X3

MUSIC WORKSTATION

Getting Started &
Tutorial Guide

GENERAL
MIDI
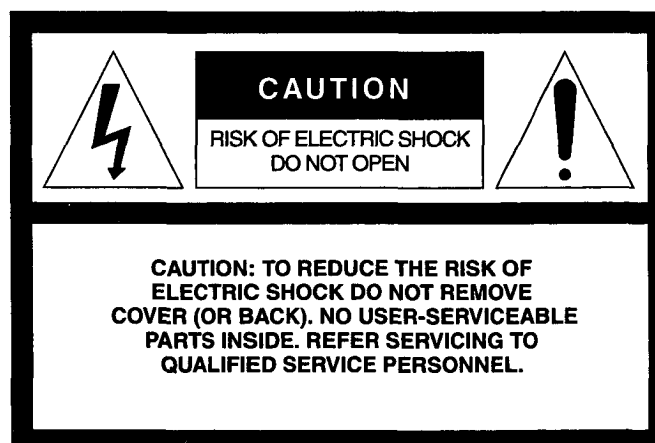**INSTRUMENT**

AI² Synthesis System

KORG

Ⓔ ③

IMPORTANT SAFETY INSTRUCTIONS

WARNING — When using electrical products, basic precautions should be followed, including the following:

1. Read all the instructions before using the product.

2. Do not use this product near water — for example, near a bathtub, washbowl, kitchen sink, in a wet basement, or near a swimming pool, or the like.

3. This product should be used only with the cart or stand that is recommended by the manufacturer.

4. This product, either alone or in combination with an amplifier and headphones or speakers, may cause permanent hearing loss. Do not operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.

5. The product should be located so that its location or position does not interfere with its proper ventilation.

6. The product should be located away from heat sources such as radiators, heat registers, or other products that produce heat.

7. The product should be connected to a power supply of the type described in the operating instructions or as marked on the product.

8. The power-supply cord of the product should be unplugged from the outlet when left unused for a long period of time.

9. Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

10. The product should be serviced by qualified personnel when:

    A. The power-supply cord or the plug has been damaged; or

    B. Objects have fallen, or liquid has been spilled into the product; or

    C. The product has been exposed to rain; or

    D. The product does not appear to operate normally or exhibits a marked change in performance; or

    E. The product has been dropped, or the enclosure damaged.

11. Do not attempt to service the product beyond that described in the user-maintenance instructions. All other servicing should be referred to qualified service personnel.

SAVE THESE INSTRUCTIONS

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

**CAUTION: TO REDUCE THE RISK OF
ELECTRIC SHOCK DO NOT REMOVE
COVER (OR BACK). NO USER-SERVICEABLE
PARTS INSIDE. REFER SERVICING TO
QUALIFIED SERVICE PERSONNEL.**

The lightning flash with the arrowhead symbol within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

GROUNDING INSTRUCTIONS

This product must be grounded (earthed). If it should malfunction or breakdown, grounding a path of least resistance for electric current to reduce the risk of electric shock. This product is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with the local codes and ordinances.

DANGER – Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the product is properly grounded. Do not modify the plug provided with the product – if it will not fit the outlet, have a proper outlet fitted.

THE FCC REGULATION WARNING

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause interference to radio and television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

* Reorientate the receiving antenna.
* Relocate the equipment with respect to the receiver.
* Move the equipment away from the receiver.
* Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock No. 004-000-00345-4.

CANADA

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Table of Contents

Introduction

Welcome to the X3

Thank you for purchasing a Korg X3 Music Workstation, and welcome to the exciting world of AI^2 Synthesis.

Unpacking Your X3

The following items should be enclosed with your X3. Make sure that you have them all.

*   *Getting Started & Tutorial Guide*
*   *Operating Manual*
*   *Performance Notes*
*   X3 data floppy disk
*   Power cable
*   Guarantee Card

Keep the packaging materials for when you want to transport the X3 in the future.

X3 Manuals

The X3 is supplied with two manuals: this *Getting Started & Tutorial Guide* and a *Operating Manual*.

This *Getting Started & Tutorial Guide* explains how to set up, switch on, and play the X3. Using a tutorial style format, it also introduces some of the X3 functions. Use this guide first, then when you want to know the full details, refer to the *Operating Manual*.
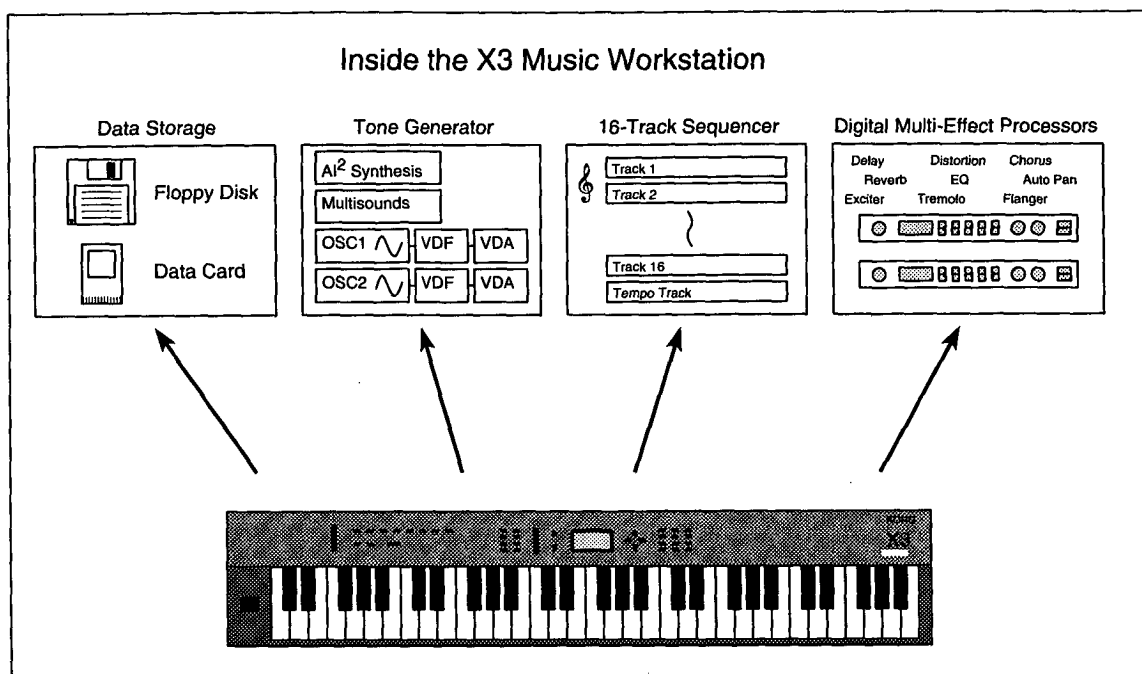
The *Operating Manual* contains full details about all the X3's functions. It also contains an index that will help you to locate information quickly.

X3 Features

*   Korg's AI^2 Synthesis technology
*   340 multi-sampled PCM Multisounds
*   336 internal Programs
*   200 internal Combinations
*   114 drum and percussion sounds
*   32-note polyphony in Single Program mode, 16-note polyphony in Double Program mode
*   Two digital multi-effect processors, each with 47 effect types, and dynamic modulation
*   16-track sequencer: 10 songs, 100 patterns, 32,000 event capacity, powerful editing functions
*   Editable Program and Combination parameters while playing
*   GM (General MIDI) compatibility
*   3.5 inch floppy disk drive for data storage
*   Read and write SMF (Standard MIDI Files)
*   MIDI Exclusive data recorder function
*   PROG/SEQ (RAM) card slot for Programs, Combinations, and sequencer data
*   PCM data (ROM) card slot for adding more Multisounds and drum sounds
*   All data, including sequencer data, is stored when the X3 is powered off.

What is the X3

The following diagram shows the basic parts that make up the X3 Music Workstation:

Inside the X3 Music Workstation

Data Storage	Tone Generator	16-Track Sequencer	Digital Multi-Effect Processors

Floppy Disk

Data Card

AI² Synthesis

Multisounds

OSC1 — VDF — VDA

OSC2 — VDF — VDA

Track 1

Track 2

Track 16

Tempo Track

Delay   Distortion   Chorus
Reverb   EQ   Auto Pan
Exciter   Tremolo   Flanger

X3 Architecture

AI² Synthesis Technology: this is a technique developed by Korg for capturing the true essence of acoustic sounds for use in a tone generator.

Multisounds: these are the basic sound elements. The X3 contains 340 Multisounds, and more can be added by using optional PCM data cards. Internal Multisounds and drum sounds are stored in 6MB ROM.

Programs: can use one or two oscillators, Single mode and Double mode respectively. Each oscillator is assigned a Multisound, and has an independent VDA (Variable Digital Amplifier) and VDF (Variable Digital Filter). Oscillators share a common pitch EG (Envelope Generator) and VDF modulator. Programs are output on four buses (A, B, C, D) that feed multi-effects 1 and 2.

The X3 contains 336 Programs: 100 in bank A, 100 in bank B, and 136 in bank GM. More Programs can be added using optional PROG/SEQ data cards.

Combinations: can use up to eight Timbres. Each Timbre is assigned a Program, MIDI Channel, etc. Combinations are ideal for layering Programs and multi-timbral type sequencing. Timbres can be assigned to specific areas of the keyboard for split type Combinations, and to specific note velocities for velocity cross over type Combinations. Combinations are output on four buses (A, B, C, D) that feed multi-effects 1 and 2. These settings can be made for each Timbre individually.

EXT mode Timbres allow Programs, voices, patches, etc. on other MIDI instruments to be used as part of a Combination. MIDI Program change messages can be sent to those instruments when the Combination is selected. The X3 contains 200 Combinations: 100 in bank A, and 100 in bank B. More Combinations can be added using optional PROG/SEQ data cards.

Drum Kits: the X3 contains 164 drums sounds. More can be added by using optional PCM data cards that contain drum sounds. Drum sounds are arranged into 8 ROM kits and 4 user kits. Each drum kit contains 60 indexes, with one drum sound assigned to each index. Extra drum kits can be stored on a PROG/SEQ data card. Level, pan, tuning, and decay parameters can be set individually for each index in a kit.

Sequencer

The X3 contains a 16-track sequencer with a maximum event (note, etc.) capacity of 32,000. Up to 10 songs and 100 patterns can be held in memory simultaneously. Up to 999 measures can be contained. Each track is assigned a Program, MIDI Channel, etc. A tempo track is provided for entering tempo changes. Tracks and patterns can be recorded in real time and step time. Patterns can also be created by copying a specified section of a track. Patterns can be copied or put into tracks. EXT mode tracks can be used to control other MIDI instruments.

Songs are output on four buses (A, B, C, D) that feed multi-effects 1 and 2.

Digital Multi-Effect Processors

The X3 contains two digital multi-effect processors that can produce effects such as reverb, delay, chorus, flanger, distortion, EQ, auto pan, exciter, etc. Effects 1 to 37 are single effects, 38 and 39 are serial effects, and 40 to 47 are parallel effects. The parallel type effects allow up to four independent effects simultaneously.

Each Program, Combination, and song can have its own effect settings. When a Program is used as part of a Combination or song, its own effect settings are ignored, and effect settings for that particular Combination or song are used.

Floppy Disk Drive

An internal 3.5 inch 2DD floppy disk drive provides a convenient way to store your Programs, Combinations, sequencer songs and patterns. In addition, MIDI Exclusive data from other MIDI devices can be stored and loaded via the disk drive, just like a MIDI data filer. The X3 floppy disk format is compatible with the MS-DOS 720KB format, making it easy to exchange SMF (Standard MIDI File) data, etc., with other users.

General MIDI

GM (General MIDI) is being implemented by a number of manufacturers. Among other things, it states that a GM compatible tone generator must have 128 specific programs, be able to produce at least 24 notes simultaneously, use MIDI Channel 10 for drums and percussion, etc. The main reason for GM is to improve song file compatibility between different music systems. GM is also becoming popular for computer based multimedia systems.

In sequencer mode, you can play and record GM compatible songs. Therefore, you should be able to swap song files with other GM compatible musicians – with ease.

The GM standard does not specify effect types, tone generator architecture, or sound generation processes, so song files produced using other tone generators will not sound exactly the same on the X3. If you are depending on GM compatibility, create a few sample song files to check compatibility with the system that you hope to exchange data.

See "Playing GM Songs" on page 27 for more details.

SMF (Standard MIDI Files)

SMF allows you to transfer song data between sequencing systems. Most recent software and hardware sequencers use SMF.

These files come in three formats: Format 0, Format 1, and Format 2. The X3 conforms to formats 0 and 1. In format 0, data of all tracks is merged onto one track and saved to floppy disk. In format 1, data is saved on individual tracks. Format 1 is more common.

SMF data does not necessarily conform to the GM standard, however, SMF is a useful way of transferring song data between GM compatible music systems.

X3 Memory Banks

The following table shows how the X3 memory banks are organized.

Bank A	Bank B	Bank GM (ROM)	Bank C (PROG/SEQ Card)	Bank D (PROG/SEQ Card)
100 Programs	100 Programs	136 Programs	100 Programs	100 Programs
100 Combinations	100 Combinations	—	100 Combinations	100 Combinations
Drum kits A1 and A2	Drum kits B1 and B2	ROM Drum kits1 ~ 8	Drum kits C1 and C2	Drum kits D1 and D2
Global setup data				

Note that PROG/SEQ data card bank C or D can alternatively be used to store sequencer data. See "PROG/SEQ Data Cards" on page 189 of the *Operating Manual.*

Output Routing

The following diagram shows how Programs, Combinations, and songs are output. Panpot, Send C, and Send D parameters can be set individually for each Program oscillator, Combination, and song track. The four output buses A, B, C, and D are fed to the two multi-effect processors, and subsequently mixed down to the L/MONO and R outputs. The buses can be routed through the effects processors in four different ways, called placements. See "Effect Placement – 7E" on page 53 of the *Operating Manual* for details about effect placements.
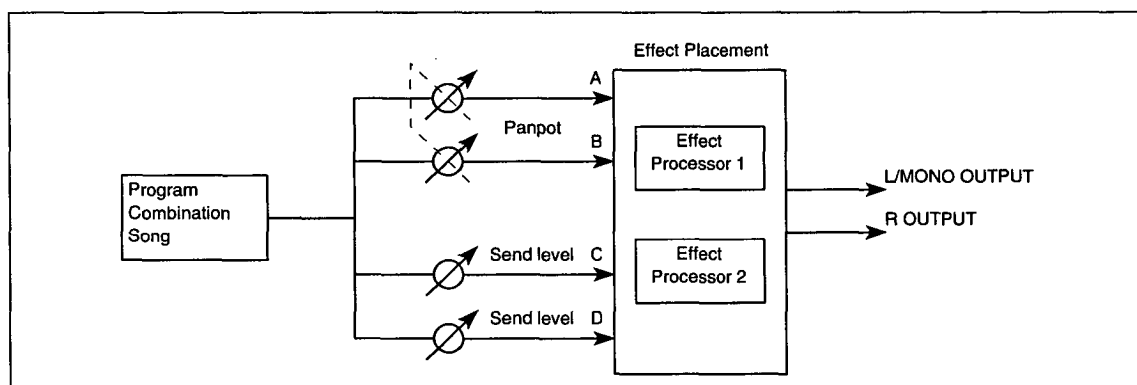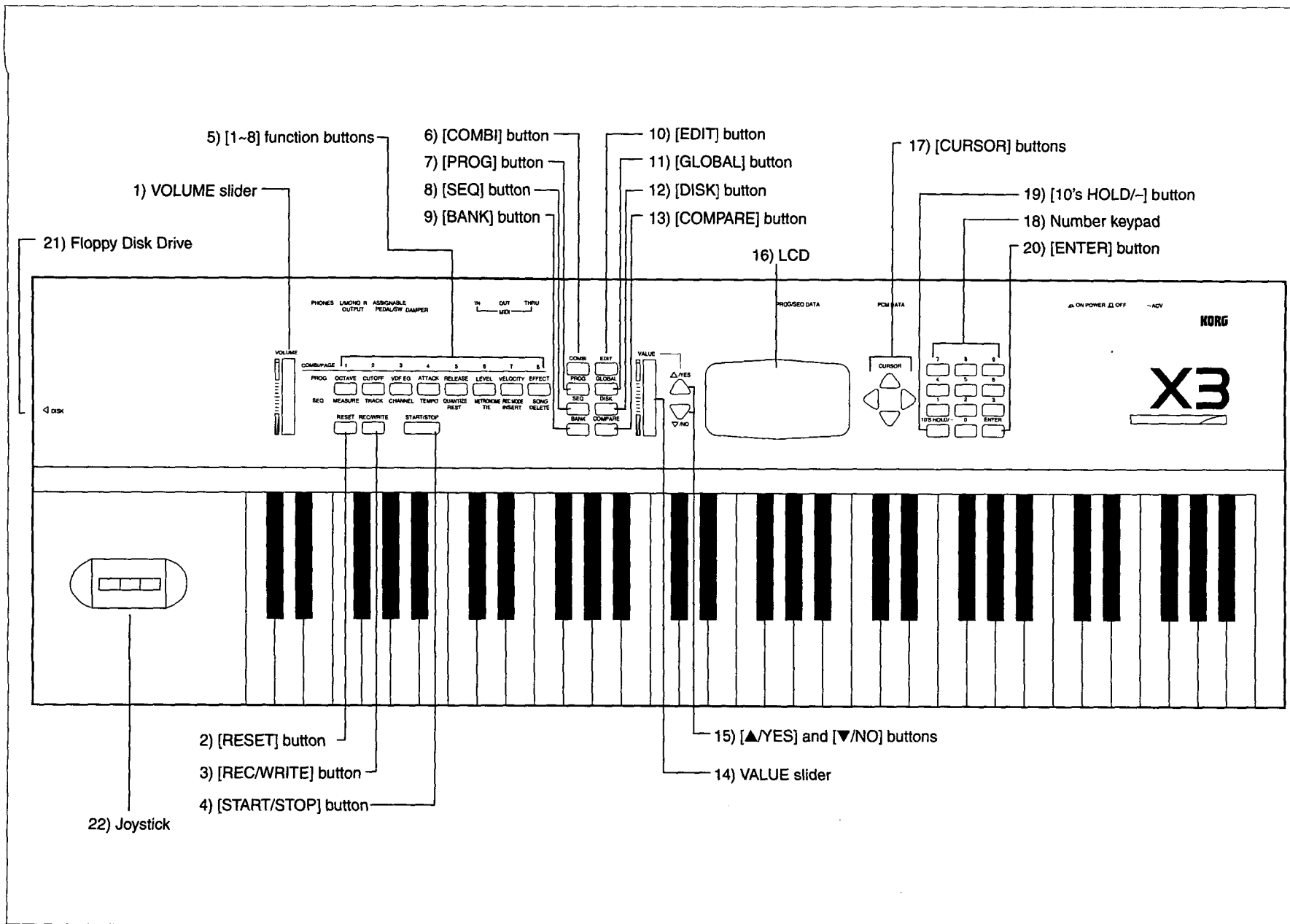

X3 Modes

The following table lists the X3 operating modes and gives a brief explanation what you can do in each mode:

Modes	Purpose
Program Play mode	Play and select Programs, edit some parameters.
Program Edit mode	Edit all Program parameters, set up Program effects, write Programs to memory.
Combination Play mode	Play and select Combinations and edit some parameters.
Combination Edit mode	Edit all Combination parameters, set up Combination effects, write Combinations to memory.
Sequencer mode	Play back songs and record in real time.
Sequencer Edit mode	Record in step time, record patterns in real time and step time, set up song effects, edit tracks, patterns, etc.
Global mode	Set parameters that change the overall performance of the X3 such as the Global MIDI Channel, master tune, transpose, MIDI filters, memory protection, save and load data to a PROG/SEQ data card, set up the drum kits, assignable pedal, etc.
Disk mode	Save and load X3 data to floppy disk, save and load MIDI Exclusive data, save and load SMF (Standard MIDI Files), delete disk files, rename disk files, etc.

5) [1~8] function buttons

6) [COMBI] button

7) [PROG] button

8) [SEQ] button

9) [BANK] button

10) [EDIT] button

11) [GLOBAL] button

12) [DISK] button

13) [COMPARE] button

1) VOLUME slider

21) Floppy Disk Drive

16) LCD

17) [CURSOR] buttons

19) [10's HOLD/–] button

18) Number keypad

20) [ENTER] button

2) [RESET] button

3) [REC/WRITE] button

4) [START/STOP] button

22) Joystick

15) [▲/YES] and [▼/NO] buttons

14) VALUE slider

1) VOLUME slider

This slider controls the output volume of the X3. It also controls the headphone volume.

2) [RESET] button

This button works in Sequencer mode and Sequencer Edit mode. When the sequencer is stopped, pressing this button will return the song to the beginning. If, for some reason, the sound being produced cannot be stopped, press this button.

3) [REC/WRITE] button

The operation of this button depends on the selected mode:

Sequencer and Sequencer Edit Modes: pressing this button will engage Record Ready mode, and REC will appear on the LCD screen. To cancel Record Ready mode, press again. To start recording, press the [START/STOP] button.

Program, Program Edit, Combination, Combination Edit Modes: pressing this button allows you to write the current Program or Combination to memory.

4) [START/STOP] button

This button works in Sequencer mode and Sequencer Edit mode. It is used to start and stop song playback and recording.

5) [1~8] function buttons

The operation of these buttons depends on the selected mode.

Current Mode	Operation
Program Play Mode	Select the various parameters that can be edited in Program Play mode. See "Editing in Program Play Mode" on page 4 of the *Operating Manual.* White text on front panel.
Program Edit Mode	Select LCD screen groups for parameters and functions in Program Edit mode. See "Program Edit Mode" on page 6 of the *Operating Manual.*
Combination Play Mode	Select a Timbre from 1 to 8 for editing in Combination Play mode. See "Editing in Combination Play Mode" on page 34 of the *Operating Manual.* Blue text on front panel.
	Individual Timbres can be soled by double clicking on the corresponding button. See "Soloing Individual Timbres" on page 35 of the *Operating Manual.*
Combination Edit Mode	Select LCD screen groups for parameters and functions in Combination Edit mode. See "Combination Edit Mode" on page 36 of the *Operating Manual.*
Sequencer Mode	Select the various parameters for playing and recording songs. See "Sequencer Mode" on page 83 of the *Operating Manual.*
	Function button 2 can be used to solo the currently selected track. See "Soloing Individual Tracks" on page 88 of the *Operating Manual.* Green text on front panel.
Sequencer Edit Mode	Select LCD screen groups for parameters and functions in Sequencer Edit mode. See "Sequencer Edit Mode" on page 103 of the *Operating Manual.*
	For step-time recording event edit, function buttons 5, 6, 7, 8 are used to enter rests, ties, notes, and delete notes, respectively.
Global Mode	Select LCD screen groups for parameters and functions in Global mode. See "Global Mode" on page 149 of the *Operating Manual.*
Disk Mode	Select LCD screen groups for parameters and functions in Disk mode. See "Disk Mode" on page 168 of the *Operating Manual.*

Powering on the X3 while pressing the [SEQ] button and function button [8] will erase all sequencer data and initialize all parameters. Make sure that you save your important data to either floppy disk or card beforehand. See "Erase All Sequencer Data" on page 88 of the *Operating Manual.*

6) [COMBI] button

Press this button to select Combination Play mode.

7) [PROG] button

Press this button to select Program Play mode.

8) **[SEQ] button**

Press this button to select Sequencer mode.

Powering on the X3 while pressing the [SEQ] button and function button [8] will erase all sequencer data and initialize all parameters. Make sure that you save your important data to either floppy disk or card beforehand. See "Erase All Sequencer Data" on page 88 of the *Operating Manual*.

9) **[BANK] button**

Press this button to select banks in Program Play mode (A, B, GM) and Combination Play mode (A, B), and songs on a SEQ/PROG data card in Sequencer mode.

10) **[EDIT] button**

Press this button to enter the corresponding edit mode for the current mode. For example, to select Program Edit mode, first select Program Play mode by pressing the [PROG] button, then press the [EDIT] button.

11) **[GLOBAL] button**

Press this button to select Global mode.

12) **[DISK] button**

Press this button to select Disk mode.

13) **[COMPARE] button**

Pressing this button allows you to compare the Program or Combination that you are currently editing with the original, COMPARE will appear on the LCD screen. Press the button again to return to the version you are editing, COMPARE will disappear. If you edit any parameters while the word COMPARE is shown on the LCD, you will not be able to return to that version.

14) **VALUE slider**

This slider is used set parameter values and select parameter options.

15) **[▲/YES] and [▼/NO] buttons**

In Program Play mode and Combination Play mode, these buttons allow you to select Programs and Combinations respectively.

Like the VALUE slider, these buttons can be used to set parameter values and select parameter options. Press the [▲/YES] to increase values, and the [▼/NO] button to decrease them. Pressing and holding either button will change the selected parameter value rapidly.

By pressing both buttons simultaneously, you can reset the parameter to its original value, that is, the value before you edited it.

These buttons are also used when the X3 requires a yes or no answer from you. For example, when the message "Are You Sure?" appears, press the [▲/YES] button to continue, or the [▼/NO] button to cancel the function.

16) **LCD**

This large, clear, easy to read visual interface displays the current mode and any parameters related to that mode.

17) **[CURSOR] buttons**

These buttons are used to move the cursor around the LCD and select parameters.

When selecting LCD screens you can either press and hold down the [←] or [→] cursor button, or to select the next LCD screen to the left, press and hold down the [←] cursor button, then press the [→] button. Likewise, to select the next LCD screen to the right, press and hold down the [→] button, then press the [←] cursor button.

When another LCD screen is available to the left, "<" is shown. When another LCD screen is available to the right, ">" is shown. When LCD screens are available to both the left and right, "<>" is shown.

These buttons are also used to insert and delete characters when naming Programs, Combinations, and songs.

18) Number keypad

This keypad allow you to select Programs and Combinations by entering the corresponding number. For example, to select Program 67 (presuming you are in Program Play mode), press number button [6], then [7].

This keypad can also be used to specify parameter values. See "Setting Parameters" on page 17.

These buttons are also used to insert and delete characters when naming Programs, Combinations, and songs.

19) [10's HOLD/–] button

In Program Play mode and Combination Play mode, this button allows you to select all the twenty-something, thirty-something, etc., Programs or Combinations respectively, just by pressing one number button. For example, if you have selected Program 21 and you want to select Program 29, first press the [10's HOLD/–] button, then press number button [9]. Program 29 will be selected. While this function is active, a dot is shown in the number. To cancel it, press the [10's HOLD/–] button again.

This button is also used to enter negative parameter values. For example, to enter a value of –36, press the [10's HOLD/–] button, [3] button, the [6] button, then the [ENTER] button. To make a negative value positive or vice versa, press the [10's HOLD/–] button.

In Program Edit mode, you can select Multisounds from a PCM data card by pressing this button.

In Combination Edit mode, you can use this button to select Program banks when setting up Timbres.

When naming Programs, Combinations, and songs, this button can be used to select lowercase and uppercase characters.

20) [ENTER] button

When you specify a parameter value using the number keypad, press this button to enter that value. If you do not press this button, the specified value will not be entered.

This button is also used when specifying parameter values using the keyboard.

21) Floppy Disk Drive

This is where you insert 3.5 inch 2DD type floppy disks. You can store Programs, Combinations, sequencer data, MIDI exclusive data, and SMF (Standard MIDI Files) on floppy disks. See "Disk Mode" on page 168 of the *Operating Manual*.
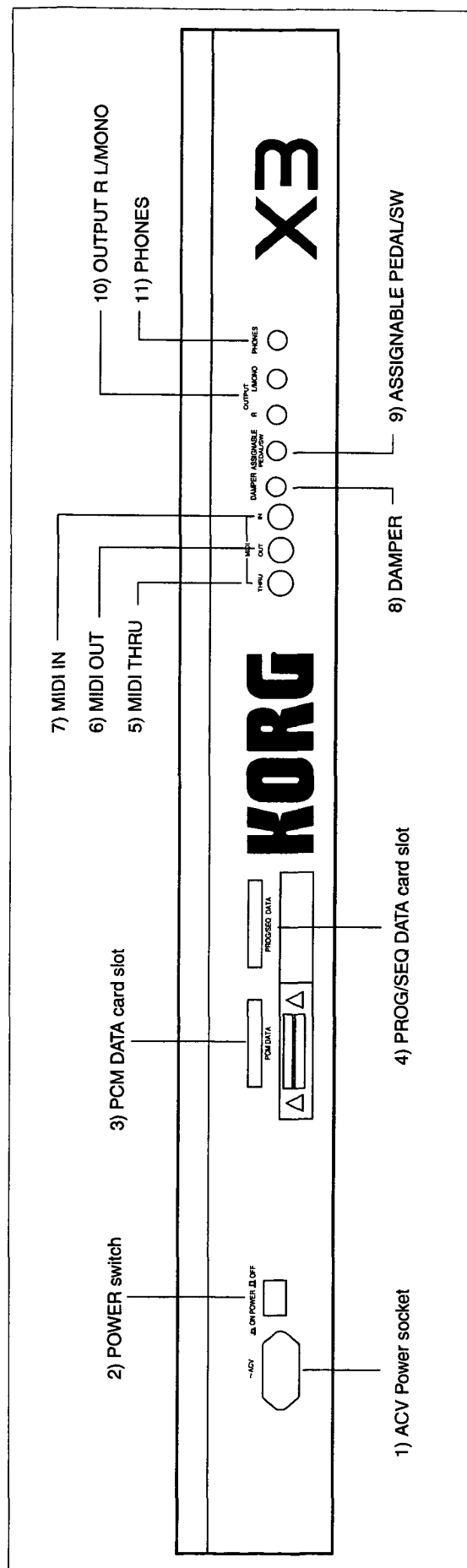
22) Joystick

The joystick allows real-time control of the following Program parameters: pitch bend, VDF cutoff frequency, VDF modulation intensity, modulation frequency and intensity. See "Pitch1 Modulation – 5A" on page 25 and "After Touch & Joystick Control – 6A" on page 28 of the *Operating Manual*.
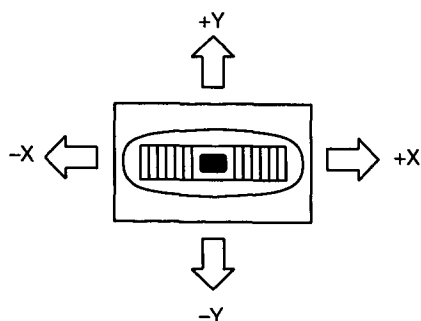
±X	Pitch bend, VDF cutoff sweep
+Y	Pitch modulation depth (vibrato), speed
–Y	VDF modulation depth (wow wow)

Rear Panel

1) ACV Power socket
2) POWER switch
3) PCM DATA card slot
4) PROG/SEQ DATA card slot
5) MIDI THRU
6) MIDI OUT
7) MIDI IN
8) DAMPER
9) ASSIGNABLE PEDAL/SW
10) OUTPUT R L/MONO
11) PHONES

1) ACV Power socket

Connect the supplied power cord to this connection. Connect the other end of the power cord to a suitable AC receptacle.

2) POWER switch

This switch is used to power on and power off the X3. Press once to power on; press again to power off.

3) PCM DATA card slot

Optional PCM data cards can be inserted here. These cards typically contain Multisounds and drum sounds, and they allow you to increase your library of Multisounds. See your Korg dealer for more details. See "PCM Data Cards" on page 189 of the *Operating Manual*.

4) PROG/SEQ DATA card slot

Optional PROG/SEQ data cards can be inserted here. These cards can be either RAM or ROM type cards.

ROM cards typically contain third-party Programs, Combinations, or both, and they allow you to expand your Program and Combination library.

RAM cards can be used to save Programs, Combinations, and sequencer data. See "PROG/SEQ Data Cards" on page 189 of the *Operating Manual*.

5) MIDI THRU

This connection outputs MIDI data received at the MIDI IN connection. This allows you to connect a number of MIDI devices in a daisy chain. Each device receives all the MIDI data, but only responds to data on the specified MIDI Channel.

If you want to connect more than three MIDI devices, it is recommended that you use an optional MIDI THRU box. See your Korg dealer for more details.

6) MIDI OUT

The X3 outputs MIDI data via this connection. This could be connected to the MIDI IN of a synthesizer, external sequencer, drum machine, etc.

7) MIDI IN

The X3 receives MIDI data via this connection. This could be connected to the MIDI OUT of a master keyboard, external sequencer, guitar controller, etc.

8) DAMPER

An optional Korg DS-1 damper pedal can be connected here for use as a damper (sustain) pedal.

9) ASSIGNABLE PEDAL/SW

An optional Korg PS-1 foot pedal or Korg EXP-2 volume pedal can be connected here. A pedal connected here can be set to perform one of many functions, such as selecting Programs and Combinations, start and stopping the sequencer, controlling the volume, etc. See "Assignable Pedal Setup – 8B" on page 167 of the *Operating Manual*.

10) OUTPUT R MONO/L

These 1/4 inch phone jack connections should be connected to the inputs of a stereo amplifier, mixer, cassette multitracker, etc. If your amplifier is mono, use the L/MONO connection only.

11) PHONES

A pair of stereo headphones can be connected here for private playing.

Chapter 2: Setting Up the X3

The following setups show how the X3 can be used with other equipment.

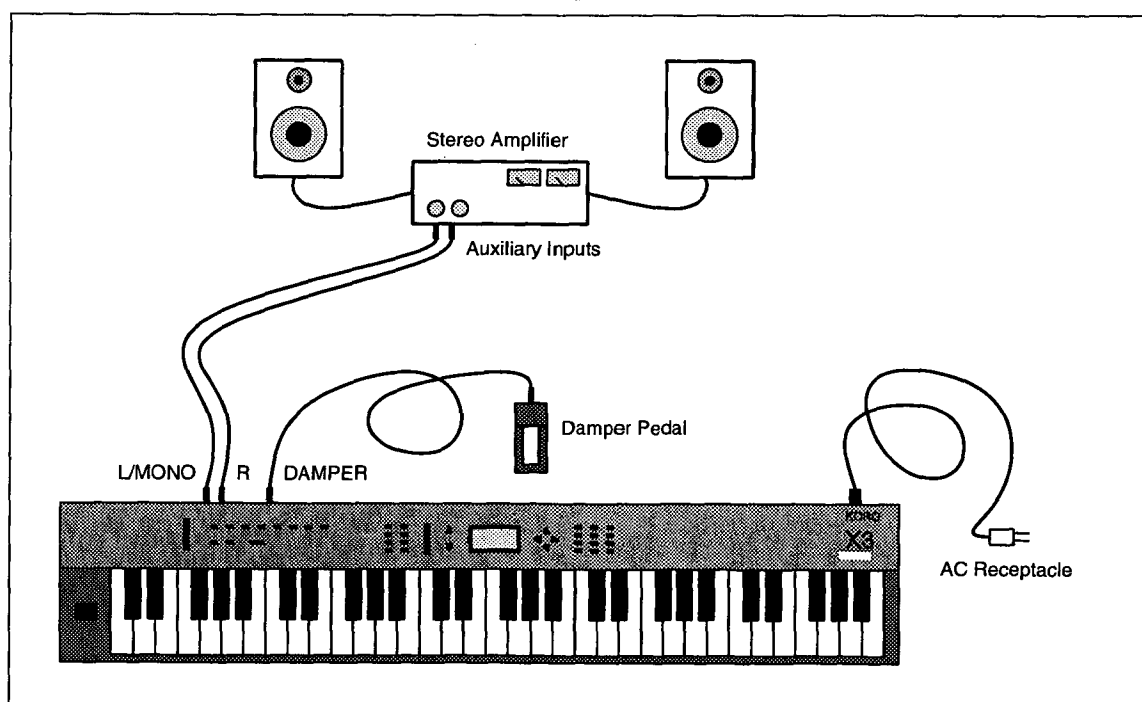Before making any connections, make sure that each piece of equipment is powered off.

Setup A

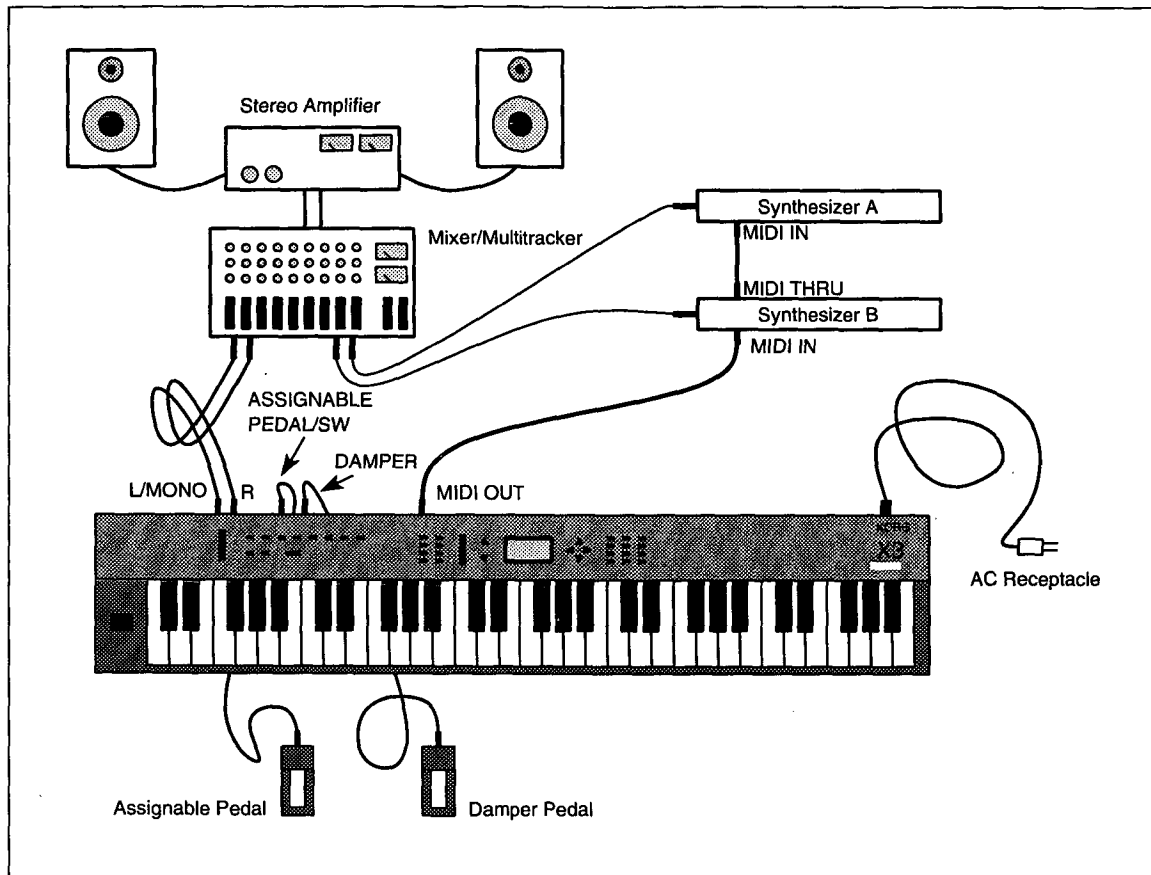In this setup the X3 is connected to a mono keyboard amplifier.
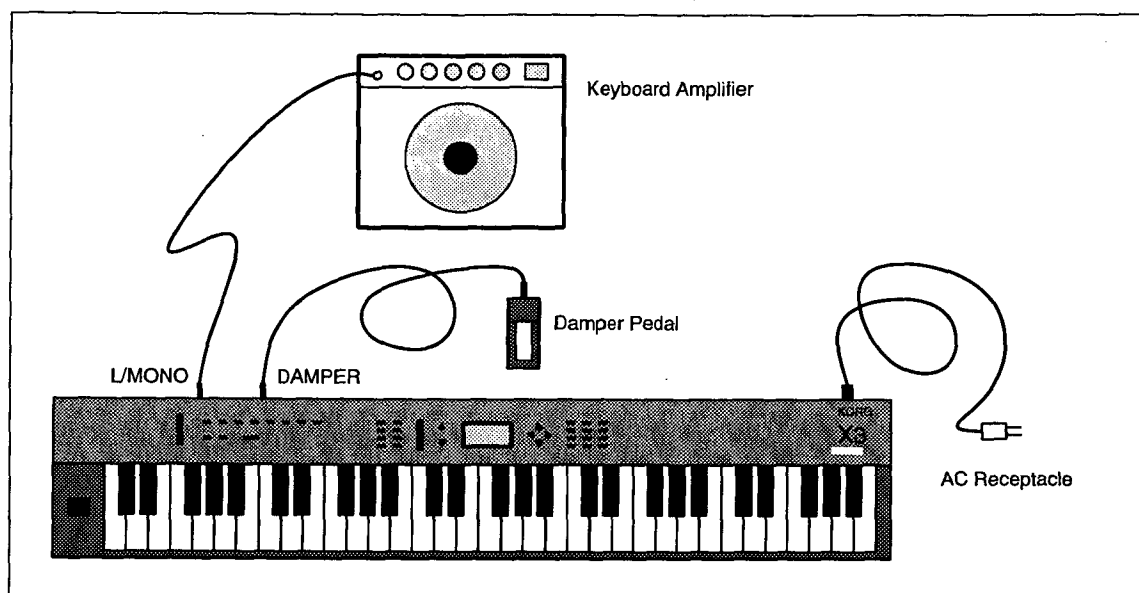
Setup B

In this setup the X3 is connected to a stereo amplifier.

Setup C

In this setup the X3 is connected to a mixer/cassette multitracker. Two extra synthesizers are connected via the X3 MIDI OUT connection. They can be played via the X3 keyboard and controlled by the sequencer.

Power On Procedure

When you have made all the necessary connections, press the power switch to power on the X3. Then power on your amplifier, powered monitor speaker, etc.

The following LCD screen will be displayed for a few seconds, then Combination Play mode will be selected:

```
X3 MUSIC
   WORKSTATION
```
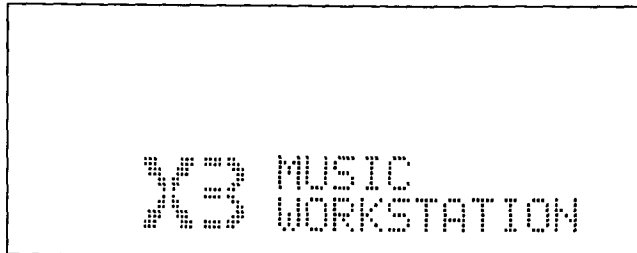
Power Off Procedure

Press the power switch to power off the X3.

All internal Programs, Combinations, and sequencer data are stored while the X3 is powered off.

Note: *Do not power off while the disk drive light is on, or when a "Loading" or "Saving" message is shown on the LCD.*

Adjusting the Volume

Use the VOLUME slider to set an appropriate output level. This slider also controls the headphone volume.

LCD Contrast

The LCD contrast has been set for optimum readability. However, depending on the temperature and lighting conditions, you may need to adjust it to maintain good readability.

1) Press the [GLOBAL] button.

2) Press function button [8].

3) Use the VALUE slider or [▲/YES] and [▼/NO] buttons to adjust the contrast.

Chapter 3:   Getting Around the X3

The LCD

This section explains the various characters and symbols that appear on the X3 LCD.
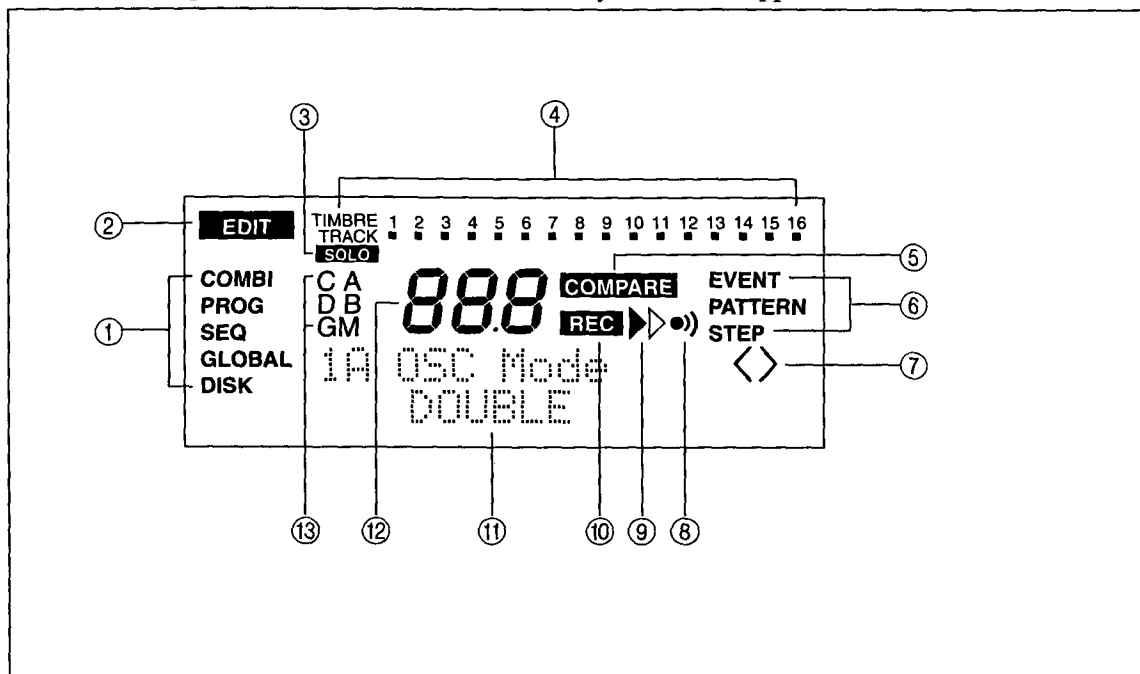
1) **Modes**

These indicate the current mode.

2) **EDIT**

This indicates that the current mode is an Edit mode.

3) **SOLO**

In Combination Play mode, this indicates that a Timbre is soloed. In Sequencer modes, it indicates that a track is soloed.

4) **TIMBRE, TRACK**

In Program Play mode, the numbers 1 to 16 are displayed. The flashing number indicates the Global MIDI Channel setting. When MIDI Note ON/Off messages are received, a box below the corresponding number flashes.

In Combination Play mode, digits 1 to 8 correspond to timbres 1 to 8. Nothing is displayed when a timbre is turned off. When MIDI messages are received, the box below the corresponding Timbre number flashes.

In Sequencer mode, digits 1 to 16 correspond to tracks 1 to 16. The currently selected track number will flash. When MIDI messages are received, a box below the corresponding track number flashes.

5) **COMPARE**

This indicates that the Compare function is active.

6) **EVENT, PATTERN, STEP**

In Sequencer Edit mode, EVENT appears when using event related LCD screens, PATTERN appears when using pattern related LCD screens, and STEP appears when using step related LCD screens.

7) < >

These indicate that other LCD screens are available within the current group.

When another LCD screen is available to the left, "<" is shown. When another LCD screen is available to the right, ">" is shown. When LCD screens are available to both the left and right, "<>" is shown.

8) Metronome

This indicates that the metronome is on.

9) Beat Indicators

These indicate the beat.

▶ This indicates the first beat of a measure.

▷ This indicates the other beats.

10) REC

This indicates that recording is in progress.

11) Character Display

Program names, Combination names, song names, parameters, etc., are displayed on these two lines. The top line can display 14 characters, and the bottom line, 16 characters.

Most of the LCD screens in the X3 manuals show just these two lines.

The dot between the second and third digits indicates that the [10's HOLD/–] button is active.

12) Three Large Digits

In Program Play mode and Combination Play mode, these indicate the number of the currently selected Program or Combination respectively.

In Sequencer modes, they indicate the current song measure.

13) Bank/Measure

In Program Play mode, these indicate the current Program bank. A and B are internal RAM banks, C and D are PROG/SEQ data card banks, and GM is an internal ROM bank.

In Combination Play mode, these indicate the current Combination bank. A and B are internal RAM banks, and C and D are PROG/SEQ data card banks.

In Sequencer modes, the letter M indicates that the large 3-digit number in the middle of the LCD is displaying measures numbers.

Selecting LCD Screens

X3 functions are organized into modes: Program Edit mode, Combination Edit mode, Sequencer Edit mode, Disk mode, and Global mode. LCD screens are identified alphanumerically. For example, in Program Edit mode the INIT PROG function is located on LCD screen 8E, as shown below. To select LCD screen 8E, press function button [8], then press the [↑] cursor button four times.
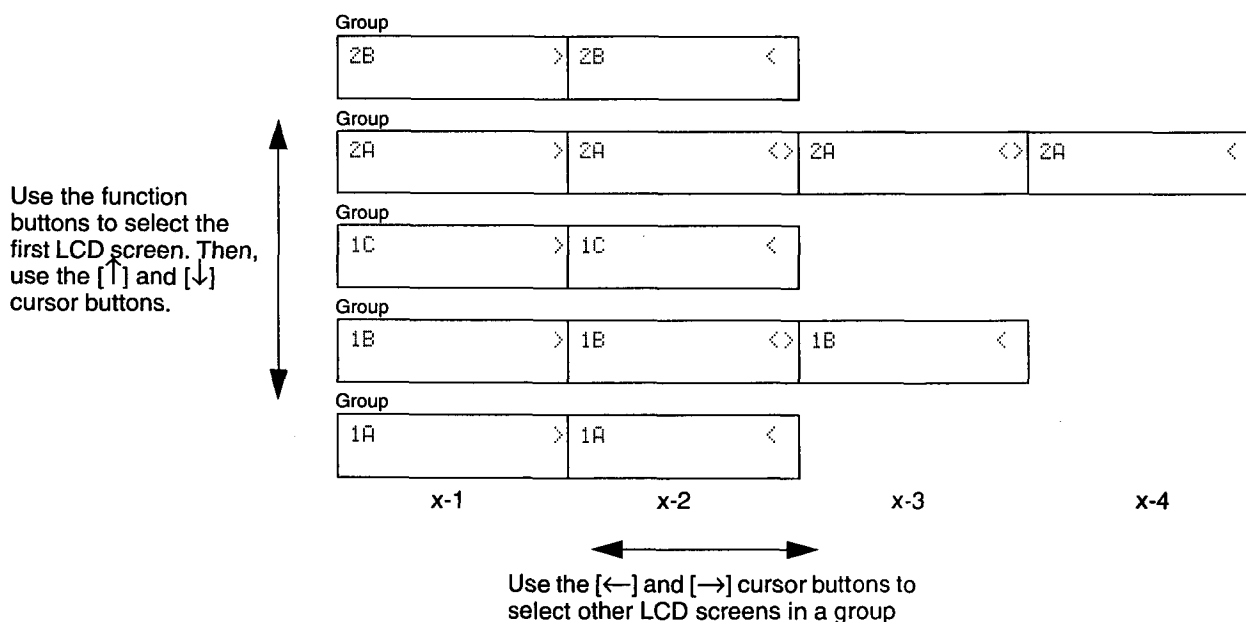
```
8E INIT PROG
              OK?
```
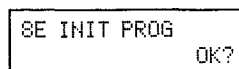
For some functions, there may be one, two, three, or more LCD screens available, these are called LCD screen groups. If more LCD screens are available, left or right angle brackets (<>) are shown on the right-hand side of the LCD. Use the [←] and [→] cursor buttons to select the other screens.

LCD screens in a group all display the same number. However, in the X3 manuals, LCD screens in a group are referred to as, for example, 1A-1, 1A-2, etc.

To select the first LCD screen in a group, press the corresponding function button. For example to select LCD screen 4A-1, press function button [4].

To select the other LCD screens in a group, press the corresponding function button, then use the [←] and [→] cursor buttons. For example, to select LCD screen 4A-3, press function button [4], then press the [→] cursor button twice.

To select other LCD screen groups, press the corresponding function button, or use the [↑] and [↓] cursor buttons. LCD screens are organized in a grid, as shown below:

Use the function buttons to select the first LCD screen. Then, use the [↑] and [↓] cursor buttons.

Group

| 2B | > | 2B | < |

Group

| 2A | > | 2A | <> | 2A | <> | 2A | < |

Group

| 1C | > | 1C | < |

Group

| 1B | > | 1B | <> | 1B | < |

Group

| 1A | > | 1A | < |

x-1   x-2   x-3   x-4

Use the [←] and [→] cursor buttons to select other LCD screens in a group

Selecting Parameters

On most of the LCD screens, a number of parameter values are displayed simultaneously. However, the currently selected parameter is the one that's flashing. To select other parameters, use the [←] and [→] cursor buttons.

Setting Parameters

There are four ways in which you can set parameters:

* Using the VALUE slider.
* Using the [▲/YES] and [▼/NO] buttons.
* Using the number keypad.
* Using the keyboard (works for a few functions only)

VALUE slider: select the parameter that you want to adjust, then move the slider. Moving the slider up will increase values, and down will decrease them.

[▲/YES] and [▼/NO] buttons: select the parameter that you want to adjust, then press the [▲/YES] button to increase it, or the [▼/NO] button to decrease it. Pressing and holding either button will change the selected parameter value rapidly.

By pressing both buttons simultaneously while editing, you can reset the parameter to its original value, that is, the value before you edited it.

Number keypad: select the parameter that you want to adjust, enter the value, then press the [ENTER] button. For example, to specify a value of 58, press the [5] button, the [8] button, then the [ENTER] button.

To enter a negative value, or change a value from positive to negative or vice versa, press the [10's HOLD/–] button.

Note: *If you specify a value that is outside the selected parameter's range, the highest or lowest available value for that parameter will be selected.*

Keyboard: can be used to specify note values for parameters such as Key Window, which accept note value input. Key Windows are used for Combination Timbres and sequencer tracks.

Comparing While Editing

[COMPARE] button: while editing Programs and Combinations, press the [COMPARE] button to listen to the original unedited version. The word "COMPARE" will appear on the LCD. Press the [COMPARE] button again to return to the edited version, that is, the version you are editing.

[▲/YES] & [▼/NO] buttons: to reset a parameter value to the value that is was when you first selected it, press the [▲/YES] & [▼/NO] buttons simultaneously.

Useful Notes

Top Panel Colors: on the X3 top panel, functions for Sequencer mode are printed in green, and functions for Program Play mode are printed in white.

Effects: in Program Edit mode, Combination Edit mode, and Sequencer Edit mode, you can set up the effects by pressing function button [7].

Quick Write: in Program Play mode, Program Edit mode, Combination Play mode, and Combination Edit mode, you can write to memory at anytime by pressing the [REC/WRITE] button, then the [▲/YES] button.

Keyboard Range

The range of the X3 keyboard is from C2 to C7, five octaves. Using the Global mode transpose function, the range can be transposed up or down from C1 to C8.

MIDI Notes

The X3 responds to incoming MIDI notes from C–1 to G9 (MIDI Note numbers 0 to 127). However, some Programs may not produce any sound at the top end of the range.

The following table shows how MIDI Note numbers correspond to keyboard notes:

Note	C–1	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9	G9
MIDI Note Number	0	12	24	36	48	60	72	84	96	108	120	127

Chapter 4: Program Tutorial

In this tutorial, we take a brief look at what you can do with Programs.
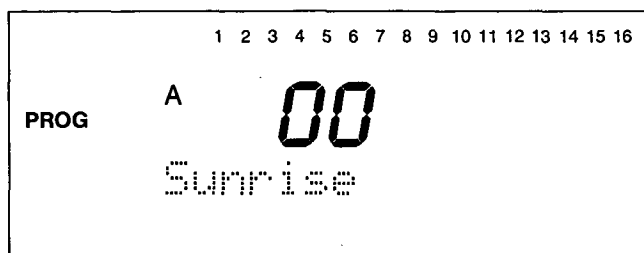
This tutorial serves as an introduction only. For full details about Programs, see "Program Play Mode" on page 3 and "Program Edit Mode" on page 6 of the *Operating Manual*.

Presuming that you have connected the X3 to some sort of amplification system and powered on:

Selecting Program Play Mode

1) Press the [PROG] button.

The LCD should look like the one shown below:

```
                1  2  3  4  5  6  7  8  9  10 11 12 13 14 15 16

PROG        A      00
                Sunrise
```

2) Use the VOLUME slider to set the volume to an appropriate level.

You should now be able to play and hear Program 00 of bank A.

Selecting Programs

To select other Programs:

1) Use the [▲/YES] and [▼/NO] buttons.

Programs can also be selected by entering the Program number via the number keypad. For example, to select Program 89, press number button [8], then [9].

Selecting Other Program Banks

1) To select Programs in banks B and GM, press the [BANK] button repeatedly.

To select GM bank Programs above 100, enter three digits. To select GM bank Programs below 100, enter two digits, then press the [ENTER] button.

The currently selected bank is indicated on the LCD.

If a PROG/SEQ data card is inserted, you can select Programs from card banks C and D too. However, if the card bank contains sequencer data, you cannot select it.

Editing Programs as You Play

Some Program parameters can be edited as you play, that is, without entering Program Edit mode. For example, if, during a live performance, you want to play notes that are beyond the currently available range:

1) Press function button [1].

The LCD should look something like the one shown below:

```
        1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

PROG    A    00

        Sunrise       +00  >
        Oct  1: 16' 2: 4'
```
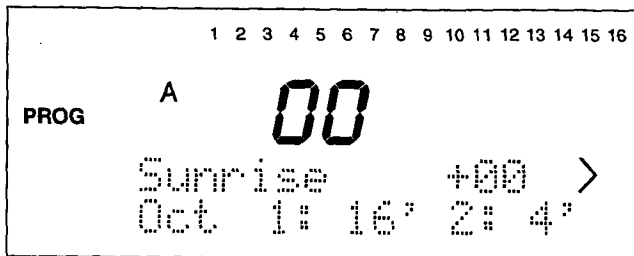
2) Use the VALUE slider or the [▲/YES] and [▼/NO] buttons to adjust the Octave parameter for oscillator 1 and oscillator 2.

If, for example, you press the [▲/YES] button once, the value at the right-hand side of the top line will change to +1. In this case, the octave parameter for oscillator 1 becomes 8', as shown on the bottom line, and oscillator 2 becomes 4'.

Other editable parameters can be accessed by pressing the other function buttons.

To return to the previous LCD screen, press the [PROG] button.

See "Editing in Program Play Mode" on page 4 of the *Operating Manual* for full details.

Note: *If you select another Program without first saving your edits, they will be lost. To write a Program, press the [REC/WRITE] button, then press the [▲/YES] button.*

Editing Programs

Program Edit mode allows you to edit Programs. You can create new Programs from scratch or edit existing ones.

1) In Program Play mode, select the Program that you want to edit.

2) Press the [EDIT] button.

The LCD should look something like the one shown below:

```
 EDIT   1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

PROG    A    00

        1A OSC Mode          >
            DOUBLE
```
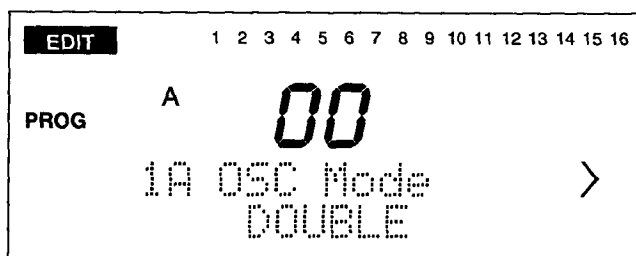
3) Use the function buttons to select LCD screens.

4) Use the VALUE slider and the [▲/YES] and [▼/NO] buttons to set parameters.

Please refer to the *Operating Manual* for full details about editing Programs.

Note: *If you select another Program without first saving your edits, they will be lost. To write a Program, press the [REC/WRITE] button, then press the [▲/YES] button.*

Comparing Your Edits

The Compare function allows to compare the Program that you are currently editing with the unedited version that is stored in memory. This is useful for checking how your edits have changed the Program.

1) Press the [COMPARE] button.

The word COMPARE will appear on the LCD, and you can play the unedited version.

2) Press the [COMPARE] button again to return to the version that you are editing.

Setting Effects

The X3 contains two digital multi-effect processors. Here we will apply some Hall type reverb.

1) In Program Play mode, select the Program that you want to edit, then press [EDIT].

2) Press function button [7].

3) Use the VALUE slider or [▲/YES] and [▲/NO] buttons to set "01".

The following LCD screen will appear:

```
7A EFFECT1=01
Hall        OFF
```

4) Press the [→] cursor button to select the OFF parameter.

5) Press the [▲/YES] button to turn Effect 1 ON.

Hall type reverb should now be applied to the current Program.

See page 51 of the *Operating Manual* for full details about X3 effects.

Effect Dynamic Modulation

Dynamic modulation allows you to adjust effect parameters in real time. Here we use the joystick as the dynamic modulation source to control the balance between the reverb signal and the dry (unaffected) signal.

6) Press the [→] cursor button twice, then press the [▲/YES] button to set the Src (Source) parameter to JS(+Y). JS(+Y) means joystick moved forward.

```
7A Hall          <
Src:JS(+Y) I+10
```

7) Press the [→] cursor button to select the I (Intensity) parameter.

8) Set this parameter to +15.

As you play the keyboard, move the joystick forward to increase the amount of reverb.

A negative Intensity value will reduce the amount of reverb.

Experiment with other dynamic modulation sources such as AFTT (After Touch) and VDA-EG (Variable Digital Amplifier-Envelope Generator).

See page 51 of the *Operating Manual* for more details about dynamic modulation.

Saving Your Edits

If you want to save your Program edits:

9) Press function button [8].

The following LCD screen will appear:

```
8A PROG WRITE
Write→A00     OK?
```

10) Use the VALUE slider or [▲/YES] and [▼/NO] buttons to specify the write destination.

The write destination can be from A00 to B99. If you are using a PROG/SEQ DATA card, you can select from C00 to D99.

11) Press the [→] button to position the cursor on OK?

12) Press the [▲/YES] button.

The message "Are You Sure OK?" will appear.

13) Press the [▲/YES] button to write the Program to memory, or the [▼/NO] button to cancel the Write function.

Programs can also be saved by pressing the [REC/WRITE] button. However, in this case you cannot specify a write destination other than the current Program.

Programs can also be saved to floppy disk or an optional PROG/SEQ data card. See "Save P/C/G Data – 3B" on page 179 and "Save Programs & Combinations to Card – 6C" on page 161 of the *Operating Manual* respectively.

Chapter 5: Combination Tutorial

In this tutorial, we take a brief look at what you can do with Combinations.

This tutorial serves as an introduction only. For full details about Combinations, see "Combination Play Mode" on page 33 and "Combination Edit Mode" on page 36 of the *Operating Manual*.

Presuming that you have connected the X3 to some sort of amplification system and powered on:

Selecting Combination Play Mode

1) Press the [COMBI] button (note: the X3 always powers up in Combination Play mode).

The LCD should look like the one shown below:

```
        TIMBRE  1  2  3  4  5  6  7  8

COMBI     A        00
                Start Burst
```
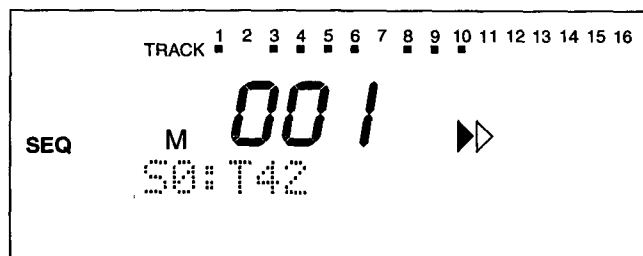
2) Use the VOLUME slider to set the volume to an appropriate level.

You should now be able to play and hear a Timbre from Combination 00, bank A. The keyboard will play any Timbres set to the same MIDI Channel as the Global MIDI Channel.

Selecting Combinations

To select other Combinations:

1) Use the [▲/YES] and [▼/NO] buttons.

Combinations can also be selected by entering the Combination number via the number keypad. For example, to select Combination 89, press number button [8], then [9].

Selecting Other Combination Banks

1) To select Combinations in bank B, press the [BANK] button.

The currently selected bank is indicated on the LCD.

If an optional PROG/SEQ data card is inserted, you will also be able to select Combinations from card banks C and D. However, if the card bank contains sequencer data, you cannot select it.

Soloing Individual Timbres

The solo function allows you to listen to timbres individually.

1) Double click the function button that corresponds to the Timbre you want to solo.

For example, to solo timbre 6, double click function button [6].

2) Double click the function button again to cancel the solo function.

Editing Combinations as You Play

Some Combination parameters can be edited as you play, that is, without entering Combination Edit mode. For example, Program, level, pan, and MIDI Channel.

Here we will change the Program assigned to Timbre 1.

1) Press function button [1] to select Timbre 1.

The LCD should look something like the one shown below:

```
        TIMBRE  1  2  3  4  5  6  7  8

COMBI      A      00
           T1:Stadium           >
           127 046 PRG 16
```
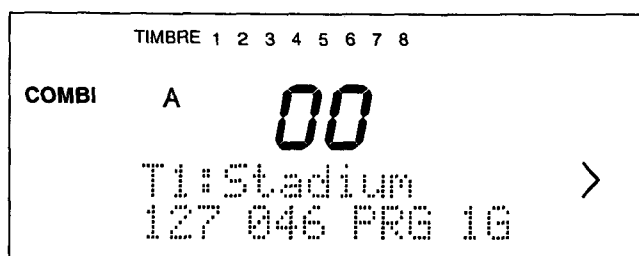
2) Use the VALUE slider or the [▲/YES] and [▼/NO] buttons to select Programs.

Use the [←] and [→] cursor buttons to select the other parameters.

To edit these parameters for other Timbres, press the corresponding function button.

To return to the previous LCD screen, press the [COMBI] button.

See "Editing in Combination Play Mode" on page 34 of the *Operating Manual* for full details.

Chapter 6: Playing Demo Songs

Some demo sequencer songs are loaded into the X3 at the factory. If a Program used by a song has been edited, playback will not sound as it should. In this case, load the demo song data in Disk mode first. See "Load All Data – 1A" on page 172 of the *Operating Manual*.

Presuming that you have connected the X3 to some sort of amplification system and powered on:

Selecting Demo Songs

1) Press the [SEQ] button to enter Sequencer mode.

2) Press function button [8]. The following display will appear:

```
S0:Song Name
```
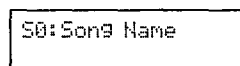
3) Use the VALUE slider, [▲/YES] and [▼/NO] buttons, or number keypad to select a song.

4) Press the [START/STOP] button to start playback.

The current measure and the beat indicators will flash on the LCD:

```
        TRACK 1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16
              ■     ■  ■  ■  ■        ■  ■  ■

SEQ        M   001    ▶▷
           S0: T42
```

For tracks that contain data, a little box is shown under the corresponding number.

5) Press the [START/STOP] button to stop playback.

To restart playback, press the [START/STOP] button again.

To return the song to the beginning, press the [RESET] button.

Chapter 7: Sequencer Tutorial

Tracks and patterns can be recorded in either real time or step time. Here we explain how to record a few tracks in real time. Sequencer mode is used for real-time track recording.

This tutorial serves as an introduction only. For full details about the sequencer, see "Sequencer Mode" on page 83 and "Sequencer Edit Mode" on page 103 of the *Operating Manual.*

Presuming that you have connected the X3 to some sort of amplification system and powered on:

Recording

1) Press the [SEQ] button.

The LCD should look something like the one shown below:

```
          TRACK  1  2  3  4  5  6  7  8  9  10 11 12 13 14 15 16
                   _   _   _
                  |   |   |  |
SEQ        M      |_| |_|  |
                  50:New Song
                  M001   099% Free
```
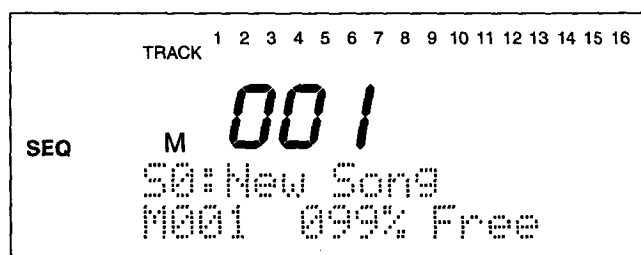
2) Press function button [8].

3) Use the [▲/YES] and [▼/NO] buttons to select a song (an unrecorded song).

Note: *xxx% on the bottom line of the LCD indicates the amount of free memory available for the sequencer (1% is approximately 320 events). If you need more memory space, erase another song. See "Erase Song – 2G" on page 121 of the Operating Manual.*

4) Press function button [6].

5) Press the [▲/YES] button to turn on the metronome.

The metronome symbol ●) will appear on the LCD.

6) Press function button [4].

7) Use the VALUE slider or the [▲/YES] and [▼/NO] buttons to set the tempo.

8) Press function button [2].

9) Use the VALUE slider or the [▲/YES] and [▼/NO] buttons to select the track that you want to record.

The number of the selected track will flash on the LCD.

10) Press the [→] cursor button.

11) Use the VALUE slider or the [▲/YES] and [▼/NO] buttons to select a Program for the track.

You should be able to play and hear the selected Program.

12) Press the [REC/WRITE] button to engage Record Ready mode.

The REC symbol will appear on the LCD, and the metronome will start.

If you change your mind about recording, press the [REC/WRITE] button again.

13) To start recording, press the [START/STOP] button.

After a two measure count-in, recording will start – so play your part.

14) When you've finished recording, press the [START/STOP] button.

The little box under the number of the track that you just recorded indicates that the track contains data.

Song Playback

To playback what you have just recorded:

1) Press the [RESET] button. This returns the song to the beginning.

2) Press the [START/STOP] button to start playback. At the end of the song, playback will stop, and the song will return to the beginning.

3) Press the [START/STOP] button again to stop playback. Pressing the [START/STOP] button again will start playback from the current position.

Re-Recording

If you are not happy with the recording and want to do it again:

1) Press the [RESET] button to return the song to the beginning.

2) Press the [REC/WRITE] button to engage Record Ready mode.

3) Press the [START/STOP] button.

   After a two measure count-in, recording will start – so play your part again.

4) When you've finished recording, press the [START/STOP] button.

   The previous track data will be deleted, because the current Recording mode is OVWR (Overwrite).

Recording More Tracks

To record some more tracks:

1) Press function button [2].

2) Use the VALUE slider or the [▲/YES] and [▼/NO] buttons to select another track.

3) Press the [→] cursor button.

4) Use the VALUE slider or the [▲/YES] and [▼/NO] buttons to select a Program for the track.

5) Press the [REC/WRITE] button to engage Record Ready mode.

6) Press the [START/STOP] button.

   After a two measure count-in, recording will start and the previously recorded tracks will start playback – so play your next part.

7) When you've finished recording, press the [START/STOP] button.

   To record some more tracks, repeat steps 1 to 7.

Erasing Tracks

Individual tracks can be erased in Sequencer Edit mode:

1) Press the [EDIT] button.

2) Press function button [2].

3) Press the [↑] cursor button twice.

   The following LCD screen will appear:

```
2C Erase Track
Tr01         OK?
```
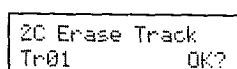
4) Use the VALUE slider or the [▲/YES] and [▼/NO] buttons to select the track that you want to erase.

5) Press the [→] cursor button.

6) Press the [▲/YES] button.

   The selected track will be erased.

7) Press the [SEQ] button to return to Sequencer mode.

Chapter 8: Playing GM Songs

The X3 can playback GM compatible songs in two ways: by receiving the song data via the MIDI IN connection, or by loading the GM (General MIDI) song via the SMF (Standard MIDI File) format from a floppy disk. Here we explain how the X3 can play GM song data received via the MIDI IN connection. The following diagram shows how to connect such a system:
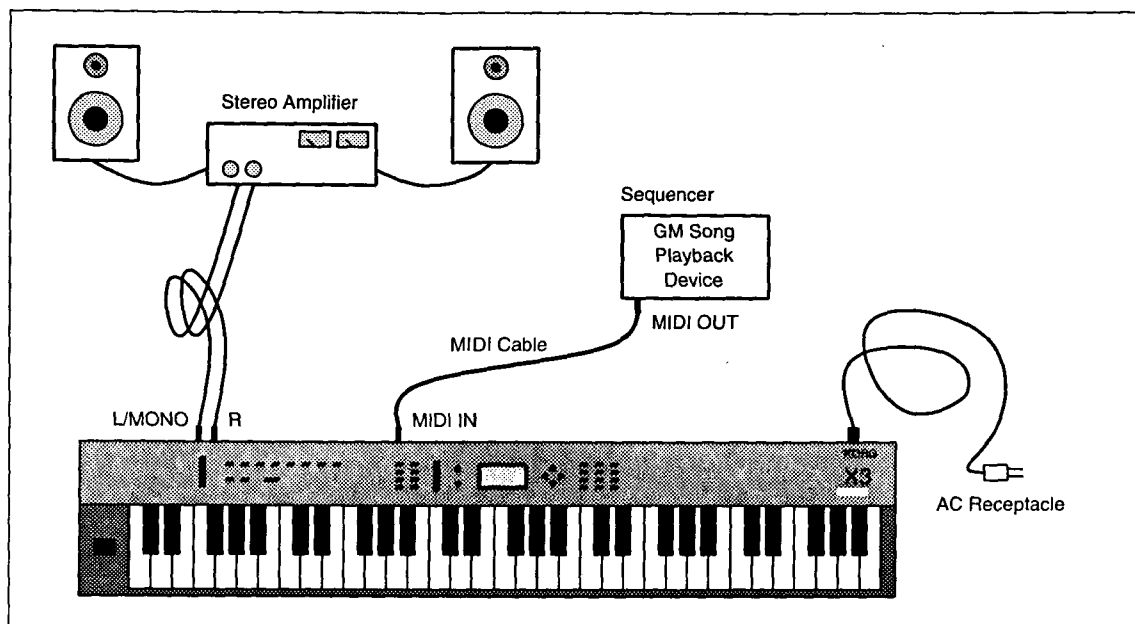
1) Connect the MIDI OUT of the device that contains the GM song data to the X3's MIDI IN connection.

2) Press the [SEQ] button to select Sequencer mode.

3) Press function button [8] to select the song select LCD screen, then select a song (an unrecorded song).

4) Press the [EDIT] button to enter Sequencer Edit mode.

5) Press function button [8], then the press the [↑] cursor button five times.

6) Press the [▲/YES] button to conform the song to GM. Press the [▲/YES] button again to confirm the "Are You Sure OK?" message.

Note: *When the X3 receives a GM System On message, song 9 is selected and conformed to GM.*

7) Playback the GM data on the sequencer.

About GM Song Data

Typically, each track of a GM song will contain a MIDI Program Change message. When the X3 receives these Program Change messages, it selects the correct Program for each track. This ensures that a piano track gets a piano Program, a bass track gets a bass Program, etc. Drums are always on track 10. If you are having trouble playing back some GM song data, check the following Global mode parameter settings:

LCD Screen	Parameter	Value
Transpose — 1B	Transpose	+00
Keyboard After Touch & Velocity Response Curve — 1C	Velocity Response	3
	After Touch Response	3
Keyboard Scale — 2A	Scale Type	Equal Temperament
Local Control & Note Receive Filter — 3B	Note Receive Filter	ALL
MIDI Filter1 — 3C	Program Change Filter	ENA, NUM
	After Touch Filter	ENA
MIDI Filter2 — 3D	MIDI Controller Filter	ENA
	System Exclusive Filter	DIS

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KORG

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