

YAMAHA

# DX27

DIGITAL PROGRAMMABLE ALGORITHM SYNTHESIZER

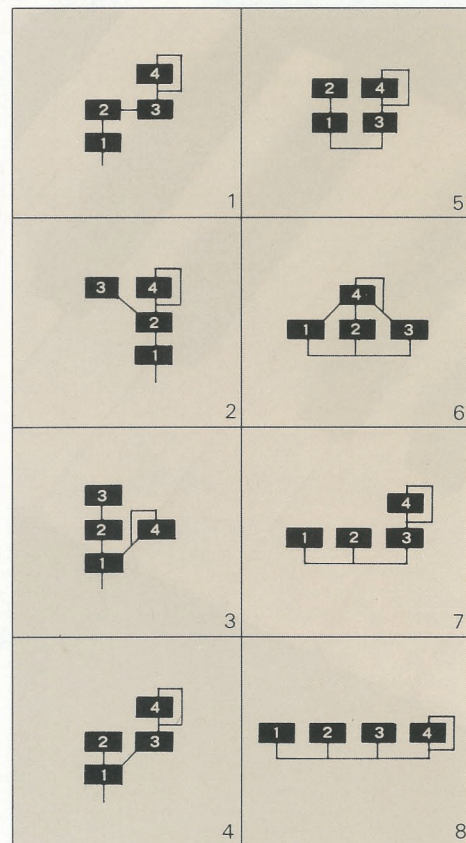




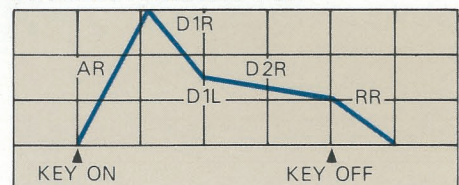
# FM DIGITAL SYNTHESIS: THE BEST IDEA IS A SIMPLE ONE

Like its companions in the DX Series, the DX27 utilizes sophisticated digital FM (frequency modulation) synthesis in the creation of sound. It has four operators, each comprising a digital sine wave generator with its own five-parameter envelope generator. The DX27 combines its operators into arrangements known as "algorithms," which are illustrated on its top panel. The sophisticated envelope generators in each operator allow you precise control over the envelope characteristics for broad voice programming versatility. This results in a truly remarkable range of level and timbral variations — from accurate acoustic tones to the limits of your imagination. Generally speaking, two operators together are capable of producing extremely complex voices. With the four provided in the DX27, the sound possibilities are astounding.

## ALGORITHM



## ENVELOPE GENERATOR



Perhaps the most exciting aspect of the DX27 is that you can create, by means of the algorithms, operators, and envelope generators, your very own sounds. You can edit any of the presets, or start from scratch and create your own.

## 192 Preset ROM Voices

The DX27 contains a vast array of 192 preset ROM voices accessible through two separate play modes. They contain everything from highly realistic piano and guitar sounds to the outrageous "Feed Lead" and numerous sound effects. In fact, the range of voices permanently stored in MEMORY is so lifelike, you may find yourself playing things you thought possible only on other instruments!

## Two Separate Play Modes

The DX27 operates in two distinct play modes: Bank Play and Internal Play. Bank Play mode contains, in 4 banks of 24 voices, the entire 192 preset voices. In this mode, you can rearrange, select, and edit any or all of the ROM voices to suit your tastes or requirements. The Internal Play mode accesses the 24-voice internal RAM. This is your personal "voice set," where you can store your edited and totally original voices for instant recall. The two play modes in the DX27 are state-of-the-art in synthesized voice selection.

## DX Effects Controllers: In Touch With Your Music

The DX27 features a full complement of sophisticated controllers. With them, you can bring new expression to your music. And as voice selection on the DX27 is so easy, you can spend more time playing, instead of "adjusting" for a performance. Pitch Bend, as featured on other Yamaha DX Series synthesizers, is a highly controllable effect that can be used to add anything from a subtle, vocal quality to a wild, rock guitar feel to your: solos. Your settings can even be programmed individually for each voice! The Modulation Wheel works in conjunction with the LFO (low frequency oscillator) to lend a wide range of tremolo, vibrato, and wow-wow effects to your playing. The optional BC-1 Breath Controller is a unique way to apply varying amounts of pitch or amplitude modulation for added expression. With the BC-1, the DX27 can even function like a wind instrument!

## Voice Programming: Your Personalized Sound

Of course, a key to the incredible possibilities of the DX27 lies in its voice programming capability. Simply, it allows you to program all of the many voice parameters, accessible through a special Edit mode, for any of the existing voices. Or, start with the Voice Initialize function to create a "blank" voice and use your imagination.

## Cassette Storage: For Limitless Variety

The DX27 is not limited to the 24-voice RAM, or to the 192-voice preset ROM. In fact, it is not limited at all, with regard to voice storage. The DX27 is equipped with a data cassette interface. Through this, you can permanently store any or all voices you have created or edited for loading whenever needed. Just insert your voice cassette into a data recorder, and command the DX27 to save or load those voices. You'll soon build an extensive library of exciting, original sounds.

## MIDI Functions: Instruments That Communicate

The DX27 is MIDI-compatible, so it can send and receive MIDI information to the entire network of MIDI-equipped Yamaha musical instruments: digital sequencers, drum machines, music computers, and other DX synthesizers. MIDI stands for Musical Instrument Digital Interface, and it allows the DX27 and other MIDI-compatible musical instruments to transmit and receive all performance data. For you, the DX27 can be the nucleus of a sophisticated MIDI music system.



The CP60M is a transmit-only instrument.

*Yamaha proudly presents the DX27 Digital Programmable Algorithm Synthesizer. The latest in our revolutionary DX Series, this is the perfect entry instrument for the keyboardist new to the world of digital synthesis. Here in a compact and lightweight package is an advanced, professional sounding keyboard synthesizer that is equally at home onstage or in your personal recording studio. It has 192 outstanding presets from which to choose, and a superlative programmable FM tone generator system so you can create your own voices. And the DX27 is designed for versatility and ease of use. Now, with the Yamaha DX27, you can explore an entire galaxy of new sounds.*





# DX27 CONTROLS

**PITCH BEND WHEEL:** An exciting, 3-mode selectable pitch bend effect. Adds subtle or wild expression to chords, solos.

**DATA ENTRY CONTROLS:** Convenient slide control and No/Yes switches for voice editing/function range selection.

**OPERATOR SELECT/ PB MODE/MODE SET:** Multi-function button for selected operator, Pitch Bend Mode selection/ ON-OFF.

**BANK A-D/OPERATOR/ AMS ON-OFF:** Multi-function switches for Operator ON/OFF selection, Voice Bank selection, Preset Search.

**ALGORITHMS:** Printed panel display of all selectable algorithms for easier voice planning.

**MODULATION WHEEL:** Applies LFO pitch or amplitude modulation for vibrato, tremolo, or wow-wow effects. Lends a realistic quality to your voices.

**VOLUME CONTROL:** Master volume control for entire keyboard to headphones, amplifier, PA system.

**KEY SHIFT/KEY SET:** Key Shift instantly transposes keyboard pitch up or down to a programmed key. Key Set places any key within a 2-octave range of C3 to Middle C pitch.

**EG COPY/STORE:** Automatically copies Envelope Generator data from one operator to any or all other operators. Control point for Voice Storage function.

**COMPARE/FUNCTION:** Selects Function mode for setting performance parameters and accessing other utility functions. Provides instant comparison of original or preset function settings to newly selected data levels.

**VOICE SELECTORS:** Multi-function buttons for selecting all individual voices, functions, and editing parameters.



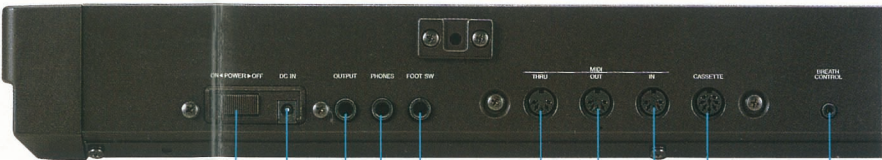
**KEYBOARD:** Compact, 5-octave range for excellent feel, quick response.

**COMPARE/EDIT:** Selects Edit mode for editing or creating new voices. Provides quick comparison of original or preset voice parameters to newly edited parameters.

**INTERNAL PLAY:** Enters Internal Play mode, 24-voice RAM.

**LCD INDICATOR:** Quick visual readout of all selected voices, functions, and parameters.

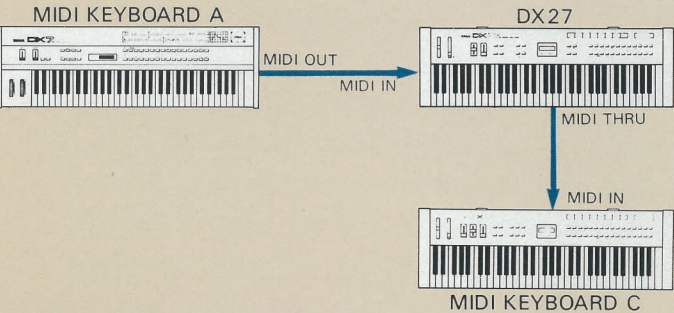
## DX27 REAR



Power ON-OFF  
Output Jack  
Phones Jack  
Foot Switch Jack  
MIDI-THRU  
MIDI-OUT  
MIDI IN  
Breath-Controller Jack  
Cassette Interface

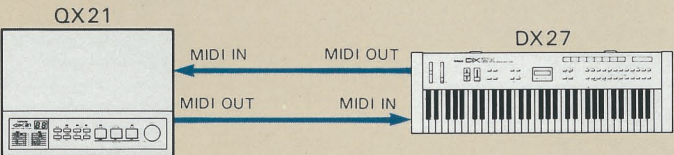
## DX27 MIDI APPLICATIONS GUIDE

### DX27/MIDI Keyboard/MIDI Keyboard



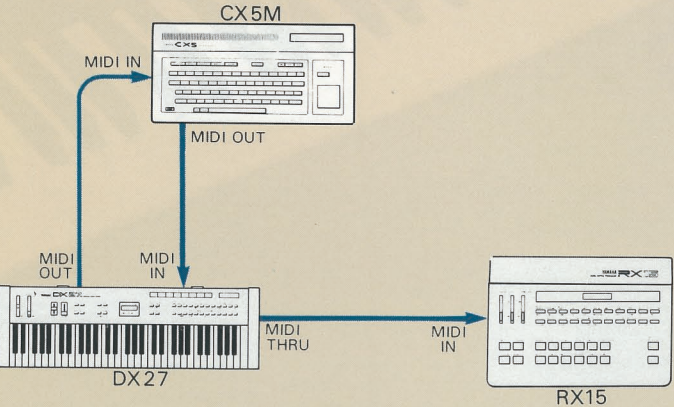
Transmit performance data from MIDI Keyboard A to the DX27, and through the DX27 to MIDI Keyboard C. The DX27 and Keyboard C will now respond instantly to all performance commands from Keyboard A.

### YAMAHA QX21 DIGITAL SEQUENCE RECORDER/DX27



Transmit performance data — chords, notes, real-time effects — from the DX27 to the QX21 Sequencer via the DX27 MIDI-OUT terminals. The QX21 can now digitally record and re-transmit all information to the DX27, which will then perform your compositional sequences in flawless detail.

### YAMAHA CX5M/DX27/RX15



Here, the CX5M becomes a multi-channel MIDI sequencer utilizing the FM Music Composer Cartridge. The DX27 acts as a MIDI controller keyboard. The RX15 Rhythm Programmer, providing expansive drum synthesis capabilities, is synchronized to sequence playback from the CX5M.



## ACCESSORIES



FC-5 Foot Switch



FC-4 Foot Switch



FC-9 Foot Switch



BC-1 Breath Controller



LC-21S Carrying Case



SC-21 Carrying Case

## SPECIFICATIONS

### KEYBOARD

61 Keys

### SOUND SOURCE

FM Tone Generator (4 operators, 8 algorithms)

### SIMULTANEOUS NOTE OUTPUT

8 notes, reverse priority

### INTERNAL MEMORY

24-voice INTERNAL memory (alterable)

192-voice PRESET memory (reading only)

96-voice number bank (alterable)

### EFFECTS

PITCH BEND, MODULATION, PORTAMENTO, SUSTAIN, KEY VELOCITY (reception only)

### CONTROLS

PITCH BEND WHEEL, MODULATION WHEEL, VOLUME

### EXTERNAL CONTROL TERMINALS

BREATH CONTROL, FOOT SWITCH

### CONNECTING TERMINALS

OUTPUT (rated output level – 20dB/output impedance 10k $\Omega$  or less),

PHONES (rated output level – 16dB/output impedance 47 $\Omega$  or less),

FOOT SWITCH (PORTAMENTO ON-OFF/SUSTAIN ON-OFF), MIDI IN,

MIDI OUT, MIDI THRU, CASSETTE (transmission speed 1,200 baud),

BREATH CONTROL, DC 12V IN

### POWER SUPPLY

U.S. & Canadian Models: 120V, 50/60Hz

General Model: 220V, 50Hz

### DIMENSIONS (W x H x D)

909(W) X 82(H) X 270(D) mm (35.8" X 3.2" X 10.6")

### WEIGHT

7.5kg (16.5 lbs)

### STANDARD ACCESSORIES

AC Adaptor PA-1210, Music Stand, Cassette Cable,

Explanation Cassette Tape

### OPTIONAL ACCESSORIES

FC-4, FC-5 or FC-9 Foot Switch, BC-1 Breath Controller, LC-21S

or SC-21 Carrying case, LG-21 Stand, MIDI-03 or MIDI-15

MIDI Cable

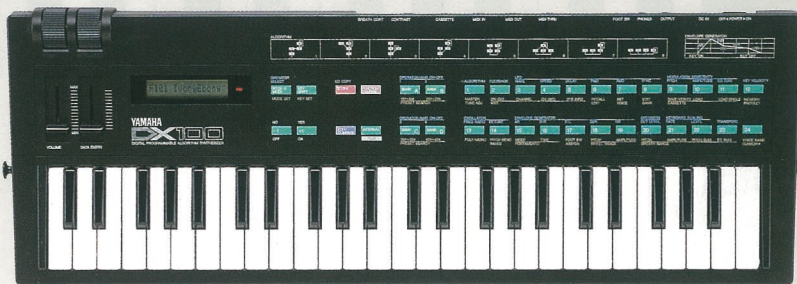
\*0dB-0.775Vr.m.s

\*Specifications and appearance are subject to change without notice.

## DX100

### DIGITAL PROGRAMMABLE ALGORITHM SYNTHESIZER

A companion to the DX27, the Yamaha DX100 is an outstanding performance-styled digital programmable algorithm synthesizer in an extremely portable, compact package. Its features and specifications are nearly identical to those of the DX27, so you can even use it as a MIDI on-line controller keyboard.



For details please contact:

SINCE 1887



# YAMAHA

NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN