DRUMMER

Interactive Drum Pattern Sequencer

Owner's Manual

Purchase Date _____

Price _____

Software Version no._____

Memory Size _____

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Contents

1 - Introduction

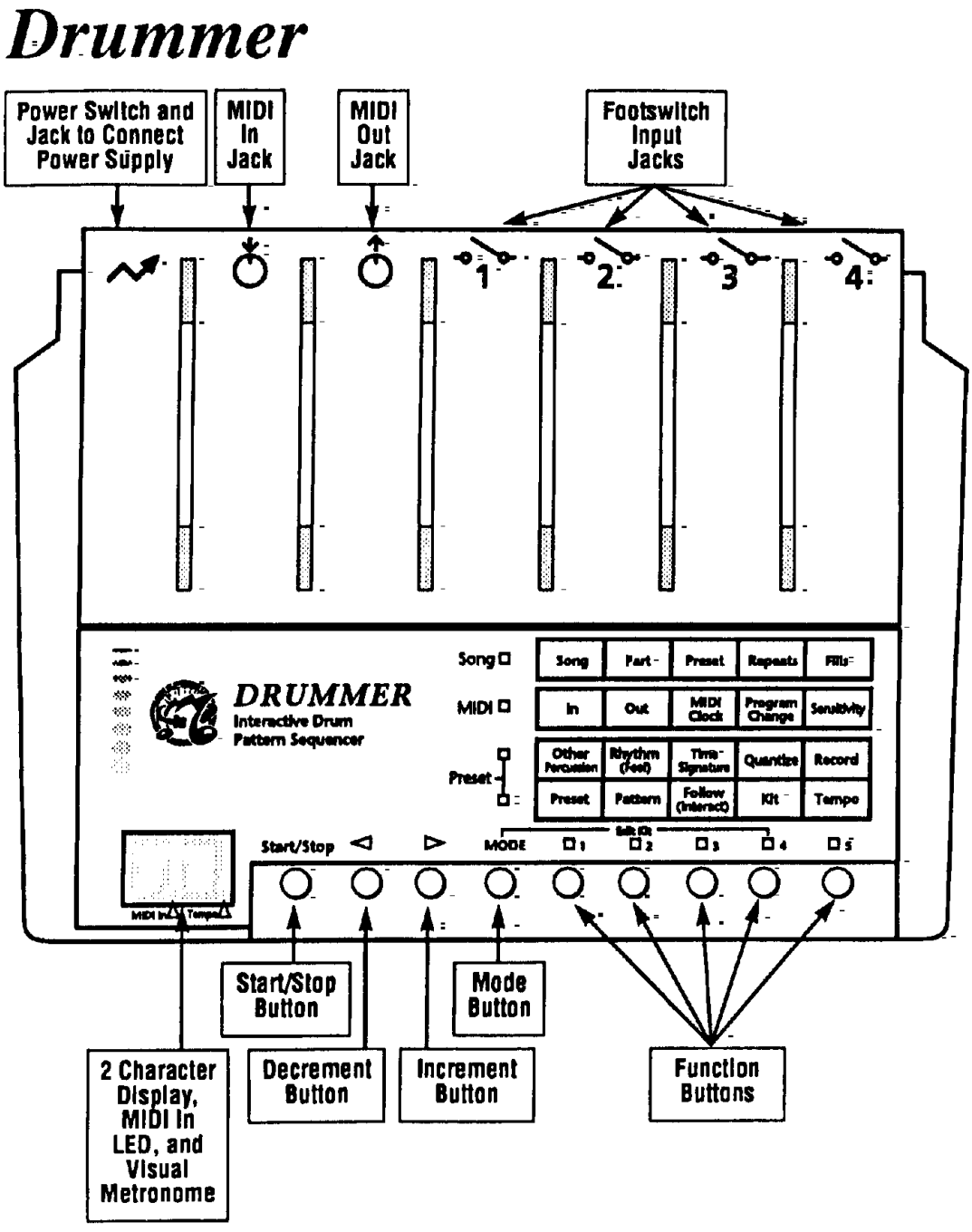
Welcome to Drummer! This unique addition to your MIDI setup is a lot of fun, easy to learn, and makes drum tracks come alive. Stilted mechanical beats are now a thing of the past. You no longer need to spend endless hours fiddling with drum patterns trying to inject that highly elusive human quality. Drummer sets you free to concentrate on other aspects of your music.

Drummer's factory "Presets" may be all you'll need to lay the foundation your music requires, but if you want more, you can easily create your own presets. Whether you use Drummer's original presets, or your own user presets, it's a simple matter to string them together to build "Songs".

Most likely you'll find the setup(s) suited to your drum machine(s) among Drummer's 16 "Kits". If you have a drum machine or a sampler not included in Drummer's factory kits, it's painless to customize kits for your particular setup. Either way Drummer eliminates the time and frustration involved in wading through multiple drum machine manuals – Drummer can play them all for you.

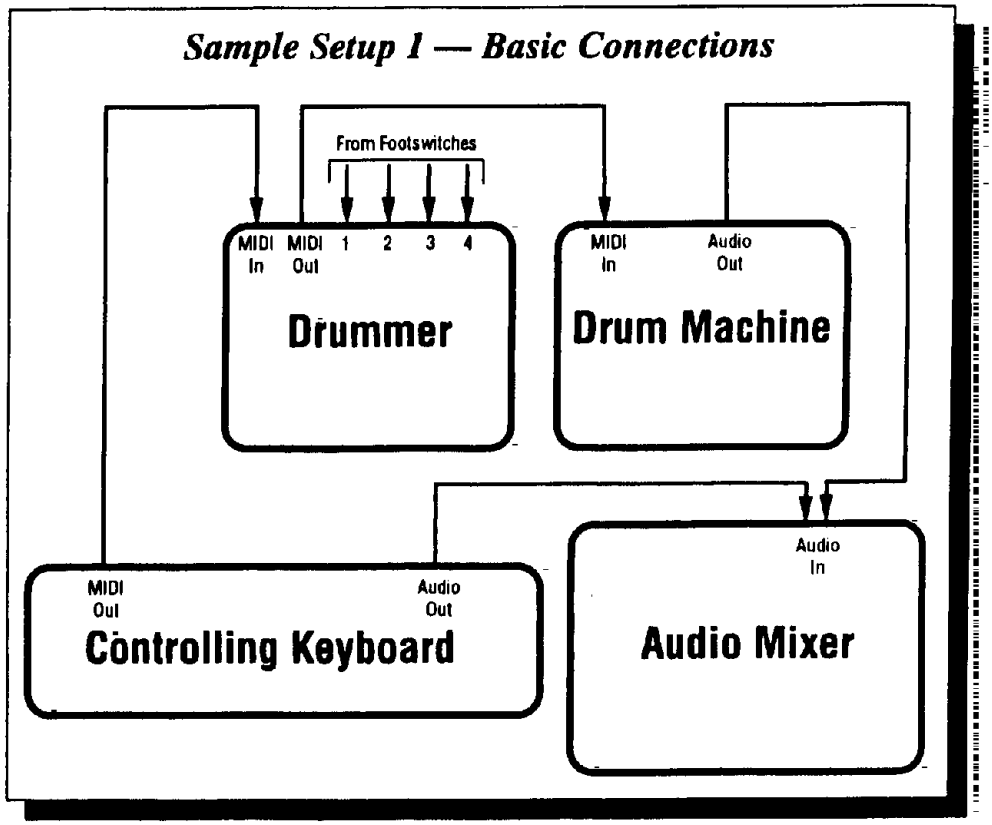
Of course Drummer has the features you need such as programmable tempo and time signature but what makes it such a valuable tool is its ability to jam interactively. Drummer follows your lead while sparking your creativity with fills and nuances of its own. Drummer will become a valued player in your live shows, recording sessions, and compositions.

3- Drummer's Layout

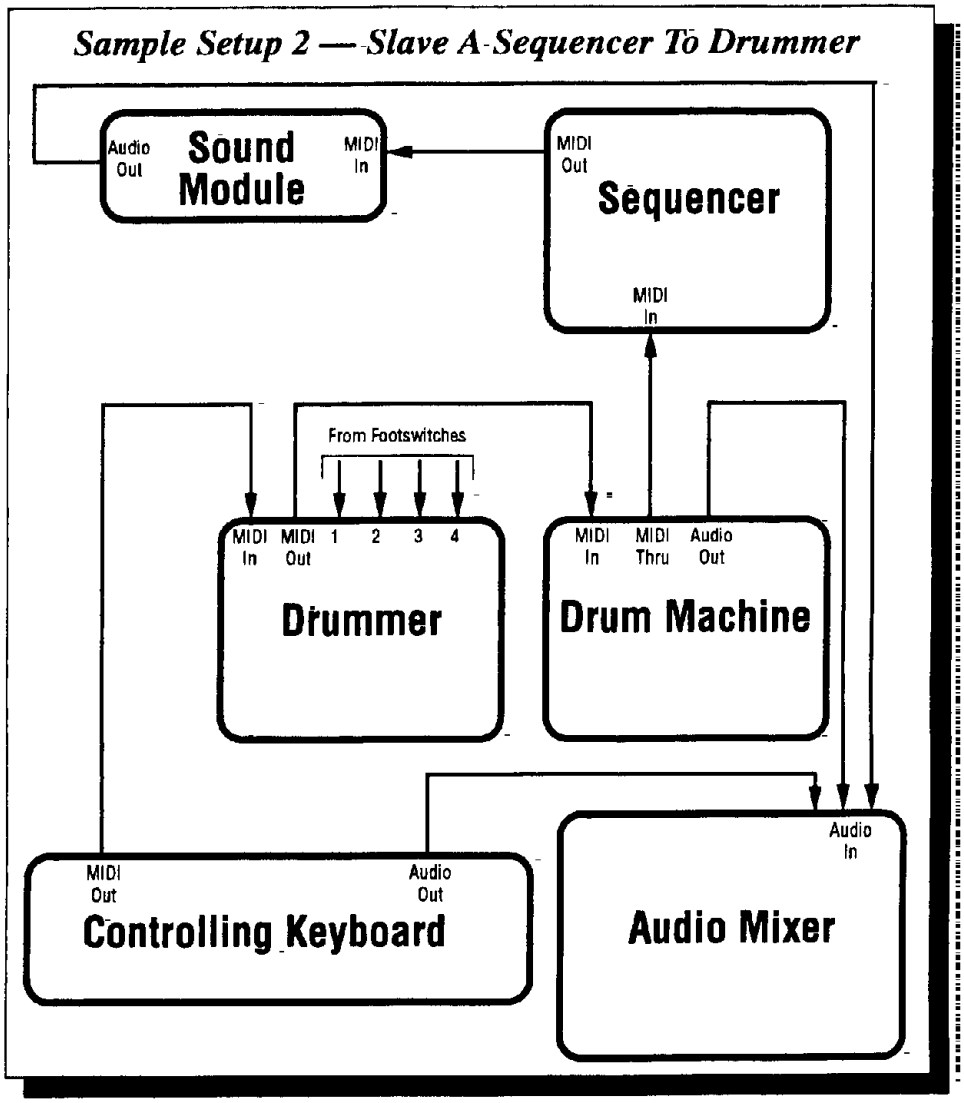


4- Before You Start

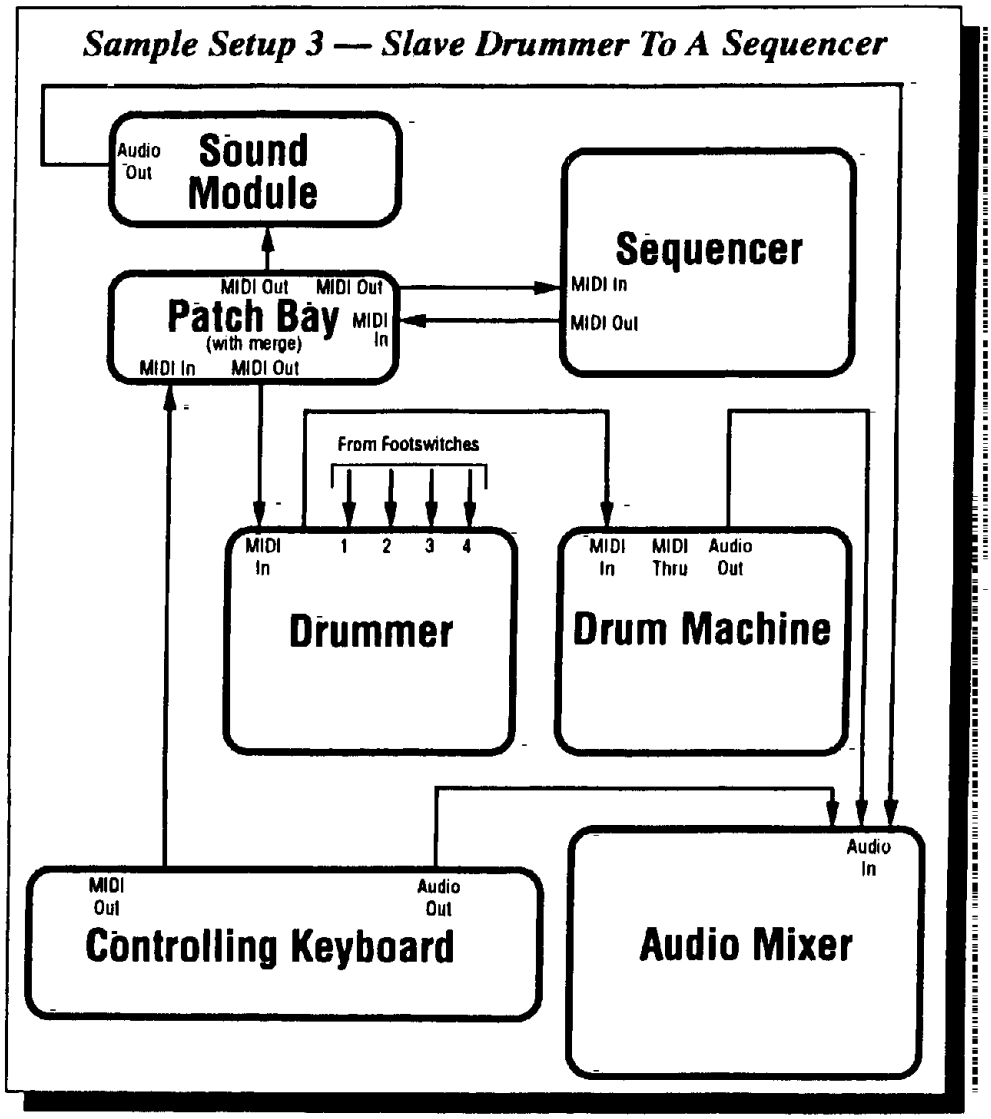
Making Connections



1- Connect the MIDI Out from your controlling keyboard to Drummer's MIDI In.
2- Connect Drummer's MIDI Out to your drum machine's MIDI In.
3- Make audio connections from the drum machine and keyboard controller to your mixer or amp.
4- Connect 4 footswitches to Drummer for remote control.



1- Connections are the same as "Sample Setup 1" except that in order to connect to a sequencer, you must connect the drum machine's MIDI Thru to the sequencer's MIDI In.
2- If your drum machine has no MIDI Thru, you will need a MIDI Thru box or MIDI patch bay. Connect Drummer's MIDI Out into the Thru box or patch bay and connect MIDI Outs from there to MIDI Ins on the drum machine and sequencer.



You need a MIDI merge box or MIDI patch bay with merge capability to jam interactively with Drummer while syncing to a sequencer. This is unnecessary if you only want to slave Drummer to the sequencer and don't plan on jamming. In this case, simply connect the sequencer's MIDI Out to Drummer's MIDI In, and Drummer's MIDI out to the drum machine's MIDI In.

NOTE: It is recommended you make Drummer the master unit as in "Sample Setup 2" if you need to synchronize, especially if you plan to jam interactively with Drummer while synchronizing. Drummer operates most efficiently like this and it eliminates the need for a merge facility.

MIDI Channel Settings

Drummer may be set to respond to incoming MIDI information on any of MIDI's 16 channels. It also has the useful ability to re-channelize that MIDI information and send it back out on a completely independent channel. This is handy for people using older generation keyboards (the original DX7 for instance) that can only send MIDI on channel one.

To set MIDI channels:

1- Select MIDI "in" (mode 3/function 1).

2- Use the increment/decrement buttons to select an input channel to match the output of your controlling keyboard.

3- Select MIDI "out" (mode 3/function 2)

4- Using the increment/decrement buttons, select the channel on which your drum machine is set to receive MIDI information. For example, Roland drum machines are factory preset to receive on channel 10 (this happens to be Drummer's factory preset output channel too). Be sure your drum machine is set to respond to MIDI information – check the drum machine's manual for details on how to do this.

Sensitivity

Drummer is designed to easily fit in with the way you work. "Sensitivity" is a parameter that sets Drummer's velocity response to match your playing style or the limitations of your controlling keyboard. For example, old DX7's were not designed to play the full 127 velocity steps MIDI can handle. Drummer can compensate by expanding this range. On the other hand, if you consistently play hard, but want more dynamics, Drummer can handle that too. Experiment to find the setting best for you.

To set sensitivity:

1- Select "Sensitivity" (mode 3/function 5).

2- Use the increment/ decrement buttons to select from the 3 choices.

Display	Sensitivity
"Lo"	For softer playing styles or to compensate for keyboards without a full velocity range.
"- -"	No change - this is the factory default setting.
"Hi"	For harder playing styles with not enough velocity variation.

Drum Kits

Among Drummer's 16 factory preset "kits", you may find one that matches your drum machine or workstation's default MIDI note assignments. Have a look at the chart below to see if your drum machine is listed. Don't worry if it isn't, or if you are using a sampler to play drum sounds – it's easy to make your own custom kits. The last 3 kits have been left for your use, but if you need more, you can overwrite any of the others. Don't worry about losing the factory kits – they are always stored in memory and may be easily recalled.

Each preset is assigned one of the 16 kits, or it can be set to use the same kit as preset "00". This feature allows you, for example, to work on tunes at home with one drum machine, then go into the studio, or come into a gig with another drum machine, and instantly change the MIDI note assignments globally.

Display	Drum Machine		Display	Drum Machine
"01"	KAWAI K4 1		"09"	YAMAHA KIT 2.
"02"	KORG M1R (1)		"10"	YAMAHA KIT 3
"03"	ROLAND D-70		"11"	ALESIS HR-16
"04"	ROLAND/BOSS 1		"12"	ALESIS SR-16
"05"	ROLAND/BOSS 2		"13"	PROTEUS
"06"	ROLAND/BOSS 3		"14"	USER
"07"	ROLAND R-5		"15"	USER
"08"	YAMAHA KIT 1		"16"	USER

Choosing a Kit

1- Select "Kit" (mode 1/function 4).

2- Use the increment / decrement buttons to select one of 16 kits, or "=0". "=0" tells Drummer to use the kit selected for Preset 00. This is the factory default setting on all presets (except "00").

Making a Custom Kit

Feel free to skip this part if you find your drum machine among the factory kits.

1- Using the increment/decrement buttons, select the kit you wish to modify. This is a global change and will affect all presets using this kit.

NOTE: If you edit a Kit that is set to "=0", you are editing preset 00's kit.

2- Press and hold Function button 4, and while you're holding it, press the Mode button. The display will read "Ed" (edit drums) as long as you're holding the buttons. Release the buttons.

3- The display will read "bd" (bass drum). On your controlling keyboard, play the note which corresponds to the bass drum on your drum machine. The note will be echoed through to your drum machine and you should hear your bass drum. If you hear another drum, keep playing different notes until you hear the right one. (Alternatively, you may use the increment / decrement buttons to display and select MIDI note numbers.) Then press function button 4 and the display will change to "Sd" (snare drum).

4- Repeat step 3 until you've given all the drum sounds the appropriate MIDI note assignments. The chart below lists the abbreviations seen in the display.

Display	Drum Sound		Display	Drum Sound
"bd"	bass drum		"CL"	click (used for metronome)
"Sd"	snare drum		"rd"	ride cymbal
"oH"	open hi hat		"tb"	tambourine
"CH"	closed hi hat		"Cb"	cowbell
"t1"	tom 1		"SH"	shaker
"t2"	tom 2		"SE"	snare enhancement (claps, noise burst, etc.)
"t3"	tom 3		"bG"	bongo or conga
"Cr"	crash cymbal		"So"	snare with open snares (perhaps timbale, etc.)

Resetting Factory Default Kits

1- "Press Function button 4 and the Mode button. The display will show Ed (for Edit) as long as you are holding the buttons. Release the buttons and the display will show bd (bass drum).

2- Press the Mode button. The display will flash "rd" (reset drums).

3- Press Function button 4 to reset kit to factory default, or the Mode button to cancel reset and re-enter the Edit mode.

4- To exit the Edit mode, keep pressing F4 until the Kit number appears in the display and the mode 1 LED lights (a maximum of 16 presses is needed).

Drum Kit note assignments:

Note: on earlier software releases, restore drums used the wrong table. Kit 1 was loaded with Kit 2 data, Kit 2 loaded 3... only a Master Reset put the right kit data in the correct place. Software Version 3.8 fixes this problem.

KIT	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
bd	36	36	35	36	36	36	84	36	38	45	35	35	36	48	48	00
Sd	38	41	40	58	40	38	88	46	49	52	38	38	38	60	60	00
oH	44	55	46	44	46	46	46	59	59	59	46	46	56	00	00	00
CH	42	53	44	42	42	44	42	57	57	57	42	42	54	00	00	00
t1	50	52	50	50	48	48	50	43	50	50	48	48	84	60	60	00
t2	47	52	47	47	45	45	47	42	48	48	45	45	81	55	55	00
t3	43	53	43	43	41	41	43	41	47	47	41	41	76	48	48	00
Cr	49	60	49	49	49	49	49	60	60	60	49	49	49	00	00	00
CL	37	48	37	37	37	37	37	51	51	51	37	65	37	00	00	00
rd	53	76	51	53	51	51	51	62	62	62	51	51	51	00	00	00
tb	54	72	66	54	69	54	54	58	58	58	67	63	66	00	00	00
Cb	56	69	56	56	56	56	56	55	55	55	65	67	58	00	00	00
SH	70	81	69	70	69	69	69	56	56	56	62	69	68	00	00	00
SE	39	79	39	88	39	39	58	54	54	54	39	39	39	69	69	00
bG	60	64	83	60	60	64	62	64	63	63	68	60	64	00	00	00
So	93	67	79	93	65	86	64	69	69	69	68	93	59	60	60	00

5- Playing and Editing Presets

First make sure everything is connected correctly. See "Making Connections" in Section 4 for details.
A "Preset" is the result of combining "Pattern" and "Rhythm" with a number of editable parameters ("Follow (Interact)", "Kit", Tempo, "Other Percussion", and Time Signature). Drummer remembers any changes you make, even when you switch off the power. Don't worry about making mistakes – it is easy to reset presets to their factory defaults. (see page 7-3)

Preset

1- Select "Preset" (mode 1/function 1).

2- Using the increment/decrement buttons, go through the presets and check them out. The display will show "05" for preset number five, "78" for preset seventy–eight, etc. (For a list of presets and detailed descriptions of how they do what they do, see the factory Presets List in Appendix 2.)

3- Press "Start/Stop" (or Footswitch 1) to start playing. Press it again to stop.

Tempo

1- Select "Tempo" (mode 1/function 5).

2- Use the increment/decrement buttons to raise and lower the tempo. The tempo range is from 40–219 bpm (beats per minute). The display shows the last two numbers so if the tempo is 103 bpm it looks the same as 203 bpm, but don't worry – it's not hard to tell them apart since one goes a lot faster than the other!

Other Percussion

Use Drummer's "Other Percussion" parameter to inject extra spice into a preset with random percussion (suited to the rhythmic style of the currently selected preset).

1- Select "Other Percussion"
(mode 2/ function 1).

2- Use the increment/decrement buttons to select one of 8 options.
NOTE: The last two options are not random but offer instead regular snare fills in a hip hop swing 16th style (if the preset uses swing), or a "60's electric boogaloo" style (if the preset is not swung).

Display	Other Percussion
"of"	off (no other percussion)
"CH"	closed hi hat
"CL"	click
"rd"	ride cymbal
"tb"	tambourine
"SH"	shaker
"S1"	1 bar snare (snare fill every bar)
"S2"	2 bar snare (snare fill every 2nd bar)

Rhythm (Feel)

This parameter varies bass drum, hi hat, and cymbal patterns, as well as defining variations in timing, and so on. (See the "Preset List" in Appendix 2 for details of rhythmic "envelopes", etc.)

1- Select "Rhythm (Feel)" (mode 2/function 2).

2- Using the increment/decrement buttons choose from 99 possibilities ("01"–"99") or a special random setting (shown in the display as "– –").

Time Signature

Changing a preset's time signature has a major effect on how it plays. You'll see more or less of a change depending on the preset and whether it uses 8th or 16th hi hats, etc. Going from a 4/4 signature to 3/4, for instance, can result in a rather bent beat. Changing to or from swing 16ths can turn straight beats into hip hop, or vice versa.

1- Select "Time Signature" (mode 2/function 3).

2- Using the increment/decrement buttons choose from seven possibilities.

Display	Time Signature
"22"	2/2
"34"	3/4
"44"	4/4
"68"	6/8
"98"	9/8
"28"	12/8
"SG"	swing (4/4 with swing 16ths)

6- Jamming With Drummer

One of Drummer's most exciting and unique attributes is its ability to jam with you. This can be a lot of fun, and more importantly, it can spark some terrific performances.

There are two ways to interact with Drummer: by means of four Footswitches, or by using the "Follow (Interact)" options and your controlling keyboard.

Footswitches

As discussed in Section 3 ("Drummer's Layout") Drummer uses four momentary footswitches for remote control.

1- START/STOP PEDAL – Duplicates the front panel Start/Stop button, i.e. press it once to start Drummer playing – press again to stop.

2- BREAK/INTERRUPT PEDAL– Mutes Drummer's output while it is pressed. Drummer keeps playing silently and will come back in right on beat when the pedal is released.

3- ADD PERCUSSION PEDAL. This is completely independent of "Other Percussion" settings. Each time the pedal is pressed, Drummer will select a new percussion instrument to play with the pattern starting on beat 1 of the next measure. Please note: If the pattern is already using that instrument, you won't hear a change. If you hold the pedal down, Drummer will select a new instrument each measure. Drummer will continue to play the added percussion part until the preset or song is stopped.

4- FILL–IN PEDAL – Press this to produce fill-ins in the style of the currently playing preset. Pressing the pedal at the beginning of a bar produces a one bar fill. Press on beat 4 to produce a fill only in the last 1/4 of the bar. Fills end with a crash cymbal on the first beat of the bar following the fill. For longer fills, hold the pedal down and Drummer will keep playing fills. The crash cymbal will only play on the downbeat of the bar following the release of the pedal. NOTE: Fills are in the style of the currently playing "Preset", but with all its variation parameters, Drummer is not likely to play the same fill twice in a row.

Follow (Interact)

"Follow (Interact)" features are great for live jams and can generate some impressive dynamics. Depending on the option you choose, Drummer will follow your lead and wait for you to start playing, play softer when you do, lock onto your bass line, or do a fill when you leave a space in your playing.

Remember, Drummer stores your "Follow (Interact)" choice with each "Preset" so you can choose to jam interactively in one "Part" of a "Song", and have Drummer play normally in another "Part".

There are four parameters which may be used individually or combined with each other. There are sixteen ("00"–"15") combinations to choose from. (See the chart which follows for details.)

The four parameters are:

1- AUTO–START: Drummer will wait till you play the first note on your keyboard before starting to play. (This may be over ridden by the "Start/Stop" button or Footswitch 1.)

2- FILL: While you play your controller keyboard, Drummer plays normally, but as soon as you stop, or hold notes, and Drummer sees a space, it will throw in a fill. Drummer will go back to normal playing as soon as you start playing on your keyboard again, and wait for another space to play a fill.

3- VELOCITY: Drummer follows the velocity of your playing. You play softer, and Drummer makes the drums play softer. Play harder, and Drummer makes the drums play louder. This is excellent for creating dynamic variation in live performances.

4- BASS: Drummer locks the bass drum with notes played on your keyboard controller below middle C. In other words, Drummer will follow your bass line for a really tight rhythm section. To help you keep time, Drummer plays a bass drum on the downbeat of each bar.

Display	AutoStart	Fill	Velocity	Bass
"00"	OFF	OFF	OFF	OFF
"01"	OFF	OFF	OFF	ON
"02"	OFF	OFF	ON	OFF
"03"	OFF	OFF	ON	ON
"04"	OFF	ON	OFF	OFF
"05"	OFF	ON	OFF	ON
"06"	OFF	ON	ON	OFF
"07"	OFF	ON	ON	ON
"08	ON	OFF	OFF	OFF
"09"	ON	OFF	OFF	ON
"10"	ON	OFF	ON	OFF
"11"	ON	OFF	ON	ON
"12"	ON	ON	OFF	OFF
"13"	ON	ON	OFF	ON
"14"	ON	ON	ON	OFF
"15"	ON	ON	ON	ON

7- Recording User Presets

The first 13 presets ("00"–"12") are especially designed for recording. You may choose to add extra Notes to factory patterns, or record an entirely new groove in one of these locations. Either way, you can easily get back the original factory defaults, so feel free to experiment without worrying about losing anything.

Patterns are 2 bars long. When you go into record mode, you will hear the pattern loop around and you can add new drum hits whenever you like, as long as you are recording. If you make a mistake, you can easily erase it. Drummer features quantization (with some unique options) to make it easy to record great sounding grooves.

Adding Notes to a Preset

1- Select "Preset" (mode 1/function 1). Using the increment/decrement buttons, choose any preset from "00" –"12".

2- Select "Pattern" (mode 1/function 2). Using the increment/decrement buttons, choose from the 99 possible patterns ("00" –"98"). The hundredth pattern, labeled "bL" (blank), we'll discuss later in "Recording a User Preset".

3- Select "Quantize" (mode 2/function 4).

4- Using the increment/decrement buttons, choose from 4 possible quantize settings.

5- Select "Record" (mode 2/function 5). The display will read "rH" (rehearse) and MIDI input from your controlling keyboard will be channeled through to your drum machine so you can practice what you want to play.

6- Press "Start/Stop" to begin recording. The display will change to "rC" (recording) and the "CL" (click) sound in your selected kit will count the time as a metronome in 1/4 notes. You will also hear the factory preset playing so you can tell where to play your extra hits.

7- While the groove is looping in record mode, pressing function button 5 will alternate between rehearsing and recording, and the display will change to let you know what's happening.

8- Play your controlling keyboard and the notes will be recorded according to the quantize option set in step 4.

9- Pressing the "Start/Stop" button will stop recording and automatically reenter "Preset" mode.

10- To add more to the groove, repeat steps 5 through 9.

Display	Quantization Values
"oF"	off - Drummer will record exactly what you play with no quantization.
"16"	16th note quantization. Drummer aligns your playing to the nearest 16th note.
"SH"	shuffle - Drummer quantizes to 16ths with a shuffle feel.
"SG"	swing - Drummer quantizes to swing 16ths.

Erasing Notes

1- While still in "Record" mode, press and hold Function button 4 (Quantize) and the display will read "Er" (erase). While holding the button, play the offending note on your keyboard and all occurrences of that note will be erased. For instance, if you had recorded some tambourine and you were not satisfied, this procedure would erase all the tambourines you had recorded, giving you a clean slate to start again.

2- If you have already stopped recording and want to go back to get rid of something, then re-enter "Record" mode as described in step 5 of "Adding Notes to a Preset". Drummer won't erase the underlying pattern, only the added notes may be erased.

Follow the procedure in step 1 to eliminate all occurrences of the drum you want to erase.

Recording User Presets (Presets 00 to 12)

Drummer does not limit you to merely adding Notes to factory presets. You also have the option of recording something completely your own. They may also be integrated into songs along with the factory presets. Of course Drummer will remember all parameters such as Time Signature, Tempo, and "Other Percussion" as part of your preset. (The "Rhythm (Feel)" you record over is the one used for interaction.)

To record a User Preset:

1- Select "Preset" (mode 1/function 1).

2- Using the increment/decrement buttons, choose from among the first 13 presets ("00" – "12") to record.

3- Select "Pattern" (mode 1/function 2).

4- Using the increment button, select the the last pattern, labeled "bL" (blank). This pattern is the one you use to record presets from scratch. NOTE: Interaction does not work with patterns created from blank.

5- Follow the procedure described in steps 5 through 9 of "Adding Notes to a Preset" to record your own groove. The only difference here is that you will only have the metronome ("CL") to guide your playing. Erasing notes is exactly the same here too. See "Erasing Notes" for details.

Restoring Factory Presets

If you need to get back the original preset, it's easy to do. But before you erase a great groove you've just recorded, save it via a system exclusive dump (see "System Exclusive" in the "More MIDI" section for details).

To Recall Factory Presets:

1- Select "Preset" (mode 1/function 1).

2- Using the increment/decrement buttons, choose the preset you wish to restore.

3- Press and hold Function button 1. While holding it, press the Mode button. Release the buttons. The display will flash "rP" (reset Preset).

4- Press the Mode button to cancel, or press Function button 1 to recall the factory preset.

8- Songs

Songs are easy to build and Drummer's 16 song capacity should be plenty for even lengthy live sets. Each song has 16 "Parts". A "Part" is made of a "Preset" which "Repeats" up to 99 times (plays up to 99 bars), with various "Fills" options to choose from.

Building Songs

1- Select "Song" (mode 4/function 1). Use the increment/decrement buttons to select a song number ("01" –"16").

2- Select "Part" (mode 4/function 2). Use the increment/decrement buttons to select a part number ("01"–"16").

3- Select "Preset" (mode 4/function 3).

4- Use the increment/decrement buttons to select a "Preset" ("00"–"99") for the "Part".

5- Select "Repeats" (mode 4/function 4).

6- Use the increment/decrement buttons to select the number of "Repeats" ("01"–"99") for that "Part". Selecting "ss" will stop the song at this step. Note: The number of repeats selected equals the number of bars the "Part" will play before the song goes on to the next "Part".

7- Select "Fills" (mode 4/function 5). Use the increment/ decrement buttons to select from among eight "Fills" options for the "Part".

Display	Fills
"no"	no fill for the "Part".
"01"	Drummer will play just one fill during the last bar of the "Part".
"04"	Drummer will play a fill during every 4th bar for the duration of the "Part".
"08"	Fill during every 8th bar.
"12"	Fill during every 12th bar.
"16"	Fill during every 16th bar.
"24"	Fill during every 24th bar.
"32"	Fill during every 32nd bar.

8- Repeat steps 2 through 7 for as many "Parts" as you need in the "Song".

9- To indicate the end of the "Song", the last "Part" must be set to no repeats. For example, if your "Song" is made of 12 "Parts", select "Part 13" (as described in step 2), then select "Repeats" (step 5), and using the decrement button, lower the number of repeats below "01"

and the display will show "ss", indicating the "Song" should not play this "Part". When this "Part" is reached, Drummer will stop playing.

Playing Songs

1- Select "Song" (mode 4/function 1).

2- Use the increment/decrement buttons to select a song number ("01"–"16").

3- Press the "Start/Stop" button (or Footswitch 1) to start playing the "Song". The display will show bar numbers advancing and the LED dot in the lower right corner will flash in time with the 1/4 note beats. When the end of the "Song" is reached, Drummer will stop playing.

4- Press the "Start/Stop" button (or Footswitch 1) again to stop playing the "Song", and Drummer instantly resets itself to be ready to play again from the beginning.

A Note About Tempo In Song Mode

One of Drummer's cool features is its ability to match tempos from one Part to another in Song mode. For example, the tempo in the verse is laid back, but it picks up a bit in the chorus. Drummer has the smarts to increase/decrease the tempo automatically during the last bar of a Part to match the tempo of the Part that follows. Remember, Drummer stores tempo settings along with each preset, so use this to your advantage in creating the dynamics of leaning into the hook of a song, or cooling out in the bridge.

9- More MIDI

In this part you'll learn how to synchronize Drummer with other gear, make Drummer respond to program (patch) changes, and how to back up Drummer's settings using its system exclusive capabilities.

MIDI Clock

"MIDI Clock" allows Drummer to sync with other gear. The factory default setting is OFF (neither send MIDI clocks, nor respond to incoming clock information), so if you want to synchronize, you'll have to change this parameter first.

To Set MIDI clock Options:

1- Select "MIDI Clock" (mode 3/ function 3).

2- Using the increment/ decrement buttons, select from three choices.
Synchronizing – Drummer Is Master

Display	MIDI Clock Modes
"Of"	off - neither transmits nor receives MIDI clocks (default setting).
"tr"	transmit - Drummer is master and transmits MIDI clock information to slave(s).
"Sy"	sync - Drummer slaves to MIDI clock information from an external device such as a sequencer, for example.

1- Ensure everything is properly interfaced. (See "Making Connections" in Part 3 for details.)

2- As outlined in "MIDI Clock", select the "tr" (transmit) option to enable MIDI clock output.

3- Set the slave unit(s) to receive MIDI clock information. Some machines may need to be put into play mode and will wait for incoming clock information. Many units will jump into play once they receive MIDI clocks regardless of whether you pressed their play button first or not. Consult the owner's manual(s) of the slave unit(s) to see what you should do.

4- Press Drummer's "Start/Stop" button (or Footswitch 1) to start synchronized play. Press again to stop and return to the beginning of the song or preset.

Synchronizing – Drummer Is Slave

1- Make sure everything is properly interfaced. (See "Making Connections" in Part 3 for details.)

2- As outlined in "MIDI Clock", select the "SY" (sync) option to enable Drummer to respond to incoming MIDI clock information. Please note: Drummer does not echo MIDI clock to output.

3- Ensure your master unit is set to send MIDI clock information. Consult the owner's manual of the master device for details of how to do this.

4- Start your master device and Drummer will jump into action playing a song, or preset, depending on what you have selected. You do not need to press the "Start/Stop" button to enable Drummer to be ready to receive MIDI clocks. When you stop the master unit, Drummer will stop and return instantly to the beginning of the song or preset, and be ready to play again.

MIDI Program (Patch) Changes

Drummer has the ability to respond to program (patch) changes over MIDI in both "Song" and "Preset" mode. Drummer will change Song when a MIDI program change is received ONLY when "Song" function is selected. In any other mode, Drummer will change the Preset in response to a MIDI program change command. NOTE: Drummer will not echo Program changes on the selected channel.

To Choose MIDI Channel for Program Changes:

1- Select "Program Change" (mode 3/ function 4).

2- Use the increment/ decrement buttons to select from 17 choices.

Display	MIDI Program Changes
"oF"	off - Drummer will not respond to program changes over MIDI. This is the factory default setting.
"01"–"16"	Drummer will respond to MIDI program changes on the selected channel ("01" means MIDI channel one, etc.).

System Exclusive

Drummer has the valuable ability to send and receive system exclusive information, allowing you to protect your edited presets, songs, and kits from accidental erasure, or to build up a library. Drummer can "dump" a snapshot of all its settings to a system exclusive librarian such as can be found in many sequencers, or in stand–alone units. If you lose your data, or when you go to a session and want to recall a kit you don't often use, Drummer can load previously saved information.

Send System Exclusive Data:

1- Prepare your system exclusive librarian to receive data. Consult its owner's manual on how to do this.

2- Press and hold Function button 2, and while holding, press the Mode button.

3- Release the buttons. The display will flash "ts" (transmit system exclusive data).

4- Press the Mode button again to cancel, or press Function button 2 again to proceed with sending system exclusive data. While sending system exclusive data, Drummer's display will show rapidly counting numbers. The numbers don't mean anything in particular. This display is just to let you know things are proceeding as they should. When the dump is finished, Drummer will return to normal operation.

Receive System Exclusive Data:

1- Press and hold Function button 3, and while holding, press the Mode button.

2- Release the buttons. The display will flash "rs" (receive system exclusive data).

3- Press the Mode button again to cancel, or press Function button 3 again to proceed with receiving system exclusive data. The display will stop flashing and wait for you to send data from your system exclusive librarian.

4- Start transmitting from your librarian. Consult the owner's manual of your librarian on how to do this. Drummer's display will start rapidly counting numbers to let you know it is receiving data. When all the data is received, Drummer will return to normal operation.

10- Glossary

Word or Term	Definition
= 0	Drummer displays this when a preset uses the same kit as preset "00".
Auto–Start	An option you can set in "Follow (Interact)" whereby Drummer will start automatically as soon as you begin to play your controlling keyboard.
Controlling Keyboard	For convenience, this manual uses "controlling keyboard" to refer to any MIDI device you might use to control Drummer over MIDI.
Decrement	Used to describe the button which lowers values when selecting parameters, etc. The decrement button is the one with the left pointing arrowhead on Drummer's front panel.
Drum Machine	For convenience, this manual refers to any sound module, keyboard, or rack unit you might use for drum sounds, as a "drum machine".
Envelope	The "outline" of a sound or event. Drummer uses Envelopes to describe rhythmic variations.
Factory Default	The setting a parameter has when you power up Drummer for the first time. Drummer makes it easy to reset parameters to their factory defaults any time you want.
Fill	The extra notes or pattern variation used to lead from one part of a tune to the next. Fills are programmable in Song mode and many patterns automatically generate fills and variations according to their programmed envelopes.
Function	The 5 buttons on the right of Drummer's front panel are called "function buttons". These are used with the "mode button" to select parameters.
Increment	The button which raises values when selecting parameters, etc. The increment button is the one with a right pointing arrowhead on Drummer's front panel.
Kit	Drummer's 16 "kits" are the MIDI note assignments used by Drummer to play different drum machines.
LED	Acronym for Light Emitting Diode – the little lights which help you navigate Drummer's front panel.
Loop	In drum machines and sequencers; when a pattern or song plays from beginning to end, then starts again, keeping on playing, until you tell it to stop. (Drummer loops when playing presets **but not in song mode**).
Master	When synchronizing equipment, the piece of gear which acts as the leader, is called the master.

MIDI Channel	One of 16 channels used to send information down a MIDI cable. The receiver (Drum Machine) must be set to the same channel as the sender (Drummer).
MIDI Clock	A MIDI timing signal used to synchronize sequencers and drum machines.
MIDI Merge Box	A box which combines 2 or more MIDI signals into a single MIDI data stream.
MIDI Note	MIDI sends notes using numbers corresponding to a note played on a sound module. There are 127 note numbers for each of the 16 MIDI channels. This is how Drummer tells your drum machine which sound to play.
MIDI Patch Bay	A MIDI patch bay has MIDI jacks to connect the ins and outs of multiple pieces of MIDI gear. It acts like a telephone operator to direct MIDI signals. Often MIDI patch bays include MIDI merge capabilities.
MIDI Program (Patch) Change	Drummer responds to MIDI program (patch) changes by changing presets or songs, depending on its current mode of operation. If Drummer is in "Song" mode, it will change the current song, otherwise it will change the preset.
MIDI Thru	Some MIDI equipment will has a MIDI connector labeled "thru". Use this to pass a MIDI signal on to another device.
MIDI Thru Box	A MIDI thru box takes a single MIDI cable and sends the same data to multiple MIDI devices.
Mode	The 4th button from the left on Drummer's front panel. Pressing it cycles through 4 modes and lights the LED beside the selected row. Combined with Drummer's function buttons, it allows you to choose parameters.
Part	Songs are made up of parts. Each part is made up of a preset, is repeated a number of times, and may have fills programmed to play after a specified number of bars.
Pattern	Patterns are at the heart of how Drummer works. They have envelopes which define how and when variations and fills will be generated.
Preset	Presets are the patterns programmed in Drummer. Each preset contains all the parameters affecting it, such as tempo, rhythm, other percussion, etc.
Repeats	Repeats are the number of bars a part will play before a song moves on to the next part. If this parameter's lowest setting is selected, the part will not play. Songs do NOT loop.
Rhythm (Feel)	The Rhythm (Feel) selected in a preset directly affects such things as bass drum and hi hat patterns, as well as timing variations and so on. This parameter is the heart of Drummer's human capabilities. Drummer stores the individual setting of this parameter for each preset.

Sensitivity	The Sensitivity parameter adjusts Drummers velocity response to your playing style and the range limits of your keyboard.
Sequencer	A sequencer is a device that records a "sequence" of notes to playback on a sound module. It can be software running on a computer, or a stand alone box. Sequencers act like tape recorders in recording MIDI performances for playback but allow you to edit single notes.
Slave	When synchronizing, the slave unit(s) follow(s) the master unit's clock.
Song	Drummer's songs are made by stringing together parts made of presets.
Synchronize	For several pieces of gear to play in time with each other, they must be synchronized. Drummer makes it easy to synchronize by using MIDI clock.
System Exclusive (sysex)	System Exclusive messages are the way MIDI can send special information, like the settings of a Drummer preset, to a storage device or a sequencer.
Tempo	The speed in Beats Per Minute that a preset pattern will be played.
Time Signature	The number of Beats per measure over the value of the note getting one beat. 4/4 time is four beats per measure with every quarter note getting a beat.
Velocity	Velocity is the MIDI data used to control how loud a note will sound. Drummer responds to velocity by following your dynamics, and uses velocity to tell your drum machine how loud to play.

11- Preset List

This list of presets can be used on different levels. The first 4 columns — Preset #, Preset Name, Time Signature, and BPM (speed in beats per minute) — give all the information needed as a starting point in becoming acquainted with Drummer. Most people will find this everything they need to know about the factory presets.

For those who become intrigued with Drummer's unique capacity for making drum machines sound like they're being played by a real drummer, the other columns take you deeper into Drummer's "psyche". (See "Notes On Abbreviations" on the facing page for more details.)

Go only as deep as your interest takes you. If the technical stuff isn't important to you, ignore it. The great thing about Drummer is that anyone can use it without needing to know anything about how it does what it does.
Note: In Drummer's factory defaults, Preset "01" uses Pattern "01" and so on.

Pattern chart:
In the factory default presets, each preset has been assigned a pattern with the same number. Preset "1" uses Pattern "1" but you can use any pattern with any preset. The Names given in the Drummer Preset Chart are actually the Pattern Names.

The patterns are in groups of 10. While Song mode is great if you have a complicated tune, many of the patterns can be used alone as a complete song. The 8 bar and 12 bar patterns are complete with fills at the end of each repeat.

Pattern	Type	Length	comment
01 to 09	4/4 Rock,	2 bar	
10 to 19	4/4 Rock,	8 bar	
20 to 29	4/4 Rock Shuffle,	2 bar	(same as 01 to 09 only shuffled)
30 to 39	4/4 Rock Shuffle,	8 bar	(same as 10 to 19 only shuffled)
40 to 49	Swing types and triplets,	2 bar	
50 to 59	Swing types and triplets,	8 bar	
60 to 69	Latin and Reggae,	2 bar	
70 to 79	Latin and Reggae,	8 bar	
80 to 89	Misc, plus variations and fills.	8 bar 12 bar	Useful as complete songs, good Jam Patterns (12 bar blues with turnarounds at bar 24 etc...)
90 to 99	Odd, Weird, and Utilities		Random type 1 and 2 are basic backbeat with percussion changes 94.Snare Beat and 95.Tom Tom Beat are solo drums, these follow the Rhythm Pattern Exactly.

Rhythm chart:

Use pattern 98 (kick / Hi-Hat only) and step through the Rhythm settings. These rhythms are used as variations to the pattern being played and most of the time affect the snare and kick parts. When Other Percussion is ON, the rhythm setting is used double time (each eighth note entry is played as a sixteenth) to vary the percussion pattern.

Drummer Preset Chart

Notes On Abbreviations:

Time Signature: Indicates default time signature.

Tempo (BPM): Indicates default tempo setting.

Base:

2B4 = 2 beat with quarters
4B4 = 4 beat with quarters
2B8 = 2 beat with 8ths
4B8 = 4 beat with 8ths
2B16 = 2 beat with 16ths
4B16 = 4 beat with 16ths
REG= reggae back beat, enhanced for reggae
REGS = shuffle reggae back beat, enhanced for reggae

NOTE: Rhythm parameter may cause different effects on different base types.

Rhythm: Indicates default rhythm.
"- -" = random.

#	Name	Time	BPM	Base	Rhythm
00	joe rock A	4/4	120	2B8	1
01	straight rock A	4/4	125	4B8	19
02	16 beat rock A	4/4	120	2B16	19
03	serious beat A	4/4	130	4B8	20
04	big 4 A	4/4	120	2B8	20
05	motown I A	4/4	136	4B4	2
06	motown II A	2/2	80	4B4	17

#	Name	Time	BPM	Base	Rhythm
07	hard rock A	2/2	110	4B4	3
08	old rock A	2/2	90	4B8	4
09	busy rock A	4/4	90	4B16	--
10	joe rock B	4/4	120	2B8	1
11	straight rock B	4/4	125	4B8	19
12	16 beat rock B	4/4	120	2B16	19
13	serious beat B	4/4	130	4B8	20
14	big 4 B	4/4	120	2B8	20
15	motown I B	4/4	136	4B4	2
16	motown II B	2/2	80	4B4	17
17	hard rock B	2/2	110	4B4	3
18	old rock B	2/2	90	4B8	4
19	busy rock B	4/4	90	4B16	--
20	joe rock C	12/8	110	2B8	1
21	straight rock C	12/8	110	4B8	19
22	straight pop A	12/8	110	2B4	30
23	serious beat C	12/8	120	4B8	20
24	shuffle pop A	12/8	120	4B4	23
25	motown I C	12/8	126	4B4	2
26	motown II C	12/8	150	4B4	17
27	hard rock C	12/8	110	4B4	3
28	old rock C	12/8	170	4B8	4
29	busy rock C	12/8	80	4B16	--
30	joe rock D	12/8	110	2B8	1
31	straight rock D	12/8	110	4B8	19
32	straight pop B	12/8	110	2B4	30
33	serious beat D	12/8	120	4B8	20
34	shuffle pop B	12/8	120	4B4	23
35	motown I D	12/8	126	4B4	2
36	motown II D	12/8	150	4B4	17
37	hard rock D	12/8	110	4B4	3
38	old rock D	12/8	170	4B8	4
39	busy rock D	12/8	80	4B16	--
40	joe swing rock A	4/4	100	2B8	1
41	swing 16ths pop 1 A	4/4	105	4B8	10
42	slow swing (rap) A	4/4	100	4B8	34
43	slow swing (rap) II A	4/4	98	4B8	34
44	slow rock A	12/8	80	2B16	1
45	fast 4/4 swing A	12/8	170	4B4	1
46	triplets A	12/8	110	2B16	1
47	triplets II A	12/8	120	4B16	19
48	fox trot (2/4 swing)	12/8	160	2B4	1
49	fox trot (2/4 swing) w/ random	12/8	160	2B4	1

#	Name	Time	BPM	Base	Rhythm
50	joe swing rock B	4/4	100	2B8	1
51	swing 16ths pop 1 B	4/4	100	4B8	10
52	slow swing (rap) B	4/4	100	4B8	34
53	slow swing (rap) II B	4/4	98	4B8	34
54	slow rock B	12/8	80	2B16	1
55	fast 4/4 swing B	12/8	170	4B4	1
56	triplets	12/8	110	2B16	1
57	triplets II B	12/8	120	4B16	19
58	fox trot (2/4 swing)	12/8	160	2B4	1
59	fox trot (2/4 swing) w/ random	12/8	160	2B4	1
60	rock/reggae A	4/4	69	4B16	--
61	reggae shuffle A	12/8	125	REG	7
62	reggae shuffle type II A	12/8	135	REGS	7
63	reggae 8ths A	4/4	150	REG	10
64	reggae 8ths type II A	4/4	145	REGS	2
65	salsa A	2/2	110	4B8	--
66	salsa double time A	4/4	140	4B8	20
67	Latin shuffle A	12/8	140	4B4	--
68	bossa nova A	4/4	110	2B4	1
69	bossa nova II A	4/4	115	2B4	1
70	rock/reggae B	4/4	69	4B16	--
71	reggae shuffle B	12/8	125	REG	7
72	reggae shuffle type II B	12/8	135	REGS	7
73	reggae 8ths B	4/4	150	REG	2
74	reggae 8ths type II B	4/4	145	REGS	2
75	salsa B	2/2	110	4B8	--
76	salsa double time B	4/4	140	4B8	20
77	latin shuffle B	12/8	140	4B4	--
78	bossa nova B	4/4	110	2B4	1
79	bossa nova II B	4/4	115	2B4	1
80	joe rock with variation and fills	4/4	120	2B8	1
81	joe rock shuffle with variation and fills	12/8	110	2B8	1
82	12 bar jam 1	2/2	110	4B4	1
83	12 bar jam 2	12/8	90	2B8	1
84	jazzy rock with variation and fills	4/4	120	2B8	--

#	Name	Time	BPM	Base	Rhythm
85	swing rock with variation and fills	4/4	100	2B8	10
86	16 beat rock with variation and fills	4/4	120	2B16	19
87	rock/reggae with variation and fills	4/4	69	4B16	- -
88	reggae 8ths with variation and fills	4/4	150	REG	2
89	salsa C	2/2	110	4B8	- -
90	oom pa pa waltz	3/4	170	2B4	1
91	soft waltz	3/4	210	2B4	1
92	polka	2/2	150	2B4	1
93	polka-ish hihat	4/4	150	4B8	1
94	snare beat	4/4	120	2B4	2
95	tom tom beat (diddlish)	4/4	100	2B4	37
96	random type 1	4/4	120	4B8	1
97	random type 2	4/4	120	4B4	1
98	4 beat empty	4/4	120	4B4	1
99	blank	4/4	60	4B4	1

12- MIDI Implementation

Recognized
Note On
Note Off
Note On Velocity
Program Change
MIDI Timing Clocks
Start
Stop
Continue
System Exclusive

Transmitted
Note On
Note Off
Note On Velocity
MIDI Timing Clocks
System Exclusive

- When enabled, Drummer will response to MIDI Program Change commands (see page 26). Drummer will change Songs ONLY when in Song Mode, in any other mode Drummer changes presets.
- A program change that is outside the range 1 to 16, sets the Song to 16
- Drummer will NOT Echo Program Change commands on the Program Change channel (see page 26).
- Drummer does NOT respond to Song Select or Song Position Pointer.

System Exclusive Format
The MIDI System Exclusive message from the Drummer is in the format of Header, the entire contents of RAM, and then Close. There is no checksum or error correction. The Drummer will however ignore out of range data.

F0 hex	Start of MIDI System Exclusive message
10 hex	Oberheim ID
08 hex	Perf/X ID
05 hex	Drummer ID

data (16K bytes for 8K RAM, 64K bytes for 32K RAM) in the range of 00 hex to 63 hex. Please note that this is a bulk dump of the complete state of the machine, including system pointers. If these pointers are changed, the Drummer will crash and you will have to perform a Master Reset.

F7 hex End of MIDI System Exclusive message

13- Troubleshooting

Master Reset: (Cold boot)

(erases user presets, loads factory presets)
HOLD <, >, and **START/STOP** during power on.

Drummer Does Not Respond to MIDI From Controlling Keyboard

Make sure you are connected properly (see "Making Connections" in Part 4). Check to see if the dot in the middle of the 2 digit alpha-numeric display lights when you play a key on the keyboard. If it does, then you are connected and receiving MIDI information. In this case, check that your MIDI In channel matches the MIDI Out channel of your controlling keyboard (see "MIDI Channel Settings" in Part 4.) Is the keyboard set to send MIDI information?

Drum Machine Does Not Respond to Drummer

Make sure you are connected properly (see "Making Connections" in Part 4). Check that Drummer is transmitting MIDI on the channel to which your drum machine is set to respond (see "MIDI Channel Settings" in Part 4.) Have you selected an appropriate "Kit" to match your drum machine's MIDI note assignments? (See "Choosing a Kit" in Part 4.) Is the volume turned up on the drum machine?

Drum Machine Plays the Wrong Drum Sounds

Have you selected an appropriate "Kit" to match your drum machine's MIDI note assignments? (See "Choosing a Kit" in Part 4.)

Drummer Won't Sync to External MIDI Clock

Check your connections. Be sure Drummer is set to respond to incoming MIDI clocks. Be sure your master unit is set to send MIDI clocks. (See Part 4 – "More MIDI".)

Sequencer Won't Sync to Drummer

Check your connections. Be sure Drummer is set to send MIDI clocks. Check your slave unit is set to respond to MIDI clocks. Does your slave unit need to be manually put in play in order to be ready to respond to MIDI clocks? (See Part 4 – "More MIDI".)

Drummer Won't Respond to MIDI Program (Patch Changes)

Be sure Drummer is set to respond to program changes. (See "MIDI Program (Patch) Changes" in Part 9.)

Footswitches Work Backwards

Always connect the footswitches before turning Drummer on. In this way Drummer will analyze the polarity of the footswitches and set itself accordingly. Please note that Drummer does not react to the Start /Stop footswitch until it is released.

Display Codes:

--	No change / random	--
=0	Use Preset 00 kit	=0
bd	bass drum	bd
bG	bongo (conga)	bG
Cb	Cowbell	Cb
CH	Closed hi-Hat	CH
CL	Click (metro.)	CL
Cr	Crash cymbal	Cr
Ed	Edit (Drum Kit)	Ed
Er	Erase	Er
oF	off	oF
oH	open hi-Hat	oH
rC	Record	rC
rd	ride cymbal/reset drum	rd
rH	rehearse	rH
rS	receive SysEx	rS
Sd	Snare drum	Sd
SE	Snare Enhancement	SE
SG	Swing	SG
SH	Shaker	SH
SH	Shuffle	SH
So	Snare open	So
SS	Stop Song	SS
SY	Sync	SY
t1	tom 1 (high)	t1
t2	tom 2 (mid)	t2
t3	tom 3 (low)	t3
tb	tambourine	tb
tr	transmit MIDI Clock	tr
tS	transmit SysEx	tS

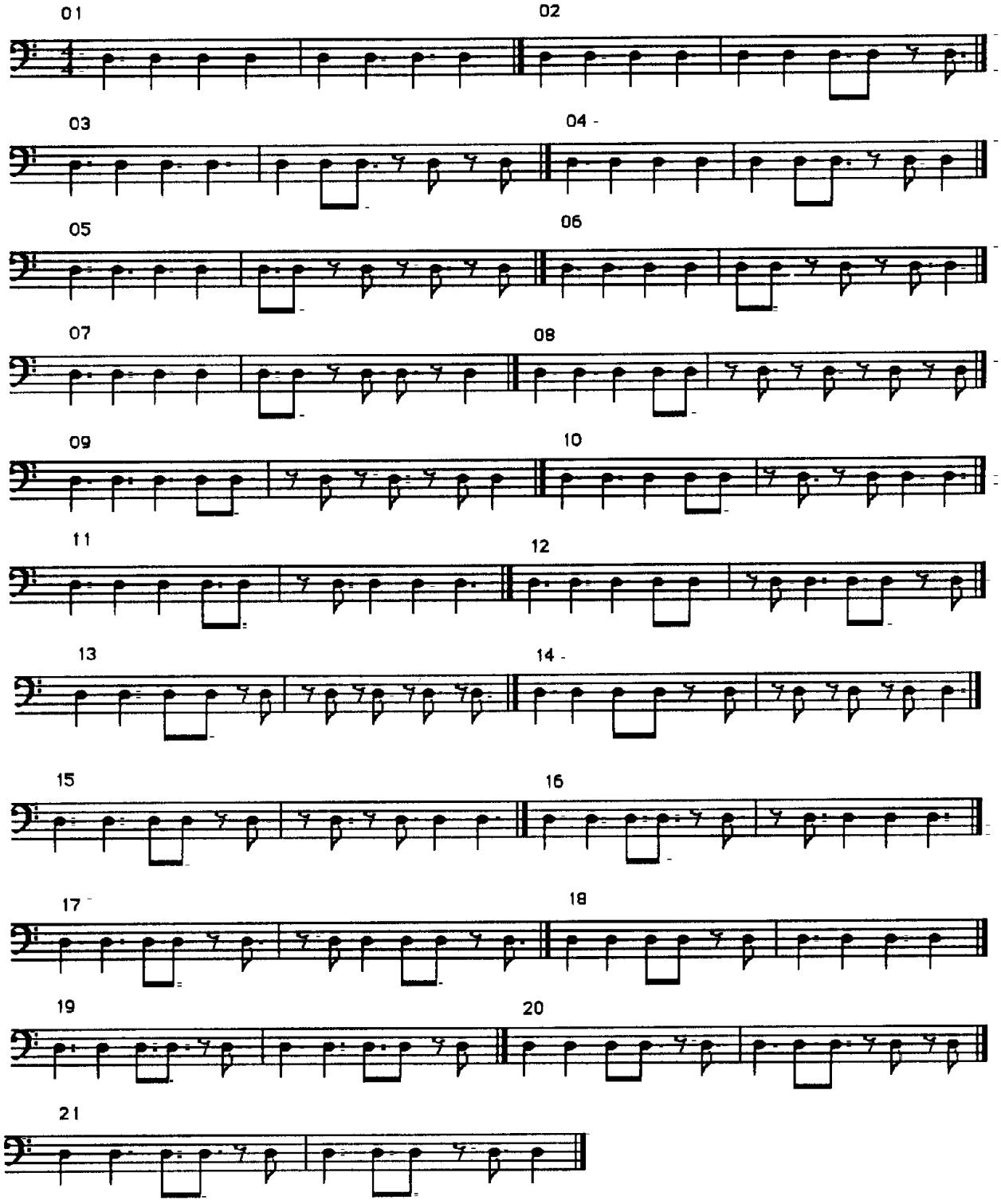
Software Version Number & Memory Size
Every time the Strummer is turned ON, the first numbers shown in the display are the Software Version Number. These flash by in about half a second, followed by the Memory Size equally fast before stopping on the current Preset number. The Software Version shown should be 3.8 or larger. The stock memory will show 08 (expanded memory shows 32).

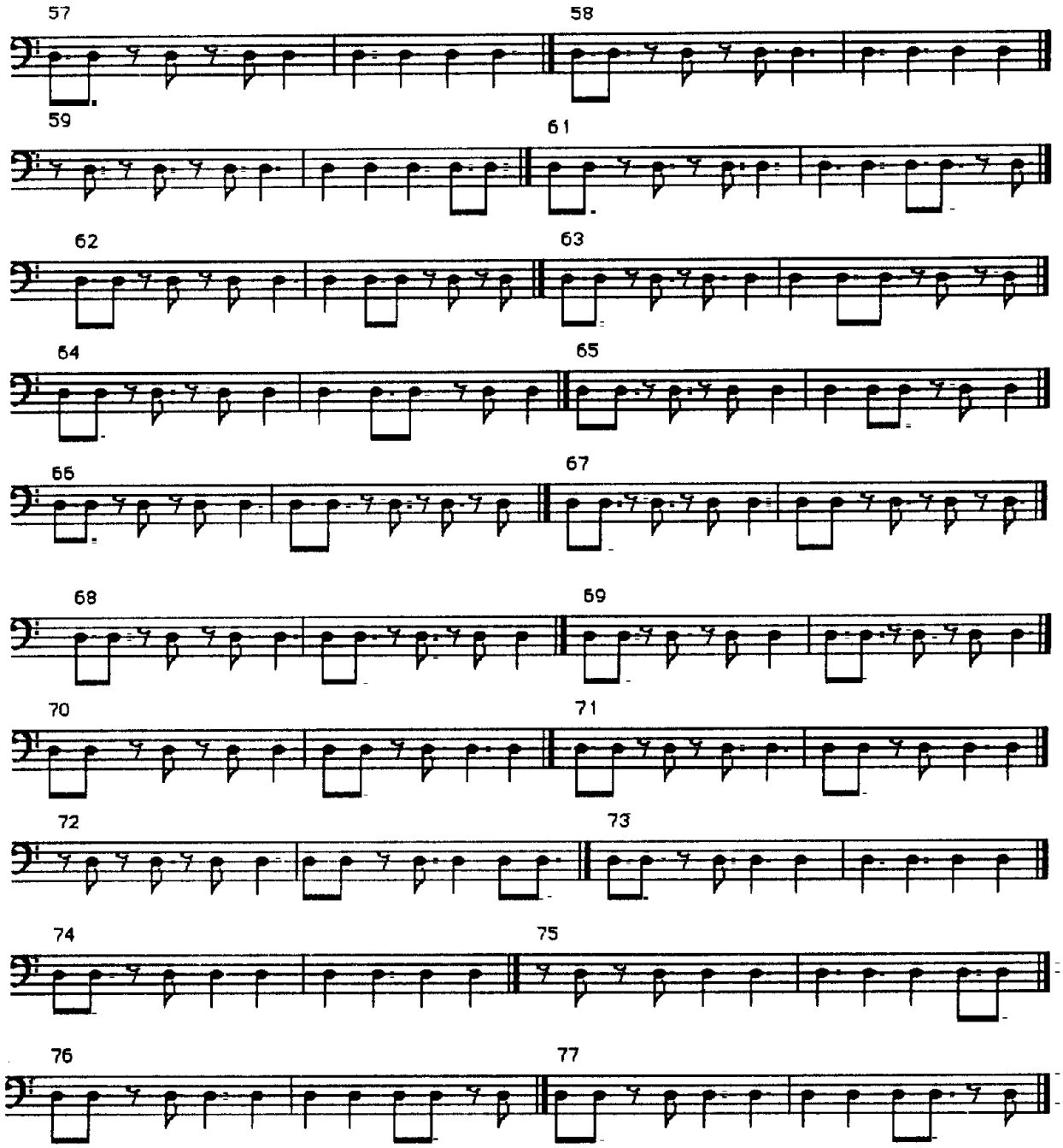
Your Perf/X comes stock with 8K of RAM (Random Access Memory). It can be expanded to 32K of RAM allowing user patterns to be recorded in all 100 presets. While the procedure is relatively simple, caution against static electricity must be exercised to avoid destroying your unit.

The services of qualified tech should be used to change the memory chip. In case of problems occurring after a memory expansion, Oberheim will make the sole determination as to the correctness of the procedure and the cause of any failures in circuitry.

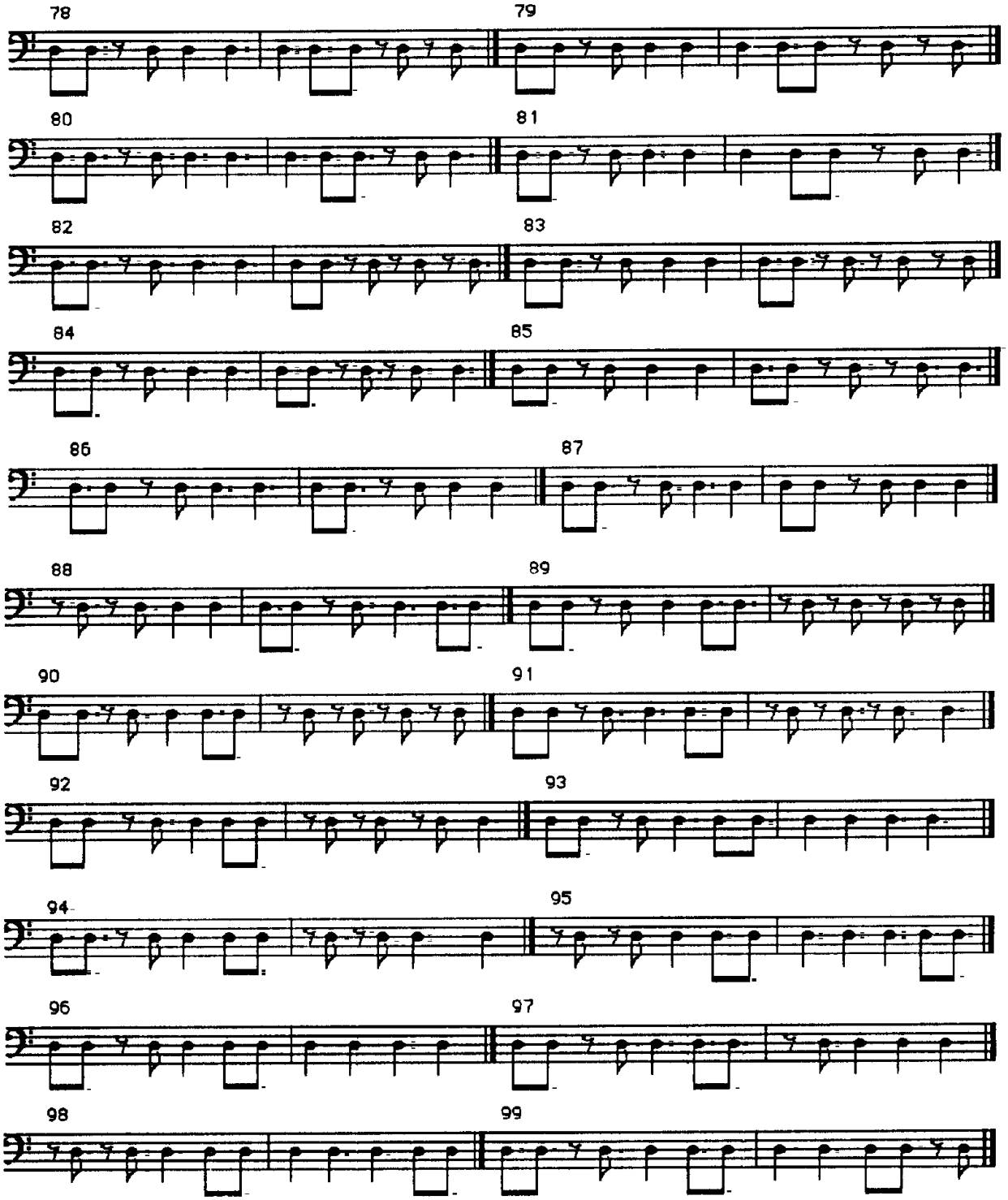
Memory Expansion: (works in ALL Perf/X)
To expand the memory, replace the memory chip inside the Perf/X with a 32K x 8 low power static RAM (SRAM) with a speed of 150nS or better. (The Hitachi part number for this is a UM62256A-15L. Other brands will work fine. The "generic" part number is a 62256.)

Drummer Version 3.8 Rhythms





Drummer Rhythms cont...



Drummer Rhythms cont...

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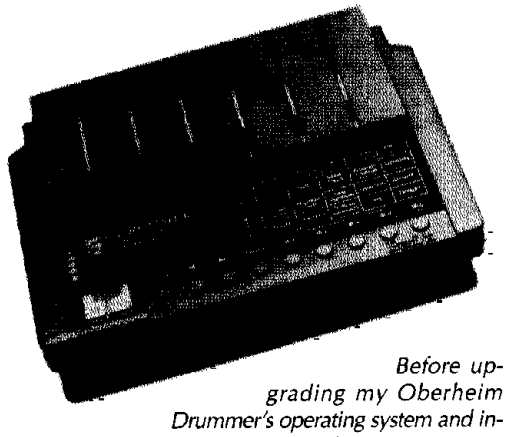

Before upgrading my Oberheim Drummer's operating system and increasing its internal RAM from 8K to 32K, I dumped its memory to my generic librarian. But when I tried to reload the data, Drummer refused to accept it. What am I doing wrong?

Glenn Richards
Vancouver, B.C.

According to Oberheim, when you increase Drummer's RAM size, it will no longer accept a sys-ex dump that was generated before the upgrade, because part of the process involves a memory-configuration check. Therefore, you'll have to manually recreate your Drummer edits. (It may be too late for Glenn, but other Drummer owners can save considerable time and aggravation by writing down all parameter values before installing the memory upgrade.) By the way, it's not mentioned in the manual, but the chip you need for the memory upgrade is a 32K x 8 low-power static RAM (SRAM) with a speed of 150ns or better. The Hitachi part number is UM62256A-15L; the generic part number is 62256. The chip can be purchased at most electronic parts stores for about $5. Note to Strummer owners: If you plan on upgrading your units, you'll face the same memory/sys-ex compatibility problem.

On my Roland D-110 you can select a factory preset Timbre via a MIDI program change command. But the manual is unclear as to how to select a user-edited Timbre or Tone via MIDI. Do I have to save the sound to a RAM card first, or perhaps assign the sound to a patch and then select the patch?

Bert Schneider
Colorado Springs, CO

As you've obviously found out, Bert, sometimes increased flexibility in a synth engine comes at the price of having a software architecture that is so complex as to obscure that same flexibility. Let's begin by defining the D-110's elements. At the base level are Tones, which contain raw waveform data and a variety of user-programmable parameters such as filter cutoff, amplitude envelope, and so on. Four banks of 54 Tones each are provided: Banks "a" and "b" are factory preset Tones, bank "i" is for storing user-programmed Tones, and bank "r" is for the rhythm Tones. The next level up is Timbres, which consist of Tones that have been given performance parameters such as pitch-bend range and transposition. Two Timbre banks, A and B, each containing 64 Timbre locations, are provided. These locations can contain either factory- or user-programmed Timbres. Timbres are assigned to Parts, the next level of the software heirarchy. The MIDI receive channel, pan position, output level, and so on are programmed at the Part level. The assignment of eight Parts and a rhythm section is saved at the uppermost multitimbral level, the Patch.

You can select Patches via MIDI by sending a MIDI program change command on the control channel as defined in the D-110's System menu. To select Timbres via MIDI, simply send the program change command on the channel that corresponds to the Part number where you wish the Timbre to be assigned. MIDI program changes 1-64 access Timbres stored in bank A, 65-128 those in bank B. Tones *cannot* be accessed via MIDI. In order to use a user-programmed Tone in a Patch, you must first assign it to a Timbre, and then assign the Timbre to a Part.

I have an E-mu Emax sampler and an Apple Macintosh Classic. Can you tell me how I can use the Emax's built-in computer interface to hook them together? What cable do I use, and do I need special software?

Jean-Marc Chalvesche
Marseille, France

You don't need to use the Emax's computer interface at all if you simply want to use MIDI sequencing software in the Classic to drive the Emax. For that application, all that's required is a standard Macintosh MIDI interface and a couple of MIDI cables. If you want to use graphic sample-editing software, such as Passport Design's Alchemy or Digidesign's Sound Designer, you still don't need to use the Emax's built-in RS-422 interface, but doing so allows you to transfer sample data between the computer and the Emax much faster than via MIDI sample dump. To connect the Mac to the Emax, you'll need a standard RS-422 cable and an adapter cable that goes from RS-422 on one end to the Mac's eight-pin serial port jack on the other. Both the adapter cable and the RS-422 cable are available at most computer supply houses. We've heard stories, however, of RS-422 cables that have non-standard wiring configurations; if you happen to get one of these cables, you'll likely encounter difficulties. E-mu sell cables that have been tested, and are guaranteed to work. Contact Frank Revel at E-mu Systems, Box 660015, Scotts Valley, CA 95067. (408) 438-1921.

• ON-LINE •

Your July '91 column contained a request from Jerry Dragon of New York for a Synergy manual and/or sound cartridges. I have the owner's manual, an instructional audio tape, the programmer's manual for the CP/M-based editing software, and an original Synergy product brochure. If Jerry would like, I'd be happy to photocopy any of the above as well as make dub of the audio tape. I can be contacted at (808) 239-5091.

Clyde Pound
Kaneohe, HI

I recently pulled my Roland Jupiter-6 out of the closet and patched it into my MIDI system. The problem is that it always responds to all 16 MIDI channels. Is it possible to assign it to a single channel? I'd love to be able to use some of its sounds in my sequencing setup.

Bill Aanestad
Riverside, CA

The Jupiter-6 defaults to omni mode when it is first powered up, which is why it's responding to data on all 16 MIDI channels. The instrument will respond to an omni off command, which many software sequencers send when they are first booted. If you don't have a way of sending the omni off command, don't worry, as there is a workaround: With the Jupiter off, take a MIDI cable and connect the instrument's MIDI out to its MIDI in, then turn it on and play a few keys. This will take the Jupiter out of omni mode. Once omni is off, the instrument will respond only to MIDI channel 1 when in dual mode, and on channels 1 and 2 when in split mode. ■: