

# AE touch

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THE OFFICIAL PUBLICATION OF THE YAMAHA USERS GROUP



JULY 1987

 **YAMAHA**®

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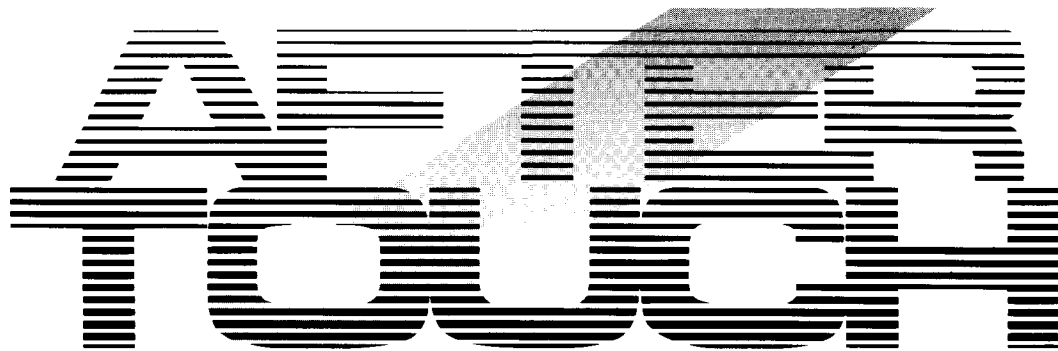
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July 1987

Volume 3, Number 7  
Issue #22

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AFTERTOUCH is published monthly. Third class postage paid at Long Prairie, MN and additional points of entry.  
**SUBSCRIPTIONS:** Free. Address subscription correspondence to AFTERTOUCH, P.O. Box 7938, Northridge, CA 91327-7938. **POSTMASTER:** Send form 3579 to P.O. Box 7938, Northridge, CA 91327-7938.

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# From The Editor

**F**IRST OF ALL, AfterTouch has a new mailing address. One local Post Office Box facility is closing and another is opening up, so we are transferring our Box to the new facility. The new mailing address is as follows: AfterTouch, P.O. Box 7938, Northridge, CA 91327-7938.

As you can see from the cover, this is indeed the issue I promised last month, and more. All of the Hot Tips, all of the Questions, and almost all of the patches in this issue came directly to us from AfterTouch readers. (The exceptions are the four RX5 voice edits from Vincent Bitetti, who sometimes works with Yamaha as a product consultant. He supplied us with a number of RX5 voice edits, which we have shared with you in this and the previous issue.)

For this issue, we wanted to use as much reader material as possible, so we have saved the MEP4 applications article (mentioned in this column last month) for use in a later issue. Next month we will have more Hot Tips, more Questions, and a number of 4-operator patches—all from readers. And, in upcoming issues, there will be more of the same, plus more articles from readers (and articles on topics that have been requested by readers). We will also keep you up to date on new products.

By the way, I hope you have noticed that the column in which your hot tips appear is called, simply, "Hot Tips." All previous installments of our hot tips column have gone under the name "Final Touch." It was cute, and it sort of tied in with the name of the magazine, but I was worried that it didn't really let you know what the column was about. So, from now on, we'll call a

rose a "rose"—hot tips will be featured in "Hot Tips." In addition, letters from readers will be found in the "Letters" column—not in a column titled "Touch Response." Let's keep it simple and straightforward. What with MIDI and all of these complex, fascinating instruments, I figure that we have enough to worry about.

So, keep your suggestions, hot tips, patches, questions, and articles coming in. Keep letting us know what you want and need, and we'll do our best to get it into AfterTouch for you.

In closing, here is our monthly repeat of some information we get asked for every month:

**Back Issues:** If a request for back issues is combined with a subscription request or other material, chances are it will not be fulfilled. All requests for AfterTouch subscriptions must go to our Mailing List input service. After the addresses are entered, the letters are normally kept on file, in keeping with various postal regulations. To be absolutely sure that you receive any available back issues that you want, make back issue requests separately, and include the indication "ATTN: Back Issues" on the envelope. Please do not send back issue requests on the attached subscription postcard.

**Product Literature:** All requests for literature on specific products must go directly to Yamaha. (The address is: Yamaha Music Corporation USA, P.O. Box 6600, Buena Park, CA 90622). We at AfterTouch are happy to receive specific questions concerning the use of Yamaha professional music products, and we will answer as many of them as we can in the Questions column; however, requests for general product information must be sent directly to Yamaha. —TD

**AFTER-TOUCH** is a monthly informational publication from Yamaha

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After you have filled in the relevant information, put a stamp on the postcard and mail it to us. When we receive the card, we'll put you on our permanent mailing list, and you will receive twelve issues of AfterTouch absolutely free! There is absolutely no obligation, and no other strings are attached.

(By the way, if you received *this* issue in the mail, you are already on our permanent mailing list, so you don't need to send in another card.)

Also, don't limit yourself to just sending in your address: Let us know what you want to read, and what *you* have to offer (see page 19 for details). We look forward to your input.

To receive **AFTER-TOUCH** every month, absolutely free, just put your name and address on the enclosed card and mail it to us.

# DX7

## FLAPYBASS2. A New DX7 Voice By Dave S. Miller.

TRI	27	0	1	0	OFF	3
WAVE	SPEED	DELAY	FMD	AMD	SYNC	FMS

R1	R2	R3	R4
99	99	99	99
L1	L2	L3	L4
50	50	50	50

PITCH ENVELOPE

C2
KEY TRANSPOSE
ON
OSC. SYNC

POLY	7	0	OFF	OFF	0
POLY/MONO	RANGE	STEP	MODE	GLISSANDO	TIME
PITCH BEND			PORTAMENTO		

(CONTROLLER)	RANGE	PITCH	AMPLITUDE	EG BIAS
MOD WHEEL	6	ON	OFF	OFF
FOOT CONTROL	0	OFF	OFF	OFF
BREATH CONTROL	0	OFF	OFF	OFF
AFTERTOUCH	0	OFF	OFF	OFF

FREQUENCY	DETUNE	AMS		
5.00	+1	0		
ENVELOPE DATA				
R1	R2	R3	R4	RS
96	89	26	46	0
L1	L2	L3	L4	
99	0	0	0	
KEYBOARD SCALING				
CURVE	BREAKPOINT	DEPTH		
L	-L	A-1	L	0
R	-L		R	0
OP#	OUTPUT LEVEL	VELOCITY		
6	99	0		

FREQUENCY	DETUNE	AMS		
2.50	0	0		
ENVELOPE DATA				
R1	R2	R3	R4	RS
99	56	26	42	0
L1	L2	L3	L4	
99	0	0	0	
KEYBOARD SCALING				
CURVE	BREAKPOINT	DEPTH		
L	-L	C-1	L	0
R	-E		R	56
OP#	OUTPUT LEVEL	VELOCITY		
5	83	0		

FREQUENCY	DETUNE	AMS		
0.50	0	0		
ENVELOPE DATA				
R1	R2	R3	R4	RS
99	34	26	39	2
L1	L2	L3	L4	
99	0	0	0	
KEYBOARD SCALING				
CURVE	BREAKPOINT	DEPTH		
L	-E	A6	L	14
R	-L		R	99
OP#	OUTPUT LEVEL	VELOCITY		
4	85	0		

FREQUENCY	DETUNE	AMS		
2.00	0	0		
ENVELOPE DATA				
R1	R2	R3	R4	RS
99	60	26	71	2
L1	L2	L3	L4	
99	0	0	0	
KEYBOARD SCALING				
CURVE	BREAKPOINT	DEPTH		
L	-E	C8	L	86
R	-E		R	99
OP#	OUTPUT LEVEL	VELOCITY		
2	99	0		

FREQUENCY	DETUNE	AMS		
0.50	0	0		
ENVELOPE DATA				
R1	R2	R3	R4	RS
83	35	0	39	2
L1	L2	L3	L4	
99	0	0	0	
KEYBOARD SCALING				
CURVE	BREAKPOINT	DEPTH		
L	-L	C1	L	0
R	-E		R	28
OP#	OUTPUT LEVEL	VELOCITY		
1	96	0		

FREQUENCY	DETUNE	AMS		
0.50	+5	0		
ENVELOPE DATA				
R1	R2	R3	R4	RS
83	34	0	46	1
L1	L2	L3	L4	
99	0	0	0	
KEYBOARD SCALING				
CURVE	BREAKPOINT	DEPTH		
L	-L	C1	L	0
R	-E		R	28
OP#	OUTPUT LEVEL	VELOCITY		
3	99	2		

ALGORITHM #1

Notes:

This is a full percussive bass sound. It's great for funky bass lines.

# DX7

## PIANO 1B. A New DX7 Voice By Ret Miles.

TRI	35	0	0	0	ON	0	
WAVE	SPEED	DELAY	FMD	AMD	SYNC	PMS	
R1	99	R2	99	R3	99	R4	99
L1	50	L2	50	L3	50	L4	50
PITCH ENVELOPE							
						C3	
						KEY TRANSPOSE	
						ON	
						OSC. SYNC	

FUNCTIONS					
POLY	0	0	OFF	OFF	0
POLY/MONO	RANGE	STEP	MODE	GLISSANDO	TIME
	PITCH BEND		PORTAMENTO		
(CONTROLLER)	RANGE	PITCH	AMPLITUDE	EG BIAS	
MOD WHEEL	0	OFF	OFF	OFF	
FOOT CONTROL	0	OFF	OFF	OFF	
BREATH CONTROL	0	OFF	OFF	OFF	
AFTERTOUCH	0	OFF	OFF	OFF	

FREQUENCY	5.00	DETUNE	0	AMS	0
ENVELOPE DATA					
R1	99	R2	20	R3	10
R4	33	RS	7		
L1	99	L2	93	L3	0
L4	0				
KEYBOARD SCALING					
CURVE	BREAKPOINT	DEPTH			
L	+L	F#0	L	13	
R	+E		R	99	
OP#	OUTPUT LEVEL	VELOCITY			
5	74	2			

FREQUENCY	4.00	DETUNE	0	AMS	0
ENVELOPE DATA					
R1	99	R2	20	R3	10
R4	33	RS	7		
L1	99	L2	93	L3	0
L4	0				
KEYBOARD SCALING					
CURVE	BREAKPOINT	DEPTH			
L	-E	D5	L	99	
R	-L		R	43	
OP#	OUTPUT LEVEL	VELOCITY			
6	61	2			

FREQUENCY	1.00	DETUNE	-3	AMS	0
ENVELOPE DATA					
R1	99	R2	25	R3	10
R4	43	RS	7		
L1	99	L2	96	L3	0
L4	0				
KEYBOARD SCALING					
CURVE	BREAKPOINT	DEPTH			
L	+L	C3	L	40	
R	+L		R	9	
OP#	OUTPUT LEVEL	VELOCITY			
2	53	0			

FREQUENCY	1.00	DETUNE	+3	AMS	0
ENVELOPE DATA					
R1	99	R2	99	R3	99
R4	33	RS	7		
L1	99	L2	99	L3	0
L4	0				
KEYBOARD SCALING					
CURVE	BREAKPOINT	DEPTH			
L	+L	C5	L	10	
R	-L		R	50	
OP#	OUTPUT LEVEL	VELOCITY			
4	72	0			

FREQUENCY	1.00	DETUNE	0	AMS	0
ENVELOPE DATA					
R1	74	R2	10	R3	99
R4	45	RS	7		
L1	99	L2	0	L3	0
L4	0				
KEYBOARD SCALING					
CURVE	BREAKPOINT	DEPTH			
L	-L	A-1	L	0	
R	-L		R	0	
OP#	OUTPUT LEVEL	VELOCITY			
1	89	2			

FREQUENCY	1.00	DETUNE	0	AMS	0
ENVELOPE DATA					
R1	80	R2	15	R3	10
R4	34	RS	7		
L1	99	L2	90	L3	0
L4	0				
KEYBOARD SCALING					
CURVE	BREAKPOINT	DEPTH			
L	-L	G5	L	0	
R	+L		R	43	
OP#	OUTPUT LEVEL	VELOCITY			
3	89	3			

ALGORITHM #15

These DX7 voices can also be loaded into all the other Yamaha 6-operator FM digital synthesizers and tone generators, including the DX5, TX7, TX216, TX816, TF1, DX1, DX7s, TX802, and DX7 II FD/D.

# DX7

**4FASTREPS.**  
**A New DX7**  
**Voice By Jerry**  
**LaRosa.**

TRI	35	0	0	0	ON	3
WAVE	SPEED	DELAY	FMD	AMD	SYNC	PMS
R1	R2	R3	R4	C3		
99	99	99	99	KEY TRANSPOSE		
L1	L2	L3	L4	OFF		
50	50	50	50	OSC. SYNC		

FUNCTIONS					
POLY	2	0	OFF	OFF	0
POLY/MONO	RANGE	STEP	MODE	GLISSANDO	TIME
	PITCH BEND		PORTAMENTO		
(CONTROLLER)	RANGE	PITCH	AMPLITUDE	EG BIAS	
MOD WHEEL	99	ON	OFF	OFF	
FOOT CONTROL	0	OFF	OFF	OFF	
BREATH CONTROL	0	OFF	OFF	OFF	
AFTERTOUCH	37	ON	OFF	OFF	

FREQUENCY	7.00	DETUNE	0	AMS	0
ENVELOPE DATA					
R1	R2	R3	R4	RS	
71	68	88	65		2
L1	L2	L3	L4		
99	67	62	0		
KEYBOARD SCALING					
CURVE	BREAKPOINT	DEPTH			
L	-L	A2	L	25	
R	-L		R	0	
OP#	OUTPUT LEVEL	VELOCITY			
3	90	0			

FREQUENCY	15.00	DETUNE	0	AMS	0
ENVELOPE DATA					
R1	R2	R3	R4	RS	
71	68	88	65		0
L1	L2	L3	L4		
99	67	62	0		
KEYBOARD SCALING					
CURVE	BREAKPOINT	DEPTH			
L	-L	A-1	L	0	
R	-L		R	0	
OP#	OUTPUT LEVEL	VELOCITY			
6	99	0			

FREQUENCY	0.50	DETUNE	0	AMS	0
ENVELOPE DATA					
R1	R2	R3	R4	RS	
88	40	75	57		0
L1	L2	L3	L4		
75	74	96	0		
KEYBOARD SCALING					
CURVE	BREAKPOINT	DEPTH			
L	-L	A-1	L	0	
R	-L		R	0	
OP#	OUTPUT LEVEL	VELOCITY			
2	85	0			

FREQUENCY	16.00	DETUNE	0	AMS	0
ENVELOPE DATA					
R1	R2	R3	R4	RS	
71	68	88	65		0
L1	L2	L3	L4		
99	67	62	0		
KEYBOARD SCALING					
CURVE	BREAKPOINT	DEPTH			
L	-L	A-1	L	0	
R	-L		R	0	
OP#	OUTPUT LEVEL	VELOCITY			
5	99	0			

FREQUENCY	1.000Hz	DETUNE	0	AMS	0
ENVELOPE DATA					
R1	R2	R3	R4	RS	
71	79	82	49		0
L1	L2	L3	L4		
81	56	99	56		
KEYBOARD SCALING					
CURVE	BREAKPOINT	DEPTH			
L	-L	A-1	L	0	
R	-L		R	0	
OP#	OUTPUT LEVEL	VELOCITY			
1	97	0			

FREQUENCY	1.00	DETUNE	0	AMS	0
ENVELOPE DATA					
R1	R2	R3	R4	RS	
57	67	97	65		0
L1	L2	L3	L4		
99	67	85	0		
KEYBOARD SCALING					
CURVE	BREAKPOINT	DEPTH			
L	-L	C#4	L	99	
R	-L		R	0	
OP#	OUTPUT LEVEL	VELOCITY			
4	98	0			

ALGORITHM #3

Notes:

This voice is best used with rock-type chord figures that repeat.

# DX7

TOM-THOUSAN.  
A New DX7  
Voice By Sam  
Millender, Jr.

TR1	99	0	0	0	ON	0
WAVE	SPEED	DELAY	FMD	AMD	SYNC	PMS

R1	99	R2	87	R3	99	R4	1
L1	50	L2	0	L3	0	L4	50

PITCH ENVELOPE

C2	OFF
KEY TRANSPOSE	OSG. SYNC

POLY	3	0	OFF	OFF	0
POLY/MONO	RANGE	STEP	MODE	GLISSANDO	TIME
	PITCH BEND		PORTAMENTO		

(CONTROLLER)	RANGE	PITCH	AMPLITUDE	EG BIAS
MOD WHEEL	99	ON	ON	ON
FOOT CONTROL	0	OFF	OFF	OFF
BREATH CONTROL	0	OFF	OFF	OFF
AFTERTOUCH	99	ON	ON	ON

FREQUENCY	10.00Hz	DETUNE	0	AMS	1
ENVELOPE DATA					
R1	99	R2	53	R3	90
R4	45	RS	2		
L1	99	L2	0	L3	0
L4	0				
KEYBOARD SCALING					
CURVE	BREAKPOINT		DEPTH		
L	-L	A-1	L	0	
R	-L		R	0	
OP#	4	OUTPUT LEVEL	35	VELOCITY	7

FREQUENCY	602.6Hz	DETUNE	+2	AMS	0
ENVELOPE DATA					
R1	99	R2	37	R3	99
R4	0	RS	2		
L1	99	L2	99	L3	99
L4	0				
KEYBOARD SCALING					
CURVE	BREAKPOINT		DEPTH		
L	-L	A-1	L	0	
R	-L		R	0	
OP#	6	OUTPUT LEVEL	99	VELOCITY	6

0

Notes:

*This patch sounds great with reverb. For maximum effect, hit the keys hard. Hold the keys down for decay in pitch.*

FREQUENCY	0.50	DETUNE	+3	AMS	0
ENVELOPE DATA					
R1	99	R2	75	R3	99
R4	40	RS	2		
L1	99	L2	82	L3	0
L4	0				
KEYBOARD SCALING					
CURVE	BREAKPOINT		DEPTH		
L	-L	A-1	L	0	
R	-L		R	0	
OP#	2	OUTPUT LEVEL	99	VELOCITY	0

FREQUENCY	1000Hz	DETUNE	0	AMS	1
ENVELOPE DATA					
R1	99	R2	53	R3	99
R4	50	RS	2		
L1	99	L2	0	L3	0
L4	0				
KEYBOARD SCALING					
CURVE	BREAKPOINT		DEPTH		
L	-L	A-1	L	0	
R	-L		R	0	
OP#	3	OUTPUT LEVEL	39	VELOCITY	0

FREQUENCY	100.0Hz	DETUNE	+1	AMS	0
ENVELOPE DATA					
R1	99	R2	51	R3	90
R4	15	RS	2		
L1	99	L2	99	L3	99
L4	0				
KEYBOARD SCALING					
CURVE	BREAKPOINT		DEPTH		
L	-L	A-1	L	0	
R	-L		R	0	
OP#	5	OUTPUT LEVEL	74	VELOCITY	3

FREQUENCY	2.00	DETUNE	-2	AMS	0
ENVELOPE DATA					
R1	99	R2	46	R3	99
R4	57	RS	2		
L1	99	L2	0	L3	0
L4	0				
KEYBOARD SCALING					
CURVE	BREAKPOINT		DEPTH		
L	-L	A-1	L	0	
R	-L		R	0	
OP#	1	OUTPUT LEVEL	99	VELOCITY	0

ALGORITHM #16

# RX5

A New RX5  
Voice Edit By  
Vincent Bitetti.

Notes:

*This sound uses an extreme  
pitch edit, but it is very  
authentic.*

Voice Name: <b>Lion's Roar</b>		Origin: <b>Crt-Hey</b>	
<b>JOB #</b>	<b>PARAMETER</b>	<b>RANGE</b>	<b>NEW VALUE</b>
02	<b>Pitch</b>	-3600 ~ 2400	<b>-3600 cent</b>
03/1	<b>Attack Rate</b>	1 ~ 99	<b>62</b>
03/2	<b>Decay 1 Rate</b>	1 ~ 99	<b>01</b>
03/3	<b>Decay 1 Level</b>	1 ~ 60	<b>01</b>
03/4	<b>Decay 2 Rate</b>	1 ~ 99	<b>01</b>
03/5	<b>Release Rate</b>	1 ~ 99	<b>01</b>
03/6	<b>Gate Time</b>	100 ~ 6500	<b>6500 ms</b>
04/1	<b>Bend Rate</b>	-60 ~ 60	<b>01</b>
04/2	<b>Bend Range</b>	1 ~ 60	<b>-38</b>
05	<b>Inst Level</b>	0 ~ 31	<b>28</b>
06	<b>Sound Loop</b>	OFF / ON	<b>OFF</b>

# RX5

A New RX5  
Voice Edit By  
Vincent Bitetti.

Notes:

*This is a percussive, punchy,  
orchestral sound.*

Voice Name: <b>Perc.Orch.Hit</b>		Origin: <b>Crt-DXOrch</b>	
<b>JOB #</b>	<b>PARAMETER</b>	<b>RANGE</b>	<b>NEW VALUE</b>
02	<b>Pitch</b>	-3600 ~ 2400	<b>+0660 cent</b>
03/1	<b>Attack Rate</b>	1 ~ 99	<b>83</b>
03/2	<b>Decay 1 Rate</b>	1 ~ 99	<b>84</b>
03/3	<b>Decay 1 Level</b>	1 ~ 60	<b>60</b>
03/4	<b>Decay 2 Rate</b>	1 ~ 99	<b>41</b>
03/5	<b>Release Rate</b>	1 ~ 99	<b>73</b>
03/6	<b>Gate Time</b>	100 ~ 6500	<b>4100 ms</b>
04/1	<b>Bend Rate</b>	-60 ~ 60	<b>60</b>
04/2	<b>Bend Range</b>	1 ~ 60	<b>-17</b>
05	<b>Inst Level</b>	0 ~ 31	<b>28</b>
06	<b>Sound Loop</b>	OFF / ON	<b>ON</b>



# RX5

A New RX5  
Voice Edit By  
Vincent Bitetti.

Notes:

*This is a muted acoustic tom sound. It works quite well in Multi-Voice mode.*

Voice Name: <b>Abbey Road Tom</b> Origin: <b>Int-Tom 2</b>			
JOB #	PARAMETER	RANGE	NEW VALUE
02	<b>Pitch</b>	-3600 ~ 2400	<b>+0600 cent</b>
03/1	<b>Attack Rate</b>	1 ~ 99	<b>99</b>
03/2	<b>Decay 1 Rate</b>	1 ~ 99	<b>61</b>
03/3	<b>Decay 1 Level</b>	1 ~ 60	<b>55</b>
03/4	<b>Decay 2 Rate</b>	1 ~ 99	<b>55</b>
03/5	<b>Release Rate</b>	1 ~ 99	<b>99</b>
03/6	<b>Gate Time</b>	100 ~ 6500	<b>0425 ms</b>
04/1	<b>Bend Rate</b>	-60 ~ 60	<b>09</b>
04/2	<b>Bend Range</b>	1 ~ 60	<b>-08</b>
05	<b>Inst Level</b>	0 ~ 31	<b>30</b>
06	<b>Sound Loop</b>	OFF / ON	<b>ON</b>

# RX5

A New RX5  
Voice Edit By  
Vincent Bitetti.

Notes:

*This is similar in sound to a synthesized, staccato, electric violin.*

Voice Name: <b>Synth Fiddle</b> Origin: <b>Crt-DXClav</b>			
JOB #	PARAMETER	RANGE	NEW VALUE
02	<b>Pitch</b>	-3600 ~ 2400	<b>+1400 cent</b>
03/1	<b>Attack Rate</b>	1 ~ 99	<b>54</b>
03/2	<b>Decay 1 Rate</b>	1 ~ 99	<b>01</b>
03/3	<b>Decay 1 Level</b>	1 ~ 60	<b>60</b>
03/4	<b>Decay 2 Rate</b>	1 ~ 99	<b>57</b>
03/5	<b>Release Rate</b>	1 ~ 99	<b>27</b>
03/6	<b>Gate Time</b>	100 ~ 6500	<b>1700 ms</b>
04/1	<b>Bend Rate</b>	-60 ~ 60	<b>15</b>
04/2	<b>Bend Range</b>	1 ~ 60	<b>+02</b>
05	<b>Inst Level</b>	0 ~ 31	<b>23</b>
06	<b>Sound Loop</b>	OFF / ON	<b>ON</b>

# RX5

A New RX5  
Voice Edit  
By Rick  
Wilminko.

Voice Name: U-F-O		Origin: Crt-Cuica	
JOB #	PARAMETER	RANGE	NEW VALUE
02	Pitch	-3600 ~ 2400	-0200 cent
03/1	Attack Rate	1 ~ 99	06
03/2	Decay 1 Rate	1 ~ 99	22
03/3	Decay 1 Level	1 ~ 60	01
03/4	Decay 2 Rate	1 ~ 99	22
03/5	Release Rate	1 ~ 99	19
03/6	Gate Time	100 ~ 6500	6400 ms
04/1	Bend Rate	-60 ~ 60	01
04/2	Bend Range	1 ~ 60	+01
05	Inst Level	0 ~ 31	31
06	Sound Loop	OFF / ON	ON

# RX5

A New RX5  
Voice Edit  
By Rick  
Wilminko.

Voice Name: Fast Forward		Origin: Crt-Wao	
JOB #	PARAMETER	RANGE	NEW VALUE
02	Pitch	-3600 ~ 2400	+0000 cent
03/1	Attack Rate	1 ~ 99	24
03/2	Decay 1 Rate	1 ~ 99	25
03/3	Decay 1 Level	1 ~ 60	59
03/4	Decay 2 Rate	1 ~ 99	52
03/5	Release Rate	1 ~ 99	63
03/6	Gate Time	100 ~ 6500	6500 ms
04/1	Bend Rate	-60 ~ 60	01
04/2	Bend Range	1 ~ 60	+24
05	Inst Level	0 ~ 31	26
06	Sound Loop	OFF / ON	ON

# Hot Tips

## Feedback Effects With The CX5M

By P. J. Otto

I recently discovered a technique in *Keyboard* magazine to create guitar-like feedback effects with a synthesizer. Although the article, by Don Muro, suggests that you use two amplifiers and a volume pedal, I have been working with a simpler method which uses the dual mode of the CX5M's internal FM digital tone module

## Reader Tips For The CX5M, DX21, SPX90, RX5, FB-01, REV7, KX88/76, And More.

feedback sound, or transposed up an octave and a fifth (+19) for the more classic, guitar-like feedback effect.

When you play the two voices together in the dual mode, the first voice slowly fades out, while the second, higher-pitched voice slowly fades in—this creates the feedback effect.

Actually, the same effect can be created using only one voice with algorithm #5. The first 2-operator stack (with lower frequencies) is set to fade out slowly, while the second 2-operator stack (with higher frequencies) is set to fade in slowly.

(the SFG05). Here is how it works:

Start with two of the same voices. The first voice (see the printout for "FBGUIT1") is set to fade out by using a slow decay rate. The second voice (see the printout for "FBGUIT2") is set to fade in by using a slow attack rate. Then, the second voice can be transposed up one octave (+12) for a more harmonically pleasant

*This CX5M voice, "FBGUIT1," is to be used in conjunction with "FBGUIT2" to create a guitar-like feedback effect.*

*This CX5M voice, "FBGUIT2," is to be used in conjunction with "FBGUIT1" to create a guitar-like feedback effect.*

## Three Tips For The CX5M's FM Music Composer Program

By Peter Van der Zee

Through extensive use of the CX5M's FM Music Composer program, I have found three tips which will make your use of the program go a lot easier. These tips are meant to guide you to an understanding of the instrument not readily obvious to the beginner—they are applicable for both the original FM Music Composer (YRM101) and the FM Music Composer II (YRM 501).

First and foremost on the list is this: Always notate first and then enter what you have written. This will save time and energy. The data—notes, rests, expression marks and computer system information—may later be played with to your satisfaction.

Next: It is always to your advantage to use Insert mode. Enter all information through the Insert mode and you will not encounter the problem of erasing data you have already entered. This is important because in the midst of a composition you may enter data which, if not inserted correctly, can cause problems which have you searching for the mistake for hours. Never leave the Insert mode.

Last on this small but critical list is the proper method for sending voice program changes. This can be an excellent live performance variable, one that is easily controlled when used in the manner set forth here. This MIDI System Exclusive information should be placed at a point in the music where it will not affect the performance of the composition. If you want your keyboards set to the correct sounds before

# Hot Tips Continued

you begin a piece, enter the data during a rest before the piece begins, using the Command mode.

If you would like to change sounds in the middle of a computer-assisted or completely computerized composition, enter the voice change on an eight-rest (or a longer rest) just before the spot where you want the change to take effect. This may have to be entered on a separate track, or you may simply have to make room for the voice change information in your composition. Of course, if there is room for the voice change far in advance, enter it earlier in the piece. The CX5M computer will not perform the voice change on the beat on which it is meant to be utilized, so it must be accomplished before that beat.

All users of the FM Music Composer program will find these tips invaluable in discovering the awesome power of the CX5M music computer.

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## Creating The "Splitar" On The DX21

By Dave Dickey & Joan Dickey

Here is an easy patch that uses the split mode of the DX21 to create an exotic Indian sound that we call the "Splitar." Follow these steps:

- 1) Call up the "sitar" voice from ROM (group 6 voice 4).
- 2) Change the operator #1 Rate Scaling from 3 to 0.
- 3) Change the Tranpose from C3 to C2.
- 4) Turn the Chorus effect On.
- 5) Change the Pitch Bend Range from 2 to 0.
- 6) Store the altered voice in tone generator A.
- 7) Now call up the "sitar" from ROM again, and repeat the edits outlined in steps 2 through 4 above—leave the Pitch Bend Range unaltered.
- 8) Store this second altered voice in tone generator B.
- 9) Set the DX21 to Split mode and put the Split Point at note number 60.

We like to play a slow drone with the left hand voice (using a sequencer), and then use the Pitch Bender to create a lush sitar sound with the right hand voice.

## Dealing With Noise On The CX5M During Recording

By Dennis G. Jablonski

Recently, another studio owner who happens to own a CX5M (and a Synclavier!) asked me how I managed to use my CX5M for professional recording sessions without noise problems. The only noise source that is of any consequence here is a digital quantization. Quantization noise becomes more prominent as the resolution (number of bits) decreases. Thus, my CX5M (8-bit resolution) produces more noise than my TX7 (12-bit resolution).

Quantization noise is effectively "masked" (drowned out), however, by any significant level of high harmonics present in the voice patch you are using. So, when choosing which synth to use for which voice, I try to assign the CX5M to whichever voice has the most substantial level of high harmonics *at the mellowest part of each note*. For instance, if I am using a Rhodes voice and a harpsichord voice in the same song, I would assign the CX5M to the harpsichord, which has a rich harmonic spectrum throughout the duration of each note, effectively masking the noise components. The TX7, having a higher resolution, handles the more mellow Rhodes voice without a noise problem.

Of course, it helps to customize voices occasionally, too. With many voices it is possible to write a voice patch that is just a little bit brighter than what you really want. The extra brightness helps the noise-masking effect. Then, during mixdown, you can use your mixing board's channel EQ to trim the high end back to normal. Removing the extra brightness takes most of the audible noise with it.

Readers with some background in theory may recognize this technique as an application of

DX21 FM digital synthesizer.



one of the central concepts used in noise reduction systems such as those made on Dolby and dbx. The usefulness of this technique depends to some extent on the audible results of the interaction between two variables. One variable is a combination of the slope and breakpoint of the high-end EQ used. The other variable is the amount of change in spectrum that results when you rewrite the voice patch. The results of this interaction will generally be different from one note to another across the keyboard, so it will take a little trial-and-error to optimize your voices—I consider it well worth the effort.

The above principles can be generalized to be useable on most, if not all, FM digital synthesis systems.

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### Storing RX5 Data With The DX7 II FD

By Joel Fairstein

The RX5's bulk data dump is larger than the 20K buffer of the DX7 II FD. This makes the direct downloading of RX5 bulk data to the MDR disk library of the DX7 II FD impossible. There is, however, an alternate method that works quite well. It involves the use of a RAM4 cartridge. Follow these steps:

- 1) Save the memory of the RX5 to a properly formatted RAM4 cartridge.
- 2) Remove this RAM4 cartridge from the RX5, and insert it into the cartridge slot of the DX7 II FD.
- 3) Enter the Edit mode on the DX, and call up the Disk function via button #16.
- 4) Select the CRT disk library, and save the contents of the RX5 RAM4 cartridge to disk.

This will store the RX5 data on the RAM4 cartridge directly to the DX7 II FD disk via the CRT function, bypassing the DX's internal buffer. By the way, it is a good idea to use "RX5" or "RX" as part of the file name, to save confusion later on.

To retrieve the RX5 data from the DX7 II FD disk, follow these steps:

- 1) Insert a RAM4 cartridge that has been formatted for RX5 data into the DX7 II FD cartridge slot.



*RX5 digital rhythm programmer.*

- 2) Enter the Edit mode and call up the Disk function via button #16.
- 3) Select the CRT library, and scroll to the desired RX5 file.
- 4) Load the file from the disk to the RAM4 cartridge.
- 5) Remove the RAM4 cartridge from the DX6 II FD, and insert it in the RX5's RAM cartridge slot.
- 6) Load the RX5 data on the RAM4 into the RX5.

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### Using The KX88 Or KX76 To Control Volume On Four MIDI Channels

By Craig Wilson

In many situations, it would be useful to have four MIDI volume sliders on the KX—very useful for things like sequencer control of "the mix."

There are four continuous sliders (CS1-CS4) on the KX88/76; but, using standard methods, it is possible to assign volume control to only two MIDI channels—those currently active from the KX's keyboard. In order to access the other two channels, you must make use of the KX88/76's "Universal Parameter" function. Since this is not a familiar function for many users, I'll explain how it works after giving instructions for setting up the KX.

To begin with, assign CS1 and CS2 to control the volume of MIDI channels 1 and 2 in the usual way. Now follow these steps:

- 1) Enter the PA mode by pressing the MODE button twice and holding it for

# Hot Tips *Continued*

about 1 second.

- 2) Press Bank A button #13 (Universal Parameter).
- 3) Enter "1" using the Bank B buttons—there are two Universal Parameters.
- 4) Enter "B2" using the Bank B buttons.
- 5) Enter "07" using the Bank B buttons.
- 6) Press the Bank B button.
- 7) Go to CA mode and assign CS3 to "3E" in the usual manner.

CS3 should now control MIDI volume on channel 3.

To assign CS4 to control MIDI volume on channel 4, follow these steps.

- 1) Enter the PA mode by pressing the MODE button twice and holding it for about 1 second.
- 2) Press Bank A button #13 (Universal Parameter).
- 3) Enter "2" using the Bank B buttons—there are two Universal Parameters.
- 4) Enter "B3" using the Bank B buttons.
- 5) Enter "07" using the Bank B buttons.
- 6) Press the Bank B button.
- 7) Go to CA mode and assign CS3 to "3F" in the usual manner.

Now to explain. The Universal Parameter allows you to predefine any MIDI message. You enter the data byte by byte, and at some point tell the KX to insert the controller data—step 6 did this in both procedures above. Byte 1 ("B2") in step 3 of our first set of instructions specified a MIDI control change on channel 3 while Byte 2 ("07") in step 4 specified the Control Change number for MIDI volume. The second set of instructions set up the same situation for MIDI channel 4. There are many other possibilities!

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## Transmitting RX5 Bulk Data To The QX1

By Vincent Bitetti

There are three format codes that will work when transmitting MIDI bulk data from the RX5 to the QX1. These codes are 000, 011, and 126.

The 000 code is the "generic" code that the QX1 will accept for any MIDI bulk data. Both

*QX1 digital sequence recorder.*



the 011 and 126 codes are carry-overs from the RX11, with the 011 code requesting the parameter bulk data and the 126 code requesting the Pattern/Song bulk data.

Depending on the actual code entered into the QX1, there are two different procedures necessary to execute data transmission. The MIDI connections are straightforward: Connect the MIDI OUT of the RX5 to the MIDI IN of the QX1, and connect the MIDI OUT of the QX1 to the MIDI IN of the RX5. This allows the two units to communicate with each other completely.

To use format code 000 or 011, follow these steps:

- 1) On the QX1, access Utility mode Job Command 21 and enter either the 000 or the 011 format.
- 2) Give the bulk a title.
- 3) Press ENTER on the QX1. The display will read "Waiting."
- 4) On the RX5, call up MIDI Job 10 (Transmit Bulk).
- 5) On the RX5, respond with "YES." The RX5 display will read "Now Transmitting," while the QX1 will read "Executing Now."

To use format code 126, follow these steps:

- 1) On the QX1, access Utility mode Job Command 21 and enter the 126 format.
- 2) Give the bulk a title.
- 3) Press ENTER on the QX1.
- 4) The QX1 will request a bulk dump from the RX5.
- 5) After the handshake is completed, the RX5 will transmit bulk data from whichever mode it was previously in. The RX5

display will read "Now Transmitting," while the QX1 display will read "Executing Now."

In all of the above cases, the bulk size will be the same.

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## Transferring RX Rhythm Tracks To The CX5M's MIDI Recorder

By Craig Wilson

When using an RX digital rhythm programmer with the CX5M's MIDI Recorder program (YRM301), it can be rather tedious to maintain separate files for the same song. Also, when editing a song, it can be difficult to cue the RX to the same point as the MIDI Recorder. The simplest solution to this problem is to record the RX track into the MIDI Recorder.

In order to do this, you first need to verify that there is sufficient memory in the CX5M to do this, and then you need to clear a track. The following works best in the Record mode, but it can be modified to work in the Chain mode. Also, there is a way to cut memory usage in half for some applications (which I will explain later). Please consult your owners manual if you're unsure of any of the following steps:

- 1) Set the RX's instruments to transmit on a desired MIDI channel.
- 2) Set the RX to receive on the same channel.
- 3) Set the RX sync to External.
- 4) Connect the RX MIDI OUT to the CX5M MIDI IN, and connect the CX5M MIDI OUT to the RX MIDI IN.
- 5) Set up your free track on the MIDI Recorder to record on the RX transmit channel (or "M").
- 6) Turn off all tracks on the MIDI Recorder and start recording.
- 7) After the song ends, set the RX to a blank pattern.
- 8) Play back the MIDI Recorder song and verify that the RX part was recorded (and is playing the RX unit properly).

In many cases, this procedure will use up a lot of the MIDI Recorder's memory. Many MIDI devices use "Note ON, Velocity=0" as a Note

OFF message. By looking at the MIDI reception format for the RX units, you may notice that they ignore these messages. Using a MIDI data filter set to pass only Note ON Velocity information that is greater than zero, you can effectively double the amount of memory available for the RX rhythm track.

Please note that this idea must be used with some discretion, since Note OFF commands are very important to most other MIDI devices.

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## How To Rechannel CX5M MIDI Recorder Tracks

By Craig Wilson

Have you ever noticed that the Step Record mode of the MIDI Recorder program (YRM301) records only on MIDI channel 1? Or perhaps you've recorded a track on MIDI channel 5 and now want that track to transmit on MIDI channel 12. Both situations can be remedied by simply "rechannelizing" the track. This can be done very easily using only the CX5M and a single MIDI cable. Follow these steps:

- 1) Arrange your tracks so that there is one free.
- 2) Set prerecorded track(s) that you wish to alter to play back on the desired channel.
- 3) Set the free track to the same channel (or "M" if preferred), and set it to Record.
- 4) After making sure that the CX5M's MIDI OUT function is *not* set to "Mix," connect the CX5M's MIDI OUT port to its MIDI IN (failure to do so will result in a crash of the program).
- 5) Push the F1 button ("Record") and then push the space bar.
- 6) After Recording is complete, reconnect your tone generators to the CX5M and verify that your newly-recorded track operates on the desired MIDI channel.
- 7) If so, you are free to Clear the old track or Merge new ones. This procedure also works using the Punch In mode.

There is also a way to change the MIDI channel of tracks recorded using the "M" function. If you know what the track's MIDI channel is, add that value to the displayed channel. If the result

# Hot Tips *Continued*

is greater than 16, simply subtract 16 from the total. This works because the MIDI Recorder uses the channel function as an "offset" to the actual value it records.

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## Stereo Imaging With The FB-01

By James R. Binkley

The FB-01 FM digital tone module can produce eight mono mode MIDI instruments, with each one having a separate volume control and a Pan setting (Left, Center, or Right).

It would seem that one can only position a voice to one of three points in the stereo field. This is not really the case. For example, one could combine two instruments with the same voice, put one in the Center and the other Left, and then adjust their separate outputs to position the stereo image of the "combined" voice somewhere between Center and Left. Thus, it is possible to have more than three points in the stereo field, with the tradeoff being that you have to combine voices to achieve this effect.

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## Using the KX88 & KX76 To Access DX/TX Character Sets

By Craig Wilson

Using the KX88/76 Continuous Sliders, it is possible to access those "different" characters (found in the Shift position on the top row of a standard typewriter keyboard), as follows:

! @ # \$ % ^ & \* ( )

To be able to use these characters as part of your voice names, follow these steps:

- 1) Enter PA mode by pressing the MODE button twice and holding it for about 1 second.
- 2) Press Bank A button #12 (Parameter Change).
- 3) Enter the controller number that you wish to define, "40" for example, by using the Bank B buttons.
- 4) Set the Limit to Off by pressing Bank B button #16.

- 5) Set the Group to "00" using the Bank B buttons.
- 6) Set the Subgroup to "1" using the Bank B buttons.
- 7) Set the Parameter to "11" using the Bank B buttons.
- 8) Go to CA mode and assign CS1 to "40" in the usual manner.
- 9) Return to Play mode.

After assigning CS1 to the same MIDI channel as the DX/TX unit you are using, turn the DX/TX System Info to "available." Now move CS1, and the first position character should change—you will have access to a wider group of characters. Note that the character sets for the DX and TX units are slightly different.

If you wish to access this expanded character set in other positions (the DX7 and TX7 have ten character positions in their voice names), it is necessary to enter a different Parameter number in step 7 above. The numbers are as follows:

- 11 = character 1
- 12 = character 2
- 13 = character 3
- 14 = character 4
- 15 = character 5
- 16 = character 6
- 17 = character 7
- 18 = character 8
- 19 = character 9
- 1A = character 10

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## A REV7 Stereo Phasing Patch

By Ken Como

Start with the Stereo Phasing preset, #13, and use these settings:

- DELAY:2.0 ms
- 1ST DELAY:0.1 ms
- 1ST LEVEL:11%
- MOD FREQ:1.2 Hz
- MOD DEPTH:85%
- MOD DELAY:5.0 ms

This patch works well with FM piano voices—it creates a nice warmth for a country music feel. As usual, mix the REV 7 to suit your personal taste.



# Questions

**Is the Yamaha MDF1 MIDI data file compatible with MIDI information from other brands of instruments?**

Yes. The MDF1 can be used to store MIDI System Exclusive data from instruments made by other manufacturers. If you use the MDF1 to store System Exclusive data from a number of different products (by different manufacturers), make sure that you keep a good record of what information is stored in each file on each one of your disks. Doing so will avoid a lot of potential confusion later on, since each file (in general) will only "make sense" to the model of instrument from which it came.

**Why don't the DX7 envelope generators act more like ADSRs and other envelope generators? I spend a lot of time working on the timing of the rates; but then, when I adjust the levels so that the envelope shape creates the sound I want, I find that the timing of the rates has changed. What's going on?**

We are asked this question (in one form or another) quite often, so we thought it would be useful to reprint an answer (to a similar question) that appeared in the first issue of *AfterTouch* (October '85):

Unlike standard analog ADSR envelope generators, in which a setting represents an absolute amount of time, the rates on the DX7 envelopes are rates of speed. Therefore, the amount of time taken up by Rate 1 will depend on how far the envelope is traveling. If Level 4 is set to 0 (which is typical) and Level 1 is 99, there is a lot more ground to cover than when Level 4 is 0 and Level 1 is 55, so the amount of time elapsed during Rate 1 will change.

This distinction is emphasized by the names—"Rate 1" rather than "Attack Time." Think of the rate settings as miles-per-hour: 10 is slow, 99 is fast. The overall time for the trip will depend on the distance covered. So, if you change Level 1 after setting Rate 1, you will change the timing of rate 1 (but not the speed). With practice, the relationships between the levels and the rates will become clear.

**What FB-01 voicing or voice librarian programs exist for the CX5M music computer?**

We know of two. One, the FB-01 Editor Program cartridge by Yamaha (YRM506), was described in detail in the August '86 issue of *AfterTouch*. The other, called CX Voice Master, is available by mail order from Noteworthy

## Answers To Questions From Readers.

Publishing/Productions. Here is some information.

CX Voice Master is an enhanced librarian program for CX-Series computers and the FB-01 tone module. The librarian features of the program allow the user to review, rename, delete, or reorder any of the voices from their entire CX/FB Voice-file collection as each new Voice file is being compiled.

Simple two-keystroke commands and convenient Help screens facilitate consolidation of voices or copying of entire Voice files. Expanded Voice-file performance allows access to 144 internal voices, giving you three banks of voices up and running at one time.

CX Voice Master is available in two forms: the 3.5" disk version and the Smart-Tape cassette version. The 3.5" disk version comes with a handy auto-load feature.

The disk program offers complete disk-file operation and listing for CX/FB-01 Voice-files, plus ASCII, binary, and manually transmitted or stored System Exclusive files (including those of all DX/TX synthesizers)—each file may be up to 6.4K in size.

The Smart-Tape cassette version upgrades itself: If a disk drive is added to your system later, the cassette will automatically include the disk-file operational features offered in the disk version (minus the speed and convenience of the disk auto-load).

For more information, send a self-addressed, stamped envelope to Noteworthy Publishing/Productions, 520 First St., Fillmore, CA 93015; or call 805-524-1747. When ordering, be sure to specify which CX model you own and whether you want the Smart-Tape cassette version (for \$29.95) or the 3.5" disk version (for \$34.95). California residents add 6% sales tax. For shipping and handling in the USA and Canada, add \$3.00.

**Using the QX1, it is great to use Step Time Entry to type in music that is beyond my performance ability, but I need to know how to make it sound more "human"—less like a computer. Any suggestions?**

The most obvious approach would be to make alterations in your QX1 Banks after you have entered them in Step Time Record: Use Edit mode to make minute changes in the Clock value for some of the notes. Since "human" feel is a very subjective thing, you may need to experiment until you find the approach that

# Questions

Continued



*QX1 digital sequence recorder.*

suits your needs. Make a copy of your original, unedited, Step Time Banks—experiment with the copies, and keep your originals intact (both to compare with your experiments and to create further copies on which to experiment).

### **Can you direct me to the right people to get my Yamaha CP-35 (circa '83) MIDIed via its Keycode Output jack?**

Forte Music performs such a modification. For further information, call them at 415-965-8880. By the way (for readers who aren't familiar with the term), the Keycode jacks on the CP-35 and other Yamaha instruments of the period represented an early, pre-MIDI interface system.

### **Is there a way to save the memory of the MEP4 MIDI event processor, either to cassette or to disk via MIDI?**

The MEP4 does not have a cassette interface. However, you can use the MEP4's Bulk Dump function to save its memory to disk over MIDI. You will need a unit that stores MIDI System Exclusive data, such as the MDF1 MIDI data filer or the DX7 II FD (which has a built-in disk drive). The basic Bulk Dump operation is described on pages 42–43 of the MEP4's owners manual. Simply make MIDI connections between the MEP4 and the storage unit (instead of to another MEP4, as described in the MEP4 manual); then, follow the instructions in the owners manuals of the MEP4 and the storage unit.

### **Is it possible to load 4-operator voices from a DX21 into a QX5 sequencer via cassette, perform some sort of System Exclusive editing on them, and transfer them into an FB-01—all without the use of a computer?**

There are lots of problems with this idea. First of all, the DX21 does not have a cassette storage

feature, so it is impossible to save DX21 voices onto cassette.

The DX100, a synthesizer that uses the same 4-operator voice architecture as that of the DX21, does have a cassette interface; however, it would still be impossible to load DX100 voice data from cassette into a QX5: The QX5 cassette interface is designed to load sequences that have been saved to cassette from its internal memory (or from that of another QX5), so it would not be able to read DX100 voice information stored on cassette via the DX100's cassette interface.



*QX5 digital sequence recorder.*

Next, the QX5 is simply a digital sequencer; while it has an extensive Edit mode for editing of sequence data, it has no ability to perform edits on voice data.

Finally, the FB-01 does not have a cassette storage feature either; and, if it did, you would still have one more problem: The voice data of the DX21 and DX100 is not compatible with the voice data of the FB-01.

Most of the current Yamaha 4-operator synthesizers are compatible: Voices created on the DX21, DX27, DX27s, DX100, and TX81Z are consistent with each other, and may be loaded from one unit to another via MIDI.

The FB-01 voice, however, has a different structure—as does the FB-01 itself. All of the other instruments mentioned above give you the ability to edit voices or create new voices using nothing more than the instrument's front panel. The FB-01, however, is a tone module pure and simple. It contains a large number of permanent internal voices (240), but gives you no direct way to edit these voices or create new ones. In order to do that, you must connect the FB-01 to a computer (via MIDI) and use a CAV (Computer-Aided Voicing) program created for use with the FB-01. For more information on voicing programs for the FB-01, see the August '86 and September '86 issues of *AfterTouch*.

# DX9 Diary

**I**T WAS A NIGHT much like any other night, and I was setting up my keyboards at a local bar. The band I was in played 60s rock and roll, and we had a steady gig at a popular local club. My keyboard stand had been giving me problems at the time. It was a very touchy stand which was nearing the end of its days. Little did I know that this was to be the very last night I used that stand.

I had just finished setting up the band's DX7 and DX9 in their places at the side of the stage. After checking all of my connections, I went through the usual process of tuning the keyboards. I got them all in tune, and then the band leader felt it necessary to move the keyboard stand slightly. He had to move the stand in order to put up the band's logo behind the stage.

Well, as you might have guessed, that was a giant mistake. No sooner had he set up the sign

when the stand holding the DX9 flipped over, and the keyboard tumbled fifteen feet to the ground with quite a crash. Two keys were broken in half, and the keyboard had grazed a young lady's back on its way to the floor.

Of course, I practically had a heart attack. My prized possession (the DX9) had fallen off the stage, and in the process had hit a girl in the back. How was I going to get the stand to work? How could I perform that evening? Would I be liable for damages caused by the keyboard's fall? All these thoughts raced through my mind as I prepared myself for the night's work.

Fortunately, we were able to jury-rig the setup and tape down the half-broken keys. This made it possible to go on with the performance, although the butterflies were still going strong inside me.

Of course, all that had happened would not

*Continued on page 20*

**The Night My DX9 Fell Off The Stage.**  
By Peter Van der Zee.

**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 program for the CX5M II music computer 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.

Have you discovered a trick that increases the musical flexibility of one of the Yamaha AfterTouch products? Send it in to our "Hot Tips" column. If we use your hot tip, you'll receive full credit plus a check for \$25.00.

Have you developed a new approach to one of the Yamaha AfterTouch instruments, or have you discovered an important secret regarding their use? Put it on paper and send it to us. Don't worry about your writing style—just get the information down. If we decide to use your material as a full article in AfterTouch, we'll write it up, put your name on it, and send you a check for \$100.00. (An AfterTouch article always covers at least one magazine page—which translates to at least four double-spaced pages of typescript.)

By the way, we cannot assume liability for the safe return of unused ideas, patches, or manuscripts. We will only be able to return unused material if you enclose a self-addressed, stamped envelope with your submission.

If you just have a question regarding the use of Yamaha professional musical products, send it along too, and we'll do our best to answer it in the pages of AfterTouch. (We regret that we won't be able to answer questions through the mail, but we will use all of your questions to guide us in our choice of future topics.)

Finally, if you just want to get something off your chest, or if you'd like to establish direct contact with other Yamaha AfterTouch product users, send in something to our "Letters" column. We'll do our best to print names, addresses, and phone numbers of all those who are interested in starting up regional users groups.

AfterTouch is your publication. Let us hear from you!

Write To:  
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# DX9 Diary

*Continued from page 19*

have been so amazing except for one fact: The keyboard that had taken such a fall, had been handled so rudely, and was played on for the entire evening—that keyboard was still in tune! Yes, at the end of that night I checked the tuning on my DX9, and it was perfectly in tune. We had played another evening of music without a

hitch. Unperturbed by the disaster which began the evening, we finished undaunted—ready to face the world another day.

This story is entirely true. It happened during early July of 1986 at the End Zone in Hermosa Beach, California. The band I was in was known as the Modbeats.