KORG

Music Workstation

01/W*pro*
01/W*pro*X
Quick Guide

① Ⓔ

CONTENTS

Introduction

This 01/W pro Quick Guide is for users of the 01/W pro who are new to desktop music (DTM) or have relatively little experience using synthesizers. If you find yourself wondering what to do after you've turned on the power to your 01/W pro, read this manual through from cover to cover. The instructions you will find herein will give you a basic understanding of the 01/W pro's operation. Once you have mastered the techniques described in the following pages, you will find it easier to refer to the 01/W pro Owner's Manual. The Owner's Manual contains a great deal of information that you won't find in this Quick Guide---including detailed explanations of less frequently used special functions.

The 01/W pro's large LCD presents information in such a way that novices and veteran users alike should find the 01/W pro fairly easy to operate. If you have experience using full-scale synthesizers such as Korg's Wavestation or the models in the M Series and T Series, feel free to skip this guide: you will probably be able to make full use of the 01/W pro's capabilities with reference to the 01/W pro Owner's Manual alone.

Note: The name "01/W pro" which appears in this manual refers to both the 01/W pro and the 01/W pro x.

Making Connections, Part 1: Audio Output

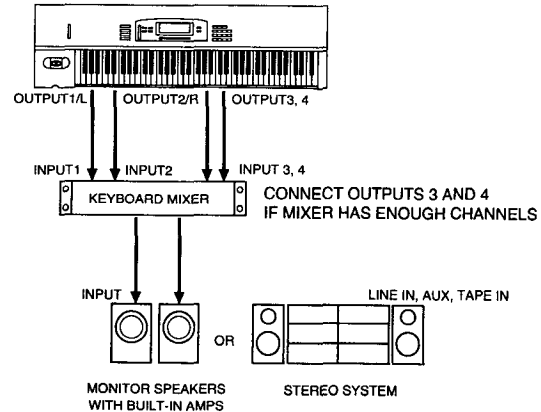## Connect the 01/W pro to audio equipment

Before you can use the 01/W pro, you must connect it to a set of amplified monitor speakers or stereo equipment in order to amplify the audio signal output by the 01/W pro and turn it into sound. Always remember to turn the power switch OFF or the volume control down on the 01/W pro and audio equipment before you connect them.

When the 01/W pro is your only tone generator:

OUTPUT1/L, 2/R

INPUT   LINE IN, AUX, TAPE IN

OR

MONITOR SPEAKERS   STEREO SYSTEM
WITH BUILT-IN AMPS
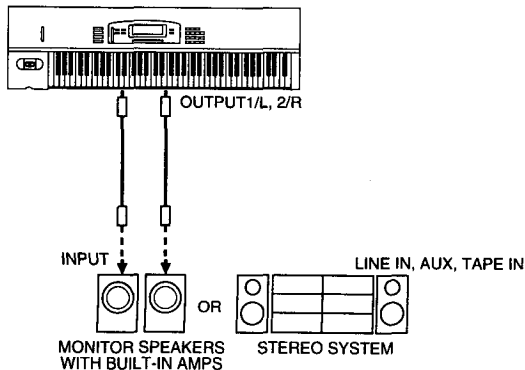
Connect the unit to a set of amplified monitor speakers with standard phone plugs, or to your stereo system with RCA pin plugs.

To use the 01/W pro with other tone generators:

Some amplified keyboard speakers have two or three input channels, allowing you to input signals from more than one sound source. However, you may find it troublesome to make level settings using such equipment. For greater ease of operation, we recommend using a mixer such as Korg's KMX-122 when using a number of MIDI tone generators in combination.

OUTPUT1/L   OUTPUT2/R   OUTPUT3, 4

INPUT1   INPUT2   INPUT 3, 4

KEYBOARD MIXER   CONNECT OUTPUTS 3 AND 4
                         IF MIXER HAS ENOUGH CHANNELS

INPUT   LINE IN, AUX, TAPE IN

OR

MONITOR SPEAKERS   STEREO SYSTEM
WITH BUILT-IN AMPS

Caution: Professional audio devices such as the 01/W pro output sounds over an extremely wide dynamic range. If you connect the 01/W pro to the 01/W pro jack of a stereo amplifier, be sure to keep your stereo's volume control turned down to avoid damaging to your speakers.
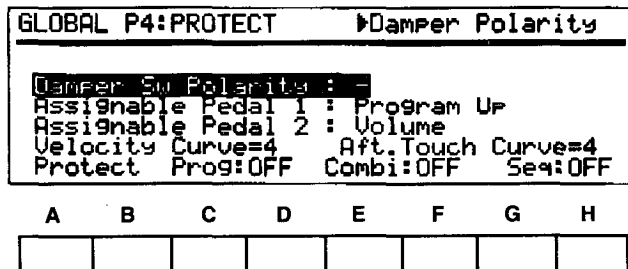
Turn on the power

Now you can turn the power on. First, turn the 01/W pro on, followed by your mixer (if you're using one) and then your amplifier(s).
The 01/W pro's LCD should light up when you turn on the power. Can you read the display? If the angle of the LCD makes it difficult to read the contents, adjust the display's contrast setting. Begin by pressing the GLOBAL mode select key to enter Global mode. (A mode is an operating state of which the 01/W pro has seven. Global mode allows you to make settings related to the 01/W pro's overall operation. We will describe the other modes as we come to them.)
The cursor---the dark rectangle in the display---should be located at the LCD Contrast parameter. (A parameter is an item for which you can change the set value.) Try using the VALUE slider or the VALUE △ and ▽ keys to adjust the value that is displayed after this parameter. You can set a value of 1 to 8. Use a lower value when looking up at the display from below, or a higher value when looking down on the display from above.

Try playing the demo song

Try playing the demo song. Before you do anything else, you'll probably want to hear what the 01/W pro sounds like. Begin by inserting the floppy disk that came with your synthesizer, label side up and shutter first, into the disk drive located on the left front edge of the unit. Push the disk in gently until you hear it settle into the drive with a click. Next, press the GLOBAL mode key to enter Global mode. Then press 4 or use the PAGE + or – key to move to page 4 of the display. The page name on the top line of the display should change to "P4:PROTECT." When it does, press the CURSOR DOWN key to move the cursor to the bottom line of the display, then press cursor keys C, E, and G to select "Protect Prog", "Combi", and "Seq," respectively, using the VALUE ▽ Key to turn the protect setting for each item to OFF.

```
GLOBAL P4:PROTECT        ▶Damper Polarity

 Damper Sw Polarity :  -
 Assignable Pedal 1 : Program Up
 Assignable Pedal 2 : Volume
 Velocity Curve=4      Aft.Touch Curve=4
 Protect   Prog:OFF   Combi:OFF   Seq:OFF

 A    B    C    D    E    F    G    H
```
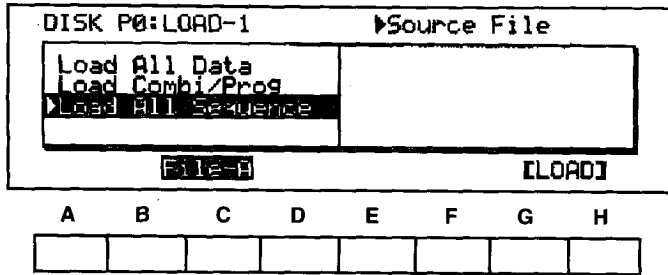
Once you have turned the protect settings off, press the DISK mode select key to enter Disk mode. The page name on the top line of the display will change to "P0:LOAD-1." (If it doesn't, press 0 or the PAGE–key several times to move to page 0.) Check to make sure that the cursor is pointing at the Load All Data function, the first function on the left side of the display. If it isn't, use the CURSOR UP or DOWN key to move the cursor. Then use the VALUE △ and ▽ keys to select File-A, and press cursor key G or H ([LOAD]). The 01/W pro will ask you if you're sure you want load the data. Press cursor key E or F (YES). The disk drive will operate for a few moments as the 01/W pro reads the data, displaying The message "Now Loading" while it does so. Be careful not to remove the disk from the disk drive while this message is displayed.

```
DISK P0:LOAD-1        ▶Source File

 Load All Data
 Load Combi/Prog
▶Load All Sequence

       File-A                    [LOAD]
```

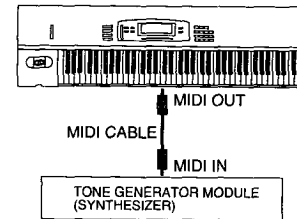A   B   C   D   E   F   G   H

When all of the data has been properly loaded, the 01/W pro will display the "Completed" message. Now you can press the SEQ mode select key to enter Sequencer mode.
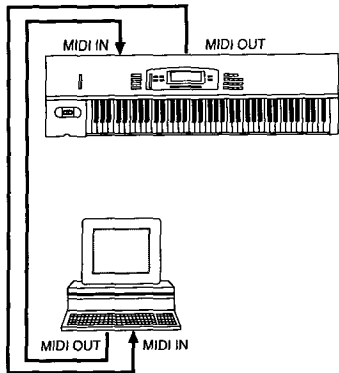
Set the 01/W pro's MASTER VOLUME slider to about 8, and raise your mixer and amplifier volume settings slightly. While you're at it, connect a pair of headphones to the 01/W pro's PHONES jack.

When you're ready, press the START/STOP key. The 01/W pro will begin playing the demo. Adjust the volume of your amplifier(s) as you listen. (If you are using a mixer, you should generally use the mixer's controls to adjust the volume.) When you've got the volume setting just right, sit back and enjoy the music Korg has prepared to show you what you can do with the 01/W pro.

If you can't hear any music, run over the connection procedure once again. If you can hear sound from your headphones but not from the speakers, there is probably something wrong with your cables or your audio equipment.

Making Connections, Part 2: MIDI

Once you've checked your audio connections by playing the demo, you can begin connecting the 01/W pro to other MIDI equipment. As a complete music workstation, the 01/W pro alone is all you need to produce high-quality music. Since it boasts a large keyboard and a sequencer that rivals stand-alone models, you will find that it functions admirably as the master keyboard in a large MIDI system. Here are a few of the possible applications:

- With a tone generator module or synthesizer

MIDI OUT

MIDI CABLE

MIDI IN

TONE GENERATOR MODULE
(SYNTHESIZER)

- With an external sequencer (e.g. personal computer with sequencer soft-ware)

MIDI IN   MIDI OUT

MIDI OUT   MIDI IN

- As part of a MIDI system including an external sequencer (e.g. personal computer with sequencer software) and another tone generator

MIDI IN   MIDI OUT

MIDI OUT   MIDI IN MIDI THRU   TONE GENERATOR MODULE SYNTHESIZER

- Using a MIDI patch bay

MIDI OUT   MIDI IN   MIDI OUT   MIDI IN
MIDI IN   MIDI THRU   MIDI IN   MIDI THRU

MIDI PATCH BAY

MIDI THRU   MIDI THRU
MIDI IN   MIDI IN

TONE GENERATOR MODULE   TONE GENERATOR MODULE
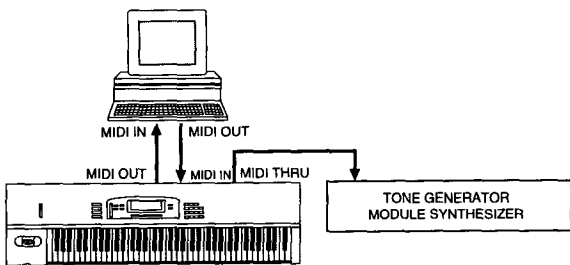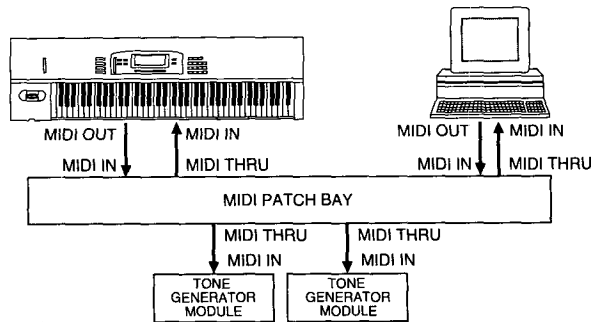
Note: When a tone generator in a MIDI system fails to produce any sound, the cause is usually faulty MIDI cables or connections. Use only high-quality MIDI cables, and connect them to your equipment carefully.

Playing the 01/W pro

(Play a few of the 01/W pro's programs)

The 01/W pro outputs sound at two levels. Individual sounds produced by such unit as the oscillator (OSC), WaveShaping (WS), filter (VDF), and amplifier (VDA) are called programs. You can combine as many as eight of these programs in a variety of manners to create sets of programs known as combinations. The 01/W pro plays programs when it is in Program mode, and combinations when it is in Combination mode. Let's start by listening to a program.
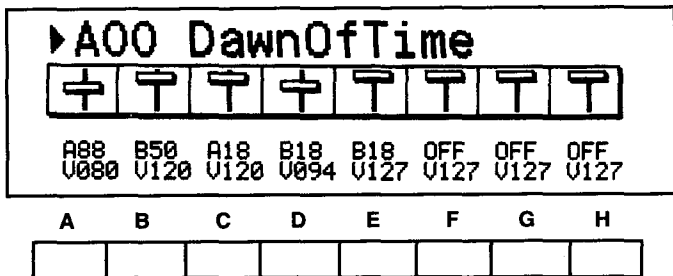
Press the mode select key labeled PROG to enter Program mode. The message "A00 Ephemerals" should appear at the top of the display. "Ephemerals" is the name of the program that was stored in Bank A, Memory 00 at the factory. Now try playing a note on your keyboard (on transmit performance information from a sequencer). Did you hear a sound? If not, check your connections and settings---especially the MIDI channel setting---once again.

The 01/W pro contains 200 programs: 100 programs (numbered 00 through 99) in each of two banks (labelled A and B). Press the BANK key to change the bank, and use the number keys or the VALUE △ and ▽ keys to select the programs you'd like to hear.
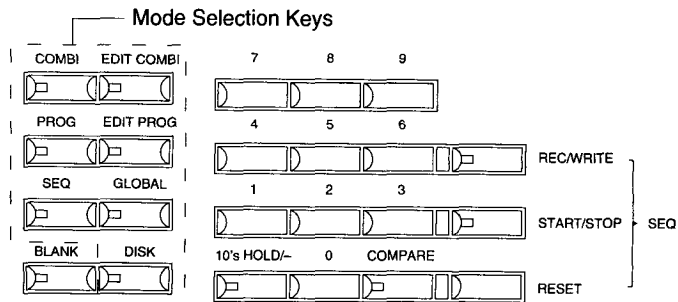
Next, try playing some combinations. Press the COMBI mode select key to enter Combination mode. The top line of the display should change to read "A00 DawnOfTime". When you try playing this combination, you will notice that notes above C4 (middle C) and those below B3 (the note just below middle C) produce different sounds. You will also find that the notes above A#5 produce a slightly different nuance.

Try pressing cursor keys [A] through [E]. The program name displayed to the right of the word "Timbre" in the center line of the display will change each time you press a key. As the name implies, a combination is essentially a group of programs. By combining programs you can produce more elaborate sounds, or create multiple-sound sets that let you play a number of different parts from a single keyboard during live performances. Combinations also let you use the 01/W pro with a sequencer to play complex songs consisting of a number of parts.

```
▶A00 DawnOfTime
⊹ ⊤ ⊤ ⊹ ⊤ ⊤ ⊤ ⊤

A88  B50  A18  B18  B18  OFF  OFF  OFF
V080 V120 V120 V094 V127 V127 V127 V127
```

A	B	C	D	E	F	G	H

As with programs, the 01/W pro has 200 combinations stored in two banks. Press the BANK key to change the bank, and use the number keys or the VALUE △ and ▽ keys to select different combinations.

Combining Sounds: Combination Editing

If you use the 01/W pro as part of a MIDI system, you will probably want to use it more often in Combination mode than in Program mode. So before we explain how programs are created, let's take a closer look at how combinations are set up. During the discussion which follows, we will refer to one of the 01/W pro's preset combinations that were stored in your 01/W pro's memory at the factory---as an example.

A combination is a set of up to eight programs. There are several types of combinations, including one which plays one program – "A01 16' Piano," for example---throughout the entire range of the keyboard. Combinations which play only one program are often referred to as single combinations. Playing a program in a single combination is effectively no different from playing the same program in Program mode.

Another is a combination which plays two programs, such as "A01 16' Piano" and "A07 TheStrings," simultaneously throughout the entire range of the keyboard. This method of combining programs is called layering. Layered combinations provide a richness and complexity that is hard to achieve with a single program.

Yet another is a combination which plays "A07 TheStrings" on all of the notes from C4 (middle C) down, and "A02 OrchBrass" on all of the notes from C#4 up. Such an arrangement is known as a split. Split combinations are useful when you want to play different sounds with your right and left hands during live performances.

Another type of combination which plays three programs: "A07 TheStrings" on all of the notes from C4 (middle C) down, "A02 OrchBrass" on all of the notes from C#4 up, and "A01 16' Piano" throughout the entire range of the keyboard. Such a combination would be making use of both the layering and split techniques.

The Strings	Orch Brass
16' Piano	

C4
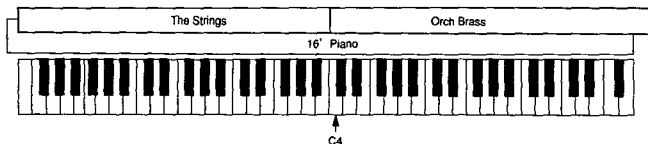
Next, let's take a look at a combination method utilizing velocity, which measures how hard you hit the keyboard. Such a combination would assign program "A16 B.Bass" to velocities 1 to 100, and "A46 SlapBass" to velocities 101 to 127. It would play a normal bass sound when you play the keys with normal force, but switch to a slapped bass sound when you strike the keys particularly hard. This method of combining programs is known as a velocity switch.

There is a related method called velocity layering. You can probably guess what this means. As an example, you might assign program "A07 TheStrings" to all velocities (1 to 127) and "A02 OrchBrass" to velocities 101 to 127 in order to create a combination which would normally play the string section, adding the brass only when you strike the keys with extra force.

In the preceding examples, we have restricted our use of layering to two programs. However, since the 01/W pro can produce up to 8 programs at once, you can mix together as many of these as you like in order to produce combinations of even greater complexity. Or you can use all eight of them separately.

Each program that is used in a combination is assigned to one of eight timbres. When the 01/W pro is in Combination mode or Edit Combination mode, each of the cursor keys (A through H) corresponds to a timbre (1 through 8).

To demonstrate this, let's look at one of the 01/W pro's preset combinations. Select combination "A18 Jazz Hits". If you try pressing cursor keys A through H, you will notice that the program name to the right of the word "Timbre" in the center line of the display changes each time you press a key. This combination seems to combine six different programs. If you try playing a few notes, you will hear a bass

sound when you play low on the keyboard, and an organ sound when you play higher up. Let's take a closer look at this combination. Press the EDIT COMBI mode select key to enter Edit Combination mode. You can use this mode to create or modify combinations.

The message "P0:Timbre" should have appeared in the top line of the 01/W pro's display. (If it didn't, press 0, or press the PAGE- key several times until page 0 appears.) The first of the four parameters displayed, Timbre Mode, allows you to specify which of the eight timbres are to be used by a combination. As you can see, "A18 Jazz Hits" uses timbres 1 through 6.

The third parameter displayed lets you to assign the program that is played by each timbre. Use the CURSOR UP or DOWN key to move the cursor to the Program parameter, then press the D key to select timbre 4. The message "Timbre4 B61:Gospel Org" will appear on the second line of the display. Now try pressing the VALUE △ key once to change the value of this parameter to B62. The program name after timbre4 should change to "B62:Brass 2". Now if you try playing a few notes, you will find that the organ sound you heard when you played at the upper end of the keyboard earlier has been replaced by a brass sound.

9

A	B	C	D	E	F	G	H
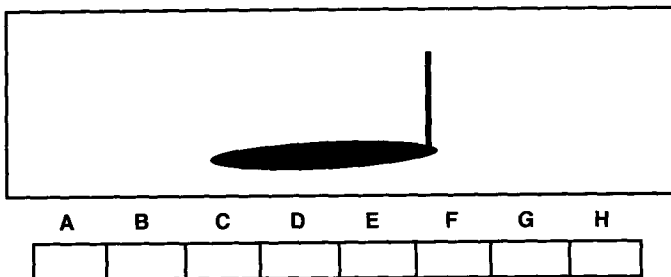
In this way, you could change the program assigned to each timbre if desired. For now, however, press the ▽ key to return the value 06 timbre 4's Program parameter to A61.

Next, try moving to page 2 of the display. (You can do this by pressing 2 or the PAGE+ key twice.) Layers, splits, and velocity switches are all created using this page. There are also four parameters on this page: Vel Window Top, Vel Window Bottom, Key Window Top, and Key Window Bottom. These parameters allow you to specify the upper and lower ends of the velocity and keyboard ranges in which a timbre will play.

If you move the cursor to one of the Key Window parameters, you will see a graphic in the upper left area of the display which shows you the current Key Window settings for all eight of the timbres. This combination features a layered split: timbres 1 and 2 play on notes from B3 down, whereas timbres 3 through 6 play on notes from C4 up. (You will recall that timbres 7 and 8 were turned off when you looked at page 0.)

A	B	C	D	E	F	G	H
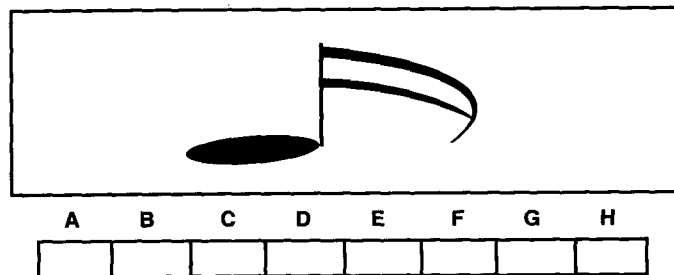
Now look at the Vel Window settings for timbres 1 and 2. Timbre 1 is set to play at velocities 1 through 127, while timbre 2 plays at velocities 110 through 127. Thus, these timbres are combined using the velocity layer method: if you hit key B3 or lower at a normal velocity, you will hear "A36 Pick Bass"; but if you hit the same key harder, the 01/W pro will add "A46 SlapBass 1."

As for the upper range of the keyboard, timbre 4 is set to play at all velocities, while timbre 3 plays at velocities 1 through 114 and timbres 5 and 6 play at velocities 115 through 127. This is a mixture of the velocity switch and layer techniques: the 01/W pro will produce a layered mixture of "B71 PercOrg" and "B61 Gospel Org" when you play normally, but switch to a layer of three sounds---"B61 Gospel Org," "B22 Brass 1," and "A02 OrchBrass"---when you strike the keyboard harder.

```
COMBI A18 P2:WINDOW   ▶Vel Window Top

▶Timbre1   A36:Pick Bass   MIDI Ch:01G

 127  127  114  127  127  127  127  127
 001  110  001  001  115  115  001  001
 B3   B3   G9   G9   G9   G9   G9   G9
 C-1  C-1  C4   C4   C4   C4   C4   C-1

  A    B    C    D    E    F    G    H
┌────┬────┬────┬────┬────┬────┬────┬────┐
│    │    │    │    │    │    │    │    │
└────┴────┴────┴────┴────┴────┴────┴────┘
```

It's easy to edit this arrangement and create an original new combination. All you have to do is move the cursor to a parameter and use the VALUE slider or the VALUE △ and ▽ keys to modify the value. Let's try adding a few changes to this combination.

First, we want the bass to play notes as high as E4 (the E above middle C) instead of just up to B3. Press cursor key Ⓐ to select timbre 1 and change the value of its Key Window Top parameter to E4. Then press cursor key Ⓑ and do the same for timbre 2. Next, select timbres 3 through 6 (by pressing cursor keys Ⓒ through Ⓕ) and change the Key Window Bottom values of these timbres to F4. Now, when you play a few notes, you will find that the range of the bass sound has been extended as far as E4.

Next, let's change the setting so that the mixture of the gospel organ and brass sounds will play with a lighter touch. Lower the Vel Window Top value of timbre 3 to 80, and change the Vel Window bottom values of timbres 5 and 6 to 81. Now the brass sounds will have just a little more extra force.

```
COMBI A18 P2:WINDOW   ▶Vel Window Bottom

▶Timbre6   A02:Orchbrass   MIDI Ch:01G

 127  127  080  127  127  127  127  127
 001  110  001  001  081  081  001  001
 E4   E4   G9   G9   G9   G9   G9   G9
 C-1  C-1  F4   F4   F4   F4   C4   C-1

  A    B    C    D    E    F    G    H
┌────┬────┬────┬────┬────┬────┬────┬────┐
│    │    │    │    │    │    │    │    │
└────┴────┴────┴────┴────┴────┴────┴────┘
```

Next, let's add a string section sound that plays whenever the organ plays. Change the Key Window Bottom value of timbre 7 to F4, and go back to page 0. Move the cursor to the Timbre Mode parameter and change the value of this parameter to INT. Then change the value of the Program parameter to "A07 TheStrings." Now try playing a few notes. You should hear the sound of strings along with the organ.

Finally, let's give our new combination a name and save it. Go to page 9. Move the cursor to the second item, Rename Combination. The alphabet will be displayed. Use cursor keys G and H to move the cursor to the letters of the combination's name, and the VALUE slider or the VALUE △ and ▽ keys to select the desired letters. To enter a blank space in the name, lower the VALUE slider to the bottom most position. We'll give our new combination the name "Q. Guide".

```
COMBI A18 P9:WRITE
┌─────────┬─────────────────────────┐
│ Write Com│ABCDEFGHIJKLMNOPQRSTUVWXYZ│
│▶Rename Co│abcdefghijklmnopqrstuvwxyz│
│ Copy Effe│0123456789!"#$%&'         │
│ Copy/Swap│()*+,-./:;<=>?[¥]^_(|)→←  │
└─────────┴─────────────────────────┘
 A18:Q.Guide          [INS][DEL][ ◀ ][ ▶ ]
```

A	B	C	D	E	F	G	H
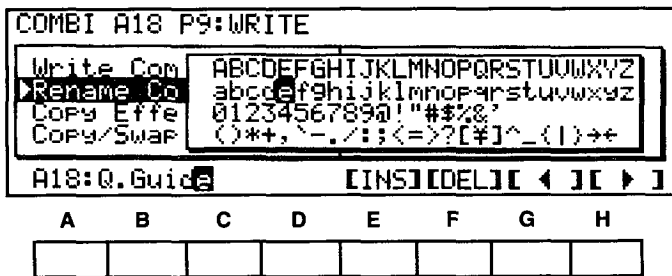
Once you've named the combination, press the CURSOR UP key once to select the "Write Combination" function. You can use the VALUE slider or the VALUE △ and ▽ keys to select a different bank and combination number as the location for storing the combination. For now, however, let's keep the current setting of "A18". Press cursor key F ([WRITE]) to write the data to memory. Since the combination that was previously stored in the memory location you've selected will be erased by the write operation, the 01/W pro displays a message asking you if you're sure you want to continue. Press cursor key E or F (YES) if you want to save your new combination.

The 01/W pro As a Multi-timbral Tone Generator

About MIDI Channels

You will normally place the 01W/ pro in Combination mode when using an external sequencer (i.e., personal computer with sequencer software) to control the 01/W pro. The sequencer will send digital signals from its MIDI OUT jack to the 01/W pro telling it which notes to play, at what velocity, and for how long. If the sequencer and the 01/W pro are not set to the same MIDI channel however, the latter will not be able to receive the information that the former transmits. The MIDI standard provides sixteen different channels that digital instruments can use to communicate with each other. In order for them to exchange information, both the sending device and the receiving device have to use the same channel.

Normally when you use a sequencer or computer to control 01/W pro performances, you will want to assign each part---drums, bass, strings, and so on---to one of the 16 MIDI channels.

Using the 01/W pro as a Multi-timbral Tone Generator

It is possible to assign a different MIDI channel to each of the 01/W pro's eight timbres, so that you can send note information to control the performances of the programs assigned to each channel separately. In other words, the 01/W pro has eight parts, and allows different information to be transmitted to each part. Of course, not all the parts need perform.

Tone generators which possess the ability to perform more than one part simultaneously are called multi-timbral tone generators. (In fact, the 01/W pro is capable of handling up to sixteen parts in Sequencer mode. For details regarding this function, refer to the "Sequencer Mode" section in the 01/W pro Owner's Manual.)

Let's try setting up the 01/W pro to perform as a multi-timbral tone

generator. Select combination "A18 Q. Guide," which you edited and saved in the last section. (If you returned to Combination mode without writing the changes to memory, the name of the combination will still be Jazz Hits.) The second of the four parameters on page 0 of the display is used to set the MIDI channel for each timbre.

Let's start by pressing cursor key ⌗ to edit timbre 8. Move the cursor to Timbre Mode and set INT as the value of that parameter. Set the value of the MIDI Channel parameter to 2 on the second line from the top. Now, when you use a sequencer to send MIDI note information to the 01/W pro via channel 2, you will hear these notes played using program "A00 Ephemerals" (the program that was already selected for timbre 8). If you select a different MIDI channel for each timbre in this way, you can use the 01/W pro as eight independent synthesizers.

Next, let's change the channel used by timbres 1 and 2 to channel 3. Now, the 01/W pro will not produce any sound for information sent for notes below E4 (or B3) via channel 1. If you send the same information via channel 3, however, the 01/W pro will play the notes as long as they are not above B3 (or E4) on the keyboard. As you can see, it is possible to create splits and layered combinations for different parts by assigning more than one timbre to a single MIDI channel.

```
COMBI A18 P0:TIMBRE    ▶MIDI Channel
─────────────────────────────────────
▶Timbre1  A36:Pick Bass    MIDI Ch:03

INT  INT  INT  INT  INT  INT  OFF  OFF
03   03   01G  01G  01G  01G  01G  02
A36  A46  B71  B61  B22  A02  A00  A00
V109 V121 V036 V121 V096 V078 V127 V127
```

A	B	C	D	E	F	G	H

What is an Effects Processor?

The function of an effects processor

One of the 01/W pro's main features is its pair of built-in digital multi-effect processors. This section of the Quick Guide explains what these effects processors do, what kinds of effects they provide, and how you can use them.

As their name implies, effects processors are used to add effects to sound that has been converted into an electronic signal, such as the sound from synthesizers, guitars, or microphones. Effects such as reverberation or delay can be used to add acoustic ambience or echoes to the sounds produced by digital instruments or instruments recorded in a studio. Other effects, such as equalizers, can be used during sound synthesis to process the electronic signal, altering the qualities of the sound itself, while effects such as compressors and limiters can be used to compress the wide dynamic range of natural sounds and limit level fluctuations.

(A multi-effect processor does not limit you to a single effect, but allows you to select from a variety of supplied effects. Since the 01/W pro is a synthesizer, most of its effects are those that add acoustic ambience or echoes or those used during sound synthesis to alter the quality of the sound itself.)

A variety of effects

To get an idea of the sorts of effects provided for your use by the 01/W pro, you should try listening to them as you read our explanation. Please select combination "A77 HarpString." As the name of this combination implies, it mixes the sound of a harp with that of a string section. Let's use this sound to see what an effects processor can do.

13

As we mentioned earlier, the 01/W pro has two built-in effects processors. In the explanation that follows, however, we will use just one of them, so that you can better understand just what it is doing to your sound. Enter Edit Combination mode, and move to page 8. (The message "P8: EFFECT" will appear on the top line of the display when you get there.)

Move the cursor to the FX1 parameter in the upper-left portion of the display, and slide the VALUE slider all the way down. (If it is already all the way down, move it up and then down again.) The value of the parameter should change to read "00: NO EFFECT". Now press the CURSOR DOWN key twice to move the cursor to "FX2." The value of this parameter should be 01:Hall. Now we're ready to start our discussion of the 01/W pro's effects.

```
COMBI A77 P8:EFFECT
FX1 00:No Effect    :ON  Mod:S+J(-) I-02
        No Effect
FX2 01:Hall         :ON  Mod:S+J(-) I+03
 2.8 D056 E81  HD47      L-04 H+00 →70:30
[ SERIAL ]  Out3 =   L   Out4 =    R
```

A	B	C	D	E	F	G	H
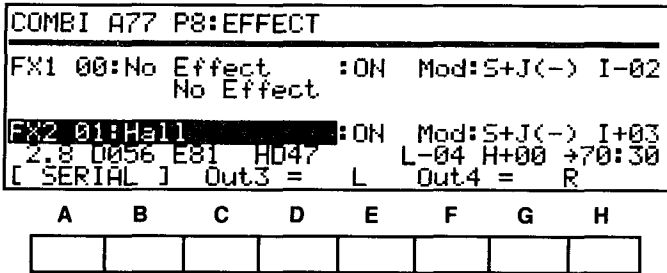
- Effects that add acoustic ambience to a sound

Effects used to add a sense of acoustic ambience to a sound are commonly known as reverb.

■ Reverb

Sounds exhibit a wide variety of reverberations, depending on the size of the surrounding acoustic environment and the materials used in nearby walls, ceiling, and so on. Reverb is an effect that is used to add such reverberations to dry sound. (Dry sound is the term used to refer to the original sound without any added effects.)

The 01/W pro features nine types of reverb--1:Hall through 9:Spring--each of which simulates an acoustic environment with different characteristics. Try listening to all of these effects, pressing the VALUE key and playing a few notes with each. (You will find it easier to distinguish the effect added to the harp sound by these effects---and by the early reflection and delay effects described below---if you hit the keys and release them quickly.) Can you hear the differences in the reverberations produced by these effects?

Let's look at the nature of these reverberations. Imagine making a noise in a hall. After that noise travels directly to your ear, you will hear a number of sounds reflected from the surrounding walls and ceiling. These are known as early reflections. The time that passes before you hear these reflections---known as pre-delay---will vary depending on the size of the hall. The reflections then bounce around wildly, producing a fuzzy reverberation that gradually fades away. The time that it takes for these reflections to disappear is known as the reverb time; it, too, changes with the size of the acoustic environment.

Finally, the quality of these reverberations depends upon the material used in the ceiling, walls, and other objects in the room. If the walls are made of a soft material, for example, they will tend to absorb the

DRY SOUND
FIRST REFLECTION
EARLY REFLECTIONS
REVERBERATION
Level
Time
PRE-DELAY
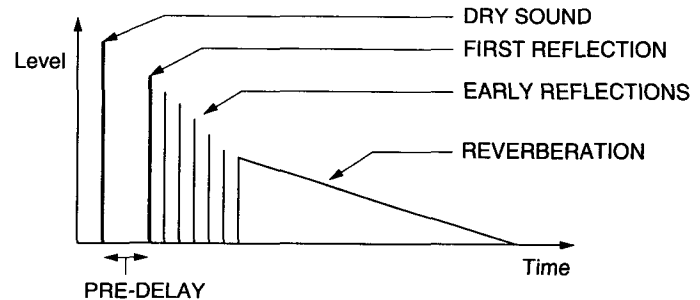
high-range portion of the sound and reflect only the low range. The proportion of high-range sound that is lost is represented by the high damp parameter.

-Effects which add spatial characteristics to sound, but can be used as sound elements

There are some effects which add spatial characteristics to sound, but are also suited for use as elements of the sound synthesis process. These include early reflections, delay, chorus, and flanger effects.

■ Early Reflections

This effect reproduces only the early reflections segment of the reverb effect. By using only the early reflections, you can add weight to a sound or create effects like those added by gated reverb. The 01/W pro lets you choose from three types of early reflection effects: 10:Early Ref 1 through 12:Early Ref 3. The volume of the reflections provided by 12: Early Ref 3. grows in level instead of fading away.

■ Delay

While reverb and delay both add delayed sounds to the dry sound, they are nonetheless completely different effects. If reverb is a "hall" effect, delay is a "mountain echo" effect. While reverb involves a mass of undistinguishable reflections that fade away as a group, the delay effect creates discrete delayed sounds at regular intervals. The amount of time that elapses before the first echo returns is known as the delay time, while the number of repetitions you hear are called feedback.

The 01/W pro offers six kinds of delay, from 13: Stereo Delay through 18: Multitap Dly3. While the delay effect was originally devised to add spatial characteristics to sound, effects such as cross delays and multi tap delays are best thought of as elements for sound creation.

DELAY TIME
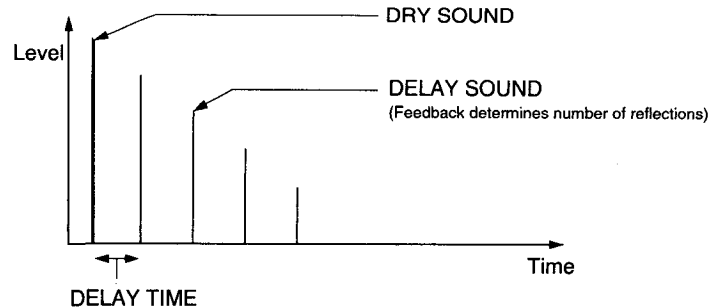
■ Chorus

As its name implies, chorus creates an effect that makes it sound as if a number of instruments are being played. It is used with a wide variety of sounds, from electric pianos to strings, guitars, and so on. When an ensemble plays in unison, variations in the pitch of each instrument create a sort of warbling in the sound. It is this warbling effect that gives listeners the impression that a number of instruments are being played. The chorus effect uses a delay to create similar variations of pitch.

Changing the delay time of a delay effect alters the pitch of a delayed sound. The chorus effect uses a low-frequency oscillator (LFO) to modulate the delay time, creating a signal in which the pitch is constantly fluctuating. When this signal is mixed with the dry sound, it creates an effect similar to the warbling that is produced by several instruments being played in unison.

Put simply, chorus is an effect which modulates the time of a delay effect. The speed at which the LFO oscillates---that is, the speed of the pitch fluctuations---is called the modulation speed. The amount by which the LFO modulates the specified delay time, and hence the pitch, is known as the modulation depth.

The 01/W pro provides you with six types of chorus effects, from 19:Chorus 1 through 24: Symphonic Ens. When listening to these effects (and all of the following effects), hold down the keys so that

you can hear how they add different breadths, depths, and amounts of warbling to the sound of the string section.

■ Flanger
The flanger effect is like the chorus effect, but with a shorter delay time and the addition of a feedback loop which routes part of the output signal back into the effect. The result of these changes makes the flanger a very different effect. Technically speaking, the comb filter alters the pitch characteristics of the sound. This can create a powerful effect when used on sounds with a lot of harmonics.
The 01/W pro has three flanger effects, from 25. Flanger 1 through 27. XOver Flanger.

- Effects that change the characteristics of a sound
Effects which alter the character of the sound itself by processing the electronic signal include equalizer and distortion effects, as well as a number of others.

■ Exciter
The 01/W pro's exciter effect, 28. Exciter, modulates the sound itself, optimizing its acoustic characteristics in order to give it definition and help it stand out.

■ Enhancer
The 01/W pro's enhancer effect, 29. Enhancer, clarifies the sound, giving it greater definition and presence to bring it to the forefront. It also includes a delay which adds breadth to the sound.

■ Distortion
Originally devised for use with guitars, the distortion effect electronically simulates the distortion that occurs when you input a signal to an amplifier at an excessive gain level. It adds thickness to single sounds, which makes it effective with solo instruments. It produces a muddy effect when used with an instrument playing chords.

The 01/W pro has two kinds of distortion, 30. Distortion and 31. Over Drive.

■ Phaser
The phaser effect shifts the phase of a sound, as its more proper name---the phase shifter effect---implies. This effect creates a signal with a continuously varying phase that creates a fluctuating effect at a certain frequency when added to the dry sound. Since this effect alters the phase of the sound, it creates a different sort of growling from that created by the chorus or flanger effects, which alter the delay time. It is effective with electric piano, and guitar sounds, as well as with synthesizer sounds and low-range sounds that don't fade out too quickly.
The 01/W pro gives you two phaser effects to choose from: 32. Phaser 1 and 33. Phaser 2.

■ Rotary Speaker
The rotary speaker effect, 34. Rotary Speaker, simulates the sound produced by rotary speakers commonly used in organs. Rotary speakers have a motor which causes the high-range speaker horn to rotate. This physical rotation of the horn creates a Doppler effect, like the sound you hear when an ambulance goes past. The horn can usually rotate at one of two speeds: the slower speed produces a chorus-like effect, while the faster speed provides a tremolo effect. In either case, the sound has a special characteristic all its own. The rotary speaker effect is best suited to organ sounds; in fact, the two are pretty much inseparable.

■ Tremolo
The tremolo effect produces cyclic variations in the volume of a sound. Effect 35. Auto Pan modulates the two stereo channels inversely, creating the sort of stereo tremolo that suitcase-type electric pianos are famous for. The other tremolo effect, 36. Tremolo, modulates both channels in sync. This effect is more useful with languid melodies and broad chords, less so with detailed phrases.

■ Parametric Equalizer

The parametric equalizer effect, 37. Parametric EQ, provides you with a three-band equalizer. It allows you to set cutoff frequencies for the high and low ranges, and apply a filter with a variable band width to the middle frequencies.
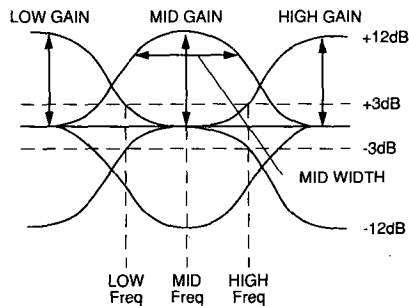
Using the effects processors

Now that you have checked out the various types of effects that the 01/W pro makes available, you're probably wondering how to go about setting up a combination or program so that its output is sent to the effects processors.

## Connect the combination to the effects processor

The 01/W pro's effects processors have four input circuits, labelled A through D. You can connect each of the timbres in a combination to the effects processors via one of these input circuits using the Panpot parameter at the bottom of page 1 of the Edit Combination mode display. (To connect a program, you would use the OSC Pan parameter found on page 0 of the Edit Program mode display.)

Select an effects processor placement.

The 01/W pro's two digital multi-effect processors can be arranged in one of three ways. Let's look at each of these arrangements in turn.

■ Serial

Move the cursor to the "Effect Placement" parameter in the lower left corner of page 8. A graphic indicating the current layout of the effects processor units will appear on the right side of the display. When the effects processors are connected in serial, both effect 1 and effect 2 are applied to the signals input via channels A and B before the signals are output from the 1/L and 2/R jacks. Signals input via channels C and D are output from the 3 and 4 jacks as is; however, they can also be mixed into the two inputs of effect 2.
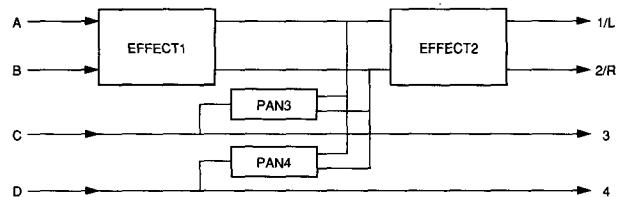
The Serial placement is normally used with programs. It can also be applied to single combinations (i.e., not split combinations or multitimbral combinations).

It is common to select a chorus, flanger, or phaser effect for effect 1 to give the sound breadth, then add reverb using effect 2. You can apply the effects processors to even more elaborate sound creation, selecting distortion or the parametric equalizer for effect 1 and a chorus or flanger effect for effect 2. If you use input channels C and D as well, such a setup would allow you to apply distortion and chorus effects to

17

a guitar, for example, while applying the chorus effect alone to a strings sound.
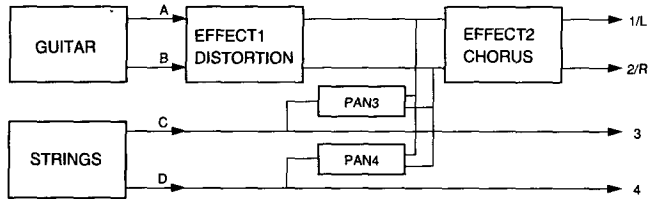
■ Parallel

Press the VALUE △ key once. The graphic on the right side of the display should change in response. With the Parallel placement, a different effect is applied to each of the two pairs of input channels. The signals input via channels A and B are run through effect 1 and then output vi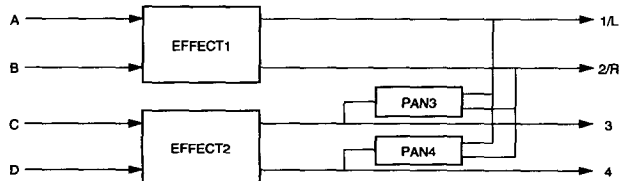a the 1/L and 2/R jacks, whereas those input via channels C and D go through effect 2 before they are output via jacks 3 and 4. Also, the signals output from effect 2 can also be mixed in with those output from 1/L and 2/R.

You will find this arrangement useful when you use the 01/W pro as a multi-timbral tone generator, as it allows you to apply the most appropriate affects to different sounds, and output the results from different channels. Even if your mixer does not have enough channels to accommodate four channels of output from the 01/W pro, you can mix all of the signals together and output them from 1/L and 2/R after applying different effects to each.

You can use each of the 01/W pro two multi-effect processors as a pair of monaural effects processors by selecting one of the combination effects (numbered 40 through 47). This lets you apply different effects to each of the four signals input via channels A through D. If, for example, you choose 44: Delay/Distortion for effect 1 and 47: Delay/Rotary for effect 2, you create a setup which applies a short delay to strings input via channel A, distortion to a guitar from channel B, a long delay to a lead synth sound from channel C, and a rotary speaker effect to an organ input via channel D.
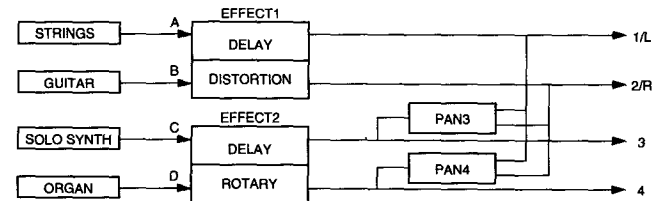
■ Parallel 2

Press the VALUE △ key once again. As with the Parallel placement, the Parallel 2 setting applies effect 1 to the signals input via channels A and B, and effect 2 to those input via channels C and D. While the signals output from effect 2 are normally channeled to jacks 3 and 4, they can also be mixed in with the signals input to effect 1.
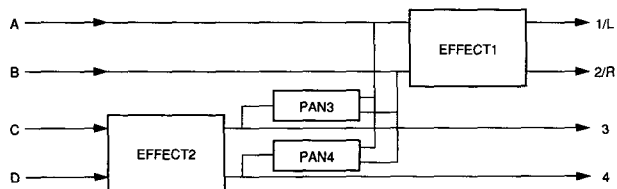
This arrangement is also useful with multi-timbral and split combinations. While it can be used in exactly the same way as the Parallel placement, it will also apply effect 1 to the signals you input via channels C and D when you output them to jacks 1/L and 2/R. This lets you achieve a result similar to but opposite that which you can achieve using the Serial placement: in this case, both effects 1 and 2 are applied to the signals input via channels C and D, while only effect 1 is applied to the signals of channels A and B.

Sound Synthesis: Editing Programs

Three elements of sound

The past sections should have given you a good idea how to use the 01/W pro's combinations. Since these combinations are essentially combinations of the preset programs, you will find it possible to create great music by simply creating the combination that best suits your purposes.

However, the 01/W pro is an extremely flexible tone generator that allows you create a wide variety of sounds. You will not be making much use of its creative potential if you limit yourself to using the preset programs. There's one good way to give you an idea of this potential: at last, it's time for you to try creating a new program.

You're probably aware that sound consists of vibrations or "waves" in the air. We make judgments about the sounds that reach our ears based on three points: pitch, tone, and volume. These three points are the elements of sound. Synthesizers are often depicted as being divided into a number of blocks, but generally speaking, each of these blocks deals with one or more of these three elements: tone in one block, pitch in another block, and so on. If you compare the various parts of a 01/W pro program to these elements, you will find that the oscillator (OSC) creates the basic tone and sets the pitch, the Wave-Shaping (WS) and filter (VDF) functions modify the tone, and the amplifier (VDA) sets the volume. You can create a wide range of sounds by setting appropriate values for the parameters in each of these blocks.

OSC Basic Tone and Pitch	→	WS Tone	→	VDF Tone	→	VDA Volume
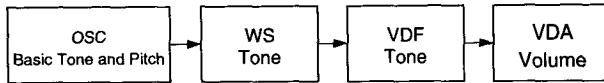
The element of volume in sound synthesis

Let's begin our discussion of these three elements with the concept of "volume". Even though we use the word volume, when it comes to sound synthesis we are not talking about simple loudness. The sound of a piano can be recognized as such whether you're listening to someone play it nearby, or whether you hear it coming from another room down the hall. So if loudness doesn't help to distinguish between different sounds, what does?

You are probably able to distinguish between, say, a flute and the electronic chime that you hear when you dial to get the correct time. However, if you check the shape of the sound waves produced by these two instruments using an oscilloscope (that is , if the air vibrations caused by the two instruments are converted to an electric signal that produces a visible wave pattern on an electronic display), you will find that they are nearly the same.

If sound only consisted of waves in the air, it might seem odd that you can tell these two instruments apart. The fact is that the two sounds differ in the way that their volume changes over time, as the following diagram shows.

FLUTE
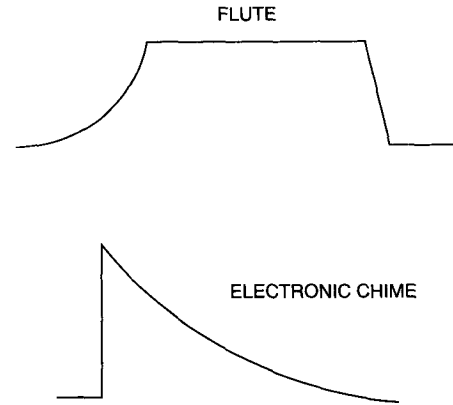
ELECTRONIC CHIME

The two instruments probably look something like this. Since the volume levels of these two sounds change differently over time, human beings recognize them as coming from completely different sources. Sounds such as the electronic chime which grow quieter over time are called attenuating sounds, whereas sounds which remain constant, such as that of the flute, are called continuous sounds. Try to change the electronic tone so that it's volume changed as shown in the upper diagram, it would sound very much like a flute.

The sound of every instrument has its own way of changing over time. This is one of the characteristics that defines the instrument's sound. When you are creating new sounds, too, volume will play an important role. Here are some more diagrams illustrating how the volume of sounds produced by a number of instruments change over time. Try imagining their sounds as you look at the diagrams.

VOLUME

PIANO

TIME

VOLUME

BRASS

TIME

VOLUME

SLOW ATTACK STRINGS

TIME

VOLUME

STRINGS PLAYED QUICKLY
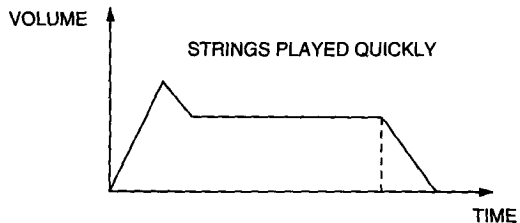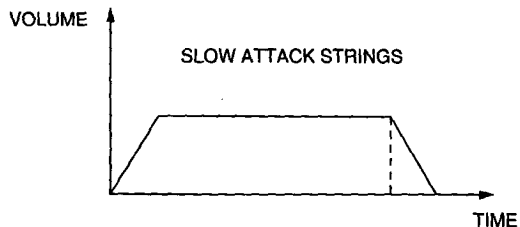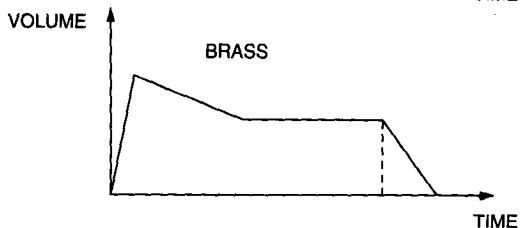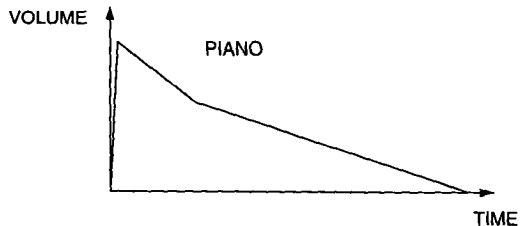
TIME

In a synthesizer, the shapes of the lines indicating changes over time in diagrams such as these are known as envelopes. The block that actually creates these changes as the sound is output is known as an envelope generator (EG). Thus, the envelope generator for the amplifier is called the VDA EG.

Let's try changing the settings of one of the 01/W pro's preset programs to see how the VDA EG works. Press the PROG key to enter Program mode, and select program "A34 Harmonics." Try playing a few notes: you'll hear the sound of a guitar's harmonics. Now press the EDIT PROG key to put the 01/W pro in Edit Program mode, and move to page 4 (VDA 1). The seven items lined up in the bottom line of the display are the VDA EG parameters. If you move your cursor to this line, a graphic showing the current shape of the VDA envelope will appear in the upper right corner of the display.

Press cursor key Ⓐ and raise the Attack Time (AT) setting to 60. Then press cursor keys Ⓓ and Ⓕ and raise the Break Point (B) and Sustain Level (S) to +70. Finally, press cursor key Ⓖ and raise the Release Time (RT) to 60. Now try playing a few notes. The strange sound you'll hear no longer resembles the guitar harmonics you started out with.

```
PROG A34 P4:VDA 1      ▶Release Time

Velocity Sense=+70
KBD Track  Int=+00
EGTime VelSens= 01
EGTime KbdTrk = 10   AT:0 DT:+ ST:0 RT:0
AT60 A+99 DT92 B+70 ST72 S+70 RT60
```
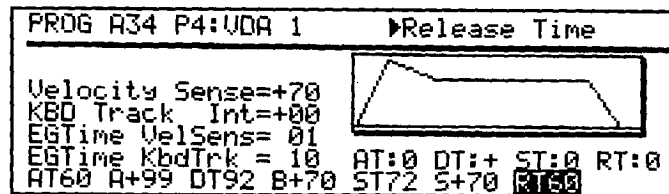
A	B	C	D	E	F	G	H

Below is a chart illustrating how the VDA EG parameters affect the volume of a sound. Feel free to try changing the values assigned to each, and see how the display's graphic and the sound itself change in response.

21

VDA EG SETTINGS
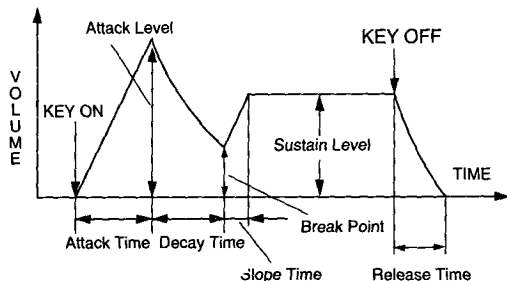
How tone is defined

The basic tone is defined by the oscillator.

Next let's take a look at the concept of tone. The tone of a sound is defined by how it causes air to vibrate---in other words, it is defined by the sound's waveform. With the 01/W pro, you can choose a basic waveform from the list of those produced by the oscillator (OSC), then process it with the filter (VDF) and WaveShaping (WS) functions to create the final tone.

Traditional musical instruments have a fixed waveform. The 01/W pro's oscillator (OSC) provides you with as many as 256 different waveforms. These waveforms, which are called Multisounds, include waveforms unique to synthesizers. Among the Multisounds which reproduce acoustic instruments you will find variations including "loop only" Multi-sounds, which contain the sustain portion of the sample only, and non-transposing Multi-sounds whose pitch stays constant regardless of the not played on the keyboard. These Multisounds allow you to create highly authentic simulations of natural instruments with relative ease.

In Program mode, select program "A13 Alto Sax" and play a few notes. This is a realistic saxophone sound. Now display page 0 of Edit Program mode and move the cursor to the third parameter, Multi-

sound. The value that has been set for this parameter is 107:Alto Sax. Change it to 008: HardFlute1 using the VALUE slider or the VALUE △ and ▽ keys, then play a few notes. The saxophone has become a flute. Next, set the value to 114---now it's a trombone! Well then, what about number 128? Here's a Multisound that practically shouts "synthesizer." And 134? A choir singing. . .

The filter changes tone over time.

You might be wondering what makes all of these Multisound waveforms different from one another. The answer to this question is harmonics. A sound's waveform is ultimately defined by the harmonics that it contains.

Try comparing the sounds produced by a violin and a flute when they play the note A4 (the A above middle C). Both instruments produced continuous sounds, but the sound from the violin is much brighter. While the flute's tone is duller and more monotonous, that of the violin is more complex and has a richer resonance. This complexity of tone indicates that the sound of the violin is composed of a large number of elements. By contrast, the simpler tone of the flute is composed of fewer elements.

In fact, both of the instruments produced sounds of a much higher pitch when they played the note A4. It is these higher sounds that are called harmonics. To rephrase the explanation above, the waveform

of the violin sound contains more harmonics than does that of the flute. Now, you may be thinking that you couldn't hear any higher notes. Keep in mind that harmonics are merely one of the elements that make up the entirety of a sound's tone---they can't be heard separately from the sound itself. (Together, they form a single sound.) Thus, when we say that a sound's tone consists of its waveform, we are taking into account the fact that a certain variety and quantity of harmonics are mixed in with the note's basic pitch.

What would happen if we started removing the harmonics from a sound, beginning with those of the highest-pitch and working down? If we do this to the sound produced by a violin, it will eventually begin to sound more like a flute. (That is, without the high-pitch harmonics, the harmonic structure of a violin comes to resemble that of a flute.) This removing of harmonics from the highest down is exactly what the 01/W pro's filter (VDF) does. Let's try doing this to the program we're editing.

Move to page 2 (VDF1) after selecting Multisound 134 or 107. Lower the value of the Cutoff parameter in the upper left corner of the display to 00, then play a few notes. The sound will become quite dark and muddy.

Next try raising the value all the way to 99. The sound will become much brighter. Generally speaking, the more harmonics a sound contains, the brighter it will become.
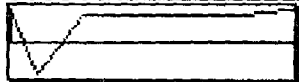
In order to pass a Multisound through the VDF without removing any harmonics, set the value of the filter Cutoff parameter to 99. Careful use of the filter will allow you to create sounds with characteristics that the original Multisounds do not possess.

Now move the cursor to the bottom line of the display. A graphic should appear in the upper right corner of the display. That's right, the VDF also has an EG. The VDF EG changes the cutoff point over time. To see how this works, press cursor key [C] and change the Decay Time (DT) to 50, then press cursor key [D] and set the Break Point (B) to -99. Now play a note. The sound will suddenly become dark, then bright again.

CUTOFF FREQUENCY

23
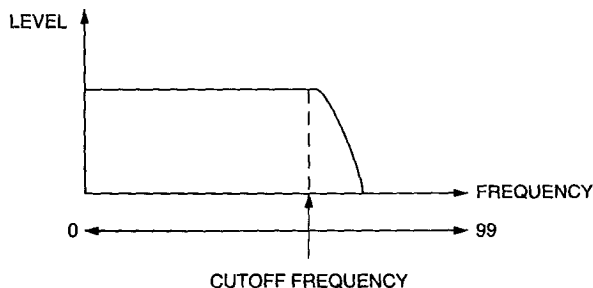
The tone of every instrument also changes over time in a particular way. The Multisounds themselves include a certain amount of tonal variation, but if you find this insufficient for your purposes, however, you will need to use the VDF EG to create the shape you desire. Below you will find the VDF envelope shapes for the instruments we showed you when we were discussing the VDA. Please compare them with the VDA envelopes, and refer to this information when you are creating your own sounds.

CUTOFF FREQUENCY

PIANO

TIME

CUTOFF FREQUENCY

BRASS

SLOWER THAN VOLUME   SHORTER THAN VOLUME   TIME

CUTOFF FREQUENCY

SLOW ATTACK STRINGS

TIME

CUTOFF FREQUENCY

STRINGS PLAYED QUICKLY

FASTER THAN VOLUME   TIME
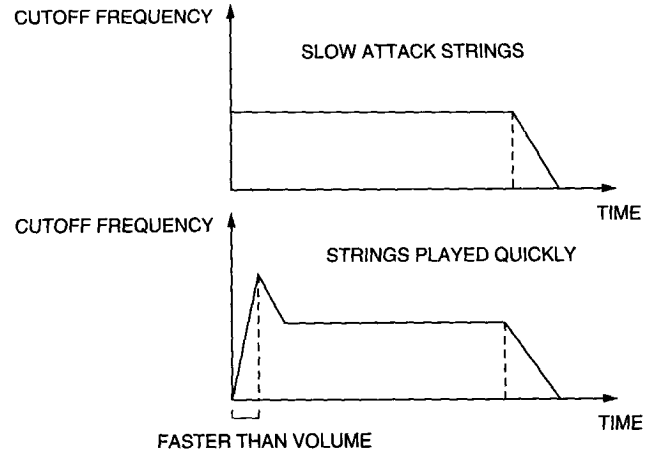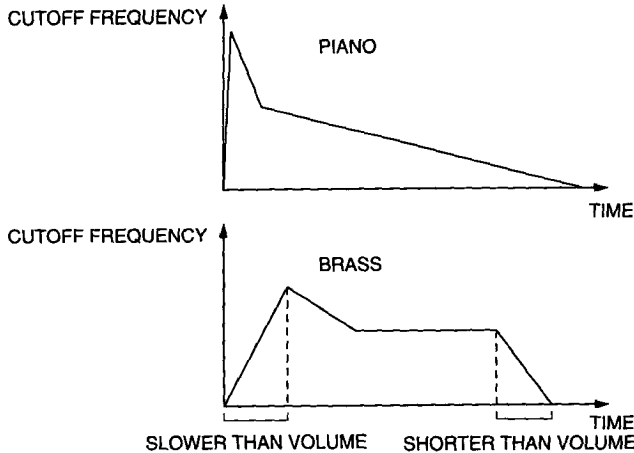
Unlike the VDA EG, the VDF EG has a Release Level (R) parameter. In addition, all of the level parameters may be set to negative values. The following chart illustrates how the VDA EG parameters change the cutoff frequency over time. Compare it with the chart we presented above for the VDA to see how they differ.

VDF EG SETTINGS

EG Intensity value

Attack Level

KEY OFF

KEY ON

Break point

Sustain level

CUT OFF

TIME

Release Level

Attack Time   Decay Time   Slope Time   Release Time

24
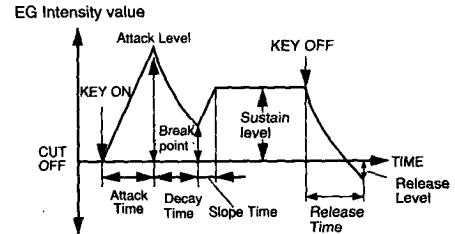
WaveShaping adds further nuances.

The 01/W pro has one more feature which can greatly effect the tone of the sounds it produces. This is the WaveShaping function. Before we explain this function, let's first listen to a program using it to see how it works. Return to Program mode and select program A01 16' Piano. This is a standard piano sound. Now enter Edit Program mode and display page 1, then move the cursor to the W.S.Table parameter in the lower left corner of the display. Press the VALUE key several times and listen to how the sound changes each time.

```
PROG A01 P1:EMP/W.S    ▶W.S. Table

Emphasis 1  Intensi▁╲▁▁▁▁▁▁
                    ╲▁▁▁▁▁▁
▐WS1=13:Resonant 2▌  VS+00 S99 DT70 SL20

 A    B    C    D    E    F    G    H
┌────┬────┬────┬────┬────┬────┬────┬────┐
│    │    │    │    │    │    │    │    │
└────┴────┴────┴────┴────┴────┴────┴────┘
```
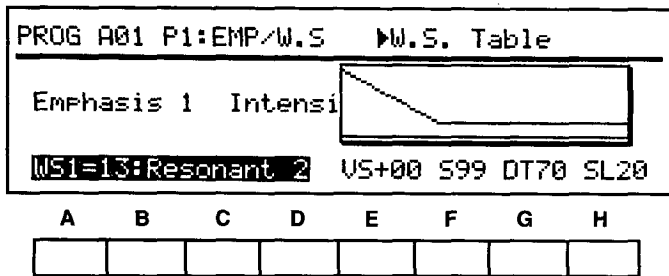
What do you think? The WaveShaping changes the sound quite radically in some cases. When sound synthesis consists of choosing a basic waveform from the Multisound selection offered by the OSC and then removing some of the harmonics using the VDF, it is possible to find a suitable waveform close to the one you want and then get it close to the sound you imagine fairly quickly. However, it is a bit harder to create sounds that are farther removed from any of the available waveforms.

That is where the WaveShaping function comes in handy. This function actually alters the way in which the 01/W pro reads the waveforms stored in its memory---which means that you can create new harmonics that were not included in the original Multisound, producing completely different sounds. And since the WS block comes before the VDF in order, you can apply filters to the reshaped waveforms that you create using WS.

WS gives you a choice of 60 ways to reshape Multisounds. Some of them provide rather predictable results. In many cases, however, the effects of a WaveShaping selection will vary greatly depending upon the basic waveform you combine it with: you won't know what it sounds like until you try it! For this reason, sound synthesis with the WaveShaping function involves a certain amount of trial and error. Nevertheless, this function can provide some very dramatic changes of tone, so please try to make use of it!

A few words about pitch

Finally, let's consider the element known as pitch. The pitch of a sound is determined by its frequency. Frequency is measured in hertz, which is abbreviated Hz. One hertz represents the number of times that a sound causes the air to vibrate in a second. The frequency of a sound doubles each time the pitch rises an octave. Thus, while A4 (the A above middle C) has a frequency of 440 Hz, the A one octave above it has a frequency of 880 Hz.

Modern music is based on a musical scale of European origin which divides the octave into 12 steps according to specific frequency ratios. The methods of representing the pitches in this scale include the familiar five-bar musical staff and systems of note names; and a great many instruments are designed to produce notes in accordance with this scale when their keyboards or frets are fingered. The MIDI standard follows this system, as well: it assigns 128 note numbers (0 to 127) to consecutive pitches on the musical scale, so that (for example) an instrument will play C4 whenever it receives note number 60.

However, although there might be some minor differences depending on the frequency range, the sound of a piano is still recognizable as such whether you play C3 or C6. As with volume, it is not pitch per se that defines the sound of an instrument. How, then, does pitch help to define the sound of an instrument? You've got it: once again, it is the change of the characteristic over time that makes the difference.

25

Return to Program mode and select Program "A32 FrHrn&Tuba." This is a brass sound. Enter Edit Program mode and select page 0 (OSC). The items lined up at the bottom of the display are the OSC EG parameters, which control the change of pitch over time. Move the cursor to the bottom line of the display and look at the graphic that appears. It seems as though the pitch at the start of a note is just a little higher than the rest. Press cursor key $\boxed{A}$ and use the LEVEL $\triangledown$ key to change the value for the Start Level (S) parameter to +00, and play a note or two. Do you notice a change? There might be a tiny difference of nuance, but it's still pretty much the same.

Okay, try this: change the start level to +99. Press cursor keys $\boxed{B}$ and $\boxed{D}$ to set the Attack Time (AT) and Delay Time (DT) both to 50. Then press cursor key $\boxed{C}$ and set the Attack Level (A) to –99.

```
┌─────────────────────────────────────────┐
│ PROG A32 P0:OSC      ▶Attack Level       │
│                                          │
│ OSC Mode : SINGLE    ┌──────────┐        │
│ Assign   : POLY      │ \        │        │
│ 111:Tuba/FrH   L=80  │  \/      │        │
│                      └──────────┘        │
│ S+99 AT50 ▓A-99▓ DT50 RT00 R+00 L+00 T+00│
└─────────────────────────────────────────┘
  A    B    C    D    E    F    G    H
 ┌────┬────┬────┬────┬────┬────┬────┬────┐
 │    │    │    │    │    │    │    │    │
 └────┴────┴────┴────┴────┴────┴────┴────┘
```
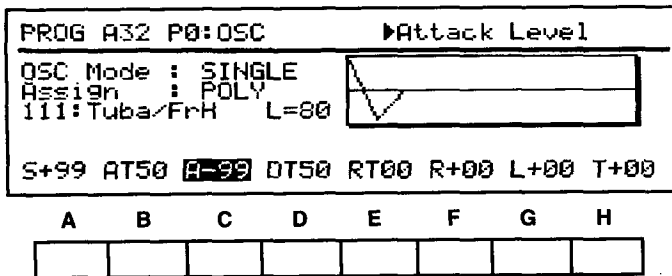
Now the pitch will change dramatically with each note. The new sound seems more like a sound effect than anything. Clear-cut changes of sound such as this tend to produce very unusual results, so the OSC EG tends not to be used other than to simulate the minute changes of pitch that occur when instruments begin to play a note. In sound synthesis, the element of pitch may be stressed less than the elements of tone and volume.

And what is Double Mode?

We touched on the concept of layering when we discussed the 01/W pro's combinations. The 01/W pro also allows you to layer two sounds at the program level. If you look at page 0 of the Edit Program mode display you will find a parameter named OSC Mode. If you set this parameter to DOUBLE, an additional set of parameters will appear for the OSC, WS, VDF, and VDA sections. Double mode lets you combine two different types of sounds at the Program mode level. Or you can have both oscillators (OSC1 and OSC2) play the same sound, but vary the pitch of each slightly to create a thicker sound.

When you create programs in Double mode, be sure to keep in mind that this will decrease the number of simultaneous notes you can play. The 01/W pro is a 32-note polyphonic tone generator, which means that it can normally be playing 32 notes at any given time. However, since Double mode programs actually play two notes for every MIDI note number received, you will only be able to play sixteen notes at a time if you use only Double mode programs.

Effects with programs

The 01/W pro also allows you to specify effect settings for each program. However, since the 01/W pro only has two digital stereo multi-effect processors, the effect settings you make for individual programs will be ignored in favor of the combination settings when you use programs in Combination mode. Therefore, you should be careful to avoid relying on the effects processors to supplement your sound synthesis when creating programs for use in combinations.

You can set up effects for programs in the same way as we described for use with combinations.

Saving programs

Programs are saved in exactly the same way as combinations. For details, please refer to our description of the procedure for writing combinations.

To create original programs

In order to create original sounds, it is important to avoid getting caught up in established concepts. (It is also important to form a clear image in your mind of the sound you wish to create.)

For example, don't let yourself be limited by the name of a Multisound. Don't think, for example, that you must put a bass envelope on Multisound 047 simply because it is named "A.Bass". Try using this bass waveform in a high frequency range, with an envelope that you'd use for slow attack strings. Truly original sounds are born of just this sort of experimentation.

The same holds true for the effects processors. There's no need to believe that overdrive only works with guitars, or that the rotary speaker effect can only be used for organs. Don't be trapped by common sense: instead, be willing to give anything a try.

And while you are experimenting, try to keep in mind the image of the sound you are creating. Even a partial image, such as that of "a soft, spacy sound", will give you at least a few clues: it should have a slow VDA EG attack, for example, and relatively dull harmonics. With your image as a starting point, you can try VDA EG and VDF EG parameter settings, look for an appropriate Multisound, and try a number of WS options. Eventually, you will come up with the original sound you're looking for.

Using the Sequencer

Using the Sequencer to Sketch out Song Ideas

Realtime recording

The demo song that we listened to at the beginning of this Quick Guide should have given you an idea of the musical potential the 01/W pro music workstation packs into a single package. Of course, since the 01/W pro's built-in 16-track sequencer is also capable of controlling external tone generators, you can use the 01/W pro as the heart of an extended MIDI system. First, however, let's try creating a song using the 01/W pro alone, to give you a feel for sequencer operations. Beautiful songs often start out as simple phrases that pop into the mind. So let's try creating a complete song from a single snippet of melody. (In the following pages, we will explain only the

most elementary steps of song writing. Please use this explanation as a starting point, then refer to the more detailed instructions in the 01/W pro Owner's Manual to perfect the song.) Here is the phrase we will begin with:

Although this simple phrase may not be too hard to remember, let's use the sequencer to record it for good measure. The 01/W pro allows you to record music using a step recording technique -- that is, by inputting notes numerically, one at a time. But since the 01/W pro has a keyboard, let's try using the realtime recording method, which

lets you record notes by playing them on the keyboard. (Step recording is explained in detail on page 120 of the Owner's Manual.)

Press the SEQ mode select key to enter Sequencer mode, and change to page 0 of the display. This is the page you will use to perform realtime recording. The 01/W pro's memory can contain as many as ten songs, numbered 0 through 9. Each song consists of sixteen recording tracks. Information for tracks 1 through 8 are displayed on the second and third lines of the display, while that for tracks 9 through 16 are displayed on lines four and five. The leftmost item on the second line from the bottom of the display is the Song parameter. Use this parameter to select the number of the song you wish to record.

```
SONG0 P5:EDIT SONG
┌─────────────────────┬─────────────────────┐
│ Step Recording      │ Bounce Track        │
│ Create CTRL Data    │ Copy Track          │
│ Event Edit          │▶Erase Song          │
│ Erase Track         │ Append Song         │
├─────────────────────┴─────────────────────┤
│ SONG0                          [ERASE]     │
└────────────────────────────────────────────┘
  A    B    C    D    E    F    G    H
┌────┬────┬────┬────┬────┬────┬────┬────┐
│    │    │    │    │    │    │    │    │
└────┴────┴────┴────┴────┴────┴────┴────┘
```
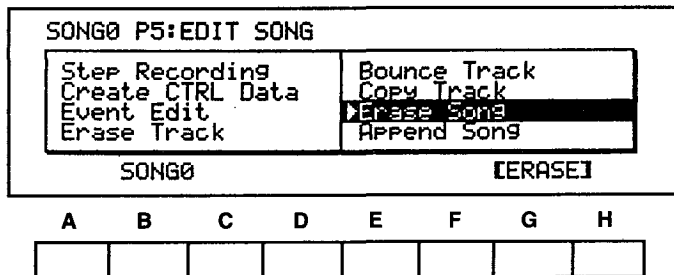
Before we begin recording, let's erase any data that may have been recorded for the song you selected. To do so, set all the Protect parameters found on the third line from the bottom of pages 1 and 2 to OFF, then go to page 5 and use the CURSOR UP or DOWN key to move the cursor to the Erase Song function located on the third line on the right side of the display. Then press cursor key ⒢ or ⒣ ([ERASE]) to clear all data for the selected song from the 01/W pro's memory.

```
SONG0 P3:CH/WINDOW1-8  ▶MIDI Ch

 Tr01 Tr02 Tr03 Tr04 Tr05 Tr06 Tr07 Tr08
 ▐01▌ 02   03   04   05   06   07   08
 127  127  127  127  127  127  127  127
 001  001  001  001  001  001  001  001
 G9   C7   B0   B2   B4   B6   G9   G9
 C-1  C2   C-1  C1   C3   C5   C7   C4

  A    B    C    D    E    F    G    H
┌────┬────┬────┬────┬────┬────┬────┬────┐
│    │    │    │    │    │    │    │    │
└────┴────┴────┴────┴────┴────┴────┴────┘
```
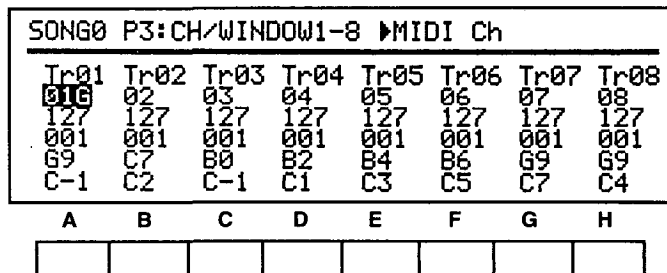
You might want to attach a temporary title to the song you are going to record to make it easy to identify later. To do so, move to page 9 and use the function called Rename Song. The method used to enter a song's name is the same as that which we used for naming combinations. This page also lets you set the number of measures the 01/W pro will count down before it begins recording what you play. Move the cursor to Metronome, the third item in the left-hand column, and press cursor key Ⓑ to change the Lead In value to 2. Next, you must prepare the tracks you will use to record the song. You can assign any MIDI channel to each of the sixteen tracks.

This is done using the parameters on the 5th row from the bottom on pages 3 (for tracks 1 through 8) and 4 (for tracks 9 through 16). To avoid confusion, it is a good idea to assign each MIDI channel to the track of the same number unless it is absolutely necessary to do otherwise. You will notice that these pages also allow you to limit the note ranges and velocities received by each MIDI channel, as you can for each of the timbres in a combination.

```
SONG0 New Song          ▶A02:Orchbrass
███   A00  A00  A00  A00  A00  A00  A00
A00   A00  A00  A00  A00  A00  A00  A00
SNG0 Tr01 M001 4/4  OVWR
♩=120:MAN Q:HI M:OFF Edit:PRG
```

```
  A     B     C     D     E     F     G     H
┌─────┬─────┬─────┬─────┬─────┬─────┬─────┬─────┐
│     │     │     │     │     │     │     │     │
└─────┴─────┴─────┴─────┴─────┴─────┴─────┴─────┘
```

Now return to page 0 and move the cursor to Track, which is the second parameter on the second line from the bottom. This parameter lets you designate the track to be recorded. Select track 1. Next, move to Edit Track Param, the 5th parameter (cursor key E) from the left on the bottom line, and change it to PRG. Then move the cursor to a track with a program you wish to play with track 1.

Let's select "A02 OrchBrass." (To send data from this track to another instrument via the MIDI OUT jack without triggering any notes on the 01/W pro, set Track Status, the 4th parameter from the bottom on pages 1 and 2, to EXT).

```
SONG0 New Song          ▶Measure
A02   A00  A00  A00  A00  A00  A00  A00
██    
A00   A00  A00  A00  A00  A00  A00  A00
SNG0 Tr01 M001 **/** AUTP:003→004
♩=120:MAN Q:HI M:REC Edit:PRG
```

```
  A     B     C     D     E     F     G     H
┌─────┬─────┬─────┬─────┬─────┬─────┬─────┬─────┐
│     │     │     │     │     │     │     │     │
└─────┴─────┴─────┴─────┴─────┴─────┴─────┴─────┘
```

Make sure that Realtime Quantize the third parameter {cursor key C) on the last line of the display} is set to HI. If you set this parameter to ♩ or ♪ , the 01/W pro will adjust the timing of any notes you play to the selected value. (If you don't have much confidence in your sense of rhythm, or in your ability to play the keyboard, you may want to set this parameter to a value that will not interfere with the timing of the phrase to be recorded.) Also, move the cursor to the right (cursor key D) and set the Metronome parameter to REC, then move the cursor to Rec Mode (cursor key E) the fifth parameter from the left on 2nd line from the bottom, and set it to OVWR.

Press the REC/WRITE key, which you will find on the right side of the front panel. Next, move the cursor to the 2nd line from the bottom, press cursor key B, and set the Tempo Track parameter to MAN. Then move the cursor to the left and set Tempo (cursor key A) to a tempo that will allow you to play the phrase comfortably. (You will be able to change the tempo as you wish when you play back the phrase. Finally, move the cursor to the 4th parameter from the left on the 2nd line from the bottom, press cursor key D, and set the Beat parameter to the time signature of the phrase you are about to record. Now go ahead and press the START/STOP key. The 01/W pro will begin recording after a two-measure countdown. Play the phrase on the keyboard, then press the START/STOP key to stop the recording when you are finished. Once you stop the recording, the 01/W pro will automatically return to the measure that you began recording at---in this case, the first measure of the song. You can listen to your recording simply by pressing the START/STOP key once again. How did it turn out? If the phrase didn't turn out quite right, try recording it again. After you listen to the phrase a few times, the next variation will probably pop into your mind.

Let's try recording this variation after the phrase you just recorded. To do this, you will want to record the third and fourth measures of the song, leaving the first measures you recorded as they are. This is where the technique known as auto punch-in recording comes in handy. This technique lets you specify one or more measures to be recorded. It is commonly used to re-record parts of a song that didn't turn out quite right. Press the REC/WRITE key, then move the cursor to the second line from the bottom, press cursor key E, and set the Rec Mode parameter to AUTP. Set Rec Start Measure (cursor key F) to 3, and Rec End Measure (cursor key G) to 4.

Finally, set the Location measure to 1. Now when you press the START/STOP key, the 01/W pro will start playing the phrase you've already recorded, beginning at measure 1. When it reaches the third measure, it will automatically begin recording. Play the new variation, then press the START/STOP key once you're past measure 4. As before, the 01/W pro will automatically return to the measure that you began recording at. You can press the START/STOP key at this point to listen to the notes you just recorded.

The image created by the combination of these phrases and the sound we've selected to play them with might inspire you to attempt more complex arrangements. Let's try adding harmony to the melody, using a slightly different brass sound.

Move the cursor to the second line from the bottom, then press cursor key B and set the Track to 2. Let's try using "B02 Brass 2" for this track. If the word MUTE is displayed for track 1, change it to PLAY at this point. Then press cursor key E on the 2nd line from the bottom and change the Rec Mode parameter to OVWR, making sure that the Location Measure parameter (cursor key C) on the same line is set to 1. Now press the REC/WRITE key, followed by the START/STOP key. The 01/W pro will begin recording after the two-measure countdown. When you're done recording, press the START/STOP key as before. How does it sound? Did the harmony turn out all right? Finally, let's add a little bass to the recording.

Set the Track to 3 and select the program you will use for the third track. Let's try "A07 The Strings." If track 2 is set to MUTE, change it to PLAY. Check Location Measure again to make sure it is set to 1. Then press the REC/WRITE key followed by the START/STOP key to record the new part as before. How's that? The simple phrase we began with is gradually becoming more and more elaborate. By adding new parts a little at a time in this manner, you can eventually create a complete work of art like the demo song you listened to earlier. We'll put this example aside for now, though, and move on to something else. But wait---there's something you should keep in mind before you turn off the power to the 01/W pro. Once you turn off the power to the 01/W pro, all of the data in the 01/W pro's sequencer will be lost. After taking the time to record a song, you don't want all that effort to go to waste, so it's a good idea to get in the habit of saving your song data to disk before you turn off the power. If you have a new disk that you want to save a song to, you must format the disk before you can use it. Make sure the disk is not write-protected, then insert it into the disk drive, press the DISK mode key, and move to page 2. The word SAVE should appear at the top of the display. Use the CURSOR UP and DOWN keys to move the cursor to Format Disk, the fourth item down on the left side of the display. Then press cursor key [G] or [H] ([FORMAT]). Since any data contained on the disk will be destroyed during formatting, the 01/W pro will display a message asking if you're sure you want to go ahead with the formatting operation. If you're certain that the disk doesn't contain any data that you want to keep, press cursor key [E] or [F] (YES) to go ahead. The 01/W pro will display the message "Now Formatting" while it formats the disk. Be sure not to remove the disk from the disk drive while this message is displayed.
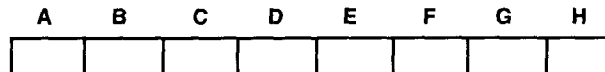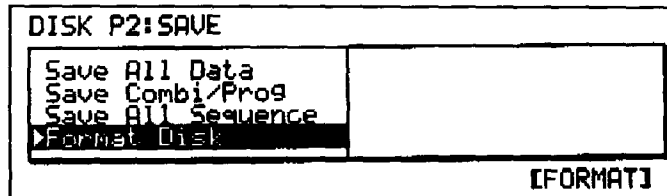
To save your sequencer data, press the CURSOR UP key to move the cursor to Save All Sequence, which is the third from the top on the left side of the display. Use the VALUE △ and ▽ keys to select the letter of the file you will use to hold the data, and press cursor key [G] or [H] ([SAVE]). Once again, the 01/W pro will ask you if you're sure you want to go ahead with this operation. Press cursor key [E] or [F] (YES) to save the data. The 01/W pro will display the message "Now Saving" while it writes the data to disk. Be sure not to remove the disk from the disk drive while this message is displayed.
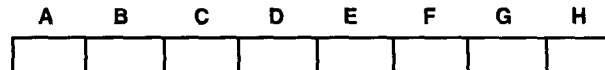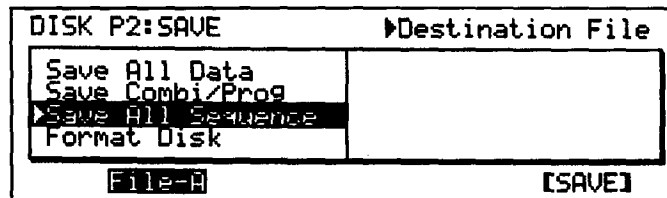
Recording patterns

Another approach to song writing, commonly used by composers in rock and other popular genres, is to think up guitar and bass riffs while playing a set rhythm pattern, then build the melody and overall arrangement on top of these basics. You will find the pattern recording method useful if you take this approach to music creation. This technique lets you register repeatable groups of measures, such as drum patterns or bass riffs, as individual patterns. You can then play them back repeatedly while you're putting together ideas for a song. You can also arrange these patterns into tracks, a handy feature that saves on inputting time and cuts down on the amount of memory required to record a song. Let's try using the 01/W pro's pattern recording function to record a basic drum pattern.
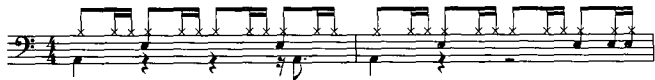
When you create a pattern, it will play back using the program specified for the currently selected track. So let's begin on Page 0 of the display to select the program we will use for our pattern. Select program "A09 Total Kit." Now we can move to page 7 of the display and begin preparing the pattern we will record. Press the CURSOR UP or DOWN keys to move the cursor to Erase Pattern, which is the first item on the right side of the display. Use the VALUE slider or the △ and ▽ keys to select a pattern number, then press cursor key G or H ([ERASE]) to clear the data from the pattern you selected. (Before you do this, check to make sure that you don't want to keep the contents of the pattern. This is because changing the contents of a pattern will cause the new data. Next, press the CURSOR UP key to move the cursor to the Pattern parameter, which is the fourth item down on the left side of the display. Press cursor key A to select one of the patterns numbered 00 to 99, cursor key B or C (Beat) to select the pattern's beat, and cursor key F or G (Measures) to set the number of measures in the pattern. When you've completed these settings, press cursor key H ([SET]). If you move to another pattern, parameter, or page without pressing this key, the settings you have made will return to their original values.


```
SONG0 P7:PATTERN      ▶Pattern Number
┌─────────────────────┬─────────────────────┐
│ Real Time Rec       │ Erase Pattern       │
│ Step Recording      │ Get From Track      │
│ Event Edit          │ Bounce Pattern      │
│▶Pattern Parameter   │ Copy Pattern        │
└─────────────────────┴─────────────────────┘
 P00 Beat: 4/4  B.Res:Hi  Length01 [SET]

  A    B    C    D    E    F    G    H
```

Once you've set your parameters, press the CURSOR UP key to move the cursor to the Real Time Rec function. Press cursor key E or F to set the Metronome parameter to ON or REC. (If you set the metronome to ON, it will sound during playback as well as during recording.) Then press cursor key B to adjust the tempo. This tempo will not be memorized as part of the recording, so feel free to choose a tempo that will allow you to play the pattern comfortably.

```
SONG0 P7:PATTERN      ▶Tempo
┌─────────────────────┬─────────────────────┐
│▶Real Time Rec       │ Erase Pattern       │
│ Step Recording      │ Get From Track      │
│ Event Edit          │ Bounce Pattern      │
│ Pattern Parameter   │ Copy Pattern        │
└─────────────────────┴─────────────────────┘
 P00  ♩=144 M-- Q:HI    MM:ON

  A    B    C    D    E    F    G    H
```

Press the REC/WRITE key on the front panel. When this key lights up you can press the START/STOP key at any time to begin recording. When the 01/W pro reaches the last measure of the pattern, it will loop back to the first measure and keep recording. Any new notes you play will be overdubbed onto the notes you recorded during the first pass. To stop recording, press the START/STOP key again. Now you can press the START/STOP key without pressing REC/WRITE first to listen to the pattern you recorded. Next, let's try placing the pattern on a track. Move to page 6 (EDIT MEAS). Use the CURSOR UP or DOWN keys to move the cursor to Put/Copy Pattern, which is the fourth function down on the right side of the display. Press cursor key B and enter the number of the pattern you wish to place on the track, then press cursor keys D and E to specify the track and the measure number where you wish to insert the pattern. If you place a pattern on a track that already contains sequencer data, writing to any measures that contain data will cause the previous data to be erased, so be sure you enter the track and measure numbers correctly. When your settings are complete, press cursor key G ([PUT]) to place the pattern on the track. Be careful not to press cursor key H ([COPY]) instead, as doing so will copy the performance data from the pattern to the track. This will not result in the savings of data that occurs when you place the pattern onto a track.

Next, let's try recording a bass riff.

We'll record this pattern using program "A16 B. Bass." The procedure for recording the pattern is the same as that for recording drum patterns. However, bear in mind that you will want to record the data to a different pattern number , as well as a different track. If you use the same pattern number as before, the data you recorded earlier will be erased. Likewise, if you use the same track number, the bass part will replace, rather than accompany, the drum pattern. If you place the drum and bass patterns onto separate tracks and play them back together, a variety of melodies and ad lib ideas may come to mind. If you try recording one of those melodies to yet a third track using the realtime recording method, you may find yourself on the way to creating a song. Pattern recording can be a very convenient tool for creating rough sketches of songs. So try taking the time to record those phrases that occur to you now and again; you may find that it will help you to increase your musical output!

```
SONG0 P6:EDIT MEAS      ▶Pattern

Quantize              Erase Measure
Shift Note            Copy Measure
Modify Velocity       Insert Measure
Delete Measure       ▶Put/Copy Pattern

   Pat00  ➡  Trk01 M001      [PUT][CPY]

 A    B    C    D    E    F    G    H
```

33

01/Wpro 01/WproX VOICE NAME LIST

< PROGRAM >

Bank A

00	Ephemerals	01	A.Piano 2	02	Orchbrass	03	Woodwind	04	RosewoodGt
10	GhostRyder	11	DigiPiano1	12	OrchTrpts	13	Alto Sax	14	Alan's Run
20	OxygenMask	21	Perc.Org 1	22	Brass Band	23	Bottles	24	ZingString
30	Fresh Air	31	DoubleStop	32	FrHrn&Tuba	33	Sweet Oboe	34	Harmonics1
40	FreeFlight	41	Hard Tines	42	Fat Synth	43	Harmonica	44	Strategy
50	DesertDawn	51	PadPiano 1	52	Trombone 1	53	Tenor Sax	54	Blue Moon
60	Syn Choir	61	Clav	62	Mute Ens.	63	Tin Flute	64	JStick Wah
70	Aliabase	71	Spit Organ	72	FanFare	73	Clarinet	74	PedalSteel
80	Shimmering	81	Whirly	82	Muted Trpt	83	Flute	84	Clean Gtr
90	UnderWater	91	Full Pipes	92	JSDogfight	93	PerkySaxes	94	Sitar

05	VS Bells 1	06	XFade Bass	07	TheStrings	08	Residrops	09	Total Kit
15	Marimba	16	B.Bass	17	ChamberEns	18	Tidal Wave	19	Jet Stream
25	SolarBells	26	RezzzzBass	27	Analog Pad	28	SynPiano	29	Dance Kit
35	SteelDrums	36	Pick Bass	37	Choir L+R	38	Raw Deal	39	Mr. Gong
45	Borealis	46	SlapBass 1	47	Bass&Cello	48	AnalogPerc	49	FreezeDrum
55	XpressBell	56	TKO Bass	57	Harp	58	Soft Pad	59	Orch Hit
65	DigiBell	66	OctaveBass	67	Voices	68	RezzzzzPad	69	VeloGated
75	Log Drums	76	Seq. Bass	77	ArcoAttack	78	Expecting	79	Crickets
85	Bell Rise	86	Deep Bass	87	Air Vox	88	NuclearSun	89	50's SciFi
95	Metal Bell	96	BowBowBass	97	SadStrings	98	MonoLead 1	99	Flutter

Bank B

00	DreamWeave	01	A.Piano 1	02	Velo.Horns	03	SweetReeds	04	ClassicGtr
10	Pitzpan	11	DigiPiano2	12	Trumpet	13	SopranoSax	14	FeedBacker
20	Lub Pad	21	CX − 3	22	Brass 1	23	Pan Flute	24	A.Guitar
30	Sanctuary	31	DWGS EP	32	FrenchBoys	33	BasoonOboe	34	Harmonics2
40	BellShower	41	Old EP	42	LeadStab 1	43	Musette	44	MuteGuitar
50	Hyperborea	51	Super Tine	52	Trombone 2	53	Bari.Sax	54	Hackbrett
60	AirFlight	61	Gospel Org	62	Brass 2	63	Arabesque	64	JazzGuitar
70	Gasmore	71	PercOrg 2	72	Soft Horns	73	Bassoon	74	Mr. Banjoe
80	Ghost Pad	81	Digi Years	82	Muted Bone	83	EnglishHrn	84	Mr. Clean
90	Spectrum	91	Positive	92	SFZ Brass	93	Scotland	94	Koto

05	VS Bells 2	06	A.Bass 1	07	YourString	08	Bellevue	09	MrProducer
15	Kalimba	16	E.Bass 3	17	Rosin Bros	18	Tona Pad	19	Stadium!!!
25	EtherBells	26	Resi Bass	27	String Pad	28	Tap Dance	29	Percussion
35	Gamelan	36	Syn Pick	37	Choir	38	Shapedet	39	Timpani
45	Baby'sGone	46	SlapBass 2	47	Stradivari	48	Quitar	49	Velo Perc
55	SplitBells	56	Tech Bass	57	Pizzicato	58	Pulse Pad	59	Drum Hit
65	Vibraphone	66	Fretless	67	Heavenly	68	WS Analog	69	Orch Perc
75	Music Box	76	Cool Bass	77	Marcato	78	MlwSquares	79	Shellphone
85	Bell Tree	86	A.Bass 2	87	Vox Voice	88	Vox Dude !	89	AlienVisit
95	Tubular	96	Stab Bass	97	Too Bad...	98	MonoLead 2	99	Steam

< Combination >

00	DawnOfTime	Split/Layer Pad. Aftertouch adds Filter Modulation.
01	MIDI Piano	Layer. Velocity increases Chorus depth and Reverb Level.
02	The Finale	Velocity/Split/Layer. Bottom Octave is Timpani only, C#3 — B6 is Orchestral sound. Velocity adds Orch Hit and Orch Percussion. C7 is Audience Applause, They loved it !
03	SuperSynth	Split/Layer (B3 — C4). Big Analog Split using Waveshaping.
04	Vox Picker	Layer of E.Guitar, Piano Pad and Voice. Slider and Joystick(—) add Chorus and Reverb.
05	Bell&Blue	Layer of Bellevue, Analog Pad and Ether Bells.
06	VolumeKnob	Split/Layer/Velocity (E4 — F4). Lower Velocity adds Clean Guitar on bottom half, Damper Pedal enabled on bottom and Pitch Bend on upper half. Slider and Joystick increase Chorus.
07	Orchestra	Multi Layer. Slider increases Reverb depth.
08	MillerTime	Velocity/Layer/Split (B3 — C4). Lower keyboard half just for bass, upper half presents muted brass and bigband while playing with harder Velocity. Reverb Level is Velocity controlled.
09	Mega Drums	Multi Layer. Slider increases Gated Reverb and decreases exciter amount.
10	Animotion	Layer. Slider decreases Delay Amount.
11	Notre Dame	Layer/Split (C4 — C#4). Pipe Organ, Choir, and Velocity adds Tubular Bell.
12	Warm Brass	Layered Brass.
13	Evolution	Layer. Aftertouch adds Filter Modualtion and expands Stereo Field.
14	Whammy&Pad	Split/Layer (D#4 — E4). Bottom half is String Pad with Damper enabled, top half is Distorted Guitar with 1 Ocatve Pitch Bend enabled. Slider and Joystick(—) add Fx Ballance.
15	Botswana	Split/Multi Layer (G4 — G#4). Velocity adds Crickets on lower half and Kalimba on upper half. Damper enabled on lower half only. Slider and Joystick(—) add Chorus and Reverb.
16	Salsa Band	Split/Layer/Velocity (C4 — C#4). Hard Velocity adds "Salsa" horns. Slider and Joystick(—) increase Chorus rate and decrease Reverb depth.
17	Marcato	Layer. Very dynamic Marcato Strings. Use slider to increase Reverb Level.
18	Jazz Hits	Multi Layer/Split/Velocity(B3 — C4). Lower half is E.Bass, upper half is Organ, hard Velocity adds Brass hits to upper half.
19	LostTemple	Split/Layer/Velocity (E4 — F4). Hard Velocity adds Gong to lower half and Arabesque to upper half. Use Aftertouch for trill effects. Follow the map so you don't get lost.
20	Death Star	Velocity/Layer/Split. C7 adds jet, Velocity adds explosion on bottom half of keyboard. Slider increases Flanger Speed.
21	Old Tines	Velocity/Layer. Electric piano. Harder Velocities adds tine.
22	LegatoReed	Split/Layer (F#4 — G4). Bottom half is Ensemble with Damper Pedal enabled, top half is English Horn with Pitch Bend enabled. Slider and Joystick(—) increase Reverb and Exciter.
23	Pollen	Layer. Hope you're not allergic to this sound.
24	XpressBass	Multi Velocity/Layer. Harder Velocities add slap — bass.
25	ChinaBell	Velocity/Layer. Hard Velocity adds transposed Split Bells.Slider and Joystick(—) add Chorus and Reverb.
26	Polka Box	Layer/Split (B3 — C4). Accordeon split, Roll out the Barrel!
27	SuperVoice	Layer. Real Voices.
28	Sax Band	Layer. Very dynamically controllable Sax section. Velocity controls Reverb level.
29	Sea Storm	Split/Layer. Buoys on C4 and C5, Foghorn on G3. Hit the rest to get the storm and waves. Joystick increases really bad weather!
30	VoxGamelan	Split/Layer (G2 — G#2).
31	The Legend	Layered Organ. Slider and Aftertouch control Rotary Speed.
32	Crescendo	Split/Layer (C4 — C#4) of SFZ Brass. Lower half is layer with Timpani, Orch Crash and Orch Hit.

33	Power 4ths	Split/Layer (B3 – C4). Bottom is Resonant Bass, upper half is preset 4th chord for power leads.
34	12 Stereo	Layer. Velocity controls panning.
35	AirCastles	Layer of Airy Pad. Aftertouch increases Reverb depth and Velocity increases Chorus Speed.
36	Piano&Strg	Layer. Velocity increases Reverb Level.
37	Chamber	Layer/Split. Play dynamically to get the bow. Velocity increases Reverb Level.
38	Velo City	Split/Layer of Bass and Pad(B3 – C4). Velocity increases 'snap' of Bass and Pad.
39	Dance Club	Layer/Split/Velocity. Drums (C2 – C4), funk bass (D4 – D6) with Orchesra Hit added by hard Velocity, Stadium (D#6 – A#6), Drum Effects(A6 – C7), slider increases Reverb depth.
40	SpaceBeast	Multi Split/Layer. Lower Half is deep pedal tone, upper half hold down and wait for the beast to appear.
41	Synth Clav	Layered Funky Clav with Waveshaping resonance.
42	Fat Guys	Layered Trombone and French Horn in Stereo.
43	Explorer	Layer. Bells and Airy Synth Vocal.
44	Bass Suite	Velocity/Layer. Soft Velocity is pad with Damper enabled, hard Velocity is Fretless Bass with Damper disabled. Slider and Joystick(–) add Chorus and Reverb.
45	Warm Bells	Layer. Analog Pad and Bells.
46	Astro Lead	Multi Layer/Split. Play sustained chords with on lower half and slow spacey solo on upper. Truly out there.
47	TheOldKing	Split/Layer/Velocity (C2 – C3). Hard Velocity adds Tubular and Timpani.
48	Plungers	Split/Layer (E4 – F4). Lower half is layered Bass and upper half is Orchestra Trumpets, French Horn, and Tuba.
49	Stereo Kit	Layer of Stereo panned Drumkits. Slider increase Reverb depth.
50	Wonderland	Multi Split/Layer. Play Octaves in lower half and solo in upper. Aftertouch and Slider control Rotary Speed and Delay Amount.
51	Registers	Layered Pipe Organ. Editing Levels of Timbres 2 and 3 adjusts footages.
52	StereoReed	Velocity/Layer. Velocity controls Pan Position of sounds.
53	Steam&Res	Velocity/Layer of Resonant Synth and Wind Bells. Velocity adds Steam. Slider and Joystick(–) add Chorus and Reverb.
54	ComingHome	Velocity Layer. Aftertouch increases Chorus depth.
55	Mallet Men	Layer/Velocity. Hard Velocity adds Log Drum, Slider increases Reverb depth.
56	The Gospel	Velocity/Layer. Velocity adds choir.
57	AnaStrings	Layer. Very dynamic Pad Strings. Velocity increases Reverb Level.
58	Octa Brass	Layer. Play dynamically to get the right expression!
59	HitTheDust	Layer/Split/Velocity. Velocity switch between Aliabase, PitzPan, Log Drum, Gong and DrumHit.
60	NightShift	Split/Layer. Split Point at B3 – C4. Damper on lower half only and Pitch Bend on upper half.
61	Piano Pad	Layer. Velocity increases Reverb Level.
62	MahlerHorn	Velocity/Layer. Velocity adds bright horns. Good stuff, Gustav.
63	Osmosis	Layer. Waveshaping Sweep. Aftertouch increases Chorus and MultiTap Delay depth.
64	SynthRezz	Layer. Waveshaping Synth Comp.
65	Solar*Eyes	Layer. Dusty returns!
65	Shogun	Multi Split. Timpani(C2 – D2), Koto and Harp(D#2 – E4), Tin Flute(F4 – B5), and Percussion(C6 – C7). Slider and Joystick(–) add Exciter and Reverb.
67	ThePhantom	Velocity. Switches between soft Choir and heavy Pipe Organ with large Choir. Leave the mask at home.
68	CrystalSax	Layer/Split (D#4 – E4). Lower half is airy pad and upper is Soprano Sax. Very New Age.
69	Fife&Drum	MultiSplit. Timpani(C2 – B2), Bagpipe(C3 – A4), Snareroll(B6) and Snare Hit (C7). Snare Hit stops Snare Roll.

70	Percolater	Layer with Percussion. Timed Delays at 86 BPM for rhythmic effect.
71	Principale	Velocity/ Split / Layer. Velocity controls Pan Position of sound.
72	StringReed	Layered String and Reed.
73	Overweight	Layer. Big Analog Pad.
74	New Guitar	Velocity/Layer. Hard Velocity adds Steel String Guitar. Slider and Joystick(−) add Reverb and Chorus.
75	HyperBaby	Layer. Delicate Bell with Pitch EG!
76	Nasty Lead	Layer. Monophonic Lead with distortion. Let's get nasty !
77	HarpString	Layer. Delicate Harp and Strings.
78	Big Band	Velocity. Hard Velocity adds Bright Brass to the Sax ensemble.
79	Slam Dunk	Layer. Use dynamics and watch out for the big boys under the boards.
80	Spirals	Layer using Waveshaping for resonance.
81	LayerPiano	Layer. Slider controls Reverb Level.
82	SweetMutes	Layer. Play dynamically. Slider adds Reverb.
83	HyperAiry	Layer with lots of air.
84	BowWowBass	Multi Velocity Layer. Harder Velocity adds octave up bright Synth Bass.
85	VeloVoxBel	Multi Layer/Velocity. Pan position of Bell changes with Velocity, Slider increases Reverb depth and decreases Chorus Rate.
86	Policemen	Split. Pick Bass and Chorused Clean Guitar.
87	OrchSwitch	Split/Layer/Velocity (C2 − G3). Velocity switch between Harpsicord, Strings and Bassoon and Timpani, Strings and Brass.
88	Bass&Piano	Split (B3 − C4). Damper is disabled Acoustic Bass.
89	ArabnNites	Multi Layer/Split (B3 − C4). Bell and Gong on lower and Bell and Flute on upper. Slider increases Reverb depth.
90	Dreaming	Layer. Aftertouch increases Chorus depth. Velocity increases Reverb Level.
91	Dbl − Manual	Split/Layer (B3 − C4). Lower half simulates Lower Manual, upper half is Percussive Organ for solo. Aftertouch and Slider control Rotary Speed.
92	OrchReeds	Layer.
93	TheSweeper	Layer of SFZ Brass and Waveshaping sweep. Slider and Joystick(−) add Chorus and Reverb.
94	JustPlayIt	Layer. Playable as Electric Guitar or as Electric Piano.
95	Stakeout	Multi Layer, Slider increases Reverb depth.
96	Bavaria	Split/Layer. Aftertouch increases volume of Accordeon and Reverb Level. Have a beer!
97	Double Bow	Layer. Layered Strings in Octaves.
98	MoonLight	Layer/Split (B3 − C4). Deep Acoustic Bass on lower half and mellow Horns on the upper.
99	Dagobar	Layer. Spacey Layer with Auto Panning simulating Wavesequencing.

Bank B

00	Eternia	Multi Layer. Lots of sparkle and lots of phasing.
01	Power Comp	Multi Layer.
02	Orch&Timp	Split/Layer/Velocity. Harder Velocity adds Timpani in lower half.
03	TheBigIdea	Split/Layer (C4 − C#4). Waveshaping ResonantBass on lower half and classic analog stab on the upper half. Dedicated to Dave Stewart.
04	GuitarVibe	Split/Layer/Velocity (C#4 − D4). Velocity adds bells, Slider and Joystick(−) increase Reverb and Chorus depth.
05	Lub Bells	Velocity/Layer. Velocity adds Bells.
06	ChorusEGtr	Layer. Slider increases Reverb depth.
07	Dynamics	Velocity/Layer. Complex Velocity windowing gives the full range of orchestral dynamics.
08	Alto Hits	Velocity/Layer/Split(B3 − C4), Acoustic Bass on lower half, on upper half Alto Sax with soft Velocity, Brass with hard Velocity.
09	LayerDrms1	Layer. Slider increases Reverb depth.
10	BellMotion	Velocity/ Layer. Hard Velocity adds Bells. Slider and Joystick increases stereo effect.
11	Full Pipes	Layer with all the stops pulled out.
12	DarkBrass	Layer of dynamic dark Brass. Velocity increases Reverb.
13	Vaporizer	Layer.
14	MetalAlloy	Split/Layer/Velocity (B3 − C4). Velocity adds power chords on lower half (Damper Pedal enabled), upper half is Metal Lead with Pitch Bend enabled.
15	TasianWind	Layer. Polyphonic Lead sound.
16	Sky Light	Split/Layer(B4 − C5). Lower half is Guitar with Voice, top half with pretty mellow Lead. Aftertouch increases Reverb.
17	Pizz & Bow	Layer of Pizzicato and Marcato strings.
18	R&B Splits	Velocity/Layer/Split (F#4 − G4). Lower half is E.Piano with Damper enabled, upper is Tenor Sax with Pitch Bend enabled. Hard Velocity adds Brass Hits.
19	Katmandu	Velocity/Layer/Split (B3 − C4). Hard Velocity adds Drum Hit.
20	Nebulae	Layer. Airy − Spacey Pad, Joystick(−) increases Cross Delay.
21	The Tramp	Layer. Fat Electric Piano. Velocity increases effects.
22	Delicato	Layer. Small orchestral ensemble.
23	GhostVoice	Layer. Velocity increases Reverb.
24	GargleBass	Layer of Waveshaping Bass. Slider and Aftertouch increase Reverb and Flanger depth.
25	BriteBellz	Layer. Slider increases Reverb and Chorus depth.
26	Last Tango	Layer/Split (B3 − C4).
27	Deep Choir	Layer. Large Choir with bassy ambience.
28	Group Sax	Layer. Sax Ensemble panned across stereo field.
29	BugForest	Layer. Environmental sound.
30	Maniac	Multi Split/Velocity/Layer (C3 − C#3). Play soft and hard to change the mood of the maniac. Jet on C7.
31	ClickOrgan	Layer. Super Percussive Rock Organ.
32	BrassSwell	Layer. Sfortzando Brass. Wait for the swell.
33	Fat Analog	Layer. Slightly overweight, middle − aged analog synth.
34	GoldGuitar	Layer.
35	CanyonHarp	Multi Layer. Slider and Aftertouch increase Reverb and Chorus depth.
36	Bass&EP 1	Layer/Split (B3 − C4). Lower half has Pitch Bend enabled, upper half has Damper enabled.
37	Amadeus	Layer. Small String ensemble. VDA level increases Reverb and Chorus depth.
38	Bass&Vibes	Split (B3 − C4). Lower half has Pitch Bend enabled, upper has Damper enabled.
39	MetalMania	Velocity/Layer/Split. Play E2 and B2 for Drums, hard Velocity adds Crash on E2, C3 − B4 is power chords, C5 − C7 is fifth Lead Rock Guitar. The keyboardist revenge!

40	LiteBeams	Multi Layer. Slider and Aftertouch increases Reverb depth and Rotary Speaker Speed.
41	Pop Clav	Layer. Slider increases Reverb depth.
42	RegalBrass	Layer.
43	Slider Pad	Layer. Synth Pad, Slider Sweeps thru mid frequencies of parametric EQ.
44	WalkinBass	Velocity/ Layer. Use Velocity for expression.
45	SecretGong	Velocity/Layer. Hard Velocity adds "secret" Gong.
46	Lead & Pad	Layer/Split (D#4 − E4). Lower half has Damper enabled, upper half has Pitch Bend enabled.
47	Overture	Velocity/Layer/Split (A3 − A#3). Hard Velocity adds Orch Hit to lower half.
48	Fusionette	Layer. A light layer of E. Pinao and Horns.
49	LayerDrms2	Layer. Slider increases Early Reflection and Flanger rate.
50	DreamCycle	Split/Layer (E4 − F4). Play Octaves in lower half with Damper Pedal, upper half is solo sound with Pitch Bend enabled. Slider and Joystick increase Chorus and Reverb depth.
51	PositivAir	Layer of chiff Pipe Organ. Slider increases Reverb depth.
52	Woodwinds	Multi Split/ Layer. Reeds split across keyboard.
53	Neutrons	Layer. Big pad with movement.
54	JazzGuitar	Layer.
55	InTheBush	Layer. Slider and Joystick(−) increase Reverb depth.
56	RockShow!!	Split. C2 − C#2 Applause, D2 − E4 E.Guitar and Bass in octaves, F4 − C7 Rock Organ. Forget about ego problems and the bass player's wife. Be your own rock band today !
57	SilkString	Layer.
58	Big Brass	Layer of bright Big Brass. Slider increases Reverb depth.
59	Ethno Geo	Layer. Drums and Percussion layer with ethnic bells.
60	Sea Horses	Split/Layer/Velocity. Hard Velocity adds Bells, Slider and Aftertouch increase Delay depth and Rotary Speaker Speed.
61	PianoFloyd	Layer of A.Piano, E.Piano and Air Vox.
62	Fox Hunt	Layer of dynamic Rrench Horns. Velocity increases Reverb.
63	Apocalypse	Layer. Velocity and Aftertouch increase effects.
64	Rezzzz Man	Layer. Waveshape Resonance with very little ambience in effects. Slider increases Chorus Delay and Phaser depth.
65	Star*Pad	Layer. Velocity increases Reverb. Only stars can use this!
66	Flute&Pick	Split. Lower half has Damper enabled, upper half has Pitch Bend enabled.
67	Acappella	Layer. Female Choir with oohs.
68	CountyLine	Layer/Split (G4 − G#4). A.Guitar and Voices on the lower half with Damper enabled and Harmonica on the upper half with Pitch Bend enabled.
69	IslandDrum	Layer. Slider increases Reverb depth.
70	Multi "Fx"	Velocity. Different Velocities give four different delays times.
71	Mixture	Layer. Harder Velocity adds principal register.
72	Royal Pad	Layer.
73	SoftAnalog	Layer. Supersoft synth.
74	Hybrid Gtr	Layer of E.Guitar and A.Guitar. Slider and Joystick(−) increase Reverb depth.
75	TheRedSun	Multi Layer. Slider and Joystick increase stereo imaging.
76	ReturnLead	Layer. Polyphonic Lead with reverse Reverb effects.
77	Gtr&String	Layer. A.Guitar and Strings.
78	Gig Brass	Layer. Same effects as A78 so there is no muting of effects when hitting the bank switch.
79	Mad Bomber	Layer/Split (C4 − C#4). Lower half is explosion, upper half is Prop planes in a dogfight. Joystick(−) adds machine guns, Joystick(+) stalls the engine. More fun than most video games.
80	Vectors	Layer. Auto pan "vectors" between Gasmore and 50's Sci − Fi.
81	DynoPiano	Layer of Tine Electric Piano. Slider increases Reverb and Chorus depth.
82	Trumpets	Layer of Trumpet ensemble. Slider increases Reverb depth.
83	AiryWaves	Layer of Airy pad. Aftertouch increases Reverb and Chorus depth.

84	Synth Bass	Layer. Slider decreases Gated Reverb depth.
85	VoxWhistle	Multi Layer/Split(A#4 − B4). Lower half has damper enabled, upper half has Pitch Bend enabled. Slider and Joystick(−) increase Effects depth.
86	CountryJam	Split. Ya'll ready to ring − dang − doo !
87	Concerto	Layer. Harpsichord and Full Orchestra.
88	Bass&EP 2	Split (B3 − C4). Lower half has Pitch Bend enabled and upper half has Damper enabled.
89	Suspiria	Layer. It's mysterious.
90	Awakening	Layer. Slider affects Reverb balance.
91	Tremolo	Layer. Organ with built − in tremolo. Slider and aftertouch increase Chorus depth.
92	Embouchure	Layer. Nice Reed ensemble in octaves.
93	Wondering	Layer. Clavy sound with pad underneath.
94	Kotograph	Layer. Damper does not affect Flute.
95	Solitare	Layer. Good for those lonely nights at home alone.
96	HappyPolka	Split/Layer (B3 − C4). Tuba on lower half, Accordeon and Brass with Damper Pedal enabled. Aftertouch makes the dance hall bigger. "Zensi,.. ah mass!".
97	BigStrings	Layer. Three octave Strings for cinematic scoring.
98	Miles Away	Layer/Split (B3 − C4). Space split.
99	HorrorShow	Layer/Split. A really scary sound. Slider increases the terror.