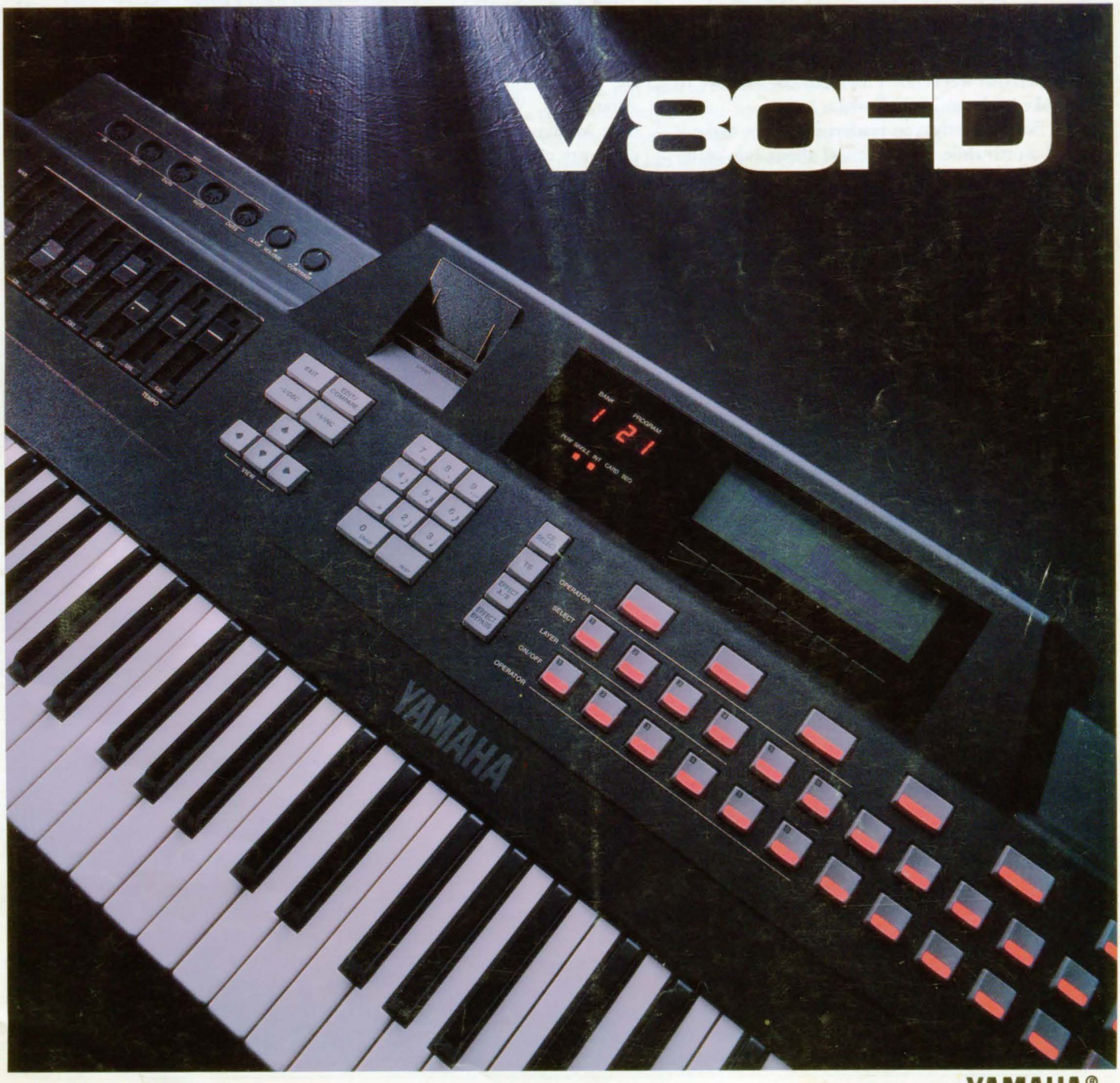
AFTER TOUCH™

THE OFFICIAL PUBLICATION OF THE YAMAHA USERS GROUP



JANUARY 1989

YAMAHA®

News & Information

HAPPY NEW YEAR! We hope your holidays were happy, and you're ready to get going in the new year. Right now, we're getting ready for the Winter NAMM (National Association of Music Merchants) trade show, in Anaheim, California, which is scheduled for the weekend of January 20th. Yes, that's right: Superbowl weekend! The sacrifices we have to make in the music industry....

But, honestly, you readers out there make it all worthwhile. We received thousands of responses from our recent Reader Survey. So, while we look over the latest technological advances in January, you all responded so positively about the main approach AfterTouch is taking that we feel it only fair to keep in mind a concern expressed by some of you, which was, essentially, "Should our old axe, quaint, hence be forgotten?"

AfterTouch is reading all of your suggestions to help improve the publication. Your generous response will keep us busy for a while tabulating all of the returned surveys, but we will give you an accounting of your thoughts in an upcoming issue. The early returns indicate that you are, in general, satisfied with the publication's efforts. And, although our balance of material didn't please all of you, your requests had a tendency to balance out: Some scolded us for being too technical and advanced, while others asked for more advanced, in-depth articles and columns.

Some of you indicated your needs by specifying past articles or columns that had been of help to you. Many of your suggested that more pages could be filled with more columns–particularly on MIDI basics and home recording techniques–and more articles about a product's capabilities. You also expressed a desire for articles that reveal the experiences of some of today's well-known professional musicians.

We also had a lot of hopefuls who said that we could help their musical needs by picking *their* survey for AfterTouch's Third Anniversary Prize–a DX11 multi-timbral FM digital synthesizer. Others were less specific and said that *any* free equipment Yamaha could send would be a big help. To those in these latter categories I can only inform you that if you haven't heard from us now, you can stop waiting by the phone: You were not the winner of the DX11 synthesizer. The winner of the prize was Todd Jones, from Hill City, SD.

While we obviously can't grant these wishes for free equipment, we are considering your inspiring and reflective thoughts quite carefully; we want to do all that we can to improve AfterTouch. We deeply appreciate all of the help you have given us in directing the future contents of this publication from the DMI (Digital Musical Instruments) division of Yamaha Corporation of America. As I mentioned earlier, the final results of our reader survey will appear in an upcoming issue.

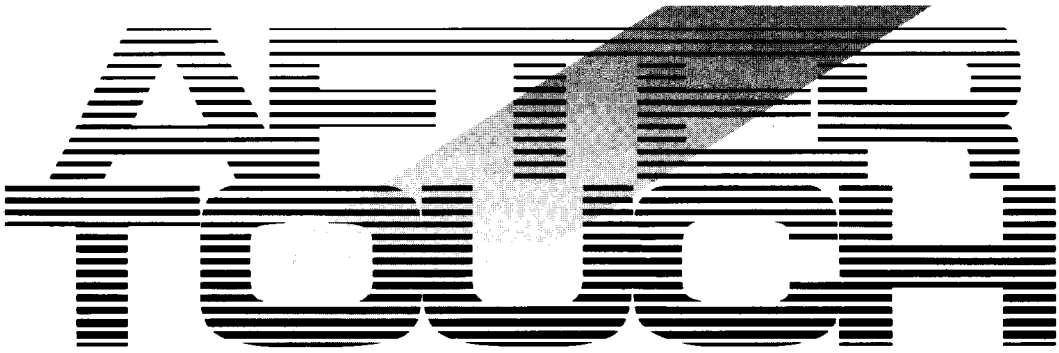
Meanwhile, there are a number of important items for you to read in this issue, our first of the new year. To get a quick preview of some of the major new products that the Yamaha DMI division will be introducing at the Winter NAMM Show, see the article beginning on page 5; and, to get an advance look at the most significant Yamaha synthesizer since the DX7, check out the introduction to the V80FD beginning on page 8.

This month's Hot Tips column space is devoted to "Resonance Effects For The SPX90," a fascinating article by reader Tom Miller. Finally, be sure to read about the Yamaha team of Product Specialists in the article beginning on page 10; they are a most valuable part of Yamaha's commitment to education.

–Sibyl Darter

Custom Voice Cartridges For The RX5 And PTX8

A library of voices for the RX5 and PTX8 has been developed in order to create Custom Voice Group Cartridges from existing sounds. Customers can choose from a library list of 140 voices, and customize a group of voices to suit their performance needs. Five free Parameter Edits can also be included with each cartridge. To receive more information, call the Yamaha Parts Service Department toll free at 1-800-443-3548.



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Questions & Answers

Answers To Questions From Readers. By Steve Deming And Tom Darter.

I use a WX7 as my main controller, and I am having problems getting my TX81Z's BCSEXYPHON voice (C-19) to respond. I've tried everything I know, but nothing works. All of the other TX81Z voices work great. Any suggestions?–Mike Smiley, Hanford, CA.

The WX7 has a switch that sets it up to send either MIDI volume messages or MIDI breath controller messages to a tone generator. If it is set to send MIDI volume, the BCSEXYPHON voice will not respond, since it is programmed to respond to MIDI breath controller messages.

There is another possible problem: The TX81Z contains a Single Utility that converts aftertouch messages to breath controller messages. If that Utility is engaged, the unit will not respond to breath controller messages. If the TX81Z is to respond directly to breath controller messages, this Utility function must be turned off.

I am trying to get some manuals for my PF80. I need the owners manual in Spanish, and the repair manual in Spanish or English. Can you help me?–Wilson Fernandez, Miami, FL.

Yamaha Corporation of America (YCA) does not offer owners manuals in Spanish, but they do exist. For more information, write to: Yamaha de Mexico, SA, Apartado Postal 28-207, Mexico 1 D.F., Mexico; or call 525-686-2722.

Service manuals in English can be purchased from the Yamaha (YCA) Parts Service Department. For more information, call toll free at 1-800-443-3548.

OOPS alert! In the October 1988 Questions column, a reader who was working on an editor/librarian for the FB-01 asked how he could obtain detailed documentation on the unit's MIDI implementation. We told him to contact the Yamaha Electronic Service Division, which was an error. In order to find out how to obtain detailed documentation of this kind, interested readers should contact the Yamaha Parts Service Department toll free at 1-800-443-3548. We apologize for the error.

My question has to do with the FB-01 "Data +1/Yes" pushbutton. Usually, a momentary push on this button will advance a value by one, and holding the button down will advance a value through several numbers, until it is released. However, pushing the button on my unit results (irregularly) in a "stuck" situation: the numbers continue to advance after I have released the button, and I can stop it only by pulling on the button manually or hitting it. For a while, I figured that this was simply a defect of my unit, but recently I was in Fort Worth, Texas, and found a display model at a store that did the same thing. Is there some way I can have this fixed? Also, is there any warranty coverage?–Dan Sturdevant, Kansas City, MO.

Yamaha has recognized this as a recurring problem, and the button has been modified. Contact your local authorized Yamaha dealer, and ask him to order this new part for you. Yamaha is providing the new part for free; however, the installation charge is at the discretion of your local dealer. If your unit is still under warranty, the installation should be provided for free.

The RX17's owners manual states that the unit can be used as a sound module *only* to receive notes from a sequencer. I use these MIDI settings: Channel Message = ON; SYNC = MIDI. However, the RX17 is still responding to the MIDI Start signal. How do I tell the RX17 to ignore MIDI Start and MIDI Clock Signals?–Paul Schwotzer, Colorado Springs, CO.

The RX17 does not have a mode that allows it to ignore MIDI Start and MIDI Clock signals. However, we think we have an answer to your problem. We assume that you want your sequencer to play the RX17's sounds, and that you don't want the RX17 to play any patterns (triggered by a MIDI Start signal). The solution is simple: Call up a pattern on the RX17 that *does not* have any data recorded on it. With this setup, the RX17 will respond to the information from the sequencer, but will not play a pattern in response to the MIDI Start signal (since there will be no data in the pattern to play).

New Yamaha Products

A Quick Look At Some Of Yamaha's Major New Products For The New Year. Compiled By Tom Darter.

THE NEW YEAR BRINGS with it a number of new musical products from Yamaha's Digital Musical Instrument (DMI) division. One is featured prominently in this issue, and others will be detailed in issues later this spring. Still, since they are all being introduced at this year's winter NAMM (National Association of Music Merchants) industry trade show in Anaheim, California, we thought that our readers would like to have a short introduction to each one of these new units in this, our first issue of 1989.

V50

In addition to its powerful dual FM tone generators, the multi-timbral V50 features a built-in PCM drum machine, an 8-track sequencer, and 17 digital effects. All programs, sequences, and patterns may be saved using the built-in 3.5" disk drive or a Yamaha memory card.

The V50's synthesizer section consists of two 4-operator, 8-waveform FM tone generators, for full 16-note polyphony and 8-timbre capability. At any time, you can access up to 300 voices instantly: 100 internal, 100 user preset, and 100 card voices. The V50 can also use voice data from the Yamaha DX11, TX81Z, YS100, YS200, or B200.

In Performance mode, up to eight different voices can be played simultaneously. A Quick Edit option has been added to the V50, allowing rapid changes to a voice's brilliance, volume, attack, or release time. Of course, full editing is also available.

The Rhythm Section contains all of the features of a professional drum machine. 100 patterns can be created and stored in memory to go along with the 100 preset patterns. Each percussion instrument has its own setting for pan, volume, MIDI note, and signal processing. There are 61 percussion sounds, including standard drums, Latin percussion, and special effects.

Also of professional quality is the Sequencer Section. This is a full 8-track sequencer, controlled from tape recorder-style buttons on the front panel. The sequencer has a capacity of 64K, which is enough for approximately 16,000 notes. Each track has its own independent MIDI transmit and receive channels. Other features include real and step time recording, overdub, mix, quantize, copy, and erase. To enhance the sequencer performance, sophisticated dynamic voice allocation is employed to make full use of the 16 available voices of polyphony.

Finally, digital signal processing enhances all of the other sections. These effects are programmable for each individual voice. Seventeen types of effects are available, including delay, reverberation, distortion, compression, equalization, and gate. Ease of operation is aided by the use of "Soft Buttons." Housed under the backlit LCD, these buttons cor-

Continued on page 6

V50 digital synthesizer.

Products

Continued from page 5

respond to the menu currently shown on the LCD screen.

Available by the end of February at authorized Yamaha DMI retailers, the V50 has a suggested retail price of $1895.00.

RX8

This new 16-bit drum machine is the latest in a full line of digital rhythm programmers from Yamaha. It is ideal for both live and studio performance and composition.

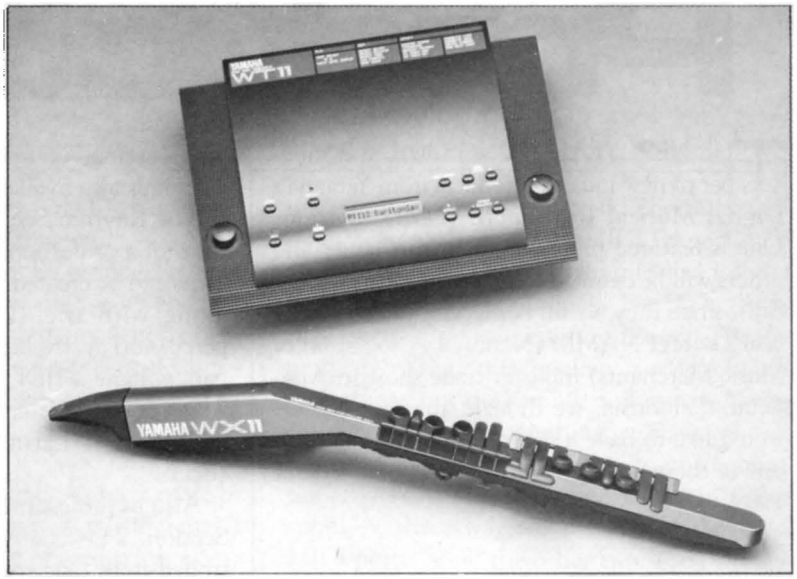
The RX8 goes beyond being a drum machine: Its sample library includes 5 bass drums, 5 snares, 8 toms, and 5 cymbals; in addition to this full complement of rhythm voices, the unit's ROM voices include Latin percussion instruments, marimba, orchestra, and even two electric bass samples, for a total of 43 sounds.

An important new feature is the inclusion of two extra assignable outputs in addition to the basic stereo left and right outputs. Any instrument can be assigned to one of these outputs for individual signal processing.

The RX8 also includes many of the features of the flagship Yamaha RX5 digital rhythm programmer. These powerful capabilities include real time and step writing, the ability to reverse any sound, up to two octaves of tuning per voice, variable quantization, and extensive MIDI implementation. You can also program volume and tempo changes within each of the 20 songs.

Programming is made easy by a backlit liquid crystal display. The internal memory holds 100 patterns and 20 songs; there are also many options for outboard storage, including the Yamaha MDC32 memory card, MIDI bulk dump, and cassette tape.

RX8 digital rhythm programmer.



WX11/WT11 MIDI wind system.

The RX8 will be available by the end of January at authorized Yamaha DMI retailers for a suggested retail price of $495.00.

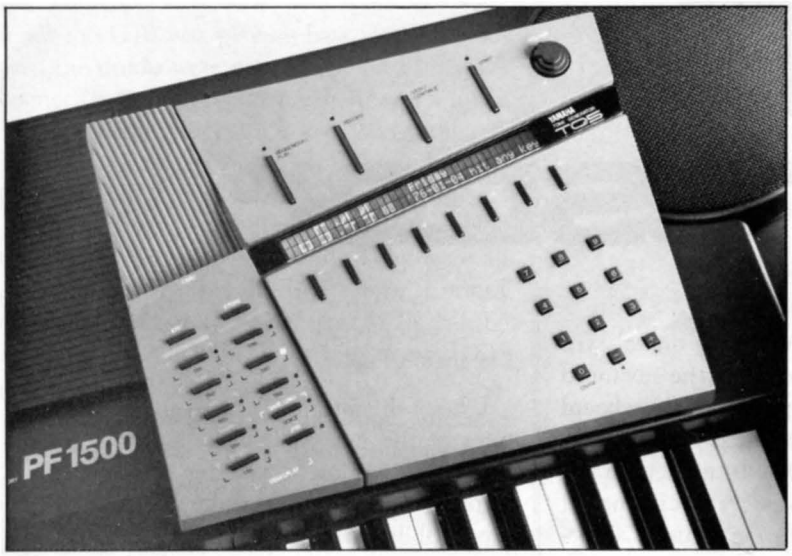
WX11

The WX11 MIDI wind controller and its companion WT11 tone generator, priced at just under $1000 suggested retail, provide woodwind and flute players with a ready-to-use system that plays almost exactly like its acoustic counterparts.

As with its big brother, the WX7, the WX11 allows variations of lip and wind pressure to control volume, timbre, and modulation of the sound, using standard Boehm fingering. Polyphony may be achieved using the WX11's hold feature, enabling the player to hold one note while playing another. The player also has the ability to transpose up by 1, 2, or 3 octaves, or down by 1 or 2 octaves.

For ease of setup, the WX11 has five sensitivity settings, which can be easily and quickly selected. And, for convenience, the dedicated WT11 tone generator is ready to go right out of the box. It is specifically voiced for use with the WX11, and includes 112 preset voices and 96 preprogrammed performances (combinations of voices and effects). User memory is available for 32 users voices and 32 user performances. The WT11 also includes its own digital signal processor with 10 effects, including reverb, echo, and distortion.

Now available at authorized Yamaha DMI dealers, the WX11/WT11 system has a suggested retail price of $995.00.



TQ5 tone generator.

TQ5

In addition to providing hundreds of voices, the table-top TQ5 tone generator has an on-board 8-track sequencer, plus effects (including reverb, echo, and distortion).

As powerful as it is, the TQ5 is also remarkably easy to use. Calling up, playing, and even editing of sounds is extremely intuitive and straightforward, even for those with no prior synthesizer knowledge. The TQ5 rests easily on top of your synthesizer or piano, or close by your wind or guitar MIDI controller (such as the Yamaha WX7 or G10). The new Yamaha PF1500 is an ideal companion for the TQ5, combining sampled and FM sounds with a sequencer and signal processing.

When used with the Yamaha G10 guitar MIDI controller, the TQ5 takes full advantage of the G10's real time performance capabilities. And, since the TQ5 can accept multiple incoming MIDI channels, each of the G10's strings can be assigned to a different MIDI channel for different voices, if desired.

The TQ5's tone generator is 4-operator, 8-waveform FM, basically the same as the YS200 and the TX81Z. And, as with the YS200, the TQ5 is 8-note polyphonic and 8-note multi-timbral. Internal memory includes 100 preset voices, with an additional 100 user voices. Another 100 voices can be accessed from a memory card, giving you up to 300 voices available at any time.

Also on-board is an 8-track MIDI sequencer. This allows the user to record, play back, and edit up to eight tracks of music. It also offers the type of extensive editing and versatility found on more expensive dedicated sequencers. One new feature of the TQ5 is that it shows the timing of sequences in minutes and seconds.

Now available at authorized Yamaha DMI retailers, the TQ5 has a suggested retail price of $695.00.

DS55

An auto-accompaniment function is just one of the distinctive features of the new Yamaha DS55 digital synthesizer. Among the unit's professional features are 4-operator 8-waveform digital synthesis tone generation, a 61-note touch response keyboard, and a built-in digital delay.

Priced at under $800, the DS55 is ideal as a first synthesizer, and it is as powerful as it is affordable. 200 voices are preset, and there is additonal memory for 100 user voices. These user voices can be entirely new, or they can be edited from the 200 voices in permanent memory. A very user-friendly editing system allows quick modification of any preset.

The DS55 also features an innovative left-hand Auto Performance function. This provides a range of 43 different sequences in many musical styles. One type of auto performance is called "Arpeggio," which produces automatic arpeggios when two or more notes are plaed on the lower octave of the keyboard. "Key Shift" sequences are all single patterns that may be transposed to any key, by playing the appropriate note, again on the lowest octave.

In addition to these preprogrammed sequences, there are several songs from which to choose. Different sections (verse, chorus, bridge) can be selected by playing different keys in the lowest octave.

Now available at authorized Yamaha DMI retailers, the DS55 has a suggested retail price of $795.00.

Sequence

Continuing its support of the innovative C1 music computer, the DMI division of Yamaha Corporation of America introduces Sequence, a powerful MIDI sequencing software program. Sequence was developed by Yamaha to take full advantage of the C1's extensive MIDI hardware and unique keyboard.

Sequence provides a fully professional sequencing environment, which includes one main display screen and five editing windows, accessible using either a mouse or keyboard commands. The main display shows everything needed for recording and playback. In addition, most editing operations can be executed from this display.

The Sequence package offers fantastic power,

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V80FD Synthesizer

Introducing Yamaha's New Multi-Timbral Digital Synthesizer, Which Features An Expansion Port And A Built-In Sequencer. By Tom Darter.

GMR (Grey Matter Response), who assisted Yamaha with the E! expansion kits for the DX series, has co-developed the V80FD with Yamaha, and will continue support with expansion products.

THE NEW YAMAHA V80FD digital synthesizer brings together all of the advanced features needed by today's professional keyboard player, including an on-board expansion port for future hardware additions. Introduced at the Winter NAMM (National Association of Music Merchants) Show in Anaheim, California, the V80FD offers many other powerful features, including a powerful new user interface, upward expandability, a complete 32-track sequencer, an FM tone generation system with 32-note polyphony and 16-voice multi-timbral capabilities, a built-in digital signal processor, and an on-board 3.5" disk drive.

User Interface

The V80FD has a large 40-character by 8-line backlit supertwist LCD screen. It is designed to be easy to read to both bright and dark lighting environments. A contrast knob located in the top left corner of the unit provides optimum clarity for any lighting situation. Right below the LCD screen are six menu buttons that are used to select one of the choices that appear at the bottom of the LCD. The screen displays a lot of information at one time, all in a graphic format that makes the unit easy to understand and operate.

The front panel also includes several other innovations. Six programmable continuous sliders (CS) and a volume slider are located on the far left. CS6 is usually used to change the tempo of the sequencer or click tone. The other CS sliders change parameters in the LCD screen. For example, if the LCD has a parameter that has "CS1" next to it, moving the CS1 slider will change that parameter, and the LCD screen will show the change to the parameter in real time. This is great for getting at several different parameters without having to move a cursor around.

Also included on the front panel are cursor keys, a numeric key pad, arrow buttons, function buttons, and an exit button that sends you to the previous LCD screen.

Expansion Port

One of the most innovative and exciting features of the new V80FD is its totally unique internal expansion port. Using the same idea as many home and business computers of internal expandability, Yamaha has incorporated a hardware I/O bus system for future expansion boards. These may include add-on PCM and other types of tone generation systems, updating and increasing the power of the sequencer and memory system, and additional audio, MIDI, and other types of communication I/Os. This upward expandability will prolong both the life and the musical effectiveness of the V80FD.

Sequencer

The V80FD contains an intuitive yet sophisticated 32-track sequencer with many unique features, including loop recording with independent looping for each track, automated digital mixing of every track, and individual note editing. The oversized display greatly simplifies the operation of the sequencer. To enhance the sequencer's performance, a sophisticated dynamic voice allocation system is employed to make full use of the instruments 32 notes of polyphony and 16-voice multi-timbral capabilities, using either performances or single voices.

The sequencer offers both Song and Pattern memory; there can be up to 99 patterns per Song, and up to 99 Songs can reside in memory at once. The internal 64K memory is fully backed up by battery, so it will hold sequence information even when the unit is turned off.

Tone Generation

The form of synthesis used is an enhanced version of Yamaha 6-operator FM synthesis. New features include negative velocity sensitivity, velocity to feedback, random LFO, random Pitch EG, and independent operator modulation.

In performance mode, it is possible to layer up to four different voices. Other new performance features include transpose for each voice, key and velocity limits for each voice, velocity curves for each voice, temperament for each voice, and audio output selection for each voice.

Though there are many new programming features in the V80FD, it is compatible with DX7, DX7 II, and TX802 sounds, providing it with the largest available voice library in existence. And even though the V80FD is a very complex instrument, the Quick Edit features make it possible for musicians with no technical expertise in FM to alter the unit's voices.

The unit contains multiple banks of on-board sounds, including 64 voices, 64 performances, and 160 permanent ROM (Read Only Memory) voices and 128 permanent ROM performances, including percussion. Each voice has its own temperament or microtuning.

Signal Processing

The built-in digital signal processor offers 31 different programmable effects, as follows: reverb hall, reverb room, reverb vocal, reverb plate, reverb + gate, distortion + reverb hall, distortion + reverb plate, early reflection, gate reverb, reverse gate, distortion + gate reverb, distortion + reverse gate, delay left and right, stereo echo, distortion + delay, distortion + echo, stereo flange, distortion + flange, stereo phasing, chorus distortion + chorus, symphonic, distortion + symphonic, pitch change 1, pitch change 2, pitch change 2s, pan, distortion, parametric equalization, adr-noise gate, and compressor.

Part of the process of creating a single Voice, a Performance, or a Song is selecting which effect and which variation will be used when it is called up. There is only one effects processor in the V80FD, so only one effect type is active at a time. However, you can store two variations (sets of values) in each effect memory. During a performance, pressing the Effect A/B button will instantly switch from one set of values to the other.

Disk Storage System

The V80FD comes equipped with an onboard 3.5" disk drive. The following types of data can be stored to and recalled from disk: Programs & System, Voice & Performance, User Effects, User Tunings, System, and Sequencer Song.

V80FD digital synthesizer.

The drive can also be used as a MIDI Data Recorder (MDR) to save MIDI bulk data from other MIDI instruments. And, if you have a MIDI instrument that requires a bulk dump request before it will send out a bulk, you can provide this with the V80FD by calling up the Dump Request screen. Using this screen, you can enter a dump request message in hexadecimal; then, when you press the OK menu button, the request will be sent out the selected MIDI OUT port.

Connections

In addition to the standard MIDI IN and MIDI THRU, the V80FD comes with three programmable MIDI OUT connectors. There are also stereo audio output jacks, a headphone jack, and connectors for two Continuous Foot Controllers, two Foot Switches, and a Breath Controller.

* * * *

The V80FD will be available in late Spring at authorized Yamaha Digital Musical Instrument (DMI) retailers, for a suggested retail price of $2995.00. For more information, see your authorized Yamaha dealer, or write to: Yamaha Corporation of America, Digital Musical Instruments Division, P.O. Box 6600, Buena Park, CA 90622. We will also be highlighting many of the unit's unique features in more detail in upcoming issues of AfterTouch.

Product Specialists

An Interview With Yamaha's Elite Team Of Product Specialists. By Sibyl Darter.

HAVE YOU EVER FELT OVERCOME by the rapid advancement of technology and the bewildering options available to you when shopping for an instrument to accommodate your musical needs? Whether you're still going to music stores deciding which instrument to buy, or if you've recently purchased a system, you may be feeling confused by so many new terms and possibilities. Learning how to use the instrument of your choice can be tedious and frustrating.

At some point, does this frustration take over and make you feel like tossing your chosen instrument as far as possible? Perhaps you're a creative, experimental-type who actually *enjoys* the unintended, unpleasant sounds coming from your new instrument; perhaps this is when members of your family or neighborhood feel like tossing *you* as far as possible. Let's face it: Some of us feel like dinosaurs in the advanced world of musical instruments technology.

Don't get in a panic! There are ways to avoid these moments of frustration. Yamaha doesn't want you feeling like you're stuck in a techno-tarpit. The DMI Division of Yamaha offers clinics throughout the country to help their consumers become better aquainted with this new equipment–to help music makers learn how to use these intrustments. While the DMI Division is justifiably proud of their technological advancements and the many products they offer, they're also aware that the people buying this equipment need supportive education to help them best use it. Yamaha has always been attentive in the education department: Yamaha Music Schools have long been a respected method of education, and the literature that Yamaha makes available to their consumers is ever-expanding. Yamaha's educational efforts also include product specialist clinics.

The Product Specialists are experienced musicians who can help you achieve your musical goals. They show you how to use the features on these new products correctly, and do it in an enjoyable, informal atmosphere.

* * * *

Mark Santos, a "rookie" on the team of product specialists, feels that these clinics are worthwhile because, "they're done by musicians. We identify with the people who are there because they are also musicians, even if only at a beginning level."

Mark recently came to the mainland from Hawaii. While residing in paradise he did studio work with artists such as Dolly Parton, Jim Nabors, and Don Ho. He performed opening acts for the likes of Whitney Houston and Jermaine Jackson. He also worked in the many clubs around Honolulu, including Nick's, which was used as the hangout spot for the Magnum P.I. TV series. Mark has been a Yamaha Product Specialist for 3 months. He explains, "I attended one of the demonstrations while I was still living and working in Hawaii. I thought the program was a good one, so when Yamaha asked me to join the DMI Division as a Product Specialist, I agreed!" For Mark, one of the job's major joys is the interaction with the people he meets at the clinics.

Kevin Stratton is another DMI Product Specialist. His professional credits include working with Frank Serafine on the sounds for the movie *Nightfall.* They had previously worked together on *Short Circuit 2.* A musician with a penchant for programming, Kevin is also the founder of the Electronic Musicians Group in Illinois, where he resides. "Most of my compositions have been used in television commercials," he explains. "Usually, I'm hired just to create the sounds." His research in creating digital reverberation using FM synthesis and his development of original software programs for a MIDI studio complement his many musical skills.

When asked what he feels is unique about the Yamaha product specialist clinics, Kevin responds, "Other companies offer a product specialist program, but I think many of them tend to be too sales oriented. As a business we obviously have to keep that [sales] in mind. However, the DMI clinics are seeking to educate people so that they'll have a better understanding of all this high-tech equipment–so that they can comfortably express their feelings musically."

Mark offers another reason for these clinic's popularity: "It's the humanizing aspect of the sessions that makes them special."

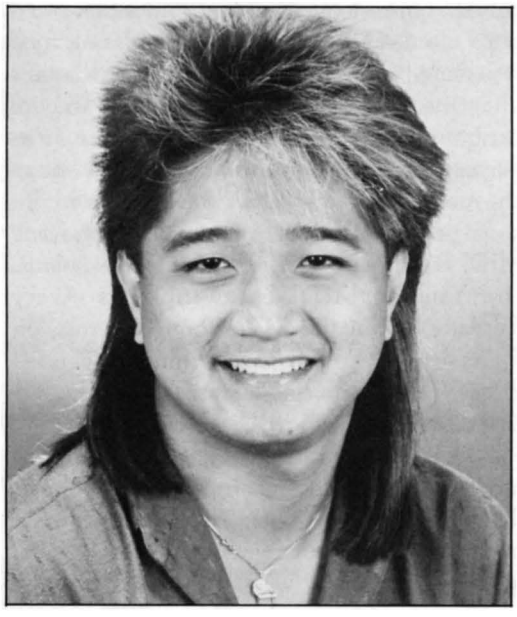
How involved with the electronic scene does

a person need to be in order to appreciate and get something out of these clinics? "Anyone, from the novice to the more experienced guys who have loads of equipment and are looking for more information to help them best utilize their set-up, show up at these clinics," observes Santos.

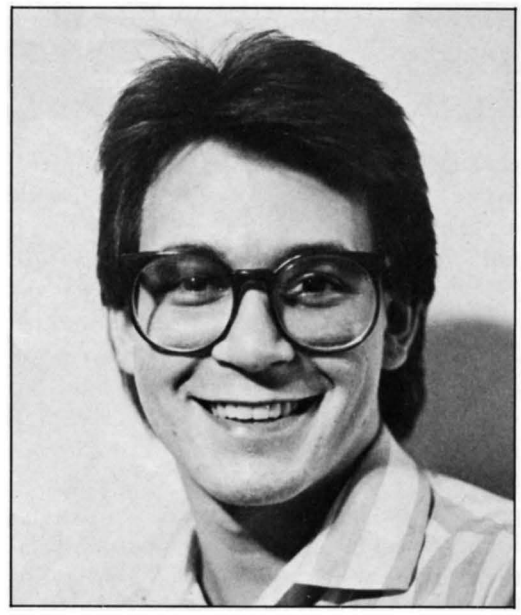
Phil Clendeninn, a Product Specialist from New York, estimates that he gives twelve to fifteen clinics a month. Phil's musical background includes his work as a recording engineer with artists such as Diana Ross, The Rolling Stones, and others over a twelve-year span. His experience and education (he holds a Bachelor of Arts degree from Syracuse University, in New York) make his clinics a valuable source of information for a user of Yamaha products. The varying levels of expertise of the people attending the clinics is something Clendeninn always finds interesting. Why? "Because you get all kinds of people coming to these classes," he explains. "From age 8 through 80–though most fall in the 20-30 age category–I see all levels of musicians: hobbyists, semi-pros, amateurs. It runs the gamut. Mostly, it's people who've always wanted to know what all this equipment does."

Kevin notes that, "while many of the people are right in the middle of the scale, there are usually some beginners, and there seems to be a fair amount of people who are experienced with electronic instruments."

Mark says, "I've found that the people coming to these clinics are on many different levels. The biggest challenge for me at some of the clinics is finding the right level to communicate with these people. Sometimes you'll have a group where there will be one person asking which MIDI cord they should use for their particular set-up, and in the same session another



Mark Santos.



Kevin Stratton.

person is asking (with the deepest sincerity) which 'sympathizer' would be the best to buy for their family. What I've experienced is that they are mostly musicians looking for answers, so that they can play their music."

In a recent conversation with AfterTouch editor Tom Darter, Phil described the way he starts one of his clinics: "I usually start out the clinic talking about FM synthesis. I'm still amazed at people who think they've heard it all, or what a lot of people's understanding of FM really is. When I ask the DX7 owners at a clinic–and there are usually a lot of them–how many have actually hit the Edit button on the machine, maybe two or three hands go up. So then I try to get them over their fear of hitting the Edit button. I use a little analogy about a bicycle with training wheels, and the kid is scared to take the training wheels off, and another kid comes along and says, "What, you don't ride yet? Are you kidding?' So I say, 'The first few weeks you may fall down, but after three weeks of being involved with it you start to learn certain things.' I tell them to take a sound apart; that's the best way to learn. You find a sound you like, start playing around with this or that parameter, and see what happens."

Danny Hoefer, the lone guitarist of the four, reports that the range of musical ability and experience of the people at his seminars seem to be "pretty evenly divided between semi-pros and those who play for their own enjoyment." Danny has been playing guitar professionally for 20 years. His credits as a musician include being a member of the historic San Francisco-based band Tower of Power. He's also recorded and toured with such notable artists as Denice Williams and the popular group Earth, Wind & Fire. "These clinics allow me a chance to

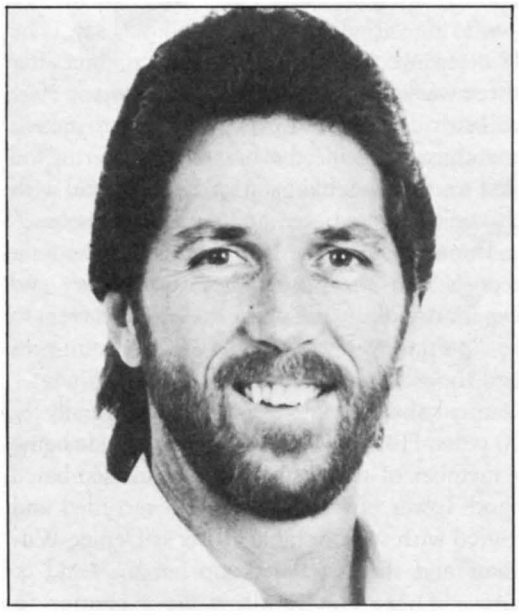
Specialists

Continued from page 11

explain the possibilities of using this instrument, from a guitarist's point of view," Danny explains. "I try to reassure them that Yamaha is not trying to replace the guitar with the G10. It's not an instrument that doubles as or is the same as a regular guitar. It's actually a dedicated MIDI controller. It gives guitar players the chance to play a lot of different sounds, but without having to learn to play keyboards." Danny speculates that a reason for the hesitation from guitarists toward the G10 could be previous non-pleasurable experiences that earlier MIDI guitars gave to the guitarist population. "There were units out there a few years back from several other companies, but they just didn't work that well. The G10 works really well!"

In a recent survey AfterTouch's readers informed us that their background in electronic music consisted of an education often described as "self-taught." Most of the readers who commented on what they needed more guidance on brought up the subject of MIDI. It starts to become apparent that there are a whole bunch of us MIDIOTS out there! And many of us are looking for an educational but musical path.

Before choking the neck of your new G10 guitar synthesizer with a MIDI cord or becoming desperate enough to pull the main power plug on your entire system, consider these specialist's observations after talking with the general public at these clinics. Many people's understanding of what MIDI is and what it can and cannot do is still very basic. Danny's experiences from these clinics tell him that, "A lot of guitar players still don't know too much about MIDI, so I give an overview of MIDI at my clinics."



Danny Hoefer.

Phil continues on the subject: "Every time I start assuming that everybody understands or is comfortable with MIDI, I always find myself introducing the whole concept to people for the first time."

Kevin concurs that many people have a problem with MIDI. "It is mostly because they don't really understand the purpose of MIDI," he explains. "And, once again, application seems to be the problem. MIDI is an open-ended kind of thing. You can go to the extremes–System Exclusive in real time–or you can do things very simply, just layering two synthesizers together."

"It's still such a new thing," Mark notes. "It becomes more confusing when people try to combine this MIDI knowledge with all of the other electronic technology available today."

Kevin thinks that people basically lack direction and applications. "They come up with mental images of what they think MIDI *should* do," he explains. "And, when it doesn't do that, they feel that they just don't understand it. I spend a lot of time answering 'Why doesn't it do this?' kinds of questions."

Phil points out, "I try to introduce MIDI on a basic level, and show how I, a fellow musician, have found ways to use different MIDI gear. It's always related to music, with specific demonstrations of parts of the gear. There really is no *single* way that it has to be used. Each person has to find their own way."

"I work in a band. How can I use MIDI in a band?" This is a question that Phil says is asked quite often: "A lot of people think it's only for a one-man band kind of situation, or that it's cheating with their music, or that they're replacing musicians. They can't see it as augmenting what they are doing. That's one of the reasons we put together the MIDI band. To show people a live performance situation using MIDI equipment." Besides Phil on keyboards, the Yamaha MIDI band includes Avery Burdette playing the WX7, Tony Verderossa on PTX drums, and fellow product specialist Danny Hoefer showing guitarists how to intertwine musically with MIDI using the G10.

"We kept switching bass parts and stuff around," Phil recalls. "That was the fun thing. They had a video camera shooting the thing, and they could never guess who was playing what. At times the WX7 was playing bass, at

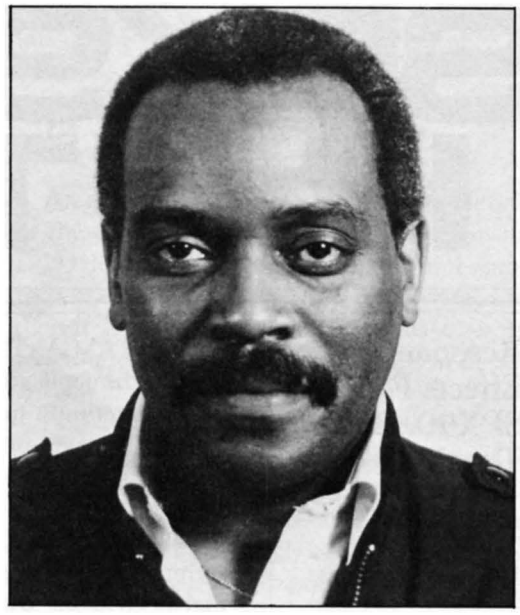
times the G10 was playing bass, and at times even the drums were playing the bass line. We bounced it around pretty much. It was a lot of fun, and the reaction we got... We're still getting calls. I went to a panel discussion down at NYU on MIDI the following Wednesday, and out of the forty people who showed up, ten of them had seen the MIDI band. They were all excited about it. It became like a "buzz" thing at the panel discussion: 'Well, gee, MIDI can be used in a live situation.' I was just amazed that people don't really see that.

"A common misconception people still have about MIDI is that it's all about sequencing, or that it's all keyboard players," Phil continues. "It's just amazing to see the reactions that we are getting with the MIDI band. People are saying, "Wow, you're redefining the roles of the musicians," because we would switch off and play different parts during a live performance. Avery does some real nice stuff with the WX7, where he plays the bass line, and then accompanies himself with chords, a call and response kind of thing. It was just too much fun! I hope we'll be doing more MIDI band performances."

"MIDI definitely allows you to explore new paths in your own musical performances," offers Hoefer. "I started thinking musically as a non-guitar player. In fact, the G10 made me realize how much like a guitar player I *do* play. It's allowed me to think of my playing as not just a guitar player, but as a musician. That sounds weird, maybe. At one clinic, a guy came up and was strumming the G10 in a folk music style; the unit was set up with a guitar sound. Then, he asked for a violin sound, so we gave it to him. But, he still strummed the strings in that same folk style, and it sounded *wrong*. You'd never hear a violin sound like that."

Kevin says he "spends a lot of time with people in these seminars teaching them about acoustic sounds. When one concentrates on and understands the acoustic properties of the actual acoustical instruments, approaching the synthesizer becomes much more simple."

Phil thinks that, "although everybody thinks that they knew how to program analog synthesizers, they're learning now that they were basically just spinning knobs until they came up with a sound they liked. With the data entry kind of system, it's not so easy to spin the knobs anymore. I tell people that if they get involved, they'll learn something. I still do a thing about getting over the fear of delving into FM. And I stress the point that you can *play* on sounds in FM because you get timbre changes the harder you hit. And that's the kind of thing that goes into expressing yourself."



Phil Clendeninn.

Kevin sees a large part of his clinic as being an educational opportunity that can enlighten musicians about the important and admirable qualities of the products demonstrated and offered by Yamaha. "These instruments were not built as techno-boxes with various bells and whistles that allow you to press a button and suddenly sound like Herbie Hancock," says Kevin. He elaborates, "These high-tech boxes and devices can bring about a whole new approach to creating and expressing feelings. Yamaha's philosophy is to build a musical instrument that allows a musician to express himself. We don't want the instrument's features directing your music. If we simply try to push a product without any education, and if customers are not aware of how they can go about creating their own music, the customer may feel alienated from us. The relationship will not last."

As the G10 specialist in the group, Danny understands the alienation a customer may feel toward new products. "If the targeted group of consumers have unrealistic goals for a product and then find that they can't reach these goals, they become frustrated, and then hesitant to become further involved," he points out. "When too many obstacles interfere with someone's creative process, they start to have negative views or feelings about the product."

Mark is impressed that "the people at Yamaha understand that the common thread between all these people at the clinics is that they want to make music."

Danny tries "to give them a vision of what the instrument can do, how it could expand their ability as a total musician. I think of the clinics like a bunch of guys who have come

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SPX90 Hot Tips

Resonance Effects For The SPX90. By Tom Miller.

SINCE I AM A GUITARIST first and foremost, the applications described in this article will center most immediately around guitar. However, I'm certain that these ideas will be found useful in many different signal processing situations.

I play Speed Metal, and I'm constantly searching for harder and harsher guitar sounds. I had been using distortion and an exciter before my SPX90 in the parametric EQ configuration (preset #30). After exhaustive tweaking, even going so far as to route a measured amount of the SPX output back to its input for controlled feedback loops, I found that none of this provided the biting resonance and bright clarity I needed. I wanted a totally different approach.

I had long been using digital delays to spice up my sound, and I wondered what would happen if I used a delay time shorter than the time scale of the individual waves being processed. Because the SPX90 has delay times variable in 0.1 millisecond intervals (down to a minimum value of 0.1 millisecond), I was able to do just that. In addition, since there are two delay sections with independently variable times and feedback settings (with inversion), a great variety of these sorts of sounds can be created. For clarity (and for lack of a better name), I'll refer to these very short delays as resonance effects. All of the SPX90 patches given below start from the **Delay L,R** preset (#7). In each case, call up preset #7, and then enter the given parameter and front panel values.

The first patch I'm sharing is called "Chinky," a really gnashing, toothy sound for use on distorted guitar or other bright program material:

Chinky (res effect, from preset #7)
L ch Delay: 0.5 ms
L ch FB: −51%
R ch Delay: 0.2 ms
R ch FB: +46%
High: 1.0
Balance: 100%
Output Level: 100%

Care should be taken in modifying feedback (FB) level, as these effects get their distinctive sound by hanging on the edge of feedback squeal. Also, they can be a little rough on the eardrums, so keep the volume down!

The next patch, called "Toasty Tubes," is a little more subtle, aimed at "warming up" a guitar sound:

Toasty Tubes (res effect, from preset #7)
L ch Delay: 0.1 ms
L ch FB: −40%
R ch Delay: 0.2 ms
R ch FB: +48%
High: 1.0
Balance: 100%
Output Level: 100%

It is important to remember that, while these are not delay effects in the conventional sense, neither can they be duplicated by any normal EQ or filter combination. There are, however, some general principles for setting up desired sounds with resonances. First, to avoid feedback squeals, keep the combined absolute values of the feedback (FB) levels below 100%. Second, "longer" delay times of 0.8 to 3.0 milliseconds tend to increase the low frequency content of a sound, whereas shorter delay times have a general tendency to increase the high frequency content of the sound. Third, negative feedback seems somewhat more "musically useful" (at least to me) than positive feedback. Finally, expect the unexpected, as small changes in the patch parameters can have a great effect on the overall sound.

Here are two more resonance programs especially for distorted guitar:

Hatefull (res effect, from preset #7)
L ch Delay: 0.1 ms
L ch FB: −45%
R ch Delay: 0.1 ms
R ch FB: +45%
High: 0.7
Balance: 100%
Output Level: 100%

Metal Hell (res effect, from preset #7)
L ch Delay: 0.7 ms
L ch FB: −44%
R ch Delay: 0.2 ms
R ch FB: −44%
High: 1.0
Balance: 100%
Output Level: 100%

These are more harsh sounds. "Hatefull" is midrange oriented, while "Metal Hell" is of the extra-crispy variety. Effects like these can be helpful in cutting through an overbearing mix. The patches can be tamed or toned down a bit by lowering feedback levels and/or mixing dry signal with effect signal via the Balance control.

Here are two more patches, a bit abstract this time:

Oboe (res effect, from preset #7)
L ch Delay: 0.3 ms
L ch FB: −50%
R ch Delay: 0.4 ms
R ch FB: −50%
High: 1.0
Balance: 100%
Output Level: 100%

Fat Boy (res effect, from preset #7)
L ch Delay: 30.0 ms
L ch FB: −46%
R ch Delay: 0.1 ms
R ch FB: +51%
High: 0.8
Balance: 100%
Output Level: 100%

"Oboe" provides a reedy tone reminiscent of an oboe, a sort of middle-Eastern feel. "Fat Boy" is just plain gross, real brassy and fat (actually a flange effect).

More interesting sounds are obtained when these resonance effects are combined with the conventional long delays. In this way, each echo (repeat) runs through the resonance process again and again until they gradually dissolve into a weird wash of sound.

Premonitions (res effect, from preset #7)
L ch Delay: 333.0 ms
L ch FB: +49%
R ch Delay: 0.5 ms
R ch FB: −47%
High: 0.9
Balance: 47%
Output Level: 100%

SPX90 digital multi-effects processor.

War O' The Worlds (res effect, from preset #7)
L ch Delay: 100.0 ms
L ch FB: +57%
R ch Delay: 0.1 ms
R ch FB: −41%
High: 1.0
Balance: 100%
Output Level: 100%

"Premonitions" is an eerie ambience, effect, intended to convey a feeling of creeping dread. Try this one with bends, glissandos, noises, and voices. The right channel delay time can be varied to adjust the tone of the repeats. "War O' The Worlds" is an attempt to duplicate the sound effects of the Martian invaders' machines in the science fiction movie classic *War Of The Worlds*. This patch responds best to sounds with percussive attacks.

All of the patches in the article can be modified. However, since they are somewhat unpredictable, and since it can be very time consuming to fiddle with independent parameters, I've stored about a dozen of my favorite resonance patches in memory for quick future reference. In this way, I can flip through them quickly (I keep them all in adjacent memory locations) to spice a guitar sound or fix that synthesizer sound that's just not quite right. Since all processing occurs in the digital domain, crisp sound is assured.

As for how all of this sounds in stereo, I have no earthly idea, as my preset setup is configured for monophonic use–alas! However, I'm fairly certain these effects will have wide and interesting stereo imaging. I look forward to reading material from other AfterTouch readers on the subject.

The patches in this article will work to good advantage with the SPX90, the SPX90 II, the REX50, and the GEP50. I hope you find them as amusing as I have.

These SPX90 patches will also work with the SPX90 II, the REX50, and the GEP50.

MIDI Mixup & Matchup

Solving MIDI Emergencies With MIDI Merge. By Michael Babcock.

THERE'S THAT RED LIGHT again. Wonder what didn't get through...

I've seen a thousand articles trying to tell me in the simplest terms what MIDI is all about. I read whatever I can find, but the articles help me less and less. I'm ready for practical cases—are you? Here's a story from my experience; I could relate many more from other folks—maybe more later.

For once I wanted my studio to have more or less standard stuff, but somehow different. I ended up with an analog keyboard synth as my MIDI controller, a rack of Yamaha 6-op stuff, and an Apple II computer to voice the Yamaha modules. Time to hook up the MIDI cables—and I'm in trouble *right now.*

Hookups with MIDI IN, MIDI OUT, and MIDI THRU can boil down to being a private conversation between two boxes plus maybe some listeners, if you aren't careful. (Remember the old rural party line—the phone rings, two people talk, and for miles around everybody quietly listens...) In my case, to do voicing of my 6-op Yamaha modules (a TX216—that's two TF1 DX7-in-a-tiny-box modules in a 19" relay-rack box), I needed to pass a pair of cables between my TX216 and my Apple II's MIDI card. That's fine, but Oops! No way to connect my keyboard. Besides that, my Apple voicing program was really designed to tie into a real DX7, where you could hear your tweaking from the Apple voicing program by hitting a DX7 key. So, the voicing program doesn't generate notes when connected to TX216 modules. I can tweak, or I can play, but not at the same time. Not without repatching cables. And to change cables, I really have to shut everything down. Serious pain!

My basic voicing setup involves connecting the MIDI OUT of the TX216 to the MIDI IN of the Apple, and connecting the MIDI OUT of the Apple to the MIDI IN of the TX216.

However, in addition to this, I need to get MIDI note information from my MIDI master keyboard to my Yamaha TX216, and I have no way to do it! The obvious—but *wrong*—answer is a Y-connector, which combines the MIDI information from the computer with the MIDI information from the keyboard controller, and sends both to the TX216's MIDI IN port.

Y-connectors are a middling to bad solution even for analog audio signals. For these digital MIDI signals, you are inviting disaster. The first problem is that this hookup is electronically bad. It may not work at all, and it may damage equipment. Here's something we may not see at first: What we think of as a two-to-one connection (two OUTs feeding one IN) is in reality simply a three-way tieup—each of the three MIDI ports "sees" the other two. (Yes, the two OUTs are trying to run each other!) So, what each of the OUT connections tries to do is feed *both* of the other two. This attempt can reduce the amount of current available to the MIDI IN port that should be the only target. There may not be enough strength left for the IN port to notice anything. Worse yet is that both of the OUTs sense *two* things to run, not just the one that each was designed to handle. Each one will try to accommodate us by trying to provide more current—possibly enough to overheat itself and blow up. Down time. Bills. Lost music. Lost gigs. (Lost pride.) Nasty.

The second problem is that what might get by for analog signals (the type that came out of or go into your cassette tape deck) won't go for digital signals (the type that run around in your computer or out of your modem). MIDI cables really just send a stream of electronic on/off pulses along a single wire. The sender and receiver of those pulses (in my case, my Apple II and my TX216) agree that the pulses come in groups of 10—a "start" bit, 8 "data" bits, and a "stop" bit. So, it takes 10 pulses to send an 8-bit byte over a MIDI cable. *And you'd better not intermix pulses from two different byte streams!*

(By the way: MIDI pulse speed is 31,250 bits (pulses) per second or about 3125 10-bit chunks (reduces to 8-bit bytes) per second. Since a MIDI note event takes a minimum of two bytes (pitch and intensity; we assume "running mode" here), we have a theoretical upper limit of just under 1600 notes per second. (The RS-232 cable that goes from your computer's serial port to your modem is very similar, but usually lots slower—typically 1200 baud, about 120

bytes per second.) MIDI data organizes itself in groups of bytes–generally groups of 1, 2, or 3 bytes. The first byte is always a "status" byte (the "most-significant" or "leftmost" of the 8 bits is "on"); the rest in the group (if they are there) are "data" bytes (the "leftmost" bit is "off"). An exception is "System Exclusive" bytestreams. The first byte is a special status byte that announces a special stream of bytes. The last of the stream is a special byte that announces the end of this special stream of bytes. Everything in between is data bytes–there can be any number, and what the bytes mean is up to the manufacturer of the equipment that is sending the stream. Another exception is "running mode." With some types of MIDI messages, you can send just one status byte that identifies a data type, and then send lots of data of that type. For example, instead of sending a "Note On" status byte followed by only a single byte pair that state one note's pitch and intensity, you could send a single "Note On" status byte, followed by many byte pairs, where each pair specifies a separate note's pitch and intensity.)

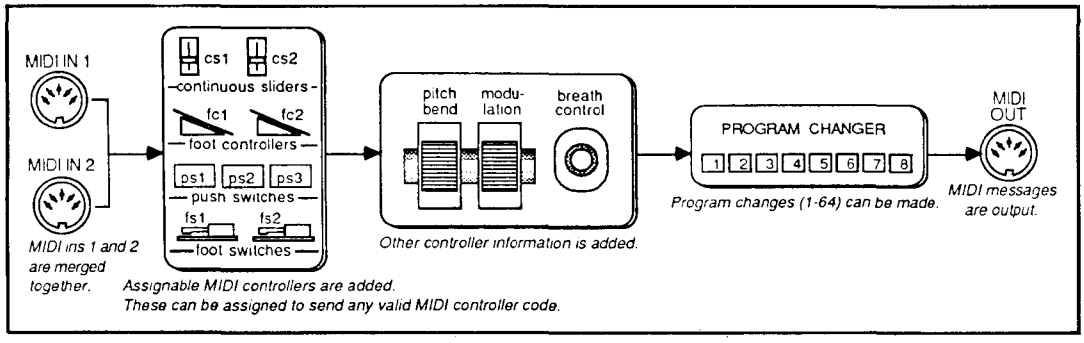
Now the reason for potential disaster in a Y-connector is plain. It is possible for both OUT ports to try to send streams of bits at the same time. All the bits will get mixed together, and even interfere with each other. An "On" bit from one OUT port might combine with an "Off" bit from the other, creating a bit that is intermediate, that the IN port might take for either "On" or "Off"–and no matter, because there is no way to untangle this mess. So, the best I can hope for is that my keyboard synthesizer doesn't send out MIDI time syncing messages every few milliseconds that would foul up a System Exclusive message from my Apple II that is trying to change a parameter in one of the modules of my TX216. And if I get excited and poke a synth key too soon, before my voicing bytestream finishes transmitting, I have the same collision problem, and the little red "error" light on my Yamaha TF1 module goes on, telling me that the last voicing message didn't make it–and now the thing goes "BLAT!"

So, what's the real solution? Nothing so simple as a cable. Rather, something that does a MIDI Merge. Something that can act as a traffic cop and keep the bitstreams uninterrupted and unscrambled. One example is the Yamaha MIDI Control Station (MCS2), a little wedge-shaped box that can add several MIDI control features to a synthesizer. One of its features is a MIDI merge capability: two MIDI IN ports and a MIDI OUT port–the incoming MIDI signals are combined into a single stream without wrecking anything. The box has to have enough smarts to store a little bit of one stream while the other finishes something, or comes to a place that it could wait in turn.

My problem got solved by using this MIDI hookup: The MIDI OUT of my master keyboard connects to the MCS2's MIDI IN 2 port, while the MIDI OUT from the Apple II connects to the MCS2's MIDI IN 1 port; the Merged MIDI OUT from the MCS2 connects to the MIDI IN of the TX216. In addition, the MIDI OUT of the TX216 connects to the MIDI IN of the Apple II.

Answers make more questions, and solutions make more problems. How long is a System Exclusive data stream? Only the sender knows, and it only tells the merger when it is done (End-of-System-Exclusive data byte). Since we're sending Yamaha voicing parameters, we'll be sending these SysEx data streams often. The merger has to watch for starting and ending System Exclusive bytes, and let nothing from the other MIDI IN channel break in during the stream. After the End-of-System-Exclusive message, the second channel can go.

But what if the stream is very long? What if more stuff comes in on the second input than the merger memory can hold? Won't that information be delayed, and some of it lost? And suppose, somehow, the End-of-System-Exclusive never comes?... bumpy timings... lost notes ... no sound at all... Stay tuned, for more red lights...



This diagram shows the basic operational structure of the MCS2.

C1 Users Central

Presenting A C1 Program For Dumping Data From A DX7 II To A C1 Disk. By Jim Smerdel And Tom Darter.

THIS MONTH, we present a simple C1 program that can be used to dump voice and performance data from a DX7 II and save it to a C1 data disk.

In order to use this program, you must first put together a disk that will hold both this program and the other system files needed to operate the C1.

1) Boot up the computer with the DOS disk in drive A. Put a blank disk in drive B and format it, using the format command (as follows–format b:/s).
2) The computer will prompt you from there, and format the disk in drive B. A basic form of DOS will be copied onto the disk.
3) Copy onto the disk the file COMMAND.COM from the DOS disk in drive A (use this command–copy command.com b:).
4) Insert the MIDI Monitor disk in drive A.
5) Copy onto the disk the four BULK files from the Monitor disk in drive A (use this command–copy bulk*.* b:).

At this point, you still need to enter the program, using the DOS text editor of your choice. Type it in just as it looks, and save it to your disk as a text only file. Be sure to include the "BAT" extension in the file name; this indicates that it is a DOS batch file.

Once you have entered the program on the disk, you are set. Put the disk in drive A (you can boot the computer with this disk), and put a data disk in drive B. Make MIDI connections between the C1 and the DX7 II, and make sure that the DX7's Device Number is set to 1.

The program is expecting to see three banks of information from the DX7 II (Voice bank A, Voice bank B, and Performance); however, you don't have to send or receive all three banks. If you want to skip a bank or banks, use a single "x" as a placeholder. To run the program, type in the file name (DP-DX7II.BAT) followed by the file names you want to give to the three banks of data coming from the DX7 (be sure to put a single space between each of the file names); then, hit RETURN. Remember that all files names have to be in DOS format.

```
echo off
rem   = = = = = = = = = = = = = = = = = = = = = = = = = = =
rem      AfterTouch Version
rem      DP-DX7II.BAT SEPT 29, 1988
rem      Written by Jim Smerdel, ver 1.0
rem   = = = = = = = = = = = = = = = = = = = = = = = = = = =

rem   = = = = = = = = = = = = = = = = = = = = = = = = = = =
rem      Check to see if all x's were entered?
rem   = = = = = = = = = = = = = = = = = = = = = = = = = = =

if not%1 = = x goto notx
if not%2 = = x goto notx
if not%3 = = x goto notx
goto end1
:notx

rem   = = = = = = = = = = = = = = = = = = = = = = = = = = =
rem      Check to see if the files already exist on b: drive?
rem   = = = = = = = = = = = = = = = = = = = = = = = = = = =

if%1 = = x goto next
if not exist b:%1 goto next
echo ***%1 file already exist on drive b:, Ctrl + break to quit, or to overwrite,
pause
:next
if%2 = = x goto next1
if not exist b:%2 goto next1
echo ***%2 file already exist on drive b:, Ctrl + break to quit, or to overwrite,
pause
:next1
if%3 = = x goto next2
if not exist b:%3 goto next2
echo ***%3 file already exist on drive b:, Ctrl + break to quit, or to overwrite,
pause
:next2
rem   = = = = = = = = = = = = = = = = = = = = = = = = = = =
rem      insert file names into bulk receive commands
rem      and create temporary file = tempfile
rem   = = = = = = = = = = = = = = = = = = = = = = = = = = =

echo pause ***ready to receive dx7II data,>tempfile
if%1 = = x goto skpbk1
echo receive "b:%1",1,dx7_2_vo1(0),1>>tempfile
:skpbk1
if%2 = = x goto skpbk2
echo receive "b:%2",1,dx7_2_vo2(0),1>>tempfile
:skpbk2
if%3 = = x goto skppf1
echo receive "b:%3",1,dx7_2_per_m(0),1>>tempfile
:skppf1
echo beep ***finished dumping, files are now on drive b: ***>>tempfile

rem   = = = = = = = = = = = = = = = = = = = = = = = = = = =
rem      redirect commands from temporary file into bulk program.
rem   = = = = = = = = = = = = = = = = = = = = = = = = = = =

bulk<tempfile

rem   = = = = = = = = = = = = = = = = = = = = = = = = = = =
rem      delete old tempfile and return to dos
rem   = = = = = = = = = = = = = = = = = = = = = = = = = = =

del tempfile
goto end

rem   = = = = = = = = = = = = = = = = = = = = = = = = = = =
rem      If you come directly here you must have entered all x's
rem   = = = = = = = = = = = = = = = = = = = = = = = = = = =

:end1
echo ****you must enter at least one file name, try again.
:end
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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 or performance for the DX7 II, the TX81Z, or any of the other members of the Yamaha family of FM digital synthesizers and tone generators? How about a patch for the SPX90 II multi-effects processor, or a great voice edit or pattern for the RX5? If so, send them in. 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 professional musical products? Send it in to our "Hot Tips" column. If we use your tip, you'll receive full credit plus a check for $25.00.

Have you developed a new approach to one of the Yamaha professional musical products, 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.

And, if you just have a question regarding the use of Yamaha professional musical products, send it along too. 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.)

Receive AfterTouch *Free* Every Month!

YOU CAN RECEIVE AFTERTOUCH for an entire year, absolutely free, just by asking. If you are not already on our mailing list and would like to be, just send us a request in a letter or on a postcard. Include your name and mailing address, and be sure to sign your request (a postal regulation); it lets us know that you really want to receive AfterTouch.

When we receive your card or letter, 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 attached.

(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.)

Specialists

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together to climb a mountain. It's always hardest for the first guy going up. But, when you understand what you're doing, I find it's great to be the lead man for the climb. Once the other guys see that it can be done, it doesn't seem so impossible, and they'll try. They find it can be exciting."

So, it seems there is a sane, practical lane for you to learn how to expand on your musical musings. Your current understanding of today's music technology can be heightened in an enjoyable atmosphere–by musicians who are not only knowledgeable in the field, but also friendly and eager to help their fellow musicians better understand how to achieve their musical goals.

Your local Yamaha Music dealer should be able to get information regarding clinics that will be happening in cities near you. Also, watch the pages of Aftertouch for notices of clinics scheduled for your area. Remember, the goal of these clinics, as Mark Santos puts it, is "to help DMI product owners be the best musicians they are capable of being."

AFTERTOUCH
P.O. Box 7938
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Products

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which fulfills the needs of even the most complex piece of music. Up to 400 sequence tracks may be recorded. The C1 can accept unlimited simultaneous input notes, and can output up to 128 simultaneous notes. Clock resolution is 480 clocks per quarter-note.

Sequence is also ideal for use in film and video, as all MIDI and SMPTE sync formats are available. Sequence and data positions are shown in both Measure/Beat/Clock and Hour/Minute/Second/Frame formats.

Sequence is now available at authorized Yamaha DMI retailers, with a suggested retail price of $295.00.

PF1500

The Yamaha PF1500 is the latest in a full line of electronic pianos offered by the DMI Division of Yamaha. Similar in design to the PF2000, the 16-note polyphonic PF1500 features the realism of Advanced Wave Memory (AWM) sampled voices and an 88-note weighted keyboard.

The five onboard voices are PIANO 1 (concert grand piano), PIANO 2 (upright piano), E. PIANO (electric piano), HARPSICHORD, and VIBE.

A powerful 20-watt stereo amplifier and two separate two-way speaker systems reproduce these authentic sampled sounds with clarity and full, rich tones. To further enhance the sound, the PF1500 has stereo digital reverberation with three settings: Room, Stage, and Hall. The amount of reverb can be adjusted using the Depth slider.

As with the PF2000, the PF1500 comes with its own custom stand, which includes two pedals—one for sustain, and the other assignable to either soft pedal or key hold.

If desired, the PF1500 can be amplified with an external sound system using the stereo output jacks; for convenience, the internal speakers may then be switched off. There are also two line input jacks for mixing in external tone sources such as a drum machine or the new Yamaha TQ5 tone module.

The PF1500 will be available in February at authorized Yamaha DMI dealers, at a suggested retail price of $2395.00. The CHPF2000 is a matching bench for the PF1500, with a suggested retail price of $195.00.

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For more information on any of these new products, write to: Yamaha Corporation of America, Digital Musical Instruments Division, P.O. Box 6600, Buena Park, CA 90622.