YAMAHA DX11

DIGITAL
PROGRAMMABLE
ALGORITHM
SYNTHESIZER

THE YAMAHA DX11. IT'S BUILT FOR COMFORT AND SPEED.

The comfort is in having available wild electronic sound effects, thickly textured synthesizer sounds, plus lush acoustic voices. And with fast and easy voice editing plus quick preset recall, it's got all the speed you need, too. All the sounds and functions formerly found on only the most expensive digital equipment are now in a compact, lightweight, and—best of all—inexpensive keyboard instrument. The new DX11.

Here are just a few of the advanced capabilities of the DX11:

- 8-voice multi-timbral operation.
- Advanced editing functions with simplified editing features.
- 128 preset voices, plus 32 internal and 64 cartridge user- programmable voices—a total of 224 impressive FM voices.
- Stereo outputs and a Pan effect for LFO-, velocity-, or keyboard split-controlled stereo imaging.
- Special effects such as a transposable repeated delay and a Chord Set function for playing chords from one note.
- Microtuning programmability.

RICH, 8-VOICE MULTI-TIMBRAL OPERATION

The DX11's sounds are a result of Yamaha's ingenious FM (Frequency Modulation) Synthesis. Because of the sophistication and sonic clarity of this system, plus the eight different waveforms available, realistic recreations of actual acoustic sounds along with stunning synthesizer and sound-effect voices are just within the reach of your fingers.

With the DX11, less is more. Up to eight different preset sounds can be played at one time, either from the DX11's keyboard or a sequencer, effectively giving you eight independent instruments in one economical package. Program, for example, a monophonic bass voice to the lowest octave on the keyboard, with a piano voice in the next two-and-a-half octaves, and a trumpet voice at the top. Or set eight separate monophonic brass and woodwind voices, each on a different MIDI channel, to be played by a computer, sequencer, or drum machine. And the Alternative Assign mode lets you enliven acoustic patches by giving each voice a slightly different tone or pitch and allows you to create unusual ensemble effects by selecting completely different voices (such as the various woodwinds, or the elements of a drum kit).

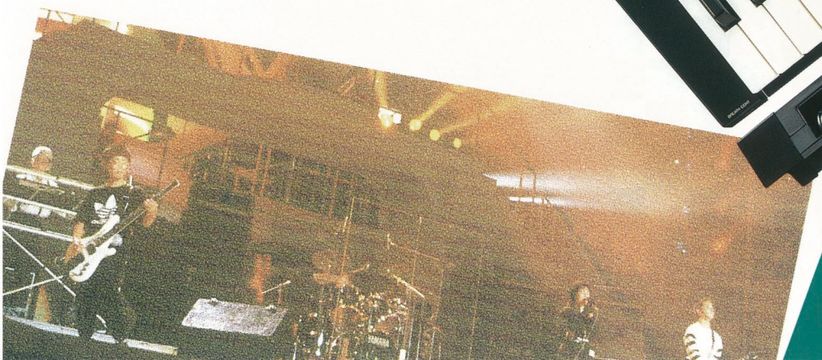
PLAYING THE DX11

Even if you've never touched a synthesizer before, let alone tried to program one, you'll find the DX11 exceptionally easy to use. To get you started, we've included 128 preset FM voices created by expert programmers, giving you an entire digital orchestra of sounds that can be played as soon as you turn the DX11 on.

Of course, you can edit any of the 128 preset voices in this mode to make your own voices, or create new voices from "scratch" and store them in the 32 user-programmable internal memory spaces, the 64-space RAM4 cartridge, or cassette tape. To add dynamic changes to your sounds as you play them, all function controls, such as pitch bend, after touch, and modulation wheel, are available. Of course, all function parameters can be set and stored independently for each voice.

The Performance Mode effectively gives you eight synthesizers in one package. With it you can have the DX11 play up to eight different voices, either from the DX11's keyboard or under the control of an external MIDI device, such as a master keyboard or a sequencer.

In the Performance mode you can determine the number of notes that will be assigned to each voice, the MIDI channel each voice will respond to (useful for multitracked sequencer recordings), and each voice's tuning, transposition, output assignment, and volume. Each voice can also be given a specific key assignment for complex splits and overlapping key sections. For expressive, lifelike recreations of acoustic instruments, any one of the three independent LFO settings can be assigned to each voice. The 32 preset Performances in internal memory demonstrate the versatile potential of this powerful feature, but you can load your own Performances to internal memory, RAM4 cartridge, or cassette tape.



THE INNOVATIVE EFFECTS FUNCTION

In addition to the wide range of possibilities the extensive editing functions afford you, one of three effect settings—Delay, Pan, or Chord Set—can be memorized as part of Performance memory or be set to globally affect all voices.

The Delay effect allows you to set delayed repeats of the notes you play, an especially useful feature for creating echo effects or starting delay-determined rhythmic patterns without the use of an external digital delay unit. Each delayed note's pitch can also be transposed by semitones within a four-octave range (two octaves, up or down). Strummed chords, predetermined melodies and riffs, and automatic chord changes are just a few of the unique and useful ways to which this feature can be applied.

The Pan function automatically moves the sound between the two outputs of the DX11 for a dynamic stereo effect. A variable speed LFO can be applied to the pan to create a cyclical stereo vibrato, or the position of the sound in the stereo image can be determined by key velocity, or you can program a stereo keyboard split so that notes played on opposite ends of the keyboard will be sent to different outputs.

The Chord Set effect allows up to four simultaneous notes to be played by just one key. Each of the four notes can be set to any semitone within a range of two octaves above or below a specified note. Playing superhumanly rapid chord changes or unusual, wide voicings, too difficult to execute normally, can easily be accomplished with this function.

VOICE EDITING: UNMATCHED EASE, FLEXIBILITY, AND PERFORMANCE

A selection of eight different waveforms for the DX11's 8-algorithm, 4-operator FM synthesis, plus advanced editing facilities make possible a combination of sonic complexity and editing simplicity in an inexpensive package that is simply unavailable anywhere else.

EIGHT DISTINCT WAVEFORMS: ENRICHING YOUR SOUNDS

The true beauty and complexity of the DX11's sounds that separate it from normal 4-operator FM synthesis comes from its eight different waveforms—waveforms more complex than the pure sine wave, giving you a much broader voice editing palette.

TROUBLE-FREE EDITING

Clear, concise, and easy-to-understand LCDs guide you smoothly through every operation step, and, for greater editing facility, the number of editing "pages" that you have to step through has been kept to a minimum. Useful features like the EG Shift function, which lets you "squeeze" the dynamic range of each envelope, and the Quick Edit function allow you to get the most out of FM synthesis with the least effort.

THE UNIQUE QUICK EDIT FUNCTION

The Quick Edit feature of the DX11 makes it far easier and faster than ever before to program FM voices. No longer is it necessary to try to think like a digital synthesizer to operate one. To program a synthesizer efficiently, you need to be able to almost put your hands in the machine and move things around to get what you want—and now you can. At the press of a button and the throw of a slider, you can instantaneously change the brilliance, volume, attack time, or release time of the voice being edited and precisely create the sound that you want. It also gives you the creative potential of stumbling upon unusual and unexpected voice possibilities faster than ever before.

INCREASED PERFORMANCE FLEXIBILITY: FUNCTION CONTROLS

Since all function data is stored with voice data in preset memory, control functions useful in live performance such as polyphonic/monophonic play, pitch bend, portamento, LFO modulation, and key transposition settings can be instantly recalled with the voice. And we've added even greater expressive capabilities such as a range parameter for the volume foot controller, Pitch Bias and EG Bias parameters for the Breath Controller, and the unique Reverb feature, which simulates the natural decay of sound in a live room.

MICROTUNING

The same advanced microtuning function found on the DX7II is also on the DX11. Each note can, just like the notes of a piano, be tuned individually for the creation of original scales and tunings. Eleven of the better known microtonal scales, such as Mean Tone, Pythagorean, Kirnberger, and 1/8 Tone, have been programmed and stored in the Micro Tune Table memory and two user-programmable memories are provided for your own original scales. You can play classical music in the authentic tunings of the period, play perfectly tuned intervals and chords, and use special tunings to play any kind of music, from ethnic to avant garde. Moreover, subtle detuning effects, useful especially on percussion sounds, can be programmed.

COMPATIBILITY CONVENIENCE AND COMPLETE DATA STORAGE

Since voice data is compatible with the TX81Z and the DX21/27/100 Yamaha synthesizers, you can take advantage of the myriad voices already programmed for these popular instruments. Voice, Performance, microtuning, and Program Change Table data can all be stored in the DX11's internal memory, RAM4 cartridge, and cassette tape; the data can also be retrieved from and sent to compatible synthesizers by MIDI transfer.

COMPREHENSIVE MIDI FUNCTIONS

The DX11 transmits and responds to all forms of MIDI data, making it both an extremely useful master keyboard controller and, with the use of its multi-timbral capabilities, a powerful sequencer-controlled tone generator.

As a keyboard controller, the DX11 can be used to play and control any MIDI instrument; lush layered sounds as well as thick keyboard splits are possible, all under the expressive control of velocity, after touch, modulation wheel, and other MIDI controllers. And voice changes for MIDI slaves can also be made from the DX11's front panel. The DX11 also permits wide control over incoming MIDI messages. And for maximum flexibility with all MIDI controllers, program change control numbers can be reassigned to any Performance number. This function is particularly useful in live performance, since the desired presets can be recalled in the selected order simply by stepping through them.

■JOB TABLE

UTILITY MODE

Master Tuning/MIDI Control (On/Off, Basic Receive Channel, Transmit Channel, Local, Control Change, After Touch, Pitch Bend, Note On/Off: All/Even/Odd, Data Entry Assign)/MIDI Program Change (Program Change: Off/Common/Individual, Program Table Initialize, Program Table Edit)/System Exclusive/Voice Transmit/Performance Transmit/Set-up Transmit/Cartridge (Bank Select, Save, Load, Format)/Cassette Save/Verify/Load (Voice, Performance, Set-up)/Combine/Effect: Delay (Time, Pitch Shift, Feedback, Level), Pan (Select, Direction, Range), Chord (Key On Note)/Microtuning Edit (Edit Octave, Initialize Octave, Edit Full Keyboard, Initialize Full Keyboard)/Initialize (Voice, Performance)/Recall Edit/Voice Edit/Controller Reset/Fixed Velocity/EG Forced Dump/Memory Protect (Internal, Cartridge)/Store/EG Copy/Effect Copy

SINGLE EDIT MODE

VOICE PARAMETERS: Preset A—D/Operator (On/Off, Output Level)/Algorithm/Feedback/LFO (Wave, Speed, Delay, Sync)/LFO Modulation Depth (Pitch, Amplitude)/Modulation Sensitivity (Pitch, Amplitude, EG Bias)/Key Velocity/Oscillator Frequency (Fixed/Ratio, Coarse, Fine, Detune)/Oscillator Waveform/EG (Rates: Attack, 1st Decay, 2nd Decay, Release; Levels: 1st Decay; EG Shift)/Pitch EG (Rate, Level)/Keyboard Scaling (Rate, Level)/Transpose//FUNCTION PARAMETERS: Poly/Mono/Pitch Bend Range/Portamento (Mode, Time)/Footswitch Assign/Foot Control (Volume, Pitch, Amplitude)/Modulation Wheel (Pitch, Amplitude)/Breath Control (Pitch, Amplitude, Pitch Bend Bias, EG Bias)/After Touch (Pitch, Amplitude, Pitch Bend Bias, EG Bias)/Reverb Rate/Voice Name/Quick Edit (Attack, Release, Volume, Brilliance)

PERFORMANCE EDIT MODE

Key Assign Mode/Maximum Notes/Voice Number/MIDI Receive Channel/Note Limit (Low, High)/Instrument Detune/Note Shift/Volume/Output Assign/LFO Select/Microtuning Select/Effect Select/Performance Name

■ 128 Preset Voice List

Preset A	Sy. Organ 2	E. Guitar	Preset C	Flute 1	Agogo Bell
Syn. Str 1	Sy. Solo 1	Mute Gtr	Strings 1	Flute 2	Wood Block
Syn. Str 2	Sy. Solo 2	Harp 1	Strings 2	Recorder	Castanet
Sy. Bass 1	Sy. Solo 3	Harp 2	Ensemble 1	Harmonica	Sybon
Sy. Bass 2	Sy. Solo 4	Harpsichrd	Ensemble 2	E. Organ 1	BoConga
Sy. Bass 3	Sy. Voice 1	Clavi	Violin 1	E. Organ 2	Tom-Pany
Sy. Bass 4	Sy. Voice 2	Koto	Violin 2	E. Organ 3	SynGameran
Sy. Ensem. 1	Sy. Decay 1	Syamisen	Cello 1	E. Organ 4	Mouse-Tom
Sy. Ensem. 2	Sy. Decay 2	Marimba	Cello 2	P. Organ 1	Carnival!
Sy. Ensem. 3	Sy. Sitar	Xylophone	Brass 1	P. Organ 2	"Air" imba
Sy. Ensem. 4	Sy. Aftr Tch	Vibe.	Brass 2	Accordion	SplashClav
Sy. Ensem. 5	Preset B	Glocken	Trumpet 1	Preset D	BamboBLock
Sy. Perc. 1	DX7 EP	Tube bell	Trumpet 2	Bass Drum 1	Terror!
Sy. Perc. 2	Old Rose	Toy Piano	Trombone	Bass Drum 2	Wind Voice
Sy. Perc. 3	E. Piano 1	Pizz. 1	HOrn	Snare 1	GuiRoach::
Sy. Perc. 4	E. Piano 2	Pizz. 2	Tuba	Snare 2	Space BUG?
Sy. Bass 1	Grand PF	E. Bass 1	Sax 1	Tom 1	Passing By
Sy. Bass 2	Upright	E. Bass 2	Sax 2	Tom 2	Earthquake
Sy. Bass 3	Flamenco	E. Bass 3	Wood Wind	Tom 3	TAP TAP <<<
Sy. Bass 4	A. Guitar	Wood BAss	Clarinet 1	Tom 4	Space Gong
Sy. Bass 5	F. Guitar	Bell	Clarinet 2	"Hi!" Hat!	RADIATION?
Sy. Organ 1	Banjo	Steel Drum	Oboe	Cow Bell	White Blow

■32 Preset Performance List

1	BRASS NO1!	17	Rich Str
2	Tight BASS	18	Orchestra
3	Glocken	19	FolkGuitar
4	Analog Str	20	Synth BASS
5	Hit I Key!	21	Latin Perc
6	Power Rap	22	Rich Horns
7	EP/Flute	23	Magic Slam
8	Wind Band	24	Tension
9	PROGRESSIV	25	Honky Tonk
10	Syn Lead	26	B(R)ASS
11	Lyric Split	27	"Fantasy"
12	Church	28	Power Solo
13	Rotary Str	29	HeavyBrass
14	Sax Solo	30	Blues Time
15	Floating?	31	Brass Band
16	Brastrings	32	I'm ZOMBI

■SPECIFICATIONS

Keyboard
61 keys (C_1—C_6), Initial Touch, After Touch
Sound Source
4-Operator, 8-Algorithm 8-Wave FM tone generation; 8-voice polyphonic output
Internal Memory
128 ROM voice memory
32 RAM voice memory
32 RAM Performance memory
Controls
Pitch Bend Wheel, Modulation Wheel, Master Volume Slider, Data Entry Slider
Control Switches
Mode Select (Store, Utility, Edit/Compare, Single, Performance, Memory Protect), Data Entry, Cursor, Preset Select, Voice Select
Terminals
Rear: Output I/Mix, Output II, Phones, Volume, Foot Control, Footswitch, Cassette, MIDI (In, Out, Thru)
Front: Breath Control
Panel: Data Cartridge
Display
16-character × 2-row backlit LCD
Power Requirements
U.S. and Canadian Models: 120 V, 50/60 Hz
General Models: 220—240 V, 50 Hz
Power Consumption
10 W
Weight
7.0 kg (15 lb. 7 oz.)
Dimensions (W × H × D)
901 × 63.3 × 297.7 mm (35-1/2" × 2-1/2" × 11-3/4")

**Specifications are subject to change without notice.*

For details please contact:

YAMAHA
YAMAHA CORPORATION
P.O.Box 1, Hamamatsu, Japan

LCK-200 871270 IJ Printed in Japan