page:

This page is used to save the current MIDI settings onto the disk. After the GO switch has been selected the following display appears:

SAVE TO SCSI FUNCTION

The SAVE TO SCSI function is used to save data from the ADD-two internal memory into the external storage device connected to the SCSI port. If no device is connected, the same error message as in the LOAD FROM SCSI function appears. If the external drive is a read only device such as a CDROM, the following error message appears:

SAVE ALL TO SCSI page:

Selecting the save all to SCSI page brings one of the following displays:

This page is used to save the 50 mixes present in the ADD-two along with their channels, drums, and samples as well as the chain and MIDI setup onto the SCSI drive. Each set up is referred to by a 10 digit name (XXXXXXXXXX in this example) which is entered in the MIX section function 98.

If a mix set up with the same name is already present on the external drive, the following message will appear:

If GO is selected, the previous version of XXXXXXXXXX is replaced with the new one. If samples with the same names already exist on the SCSI disk, they will be replaced. After pressing GO, the display reads:

SAVE COMPLETE MIX TO SCSI page:

3

```
SCSI:SAVE CMPMIX
XXXXXXXXXX GO=OK
```

This page is used to save the mix named XXXXXXXXXX along with all its associated drums and samples onto the SCSI drive. The mix's name is selected with the stepped encoder.

If a mix with the same name is already present on the external drive, the following message will appear:

3

```
REPLACE MIX
XXXXXXXXXX GO=OK
```

Any drums or samples on the disk that have the same name as drums or samples in the mix will be replaced.

After pressing GO, the display says:

3

```
SCSI: SAVING
XXXXXXXXXX
```

SAVE MIX TO SCSI page:

Selecting the save mix to SCSI page brings the following display:

3

```
SCSI: SAVE MIX
XXXXXXXXXX GO=OK
```

This page is used to save the mix named XXXXXXXXXX along with its eight associated channels onto the disk. The mix's name is selected with the stepped encoder.

If a mix with the same name is already present on the SCSI drive, the following message will appear:

3

```
REPLACE MIX
XXXXXXXXXX GO=OK
```

If GO is selected, the previous version of XXXXXXXXXX is replaced with the new one. If the user decides to not replace the old mix, he must exit from this page, rename the mix, and attempt to save it again.

After the GO switch has been selected, the display shows:

3

```
SCSI: SAVING
XXXXXXXXXX
```

SAVE DRUMS AND SAMPLES TO SCSI page:

Selecting the save drum and sample to SCSI page brings the following display:

3

```
SCSISAVE DRM+SMP
XXXXXXXXXX GO=OK
```

This page is used to save the drum named XXXXXXXXXX along with all its associated samples onto the SCSI drive. The drum's name is selected with the stepped encoder.

If a drum with the same name is already present on the SCSI drive, the following message will appear:

3

```
REPLACE WITH
SAME NAME? GO=OK
```

If GO is selected, the previous version of XXXXXXXXXX is replaced with the new one. If the user decides not to replace the old drum, he must exit from this page, rename the drum, and attempt to save it again. Any samples on disk with the same names as the ones to be saved will be replaced. After pressing GO, the display says:

3

```
SCSI: SAVING
XXXXXXXXXX
```

SAVE DRUM TO SCSI page:

Selecting the save drum to SCSI page brings the following display:

3

```
SCSI:SAVE DRUM
XXXXXXXXXX GO=OK
```

This page is used to save the drum named XXXXXXXXXX onto the SCSI drive. The drum's name is selected with the stepped encoder.

If a drum with the same name is already present on the external drive, the following message will appear:

3

```
REPLACE WITH
SAME NAME? GO=OK
```

If GO is selected, the previous version of XXXXXXXXXX is replaced with the new one. After the GO switch has been selected, the display shows:

3

```
SCSI: SAVING
XXXXXXXXXX
```

SAVE SAMPLE TO SCSI page:

Selecting the save sample to SCSI page brings the following display:

3

```
SCSI:SAVE SMP
XXXXXXXXXX GO=OK
```

This page is used to save the sample named XXXXXXXXXX onto the SCSI drive. The sample's name is selected with the stepped encoder.

If a sample with the same name is already present on the external drive, the following message will appear:

3

```
REPLACE WITH
SAME NAME? GO=OK
```

If GO is selected, the previous version of XXXXXXXXXX is replaced with the new one. After the GO switch has been selected, the display shows:

3

```
SCSI: SAVING
XXXXXXXXXX
```


SAVE CHAIN TO SCSI page:

Selecting the save chain to SCSI page brings the following display:

3

```
SCSI: SAVE CHAIN
        GO=OK
```

This page is used to save the chain setup onto the SCSI drive. Each set up is referred to by the 10 digit name of the mixset which was entered in the MIX section.

The following display appears after the chain data is stored:

3

```
SCSI: CHAIN
DATA SAVED
```

SAVE MIDI SETTINGS TO SCSI page:

Selecting the save MIDI settings to SCSI page brings the following display:

3

```
SCSI: SAVE MIDI
        GO=OK
```

This page is used to save the midi setting onto the SCSI drive. Each set up is referred to by the 10 digit name of the mixset which was entered in the MIX section. The following display appears after the midi settings are stored:

3

```
SCSI: MIDI
SETTINGS SAVED
```

DELETE FUNCTION

If there is no disk in the disk drive, or the disk is unreadable, selecting any of the DELETE FROM DISK functions brings the INSERT DISK IN DRIVE or DISK UNREADABLE error message.

If the disk in the disk drive is write protected, selecting any of the DELETE FROM DISK functions brings the DISK IS WRITE PROTECTED error message.

If there is no device connected to the SCSI port, selecting any of the DELETE FROM SCSI pages brings the NO SCSI DEVICE CONNECTED error message.

If the external drive is a read only device such as a CDROM, selecting any of the DELETE FROM SCSI pages brings the READ ONLY DEVICE error message.

DELETE MIX FROM DISK page:

4

```
DISK: DELETE MIX
              GO=OK
```

This page allows entry into the DELETE MIX function of the disk. After pushing GO the display changes to one of the following:

4

```
DISK: DELETE MIX
XXXXXXXXXX GO=OK
```

This page is used to select the mix named XXXXXXXXX to be deleted from the diskette. The mix name is selected with the stepped encoder.

The following message appears if the diskette does not contain any mixes.

4

```
DISK: DELETE MIX
NONE
```

When the GO switch is selected the following message appears:

4

```
DISK: DELETING
 XXXXXXXXXX
```

The selected mix is deleted from the diskette.

DELETE DRUM FROM DISK page:

4

```
DISK:DELETE DRM
              GO=OK
```

This page allows entry into the DELETE DRUM function of the disk. After pushing GO the display changes to one of the following:

4

```
DISK: DELETE DRM
XXXXXXXXXX GO=OK
```

This page is used to select the drum named XXXXXXXXX to be deleted from the diskette. The drum name is selected with the stepped encoder.

The following message appears if the diskette does not contain any drums.

4

```
DISK: DELETE DRM
NONE
```

When the GO switch is selected, the following message appears:

4

```
DISK: DELETING
 XXXXXXXXXX
```

The mix(es) which were using this drum will have the drum with the closest name assigned to them.

DELETE SAMPLE FROM DISK page:

4

```
DISK:DELETE SMP
              GO=OK
```

This page allows entry into the DELETE SAMPLE function of the disk. After pushing GO the display changes to one of the following:

4

```
DISK: DELETE SMP
XXXXXXXXXX GO=OK
```

This page is used to select the sample named XXXXXXXXX to be deleted from the diskette. The sample name is selected with the stepped encoder.

The following message will appear if the diskette does not contain any samples.

4

```
DISK: DELETE SMP
NONE
```

When the GO switch is selected, the following message appears:

4

```
DISK: DELETING
XXXXXXXXXX
```

The drum(s) which were using this sample will have the sample with the closest name assigned to them.

DELETE COMPLETE MIX SET FROM SCSI page:

4

```
SCSI: DELETE SET
                GO=OK
```

Pressing GO reads the directory of the SCSI drive, causing the following display:

4

```
SCSI: DELETE SET
XXXXXXXXXX GO=OK
```

This page is used to delete the mix set (50 mixes) named XXXXXXXXX from the SCSI drive. The chain and MIDI setup associated with this mix set are also deleted. The mix set to be deleted is selected with the stepped encoder. When the GO switch is selected the following message appears:

4

```
SCSI: DELETING
XXXXXXXXXX
```

All samples that are not used in any mix outside the selected mix set are also deleted.

DELETE MIX FROM SCSI page:

4

```
SCSI: DELETE MIX
                GO=OK
```

Pressing GO reads the directory of the SCSI drive, causing the following display:

4

```
SCSI: YYYYYYYYYY
XXXXXXXXXX GO=OK
```

This page is used to delete the mix named XXXXXXXXX of mix set YYYYYYYYYY from the SCSI drive. The mix name is selected with the stepped encoder. When the GO switch is selected the following message appears:

4

```
SCSI: DELETED
XXXXXXXXXX
```

If a mix belonging to a mix set is deleted, the mix number at this step in the set will be replaced with an empty mix named BLANK MIX. No samples or drums are deleted.

DELETE DRUM FROM SCSI page:

4

```
SCSI: DELETE DRM
                GO=OK
```

Pressing GO reads the directory of the SCSI drive, causing the following display:

4

```
SCSI: YYYYYYYYYY
XXXXXXXXXX GO=OK
```

This page is used to delete the drum named XXXXXXXXX of mix set YYYYYYYYYY from the SCSI drive. The drum name is selected with the stepped encoder.

When the GO switch is selected the following message appears:

4 | SCSI: DELETED
XXXXXXXXXX

DELETE SAMPLE FROM SCSI page:

The DELETE SAMPLE FROM SCSI page works identically to the DELETE SAMPLE FROM DISK page.

DELETE CHAIN FROM SCSI page:

4 | SCSI: DEL CHAIN
GO = OK

Pressing GO reads the directory of the SCSI drive, causing the following display:

4 | SCSI: DEL CHAIN
XXXXXXXXXX GO = OK

This page is used to delete the chain of mix set XXXXXXXXX from the disk. The set name is selected with the stepped encoder. When the GO switch is selected, the following message appears:

4 | SCSI: CHAIN DATA
DELETED

DELETE MIDI SETTING FROM SCSI page:

4 | SCSI: DEL MIDI
GO = OK

Pressing GO reads the directory of the SCSI drive, causing the following display:

4 | SCSI: DEL MIDI
XXXXXXXXXX GO = OK

This page is used to delete the MIDI settings of set XXXXXXXXX from the disk. The set name is selected with the stepped encoder. When the GO switch is selected, the following message appears:

4 | SCSI: MIDI
SETTINGS DELETED

NAME DISK FUNCTION

The NAME DISK function is used to assign a sixteen letter name to a disk. A disk must be present in the drive when the function is selected. Selecting this function brings the following display:

5 | NAME DISK: GO = OK
XXXXXXXXXXXXXXXX

The cursor sits under the letter which is under edition. The cursor can be moved right or left with the and buttons, respectively (each letter position is a different page). The stepped encoder is used to scan through the alphabet for the currently underlined letter. When the desired name is displayed, it is entered (written to the disk) by selecting the GO button.

DISK INFO FUNCTION

A disk must be present in the drive in order to access this function or the "ERROR! INSERT DISKETTE" message will appear.

DISPLAY FREE MEMORY page:

6 | DISK FREE SPACE
GO = OK

This page allows entry into the display free memory page, after pressing GO, the following display appears:

6

```
FREE DISK SPACE
ZZZKWORDS   XXX%
```

Where ZZZZ is the free size in K words (1 word = 16 bits) and XXX is the percentage of free storage space available on the diskette.

DISPLAY NUMBER OF DISKS IN GROUP AND GROUP ID page:

6

```
DISK GROUP & ID
          GO=OK
```

This page allows entry into the display number of disks and group id page, after pressing GO, the following display appears:

6

```
DISK X OF Z
GROUP#YYYYY
```

Where X is the position number of the disk in the group and Z is the total number of disks in this group. YYYYY is a random ID number which was automatically assigned to this group when it was created. This last number may be useful to sort out miss matched disks of two groups with the same name.

DISK UTILITIES FUNCTION

FORMAT DISK page:

7

```
FORMAT DISK?
          GO=OK
```

This page is used to format a blank disk or to erase an already formatted disk. A disk must be present in the drive when the function is selected.

To avoid user error, the following message is displayed after the GO button is pressed:

7

```
THIS WILL ERASE
THE DISK ! GO=OK
```

The following message is displayed after the GO button is pressed:

7

```
** FORMATTING **
** TRACK# XX   **
```

Where XX is the current track being formatted.

BACK UP SCSI ON DISKS page:

7

```
BACKUP SCSI TO
DISKETTE? GO=OK
```

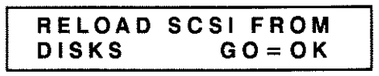
This page is used to copy the whole content of the device connected to the SCSI port on a number of disks. A device must be connected to the SCSI port in order to be able to select this page. After the GO button has been selected the following display appears:

7

```
THIS WILL TAKE
XXX DISKS! GO=OK
```

Where XXX is the number of disks required to store all the data present on the SCSI device. A disk must be in the drive when the GO button is pushed. The display will indicate to the user when to insert the following disks. The disks recorded during this operation do not have the same format as the disks created during normal ADD-two data storage, and they will be readable only for the reload SCSI from disks operation.

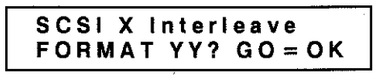
RELOAD SCSI FROM DISKS page:



This page is used to reload the SCSI device with data previously saved on disks by the backup SCSI to disk operation. The first disk of a sequence of backup disks must be in the disk drive and a device must be connected to the SCSI port in order to be able to select this page. After the GO button has been selected, the following display appears:

The reload operation will start after the GO button has been pushed. The display will indicate to the user when to insert the following disk.

FORMAT SCSI page:



This page is used to format a SCSI drive X (1-7) or to erase an already formatted SCSI drive. The "x" in the display will show the ID number (0-7) of the SCSI drive that is currently active. If more than one SCSI drive is connected, and it is desired to format a drive other than the ID displayed, see below for how to select another SCSI drive. The "yy" in the display will show the interleave factor from 01 to 16. When this page is first entered, the interleacve factor will be set at 07. To change the interleave, use the encoder. Pressing GO will begin the formatting process. The amount of time to format a SCSI drive is about 2 minutes, but will vary depending on the size and model of your SCSI drive. A SCSI drive must be present when the function is selected. To avoid error, the following message is displayed when the GO button is selected:

Pressing GO starts the formatting, and the display reads:

The display will return to the FORMAT SCSI page after formatting is complete.

SELECT SCSI FUNCTION

SELECT SCSI DEVICE page:

The select SCSI device page is used to select between multiple SCSI devices that may be connected to the SCSI port. The display reads:

Where X is the currently selected target. The stepped encoder can be used to select one of the up to seven SCSI devices. Only the number of devices currently connected can be selected. If only one device is connected, no change can be made on this page. The currently selected SCSI drive is the one that will be used by all SCSI functions in the DISK section.

The display will change to the following after the GO button is pressed:

Where X is the newly selected SCSI drive id#.

MODIFY ADD-two SCSI ID# page:

The MODIFY ADD-two SCSI ID# page is used to change the current ID# for communication thru the SCSI port. The default ADD-two SCSI ID number is 6 after power on, except there is a startup disk with an other ID# on it in the disk drive, during power up. The display reads:

8

```
MODIFY ADD-TWO
ID# X
```

Where X is the currently ID#. The stepped encoder can be used to select one of up to seven SCSI ID#'s. The ID# can only be changed to an unused ID#, any ID# currently assigned to a SCSI device will not be displayed for selection.

MASTER

The MASTER SECTION has 3 FUNCTIONS, each with the following pages:

FUNCTION **PAGES** **< <** **> >**

0 TUNE

Octave transposition
Semi tone transposition
Fine tune

1 PAD INPUT SETTINGS

Crosstalk rejection
Select pad input
Threshold
Mask time
Dynamics accuracy

2 PEDAL & SWITCH RESPONSES

Pedal 1 low trigger point
Pedal 1 low trigger amplitude
Pedal 1 low trigger dynamics
Pedal 1 high trigger point
Pedal 1 high trigger amplitude
Pedal 1 high trigger dynamics
Pedal 2 low trigger point
Pedal 2 low trigger amplitude
Pedal 2 low trigger dynamics

Pedal 2 high trigger point
Pedal 2 high trigger amplitude
Pedal 2 high trigger dynamics
Test switches volume

3 DYNAMICS CURVES

Select dynamic curve
Set curve's 1st point
Set curve's 2nd point
Set curve's 3rd point
Set curve's 4th point
Set curve's 5th point

4 MISC

Software version

TUNE FUNCTION

OCTAVE TRANSPOSITION page:

0

OCTAVE TRANSPOSE
+0

This page is used to adjust the overall octave transposition of the ADD-two. After power on, the default value is 0. The range is from -4 octaves to +3 octaves by octave increments. The current value can be modified with the encoder or with the numeric keypad while the FUNCTION/VALUE key is held down. In the last case, the +/- switch inverts the sign of the value.

SEMI TONE TRANSPOSITION page:

0

SEMITONE TRANS
+00

This page is used to adjust the overall chromatic tuning of the ADD-two. After power on, the default value is 00. The range is from -12 semi tones to +12 semi tones in semi tone increments. The current value can be modified with the encoder or with the numeric keypad while the FUNCTION/VALUE key is held down. In the last case, the +/- switch inverts the sign of the value.

FINE TUNE page:

0

FINE TUNE
+00

This page is used to adjust the overall fine tuning of the ADD- two. After power on the default value is 00. The range is from - 63 to +64 in 0.794 cent increments for a total range of +/- 1/4 tone. The current value can be modified with the encoder or with the numeric keypad while the FUNCTION/VALUE key is held down. In the last case, the +/- switch inverts the sign of the value.

PAD INPUT SETTINGS FUNCTION

CROSSTALK REJECTION page:

1

PAD CROSSTALK REJECTION: XX

This page displays the amount of crosstalk rejection to be applied to the pads. The higher the number, the more crosstalk will be masked. This control actually adjusts the relaxation time of the floating threshold that is reset each time a pad is retriggered, which determines how quickly large dynamic changes will be ignored. The range is from 0 to 50.

SELECT PAD INPUT page:

1

This page displays the threshold and mask time settings for the pad input Y. The stepped encoder can be used to select the desired pad.

THRESHOLD page:

1

This page is used to adjust the threshold for the currently selected pad input Y. The range is 0 to 50.

MASK TIME page:

1

This page is used to adjust the masking time for the currently selected pad input Y. The range is 0 to 50 in 20 ms increments.

DYNAMICS ACCURACY page:

1

This page is used to adjust the amount of delay after a trigger has passed the threshold in which the dynamic level will be calculated. Pads with a low rise time will need a higher number in order to have an accurate dynamic response. The range is from 0 (no delay) to 7 (9 milliseconds delay).

PEDAL RESPONSE FUNCTION

PEDAL 1 LOW TRIGGER POINT page:

2

This page sets the point of pedal 1's travel for which a trigger will occur. The value XX can be set from 0 to 50, which corresponds to a pedal input value ranging from minimum (0V) to half maximum (2.5V). A "PEDAL LOW TRIGGER" will be generated when the pedal value crosses the trigger point going downward. The amplitude of the trigger is proportional to the velocity of the pedal's downward motion.

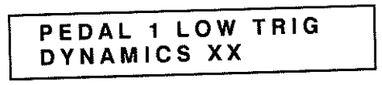
PEDAL 1 LOW TRIGGER AMPLITUDE page:

2

This page sets the amplitude of the low trigger. The range is 0 to 50.

PEDAL 1 LOW TRIGGER DYNAMICS page:

2



This page sets the dynamics of the low trigger. The range is 0 to 50. Increasing values increase the range of the trigger amplitude as a function of the pedal velocity. 0 means that the velocity of the pedal does not affect the trigger amplitude.

PEDAL 1 HIGH TRIGGER POINT page:

2

This page sets the point of pedal 1's travel for which a trigger will occur. The value XX can be set from 0 to 50 which corresponds to a pedal input value ranging from half maximum (2.5V) to maximum (5V). A "PEDAL

HIGH TRIGGER" will be generated when the pedal value crosses the trigger point going upward. The amplitude of the trigger is proportional to the velocity of the pedal's upward motion.

PEDAL 1 HIGH TRIGGER AMPLITUDE page:

2

```
PEDAL1 HIGH TRIG
AMPLITUDE XX
```

This page sets the amplitude of the high trigger. The range is 0 to 50.

PEDAL 1 HIGH TRIGGER DYNAMICS page:

2

```
PEDAL1 HIGH TRIG
DYNAMICS XX
```

This page sets the dynamics of the high trigger. The range is 0 to 50. Increasing values increase the range of the trigger amplitude as a function of the pedal velocity. 0 means that the velocity of the pedal does not affect the trigger amplitude.

PEDAL 2 pages:

These pages operate like the pedal 1 pages.

TEST SWITCHES VOLUME page:

2

```
TEST SWITCHES
VOLUME XXX
```

This page is used to setup the volume of the sound and the velocity value sent out to MIDI when the TEST switches are played. After power on, the default value is 100. The value will change to the set up stored on a disk if a load all or load MIDI is performed. The range is from 1 to 127. The current value can be modified with the encoder or with the numeric keypad while the FUNCTION/VALUE key is held down. This setting affects the 8 test switches simultaneously.

DYNAMICS CURVES FUNCTION

SELECT DYNAMICS CURVE page:

3

```
DYNAMICS CURVE Y
XX XX XX XX XX
```

This page displays the current settings of the selected tracking curve Y (Y = 1 through 8). The five values XX are the current setting of the five points of the tracking curve.

SET CURVE'S 1st THROUGH 5th POINT pages:

3

```
XX XX XX XX XX
```

These pages is used to set each of the five points for the currently selected tracking curve. The range for each point is 0 to 60.

MISC FUNCTION

SOFTWARE VERSION page:

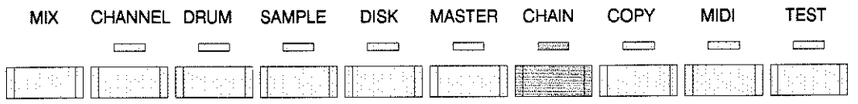
2

```
DYNACORD ADD-two
VERSION X.XX
```

This page displays the software version number currently installed in the ADD-two.

This page is intentionally left blank!

CHAIN SECTION



The functions and pages of the CHAIN section are:

FUNCTION **PAGES** **< <** **> >**

0 CHAIN ON/OFF

Chain ON/OFF

1 SET CHAIN

Set step number
Set MIX number

2 INSERT A STEP IN CHAIN

Select chain step number
Select MIX number to insert

3 DELETE A STEP

CHAIN ON/OFF FUNCTION

0

```
CHAIN MODE
OFF
```

The chain can be turned ON and OFF with the stepped encoder or the ON+/OFF- button. When the chain is ON, an incoming MIDI program number XX will be used as the step number in the chain, and the MIX number present at this step will be recalled on the ADD-two.

MIDI PROGR. CHANGE IN	000	001	002	003	004	005	...	123	124	125	126	127
CHAIN STEP	000	001	002	003	004	005	...	123	124	125	126	127
MIX NR.	03	33	13	21	29	01	...	50	43	32	45	49

MIX NR. FROM KEYPAD	03	33	13	21	29	01	...	50	43	32	45	49
MIDI PROGR. CHANG. OUT	000	001	002	003	004	005	...	123	124	125	126	127

Abb. 1 - Principle of the CHAIN MODE

Program 00 will address step 00 and program 127 will address step 127. Similarly, if a MIX number is recalled on the ADD-two front panel, this MIX number will be used as the step number in the chain and the number present at this step will be sent out as a MIDI program number.

SET CHAIN FUNCTION

SELECT STEP page:

1

```
SET CHAIN
STEP XXX MIX YY
```

The encoder (or keypad) can set the chain step number from 0 to 127. The number YY always shows the MIX number at the select step.

SELECT MIX NUMBER page:

1

```
SET CHAIN
STEP XXX MIX YY
```

The encoder (or keypad) can set the mix number from 0 to 50.

INSERT A STEP IN CHAIN FUNCTION

When this function is selected, the first page is always recalled.

SET INSERTION STEP page:

2

```
INSERT A STEP
AT STEP XXX
```

This page allows selection of the step number in which a mix is going to be inserted into the chain.

SET MIX NUMBER TO INSERT page:

2

```
INSERT MIX
NUMBER YY GO=OK
```

When GO is pushed, the program YY will be inserted at step XXX. All the further steps are incremented by one. Step 127 is lost if it has been programmed up to 127.

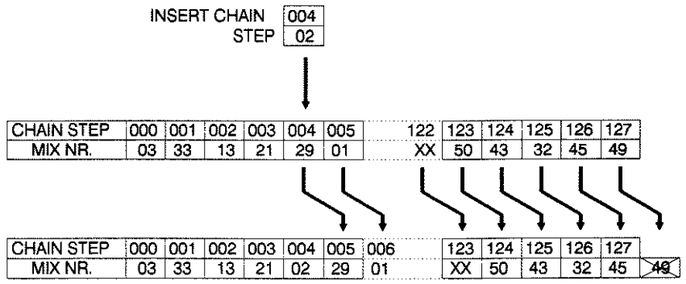


Abb. 2 - Description of INSERT A STEP IN CHAIN

DELETE A STEP FUNCTION

2

```
DELETE STEP XXX
GO=OK
```

This page allows selection of the step number to be deleted from the chain. When GO is pressed, the selected step is replaced with the mix number in step + 1, and all other mix numbers are moved down a step. Step 127 is set to mix 01.

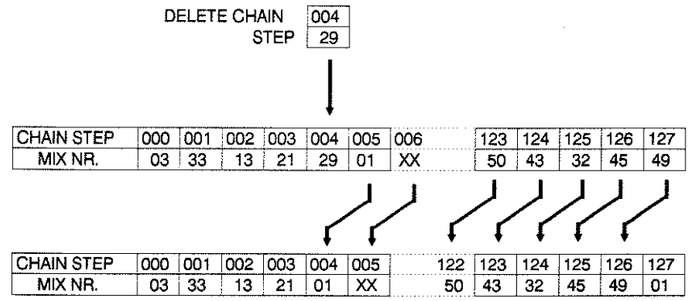
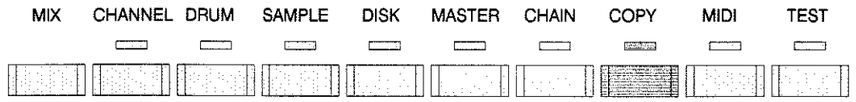


Abb. 3 - Description of DELETE A STEP

This page is intentionally left blank!

COPY SECTION



The functions and pages of the COPY section are:

FUNCTION **PAGES** < < > >

0 COPY MIX

From
To

1 COPY CHANNEL

From channel number
From mix number
To channel number
To mix number

2 COPY DRUM

From
To

3 COPY SAMPLE

From
To

COPY MIX FUNCTION

When this function is entered, the following page is always re-selected.

FROM page:

0

```
COPY MIX FROM XX
TO YY GO=OK
```

This page is used to copy a complete MIX setting (= 16 channels + the MIX name) from location XX to location YY. The source MIX XX is selected with the stepped encoder (or the keypad). The destination YY is set with the next page. The copy operation is started with the GO button.

TO page:

0

```
COPY MIX FROM XX
TO YY GO=OK
```

This page selects the destination for the previously selected MIX. The MIX at location YY is replaced by the MIX XX. The original MIX present in YY is lost. The copy operation is started with the GO button.

COPY CHANNEL FUNCTION

This function is used to copy a single channel of a mix to any other channel of any other mix. When this function is entered, the following page is always re-selected.

FROM CHANNEL page:

1

```
COPY CHANNEL X
OF MIX YY TO...
```

This page sets the source channel number from 1 through 16

FROM MIX page:

1

```
COPY CHANNEL X
OF MIX YY TO...
```

Sets the source MIX number from 0 through 50. The "TO..." indicates that the destination must be set with the following pages.

TO CHANNEL page:

1

```
...TO CHANNEL X
OF MIX YY  GO=OK
```

Select the destination channel number from 1 through 16

TO MIX page:

1

```
...TO CHANNEL X
OF MIX YY  GO=OK
```

Select the destination MIX number from 01 through 50. The transfer is started when the GO button is selected. The destination channel settings are then replaced with the source channel settings.

COPY DRUM FUNCTION

When this function is entered, the following page is always re-selected.

FROM page:

2

```
COPY DRUM
XXXXXXXXXX TO...
```

This page selects the sound to be copied. The sound's name is selected from the list of available sounds with the stepped encoder. The "TO... " indicates that the destination must be selected on the next page.

TO page:

2

```
COPY INTO DRUM
XXXXXXXXXX GO=OK
```

This page selects the destination of the previously selected sound. This name can be changed digit by digit before the sound is duplicated. The transfer is started when the GO button is selected. If the selected name is already used, the old sound with the selected name will be replaced by a copy of the selected sound. If the selected name is a new name, a copy of the selected sound will be made into a new sound with the new name.

COPY SAMPLE FUNCTION

When this function is entered, the first page is always re-selected.

FROM page:

3

```
COPY SAMPLE
XXXXXXXXXX TO...
```

This page selects the sample to be copied. The sample's name is selected with the stepped encoder. The "TO... " indicates that the destination must be selected on the next page.

TO page:

3

```
COPY INTO SAMPLE
XXXXXXXXXX GO=OK
```

This page selects the destination of the previously selected sample. The name of the new sample can be changed digit by digit before the sample is duplicated. The transfer is started when the GO button is selected. If the selected name is already used, the following display appears:

3

```
DUPLICATE SAMPLE
NAME. NOT COPIED
```

This display will appear for 3 seconds, and then the previous page will appear again. The sample will not be copied until a unique name is chosen and GO is pressed.

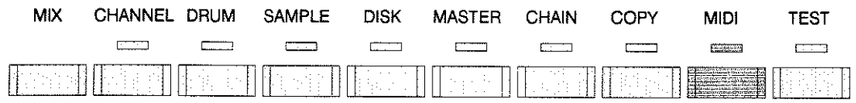
If there is not enough free memory to store the sample, the following display appears:

3

```
COPY ABORTED.NOT
ENOUGH MEMORY
```

This page is intentionally left blank!

MIDI SECTION



The functions and pages of the MIDI section are:

FUNCTION	PAGES << >>
0 BASIC CHANNEL	
	Select basic channel
1 PROGRAM CHANGE	
	ON/OFF
2 MIDI ECHO	
	ON/OFF
3 PAD ASSIGNMENT	
	Select pad number
	Assign pad's MIDI note
	Assign pad's MIDI channel
4 CONTROLLER ASSIGNEMENT	
	to controller A
	to controller B
	Controller number for pedal 1
	Pedal 1 low trigger MIDI note

Pedal 1 low trigger MIDI channel
Pedal 1 high trigger MIDI note
Pedal 1 high trigger MIDI channel
Controller number for pedal 2
Pedal 2 low trigger MIDI note
Pedal 2 low trigger MIDI channel
Pedal 2 high trigger MIDI note
Pedal 2 high trigger MIDI channel

5 DEFAULT CHANNEL

ON/OFF
Default MIDI channel for mix channel 1
Default MIDI channel for mix channel 2
Default MIDI channel for mix channel 3
Default MIDI channel for mix channel 4
Default MIDI channel for mix channel 5
Default MIDI channel for mix channel 6
Default MIDI channel for mix channel 7
Default MIDI channel for mix channel 8
Default MIDI channel for mix channel 9
Default MIDI channel for mix channel 10
Default MIDI channel for mix channel 11
Default MIDI channel for mix channel 12
Default MIDI channel for mix channel 13
Default MIDI channel for mix channel 14
Default MIDI channel for mix channel 15
Default MIDI channel for mix channel 16

6 SAMPLE DUMP

Request sample
Send sample

BASIC CHANNEL FUNCTION

0

```
MIDI BASIC
CHANNEL XX
```

This page sets the MIDI basic channel used for MIDI program change. The range is 1 through 16.

PROGRAM CHANGE ON/OFF FUNCTION

1

```
MIDI PROGRAM
CHANGE  OFF
```

This page enables or disables the program change MIDI commands for both transmit and receive.

MIDI ECHO ON/OFF FUNCTION

2

```
MIDI ECHO
OFF
```

This page enables or disables the MIDI echoing of MIDI input signals to the MIDI output.

PAD ASSIGNMENT FUNCTION

SELECT PAD NUMBER page:

3

```
PAD INPUT Y MIDI
NOTE: XXX CH: XX
```

This page displays the current MIDI setting of the selected pad number Y (FROM 1 through 8).

ASSIGN PAD'S MIDI NOTE page:

3

```
PAD INPUT Y MIDI
NOTE: XXX CH: XX
```

This page, and the following one, are used to assign a MIDI note number and channel for the selected pad input. This note will be transmitted on the selected MIDI channel every time this pad is played. Also, when this note is received on the same MIDI channel, this pad will be played. If the channel(s) using this pad also uses MIDI as a trigger input and if the the MIDI channel and range setting overlap with the pad setting, only the trigger originated by the pad setting will be played.

ASSIGN PAD'S MIDI CHANNEL page:

3

```
PAD INPUT Y MIDI
NOTE: XXX CH: XX
```

This page is used to assign a MIDI channel from 1 through 16 for the pad output and input MIDI setting.

CONTROLLERS FUNCTION

TO CONTROLLER A page:

4

```
CONTROLLER A IS
MIDI CONTROL XXX
```

This page is used to assign any of the continuous MIDI controllers to controller A from 0 to 121.

TO CONTROLLER B page:

Same as CONTROLLER A page.

CONTROLLER NUMBER FOR PEDAL 1 page:

4

```
PEDAL 1 ASSIGNED
TO MIDI CTRL XXX
```

This page is used to assign a MIDI controller number from 0 to 121 to the pedal 1 control. Pedal 1's position will be transmitted with this controller number and on the basic channel. MIDI controllers received with this number and on the basic channel will be treated in the ADD-two as pedal 1 but will not generate low and high trigger triggers. When the MIDI controller corresponding to pedal 1 is received, it is not summed with pedal 1, but instead, only the latest new value of the two sources is used. This last point avoids having the pedal current position influencing data coming from MIDI.

PEDAL 1 LOW TRIGGER MIDI NOTE page:

4

```
PEDAL 1 LOW TRIG
NOTE: XXX CH: XX
```

This page and the following one is used to assign a MIDI note number and channel to the trigger generated at the low position of pedal 1. The same note received on this channel will generate a pedal 1 low trigger.

PEDAL 1 LOW TRIGGER MIDI CHANNEL page:

4

```
PEDAL 1 LOW TRIG
NOTE: XXX CH: XX
```

This page selects on which MIDI channel the pedal 1 low trigger is sent and received.

PEDAL 1 HIGH TRIGGER MIDI NOTE page:

4

```
PEDAL1 HIGH TRIG
NOTE: XXX CH: XX
```

This page and the following one is used to assign a MIDI note number and channel to the trigger generated at the high position of pedal 1. The same note received on this channel will generate a pedal 1 high trigger.

PEDAL 1 HIGH TRIGGER MIDI CHANNEL page:

4

```
PEDAL1 HIGH TRIG
NOTE: XXX CH: XX
```

This page is used to select on which MIDI channel the pedal 1 high trigger is sent and received.

PEDAL 2 MIDI SETTINGS pages:

Same as PEDAL 1.

DEFAULT CHANNEL ON/OFF page:

4

```
DEFAULT CHANNEL
OFF
```

This page turns ON and OFF the default MIDI channel for the 16 MIX channels. With the default channel ON, the MIDI channels assigned to each MIX channel (in the CHANNEL MIDI SETTING function of the CHANNEL section) are overridden by the default MIDI channel settings. The default MIDI channel for each MIX channel is assigned with the following pages.

DEFAULT CHANNEL FOR MIX CHANNEL 1 through 16 pages:

4

```
DEFAULT MIDI FOR
MIX CHAN Y: XXXX
```

These pages are used to assign a default MIDI channel from 1 to 16 and OMNI (XXXX) to each of the 16 MIX channels (Y).

SAMPLE DUMP FUNCTION

REQUEST SAMPLE MODE page:

5

```
REQUEST SAMPLE
NORM ZZZZZ GO=OK
```

This page selects with the stepped encoder between NORM for normal MIDI sample dump mode, or S-900 for AKAI S-900 format sample dump.

REQUEST SAMPLE NUMBER page:

5

```
REQUEST SAMPLE
NORM ZZZZZ GO=OK
```

This page is used to select the sample number to be requested. When the GO button is selected from either of the above two pages, the sample numbered ZZZZZ is requested by the ADD-two from the sampler connected to the MIDI input. The relation between the sample number and the sample itself is determined by the machine originating the sample. The received sample is named NEW XX, with XX being the highest number for NEW samples. If no MIDI data is received after the GO button was selected, the display does not change. If MIDI data is sensed, the following message is displayed while the transfer takes place:

5

```
RECEIVING SAMPLE
```

Selecting any other page will abort the sample transfer. MIDI sample dumps can only be received while in one of the MIDI function 5 pages. If any of the other pages are selected before or during sample loading via MIDI, the sample will be ignored.

SEND SAMPLE page:

5

```
SEND SAMPLE ZZZZ
XXXXXXXXXX GO=OK
```

The encoder is used to select the name of the desired sample to send out MIDI, with the sample number to be sent out shown as ZZZZ. When the

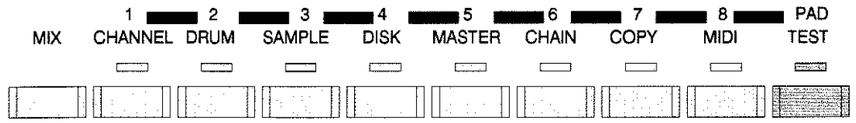
GO button is selected, the sample XXXXXXXXXX is send out MIDI. While the sample is being transmitted the display shows:

5

```
SENDING SAMPLE
OUT MIDI.....
```

Selecting any other page, function, or section will abort the transfer.

OTHER FUNCTIONS



PAD TRIGGER SWITCH

This switch can toggle ON (LED above lit) and OFF (LED off). When ON, the eight section switches from CHANNEL to CHAIN, become test trigger buttons for the eight pad inputs. In this mode, selecting a test trigger switch acts as if the corresponding pad would have been played. The strength of the strike can be set by function 2 of the master setting section. When a trigger switch, or its corresponding pad, is played, the LED above it blinks. When PAD TRIGGER is OFF, the LED above the section switches will still blink when the corresponding pad is played. In this case, if the LED is normally lit (= the corresponding section is selected), it will blink off when the pad is played.

MIDI IN LED

The MIDI IN LED is provided for monitoring the incoming MIDI signal. It will flash any time a valid MIDI note on or note off command is present on the MIDI input. If MIDI information is received on channels not in use by the ADD-two, or in a note range not used, the LED will not flash.

MUTE

When ON, the mute function turns OFF all audio outputs except the stereo headphones. While MUTE is active, the mute LED will be lit.

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MOUNTING INSTRUCTIONS FOR NRS 90149 (DRAM-Extension 2Mbyte)

SAFETY INSTRUCTIONS:

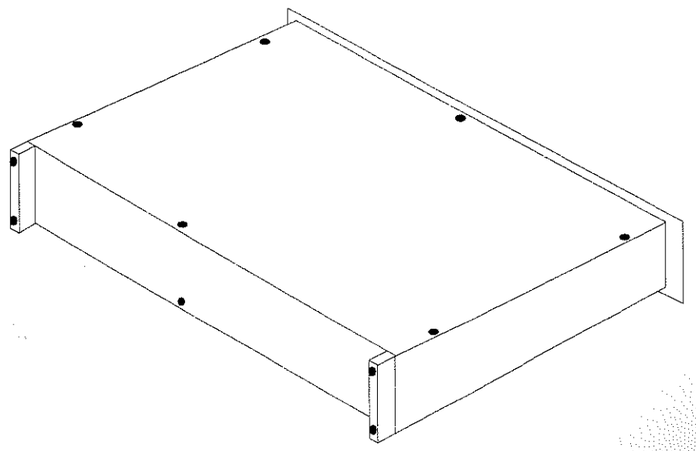
1. Pull power plug before opening the unit!
2. The product should be serviced only by qualified service personnel.
3. Please refer to the respective C-MOS handling precautions before mounting the extension board. Due to static discharge or electric fields it is possible to destroy circuit components on the board so that it will not work correct.

CONTENT OF NRS 90149:

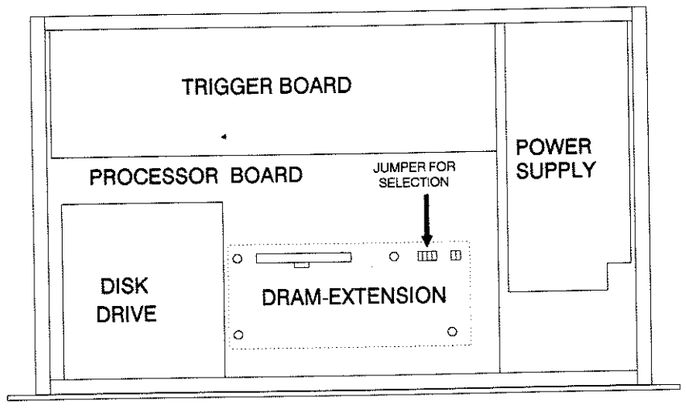
1 DRAM-Extension board including jumpers
4 screws M3 x 6 for pc-board mounting.
1 Mounting instructions

MOUNTING INSTRUCTIONS:

1. Pull power plug before opening.
2. Remove the cover. To do this it is nessecary to remove the six screws on the top side and the five screws on the rear panel. In the following drawing you can see all that screws which are marked with a black pad.



3. If you have removed the cover, you can see in the middle a 40ty pole female socket with a small termination board (80354) connected to it. Besides there are four studs where the D-RAM Extension board will be mounted with the delivered screws (M3 x 6 mm). Please remove that small termination board and connect it at the end of this session on the upper D-RAM Extension board.



4. Before you install the extension board you have to select the correct addresses with the included jumpers. This setting depends on the number of extension boards you have in your unit.

There are three possibilities which are shown in the following:

a. Mounting as the first extension.

Selection I

b. Mounting as the second extension.

Selection II

c. Mounting as the third extension.

Selection III

Please pay attention that the extension board have to be selected in the order I, II, III. The maximum number of extension boards is limited to three extension boards.

5. If you have selected the extension board(s) correct, you have to connect the boards from bottom to top and to screw each board with the four delivered screws (4 x M3 x 6).

6. On the upper extension board you have now to connect the small termination board (80354).

7. Please check all your steps carefully and if you are sure that all is well you have to mount the cover in reverse order.

CHECKING THE INSTALLED DRAM-EXTENSION BOARD(S).

1. Connect the unit to mains and switch the unit ON.
2. Push the MASTER button once.
3. Push the button number 4 once.
4. Push the left (<) and right (>) arrow buttons at the same time and hold them, then the FUNCTION/ VALUE button.
5. Push the button number 4 once.

The display reads:

```
TEST DRAM(ERASES
SAMPLES) GO=OK
```

6. After pushing the GO button the display reads:

```
RAM TEST X YYYYYH
ABORT WITH GO
```

X indicates which extension board will be tested at the moment and is in ascending order from bottom to top. YYYYY is the address in hex.

Please notice that due to the test the contents of the DRAM will be erased. The test will take about 7 minutes with all extensions installed. If the test is successful the following display apears:

```
SAMPLE RAM OK.
```

If there occurs an error, the faulty memory location will be displayed and the test will be terminated.

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SPECIFICATIONS

Display ..... 2 line, 16 letter back-lit LCD
Disk Drive..... 3 1/2 " HIGH DENSITY (2MB UNFORMATTED)
..... 3 1/2 " DOUBLE DENSITY
..... (reads AKAI™ S900 DISKETTES)
Dimensions..... 483 (W) x 88 (H) x 320 (D) mm, RACK MOUNT
Weight..... 5.7 kg /12.54 lbs
Mains voltage ..... 90 - 250 VAC without switching
Consumption ..... max. 30 VA
Sampling Rate ..... 44.1 kHz/22.05kHz switchable
Bandwidth..... 20Hz - 20kHz at 44.1kHz Sampling Rate
..... 20Hz - 10kHz at 22.05kHz Sampling Rate
Sampling time..... 22.778 s (44.1kHz Sampling Rate)
..... 45.557 s (22.05kHz Sampling Rate)
Built in RAM ..... 2 MBytes, expandable up to 8 MBytes in 2MB steps
Data format..... 16 Bit linear
Max. numb. of Samples 1000
Max. numb. of Drumss..... 100
Max. numb. of Mixes..... 50
Pitch shift ..... +3/-4 octaves, in steps of 0.794 cent
..... Interpolation with Custom Chip
Envelopes ..... 3 (ENV 1, ENV 2, ENV 3)

Frontpanel:

Sampling Input ..... 1/4 inch jack unbalanced
Input level ..... Gain 40dB,
..... Sensitivity switchable with push/pull switch
..... Mic (pull) .....-52 dBu
..... Line.....0 dBu
Headphone..... 1 x 1/4 inch jack stereo, 8 - 2000 Ohms
..... Output voltage .....5 V/600 Ohms

Rear panel:

Outputs ..... 2 x 1/4 inch jacks (L/R/MONO)
..... 6 x 1/4 inch jacks AUX(1 - 6)
..... Output level.....-3dBu
..... Output impedance..... 600 Ohm
Effect return ..... Adjustable
..... 2 x 1/4 inch jacks (L/R/MONO)
..... Max. Input level..... +20 dBu
..... Input impedance (MONO) 20kOhms
..... (STEREO) 47kOhms
MIDI..... IN/ OUT/ THRU
SCSI ..... 1 x 25 poles Sub-D female connector with screw-fastening
..... Thread: UNC
Ground Lift ..... Disconnects circuit ground from chassis
Pad inputs..... 8 x PAD (1-8)
..... Sensitivity switchable (LO/HI) .....1,2mV - 17Vs
REMOTE-Pad ..... Digital remote control for CHAIN
PEDAL 1/2..... controlable with FR 5.....0V - 5V
Optional ..... NRS 90149 (RAM-Extension 2MBytes)
..... 3 1/2 " blank High Density Diskettes
..... DYNACORD Sound library
..... REMOTE PAD
..... FOOT CONTROLLER FR 5

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MIDI - IMPLEMENTATION

MIDI-SEND

PROGRAM CHANGE - AxH	1100xxxx	x = Channel 0-15
	0nnnnnnn	n = Program number 0-50
MIDI SAMPLE DUMP HEADER		
SYSTEM EXCLUSIVE - F0H	11110000	
	01111110	7EH = Universal system exclusive
	0000xxxx	0x = Channel number
	0iiiiiii	* i = Sub ID $ - function
{* for Sub ID - funktion = $ 01		
	0sssssss	LSB of requested sound
	0sssssss	MSB of requested sound
	0bbbbbbb	Sample bit format (8, 12, or 16 bit)
	0rrrrrrr	LSB of sample rate
	0rrrrrrr	.....
	0rrrrrrr	MSB of sample rate
	0nnnnnnn	LSB number of sample words
	0nnnnnnn	.....
	0nnnnnnn	MSB of sample words
	0lllllll	LSB of loop start point
	0lllllll	.....
	0lllllll	MSB of loop start point
	0eeeeeee	LSB of loop end point
	0eeeeeee	.....
	0eeeeeee	MSB of loop end point
	0mmmmmmm	Loop mode (00H or 01H)
	*}	
{* for Sub ID-function = $ 02		
	0ddddddd	first data byte of 120
	.....	
	0ddddddd	last data byte
	0iiiiiii	Checksum (EXOR of data bytes)
	*}	
END SYSTEM EXCL. - F7H	11110111	EOX
* Sub ID $ functions	$ 01	Dump header
	$ 02	Data pakage
	$ 03	Dump request
	$ 7C	Wait
	$ 7D	Cancel
	$ 7E	Not acknowledge (NAK)
	$ 7F	Acknowledge (ACK)

MIDI RECEIVE RECOGNIZED

NOTE ON - 9xH	1001xxxx	x = Channel 0-15
	0kkkkkkk	k = Note 0-127
	0vvvvvv	v = velocity 1-127, 0 ignored
NOTE OFF - 8xH	1000xxxx	x = Channel 0-15
	0kkkkkkk	k = Note 0-127
	0vvvvvv	v = Release velocity 0-127
CHANNEL PRESSURE - CxH	1101xxxx	x = Channel 0-15
	0vvvvvv	v = 0-127
PROGRAM CHANGE - AxH	1100xxxx	
	0nnnnnnn	n = Program-number 0-127
CONTROLLERS - BxH	1011xxxx	x = Channel 0-15
	0ccccccc	c = Controller 0-121
	0vvvvvv	v = unsigned value 0-127
PITCH BEND- ExH	1110xxxx	x = Channel 0-15
	0yyyyyyy	y = LSB of pitch bend
	0zzzzzzz	z = MSB of pitch bend

SYSTEM EXCLUSIVE- F0H

MIDI SAMPLE DUMP STANDARD AND AKAI

SCSI OPERATION GUIDE

The purpose of this document is to try to explain the operation of the SCSI interface, and the manner in which files are handled within the ADD-two and how it stores these files to a SCSI drive.

CONNECTION

The ADD-two SCSI connector is a 25 pin D type connector. The pinout and connector type is identical to the Macintosh SCSI connector. Also, like the Macintosh, the ADD-two does not have any termation. Termination is required in order to have proper SCSI operation. Most SCSI drives have termination, so additional termination should not be necessary. If multiple devices are connected to the SCSI bus, no more than two terminations should be present, and the last device in the chain should preferably have termination.

Any combination of up to eight hard disks, ADS, ADS-K, or ADD-twos can be connected onto the SCSI bus. Only one hard disk is active at a time for each ADD-two. If only one hard disk is connected, it will automatically be selected as the active disk when the ADD-two is turned on. If multiple hard disks are connected, the disk with the highest identification number will be selected as the active disk. The way that communication functions between devices on the SCSI bus is by assigning an identification number to each device. The identification number can be from 0 to 7. Each device on the bus must have a unique identification number. The ADD-two defaults to ID #6. This means that a SCSI drive connected to the ADD-two should be any ID other than 6.

POWERING ON THE ADD-TWO AND THE SCSI DRIVE

In order for the ADD-two to recognize any SCSI drives connected to it, the drive must be operational when the ADD-two initializes the SCSI communications after being powered on. Many SCSI drives must be turned on for several seconds before they are able to communicate to the SCSI bus. For this reason, there is a delay built in to the ADD-two which will appear when the ADD-two is powered on if any SCSI devices are connected.

The display will read:

```
WAITING FOR SCSI
POWER-UP...
```

This display will remain for about 10 seconds. This delay should allow most SCSI drives to become ready for communication if the SCSI drive and the ADD-two are turned on at the same time. For drives that require a longer warm-up time, it is recommended that the SCSI drive be powered on before the ADD-two.

After the waiting period, the ADD-two display will change to the following:

```
INITIALIZING
SCSI
```

While this display is on, the ADD-two is checking for any possible SCSI drives that might be connected to it. During this display, any SCSI drives that are not powered on or have not completed their warm-up time will not be recognized by the ADD-two, and it will not be possible to use them without turning the ADD-two off and then on again in order for the SCSI drive to be properly recognized by the ADD-two. If more than one SCSI drive is connected to the ADD-two, the one with the highest ID number will be selected as the active drive.

After initializing the SCSI communications, the ADD-two will scan the active drive for a MIX SET with the name MIX SET 1. If it finds this set, it will be loaded automatically. This will be discussed in more detail in the SCSI MIX SET AUTOLOAD FEATURE section.

THE FIRST TIME YOU USE A SCSI DRIVE WITH THE ADD-TWO

Before a SCSI drive can be used with the ADD-two, it is necessary to format the drive. It is important to note that when formatting a SCSI drive, any information that is currently on it will be lost. Formatting a drive is like painting parking space lines in an empty parking lot. If there aren't any painted lines, no one will know where to park the cars. Without formatting the SCSI drive, the ADD-two doesn't know where to "park" the data. Each "parking place" for data on the drive is called a SECTOR. Each sector is given a number so that the ADD-two can keep track of where the data was put. One of the choices in formatting a disk is to determine the arrangement you wish to number these sectors. This is called INTERLEAVING. The advantage for choosing the INTERLEAVE FACTOR of a SCSI drive is that it can optimize the speed of the drive. The closer the drive is to the next sector the ADD-two want to read when it wants to read it, the faster the drive will work. The choices for interleave are from

01 to 16. The default interleave for the ADD-two is 07. This seems to work best for most SCSI drives. If it is desired to determine what is the best interleave factor for the drive you are using, it will be necessary to format the drive once for each interleave factor, and try saving and loading one long sample (22 seconds) for each interleave factor. If the sample can load back in less than 25 seconds, you have a good interleave factor selected. Some drives may be slow by design and not be able to load the sample this fast.

To format a SCSI drive, select DISK function 7 page 5 (press DISK, then 7, then four times). The display will read:

```
SCSI X Interleave
FORMAT YY? GO=OK
```

The "x" in the display will show the ID number (0-7) of the SCSI drive that is currently active. If more than one SCSI drive is connected, and it is desired to format a drive other than the ID displayed, see below for how to select another SCSI drive. The "yy" in the display will show the interleave factor from 01 to 16. When this page is first entered, the interleacve factor will be set at 07. To change the interleave, use the encoder. Pressing GO will begin the formatting process. The amount of time to format a SCSI drive is about 2 minutes, but will vary depending on the size and model of your SCSI drive.

SELECTING MULTIPLE SCSI DRIVES FROM THE ADD-two

To change the selected SCSI drive number (the highest ID number when powered on) to another SCSI drive connected to the ADD-two, select the DISK function 8 page 1 (press DISK, then 8). The display will read:

```
SELECT SCSI
DRIVE X  GO=OK
```

The "x" in the display will show the ID number of the currently selected SCSI drive. If additional drives are connected to the ADD-two, the encoder can be used to select the desired ID number. Only the numbers that are assigned to connected drives will be able to be selected with the encoder. To initiate the new drive selection, press the GO button.

The display will now read:

```
CURRENT SCSI
DRIVE IS NOW x
```

This display will remain until a new page is selected. If the newly selected SCSI drive is not formatted, the display will prompt you to format the drive before using it.

AUTOMATICALLY CHANGING THE ADD-two SCSI ID

The ADD-two automatically assigns itself the ID #6 when first powered up. It is recommended that connected disks be assigned to IDs other than 6. To change the ADD-two's ID number, select DISK function 8 page 2 (press DISK, then 8, then). The display will read:

```
MODIFY ADD-TWO
ID#6
```

The encoder can now be used to select an ID other than 6. The display will only allow you to select IDs that are not currently being used by other devices connected to the SCSI bus. When using multiple ADD-two connected via SCSI, it will be necessary to change the ID each time the ADD-two are turned on. An easier procedure is to create a startup floppy disk that will automatically select the desired ID number. when a SAVE ALL operation is performed on a floppy disk, it save all used MIXes, SOUNDs, and SAMPLEs, as well as the CHAIN and MIDI settings. In addition, the current MIX SET NAME will be discussed in the next section. These two parameters do not have any use for the floppy, but can be used for automating some SCSI functions. WHen the ADD-two is first turned on, it will look at the floppy drive to determine if a disk is present that contains data and is not of a multiple disk set. If these conditions are met, the floppy will be loaded before initializing any SCSI devices. This means that if a disk is created when the ID is set to something other than 6,and this disk is inserted before turning on the ADD-two, the ADD-two'ID number will automatically be changed before accessing any SCSI devices.

Any disk can be used as a start up disk, as long as all of the data is contained in one disk (not a multiple disk set). The simplest way of creating a start up disk is as follows:

1) Power on the ADD-two

2) Change the ADD-two SCSI ID to be desired value (DISK function 8 page 2)

3) Change the MIX SET NAME if desired (MIX function 98 pages 1-10)

4) Insert a blank of formatted diskette

5) Select the SAVE ALL to disk page (Disk function 2 page 1)

6) Press GO when prompted to save the data on disk

Be leaving this disk in the ADD-two'disk drive each time the power is turned on, the SCSI ID number will be changed automatically.

NOTE: The SCSI ID is stored with the MIDI data on the floppy disk. This means that any time a SAVE ALL or SAVE MIDI is performed, the current ADD-two SCSI ID will be saved on disk. This information can only be loaded from the floppy disk if it is inserted when the power is turned on, and the it is a one disk set. Performing a LOAD ALL or a LOAD MIDI from either disk or a SCSI drive will NOT change the ADD-two'SCSI ID. This insures that the ID won't be accidentally changed by loading a disk with a different ID stored than is currently selected.

SCSI MIX SET AUTOLOAD FEATURE

When the ADD-two is first turned on, and no floppy disk is inserted, the ADD-two will search the SCSI drive with the highest ID for the mix set with the name MIX SET 1. If this set exists, it will automatically load this mix set into memory. If MIX SET 1 is not found, nothing will be loaded from the SCSI drive until the user chooses to do so. If it is desired for the ADD-two to load a mix set other than MIX SET 1, a start up disk can be created as described in the previous section. The MIX SET NAME that is saved on a floppy disk will be the MIX SET NAME that the ADD-two will look for on the SCSI drive if ith floppy disk is inserted when power is first turned on. Follow the procedure descrided in the previous section for instrucions on how to create a start up disk.

WHAT IS STORED ON A SCSI DRIVE

First of all,there are many different kinds of data that can be stored on the SCSI drive. For the ADD-two, they are: MIX, DRUM, CHAIN, MIDI, and SAMPLE. The only compatible file format between the ADS/ADS-K and the ADD-two is SAMPLE. This means that there are nine file types that can be stored. Files that are not specifically for the connected machine (i.e., ADS-files on a SCSI drive connected to a ADD-two) will not be seen in the display, since they cannot be loaded into the machine. All of this is also true when saving or loading data from floppy disk. The only differences are that floppy disks have a disk name, and the ADD-two SCSI ID number is not stored on a SCSI drive with the MIDI data.

The type of file stored on the SCSI drive is not dependent on where it is stored on the drive, but simply by a file type that is stored with the data.

In order to make the best use of the space on the drive, this means that the order of the files may change depending on whether there became available a space in the middle of the drive to store new information (if, for example, a file was erased or replaced).

The file types MIX, DRUM, CHAIN, and MIDI all have a mix set name associated with them. This means that they are grouped together with a common name in order to facilitate easy loading of a group of files. When a SAVE SET TO SCSI command is executed by the user (DISK function 3 page 1), the current mix set name (MIX function 98 page 1-10) is attached to each MIX, DRUM name, as well as the CHAIN and MIDI data. Only one set of CHAIN and MIDI data can exist per MIX SET. Up to fifty MIXes and 100 DRUMs can exist within one MIX SET. When it is desired to load this set of data back into the ADD-two, the LOAD SET FROM SCSI function is executed (DISK function 1 page 1) after selecting the desired mix set name to load.

So far, we have not mentioned SAMPLEs. This is because samples are handled differently than the rest of the file types. Since samples take up the largest amount of disk space, and since it is likely that you will use the same samples in more than one mix set, all samples are stored together and can be used by any mix set. When loading a mix set, the ADD-two looks at the names of all samples used in the MIXes and DRUMs and loads these samples. This way, for example, if five different mix sets use the same set of snare samples, it is not necessary for the ADD-two to waste the space on the disk for storing the samples five times. One important thing to remember about this feature is that it requires that ALL samples have a unique name. If a new sample is created that has the same name as a sample on the SCSI drive, and the user tries to save this sample via the SAVE SAMPLE TO SCSI function (Disk function 3 page 6), the display will ask if it is desired to replace the existing sample that is on the drive. In other words, the ADD-two will not allow multiple samples to exist on one drive with the same name. This is not a problem for MIXes, or DRUMs, since they are divided into groups by their mix set names. If two drums from different mix sets have the same name, they can still be differentiated by their mix set name.

When saving a MIX SET to SCSI (DISK function 3 page 1), any samples that are in memory will replace any samples that are on the SCSI drive that have the same name. This means that it is possible to inadvertently erase a sample from the SCSI drive if a different sample is given the same name. For this reason it is important that all samples be given a unique name. Usually, the best method of insuring that this problem wont't occur is to make each sample's name as descriptive as possible. For example, "PIANO S C4" as opposed to just "C4" would reduce the chance of errors down the road.

When deleting a mix set from a SCSI drive (DISK function 4 page 5), only the files accociated with the selected mix set name will be deleted. Since samples could be used in other mix sets, no samples are ever deleted when deleting a mix set. The only way that samples can be deleted from

the SCSI drive is with the delete sample function (DISK funktion 4 page 8) This insures that samples wont't be erased that are used in other mix sets.

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337 055