

KAWAI

DIGITAL DRUM MACHINE **R-50**

OWNER'S MANUAL

INTRODUCTION

Thank you for purchasing the Kawai R-50 Digital Drum Machine! While the R-50 is easy to operate, this Owner's Manual contains valuable information to help you get the most from your new instrument. We recommend that you read it carefully and keep it handy for future reference.

FEATURES

PROFESSIONAL-QUALITY PCM SOUNDS

The R-50's 24 separate drum and percussion sounds have all been recorded in the professional 12-bit PCM with a sampling rate of 32k. The sound quality is suitable for any recording situation, including Compact Disk.

EASY TO USE

Getting around on the the R-50 is straight-forward and intuitive. It even comes with 50 preset rhythm patterns and 4 preset pad set-ups to get you started.

PROGRAMMABLE DRUM KITS

The R-50 provides for 8 user-defined pad set-ups. Each pad can be assigned a drum, tuning, pan, accent, level, delay, gate and flange.

PROGRAMMABLE TRIGGERS

Eight triggers can be incorporated into drum patterns to fire external MIDI devices.

FLEXIBLE OUTPUT

Stereo and mono outputs are fed by the stereo pan control on each drum. A sound can also be assigned to the individual output on the rear panel.

COMPLETE CAPABILITIES

50 user-defined rhythm patterns with step or real-time recording and editing. Build songs with sophisticated features like insert, delete, and multiply. 10 songs can be linked together to make performances smoother.

FULL MIDI IMPLIMENTATION

The R-50's MIDI features let you record patterns from external sources such as keyboards and drum pads. The internal sounds can also be triggered by external devices such as sequencers. MIDI clock in and out includes Song Pointer for synchronization with sequencers, drum machines and tape. The system-exclusive implimentation also enables remote operation and MIDI Data Dumps to another R-50 or MIDI data storage device.

POLYPHONIC

Sounds are dynamically assigned to the R-50's eight voices. Sounds can be replayed without cutting off the decay of the original sound.

1. TABLE OF CONTENTS

1. TABLE OF CONTENTS	1	8. EDITING RHYTHM PATTERNS	17
2. CARE AND MAINTENANCE	3	OVERDUB RECORDING	17
3. CONTROLS	4	Overdubbing Preset Patterns	17
FRONT PANEL	4	ERASING	17
R-50 PRESET RHYTHMS	4	Erasing a Pattern	17
REAR PANEL	5	Erasing an Instrument	17
4. OVERVIEW	6	Erasing a Bar	18
SOUNDS	6	Erasing a Note	18
Pads	6	Erasing All Memory	18
GETTING AROUND	6	SWING	19
Cursor Keys	6	COPYING PATTERNS	20
Volume	6	9. SONGS	21
5. WORKING WITH DRUM KITS	7	BUILDING SONGS	21
CHANGING USER SETTINGS	7	Song Tempo	21
CHANGING DRUMS	7	Song Construction	21
Level	7	Building Tools–	
Accent	8	Insert, Delete, and Multiply	22
Tuning	8	Linking Songs	23
Pan	8	PLAYING SONGS	24
Gate	8	Start at a Designated Section	24
Delay	9	Bar Count	24
Flange	9	ERASING SONGS	25
MIXER	10	Erase All Songs	25
Level	10	10. MIDI	26
Manual Pan	10	MIDI SYNC	26
Pan	10	MIDI IN	27
6. PLAYING RHYTHM PATTERNS	11	Omni Mode	27
TEMPO	12	Receive Channel	27
Tap Tempo	12	Key Info	27
7. RECORDING RHYTHM PATTERNS	13	Velocity	28
REAL TIME RECORDING	13	Volume	28
Number of Bars	13	Program Changes	28
Time Signature	13	Start/Stop	28
Error Correct	13	MIDI Note Assignments	29
Metronome	13	Initial Reset	29
Recording	14	MIDI OUT	30
STEP RECORDING	15	Poly/Mono Mode	30
Number of Bars	15	Send Channel	30
Time Signature	15	Inst Info	30
Recording	15	Trigger Info	31
		Velocity	31
		Program Change	31
		Stop/Start	31
		MIDI Note Assignments	32
		Note Trigger	32
		MIDI SYSTEM EXCLUSIVE	33
		Transmit	33
		Receive	34

TABLE OF CONTENTS

(Continued)

11. ASSIGN	37
ASSIGN VOICE	37
Assign Hi-Hat	37
Assign Crash	38
ASSIGN OUTPUT	38
ASSIGN FOOTSWITCH	39
Footswitch Functions	39
12. CASSETTE STORAGE	40
CASSETTE SAVE	40
CASSETTE VERIFY	41
CASSETTE LOAD	41
13. MEMORY MANAGEMENT	42
CHECKING AVAILABLE MEMORY	42
ERASING ALL OF MEMORY	42
14. R-50 PAD SETTING CHART	43
15. MIDI NOTE ASSIGNMENTS	45
16. MIDI DATA FORMAT	46
17. MIDI IMPLEMENTATION	47
18. SPECIFICATIONS	48
19. R-50 PRESET PATTERNS	49

2. CARE AND MAINTENANCE

PROTECT YOUR R-50 FROM:

- Direct sunlight and exposure to the elements
- Temperature and humidity extremes
- Unstable or "noisy" AC power
- Dust and sand
- Vibration during transport

POWER SUPPLY

- Use only the 12-volt power supply included with your R-50. Other power supplies may damage the unit.
- Make sure that all power switches are off before changing equipment connections

CLEANING

- Clean the instrument with a soft cloth, a mild detergent and lukewarm water.
- Never use harsh or abrasive cleansers or organic solvents.

HELPFUL HINTS

• BATTERY BACK-UP

The lithium battery that preserves memory contents while the power supply is off is good for more than five years of normal use. We recommend however, that you have your nearest authorized service representative replace it after 5 years have passed.

• LINE NOISE RESET

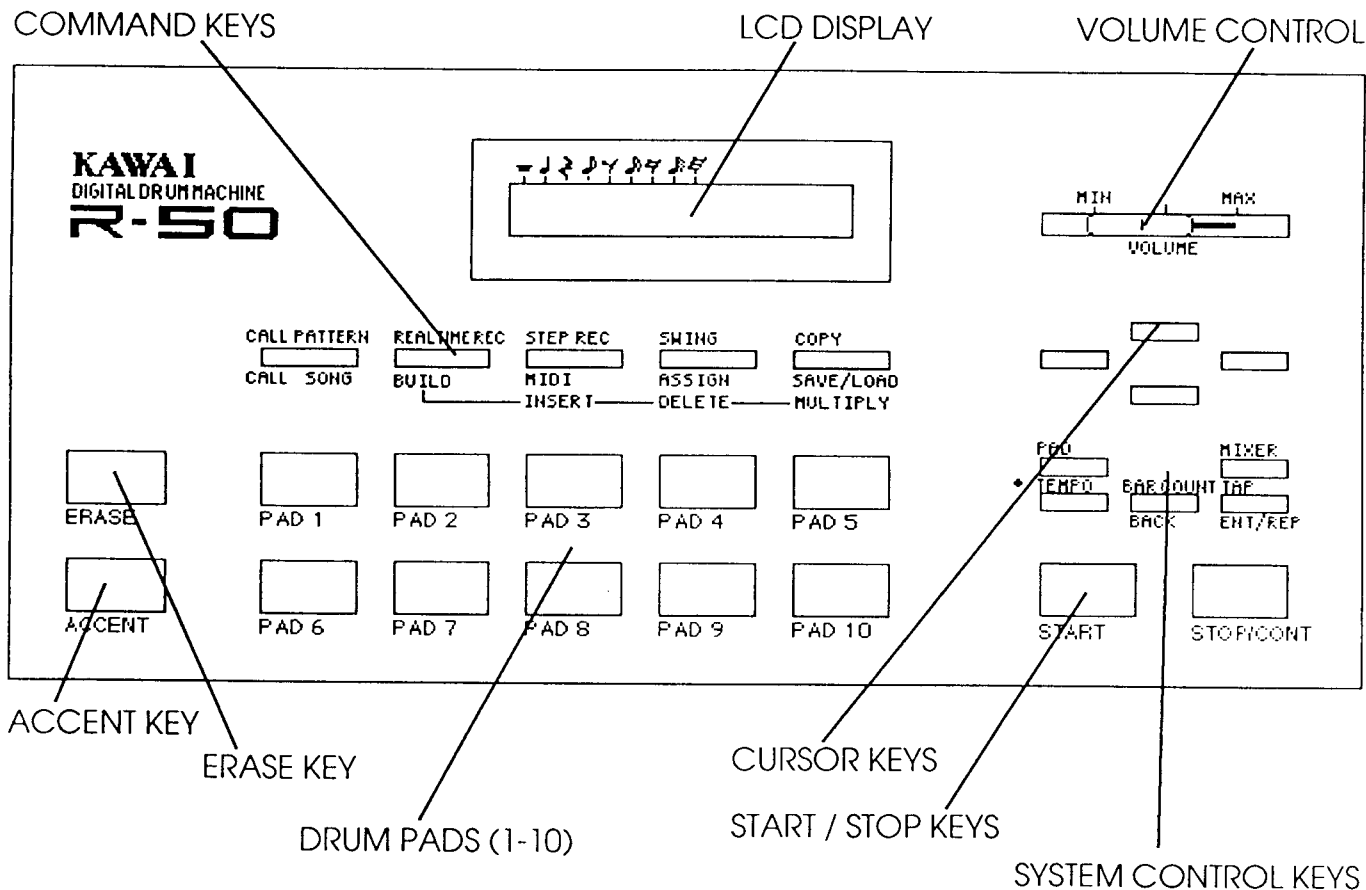
In the unlikely event of a "lock-up" due to line interference, simply turn the R-50 off for a few seconds and then turn it back on.

• REPAIRS

The R-50 should only be service by an authorized Kawai repair station. Always save your valuable internal data to a cassette tape or MIDI before taking the drum machine in for service, as the data may be erased during repair.

3. CONTROLS

FRONT PANEL

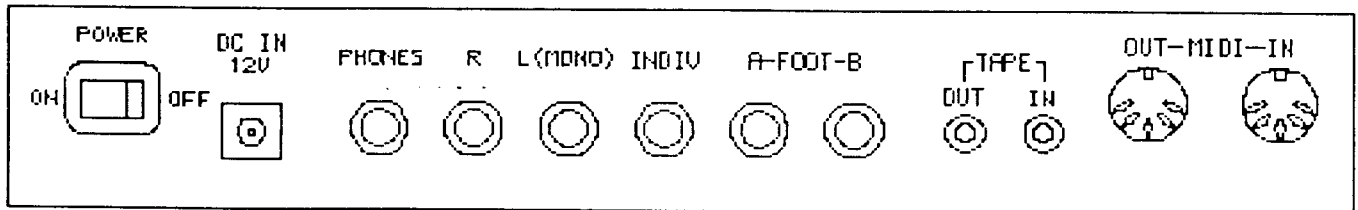


R-50 PRESET PATTERNS

(PATTERNS 50-99)

	0	1	2	3	4	5	6	7	8	9
50	8 Beat 1	8 Beat 2	8 Beat 3	8 Beat Fill In 1	8 Beat Fill In 2	8 Beat Break	Electric 8 Beat 1	Electric 8 Beat 2	Elec. 8 Beat Fill In 1	Elec. 8 Beat Fill In 2
60	Elec. 8 Beat Fill In 3	Elec. 8 Beat Fill In 4	Elec. 8 Beat Fill In 5	Elec. 8 Beat Turbo 1	Elec. 8 Beat Turbo 2	16 Beat 1	16 Beat 2	16 Beat 3	16 Beat Fill In 1	16 Beat Fill In 2
70	16 Beat Fill In 3	Bounce 1	Bounce 1 Fill In	Bounce 2	Bounce 2 Fill In	Rock Shuffle 1	Rock Shuffle 2	Rock Shuffle Fill	Disco 1	Disco 2
80	Slow Rock	Slow Rock Fill In	Swing 1	Swing 2	Waltz 1	Waltz 2 (3/4)	Waltz 3	Bossa Nova 1	Bossa Nova 2	Bossa Nova 3
90	Samba 1	Samba 2	Samba 3	Samba 4	Samba 5	Samba Break	Reggae	Reggae Fill In	March	Drum March

REAR PANEL



- POWER - Main AC power ON/OFF switch
- DC IN - Connection for 12V 500mA power supply.
- OUTPUTS
The R-50 does not include a power amp or speaker. To hear the instrument you must use headphones or connect it to a sound system (preferably full-range).

PHONES

Connection for standard stereo headphones.

R

Connection for right portion of stereo output.

L (MONO)

Connection for left portion of stereo output. Also used as a mono output if stereo is not required.

INDIV.

Connection for the Individual Output channel to which any given drum can be assigned.

- FT. SW. A
Connection for first optional F-1 footswitch. Footswitch functions are programmable.
- FT. SW. B
Connection for second optional F-1 footswitch. Footswitch functions are programmable.
- TAPE OUT
For connection to cassette deck input for data storage.
- TAPE IN
For connection to cassette deck output for data retrieval.
- MIDI IN/OUT
Connection to external MIDI gear.

4. OVERVIEW

SOUNDS

The R-50 features the following 24 digital drum and percussion sounds:

BASS DRUM 1	(BD1)
BASS DRUM 2	(BD2)
BASS DRUM 3	(BD3)
SNARE DRUM 1	(SD1)
SNARE DRUM 2	(SD2)
SNARE DRUM 3	(SD3)
TOM HIGH	(TOMH)
TOM MID	(TOMM)
TOM LOW	(TOML)
HIGH HAT CLOSED	(HHCL)
HIGH HAT OPEN	(HHOP)
RIDE 1	(RID1)
RIDE 2	(RID2)
CRASH 1	(CRS1)
CRASH 2	(CRS2)
CHINA CYMBAL	(CHNA)
COWBELL	(COWB)
CLAPS	(CLAP)
SHAKER	(SHAK)
AGOGO BELL	(AGOG)
CONGA	(CONG)
TAMBOURINE	(TAMB)
TIMBALE	(TIMB)
CLAVES	(CLVS)

These instruments can be assigned to Pads 1-10 along with other parameters such as tunings, accent, panning, level and processing. Four pad set-ups are preset and eight combinations are user-definable.

Rhythm patterns can be recorded individually using any of the pads in memory and up to eight voices can sound simultaneously. Rhythm patterns can then be assembled into a song and individual songs can be linked together to automate entire sets.

PADS

The sounds in the current pad set-up or drum kit are played using the 10 pads labeled PAD 1 - PAD 10. Additional kits are accessed using the PAD key.

GETTING AROUND

Operations on the R-50 are fairly uniform. Please take a moment to familiarize yourself with standard communication with the R-50.

Major command categories are engaged by pressing the correspondingly marked button. For keys with two commands, the lower command is accessed by pressing the key twice in succession. In either case, pressing the same button again exits the command category.

Additional commands are structured in a menu/sub-menu format and are accessed by pressing the ENT./REP. key successively for each command. In some instances, the BACK key can be used to move backward through a series of sub-menu choices. The ENT./REP. and BACK keys also serve as "Execute" and "Cancel" for certain operations.

CURSOR KEYS

The ◀ and ▶ keys are used to increment and decrement the value displayed in the window. The ▲ and ▼ keys change similar parameters in steps of +/-10. ▲ and ▼ also change certain other display attributes such as drum selection. The arrow keys repeat their functions when held down.

VOLUME

The VOLUME control serves as a master volume control for the entire instrument. Individual volumes are accessed via the MIXER.

5. WORKING WITH DRUM KITS

It is important to understand that pads and drums are independent of one another. A drum can be assigned to more than one pad at a time and the different pads can then be set for different variations in tuning, level and processing to facilitate easy and versatile entry of patterns.

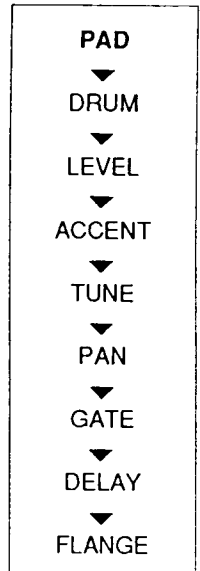
Pressing PAD displays the current drum kit. The R-50 comes with 4 preset drum kits (PRE. 1-4) and 8 user-defined drum kits (USER 1-8). (The instrument comes out of the box with PRE. 1 assigned to the pads.) Play the 10 pads to hear each sound.

Pressing the ◀ and ▶ keys moves through PRE 1-4 (presets) and USER 1-8. Select each kit in turn and play the 10 pads.

CHANGING USER SETTINGS

While the presets cannot be altered, USER 1-8 are designed to be programmed to suit your needs. After selecting the appropriate USER drum kit, ENT./REP. accesses the next function and BACK returns you to the previous function. To exit PAD mode at any time press PAD again.

You can select a pad during any of these functions simply by hitting it. The pad number is displayed along with the appropriate information for the current function and the pads can be played while making changes.



CHANGING DRUMS

This is where drums are selected for the current pad (the one played last). Besides the 24 percussion and drum sounds, eight triggers are available which can be programmed to play external MIDI devices. Trigger parameters are set up under MIDI OUT.

Press ENT./REP. from the USER display. Press the ▲ and ▼ keys to change the drum assignment. The display will show the currently selected drum.

LEVEL

While the front-panel pads are not physically sensitive, they can be programmed to record notes into patterns at a specified velocity or volume.

Press ENT./REP. from the DRUMS display. Use the ◀ and ▶ keys to change the LEVEL assignment. The bar graph in the display represents the LEVEL setting.

EXAMPLE

Press PAD to enter PAD mode.

*PAD PRE. 1

Use ◀ and ▶ to select a kit.

*PAD USER1

Press ENT./REP. to get into the kit.

*PAD 1 TOMH

Play a pad to access settings for that pad.

*PAD 9 RID2

Press ▲ and ▼ to change the assigned instrument.

*PAD 9 CRS2

Press ENT./REP. to access LEVEL.

*PAD 9 LVL. ■■

Use ◀ and ▶ to change the pad volume.

*PAD 9 LVL. ■

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ACCENT

Each pad can be given an accent level which is invoked when the ACCENT key is depressed in conjunction with the given pad. The ACCENT level can actually be higher or lower than the LEVEL setting.

Press ENT./REP. from the LEVEL display. Use the ◀ and ▶ keys to change the ACCENT level. The bar graph in the display represents the level.

TUNING

Each pad can be tuned -8/+7 semitones from the drum's original pitch. Several pads using the same drum could be tuned differently to create tuned percussion.

Press ENT./REP. from the ACCENT display. Use the ◀ and ▶ keys to change the tuning. The graph in the display increases as the pitch gets higher and decreases as the pitch gets lower.

PAN

Each pad can be positioned anywhere in the stereo field when both the LEFT and RIGHT outputs are used.

Press ENT./REP. from the TUNE display. Use the ◀ and ▶ keys to place the sound. The graph in the display indicates the left-to-right placement of the current pad.

GATE

Gating refers to cutting off part of a sound. A popular recording technique today is to apply a gate to a reverbed drum sound to choke the reverb effect off abruptly.

Press ENT./REP. from the PAN display. Each pad can be given its own gate setting using the ◀ and ▶ keys to select GATE 1, GATE 2 or GATE 3. GATE 0 indicates no gating effect.

EXAMPLE (continued)

Press ENT./REP. to access ACCENT.

*PAD 9 AC. ■■

Use ◀ and ▶ to change the ACCENT setting.

*PAD 9 AC. ■

Press ENT./REP. to access TUNE.

*PAD 9 TUNE■

Change pad tuning using ◀ and ▶.

*PAD 9 TUNE■■

Press ENT./REP. to access PAN.

*PAD 9 PAN ■

Use ◀ and ▶ to change pad panning.

*PAD 9 PAN ■■

Press ENT./REP. to access GATE.

*PAD 9 GATE 0

Use ◀ and ▶ to change the pad gate setting.

*PAD 9 GATE 1

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DELAY

Digital delay effects can be used to fatten sounds and create slapback echo effects. The delay time is preset for each drum sound.

Press ENT./REP. from the GATE display. Each pad can be given its own digital delay effect using the ◀ and ▶ to select DELAY 1, DELAY 2 or DELAY 3. DELAY 0 indicates no delay effect.

DELAY 1: The delayed sound plays at the same volume as the original sound.

DELAY 2: The delayed sound plays louder than the original sound.

DELAY 3: The delayed sound plays softer than the original sound.

FLANGE

Flanging can be used as special effects to add an animated or "spacey" effect.

Press ENT./REP. from the DELAY display. Each pad can be given its own digital flange effect using the ◀ and ▶ to select FLANGE 1, FLANGE 2 or FLANGE 3. FLANGE 0 indicates no flange effect.

FLANGE 1: The delayed sound plays at the same pitch as the original sound.

FLANGE 2: The delayed sound plays at a higher pitch than the original sound.

FLANGE 3: The delayed sound plays at a lower pitch than the original sound.

To exit PAD mode, press PAD again.

EXAMPLE (continued)

Press ENT./REP. to access DELAY.

*PAD 9 DELAY0

Use ◀ and ▶ to change the pad delay setting.

*PAD 9 DELAY1

Press ENT./REP. to access FLANGE.

*PAD 9 FLANG0

Use ◀ and ▶ to change the pad flange setting.

*PAD 9 FLANG1

Press ENT./REP. to return to the beginning of PAD mode.

*PAD USER1

Press PAD to exit PAD mode.

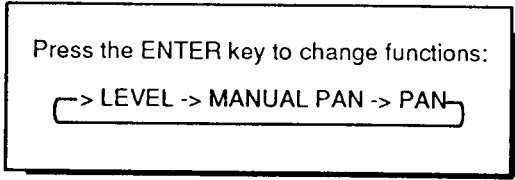
CALL PTN 49.

MIXER

The R-50 has a built-in mixer which governs the balance of individual drums, as opposed to the pads. (Remember drums are assigned to pads.)

Level controls are accessed by pressing MIXER. Pressing ENT./REP. successively accesses the other functions available and BACK returns you to the previous function:

You can use the mixer at any point while the drum machine is playing and you can also play the pads to monitor the changes you make in the mixer.



Note:
Press MIXER again to exit the MIXER menu at any time.

LEVEL

The LEVEL function provides for setting the level of the individual drums. If one drum is assigned to several pads, the volumes for all of those same pads will be changed.

If you are not in MIXER mode, press MIXER once to do so. Use the ◀ and ▶ keys to change the volume of the currently displayed drum. Press the ▲ and ▼ keys to change to the drum you wish to work with.

MANUAL PAN

The pads are normally given their panning assignments in the PAD sub-menu. It is possible to override those assignments with the ones set in this next MIXER function. If MANUAL PAN is OFF the panning set in PAD mode is in effect for all drums. If MANUAL PAN is ON, the panning set in MIXER mode is in effect for all drums.

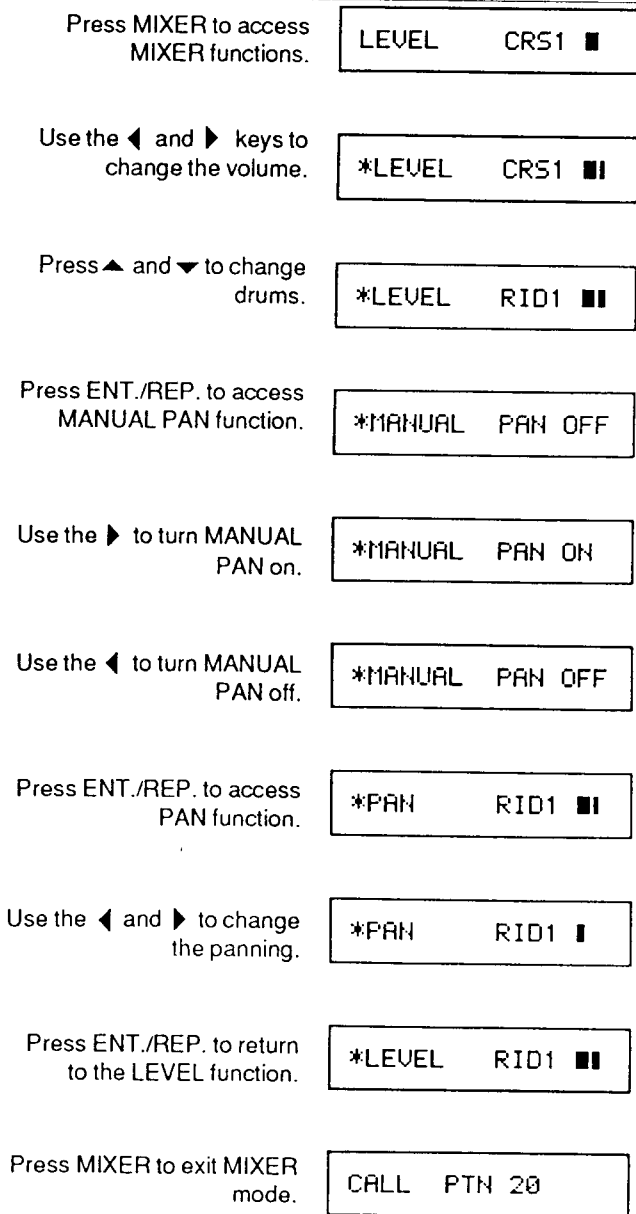
Press ENT./REP. from the LEVEL function to access MANUAL PAN. Use the ◀ key to select MANUAL PAN OFF and the ▶ key to select MANUAL PAN ON.

PAN

If MANUAL PAN is ON, the pan settings here will override those set in the PAN mode. If MANUAL PAN is OFF, these settings will have no effect.

Press ENT./REP. from the MANUAL PAN function to access PAN. Use the ◀ and ▶ keys to change the panning. Press the ▲ and ▼ keys to change the drum being panned.

To exit the MIXER mode, press MIXER again.



6. PLAYING RHYTHM PATTERNS

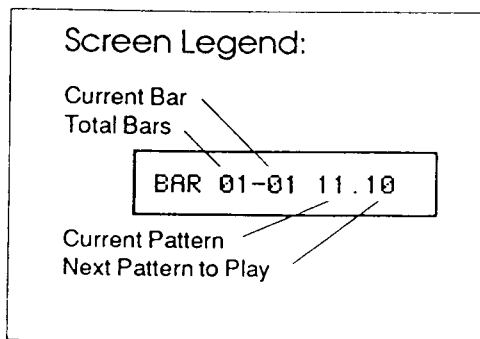
A rhythm "pattern" is a section of rhythm of a given length (such as 2 bars). The R-50 comes with 50 preset rhythm patterns (50-99) along with room for 50 user-defined patterns (00-49). These patterns are the building blocks of complete songs or a given pattern can just loop endlessly.

Existing patterns are accessed by pressing the CALL PATTERN button. The display will then show the current pattern number. The ◀ and ▶ keys decrement and increment and decrement the pattern number one digit at a time, while the ▲ and ▼ keys change the pattern number in increments of 10. (Remember, all four keys repeat their functions when held down).

Once a rhythm pattern is selected, press the START button to hear the pattern. When the end of the pattern is reached, the same pattern is repeated over and over. The red LED beside TEMPO flashes to indicate the downbeat. Press the STOP/CONT. button to stop the pattern. Once the machine has stopped playing, pressing the STOP/CONT. button again will start the pattern playing from the point where it was stopped.

Select and play a pattern. While the pattern is still playing, select a different pattern number with the arrow keys. Notice that the next time the first pattern reaches its end, the newly selected pattern begins.

At this point the display tells you several important things. The first number shows the length of the pattern in bars, while the second number represents the current bar position within the pattern. The third number is the current pattern number. When a new pattern has been selected during playback the fourth position changes from blank to the new pattern number.



You may find it handy to establish how many bars have been played since you pressed START or CONT. This is the BAR COUNT feature and is accessed by pressing BAR COUNT and TEMPO simultaneously. BAR COUNT can be displayed whether a pattern is playing or not and is reset each time you press START.

Note that during playback, various other functions such as PAD and MIXER are available. Experiment with selecting and playing different patterns and adjusting the PAD and MIXER settings to taste during playback.

EXAMPLE

Press CALL PATTERN to access patterns.

CALL PTN 00.

Press ▶ to increment pattern number by 1.

CALL PTN 01.

Press ▲ to increment pattern number by 10.

CALL PTN 11.

Press START to hear the repeating pattern.

BAR 01-01 11.

Press ◀ while pattern is playing.

BAR 01-01 11.10

Press STOP/CONT. to end performance.

BAR 01-01 10.

Press STOP/CONT. again to continue performance.

BAR 01-01 10.

Press BAR and TEMPO simultaneously to display BAR COUNT.

*BAR= 002

TEMPO

MANUAL TEMPO CONTROL

The tempo can be altered regardless of whether the machine is playing or stopped. Simply press TEMPO and the display shows the current tempo in beats-per-minute. The red LED beside TEMPO will also light to indicate TEMPO mode. The ◀ and ▶ keys are used to decrement and increment the tempo by a factor of 1, while the ▲ and ▼ keys change the tempo by a factor of 10.

TAP TEMPO

The R-50's tempo can also be dictated by simply tapping a tempo in! First press TEMPO to enter TEMPO mode. Then simply tap a tempo using the TAP button. The R-50 measures the time between any two taps and alters the tempo accordingly. We recommend that you tap at least 4 beats to establish the desired tempo.

EXAMPLE

Press TEMPO to access TEMPO mode.

*TEMPO ♩=120

Use ◀ and ▶ to change tempo by a factor of 1. Press ▶.

*TEMPO ♩=121

Use ▲ and ▼ to change tempo by a factor of 10. Press ▼.

*TEMPO ♩=111

Tap desired tempo using TAP.

*TEMPO ♩=165

7. RECORDING RHYTHM PATTERNS

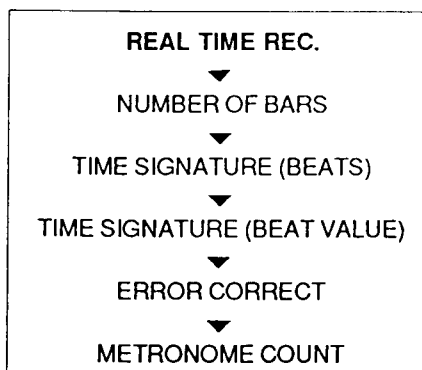
Preset patterns 50-99 cannot be altered. Patterns 00-49 can be programmed and altered by the user. Two basic methods can be used to enter new patterns - real-time and step. Real-time mode is used to enter drums parts in "live" against a metronome. Step mode is used to enter patterns one beat at a time without any reference to a real-time metronome.

In both modes, the ◀ and ▶ keys change the pattern number by a factor of 1, while the ▲ and ▼ keys change by a factor of 10. If "DUB" appears as part of the display, a pattern has already been recorded. "NEW" represents a pattern that has not been recorded. "PRE" indicates a preset pattern that cannot be altered.

REAL-TIME RECORDING

As stated earlier, real-time mode is used to enter drums parts in "live" against a metronome.

Press REAL TIME REC. to enter this mode. The ENT./REP. key is used to step through a series of set-up functions before actually recording and BACK is used to return to the previous function:



Note: You may exit from any of these functions by pressing REAL TIME REC.

NUMBER OF BARS

Each pattern can be any desired length up to 99 bars. The default is 1 bar, but is easily changed.

Press ENT./REP. from the REAL TIME REC. display. Use the ◀ and ▶ to change the number of bars by a factor of 1 and the ▲ and ▼ keys to change by a factor of 10.

TIME SIGNATURE

The time signature of an R-50 pattern is very flexible. Patterns are available from 1/4 to 99/16!

Press ENT./REP. from the BAR display to access the number of beats per measure. The number of beats in a measure can range from 1 to 99. Use the ◀ and ▶ to change the number of beats by a factor of 1 and the ▲ and ▼ keys to change by a factor of 10.

Press ENT./REP. again to access the beat value of the time signature. Use the ◀ and ▶ keys to select quarter note, eighth note or sixteenth note beat value.

ERROR CORRECT

Error correct (also known as quantize) can be used to correct your performance while recording a pattern. All entries are rounded to the closest value that you specify.

Press ENT./REP. from the TIME SIGNATURE display. The default error-correct value is 1/16 (your recordings will be rounded to the nearest sixteenth note). Use the ◀ and ▶ keys to specify the desired error-correct value. (1/6 represents quarter-note triplets, 1/12 represents eighth-note triplets, 1/24 represents sixteenth note triplets and 1/48 represents thirty-second-note triplets.) If no error-correction is desired, select 1/96 (the record resolution of the R-50 is ninety-sixth-notes).

METRONOME

Real-time recording is typically done with the aid of an audible metronome. The beat value of the metronome can be altered to suit your needs.

Press ENT./REP. from the ERROR CORRECT display. Use the ◀ and ▶ keys to specify the desired metronome beat value. (1/6 represents quarter-note triplets, 1/12 represents eighth-note triplets and 1/24 represents sixteenth note triplets.) If no metronome is desired, select OFF.

RECORDING

Once the record parameters are set properly, you're ready to record. (If you like the default settings, you don't have to access any of these set-up functions before recording.)

From the metronome display, press either ENT./REP. or REAL TIME REC. to return to REAL TIME RECORD mode. Press START to begin recording and you should hear the metronome assuming you did not turn it off. (Note: If the metronome is too loud or too soft, the level of the metronome can be adjusted using MIXER.) The display will show the total number of bars with the current bar number to the right.

The pattern will play over and over again, with the downbeat indicated by the red LED and an accented metronome beat. This repetition allows you to take your time and enter one thing at a time.

Drums are recorded into a pattern by pressing the desired pad at the appropriate time. (External MIDI devices can also be used, covered under the MIDI OPERATION section.) All data associated with a given pad is recorded such as level, tuning and panning.

To enter accented drums, hold down the ACCENT key while playing the appropriate pad.

If ENT./REP. and a pad are held down while recording, the pad will be entered repeatedly on every beat specified by the ERROR CORRECT value. For instance, if ERROR CORRECT is set for 1/16 and ENT./REP. and a pad assigned to hi-hat are held down for half of a measure, the hi-hat will be recorded on every 1/16th note in that half measure.

All drum kits are available while recording by entering PAD mode and selecting the desired kit before continuing to play the pads. TEMPO and MIXER are also accessible while recording.

Note: A useful technique is to stop the recording process and change the error-correct value as needed for each pad. (The number of bars and time signature cannot be changed.) For example, you might want a snare hit quantized to 1/4 while the high hat has no error-correction at all.

EXAMPLE

Press REAL TIME REC.

REAL : DUB PTN 11

Press ◀ to decrement pattern number by 1.

REAL : DUB PTN 10

Press ▼ to decrement pattern number by 10.

REAL : NEW PTN 00

Press ENT./REP to access BARS.

BAR 01 04/04

Press ▶ to specify 2-bar pattern.

BAR 02 04/04

Press ENT./REP. to access BEATS.

BAR 02 04/04

Press ◀ to decrement BEATS to 3/4 time.

BAR 02 03/04

Press ENT./REP. to access BEAT VALUE.

BAR 02 03/04

Press ▶ to increment BEAT VALUE to 3/8 time.

BAR 02 03/08

Press ENT./REP. to access ERROR CORRECT.

E.C. 1/16 M 1/4

Press ◀ to change ERROR CORRECT to eighth-note triplets.

E.C. 1/12 M 1/4

Press ENT./REP. to access METRONOME BEAT.

E.C. 1/12 M 1/4

Press ▶ twice to set metronome for eighth notes.

E.C. 1/12 M 1/8

Press REAL TIME REC. to exit.

REAL : NEW PTN 00

Press START to begin recording. Enter drums using pads. (Access PAD and MIXER as needed. Press again to exit.)

BAR 02-01 -REC-

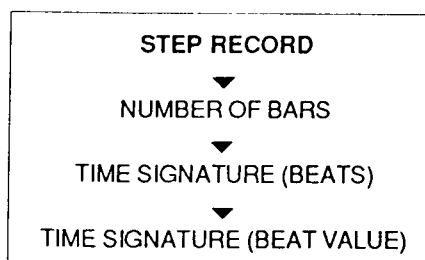
Press STOP to end.

REAL : DUB PTN 00

STEP RECORDING

Step recording is the process of manually stepping through the beats of a pattern and entering drum hits where desired.

Press **STEP REC.** to enter this mode. The **ENT./REP.** key is used to step through a series of set-up functions before actually recording and **BACK** is used to return to the previous function:



Note: You may exit any of these functions at any time by pressing **STEP REC.**

Note: For this example we assume that you have erased pattern 00.

NUMBER OF BARS

Each pattern can be any desired length up to 99 bars. The default is 1 bar, but is easily changed.

Press **ENT./REP.** from the **STEP REC.** display. Use the ◀ and ▶ to change the number of bars by a factor of 1 and the ▲ and ▼ keys to change by a factor of 10.

TIME SIGNATURE

The time signature of an R-50 pattern is very flexible. Patterns are available from 1/4 to 99/16!

Press **ENT./REP.** from the **BAR** display to access the number of beats per measure. The number of beats in a measure can range from 1 to 99. Use the ◀ and ▶ to change the number of beats by a factor of 1 and the ▲ and ▼ keys to change by a factor of 10.

Press **ENT./REP.** again to access the beat value of the time signature. Use the ◀ and ▶ keys to select quarter note, eighth note or sixteenth note beat value.

RECORDING

Once these parameters are set properly, you're ready to record. (If you like the default settings, you don't have to access any of these set-up functions before recording.) From the **BEAT VALUE** display, press either **ENT./REP.** or **STEP REC.** to return to **STEP RECORD** mode.

Pressing the **START** button gets the R-50 ready to accept the first beat. The red LED beside **TEMPO** will light to confirm that. Use the ◀ and ▶ keys to select the note value from those engraved on the display window. The ▲ and ▼ keys are used to change the value from normal (shown with ▲) to triplets (shown as "3") and back. Strike the desired pad to enter its sound at the selected value for that beat. Use **PAD** if necessary to select the proper sound. To enter accented drums, hold down the **ACCENT** key while playing the appropriate pad.

This same process is repeated to enter each beat of the pattern, with the display showing the number of bars with the current bar to the right. It is up to the user to keep track of what the current beat is within the bar. Example: If an eighth note was entered as the first beat, the next entry will appear on the next eighth note of the bar. If a quarter note was entered, the next beat will be placed on the next quarter note instead.

Rests are used to advance to subsequent beats without entering notes. After selecting a rest, play any pad to advance to the next beat. You should only hear a metronome click.

Rests can also be used to erase a drum previously recorded: Select the rest at the point in the pattern where the drum to be erased is recorded. Then, press the pad assigned to the same drum as you wish to erase. The **ENT./REP.** key can be used to advance by the selected note value.

After the last beat of the pattern has been entered the red LED lights again to show that the R-50 is ready to record another pass starting with the first beat. The **STEP RECORD** process can be repeated as many times as necessary to record all desired drums.

Pressing **STOP/CONT.** at any time exits the recording process.

To hear the pattern, you must exit **STEP REC.** mode. Select **CALL PATTERN** and press **START.**

EXAMPLE A: SET UP

Press STEP REC.

STEP : DUB PTN 11

Press ◀ to decrement pattern number by 1.

STEP : DUB PTN 10

Press ▼ to decrement pattern number by 10.

STEP : NEW PTN 00

Press ENT./REP to access BARS.

BAR 01 04/04

Press ▶ to specify 2-bar pattern.

BAR 02 04/04

Press ENT./REP. to access BEATS.

BAR 02 04/04

Press ◀ to decrement BEATS to 3/4 time.

BAR 02 03/04

Press ENT./REP. to access BEAT VALUE.

BAR 02 03/04

Press ▶ to increment BEAT VALUE to 3/8 time.

BAR 02 03/08

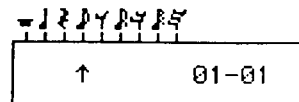
Press STEP REC. to exit.

STEP : NEW PTN 00

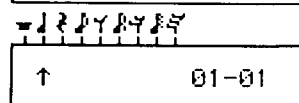
EXAMPLE B: RECORDING

Note: The following enters a simple bass/snare pattern. Select the PRE. 1 kit. Also use ERASE PATTERN to undo the changes made by Example A and return to a default of 4/4 time.

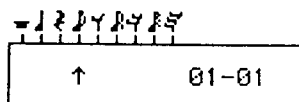
Press START.



Press ◀ twice to select quarter-note entry.



Play PAD 6 to enter a bass drum as quarter-note.

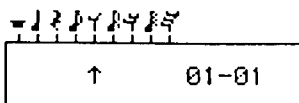


Press ▶ twice to select eighth-note entry.

Play PAD 7 to enter snare drum as eighth-note.

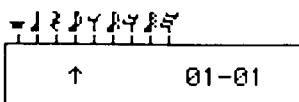
Play PAD 6 to enter bass drum as eighth-note.

Play PAD 6 to enter bass drum as eighth-note.



Press ▶ to select eighth-note rest entry.

Press any pad to enter an eighth-note rest.



Press ◀ to select eighth-note entry.

Play PAD 7 to enter a snare drum as eighth-note.

Press STOP/CONT. to exit.

Press CALL PATTERN to access pattern playback.

CALL PTN 00.

Press START to hear pattern.

BAR 01-01 00. _

8. EDITING RHYTHM PATTERNS

OVERDUB RECORDING

Overdubs are done in the same way that patterns are recorded, using either REAL TIME REC. or STEP REC. The only difference is that the display will read "DUB" instead of "NEW". Each pass can be done using a different error-correction, metronome count and drum kit if desired. Remember that the number of bars and time signature cannot be changed in an already recorded pattern.

OVERDUBBING PRESET PATTERNS

Overdubbing using a preset pattern is an easy way to create new patterns. Overdubbing using a preset pattern causes the creation of a new pattern, which is automatically saved in a blank pattern within the pattern area 00-49.

If the patterns 00-49 are all recorded, the display shows the error message "USER AREA OVER".

ERASING

ERASING A PATTERN

User-definable patterns 00-49 can be erased easily. (Preset patterns 50-99 are permanently stored in the machine.) Simply select the pattern you wish to erase and press ERASE. Press ENT./REP. to confirm or BACK to cancel.

EXAMPLE:

Select the pattern to be erased. Select Pattern 05.

CALL PTN 05.

Press ERASE.

ERASE PTN 05 ALL

Press ENT./REP. to verify.

ERASE EXECUTED

Or, press BACK to cancel erasure.

ERASE CANCEL

ERASING AN INSTRUMENT

It may be desirable to erase all occurrences of an instrument in a given pattern. This is easily accomplished.

Make sure the pattern you wish to erase is selected, then press ERASE. As with the ERASE PATTERN operation, the display will show the pattern number and is prepared to erase "ALL" drums. Use the ▲ and ▼ keys to select the drum you wish to erase. Then press ENT./REP. to proceed or press BACK to cancel the operation.

EXAMPLE:

Press ERASE.

ERASE PTN 05 ALL

Use ▲ and ▼ to select drum.

ERASE PTN 05 BD1

Press ENT./REP. to execute.

ERASE EXECUTED

Or, press BACK to cancel.

ERASE CANCEL

Note: This operation erases all events in a pattern which uses a given drum. If different entries have been made with pads using different variations on that drum, all those events will be erased. You are erasing a drum, not a pad!

ERASING A BAR

It is possible to erase all the contents of a single bar without disturbing the rest of the pattern.

Select CALL PATTERN and access the desired pattern using the 4 arrow keys. Press ENT./REP. to view the number of bars and the current bar. Select the desired bar using the ◀ and ▶ keys. (Alternately play the pattern, press STOP/CONT. during the bar you wish to erase, then press ENT./REP.) Press ERASE, then ENT./REP. to execute or BACK to cancel.

EXAMPLE:

Select the pattern.	CALL PTN 07.
Press ENT./REP. to access bar display.	BAR 02-01 07.
Use ◀ and ▶ to select bar to erase.	BAR 02-02 07.
Press ERASE.	ERASE BAR 02-02
Press ENT./REP. to continue.	ERASE EXECUTED
Or press BACK to cancel.	ERASE CANCEL

ERASING A NOTE

Rather than erase all occurrences of an instrument completely from a pattern, it may be desirable to erase a single note. This is done by holding the ERASE key and the pad you wish to erase, while in RECORD mode.

EXAMPLE:

Press REAL TIME REC.	REAL :DUB PTN 33
Select pattern using arrow keys.	REAL :DUB PTN 34
Start recording by pressing START.	BAR 01-01 -REC-
While holding ERASE, hold down pad to erase. Release.	BAR 01-01 -REC-
Press STOP/CONT.	REAL :DUB PTN 34

ERASING ALL MEMORY

You can erase all of the patterns in memory (except the preset ones of course), by holding the ACCENT key and then pressing the ERASE key.

EXAMPLE:

Hold ACCENT and press ERASE.	ERASE ALL MEMORY
Press ENT./REP. to continue.	ERASE SURE?
Press ENT./REP. to execute.	ERASE EXECUTED
Or, press BACK to cancel.	ERASE CANCEL

SWING

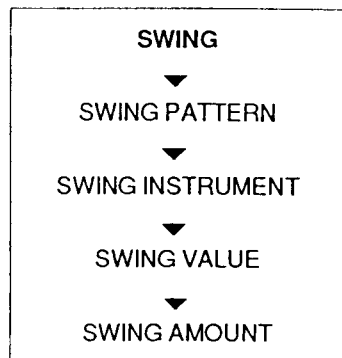
One way to make a drum pattern sound more human is to give it some "feel". Many drummers actually play behind the beat in attaining drum parts. The SWING feature of the R-50 makes it easy to create this same effect after a pattern has been recorded.

Press SWING to access SWING mode. Pressing ENT./REP. repeatedly accesses additional SWING parameters and BACK returns to the previous one. Press SWING at any time to exit SWING mode.

SELECT SWING INSTRUMENT

This function allows you to select which instrument will be effected by SWING.

Press ENT./REP. from the SWING PATTERN display. This prompt allows you to select the drum that will receive the swing effect. The default, "ALL", selects every instrument. Use the ▲ and ▼ keys to select the appropriate drum.



SELECT SWING VALUE

The R-50 allows SWING to be assigned to notes which fall on eighth notes or sixteenth notes.

Press ENT./REP. from the SWING INSTRUMENT display. Use the ◀ and ▶ keys to change between 1/8 and 1/16.

SELECT SWING AMOUNT

The amount of swing can be specified as a percentage. The default is 50%, which is no swing. The maximum is 75%.

Press ENT./REP. from the SWING VALUE parameter. Use the ◀ and ▶ keys to select the desired swing factor.

EXECUTE SWING

Press ENT./REP. from the SWING AMOUNT parameter. Press ENT./REP. again to continue or press BACK to cancel.

Warning: Once executed, the effects of SWING cannot be reversed. Making a copy of the pattern before using SWING is recommended (see next section).

Note: When the SWING VALUE is 1/16, the SWING AMOUNT cannot be 54%, 63%, or 71%. This combination will result in the error message "ILLEGAL INPUT." Also, if the pattern selected for SWING is blank, the error message "EMPTY PATTERN" will appear.

EXAMPLE:

Press SWING to enter SWING mode.	SWING PTN 00
Press ▶ to raise pattern.	SWING PTN 01
Press ENT./REP.	ALL 1/8 50%
Press ▲ to select drum.	BD1 1/8 50%
Press ENT./REP.	BD1 1/8 50%
Press ▶ to select swing value.	BD1 1/16 50%
Press ENT./REP.	BD1 1/16 50%
Press ▶ to select swing factor.	BD1 1/16 58%
Press ENT./REP.	SWING READY
Press ENT./REP. again to execute.	CALL PTN 01.
Or, press BACK to cancel.	SWING CANCEL

COPYING PATTERNS

It is often desirable to copy an existing pattern. For instance, you may want to create a pattern that is similar to an existing one by copying it and making slight changes (without changing the original). Also, copy is a nice safety factor when doing irrevocable operations like SWING.

The COPY command works on the principal of copying an existing source pattern to a destination pattern number. The current contents of the destination pattern will be erased. COPY can optionally be used to copy two different patterns end-on-end to a single new pattern. If the two source pattern numbers are the same, the resulting copy will be twice as long.

Press COPY to access COPY mode. Select the first pattern to be copied using the arrow keys. Press ENT./REP. Next, use the arrow keys again to select the optional second source copy. Press ENT./REP. (Leave this blank if you only wish to copy a single pattern.) Finally, select the destination pattern using the now-familiar arrow keys.

To change any of the copy values, press BACK to move to the previous parameters. Use the ERASE key to clear the entries, if necessary. When all is ready, press ENT./REP. again. Press ENT./REP. a final time to continue or press BACK to cancel.

Note: To exit COPY mode at any time, press COPY again.

ERROR MESSAGES

"ILLEGAL INPUT" will be displayed when the beat value of the second pattern is different than the first pattern, or if the patterns' combined number of bars is more than 99.

"MEMORY OVERFLOW" will appear if there is not enough memory to accept the copied pattern.

EXAMPLE:

Press COPY. Use arrow keys to select pattern to copy.

```
COPY  **+**=**
```

Press ENT./REP. and use arrow keys to select optional second pattern to copy.

```
COPY  01+**=**
```

Press ENT./REP. and use arrow keys to select copy destination.

```
COPY  01+04=**
```

```
COPY  01+04=32
```

Press ENT./REP.

```
COPY  READY
```

Press ENT./REP. to execute the copy.

```
CALL  PTH 37.
```

Or, press BACK to cancel.

```
COPY  CANCEL
```

BUILDING SONGS

Songs are constructed by assembling a list of existing patterns. This list can then be edited to insert or delete specific sections. Ten such songs can be created. It is also possible to link these songs themselves together.

Press BUILD SONG (touch REAL TIME REC. twice) to enter this mode.

The ENT./REP. key is used to move through the song-building functions and BACK returns to the previous step. Pressing BUILD SONG at any time exits the BUILD SONG mode.

SELECT SONG TO BUILD

Use ◀ and ▶ to select one of the ten songs.

SONG TEMPO

Since different songs have different tempos, it's often desirable to program the tempo right into the song.

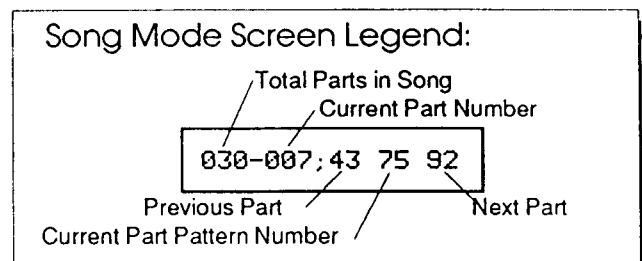
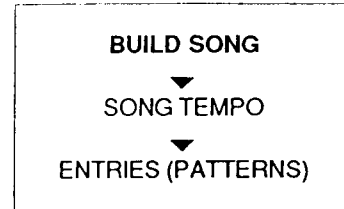
Press ENT./REP. from the SELECT SONG display. The tempo control is switched off as a default. Use the 4 arrow keys to change the tempo within the range of 40 - 250.

SONG CONSTRUCTION

Press ENT./REP. from the SONG TEMPO display. The display then shows the number of patterns followed by the current pattern position within the song. The rest of the display is a small window on a list of patterns in the order in which they will play.

Use the 4 arrow keys to select the pattern which you wish to play first, then press ENT./REP. The list moves to the left to allow entry of the next pattern. Pressing any arrow key enters a default pattern number matching the previous pattern to make entering multiples of the same pattern easier. Use the arrow keys again to select the desired pattern and press ENT./REP. Repeat this process to enter all the patterns in the desired order.

Pressing BACK will return to the previous step which can then be changed. ("st" indicates the start of the song.) When all patterns have been positioned, press BUILD to exit.



EXAMPLE:

Press BUILD.	BUILD SONG 0
Select Song 0 - 9 using the ◀ and ▶ keys.	BUILD SONG 5
Press ENT./REP. to access song tempo.	♩=OFF
Use the arrow keys to change song tempo.	♩=120
Press ENT./REP. to access the pattern list.	001-001; st ** **
Choose first pattern using arrow keys.	001-001; st 51 **
Press ENT./REP. to advance the list.	002-002; 51 ** **
Choose next pattern using arrow keys.	002-002; 51 33 **

(continued)

BUILDING TOOLS – INSERT, DELETE AND MULTIPLY

Three additional functions speed up the song-building process - INSERT, DELETE and MULTIPLY. They are accessed by the right three buttons above the pads.

INSERTING PATTERNS IN A SONG

It is often necessary when constructing an arrangement to insert patterns into a song at various points, even though the basic song has already been defined.

Use the ENT./REP. and BACK keys to move the cursor to the pattern you wish to insert in front of. Press INSERT. The patterns from the original cursor position and beyond will shift to the right to open a position in the arrangement. The left portion of the display will increase to reflect the new additions to the arrangement. Then use the arrow keys as usual to select the pattern for the newly created position.

DELETING SECTIONS OF A SONG

While building a song, DELETE removes a range of patterns from the song list. All remaining song patterns are shifted ahead to close the gap.

Select the first pattern to delete using the ENT./REP. and BACK keys, then press DELETE. The pattern to be deleted is then outlined in the display. If any subsequent patterns are also to be deleted, use the ENT./REP. key to expand the delete range and the BACK key to narrow it, or cancel the DELETE function.

When the delete range has been set properly, press DELETE again. Then press ENT./REP. to continue and the left portion of the display will change to reflect fewer patterns in the song. To cancel the deletion process, press BACK.

MULTIPLY

Songs often end with repeated sections or vamps. The MULTIPLY function specifies the number of repetitions and all the patterns from the current one to the end of the song are inserted that number of times.

While in BUILD mode, use the ENT./REP. and BACK keys to move the cursor to the beginning point of the vamp and press MULTIPLY (same as COPY). Press ENT./REP. if you wish to continue, or press BACK to cancel. The left portion of the display will increase to reflect the new additions to the arrangement.

EXAMPLE (continued)

Press INSERT to insert a pattern at the cursor.

```
003-002;51 ■■ 33
```

Select insert pattern using arrow keys.

```
003-002;51 10 33
```

Select beginning of delete range using the ENT./REP. and BACK keys.

```
003-002;51 10 33
```

Press DELETE.

```
003-002;51<10>33
```

Use ENT./REP. and BACK to change the delete range.

```
003-003;<10 33>**
```

Press DELETE to continue.

```
DELETE READY
```

Press ENT./REP. again to confirm.

```
002-002;51 ** **
```

Or, press BACK to CANCEL.

```
DELETE CANCEL
```

Select beginning of vamp using the ENT./REP. and BACK keys.

```
003-002;44 01 02
```

Press MULTIPLY.

```
003-x01;44<01 02
```

Use ◀ and ▶ to select number of repeats.

```
003-x03;44<01 02
```

Press ENT./REP. to perform entry.

```
008-008;02 ** **
```

Or, press BACK to cancel.

```
003-002;44 01 02
```

(continued)

Note: Up to 99 repetitions can be selected using the Multiply function. However, the total number of parts within a song is limited to 255. Attempting to create a Song of more than 255 parts will result in the error message "ILLEGAL INPUT."

LINKING SONGS

Once songs have been defined, it is possible to chain them together so that one plays after another. This might be used to link several short songs together or to automate a set in live performance. (For the latter application, measures of rests and/or count-offs could be programmed into the beginning of each song if necessary.)

While in BUILD mode, move to the end of the song using ENT./REP.

The display will show "END". The ◀ and ▶ keys are used to select the song (0 - 9) to be played after the current song. Exit using BUILD or ENT./REP.

EXAMPLE (continued)

To link songs, move to the end of the current song with ENT./REP.

SONG 5 END

Select the song to be played next using the ◀ and ▶ keys.

SONG 5 LINK 2

Press BUILD to execute and return to song selection level.

BUILD SONG 5

Press BUILD again to exit BUILD mode.

REAL : DUB PTN 00

PLAYING SONGS

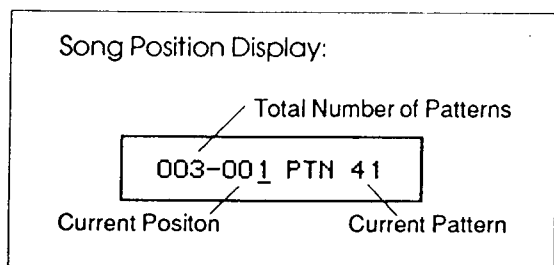
To hear a song after it has been constructed, first press CALL SONG (same as pressing CALL PATTERN twice). Select the desired song number using the ◀ and ▶ keys.

Press START to hear the song play. Press STOP/CONT. to stop playback. While playback is stopped, pressing STOP/CONT. again continues playback from where it stopped.

If the song has been programmed with a default tempo, that tempo will take effect. Whether a tempo was programmed or not, TEMPO can be accessed at any time and the arrow keys can be used to change the tempo.

START AT A DESIGNATED SECTION

It is also possible to start playback at the beginning of a specific section. Press ENT./REP. to access this mode. The display shows the number of patterns in the songs, followed by the current position and current pattern number:



Select the desired pattern using the arrow keys, then press CONT. The song will play from the beginning of that pattern. (If you press START, the Song will play from the beginning of the *first* pattern.)

BAR COUNT

It is often convenient to know how many bars into a song you are. BAR COUNT operates here the same way it does when using CALL PATTERN.

Press TEMPO and BAR COUNT (same as BACK here) to display the number of bars. (The R-50 can either be playing or stopped.) This displays the actual number of measures that have gone by rather than the number of patterns, as a pattern can be more than one measure long. Press START, CONT. (if the R-50 is stopped), or TEMPO to exit.

EXAMPLE:

Press CALL SONG to access songs.

CALL SONG 5

Use ◀ and ▶ to select appropriate song.

CALL SONG 9

Press START to begin playback.

018-001 PTN 05

Press STOP to end.

018-007 SONG 09

Press ENT./REP. to access position to play from.

018-009 PTN 23

Use ◀ and ▶ to select starting position.

018-003 PTN 66

Press CONT. to begin playback from the selected position.

018-003 PTN 66

Press TEMPO and BAR COUNT simultaneously to display BAR COUNT.

*BAR= 006

Press TEMPO to exit BAR COUNT.

018-003 PTN 66

Press STOP to return to song selection mode.

018-003 SONG 9

Press CALL SONG twice to exit CALL SONG mode.

CALL PTN 02.

ERASING SONGS

Erasing a song deletes the tempo, links and the entire list of patterns (but not the patterns themselves).

Press CALL SONG or BUILD and select the song to be erased using ◀ and ▶. Then press ERASE. Press ENT./REP. to continue or press BACK to cancel.

EXAMPLE:

Press CALL PATTERN.

CALL SONG 5

Select song to erase using
◀ and ▶.

CALL SONG 8

Press ERASE.

ERASE SONG 8

Press ENT./REP. to
confirm.

ERASE EXECUTED

Or, press BACK to cancel.

ERASE CANCEL

ERASE ALL SONGS

This procedure deletes the contents of all ten songs.

Press CALL SONG or BUILD. Hold down ACCENT and press ERASE. Then press ENT./REP. to continue. You will receive a second prompt. Press ENT./REP. again to confirm. Press BACK instead to cancel.

EXAMPLE:

Press CALL SONG.

CALL SONG 0

Hold ACCENT and press
ERASE.

ERASE ALL SONG

Press ENT./REP. to
continue.

ERASE SURE?

Press ENT./REP. to
confirm.

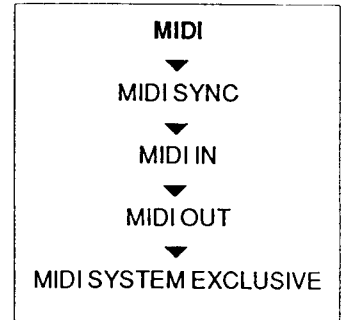
ERASE EXECUTED

Or, press BACK to cancel.

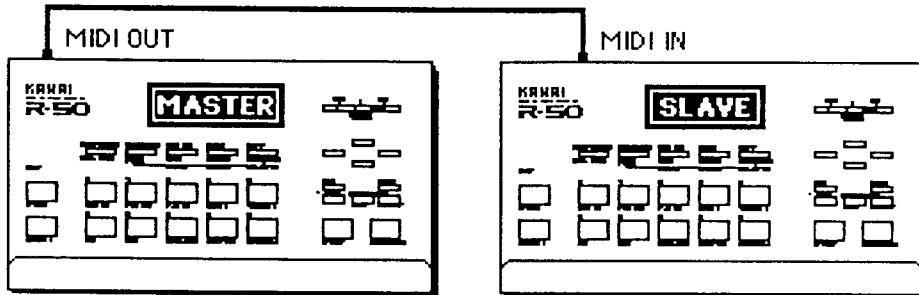
ERASE CANCEL

10. MIDI

MIDI is fully implemented on the R-50. MIDI operations are accessed by pressing MIDI (push STEP REC. twice). The ◀ and ▶ keys are used to access various sub-menus. After selecting the desired function, press ENT./REP. to access it.



MIDI Hookup:



MIDI SYNC

MIDI devices can be synchronized using MIDI Clock, part of the MIDI code that can be sent across standard MIDI cables. The R-50 can send or receive MIDI clock, allowing the machine to act as a master or a slave.

After pressing MIDI, use the ◀ and ▶ keys to select MIDI SYNC. Press ENT./REP. to enter the MIDI SYNC function. Use the ◀ and ▶ keys to select between SYNC EXT and SYNC INT. Press ENT./REP. to exit to the previous command level.

The sync default is SYNC INT, enabling the R-50 to be a master clock source. To use the R-50 as a master, connect the MIDI Out on the R-50 to the MIDI In of the slave device. To use the R-50 as a slave, connect the MIDI Out of the master device to the MIDI IN of the R-50.

The slave unit will need to be set to SYNC EXT. In this mode, pressing START will not begin pattern or song playback because the unit is waiting for a clock from a device such as a sequencer or other drum machine.

EXAMPLE:

Press MIDI to enter MIDI mode.



Press ENT./REP. to select MIDI SYNC.



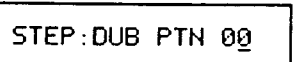
Use ◀ and ▶ to switch between internal and external sync.



Press MIDI to return to previous level.



Press MIDI again to exit.



MIDI IN

MIDI devices such as keyboards, sequencers and drum pads can be used to play the R-50 drum sounds and input rhythm patterns.

Connect the MIDI Out from the master device to the MIDI In of the R-50 as shown on Page 26.

Press MIDI, then use the ◀ and ▶ keys to select MIDI IN and press ENT./REP. A sub-menu of functions is accessed by pressing ENT./REP. BACK returns to the previous function. Press MIDI at any time to return to the basic MIDI functions. Pressing MIDI a second time exits MIDI mode.

OMNI MODE

When Omni Mode is turned on, the R-50 will receive information coming across all MIDI channels. When Omni Mode is not on, only information coming in on the designated receive channel will be acted upon.

Press ENT./REP. from the MIDI IN display. Use the ◀ and ▶ keys to switch between OMNI ON and OMNI OFF.

RECEIVE CHANNEL

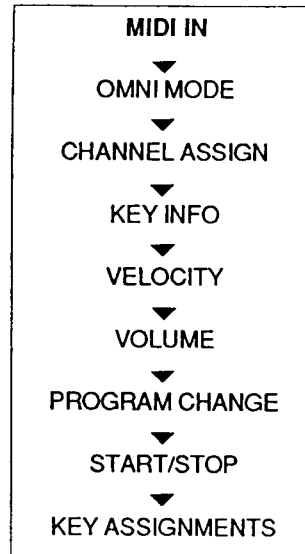
This function selects the channel on which the R-50 will receive MIDI information (if Omni Mode is off).

Press ENT./REP. from the OMNI display. The ◀ and ▶ are used to select the MIDI channel.

KEY INFO

This setting determines if the R-50 will filter out MIDI notes. Other MIDI information such as volume and program changes are still received.

Press ENT./REP. from the CHANNEL display. Use ◀ and ▶ to turn KEY INFO ON or OFF.



EXAMPLE:

Press MIDI.	MIDI SYNC
Use ◀ and ▶ to select MIDI IN.	MIDI IN
Press ENT./REP. to access Omni Mode.	OMNI ON CH: 1
Use ◀ and ▶ to turn Omni Mode on or off.	OMNI OFF CH: 1
Press ENT./REP. to access MIDI channel.	OMNI OFF CH: 1
Use ◀ and ▶ to select MIDI channel.	OMNI OFF CH: 5
Press ENT./REP. to access KEY INFO.	KEY INFO ON
Use ◀ and ▶ to turn note information on and off.	KEY INFO OFF

(continued)

VELOCITY

Many controllers send velocity information - the dynamics of how hard the instrument was struck. While the pads on the R-50 are not velocity-sensitive, the R-50 can receive MIDI velocity and tailor the sound accordingly. If velocity is filtered out the drums play at a moderate volume. Other MIDI information such as program changes are still received.

Press ENT./REP. from the KEY INFO display. Use the ◀ and ▶ keys to turn VELOCITY ON and OFF.

VOLUME

Some MIDI devices are capable of sending controller codes to change the volume on remote instruments. (MIDI Controller 7 is typically used for this.) If VOLUME is OFF, other MIDI information such as note values are still received.

Press ENT./REP. from the VELOCITY display. Use the ◀ and ▶ keys to turn VOLUME ON and OFF.

PROGRAM CHANGES

Most MIDI devices send program change information. This function can be used to filter out program changes coming from an instrument or sequencer.

Press ENT./REP. from the VOLUME display. Use the ◀ and ▶ keys to turn PROGRAM ON and OFF.

START/STOP

Many MIDI devices like sequencers and drum machines send start and stop signals to engage and disengage MIDI clock. This function can be used to filter out start and stop information coming from an external device.

Press ENT./REP. from the PROGRAM display. Use the ◀ and ▶ keys to turn START/STOP ON and OFF.

EXAMPLE: (Continued)

Press ENT./REP. to access VELOCITY.

VELOCITY	ON
----------	----

Use ◀ and ▶ to turn velocity information on and off.

VELOCITY	OFF
----------	-----

Press ENT./REP. to access VOLUME.

VOLUME	ON
--------	----

Use ◀ and ▶ to turn volume controller information on and off.

VOLUME	OFF
--------	-----

Press ENT./REP. to access PROGRAM.

PROGRAM	ON
---------	----

Use ◀ and ▶ to turn program change information on and off.

PROGRAM	OFF
---------	-----

Press ENT./REP. to access START/STOP.

START/STOP	ON
------------	----

Use ◀ and ▶ to turn START/STOP on and off.

START/STOP	OFF
------------	-----

Press ENT./REP. to access NOTE ASSIGN display.

IN	0	****_
----	---	-------

Play the desired note on the master or use the 4 arrow keys to select the note being assigned.

IN	36	BD1
----	----	-----

Press the desired pad, using PAD if necessary.

IN	36	SD1
----	----	-----

Press ENT./REP. to return to previous level.

MIDI	IN
------	----

Press MIDI to exit MIDI mode.

STEP: DUB PTN	00
---------------	----

MIDI NOTE ASSIGNMENTS

Every MIDI controller such as a keyboard sends a unique note number when a key is depressed. It is possible to "map" the individual pads to specific keys or note numbers on the master controller. Tuned percussion can easily be attained by tuning drum sounds differently on several pads, then assigning those pads to a range of notes.

The default note assignments are shown on page 45. To change them, press ENT./REP. from the START/STOP display. The 4 arrow keys are used to select the note number. The note number can also be selected by pressing the desired key on the master.

Press the desired pad to assign it to the selected note. Use PAD if necessary to change drum kits. Repeat this process to assign appropriate pads to notes sent from the master device.

Press MIDI or ENT./REP. to return to basic MIDI functions. Press MIDI again to exit MIDI mode.

The note assignments can be reset to their default settings by holding ERASE while turning on the power.

Note: KEY INFO must be ON in order for NOTE ASSIGNMENTS to be useful.

INITIAL RESET

Pressing ERASE while turning on the power returns the following functions to their default settings. The rhythms in memory are not affected by this procedure.

1. PAD SETTINGS (USER)
2. MIDI IN NOTE ASSIGNMENTS
3. MIDI OUT NOTE ASSIGNMENTS
4. MIXER SETTINGS
5. ASSIGN SETTINGS
6. TRIGGER SETTINGS

MIDI OUT

The R-50 can also be used to send MIDI information to other MIDI devices such as keyboards, sequencers and samplers. Connect the R-50's MIDI Out to the MIDI In of the slave unit as shown on page 26.

After pressing MIDI, use the ◀ and ▶ keys to select MIDI OUT and press ENT./REP. A sub-menu of functions is available by pressing ENT./REP. and BACK returns to the previous function. Press MIDI at any time to return to the basic MIDI functions. Pressing MIDI a second time exits MIDI mode.

POLY/MONO MODE

The R-50 normally sends all MIDI information on one user-selected channel - referred to as Poly Mode. In Mono Mode, each drum can be sent on an independent MIDI channel!

Press ENT./REP. from the MIDI OUT display. Use the ◀ and ▶ keys to switch between POLY and MONO.

SEND CHANNEL

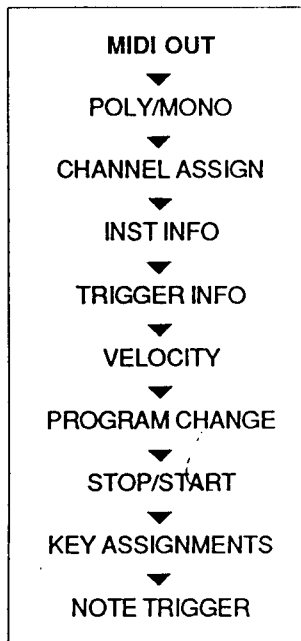
The R-50 can send and receive on different MIDI channels. This function selects the channel on which the R-50 will send MIDI information.

Press ENT./REP. from the POLY/MONO display. The ◀ and ▶ are used to select the MIDI channel. In Mono Mode, the various drums are accessed with the ▲ and ▼ keys and each drum is assigned a MIDI channel.

INSTRUMENT INFO

This setting determines if the R-50 will information out MIDI notes on transmission. Other MIDI information such as volume and program changes are still sent.

Press ENT./REP. from the CHANNEL display. Use ◀ and ▶ to turn INST INFO ON or OFF.



EXAMPLE:

Press MIDI.

MIDI SYNC

Use ◀ and ▶ to select MIDI OUT.

MIDI OUT

Press ENT./REP. to access POLY/MONO mode.

POLY CH: 1

Use ◀ and ▶ to select POLY or MONO.

MONO CLAP CH: 3

Press ENT./REP. to access MIDI channel.

MONO CLAP CH: 3

Use ◀ and ▶ to select MIDI channel.

MONO CLAP CH: 5

IN Mono Mode, use ▲ and ▼ to select different drums.

MONO SHAK CH: 1

Press ENT./REP. to access INST INFO.

INST INFO ON

Use ◀ and ▶ to turn instrument information on and off.

INST INFO OFF

TRIGGER INFO

This function determines if the 8 MIDI trigger notes will be sent to slave devices.

Press ENT./REP. from the INSTRUMENT INFO display. Use the ◀ and ▶ keys to turn trigger information on and off.

VELOCITY

The R-50 can send velocity information - the dynamics of how hard the instrument was struck. If velocity is not filtered, the velocity of the associated pad will be sent. (This is defined using PAD.) If velocity is filtered out the events are sent at a moderate velocity. Other MIDI information such as program changes are still sent.

Press ENT./REP. from the TRIGGER INFO display. Use the ◀ and ▶ keys to turn VELOCITY ON and OFF.

PROGRAM CHANGE

The R-50 normally sends program change information to other MIDI devices when a pattern or song is changed. This function can be used to filter out program changes going to an instrument or sequencer. Other information like notes and velocity are still sent.

Press ENT./REP. from the VOLUME display. Use the ◀ and ▶ keys to turn PROGRAM ON and OFF.

START/STOP

This function determines if the R-50 will send start and stop commands to control the MIDI clock of a slave device.

Press ENT./REP. from the PROGRAM CHANGE display. Use the ◀ and ▶ keys to turn start/stop information on or off.

EXAMPLE: (continued)

Press ENT./REP. to access TRIGGER INFO.

TRG INFO	ON
----------	----

Use ◀ and ▶ to turn trigger information on and off.

TRG INFO	OFF
----------	-----

Press ENT./REP. to access VELOCITY.

VELOCITY	ON
----------	----

Use ◀ and ▶ to turn velocity information on and off.

VELOCITY	OFF
----------	-----

Press ENT./REP. to access PROGRAM.

PROGRAM	ON
---------	----

Use ◀ and ▶ to turn program change information on and off.

PROGRAM	OFF
---------	-----

Press ENT./REP. to access START/STOP.

START/STOP	OFF
------------	-----

Use ◀ and ▶ to turn start/stop information on and off.

START/STOP	ON
------------	----

MIDI NOTE ASSIGNMENTS

MIDI devices such as keyboards play specific notes when they receive the analogous MIDI value. It is possible to "map" the individual pads to specific keys or note numbers on the slave device.

The default settings are shown on page 45. To change them, press ENT./REP. from the START/STOP display. The ◀ and ▶ keys are used to select the note number. The drums sounds are selected using the ▲ and ▼ keys. Repeat this process to assign appropriate pads to notes sent from the master device.

Note: INST INFO must be ON in order for NOTE ASSIGNMENTS to have effect.

NOTE TRIGGER

Triggers 1 - 8 can not only be programmed to send a given note on a given MIDI channel, but the duration of the trigger can be specified. (This is the equivalent of how long the key is held down - useful when triggering sound effects from synthesizers.)

Press ENT./REP. from the NOTE ASSIGN display. Select the current trigger number using the ▲ and ▼ keys. Select the trigger length (1/1 - 1/32) with the ◀ and ▶ keys.

Press MIDI or ENT./REP. to return to basic MIDI functions. Press MIDI again to exit MIDI mode.

EXAMPLE: (Continued)

Press ENT./REP. to access NOTE ASSIGN display.

OUT	BD1	3 <u>8</u>
-----	-----	------------

Use the ◀ and ▶ keys to select the note being assigned.

OUT	BD1	3 <u>6</u>
-----	-----	------------

Use ▲ and ▼ to select the desired drum.

OUT	SD1	3 <u>7</u>
-----	-----	------------

Press ENT./REP. to access NOTE VALUE.

OUT	TRIG1	1/ <u>8</u>
-----	-------	-------------

Use ◀ and ▶ to select the duration.

OUT	TRIG1	1/ <u>16</u>
-----	-------	--------------

Use ▲ and ▼ to select the desired trigger.

OUT	TRIG8	1/ <u>8</u>
-----	-------	-------------

Press ENT./REP. to return to previous menu level.

MIDI	OUT	
------	-----	--

Press MIDI to exit MIDI mode.

STEP:DUB	PTN	<u>00</u>
----------	-----	-----------

MIDI SYSTEM-EXCLUSIVE

System-exclusive information is used to communicate the unique functions of an instrument through MIDI rather than the generic note and controller information common to all MIDI devices. Using system-exclusive one R-50 can communicate directly with another R-50 or with another device with software that has been designed specifically for the R-50. System-exclusive can not be used for communication between two unlike instruments.

Note: In order for data dumps to work properly, the sending and receiving devices must be set for the same MIDI channel.

TRANSMIT

This function is used to send system-exclusive data from the R-50. All aspects of the unit's system-exclusive parameters are transmitted here.

Connect the MIDI Out from the master R-50 to the MIDI In of the slave device as shown on page 26.

After pressing MIDI, use the ◀ and ▶ keys to select MIDI EXCL and press ENT./REP. RECEIVE is selected using the ◀ and ▶ keys, followed by pressing ENT./REP. A sub-menu of functions is available by pressing ENT./REP. and BACK returns to the previous function. Press MIDI at any time to return to the basic MIDI functions. Pressing MIDI a second time exits MIDI mode.

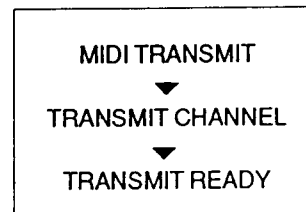
TRANSMIT CHANNEL

This function selects the MIDI channel on which system-exclusive data will be transmitted.

Press ENT./REP. from the MIDI TRANSMIT display. Use the ◀ and ▶ keys to select the desired MIDI channel.

TRANSMIT READY

Press ENT./REP. from the TRANSMIT CHANNEL display. When ready to begin transmission, press START. Press BACK or MIDI if you do not wish to transmit.



EXAMPLE:

Press MIDI.	MIDI SYNC
Use ◀ and ▶ to select MIDI EXCL.	MIDI EXCL
Press ENT./REP. to access TRANSMIT/RECEIVE sub-menu.	MIDI RECEIVE
Use ◀ and ▶ to select TRANSMIT.	MIDI TRANSMIT
Press ENT./REP. to access TRANSMIT CHANNEL.	TRANSMIT CH: 1
Use ◀ and ▶ to select transmission channel.	TRANSMIT CH: 3
Press ENT./REP. to continue.	TRANSMIT READY
Make sure receiving device is ready to receive. Press START to begin transmission.	TRANSMIT BUSY!
	CALL PTN 00.

RECEIVE

Various parts of the R-50's memory can be accessed via system-exclusive. While these features are all transmitted when doing a system-exclusive data dump, they can be filtered out individually in receive mode.

Connect the MIDI Out of the master unit to the MIDI In of the slave R-50 as shown on page 26.

After pressing MIDI, use the ◀ and ▶ keys to select MIDI EXCL and press ENT./REP. RECEIVE is selected using the ◀ and ▶ keys, followed by pressing ENT./REP. A sub-menu of functions is available by pressing ENT./REP. and BACK returns to the previous function. Press MIDI at any time to return to the basic MIDI functions. Pressing MIDI a second time exits MIDI mode.

MIXER

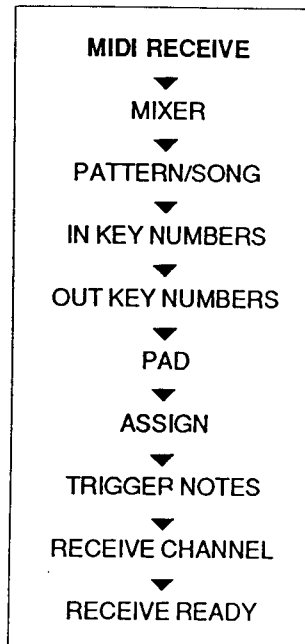
Determines if the MIXER settings are filtered out or received. Also, if MIXER setting is ON live changes to the MIXER section of the master device will be received in real time by the slave.

Press ENT./REP. from the MIDI RECEIVE display. Use the ◀ and ▶ keys to enable or disable receiving MIXER data.

PATTERN AND SONG

Determines if the contents of the patterns and songs are filtered out or received.

Press ENT./REP. from the MIXER display. Use the ◀ and ▶ keys to enable or disable receiving pattern and song data.



EXAMPLE:

Press MIDI.	MIDI SYNC
Use ◀ and ▶ to select MIDI EXCL.	MIDI EXCL
Press ENT./REP. to access TRANSMIT/RECEIVE sub-menu.	MIDI TRANSMIT
Use ◀ and ▶ to select RECEIVE.	MIDI RECEIVE
Press ENT./REP. to access MIXER filter.	MIXER OFF
Use ◀ and ▶ to turn parameter on and off.	MIXER ON

(continued)

IN KEY NUMBER

Determines if the MIDI KEY-IN MAP data (set under MIDI IN) is filtered out or received.

Press ENT./REP. from the PATTERN AND SONG display. Use the ◀ and ▶ keys to enable or disable receiving KEY-IN MAP data.

OUT KEY NUMBER

Determines if the MIDI KEY-OUT MAP data (set under MIDI OUT) is filtered out or received.

Press ENT./REP. from the IN KEY NUMBER display. Use the ◀ and ▶ keys to enable or disable receiving KEY-OUT MAP data.

PAD

Determines if the PAD settings for USER 1-8 are filtered out or received.

Press ENT./REP. from the KEY-OUT MAP display. Use the ◀ and ▶ keys to enable or disable receiving PAD data.

ASSIGN

Determines if the ASSIGN settings are filtered out or received.

Press ENT./REP. from the PAD display. Use the ◀ and ▶ keys to enable or disable receiving ASSIGN data.

TRIGGER NOTES

Determines if the TRIGGER NOTE values are filtered out or received.

Press ENT./REP. from the ASSIGN display. Use the ◀ and ▶ keys to enable or disable receiving TRIGGER NOTE data.

EXAMPLE: (continued)

Press ENT./REP. to access PATTERN/SONG filter.

PTN & SONG	OFF
------------	-----

Use ◀ and ▶ to turn parameter on and off.

PTN & SONG	ON
------------	----

Press ENT./REP. to access IN-KEY NUMBER filter.

IN KEY NO.	OFF
------------	-----

Use ◀ and ▶ to turn parameter on and off.

IN KEY NO.	ON
------------	----

Press ENT./REP. to access OUT-KEY NUMBER filter.

OUT KEY NO.	OFF
-------------	-----

Use ◀ and ▶ to turn parameter on and off.

OUT KEY NO.	ON
-------------	----

Press ENT./REP. to access PAD filter.

PAD	OFF
-----	-----

Use ◀ and ▶ to turn parameter on and off.

PAD	ON
-----	----

Press ENT./REP. to access ASSIGN filter.

ASSIGN	OFF
--------	-----

Use ◀ and ▶ to turn parameter on and off.

ASSIGN	ON
--------	----

Press ENT./REP. to access TRIGGER NOTE filter.

TRG. NOTE	OFF
-----------	-----

Use ◀ and ▶ to turn parameter on and off.

TRG. NOTE	ON
-----------	----

(continued)

RECEIVE CHANNEL

This function is used to select the MIDI channel on which the R-50 receives system-exclusive data. If Omni Mode is selected, data is received on all channels.

Press ENT./REP. from the TRIGGER NOTES display. Use the ◀ and ▶ keys to select the appropriate MIDI channel.

RECEIVE READY

Press ENT./REP. from the RECEIVE CHANNEL display. The R-50 will now receive system-exclusive data. Transmit data from master unit.

Press MIDI to return to the MIDI menu. Press MIDI again to exit.

Note: The R-50 will not receive system-exclusive dumps if the display does not read "RECEIVE READY".

EXAMPLE: (continued)

Press ENT./REP. to access RECEIVE CHANNEL.

RECEIVE	CH: 3
---------	-------

Use ◀ and ▶ to select channel system-exclusive data will be received on.

RECEIVE	CH: 8
---------	-------

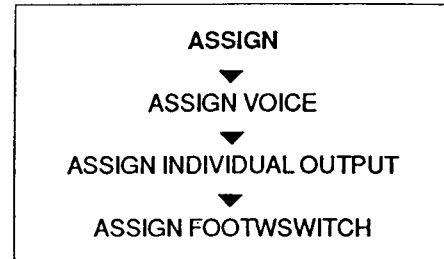
Press ENT./REP. to continue.

RECEIVE	READY
---------	-------

Send data from master unit.

11. ASSIGN

Various miscellaneous parameters are assignable under this menu. Press ASSIGN (push SWING twice) to access the sub-menus. The ◀ and ▶ keys are used to select between the next level of functions. You can exit this mode at any time by pressing ASSIGN.



ASSIGN VOICE

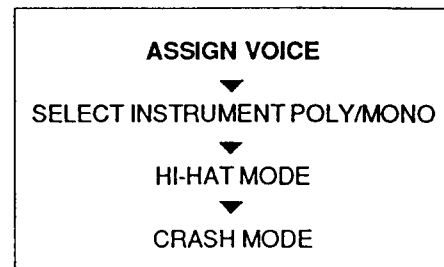
The R-50 differs from many drum machines in that it has polyphonic capability. In other words, a given drum can play several notes at a time. For example in monophonic mode, re-triggering a cymbal immediately while an earlier cymbal is still ringing would cut off the original sound - the voice is "stolen" from the first event and given to the new event. The R-50 has 8-voice polyphony, meaning that 8 instruments can sound simultaneously. If additional notes are played at the same time the latest notes will be given priority.

Each drum can be assigned to either Mono or Poly mode. (Note: This function governs voice assignment, where Mono and Poly Mode under MIDI refer to something entirely different.) The ENT./REP. and BACK keys are used to choose between functions. After selecting ASSIGN VOICE from the ASSIGN menu, press ENT./REP. to access POLY/MONO mode. The ▲ and ▼ keys select the instrument while the ◀ and ▶ keys switch the current instrument between MONO and POLY.

HI-HAT

While the overall polyphony of the hi-hat is set in the previous step, this function determines whether playing the closed hi-hat (HHCL) will actually close an open hi-hat (HHOP) that is still decaying. In MONO the hi-hat will close under the above circumstances. In POLY HHOP will continue to sound even if a pad using HHCL is played.

Press ENT./REP. to access HI-HAT mode. Use the ◀ and ▶ keys to switch between MONO and POLY modes.



EXAMPLE:

Press ASSIGN.

ASSIGN VOICE

Press ENT./REP. to continue.

VOICE BD1 POLY

Use ◀ and ▶ to switch between POLY and MONO.

VOICE BD1 MONO

Press ENT./REP. to access HI-HAT display.

HI-HAT MONO

Use ◀ and ▶ to choose HI-HAT mode.

HI-HAT POLY

CRASH

While the overall polyphony of the crash cymbals is set in the first step of this section, this function determines whether playing the closed CRS2 (choked cymbal) will actually choke a CRS1 (long crash) that is still decaying. In MONO the cymbal is choked under the above circumstances. In POLY CRS1 will continue to sound even if a pad using CRS2 is played.

Press ENT./REP. to access HI-HAT mode. Use the ◀ and ▶ keys to switch between MONO and POLY modes.

Press ENT./REP. to return to the ASSIGN menu. Press ENT./REP. again to exit ASSIGN mode.

EXAMPLE:

Press ENT./REP. to access CRASH display.

CRASH	MONO
-------	------

Use ◀ and ▶ to choose CRASH mode.

CRASH	POLY
-------	------

Press ENT./REP to return to ASSIGN menu.

ASSIGN	VOICE
--------	-------

Press ASSIGN to exit ASSIGN mode.

ASSIGN INDIVIDUAL OUTPUT

Any drum can be assigned to the individual output on the rear of the R-50 (labeled INDIV). This might be used to send a given instrument to separate processing or a different channel on a mixer or tape deck. In routing an instrument to the individual output, it is removed from the regular left-right mix outputs.

After pressing ASSIGN INDIV from the ASSIGN menu, simply use the ▲ and ▼ keys to select which drum will be routed to the individual output.

Press ENT./REP. or ASSIGN to return to the ASSIGN menu. Press ASSIGN again to exit ASSIGN mode.

EXAMPLE:

Press ASSIGN.

ASSIGN	VOICE
--------	-------

Use ◀ and ▶ to choose ASSIGN function.

ASSIGN	INDIV
--------	-------

Press ENT./REP. to continue.

INDIV	****
-------	------

Use ▲ and ▼ to select Individual Output instrument.

INDIV	SD1
-------	-----

Press ENT./REP to return to ASSIGN menu.

ASSIGN	INDIV
--------	-------

Press ASSIGN again to exit ASSIGN mode.

ASSIGN FOOTSWITCH

Various functions can be assigned to the two footswitch jacks on the rear panel labeled FT.SW.A and FT.SW.B (designed to accept the optional F-1 footswitch). The same functions are available on both footswitches, however a given function can only be assigned to one footswitch at a time.

After selecting ASSIGN FT SW from the ASSIGN menu, press ENT./REP. to access the additional functions. Use ENT./REP. and BACK to switch between FT.SW.A (footswitch A) and FT.SW.B (footswitch B). Then use ◀ and ▶ to assign the desired function.

Press ASSIGN to return to the ASSIGN menu. Press ASSIGN again to exit ASSIGN mode.

FOOTSWITCH FUNCTIONS

PAD 1 - 10

The selected pad will be triggered when the footswitch is depressed.

S/S

The footswitch will start and stop playback of patterns or songs, depending upon the current mode.

PAD#UP

The footswitch will advance PAD to the next drum kit.

PTN#UP

The footswitch will advance to the next higher pattern number when the R-50 is in CALL PATTERN mode.

REPEAT

While in CALL SONG mode, the current pattern will repeat as long as the footswitch is held down.

TAP

The footswitch can be used in place of the TAP button when in TEMPO mode.

HH O/C

The footswitch will close an open hi-hat or open a closed hi-hat.

EXAMPLE:

Press ASSIGN.

ASSIGN VOICE

Use ◀ and ▶ to choose ASSIGN function.

ASSIGN FT.SW

Press ENT./REP. to continue.

FT.SW A TAP

Use ◀ and ▶ to assign function to Footswitch A.

FT.SW A REPEAT

Press ENT./REP. to advance to Footswitch B.

FT.SW B PAD1

Use ◀ and ▶ to assign function to Footswitch B.

FT.SW B S/S

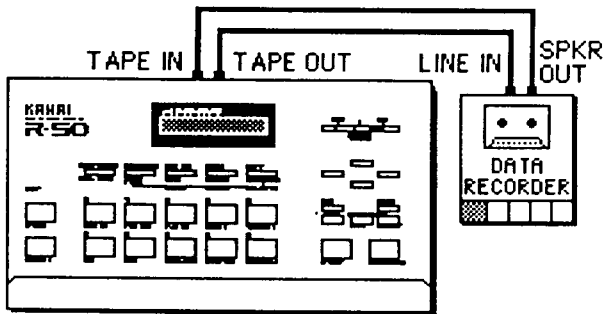
Press ENT./REP. to return to ASSIGN menu.

ASSIGN FT.SW

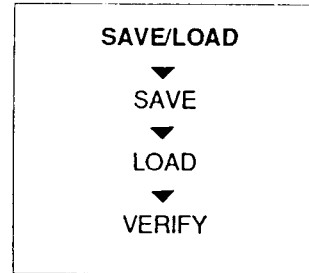
Press ASSIGN again to exit ASSIGN mode.

12. CASSETTE STORAGE

The contents of the R-50's memory, such as user-defined kits, patterns and songs can be stored on data cassette. Data quality cassette decks and tape work best and decks with options for tape type and noise reduction are not recommended. In order to use cassette storage, proper connections are required:



The CASSETTE menu is accessed by pressing SAVE/LOAD (press COPY twice). Additional functions are accessed using the ENT./REP. key and BACK returns to the previous function. Press SAVE/LOAD at any time to exit CASSETTE mode.



CASSETTE SAVE

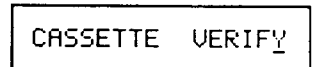
This function is used to store the R-50's memory contents on cassette tape (the memory remains intact).

Select CASSETTE SAVE from the CASSETTE menu. Put the cassette deck in record mode, then press START on the R-50 to begin the transfer. The display will show "SAVE BUSY!" during the storage procedure. On completion the display will show "SAVE END" briefly before returning to "CASSETTE SAVE". To cancel, press STOP/CONT.

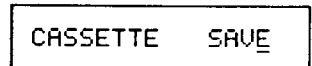
Press SAVE/LOAD to exit CASSETTE mode.

EXAMPLE:

Press SAVE/LOAD.



Use ◀ and ▶ to select function.



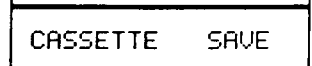
Begin recording. Press START.



Wait for process to finish.



Cancel if necessary with STOP/CONT.



CASSETTE VERIFY

This function is used to confirm that the data on the tape is the same as the data in memory. In other words, it confirms that the save was done properly.

Select CASSETTE VERIFY from the CASSETTE menu. Rewind the tape to the beginning of the data tone. Begin tape playback. As soon as the data tone starts, press START. The display will show "VERIFY BUSY!" during the procedure. If the tape verifies, the display will read "VERIFY OK" briefly before returning to CASSETTE VERIFY. If the tape does not verify, the display will read "VERIFY". To cancel, press STOP/CONT.

EXAMPLE:

Use ◀ and ▶ to select function.

CASSETTE VERIFY

Start tape playback. As soon as the data tone begins, press START.

VERIFY BUSY!

Wait for process to finish.

VERIFY END

CASSETTE VERIFY

Cancel if necessary with STOP/CONT.

VERIFY BREAK!

CASSETTE LOAD

This function is used to load new data into the R-50's memory from tape.

WARNING: LOAD erases all current data from memory. It is recommended that you use SAVE and VERIFY first to save the memory contents.

Select CASSETTE LOAD from the CASSETTE menu. Rewind the tape to the beginning of the data tone. Begin tape playback. As soon as the data tone is heard, press START to begin loading data. The display will show "LOAD BUSY!" during the procedure. On completion, the display will read "LOAD END" briefly before returning to CASSETTE LOAD. To cancel, press STOP/CONT.

EXAMPLE:

Use ◀ and ▶ to select function.

CASSETTE LOAD

Start tape playback. As soon as the data tone is heard, press START.

LOAD BUSY!

Wait for process to finish.

LOAD END

CASSETTE LOAD

Cancel if necessary with STOP/CONT.

LOAD BREAK!

CASSETTE LOAD

Press SAVE/LOAD to exit CASSETTE mode.

COPY *****

13. MEMORY MANAGEMENT

All of the user-defined functions such as patterns, songs and drum kits draw from the R-50's available memory. It is possible to fill all of memory, at which point you will receive and "OUT OF MEMORY" message. At this point, you will need to erase some data somewhere before you continue.

CHECKING AVAILABLE MEMORY

It is easy to check how much memory is left by holding ACCENT and pressing CALL PATTERN.

ERASING ALL OF MEMORY

The entire contents of memory can be erased. This should, of course, be used with extreme caution and a cassette back-up should be made if anything in memory is of value.

From CALL PATTERN, REAL TIME RECORD or STEP RECORD modes, press ACCENT and ERASE simultaneously. Press ENT./REP. to continue. You will receive a second prompt, "SURE?" If you are sure, then press ENT./REP. to verify. Otherwise, press BACK to cancel.

EXAMPLE:

Hold ACCENT and press CALL PATTERN to display available memory.

MEMORY 10%

Select CALL PATTERN, REAL TIME REC. or STEP REC.

CALL PTH 00.

Press ACCENT and ERASE.

ERASE ALL MEMORY

Press ENT./REP. to confirm.

ERASE SURE?

Press ENT./REP. to confirm *again*.

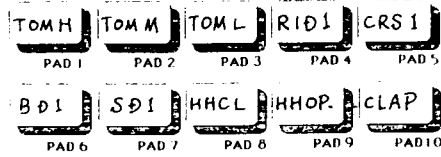
ERASE EXECUTED

Or, press BACK to cancel.

ERASE CANCEL

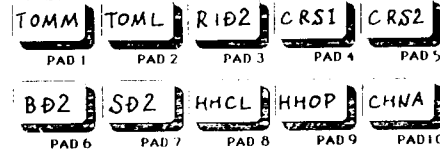
14. R-50 PAD SETTING CHART

PRE1~4=USER1~4 GT=GATE. DL=DELAY, FL=FLANGE



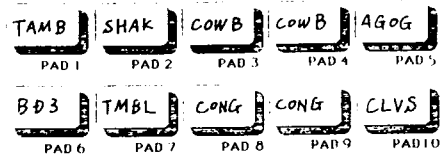
R-50 pad setting value USER(1)

PAD NO	1	2	3	4	5
Drum	TOM H	TOM M	TOM L	RID1	CRS1
pad level	11	11	11	11	11
accent	+5	+5	+5	+3	+3
tune	0	0	0	0	0
pitch	+3	+1	-5	-3	+5
effect	OFF	OFF	OFF	OFF	OFF
PAD NO	6	7	8	9	10
Drum	BD1	SD1	HHCL	HHOP	CLAP
pad level	11	11	11	11	11
accent	+3	+3	+5	+5	+3
tune	0	0	0	0	0
pitch	0	0	+6	+6	0
effect	OFF	OFF	OFF	OFF	OFF



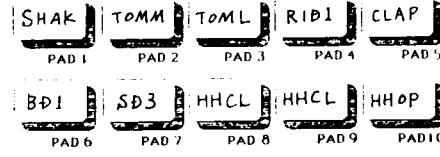
R-50 pad setting value USER(2)

PAD NO	1	2	3	4	5
Drum	TOM M	TOM L	RID2	CRS1	CRS2
pad level	11	11	11	8	11
accent	+5	+5	+3	+3	+3
tune	0	0	0	0	0
pitch	+3	-3	-5	-3	+5
effect	FL:1	FL:1	DL:2	FL:1	GT:2
PAD NO	6	7	8	9	10
Drum	BD2	SD2	HHCL	HHOP	CHNA
pad level	11	11	11	11	11
accent	+3	+3	+5	+5	+3
tune	0	0	0	0	0
pitch	0	0	+6	+6	-6
effect	OFF	DL:2,FL:1	OFF	OFF	FL:1



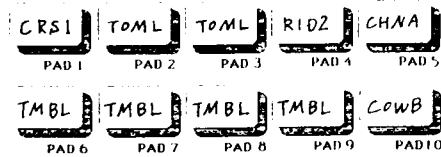
R-50 pad setting value USER(3)

PAD NO	1	2	3	4	5
Drum	TAMB	SHAK	COWB	COWB	AGOG
pad level	11	11	11	11	11
accent	+5	+3	+5	+5	+5
tune	0	0	+5	0	0
pitch	-4	+4	0	0	+4
effect	OFF	OFF	OFF	OFF	OFF
PAD NO	6	7	8	9	10
Drum	BD3	TMBL	CONG	CONG	CLVS
pad level	11	11	11	11	11
accent	+5	+5	+5	+5	+3
tune	0	0	+5	0	0
pitch	0	-4	-3	+3	0
effect	GT:1,FL:3	OFF	OFF	OFF	OFF



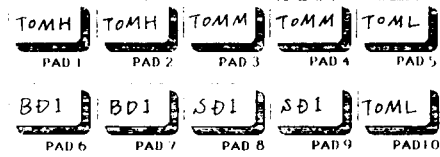
R-50 pad setting value USER(4)

PAD NO	1	2	3	4	5
Drum	SHAK	TOM M	TOM L	RID1	CLAP
pad level	11	8	8	8	11
accent	+3	+3	+3	-3	+3
tune	0	0	0	0	0
pitch	+3	+4	-5	-5	-3
effect	OFF	DL:2	DL:2	OFF	OFF
PAD NO	6	7	8	9	10
Drum	BD1	SD3	HHCL	HHCL	HHOP
pad level	11	11	6	11	11
accent	+2	-3	+2	+5	+3
tune	0	0	0	0	0
pitch	0	0	+6	+6	+6
effect	OFF	GT:1	OFF	OFF	OFF



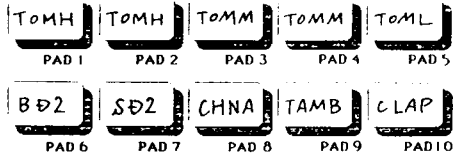
R-50 pad setting value USER(5)

PAD NO	1	2	3	4	5
Drum	CRS1	TOM L	TOM L	RID2	CHNA
pad level	8	11	11	11	11
accent	+3	+3	+3	+3	+3
tune	-8	+7	+4	0	0
pitch	-3	-3	+3	+3	+3
effect	OFF	GT:2,FL:3	GT:2,FL:3	OFF	OFF
PAD NO	6	7	8	9	10
Drum	TMBL	TMBL	TMBL	TMBL	COWB
pad level	5	13	5	13	4
accent	+5	+3	+5	+3	+3
tune	+5	15	0	0	0
pitch	-3	-3	+3	+3	+3
effect	OFF	OFF	OFF	OFF	OFF



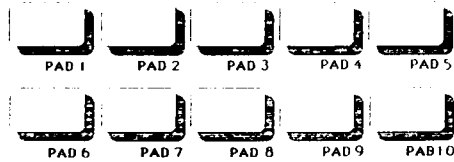
R-50 pad setting value USER(6)

PAD NO	1	2	3	4	5
Drum	TOM H	TOM H	TOM M	TOM M	TOM L
pad level	6	14	6	14	6
accent	-3	-4	-3	-4	-3
tune	0	0	0	0	0
pitch	+4	+4	+1	+1	-5
effect	OFF	OFF	OFF	OFF	OFF
PAD NO	6	7	8	9	10
Drum	BD1	BD1	SD1	SD1	TOM L
pad level	6	14	6	15	14
accent	-3	-4	-3	-4	-4
tune	0	0	0	0	0
pitch	0	0	0	0	-5
effect	OFF	OFF	OFF	OFF	OFF



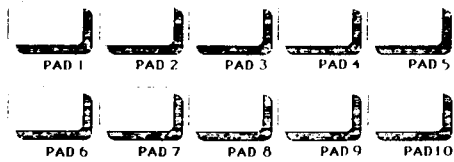
R-50 pad setting value USER(7)

PAD NO	1	2	3	4	5
instrument	TOMH	TOMH	TOMM	TOMM	TOML
pad level	11	11	11	11	11
accent	+3	+3	+3	+3	+3
tune	+7	+2	+7	+2	+6
panpot	-7	-5	0	+5	+7
effect	GT:2,FL:2	GT:2,FL:2	FL:2	FL:2	GT:2,FL:2
PAD NO	6	7	8	9	10
instrument	BD2	SD2	CHNA	TAMB	CLAP
pad level	11	15	10	9	9
accent	-3	-3	+3	+5	+3
tune	-8	-5	+7	-8	+2
panpot	0	0	+7	+7	+7
effect	GT:2,FL:3	GT:3,FL:3	GT:3,FL:2	GT:3,FL:2	GT:3,FL:2



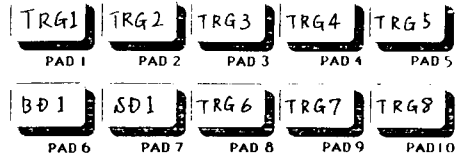
R-50 pad setting value USER()

PAD NO	1	2	3	4	5
instrument					
pad level					
accent					
tune					
panpot					
effect					
PAD NO	6	7	8	9	10
instrument					
pad level					
accent					
tune					
panpot					
effect					



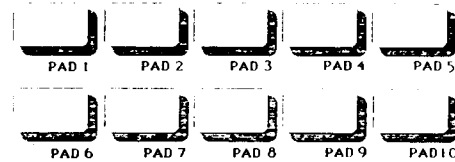
R-50 pad setting value USER()

PAD NO	1	2	3	4	5
instrument					
pad level					
accent					
tune					
panpot					
effect					
PAD NO	6	7	8	9	10
instrument					
pad level					
accent					
tune					
panpot					
effect					



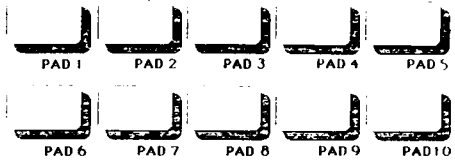
R-50 pad setting value USER(8)

PAD NO	1	2	3	4	5
instrument	TRG1	TRG2	TRG3	TRG4	TRG5
pad level	11	11	11	11	11
accent	+3	+3	+3	+3	+3
tune	0	0	0	0	0
panpot	0	0	0	0	0
effect	OFF	OFF	OFF	OFF	OFF
PAD NO	6	7	8	9	10
instrument	BD1	SD1	TRG6	TRG7	TRG8
pad level	11	11	11	11	11
accent	+3	+3	+3	+3	+3
tune	0	0	0	0	0
panpot	0	0	0	0	0
effect	OFF	OFF	OFF	OFF	OFF



R-50 pad setting value USER()

PAD NO	1	2	3	4	5
instrument					
pad level					
accent					
tune					
panpot					
effect					
PAD NO	6	7	8	9	10
instrument					
pad level					
accent					
tune					
panpot					
effect					



R-50 pad setting value USER()

PAD NO	1	2	3	4	5
instrument					
pad level					
accent					
tune					
panpot					
effect					
PAD NO	6	7	8	9	10
instrument					
pad level					
accent					
tune					
panpot					
effect					

15. MIDI NOTE ASSIGNMENTS

MIDI IN NOTE NUMBER (Default)

NOTE NUMBER	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
INST.	BD2	BD3	BD1	SD1	HHCL	SD2	HHOP	SD3	TOMH	CRS1	TOMM	CLAP	TOML	COWB	TMBL	BD2	BD3	BD1	SD3	SD1	SD2
TUNE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PANPOT	0	0	0	0	+6	0	+6	0	+3	+5	+1	0	-5	0	0	0	0	0	0	0	0
GATE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DELAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FLANG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NOTE NUMBER	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
INST.	CLAPS	TOM HI	HH CLOSED	TOM HI	HHOP	TOMM	TOMM	CRS1	TOML	CRS2	TOML	CONG	RID1	CONG	RID2	CONG	CHNA	SHAK	SHAK	AGOG	SHAK
TUNE	0	+5	0	0	0	+4	0	0	+4	0	0	+3	0	0	0	-4	0	+2	0	+7	-2
PANPOT	0	+7	+5	+3	+5	+2	+1	+5	-4	+5	-5	-2	-3	0	-5	+2	-6	0	0	0	0
GATE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DELAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FLANG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NOTE NUMBER	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83
INST.	AGOGO	COWB	COWB	TMBL	CLAP	TMBL	CLAP	TMBL	CLAP	TAMB	CRS1	TAMB	CRS1	CLVS	CLVS	CLVS	CLVS	CLVS	CLVS	CLVS	CLVS
TUNE	0	+5	0	+7	+2	0	0	-5	-1	0	-2	+2	-8	-8	-7	-6	-5	-4	-3	-2	-1
PANPOT	0	0	0	-2	0	0	0	+2	0	0	+2	0	+2	0	0	0	0	0	0	0	0
GATE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DELAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FLANG	0	0	0	0	0	0	0	0	0	0	2	0	3	0	0	0	0	0	0	0	0

NOTE NUMBER	84	85	86	87	88	89	90	91
INST.	CLVS	CLVS	CLVS	CLVS	CLVS	CLVS	CLVS	CLVS
TUNE	0	+1	+2	+3	+4	+5	+6	+7
PANPOT	0	0	0	0	0	0	0	0
GATE	0	0	0	0	0	0	0	0
DELAY	0	0	0	0	0	0	0	0
FLANG	0	0	0	0	0	0	0	0

MIDI OUT KEY NO., Ch. and Mixer (Default)

INST.	BD2	BD3	BD1	SD1	SD2	SD3	TOMH	TOMM	TOML	HHCL	HHOP	RID1	RID2	CRS1	CRS2	CHNA	COWB	CLAP	SHAK	AGOG	CONG
M Key No.	38	36	37	40	41	39	45	48	52	44	46	54	56	49	51	58	65	69	60	63	55
Ch.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
M Level	14	14	13	15	13	13	3	13	13	8	8	13	13	3	13	13	13	13	10	13	15
E Panpot	0	0	0	0	0	0	+3	+1	-5	+6	+6	-3	-5	+5	+5	-6	0	0	0	0	0

INST.	TAMB	TMBL	CLVS	TRG1	TRG2	TRG3	TRG4	TRG5	TRG6	TRG7	TRG8
M Key No.	74	68	76	48	50	52	53	55	57	59	60
Ch.	1	1	1	2	2	2	2	2	2	2	2
M Level	15	15	13	10	10	10	10	10	10	10	10
E Panpot	0	0	0								

16. MIDI DATA FORMAT

1. RECOGNIZED AND TRANSMITTED DATA

1.1 RECOGNIZED

1st	2nd	3rd	Description
1001nnnn	0kkkkkk	0vvvvvv	Note on kkkkkk=0~127 vvvvvv=1~127
1100nnnn	0ppppppp		Program pppppp=0~99: pattern no. 100~109: song no.
11110010	01111111	0hhhhhhh	Song position pointer 1111111=0~127 least signification hhhhhhh=0~127 most signification
11110011	0ssssss		Song select ssssss=0~9: song no.
11111000			Real time clock
11111010			Start
11111011			Stop nnnn=0~15 Channel no.

1.2 TRANSMITTED

1st	2nd	3rd	Description
1001nnnn	0kkkkkk	0vvvvvv	Note on off kkkkkk=0~127 vvvvv=0 off vvvvv=1~127
1100nnnn	0pppppp		Program change pppppp=0~99: pattern no. 100~109: song no.
11110011	0ssssss		Song select ssssss=0~9: song no.
11111000			Real time clock
11111010			Start
11111011			Continue
11111100			Stop nnnn=0~15 Channel no.

2. RECEIVE AND TRANSMITTED EXCLUSIVE DATA

2.1 ALL DATA DUMP

Status	Kawai ID	Channel no.	Function no.	Group no.	Machine ID	Description
11110000	01000000	40H	0~15	Transmit ch		System exclusive
0000nnnn	0nH	0~15	21H	All data dump		MIXER DATA BLOCK
00000010	02H		02H	Drum machine group		
00000010	02H		02H	R-50 ID no		
00010010	12H			Mixer data start mark		
0000xxxx				1st Level data		
0000xxxx				1st Pan data		
0000xxxx				2st Level data		
0000xxxx				2st Pan data		
0000xxxx				Last Level data		
0000xxxx				Last Pan data		
0000xxxx				MANUAL PAN ON OFF FLAG data low		
0000xxxx				MANUAL PAN ON OFF FLAG data high		
00100010	22H			Mixer data end mark		
00010011	13H			MIDI IN KEY NO. Data start mark		MIDI IN KEY NO. DATA BLOCK
0000xxxx				1st Instrument data low		
0000xxxx				1st Instrument data high		
0000xxxx				2nd Instrument data low		
0000xxxx				2nd Instrument data high		
0000xxxx				Last Instrument data low		
0000xxxx				Last Instrument data high		
0000xxxx				1st Tune Pan data low		
0000xxxx				1st Tune Pan data high		
0000xxxx				2nd Tune Pan data low		
0000xxxx				2nd Tune Pan data high		
0000xxxx				Last Tune Pan data low		
0000xxxx				Last Tune Pan data high		
0000xxxx				1st EFFECT data low		
0000xxxx				1st EFFECT data high		
0000xxxx				2nd EFFECT data low		
0000xxxx				2nd EFFECT data high		
0000xxxx				Last EFFECT data low		
0000xxxx				Last EFFECT data high		
00100011	23H			MIDI IN KEY NO. Data end mark		
00010100	14H			MIDI OUT KEY NO. Start mark		MIDI OUT KEY NO. DATA BLOCK
0000xxxx				1st Out Key no. data low		
0000xxxx				1st Out Key no. data high		
0000xxxx				2nd Out Key no. data low		
0000xxxx				2nd Out Key no. data high		
0000xxxx				Last Out Key no. data low		
0000xxxx				Last Out Key no. data high		
00100100	24H			MIDI OUT KEY NO. end mark		
00010101	15H			PAD ASSIGN DATA START mark		PAD ASSIGN DATA BLOCK
0000xxxx				1st PAD data low		
0000xxxx				1st PAD data high		
0000xxxx				2nd PAD data low		
0000xxxx				2nd PAD data high		
0000xxxx				Last PAD data low		
0000xxxx				Last PAD data high		
00100101	25H			PAD ASSIGN DATA End mark		
00010110	16H			ASSIGN DATA Start mark		ASSIGN DATA BLOCK
0000xxxx				INDIV INSTRUMENT DATA low		
0000xxxx				INDIV INSTRUMENT DATA high		
0000xxxx				Foot SWA Data low		
0000xxxx				Foot SWA Data high		
0000xxxx				Foot SWB Data low		
0000xxxx				Foot SWB Data high		
0000xxxx				1st Poly Mono select data low		
0000xxxx				1st Poly Mono select data high		
0000xxxx				2nd Poly Mono select data low		
0000xxxx				2nd Poly Mono select data high		

Data	0000xxxx	Last Poly Mono select data low	
Data	0000xxxx	Last Poly Mono select data high	
Data	0000xxxx	HIHAT Poly Mono data low	
Data	0000xxxx	HIHAT Poly Mono data high	
Data	0000xxxx	CRASH Poly Mono data low	
Data	0000xxxx	CRASH Poly Mono data high	
Data	00100110	26H	ASSIGN DATA End mark
Data	00010111	17H	TRG NOTE DATA start mark
Data	00xxxxxx(01H		1st TRG NOTE data
	20H)		
Data	00xxxxxx	Last TRG NOTE data	
Data	00100111	27H	TRG NOTE DATA End mark
Data	00010000	10H	Pattern data start mark
Data	0000xxxx		1st data low
Data	0000xxxx		1st data high
Data	0000xxxx		Last data low
Data	0000xxxx		Last data high
Data	00100000	20H	Pattern data end mark
Data	00010000	11H	Song data start mark
Data	0000xxxx		1st data low
Data	0000xxxx		1st data high
(Data)	(00110001)	31H	Song Skip mark
(Data)	(0000pppp)		Song no.
Data	0000xxxx		Last data low
Data	0000xxxx		Last data high
Data	00100001	21H	Song data end mark
E0X	11110111	F7H	End of exclusive

2.2 PARAMETER CHANGE

MIXER COMMAND PARAMETER

Status	11110000	FOH	System exclusive
Kawai ID	01000000	40H	
Channel no.	0000nnnn	0nH	0~15
Function no.	00010000	10H	Parameter change
Group no.	00000010	02H	Drum machine group
Machine ID	00000010	02H	R-50 ID no
Data	00000000	00H	Sub status (mixer command parameter)
Data	0mmddddd		Parameter no
Data	0000vvvv		Value
m=0,3	Mode no		
	0 Level		
	3 Pan		
dddd=0~23	Instrument no		
	0 BD1	8 BD2	16 BD3
	1 DS1	9 SD2	17 SD3
	2 TOM HI	10 COWBELL	18 AGOGO
	3 TOM MID	11 CLAPS	19 CONGA
	4 TOM LO	12 SHAKER	20 TAMBOURINE
	5 HH CLOSE	13 HH OPEN	21 TIMBALE
	6 RIDE1	14 RIDE2	22 CLAVES
	7 CRASH1	15 CRASH2	23 CHINA
vvv=0~15	(Level) Parameter Value		
1~15	(Pan)		
	Value		
Mode 0	8	15	
Level min		max	
Mode 1	7, 8, 9	15	
Pan	max	min	center
m=2 Manual	Pan ON/OFF		
dddd=0.15	low		
vvv=0.15	high		
	Manual Pan ON FFH dddd=15		
	vvv=15		
	Manual Pan OFF 00H dddd=0		
	vvv=0		

17. MODEL R-50 MIDI IMPLEMENTATION

Date: Mar. 1987
Version: 1.0

Function		Transmitted	Recognized	Remarks
Basic Channel	Default	1-16	1-16	Memorized
	Changed	1-16	1-16	
Mode	Default	3	1, 3	Memorized
	Messages Altered	X	OMNI on/off	
Note Number	: True voice	* 0~127	* 0-127	* KEY INFO ON
Velocity	Note ON	* ○	* ○	V=1-127 * VELOCITY ON
	Note OFF	X	X	
After Touch	Key's	X	X	
	Ch's	X	X	
Pitch Bender		X	X	
Control Change	7	X	* ○	* VOLUME ON
Prog Change	: True #	* 0-109 * * *	* 0-109 0-109	00~99=PATTERN 00~99 100~109=SONG 0~9
System Exclusive		○	○	
System Common	: Song Pos	X	○	0~9
	: Song Sel	○	○	
	: Tune	X	X	
System Real Time	: Clock	○	○	
	: Commands	○	○	
Aux Messages	: Local ON/OFF	X	X	
	: All Notes OFF	X	X	
	: Active Sense	X	X	
	: Reset	X	X	
Notes				

Mode 1 : OMNI ON, POLY Mode 2 : OMNI ON, MONO
Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF, MONO

○ : Y
X : N

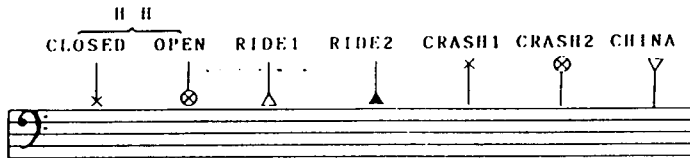
18. SPECIFICATIONS

RHYTHMS:	PATTERNS: 100 SONGS: 10
SOUNDS:	BASS DRUM 1/2/3, SNARE DRUM 1/2/3, TOM HIGH/MID/LOW, HI-HAT CLOSED/OPEN, RIDE CYMBAL 1/2, CRASH CYMBAL 1/2, CHINA CYMBAL, COWBELL, CLAPS, SHAKER, AGOGO, CONGA, TAMBOURINE, TIMBALE, CLAVES
CONTROLS AND INDICATORS:	MASTER VOLUME, COMMAND SELECT KEYS, ERASE KEY, ACCENT KEY, DRUM PADS (10), INCREMENT KEY, DECREMENT KEY, UP KEY, DOWN KEY, ENTER KEY, BACK KEY, TEMPO KEY (AND INDICATOR), START KEY, STOP/CONTINUE KEY
REAR PANEL:	HEADPHONE JACK, STEREO LEFT (MONO) AND RIGHT OUTPUT JACKS, INDIVIDUAL OUTPUT, MIDI IN/OUT, TAPE IN/OUT, FOOTSWITCH A/B
POWER CONSUMPTION:	5W
DIMENSIONS (W/D/H):	12.6" x 7.7" x 2" 320mm x 195mm x 51mm
WEIGHT:	2.2 lbs. 1.0kg
SUPPLIED ACCESSORIES:	AC ADAPTER, OWNERS MANUAL, PAD INSTRUCTION OVERLAY, AUDIO CABLE
OPTIONAL ACCESSORIES:	FOOTSWITCH (F-1), SOFT CASE

19. R-50 PRESET PATTERN

(NO.50~99)

Notations for cymbals



50. 8beat 1

HH CLOSED
SD1
BD1

51. 8beat 2

HH CLOSED
SD1
BD1

52. 8beat 3

HH CLOSED
SD1
BD1

53. 8beat Fill in 1

HH CLOSED
SD1
BD1

54. 8beat Fill in 2

HH CLOSED
SD1
BD1

TOM HI
MID
LO

55. 8beat Break

HH CLOSED
SD1
TOM MID
BD1

LO

56. E. 8beat 1

HH CLOSED
SD2
BD2

57. E. 8beat 2

HH CLOSED
SD2
BD2

58. E. 8beat Fill in 1

HH CLOSED
SD2
BD2

59. E. 8beat Fill in 2

HH CLOSED
SD2
BD2

60. E. 8beat Fill in 3

CRASH2/CHINA

Musical notation for 60. E. 8beat Fill in 3. The notation is on a single staff with a bass clef and a 4/4 time signature. It shows three measures. The first measure has a quarter note on the first line (G4) with a circled 'x' above it, followed by a quarter rest. The second measure has a quarter note on the second line (A4) with a circled 'x' above it, followed by a quarter rest. The third measure has a quarter note on the third line (B4) with a circled 'x' above it, followed by a quarter rest. Below the staff, there are three eighth notes: G4, A4, B4. The labels 'HH OPEN', 'SD2', and 'BD2' are on the left. The note 'NOTE CHINA W/FLANGES' is centered below the staff.

61. E. 8beat Fill in 4

HH OPEN/CLOSED
TOM HI
MID
LO
BD2

Musical notation for 61. E. 8beat Fill in 4. The notation is on a single staff with a bass clef and a 4/4 time signature. It shows four measures. The first measure has a quarter note on the first line (G4) with a circled 'x' above it, followed by a quarter rest. The second measure has a quarter note on the second line (A4) with a circled 'x' above it, followed by a quarter rest. The third measure has a quarter note on the third line (B4) with a circled 'x' above it, followed by a quarter rest. The fourth measure has a quarter note on the fourth line (C5) with a circled 'x' above it, followed by a quarter rest. Below the staff, there are four eighth notes: G4, A4, B4, C5. The labels 'HH OPEN/CLOSED', 'TOM HI', 'MID', 'LO', and 'BD2' are on the left.

62. E. 8beat Fill in 5

CRASH2

HH OPEN/CLOSED
SD2
BD2

Musical notation for 62. E. 8beat Fill in 5. The notation is on a single staff with a bass clef and a 4/4 time signature. It shows five measures. The first measure has a quarter note on the first line (G4) with a circled 'x' above it, followed by a quarter rest. The second measure has a quarter note on the second line (A4) with a circled 'x' above it, followed by a quarter rest. The third measure has a quarter note on the third line (B4) with a circled 'x' above it, followed by a quarter rest. The fourth measure has a quarter note on the fourth line (C5) with a circled 'x' above it, followed by a quarter rest. The fifth measure has a quarter note on the first line (G4) with a circled 'x' above it, followed by a quarter rest. Below the staff, there are five eighth notes: G4, A4, B4, C5, G4. The labels 'HH OPEN/CLOSED', 'SD2', and 'BD2' are on the left.

63. E. 8beat turbo 1

RIDE1
SD2
BD1

Musical notation for 63. E. 8beat turbo 1. The notation is on a single staff with a bass clef and a 4/4 time signature. It shows eight measures. The first measure has a quarter note on the first line (G4) with a circled 'x' above it, followed by a quarter rest. The second measure has a quarter note on the second line (A4) with a circled 'x' above it, followed by a quarter rest. The third measure has a quarter note on the third line (B4) with a circled 'x' above it, followed by a quarter rest. The fourth measure has a quarter note on the fourth line (C5) with a circled 'x' above it, followed by a quarter rest. The fifth measure has a quarter note on the first line (G4) with a circled 'x' above it, followed by a quarter rest. The sixth measure has a quarter note on the second line (A4) with a circled 'x' above it, followed by a quarter rest. The seventh measure has a quarter note on the third line (B4) with a circled 'x' above it, followed by a quarter rest. The eighth measure has a quarter note on the fourth line (C5) with a circled 'x' above it, followed by a quarter rest. Below the staff, there are eight eighth notes: G4, A4, B4, C5, G4, A4, B4, C5. The labels 'RIDE1', 'SD2', and 'BD1' are on the left.

64. E. 8beat turbo 2

HH OPEN
SD2
BD2

Musical notation for 64. E. 8beat turbo 2. The notation is on a single staff with a bass clef and a 4/4 time signature. It shows eight measures. The first measure has a quarter note on the first line (G4) with a circled 'x' above it, followed by a quarter rest. The second measure has a quarter note on the second line (A4) with a circled 'x' above it, followed by a quarter rest. The third measure has a quarter note on the third line (B4) with a circled 'x' above it, followed by a quarter rest. The fourth measure has a quarter note on the fourth line (C5) with a circled 'x' above it, followed by a quarter rest. The fifth measure has a quarter note on the first line (G4) with a circled 'x' above it, followed by a quarter rest. The sixth measure has a quarter note on the second line (A4) with a circled 'x' above it, followed by a quarter rest. The seventh measure has a quarter note on the third line (B4) with a circled 'x' above it, followed by a quarter rest. The eighth measure has a quarter note on the fourth line (C5) with a circled 'x' above it, followed by a quarter rest. Below the staff, there are eight eighth notes: G4, A4, B4, C5, G4, A4, B4, C5. The labels 'HH OPEN', 'SD2', and 'BD2' are on the left.

65. 16beat 1

HH CLOSED
SD1
BD1

Musical notation for 65. 16beat 1. The notation is on a single staff with a bass clef and a 4/4 time signature. It shows four measures. The first measure has a quarter note on the first line (G4) with a circled 'x' above it, followed by a quarter rest. The second measure has a quarter note on the second line (A4) with a circled 'x' above it, followed by a quarter rest. The third measure has a quarter note on the third line (B4) with a circled 'x' above it, followed by a quarter rest. The fourth measure has a quarter note on the fourth line (C5) with a circled 'x' above it, followed by a quarter rest. Below the staff, there are four eighth notes: G4, A4, B4, C5. The labels 'HH CLOSED', 'SD1', and 'BD1' are on the left.

66. 16beat 2

HH CLOSED/OPEN
SD1
BD1

Musical notation for 66. 16beat 2. The notation is on a single staff with a bass clef and a 4/4 time signature. It shows four measures. The first measure has a quarter note on the first line (G4) with a circled 'x' above it, followed by a quarter rest. The second measure has a quarter note on the second line (A4) with a circled 'x' above it, followed by a quarter rest. The third measure has a quarter note on the third line (B4) with a circled 'x' above it, followed by a quarter rest. The fourth measure has a quarter note on the fourth line (C5) with a circled 'x' above it, followed by a quarter rest. Below the staff, there are four eighth notes: G4, A4, B4, C5. The labels 'HH CLOSED/OPEN', 'SD1', and 'BD1' are on the left.

74 . Bounce 2 Fill in

Musical notation for Bounce 2 Fill in. The notation is on a single staff with a bass clef and a 4/4 time signature. It includes three staves: HH CLOSED/OPEN, SD1, and BD1. The HH part features a sequence of eighth notes with 'x' marks, grouped into four triplets. The SD1 part has a similar eighth-note pattern. The BD1 part has a bass drum pattern with eighth notes and rests. On the right side, there are labels for TOM HI, TOM MID, and TOM LO.

75 . ROCK SHUFFLE 1

Musical notation for Rock Shuffle 1. The notation is on a single staff with a bass clef and a 4/4 time signature. It includes three staves: HH CLOSED, SD1, and BD1. The HH part has a sequence of eighth notes with 'x' marks, grouped into four triplets. The SD1 part has a similar eighth-note pattern. The BD1 part has a bass drum pattern with eighth notes and rests.

76 . ROCK SHUFFLE 2

Musical notation for Rock Shuffle 2. The notation is on a single staff with a bass clef and a 4/4 time signature. It includes three staves: RIDE1, HH CLOSED, and SD2. The HH part has a sequence of eighth notes with 'x' marks, grouped into four triplets. The SD2 part has a similar eighth-note pattern. The BD2 part has a bass drum pattern with eighth notes and rests.

77 . ROCK SHUFFLE Fill in

Musical notation for Rock Shuffle Fill in. The notation is on a single staff with a bass clef and a 4/4 time signature. It includes three staves: CRASH1, RIDE1, and SD2. The CRASH1 part has a sequence of eighth notes with 'x' marks, grouped into four triplets. The RIDE1 part has a similar eighth-note pattern. The SD2 part has a similar eighth-note pattern. The BD2 part has a bass drum pattern with eighth notes and rests. Below the notation, it says "NOTE CRASH1 W/FLANGE1".

78 . DISCO 1

Musical notation for Disco 1. The notation is on a single staff with a bass clef and a 4/4 time signature. It includes three staves: HH CLOSED/OPEN, SD2, and BD1. The HH part has a sequence of eighth notes with 'x' marks. The SD2 part has a similar eighth-note pattern. The BD1 part has a bass drum pattern with eighth notes and rests.

79 . DISCO 2

Musical notation for Disco 2. The notation is on a single staff with a bass clef and a 4/4 time signature. It includes three staves: HH CLOSED, CLAPS, and BD2. The HH part has a sequence of eighth notes with 'x' marks. The CLAPS part has a similar eighth-note pattern. The BD2 part has a bass drum pattern with eighth notes and rests. Below the notation, it says "NOTE CLAPS W/DELAY2 PAN (-7)".

80 . SLOW ROCK

Musical notation for Slow Rock. The notation is on a single staff with a bass clef and a 4/4 time signature. It includes three staves: RIDE1, SD1, and BD1. The RIDE1 part has a sequence of eighth notes with 'x' marks, grouped into four triplets. The SD1 part has a similar eighth-note pattern. The BD1 part has a bass drum pattern with eighth notes and rests.

67. 16beat 3

68. 16beat Fill in 1

69. 16beat Fill in 2

70. 16beat Fill in 3

71. Bounce 1

72. Bounce 1 Fill in

73. Bounce 2

81. SLOW ROCK Fill in

RIDE1
SD1
TOM LO
BD1

82. SWING 1

HH OPEN/CLOSED

83. SWING 2

RIDE1
HH CLOSED

84. Waltz 1

HH CLOSED
BD1

85. Waltz 2

HH CLOSED
BD1

86. Waltz 3

HH CLOSED/OPEN
SD1
BD1

87. Bossanova 1

HH CLOSED
CLAVES
BD3

88. Bossanova 2

HH CLOSED/OPEN
CLAVES
BD3

89. Bossanova 3

HH CLOSED/OPEN
SD3
BD3 15

Musical notation for Bossanova 3. The top staff is HH CLOSED/OPEN with a series of 'x' marks. The middle staff is SD3 with a rhythmic pattern of eighth notes. The bottom staff is BD3 15 with a rhythmic pattern of eighth notes.

90. Samba 1

HH CLOSED/OPEN
BD1
COWBELL HI
LO
SHAKER

NOTE COWBELL: TUNE HI(+5) LO(0)

Musical notation for Samba 1. The top staff is HH CLOSED/OPEN with 'x' marks. The middle staff is BD1 with a rhythmic pattern. The bottom staff is COWBELL HI, LO, SHAKER with a rhythmic pattern. A note below the staff reads: NOTE COWBELL: TUNE HI(+5) LO(0).

91. Samba 2

HH CLOSED/OPEN
SD1
BD1
COWBELL HI
LO
SHAKER

Musical notation for Samba 2. The top staff is HH CLOSED/OPEN with 'x' marks. The middle staff is SD1 with a rhythmic pattern. The bottom staff is BD1 with a rhythmic pattern. The bottom-most staff is COWBELL HI, LO, SHAKER with a rhythmic pattern.

92. Samba 3

RIDE2
COWBELL HI
LO
BD1
CONGA HI
MID
LO
TAMBOURINE

NOTE COWBELL: TUNE HI(+5) LO(0)
CONGA : TUNE HI(+5) MID(0) LO(-5)

Musical notation for Samba 3. The top staff is RIDE2 with a rhythmic pattern. The middle staff is COWBELL HI, LO, BD1 with a rhythmic pattern. The bottom staff is CONGA HI, MID, LO, TAMBOURINE with a rhythmic pattern. Two notes below the staff read: NOTE COWBELL: TUNE HI(+5) LO(0) and CONGA : TUNE HI(+5) MID(0) LO(-5).

93. Samba 4

HH CLOSED/OPEN
BD1
TIMBALE
COWBELL HI
LO

Musical notation for Samba 4. The top staff is HH CLOSED/OPEN with 'x' marks. The middle staff is BD1 with a rhythmic pattern. The bottom staff is TIMBALE, COWBELL HI, LO with a rhythmic pattern.

94. Samba 5

Musical notation for Samba 5. It features two staves. The top staff is labeled 'RIDE1' and 'SD1' and contains a rhythmic pattern of eighth notes with accents. The bottom staff is labeled 'BD1' and contains a bass drum pattern with quarter notes.

95. Samba Break

Musical notation for Samba Break. It features two staves. The top staff is labeled 'SD1' and contains a rhythmic pattern of eighth notes. The bottom staff is labeled 'TIMBALE' and 'CLAVES&AGOGO' and contains a complex rhythmic pattern with accents. A '9' is written below the bottom staff.

96. Reggae

Musical notation for Reggae. It features two staves. The top staff is labeled 'HH CLOSED' and contains a pattern of eighth notes with accents and triplet markings. The bottom staff is labeled 'SD3' and 'BD1' and contains a bass drum pattern with quarter notes.

97. Reggae Fill in

Musical notation for Reggae Fill in. It features three staves. The top staff is labeled 'HH CLOSED' and contains a pattern of eighth notes with accents and triplet markings. The middle staff is labeled 'BD1' and contains a bass drum pattern with quarter notes. The bottom staff is labeled 'TIMBALE' and contains a complex rhythmic pattern with accents and triplet markings.

98. March

Musical notation for March. It features two staves. The top staff is labeled 'CRASH2' and contains a pattern of eighth notes with accents. The bottom staff is labeled 'SD1' and 'TOM LO' and contains a bass drum pattern with quarter notes. Below the staves, the text reads: 'NOTE SD1 TUNE(+2) TOM LO W/GATE1'.

99. Drum March

Musical notation for Drum March. It features two staves. The top staff is labeled 'CRASH2' and contains a pattern of eighth notes with accents. The bottom staff is labeled 'SD1' and 'TOM LO' and contains a complex rhythmic pattern with accents. Below the staves, the text reads: 'NOTE SD1.TOM LO=PTN98'.

