



THE OFFICIAL PUBLICATION OF THE YAMAHA USERS GROUP

New Sound Library & Operating Software For The TX16W



SEPTEMBER 1988

YAMAHA®

News & Information

Welcome to the second installment of a new AfterTouch feature. Each month, this column will provide readers with information on new products and services being offered by Yamaha in support of their digital instrument product line.

RAM5 Data Cartridge

The Yamaha RAM5 data cartridge is a multiple-bank cartridge that can store four banks of cartridge data. This means that one RAM5 cartridge can hold as much data as four RAM4 cartridges. Any Yamaha product that uses the RAM4 cartridge can also use the RAM5 cartridge. (Each bank must be formatted separately to accommodate the desired type of data.)

The cartridge also features two different modes of bank selection (either using switches on the cartridge or via the Bank Select parameter on instruments that include the feature), a Multi-Bank mode to enhance the performance abilities of Yamaha products, a new electronic design for the Memory Protect switch for data integrity, and a battery life of ten years. As an added guide for musicians, Yamaha Music Corporation USA has produced a Supplemental Booklet (part of the DX7 II series) that explains the use of the RAM5 cartridge in detail.

The suggested retail price of the RAM5 cartridge is \$129.95. It is available only at authorized Yamaha Digital Musical Instrument dealers.

Internal Disk Drive For The DX7 II D

For musicians who bought the DX7 II D, but now wish they had the disk storage capacity of the DX7 II FD, there is now the D! Drive Kit. Once installed, the D! Drive Kit turns a DX7 II D into a DX7 II FD, with all of the multiple-file, mass-storage capabilities of that unit.

It is also possible to purchase a DX7 II D complete with a Yamaha-installed D! Drive Kit; this new unit (with full FD capacity) is called the D-Plus. For more information on the D-Plus, contact your local authorized Yamaha Digital Musical Instruments dealer.

The D! Drive Kit was created by Grey Matter (the company that also created E! for the DX7

and DX7 II). The suggested retail price of the D! Drive Kit is \$399.00. For more information, call Grey Matter at 312-349-1889.

TX16W Basic Sampling Guide

Yamaha Music Corporation USA now offers a detailed guide to creating samples and performances on the TX16W digital wave filtering sampler. The Guide is divided into two parts: Part 1 explains how to sample a sound, loop a sound, create a voice and timbre, and create a performance; this section is essentially a guided tour of the different operational levels of the TX16W, from taking a sample to creating a finished performance. Part 2 gives a more detailed look at the parameters most commonly used in the editing of waves, timbres, voices, and performances.

The 108-page Guide includes extensive step-by-step instructions for most important operations (complete with LCD display graphics), an operational flowchart, and an extensive index. It is available for free from your local authorized Yamaha Digital Musical Instruments dealer.

QX3 Supplemental Booklet

Yamaha Music Corporation USA now offers a detailed booklet on the operation of the popular QX3 digital sequence recorder. Designed as a supplement to the QX3 owners manual, this document covers the unit in such detail that it can actually replace the existing manual.

The Booklet is divided into three basic sections. The first section, an owners manual supplement, includes material on the unit's Record/Play mode, a list of Record/Play Job Commands, a list of Edit Mode Job Commands, additional information on the Chain Edit and Other Functions sections in the original manual, a list of errors in the original manual (with corrections), and an appendix. Section two is a detailed applications guide, and section three is a useful Operations Map.

The 83-page Supplemental Booklet is available for free from your local authorized Yamaha Digital Musical Instruments dealer.



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RX5

A New RX5 Voice Edit By Tony Gillis.

Notes:

This voice edit is best used for special effects. It can be used with or in place of bass drum in quiet sections of upbeat funky tunes. Also, use it to double a backbeat for unusual timbres.

Voice Name: Box Whip		Origin: Crt-CgaHMT	
JOB #	PARAMETER	RANGE	NEW VALUE
02	Pitch	-3600 ~ 2400	-1450 cent
03/1	Attack Rate	1 ~ 99	78
03/2	Decay 1 Rate	1 ~ 99	69
03/3	Decay 1 Level	1 ~ 60	54
03/4	Decay 2 Rate	1 ~ 99	72
03/5	Release Rate	1 ~ 99	60
03/6	Gate Time	100 ~ 6500	0950 ms
04/1	Bend Rate	-60 ~ 60	03
04/2	Bend Range	1 ~ 60	-02
05	Inst Level	0 ~ 31	30
06	Sound Loop	OFF / ON	ON

RX5

A New RX5 Voice Edit By Tony Gillis.

Notes:

When used with SPX90 Hall or Room reverb, this voice sounds like a group of people snapping their fingers in unison on ballad backbeats (mel-low sections). It also works great with Gate effects on dance tunes.

Voice Name: Finger Snaps		Origin: Crt-Cstnt	
JOB #	PARAMETER	RANGE	NEW VALUE
02	Pitch	-3600 ~ 2400	+310 cent
03/1	Attack Rate	1 ~ 99	74
03/2	Decay 1 Rate	1 ~ 99	64
03/3	Decay 1 Level	1 ~ 60	60
03/4	Decay 2 Rate	1 ~ 99	68
03/5	Release Rate	1 ~ 99	60
03/6	Gate Time	100 ~ 6500	0975 ms
04/1	Bend Rate	-60 ~ 60	00
04/2	Bend Range	1 ~ 60	00
05	Inst Level	0 ~ 31	31
06	Sound Loop	OFF / ON	OFF

RX5

A New RX5
Voice Edit By
Tony Gillis.

Voice Name: Shaker/Scratch Origin: Crt-FMprc1			
JOB #	PARAMETER	RANGE	NEW VALUE
02	Pitch	-3600 ~ 2400	+1200 cent
03/1	Attack Rate	1 ~ 99	58
03/2	Decay 1 Rate	1 ~ 99	41
03/3	Decay 1 Level	1 ~ 60	59
03/4	Decay 2 Rate	1 ~ 99	64
03/5	Release Rate	1 ~ 99	60
03/6	Gate Time	100 ~ 6500	6500 ms
04/1	Bend Rate	-60 ~ 60	00
04/2	Bend Range	1 ~ 60	00
05	Inst Level	0 ~ 31	27
06	Sound Loop	OFF / ON	ON

Notes:

This voice edit is an attempt to emulate a sound on Ben E. King's "Stand By Me"—the semi-shaker sound on beat 2. It is a great effect by itself, or it can be used in syncopation with regular shaker sounds.

RX5

A New RX5
Voice Edit By
Tony Gillis.

Voice Name: Linn Rimm Origin: Int-Rim 1			
JOB #	PARAMETER	RANGE	NEW VALUE
02	Pitch	-3600 ~ 2400	-2110 cent
03/1	Attack Rate	1 ~ 99	99
03/2	Decay 1 Rate	1 ~ 99	55
03/3	Decay 1 Level	1 ~ 60	60
03/4	Decay 2 Rate	1 ~ 99	77
03/5	Release Rate	1 ~ 99	60
03/6	Gate Time	100 ~ 6500	6500 ms
04/1	Bend Rate	-60 ~ 60	00
04/2	Bend Range	1 ~ 60	00
05	Inst Level	0 ~ 31	23
06	Sound Loop	OFF / ON	ON

Notes:

This voice edit can be used to replace the LinnDrum detuned rim, both for effects and for a real "hardwood hit" type of sound—sharp and to the point. Noise gives it a natural gate after the initial strike.

RX5

A New RX5
Voice Edit By
John Louis
Kluck.

Voice Name: LightningRumble Origin: Crt-Gun			
JOB #	PARAMETER	RANGE	NEW VALUE
02	Pitch	-3600 ~ 2400	+2400 cent
03/1	Attack Rate	1 ~ 99	99
03/2	Decay 1 Rate	1 ~ 99	13
03/3	Decay 1 Level	1 ~ 60	21
03/4	Decay 2 Rate	1 ~ 99	12
03/5	Release Rate	1 ~ 99	60
03/6	Gate Time	100 ~ 6500	6500 ms
04/1	Bend Rate	-60 ~ 60	02
04/2	Bend Range	1 ~ 60	-60
05	Inst Level	0 ~ 31	29
06	Sound Loop	OFF / ON	ON

RX5

A New RX5
Voice Edit by
John Louis
Kluck.

Voice Name: Start It Up Origin: Crt-BgoHI			
JOB #	PARAMETER	RANGE	NEW VALUE
02	Pitch	-3600 ~ 2400	-3600 cent
03/1	Attack Rate	1 ~ 99	37
03/2	Decay 1 Rate	1 ~ 99	41
03/3	Decay 1 Level	1 ~ 60	01
03/4	Decay 2 Rate	1 ~ 99	64
03/5	Release Rate	1 ~ 99	60
03/6	Gate Time	100 ~ 6500	6500 ms
04/1	Bend Rate	-60 ~ 60	01
04/2	Bend Range	1 ~ 60	+60
05	Inst Level	0 ~ 31	30
06	Sound Loop	OFF / ON	ON

RX5

A New RX5
Voice Edit By
Les Corbett &
James A Powe
III.

Notes:

*This voice edit creates a very
authentic "scratch" sound.*

Voice Name: Scratch		Origin: Int-Shaker	
JOB #	PARAMETER	RANGE	NEW VALUE
02	Pitch	-3600 ~ 2400	-1600 cent
03/1	Attack Rate	1 ~ 99	86
03/2	Decay 1 Rate	1 ~ 99	99
03/3	Decay 1 Level	1 ~ 60	59
03/4	Decay 2 Rate	1 ~ 99	01
03/5	Release Rate	1 ~ 99	87
03/6	Gate Time	100 ~ 6500	0100 ms
04/1	Bend Rate	-60 ~ 60	10
04/2	Bend Range	1 ~ 60	-18
05	Inst Level	0 ~ 31	27
06	Sound Loop	OFF / ON	OFF

RX5

A New RX5
Voice Edit By
Tom Jackson

Notes:

*This voice edit really works
well for my purposes. I needed
a bass guitar sound that would
resonate with a smooth fade—
similar to what happens when
you play a note on a bass and
let the sound die out by itself.*

*The looping in this edit cannot
be heard when combined with
keyboards, guitar, and other
sounds.*

Voice Name: Open Bass		Origin: Crt-EbassL	
JOB #	PARAMETER	RANGE	NEW VALUE
02	Pitch	-3600 ~ 2400	-200 cent
03/1	Attack Rate	1 ~ 99	99
03/2	Decay 1 Rate	1 ~ 99	34
03/3	Decay 1 Level	1 ~ 60	53
03/4	Decay 2 Rate	1 ~ 99	37
03/5	Release Rate	1 ~ 99	36
03/6	Gate Time	100 ~ 6500	2600 ms
04/1	Bend Rate	-60 ~ 60	00
04/2	Bend Range	1 ~ 60	00
05	Inst Level	0 ~ 31	31
06	Sound Loop	OFF / ON	ON

FB-01

Percussion Secrets Of The FB-01. By Mark D. Vermette.

IT WAS A MIDI musician's nightmare come true. With studio rental time ticking away in a Manhattan dance loft, my drum machine abruptly decided that it didn't want to play the Big Apple. And, of course, the score required a metronomic kick drum pulse throughout the entire length of the dance. The dancers were frustrated by the misplaced beats produced by the machine; the choreographer was beginning to wonder why she hired me to score the dance; and I was getting *real* warm under the collar.

Enter the FB-01. During the next break I hurriedly programmed an edited version of voice 6/43, HandDr, into my FB-01, and punched the necessary program changes into my sequencer. Ten minutes later, the dancers were back to work, the choreographer was smiling, and my body temperature had returned to normal. However, I still remained unsatisfied. I needed to ensure that this glitch didn't happen again, at a more crucial moment—our New York premier, for example.

Later, at home, I decided *not* to trust my drum machine for the premiere, but instead to develop a configuration on my FB-01 that would give me the heavy kick drum sound needed for the dance. Without a computer or voicing software for the FB-01, I soon found that simple Instrument Function edits of existing percussion voices wouldn't produce the power of the kick drum sound in my late, lamented drum machine. What I needed was an FB-01 *configuration* to handle this sound.

After some experimentation, I devised the following configuration, called "Kick Dr," which relies on a combination of Pizzic1 (yes, that's right—a *violin* patch!) and SnareD2:

Instrument #1

Voice Select
Pizzic1 (5/32)

Instrument Assign

MIDI Ch: n
Notes: 1
Limit/L:C-2
Limit/H:C2

Instrument Function

Output Level: 127
Octave: -2
Detune: 0
Stereo: LR
LFO: off

Instrument #2

Voice Select
SnareD2 (6/47)

Instrument Assign

MIDI Ch: n
Notes: 1
Limit/L: C-2
Limit/H: C2

Instrument Function

Output Level: 85
Octave: 0
Detune: 0
Stereo: LR
LFO: on

A few notes about this configuration: The sound is closer to that of a kick drum hit as part of a drum set than it is to that of a kick drum hit in isolation. The snare part of the configuration provides a small bit of high frequency "ring" that gives the sound a little more character.

The crucial parameters of this configuration are the octave setting for the pizzicato sound and the instrument volume settings. The -2 setting for the Octave Transpose parameter for Instrument #1 contributes the "click" needed for simulating the impact of the beater on the drum head, while minimizing the characteristic "pluck" of the violin sound. This is also the reason for setting the Limit/L and Limit/H parameters of Instrument #1 to the low end of the keyboard: Above C2 this voice begins to sound increasingly tonal, and the proper effect is lost. Instrument #2's function is to bring some character to the configuration. Its Output Level setting is crucial—too much pizzicato violin and the final timbre will sound pretty dead, while an overdose of snare will result in a loss of the initial "click" that lends definition to the timbre. A final note: The "n" notation for the MIDI Channel setting simply means that you can use the MIDI channel of your choice. Of course, both instruments must be set to the same channel.

As far as using "Kick Dr" goes, I've found that this sound is more pleasing when the trigger note for the configuration is a tone center of the piece. Since the dance score I wrote was in the key of D, I chose D1, the lowest D on my keyboard controller, as my trigger. Another interesting thing to try is to pan the two instruments

of the configuration left and right, respectively. A recording of the dance with this change plus stereo digital reverb provided to be a real "hit" with headphone listeners. The kick drum sound seemed to start on one side of the listener's head and finish on the other!

There is even more that can be done with this configuration. By changing Instrument #1 from Pizzic1 to ElectDr (voice 6/42) and cranking the Output Level of Instrument #2 up to 107, this modified configuration serves well as an "extended" kick drum sound in combination with my, uhh, *replacement* drum machine. With Instrument #1, the ElectDr, panned left, the drum machine's kick panned center, and Instrument #2, the SnareD2, panned right, the resulting sound through my stereo PA system is truly titanic, especially when run through a digital reverb on a good "hall" setting. It was precisely this triple kick drum sound that inspired a member of the audience to come to me after a recent concert and pay me the compliment of asking, "Where did you get that sound?"

Another way to get your audience to ask that question is to exploit the *hidden* drum and percussion sounds within your FB-01. Hidden drum sounds, you say? Beyond the ten already installed by the factory?

It's true. Even if you *don't* have access to a computer and FB-01 voicing software, there is a technique for getting multiple tonalities out of a single FB-01 drum sound. The end result of this technique is a sound that resembles the effect achieved by a percussionist who mutes a drum by placing his or her hand on the drum head while striking it. This new FB-01 sound is similar to an RX5 factory cartridge voice called CgaHMT. The technique described below works on the FB-01 for ElectDr (6/42), HandDr (6/43), and SynTimp (6/44). It may work for others as well.

The secret of getting two distinct sounds out of a single drum voice relies on what may be a "bug" in the FB-01. To try this, you'll need a MIDI controller that supports transmission of MIDI velocity data *and* permits the musicians to play more than one note simultaneously. When using a guitar synthesizer to create this sound, I found that I needed to strike all six strings with a slapping motion in order to get the proper effect—a pick didn't produce the simultaneity of notes that I needed. With a keyboard, two notes seem to work fine. Regardless of the type

of MIDI controller you have, connect your FB-01 to it and use the Voice Select key to select HandDr (6/43). Then go into the Instrument Assign mode on the FB-01 and set the Notes parameter to 1. Check that your controller and the FB-01 HandDr sound are set to the same MIDI channel.

Now, hit two or three notes simultaneously, and hit them *hard*. If you've been careful about really hitting the notes together, what you'll hear is a new version of HandDr that has a different sound than the normal voicing. This is the "muted" HandDr. I've used this sound in my own compositions, and have found it totally repeatable. It is especially effective for simulating African and Latin percussion styles.

As for the cause of this sound, I conjecture that the "muted" drum sound is my poor FB-01's attempt to supply two (or three) notes at high velocity to a voice that has been programmed to accept only a single note. In support of this argument, I've noticed that even changing the Notes parameter to 2 almost completely eliminates the effect. The "mute" is also missing if you simply hit a single note very hard, leading me to believe that multiple simultaneous notes *and* high velocity are needed to achieve this sound (given that the Notes parameter of the drum voice has been set to 1). And, of course, I'd be very interested in any technical explanation for this effect from anyone "in the know."

In summary, I've found that the FB-01 contains hidden percussion features that can be utilized even *without* a computer and voice editing software. The first hidden feature is the "Kick Dr" configuration, a versatile combination of Pizzic1 and SnareD2 that served as an adequate substitute for my drum machine in time of need. The configuration can also be modified by changing Pizzic1 to ElectDr. This modified configuration can be used with a drum machine's kick drum to provide a "mega-kick" drum sound. The second hidden feature of the FB-01 that I've discovered is that, for the cost of a few more MIDI events, a controller can get a "muted" version of each FB-01 drum sound by setting the drum voice's Notes parameter to 1 and then "overloading" the instrument by hitting multiple notes with a lot of force. This technique works for at least three different FB-01 drum voices, and may well work for more than these.

TX16W Software

Introducing The Latest Yamaha Software For The TX16W Sampler: An Updated Operating System (Version 2.1), And A Completely New, 76-Disk Library Of Sounds.

WHEN YAMAHA INTRODUCED THE TX16W Digital Wave Filtering Stereo Sampler, the whole idea of stereo sampling suddenly became more realistic—especially for musicians on a budget. For some, though, the instrument's complex operating system was hard to understand, and the original sound library was somewhat limited.

Yamaha now offers two major improvements for the TX16W. First, there has been an update to the operating system (Version 2.1) that streamlines the way samples are created and organized. Second, the Yamaha sound library for the TX16W has been increased by a new offering of 76 disks, which expands the total Yamaha-created library to more than 100 disks.

New Operating System Software (Version 2.1)

When you first power up a TX16W, you must load an "operating system" disk. This disk contains information on the overall operation of the machine. The first versions of this software (Versions 1.0 and 1.1) provided a somewhat cumbersome method of organizing samples.

The new Version 2.1 operating system offers a number of new features, and provides a much easier way of creating and organizing samples. The most important aspect of this new operating system is that it automates the procedures that were the most tedious in previous operating systems. This makes the TX16W much more approachable: with new newly-automated procedures, the unit is easier to understand, and *much* easier to operate.

Here is a list of the new features provided by the 2.1 operating system software:

Automatic Pitch Detection: This new feature analyzes what pitch you are sampling, and then "maps" it to the keyboard. For example, if you play a C on a trumpet, the TX16W will automatically trigger this sound from the C on the MIDI keyboard to which it is connected.

Automatic Naming: When sampling an instrument, it is common practice to make several samples, so that the different ranges (the high and low notes) sound authentic. With the old operating system, you had to name each new sample, even though you were sampling the same instrument. The new system

asks for the name once, and all subsequent samples will have the same name followed by the pitch you sampled. For example, start by sampling a C on a trumpet (and naming the sample "trumpet"); if the next sample is an F, the TX16W will name the sample "trumpet F" automatically.

Automatic Mapping: Assembling several samples across the keyboard is called mapping. The old operating system made this a very tedious and cumbersome task. The new operating system automates this vital operation. If you sample a C, then an F, and then a C an octave above, the TX16W will automatically place those samples in their proper place on the keyboard.

Global Editing Of Multi-Samples: This new feature lets you edit a parameter such as "attack time" over the entire keyboard. When you sample a pitched instrument, the TX16W can analyze the sound and map it on the keyboard automatically. With non-pitched sounds such as drums, this is not possible. To help this situation, the new operating system provides templates for mapping these kinds of sounds. By calling up a template, you can quickly place non-pitched sounds on different keys of your MIDI keyboard.

Improved Memory Management: The old operating software provided 64 timbre locations; the new operating software provides 128. Therefore, with a TX16W fully loaded with expansion boards (giving six megabytes of memory), you will have memory locations for 8 banks, 256 performances, and 512 waves. (The new operating software does not increase the actual memory of the TX16W; rather, it simply provides more memory *locations* for your information.)

Mono/Poly Modes: Certain controllers, such as the G10 MIDI Guitar Controller and the WX7 MIDI Wind Controller, work better if they trigger a monophonic sound source (or, in this case, a monophonic sample). The new operating system provides this option, to enhance the TX16W's performance with these controllers.

Copy Function: A sophisticated new copy feature has been added to simplify the transferral of sounds from disk to disk. With the earlier operating system, you had to copy each of the several items that make up a performance on the TX16W; with the new operating sys-



TX16W digital wave filtering sampler.

tem, however, you just have to copy the performance: the components that make up the performance will also be copied, automatically.

Undo Function: This new feature does away with the confusing "buffer" system of the earlier operating software, making it much easier to change your mind after you enter a command. The Undo feature gives you a simple way to undo your last operation.

New 76-Disk Sound Library

In addition to the new operating system software, Yamaha has also created a vast new library of sounds for the TX16W. There are 76 new disks in all, grouped in eleven series (by instrument type). here is a complete list of disk titles in Yamaha's new sound library for the TX16W:

100 Series: Strings

101: Viola & Violin 1

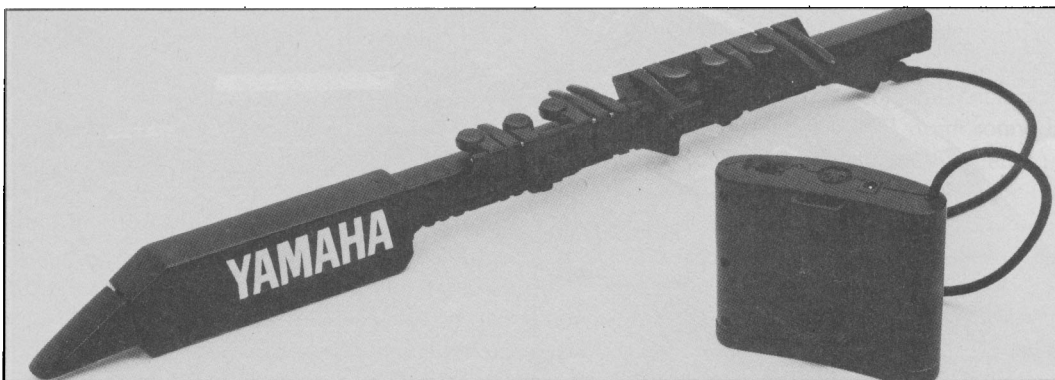
- 102: C. Bass & Cello 1
- 103: Tremolo 1
- 104: Pizzicato 1
- 105: Orchestra Hit 1
- 106: Orchestra Hit 2
- 107: Stryngs (1 of 2)
- 108: Stryngs (2 of 2)
- 109: "Sampled" Strings (1 of 2)
- 110: "Sampled" Strings (2 of 2)
- 111: Violin Orchestra

200 Series: Brasses

- 201: Trombone & Trumpet 1
- 202: Tuba & Horn 1
- 203: Unison Horn

300 Series: Woodwinds

- 301: Flute & Piccolo 1
- 302: Bassoon, English Horn & Oboe
- 303: Bb Clarinet & Clarinet 1
- 304: Four Saxes 1
- 305: Baritone & Tenor 1
- 306: Alto & Soprano 1



WX7 MIDI wind controller.

TX16W Software *Continued*

- 307: Soprano Sax 2 (1 of 2)
- 308: Soprano Sax 2 (2 of 2)

400 Series: Percussion

- 401: Drum Kit 1
- 402: Timpani & Gong
- 403: Latin Percussion 1
- 404: Wind Chimes & Handbell
- 405: Cymbals & Bass Drum
- 406: Percussion 1 (1 of 2)
- 407: Percussion 2 (2 of 2)
- 408: Electronic Drums 1
- 409: Snare Drum Collection (1 of 2)
- 410: Snare Drum Collection (2 of 2)
- 411: Drum Kit 2

500 Series: Mallet

- 501: Celesta
- 502: Vibraphone
- 503: Marimba 1
- 504: Glocken 1
- 505: Tubular Bells 1 & Steel Drums 1

600 Series: Plucked String

- 601: Harp 1
- 602: Harp 2
- 603: Shamisen 1
- 604: Acoustic Guitars

700 Series: Vocal

- 701: Pops Voice 1
- 702: Choir 1 (1 of 2)
- 703: Choir 1 (2 of 2)

800 Series: Keyboards

- 801: Harpsichord
- 802: Yamaha CF III Grand Piano (1 of 2)
- 803: Yamaha CF III Grand Piano (2 of 2)

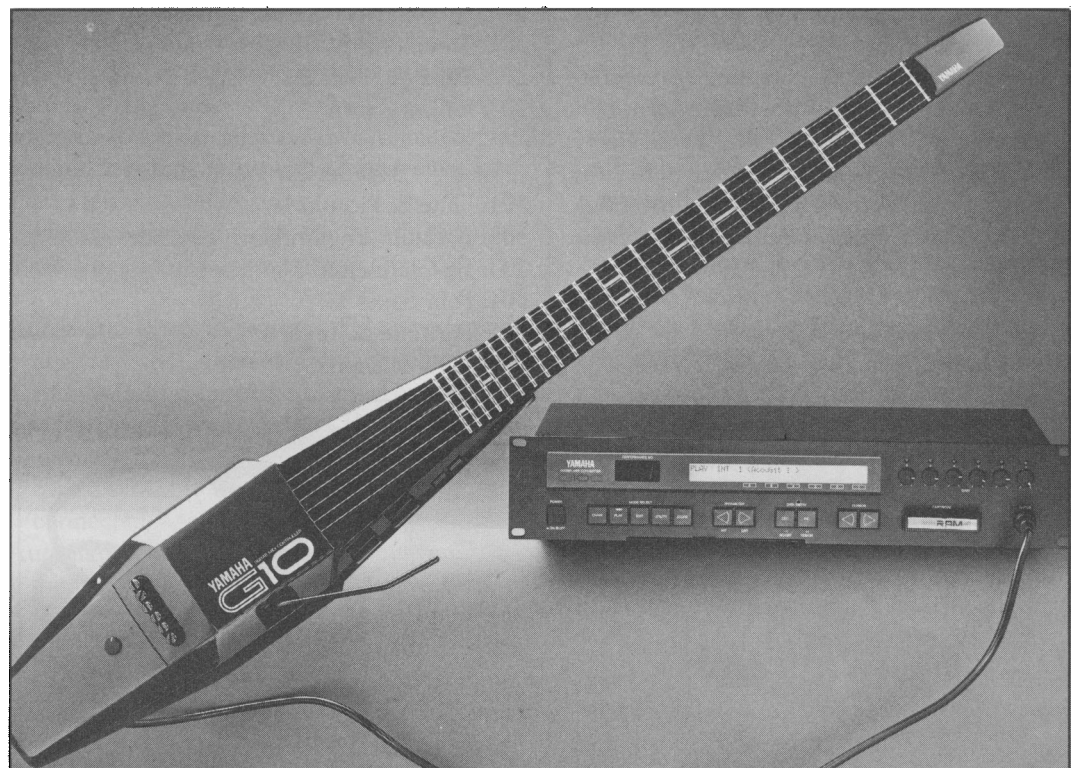
900 Series: Synthesizers

- 901: Analog Strings
- 902: Prophet 5
- 903: Spacey Keys 1
- 904: Spacey Keys 2
- 905: Synth Set 1

1000 Series: Performance

- 1001: Rock Performance 1 (1 of 2)
- 1002: Rock Performance 1 (2 of 2)
- 1003: General Performance 1 (1 of 2)
- 1004: General Performance 1 (2 of 2)
- 1005: Jazz Performance 1 (1 of 2)
- 1006: Jazz Performance 1 (2 of 2)
- 1007: Jazz Performance 2 (1 of 2)
- 1008: Jazz Performance 2 (2 of 2)
- 1009: Orchestral Performance 1 (1 of 2)
- 1010: Orchestral Performance 1 (2 of 2)

G10 MIDI Guitar System.



- 1011: Combo Performance 1
- 1012: Combo Performance 2
- 1013: Orchestral Performance 2 (1 of 2)
- 1014: Orchestral Performance 2 (2 of 2)
- 1015: Big Band Performance 1 (1 of 2)
- 1016: Big Band Performance 1 (2 of 2)
- 1017: Europop Performance 1 (1 of 2)
- 1018: Europop Performance 1 (2 of 2)
- 1019: Rock Performance 2 (1 of 2)
- 1020: Rock Performance 2 (2 of 2)

1100 Series: Sound Effects

- 1101: Sound Effects 1
- 1102: Scat Voices
- 1103: Animal Effects

Because of the many possibilities provided by the TX16W's performance mode, the titles of these disks don't really do justice to the musical material they provide. To give you a better idea, here are lists of the performance setups provided in a few of the disks (and two-disk sets) in the library:

Disk 107: Stryngs (1 of 2)

Disk 108: Stryngs (2 of 2)

- 1: Atsumi String Quartet
- 2: Synth String Pad 1
- 3: Razor Blade Bows
- 4: Stereo Raw Rosin
- 5: Synth String Pad 2
- 6: The Quintet Goes East
- 7: Orchestra Wash Strings
- 8: FairVoice III Stryng
- 9: Soft & Gentle Lush 1
- 10: The Fifth Wonder
- 11: Deep String Section
- 12: Windham Hill Texture
- 13: Hammer Horror
- 14: Big Boyz String Mix
- 15: Analog Power Stryngs
- 16: Stretched Slo String
- 17: Mellotron Accident
- 18: Big Kitaro Strings
- 19: Fat Analog Filters
- 20: Lush Syn Strings II

Disk 411: Drum Kit 2

- 1: Kick 3
- 2: Elec Kick 1
- 3: Snare 5
- 4: El Snare 1
- 5: El Tom 1
- 6: El Tom 2

- 7: Roto Tom 1
- 8: Snare Bes
- 9: SN-Brush
- 10: SN-Beat
- 11: SN-Roll
- 12: Cowbell 2
- 13: Snip 1
- 14: Git Single
- 15: Git Chord
- 16: Bass 1
- 17: Kick 1
- 18: Kick 2
- 19: Snare 1
- 20: Snare 2
- 21: Snare 3
- 22: Snare 4
- 23: C1 HH 1
- 24: Op HH 1
- 25: Rim 1
- 26: Rim 2
- 27: Triangle 1
- 28: Triangle 2
- 29: Wood 1
- 30: Stick 1
- 31: Shaker 1
- 32: Clap 1

Disk 802: Yamaha CF III Grand Piano (1 of 2)

Disk 803: Yamaha CF III Grand Piano (2 of 2)

- 1: Yamaha Grand Piano
- 2: Dynamic Grand Piano
- 3: Rock & Roll
- 4: Rock & Roll Dark
- 5: Classical Grand
- 6: Rag Thyme
- 7: CP30/RMI Harpsichord
- 8: Octaves Dark
- 9: Chorus Piano
- 10: Velocity Pan
- 11: Octaves Bright
- 12: Mic too close!
- 13: Moving Mic
- 14: Wide Octaves
- 15: Wide 5ths
- 16: 61 Key Grand Low
- 17: 61 Key Grand High
- 18: 61 Key Dynamic Low
- 19: 61 Key Dynamic High
- 20: Rock & Roll 61 Low
- 21: Rock & Roll 61 High
- 22: Classical Grand Low
- 23: Classical Grand High

TX16W Software *Continued*

- 24: Raw Data 88 Key
- 25: Raw Data 61 Key Low
- 26: Raw Data 61 Key High
- 27: Spread Field Piano
- 28: I JUST painted it!!!
- 29: .008 Piano

Disk 903: Spacey Keys 1

- 1: Deep Waterspace
- 2: Waterspace Low
- 3: Waterspace Superlow
- 4: Sparkling
- 5: Glass Chimes
- 6: Belltones
- 7: Atlantis
- 8: Watership Down
- 9: Funky Clavinet
- 10: Damp Clavinet
- 11: Tubular Chimes
- 12: Belltones 2
- 13: Bellbows
- 14: Versunkene Kathedrale
- 15: Atlantis 2
- 16: Water Organ
- 17: Blissperformance 1
- 18: Blissperformance 2
- 19: Pitch Release
- 20: Waterspace/Bells Split

Disk 1009: Orchestral Performance 1 (1 of 2)

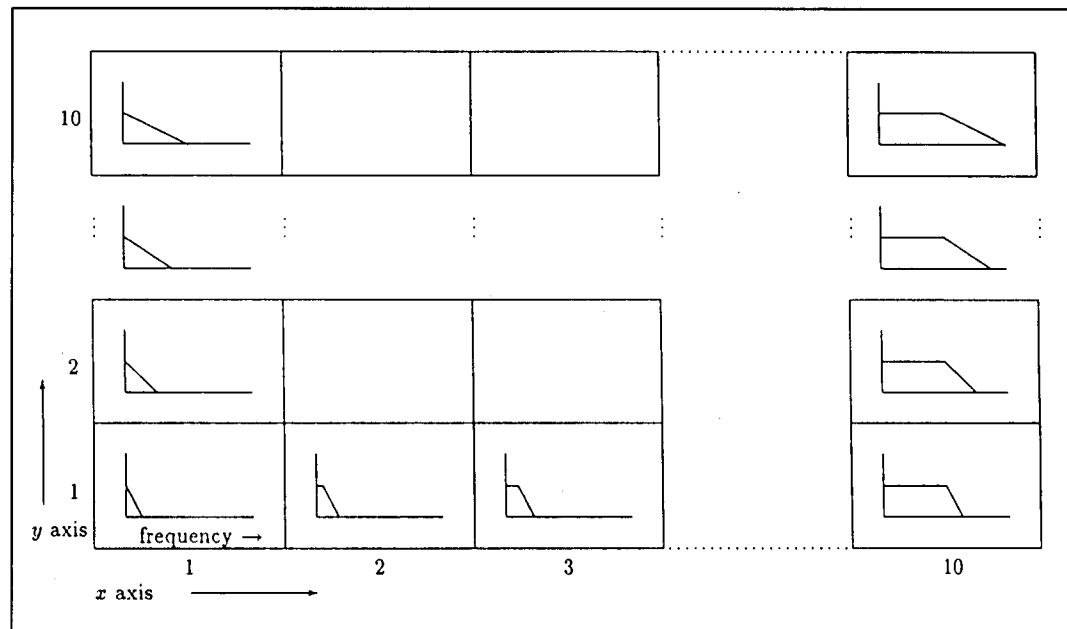
Disk 1010: Orchestral Performance 1 (2 of 2)

- 1: String Set 1
- 2: Marimba Set 1
- 3: Male-Female Choir

- 4: String Attack 1
- 5: String Set Detune
- 6: Big Orchestra
- 7: Stopped Flute
- 8: Keybrass
- 9: Filter Strings
- 10: Chorus Filter Strings
- 11: Groovey Strings
- 12: Marimba Dual
- 13: Filter Choir
- 14: Orchestral 1
- 15: Orchestral 2
- 16: Strings/Flute Split
- 17: Brass Attack II Dual
- 18: Orchestra Hit II
- 19: Unisono I
- 20: Unisono II
- 21: Groovey Strings / Octave
- 22: Octave Marimba 1
- 23: Filter Modulation MW
- 24: Synth Brass Dual
- 25: Synth Brass II Dual
- 26: Orchestra Hit II Dual
- 27: Orchestra Hit 1
- 28: Orchestra Hit Chorus
- 29: Big Orchestra II
- 30: Big Orchestra III

For more information on Yamaha's new 76-disk sound library for the TX16W, contact your local authorized Yamaha Digital Musical Instruments dealer.

This diagram shows a TX16W Filter Table for a basic Low-Pass filter.



Hot Tips

Playing Tenths Easily Using The DX7 II's "Macrotuning" Feature

By Bert C. Davis

For all of my playing life, I wished to be able to play tenths with my left hand like Count Basie and Teddy Wilson, but I just didn't have the reach. After I read the DX7 II Supplemental Booklet on "Macrotuning," I found my answer. [Note: The "Macrotuning" Supplemental Booklet outlines ways to use the DX7 II's microtuning capabilities to expand your performance options while staying within the realm of the equal-tempered scale.] I devised the following tuning for the octave between C2 and C3:

Original Note	Changed Note
C2	E2
C#2	D#2
D2	F2
D#2	F#2
E2	G2
F2	A2
F#2	G#2
G2	B2
G#2	A#2
A2	C3
A#2	C#3
B2	D3
C3	E3

I stored this in the "user 1" microtune location in internal memory. With this setup, all tenths, open arpeggios, and open three-note chords can be played with extensions of little

more than an octave (sometimes less). By using this tuning with a second voice in Dual mode, I can play tenths with one finger, if the second voice is set an octave lower. (This works for all notes except C#2, F#2, and G#2).

Although this setup is designed for the key of C, it works well in all keys, and can be transposed or modified easily to work in other keys.

.

Deleting a MIDI Channel From An Individual Beat Or Measure On The QX21

By Dean K. Brenneman

In the December 1987 issue of AfterTouch, there was a Hot Tip that outlined a technique for deleting and replacing an individual beat of information on the QX21 digital sequence recorder ("Increased Editing With The QX21" by Mac Burns, on page 17). If you follow the same process—isolating a measure and subdividing it into smaller measures—you can then delete any MIDI channel you desire from any of the "sub-measures." This will allow you to delete an error on a specific instrument, if you have isolated that instrument to its own MIDI channel.

For example, in my setup I assign a discreet MIDI channel to each drum voice in my "kit." If I record something I really like but find that, upon quantizing, I've made an error that will not quantize properly, this technique will save me from having to scrap the entire piece I've just recorded. How? By simply deleting the MIDI channel (to which the affected drum

Continued on page 16

Reader Tips For The SPX90, DX7 II, QX21, And TX81Z.



DX7 II FD digital FM synthesizer.

Hot Tips Continued

voice is assigned) from the particular measure in which I messed up.

Here's how it works. If, for example, the error occurs on an eighth-note in a bar of 4/4 time, then subdivide the measure into eight sub-measures (as per the December 1987 Hot Tip). Once you have subdivided the measure that contains the error into smaller sub-measures, you can now isolate the sub-measure that contains the error. Suppose the error falls in sub-measure three and the instrument is assigned to MIDI channel 10. Beginning with the information on Track 1 and with Track 2 empty, do the following:

- 1) CHAIN—This copies the right sub-measures onto Track 2.
- 2) ERASE—Select sub-measure four. This erases all sub-measures after the one we need to isolate (sub-measure three).
- 3) DELETE—Select sub-measure one, and then again select sub-measure one. This will complete the isolation of the sub-measure we need (three) by deleting the two sub-measures before it.
- 4) DELETE MIDI CHANNEL—Select channel 10. This will remove the offending note from the sub-measure, leaving intact whatever else is happening on all other MIDI channels at this particular point in the composition.

Now, you need to reassemble the composition. This is easy, and won't take long at all. With the isolated sub-measure on Track 1 (minus the error) and the original eight sub-measures on Track 2, you now need to replace sub-measure three on Track 2. Do the following:

- 1) INSERT—Select sub-measure four. This places the corrected sub-measure onto Track 2 *after* the original sub-measure three that contains the error.
- 2) EXCHANGE—this moves all information to Track 1.
- 3) Select sub-measure three. This deletes the sub-measure that contained the error.

Now you have reassembled the original measure. Follow the instructions from the December 1987 Hot Tip to reset the time signature, Exchange the tracks, retrieve the remainder of the piece from the Temporary Buffer, and insert the correct measure. Don't forget to Delete the

measure containing the original error.

This process takes a little time, but it can be well worth the effort. If you've just played some of your best music but made one or two small errors, you don't have to scrap the whole take. You can just delete a MIDI channel at the point where you blew it. More importantly, you don't have to delete *all* information on that channel—only the information you *want* to delete.

. . . .

Disengage The TX81Z's Memory Protection Automatically

By Stan Varnas

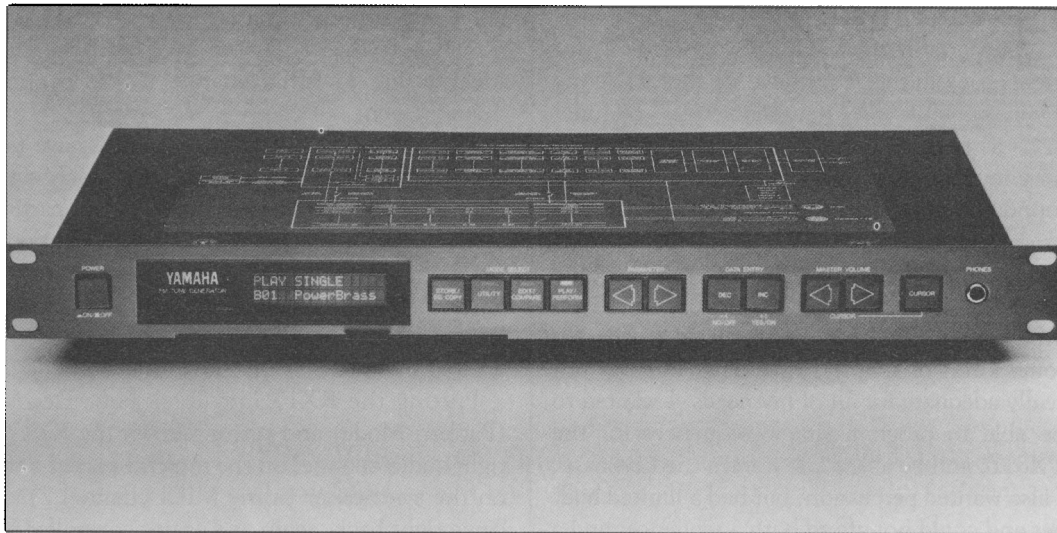
When recording with a sequencer, I like to load all of the voice information needed for a particular selection before the song begins. However, my TX81Z will not ordinarily accept voice bulk data dumps with its memory protection on. Since this protection is always present when the machine is turned on, I find myself having to turn it off manually. Here is a program that both turns the TX81Z's memory protection off and sets it to performance mode:

```
Beat #1, clock #00-EXCL 001 240(F0)
                                002 067(43)
                                003 016(10)
                                004 016(10)
                                005 123(7B)
                                006 008(08)
                                007 000(00)
                                008 247(F7)
```

```
Beat #1, clock #12-EXCL 001 240(F0)
                                002 067(43)
                                003 016(10)
                                004 019(13)
                                005 068(44)
                                006 127(7F)
                                007 247(F7)
```

```
Beat #3, clock #24-EXCL 001 240(F0)
                                002 067(43)
                                003 016(10)
                                004 019(13)
                                005 068(44)
                                006 127(7F)
                                007 247(F7)
```

The first series calls up the memory protection and deactivates it, while the other two act



TX81Z FM digital tone generator

as "remote controls" for the front panel play/perform switch. Now you can initiate a bulk voice data dump and also be ready to dump the single performance for your song. It's a good idea to save this program as a macro and call it up at the beginning of all of your compositions.

.

Two Cinematic Effects Programs For The SPX90

By David Bollinger

The Pitch Change A and Pitch Change D program on the SPX90 digital multi-effects processor (presets #21 and #24) are very flexible. They are capable of effects far beyond the standard use of pitch changers for harmonization and chorusing. Here are two examples. For each one, start from either the Pitch Change A preset (#21) or the Pitch Change D preset (#24), and use the following settings:

Patch Name: Whales
 Pitch: +4
 Fine: 0
 Delay: 10.0 ms
 FB Gain: 77%
 Balance: 100%

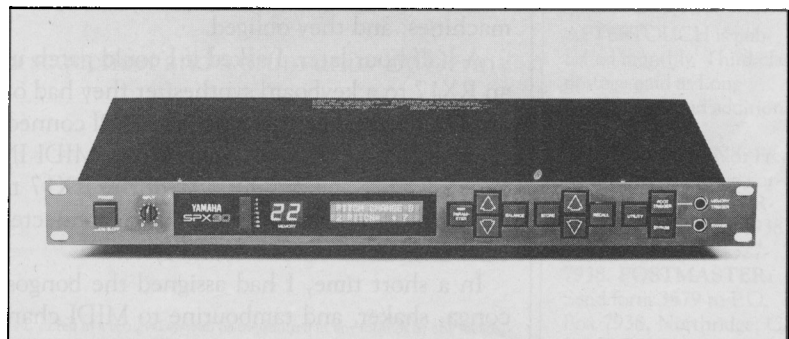
Patch Name: Dreams
 Pitch: +2
 Fine: 0
 Delay: 100 ms
 FB Gain: 77%
 Balance: 100%

"Whales" is an attempt to duplicate the whalesong used in the movie *Star Trek IV: The Voyage Home*. Just about any string patch processed with this program will come close to the original effect (if you don't have access to authentic whalesong). To simulate the effect in the scene where the whalesong is decoded, simply reduce the FB Gain setting manually while the sound is being processed.

"Dreams" recreates an effect often heard on TV during dream sequences—the whole tone scale.

The key to these effects is the Feedback Gain setting. However, do not increase the setting much above 80%, or the SPX90 will start self-oscillating. The Delay setting determines whether you will create a wash of sound (as in "Whales") or a scale (as in "Dreams"). Different Pitch settings from +1 to +12 produce widely varied effects. Chromatic scales created with +1 are good for SciFi effects, perfect fourths created with +5 have a jazz fusion sound to them, and tritones created with +6 are perfect for horror effects.

SPX90 digital multi-effects processor.



RX17

Using The RX17 As Both Sequencer And Drum Unit. By Denny Genovese.

HAVING STARTED MY electronic music experience with modular, analog instruments back in the 70s, I have a habit of making my instruments serve in as many roles and functions as possible. Just recently, I went looking for a multi-function unit to add to my gear, and found the answer in the RX17 digital rhythm programmer.

My setup included a Yamaha TX81Z tone generator and a keyboard controller with an arpeggiator. The arpeggiator was handy for some kinds of simple sequencing, but was not really adequate for all of my needs. I wanted to be able to program simple sequences for the TX81Z, and be able to do it from the keyboard. I also wanted percussion, but had a limited budget and could not afford both a sequencer and a drum machine.

At first, I wondered if my best option was to buy a cheap sequencer and let it play percussion voices on the tone generator (since the TX81Z is multi-timbral). But it seemed to me that if a drum machine could be played from a keyboard via MIDI and play an external voice module too, then it might work as a sequencer as well.

The trade off seemed to be the extra percussion voices I'd get with a drum machine, or the extra sequencing power I'd get with a sequencer (with a corresponding loss of synthesizer voices, since they would have to be used to produce percussion sounds).

Since I plan to get a computer into the act eventually, it seemed that the drum machine would be the most economical and flexible option in the long run, if it could indeed function as a sequencer. When I spoke to dealers about it, though, they said it wouldn't work because the sequencing would be too primitive. They also said that I wouldn't be able to use the percussion voices at the same time as the sequencer function.

I asked if they had ever worked with modular analog systems, and they said "no." Then, I asked to read the manuals for the various machines, and they obliged.

A half hour later, I asked if I could patch up an RX17 to a keyboard synthesizer they had on display. I started by making basic MIDI connections: MIDI OUT of the keyboard to MIDI IN of the RX17, and MIDI OUT of the RX17 to MIDI IN of the keyboard. Next, I connected both to their mixer and sound system.

In a short time, I had assigned the bongos, conga, shaker, and tambourine to MIDI chan-

nel 1 and panned them far left (the RX17 is a stereo instrument). Then, I assigned all the other voices to MIDI channel 2 and panned them far right.

Since the RX17 has 26 voices, this gave me two separate groups to work with, each synchronized in time with the other. In this particular setup, I had seven voices assigned to one MIDI channel and nineteen assigned to another. Next, I assigned the MIDI note numbers of the nineteen voices to the keys that I wanted them to play on the synthesizer.

Putting the RX17 into Real Time Record (Pattern Mode) and turning down the RX17's right audio channel on the mixer, I played a riff on the synthesizer (using MIDI channel 2). It came right back, again and again, controlled by the RX17. Then, I pecked out a rhythmic pattern on the RX17's touch pads, using congas, shaker, and tambourine. While the synthesizer continued to play the riff as controlled by the RX17, the RX17 also played my percussion pattern through its left audio channel. The two parts were independent, yet perfectly synchronized.

Programming other bass lines, melodic lines, and chords into other pattern spaces was just as easy, and combining them into songs was even easier, using the RX17's repeat functions.

I put my money down, and the dealer smiled.

My choice of voice groupings was based on my needs as they exist in my music. They could just as easily be arranged differently. For instance, a basic trap drum set might be on one channel, and everything else on the other.

The important things to consider are which percussion voices you need and which MIDI keyboard notes you need: Plan all of this as efficiently as you can. There's no sense in assigning valuable MIDI note numbers to a whole octave if you only need five or seven of the notes in that octave. The notes you save in that octave can be used elsewhere.

Quite often, I will use eight to ten notes in a higher octave, but only one or two in a lower octave. This kind of planning makes the number of available notes go a lot further. Also, make use of the synthesizer's ability to play in higher or lower octaves than the note values of the keys being played, and look into your instrument's possibilities for note shift and transposition.

Choosing percussion voices is just as critical. Every percussion voice that you decide to use

takes away one note from your sequencer (unless you play really well and find ways to use some percussion voices at the same time that you play certain MIDI notes). A basic trap set of bass drum, snare drum, ride cymbal, and crash cymbal takes only four voices, leaving you with 22 different MIDI notes free on the other channel. If you add to this the closed and open hi-hat sounds, you still have 20. Even if you add the rim shot and three toms, there will still be 16 MIDI notes left, which can be used to play a very respectable bass line (in most music).

If you want your MIDI lines to change while maintaining the same percussion pattern, program the percussion first and copy the pattern as many times as you need. Then go back and add the MIDI sequences over them. This will save time and trouble.

I love my RX17 so much that I want to mention another feature that makes me happy. It is possible to merge incoming MIDI signals from the keyboard with those generated by the rhythm unit, by means of the Echo-Back function. More multi-functions in the same instrument! This means that if I plug the MIDI OUT cable from my keyboard controller into the RX17's MIDI IN jack and then plug another cable from the RX17's MIDI OUT/THRU jack to the MIDI IN jack of the TX81Z, I can program and play the RX17 from the controller using MIDI channel 2, and then let the RX17 play itself and the TX81Z (also on MIDI channel 2) while I play other TX81Z voices directly from the keyboard on MIDI channel 1—all of this without repatching cables and without buying an outboard MIDI merger.

LET US HEAR FROM YOU! We want AfterTouch to be an information network for all users of Yamaha professional musical products, so please join in. We're looking for many different kinds of material.

Have you created an incredible patch for the DX7 II, the DX100, or any of the other members of the Yamaha FM digital synthesizer family? How about a patch for the SPX90 II multi-effects processor, or a great pattern or voice for the RX5? Send in your patches, programs, and patterns. If we use your material, we'll give you full credit plus \$25.00 for each item used.

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