

**Want
to hear
something
incredible?**

 **YAMAHA**

The new HX System Modular Electone from Yamaha.

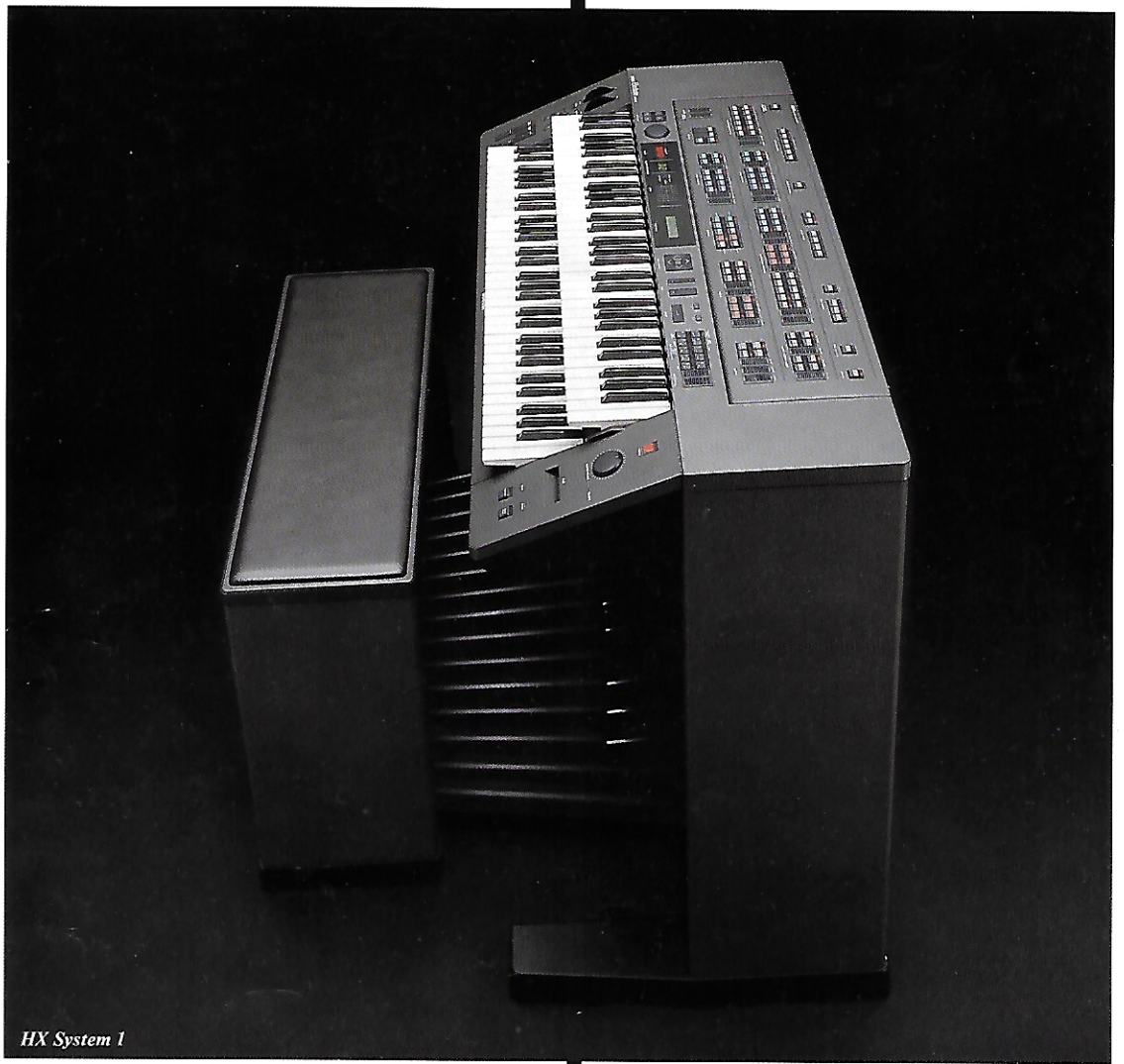
The system that fulfills
the digital music dream.

Incredible sound. Great looks.

And brains. That's what the HX System is all about. The HX is loaded with hundreds of voices and percussion sounds that come from the most advanced digital tone generating processes Yamaha has ever made.

Its sleek, modern exterior houses one of the most brilliant brains in music — a digital Multi-Menu that lets you manipulate enormous amounts of music data. Its extensive programming features give you, no matter what your playing level, total control — over everything from voices and rhythms to music sequences and digital effects parameters. It has powerful MIDI functions too, that give you virtually unlimited sound and performance potential. And it's got a modular design that gives you the freedom to get what you need now, and *expand* into what you want. Is there anything more you could wish for? The Yamaha HX System Modular Electone. It's the digital music dream — come true.





HX System 1

The Basic Systems & Modules

The HX System's flexibility begins with the design of its basic modules.

These modules are interchangeable, so you can mix and match them to create your own custom system.

Yamaha has recommendations for five ideally balanced systems, as follows:

- System 1 HX-1, MKX-5, PKX-F1, STX-1, BNX-F1
- System 2 HX-1, MKX-5, PKX-M1, STX-1, BNX-M1
- System 3 HX-3, MKX-5, PKX-M1, STX-1, BNX-M1
- System 4 HX-5, MKX-5, PKX-M1, STX-1, BNX-M1
- System 5 HX-5, MKX-4, PKX-S1, STX-1, BNX-M1

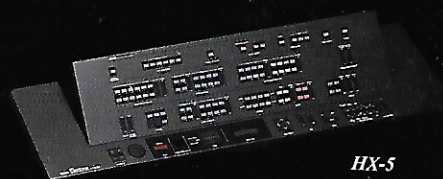
HX-3



HX-1



HX-5



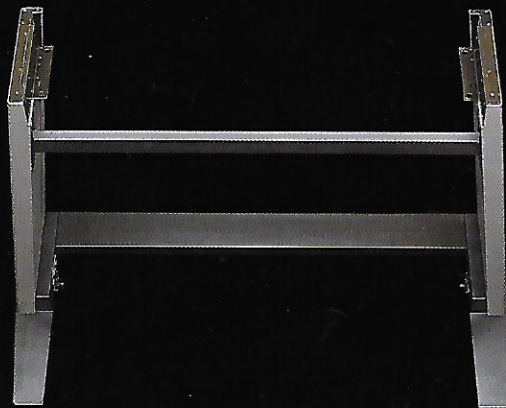
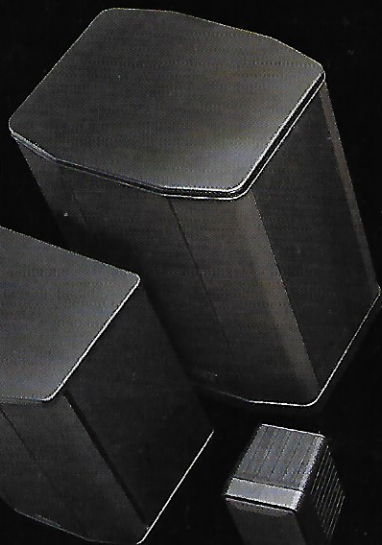
MKX-5



MKX-4

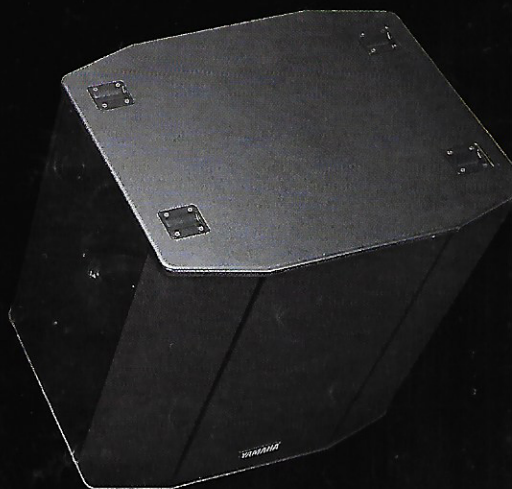


KA-30

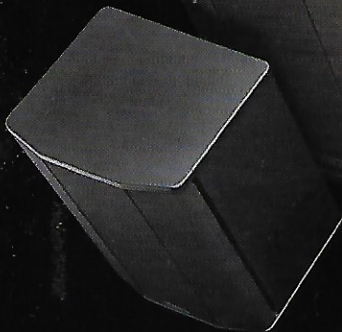


STX-1

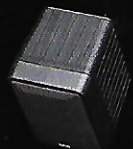
KA-40



KA-20



KA-10



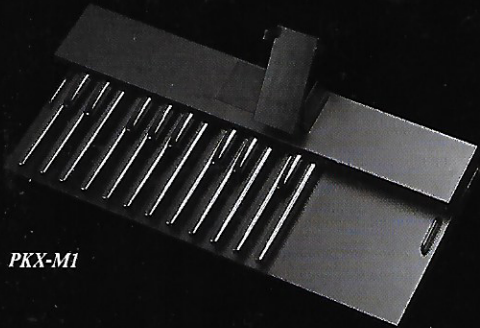
EP-20



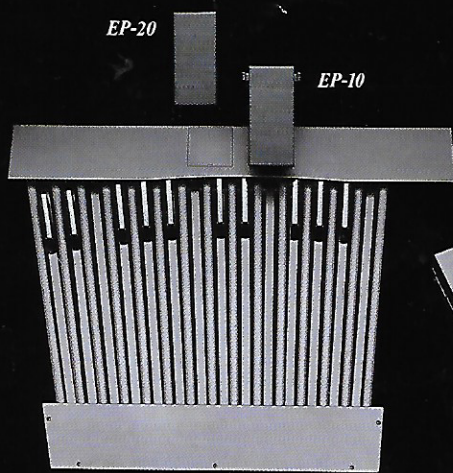
EP-10



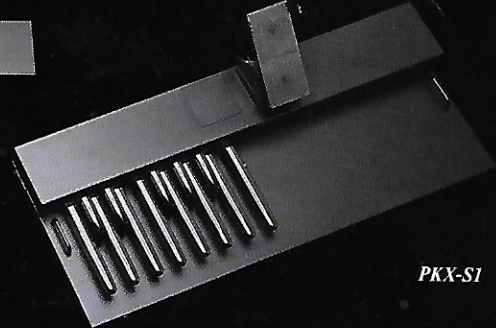
PKX-MI



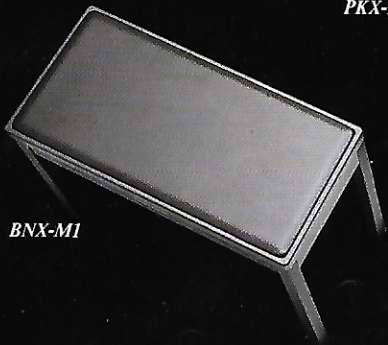
PKX-FI



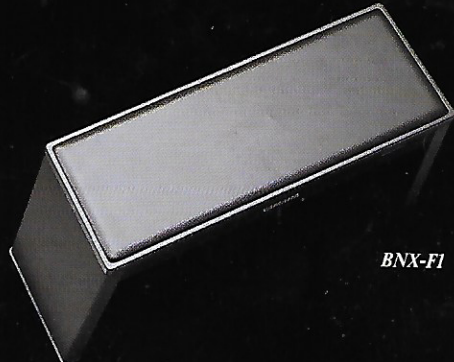
PKX-SI

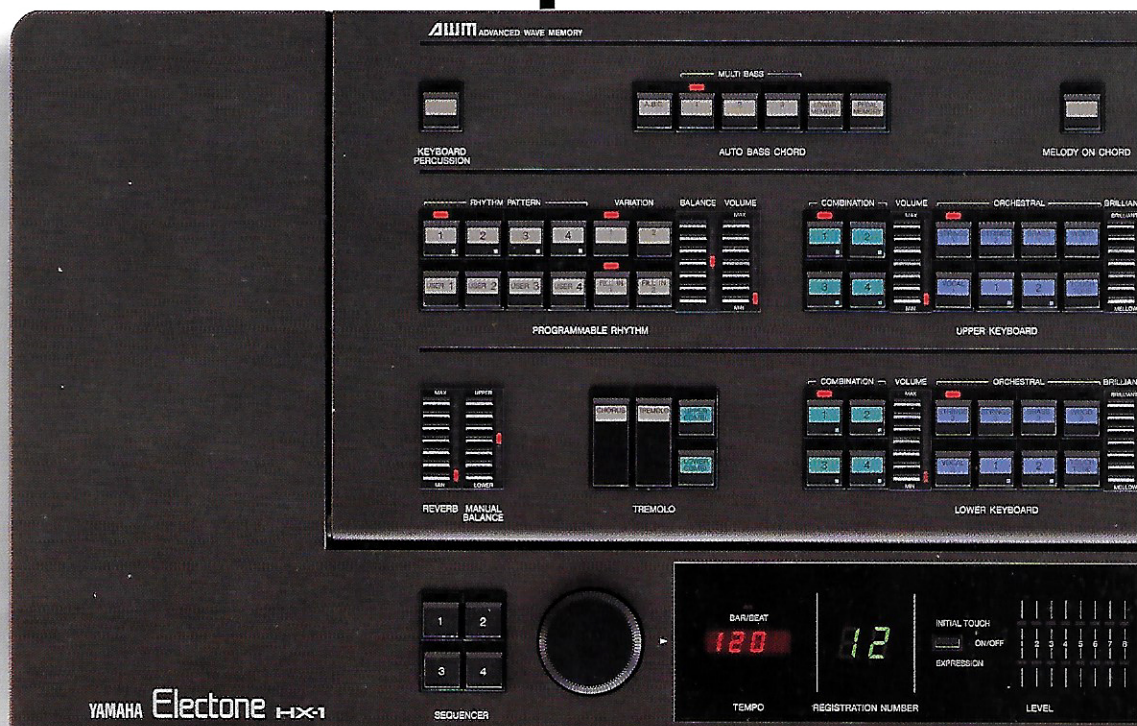


BNX-MI



BNX-FI





The Tone Generators

The HX tone generators (HX-1, HX-3, HX-5) are the heart of the modular system. They are responsible for its extraordinary sound and ease of operation.

They are factory-loaded with hundreds of voices and scores of percussion sounds, all generated by the most advanced digital sound sourcing Yamaha has ever developed: AWM (Advanced Wave Memory), FM (Frequency Modulation) and WM (Wave Memory for organ combinations).

The HX panels, which either lie flat or prop up, are simple on the outside. On the inside, though, they're packed with complex, powerful technology — including the remarkable functions of the new digital Multi-Menu.



The Voices

To get your sound, you select the voices you want for each keyboard from the Orchestral, Lead, Percussive, AWM Preset, Bass, AWM Bass and Combination sections.

These tone sections have a wide representation of preprogrammed voices. The FM and WM sections have memory space for loading other voices and combinations.

For instance, from the Multi-Menu you can load preset FM voices and WM organ combinations, as well as user-programmed WM organ combinations.* With an external computer, you can access the HX's internal FM operators to program your own voices.

The Ensemble section is a matrix for switching the tone sections on and off. So by mixing different groups of these sections, you can build a multi-timbral sound.

**HX-1 and HX-3 only. The Multi-Menu lets you program nine pitch levels for the organ combinations. (See "Programming Organ Combinations", Multi-Menu section.)*

The HX-1: Seven FM tone generators (three 8-operator polyphonic, two 4-operator polyphonic, two 16-operator monophonic); two AWM tone generators (one polyphonic and one monophonic); two WM tone generators (polyphonic).

AWM Tone Generation

AWM™ (Advanced Wave Memory) is the most advanced musical tone generation method Yamaha has ever developed. It's a sonically superior process



that gives the player an unprecedented level of real time control over the nuances of musical expression.

AWM™ — Yamaha's newest breakthrough in digital sound sourcing — uses several digitally sampled waveforms per note instead of only one, as in the current popular method. AWM™ selects the appropriate waveform (or combination of waveforms) in response to attack strength (velocity sensitivity data) and after touch response (pressure sensitivity data), allowing the player to influence both volume and tone color.

With the HX tone generators, all percussion sounds as well as several special preset musical instrument sounds are generated by this new AWM™ process.

FM Tone Generation

FM (Frequency Modulation) tone generation is a unique and highly complex digital process that, unlike conventional sound sourcing, uses *operators* to synthesize voices.

Operators are essentially digital sine wave generators capable of synthesizing the complex waveforms of musical instrument sounds.

It takes only two operators to produce an infinite range of polyphonic musical sounds, but due to Yamaha's leading edge FM technology, HX tone generators have as many as eight operators for polyphonic voices, and 16 for monophonic voices.

FM voices have the same physical sound characteristics as real musical instruments, because FM precisely matches the shapes of an instrument's sound waves, and controls the complex harmonics as they change through their decay period.

With its 8- and 16-operator FM synthesis, the HX System offers better quality sounds than any keyboard system Yamaha has ever made before.

The Manual Balance controller is for regulating the relative volumes of the upper and lower keyboards.

The Rhythms

The Rhythm section features more than 20 preset rhythms covering an immense range of styles — everything from latin to rock to jazz.

It also has memory space for storing the rhythm, variation and fill-in patterns that you create with the on-board drum machine.

The Keyboard Percussion feature is for manually playing real-time, touch sensitive AWM drums on the keyboards. The 60 percussion sounds are assignable to any key or pedal.

The Effects

HX tone generators incorporate digital signal processing for their many *programmable* effects: They provide everything from reverb, flanging and phasing to delay, wah, instrument panning effects, and more.

They also feature chorus and programmable tremolo effects for the organ combinations.

Two really special features HX tone generators offer are Touch Vibrato and Touch Tone.

Touch Vibrato lets you control the vibrato of your lead melodies with key pressure; vibrato rate and delay time are programmable with the Multi-Menu.

Touch Tone lets you activate keyboard pressure- and velocity-sensitivity for controlling volume and timbre; the degrees of sensitivity are programmable with the Multi-Menu.

Footswitching

With the HX tone generators, you can access many features by foot-switching.

There are two footswitches, located at the upper left and right on the expression pedal (EP-10).

The functions assignable to each include lead instrument glide (note bending in half steps), upper keyboard glide, and simultaneous upper and lower keyboard glide.

The right footswitch also features sequential registration *shifting* through your preprogrammed settings, as well as registration *jumping* to a predetermined panel setting.

The left footswitch also has rhythm functions that let you add fill-ins and breaks, stop the rhythm and add an ending phrase.

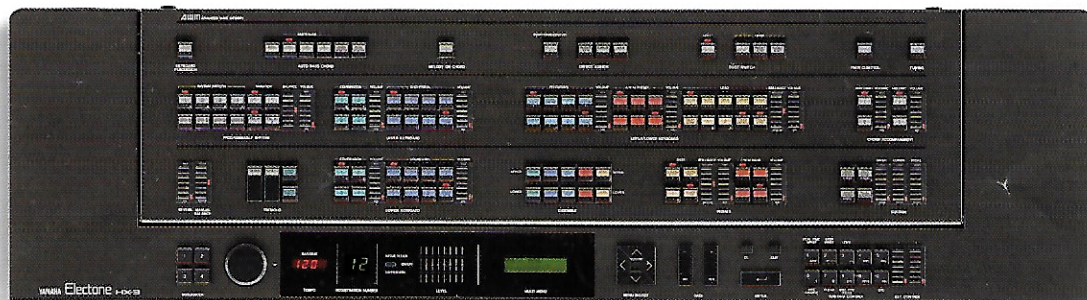
Automatic Accompaniment

HX tone generators also feature extensive automatic accompaniment.

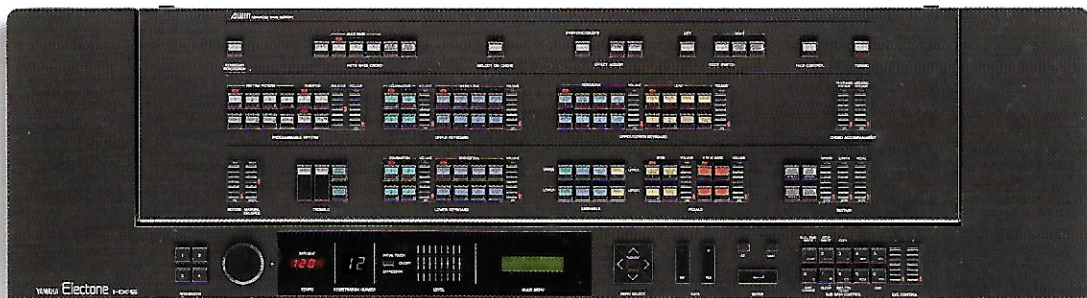
Auto Bass Chord has several modes – for accessing different bass patterns, playing the accompaniment on the lower keyboard with one hand or finger, or playing the chord patterns on the lower keyboard while playing the bass patterns on the pedals.

Chord Accompaniment adds either rhythmic or melodic chord patterns to the rhythm.

Melody On Chord automatically transforms upper keyboard single-note melodies into full harmonies – contoured by the chords you play on the lower keyboard.



The HX-3: Seven FM tone generators (five 4-operator polyphonic and two 8-operator monophonic); two AWM tone generators (one polyphonic and one monophonic); two WM tone generators (polyphonic).



The HX-5: Seven FM tone generators (three 4-operator polyphonic, two 2-operator polyphonic, two 8-operator monophonic); one AWM tone generator (monophonic); two WM tone generators (polyphonic).



The Keyboards

The HX System offers two full-featured double-manual keyboard modules: the 61-key MKX-5 and 49-key MKX-4.

Both are velocity- and pressure-sensitive keyboards (initial and after touch) that feature master volume and rhythm controls, a knee lever (for controlling sustain and lead slide), and cartridge data loading and storage systems.

And both come with a 16-location registration memory system that lets you preprogram entire HX panel settings for instant recall during performance; you can store as many of your



The MKX-4: 49 keys (velocity- and pressure-sensitive), knee lever, rhythm controls, 16 registration memories, cartridge pack data loading and storage, microphone input.



preprogrammed registrations as you want in RAM cartridge packs.*

The MKX-5 features multi-function pitch and modulation wheels. Modes for the pitch wheel include pitch bending for the Lead, Upper Keyboard Orchestral or Pedal voice sections. Modulation wheel modes include lead pan, lead slide (portamento), and wah.

There are three pedal keyboard modules: the 25-note PKX-F1, the 20-note PKX-M1, and the 13-note PKX-S1.

Both the PKX-F1 and PKX-M1 are velocity- and pressure-sensitive.

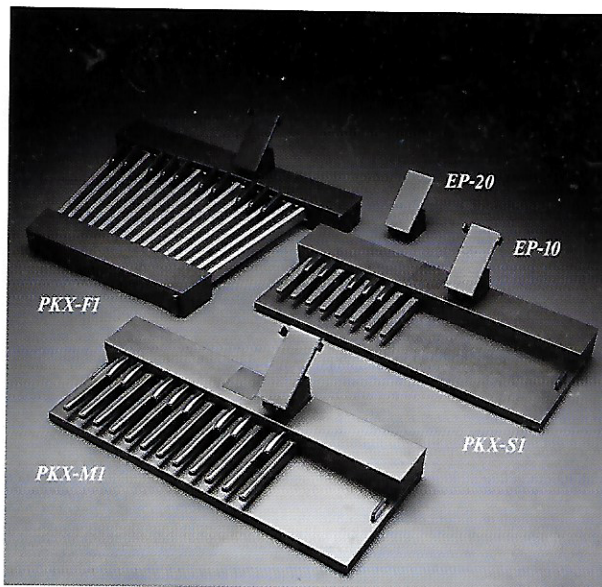
The pedal keyboards accommodate two expression pedals: the EP-10 and EP-20.

The EP-10, standard on all pedal keyboards, incorporates the two foot-switches and controls the overall volume.

The optional EP-20 (for PKX-F1 and PKX-M1 only) is multifunctional: it can control rhythm tempo as well as pitch bend and modulation wheel effects.

*RP-3 packs (8K byte) can store registrations, rhythm patterns or voices.

The MKX-5: 61 keys (velocity- and pressure-sensitive), knee lever, rhythm controls, 16 registration memories, cartridge pack data loading and storage, pitch and modulation wheels, breath controller input, microphone input.



The PKX-F1 (25 notes) and PKX-M1 (20 notes) feature velocity- and pressure-sensitive pedals. The PKX-S1 has 13 notes. The EP-10 volume controller is standard on all pedal keyboards and carries the two multi-function foot-switches. The optional EP-20 controls rhythm tempo and functions for pitch bend and modulation wheels (for PKX-F1 and PKX-M1 only).

The Stand & Benches

The STX-1 basic system stand for the HX is designed to permit maximum view of the performer. Its height is ideal for either a sitting or standing performance.

The BNX-F1 is a stylish bench specially designed for the full pedal keyboard PKX-F1.

The BNX-M1 is a lightweight bench ideal for pedal key boards PKX-M1 and PKX-S1.



BNX-M1



STX-1

BNX-F1

The Keyboard Amplifiers

To power your HX System, you have your choice of several KA Series Keyboard Amps, which deliver uncolored sound and flat frequency response over the entire dynamic range.

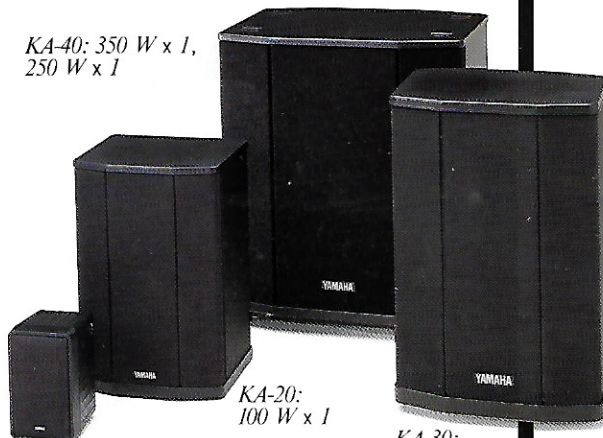
The KA-40 is ideal for high-power theatre and stage use, the KA-30 can meet all of your professional needs, and the KA-20 and KA-10 are especially well-suited for home use.

With their newly developed speaker units and *tuned bass reflection* enclosures, KA Series amps are highly efficient and provide accurate sound reproduction.

And unlike most amp/speaker combinations, KA-Series amps deliver the highest fidelity sound for *all* instruments.

Since the HX System is a stereo system, a pair of matching amps will produce the maximum effect.

KA-40: 350 W x 1,
250 W x 1



KA-10:
30 W x 1

KA-20:
100 W x 1

KA-30:
250 W x 1

The HX System is designed with the future of music in mind: Besides the basic modules, there are several external system *expander* modules* and methods to make it even more powerful.

For instance, you can MIDI an external computer to your basic system in order to access the HX's internal FM operators and program your own sounds.

New polyphonic AWM and FM expander tone generators will give you hundreds of new factory presets too.

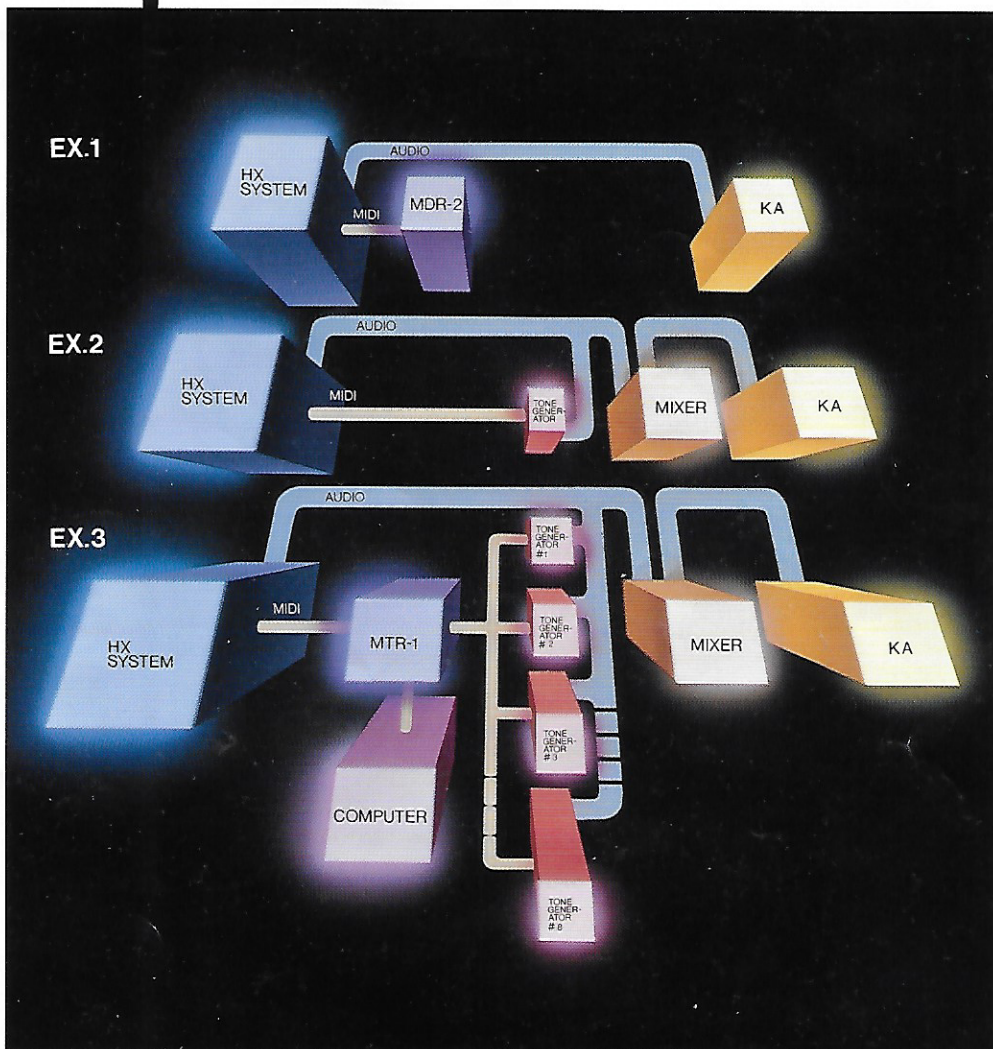
There's also the new MIDI compatible MTR-1, which is a 64 track digital multi-track recorder.

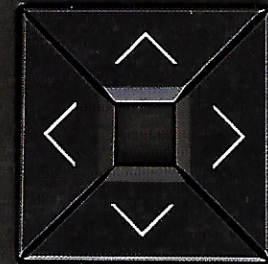
And the new 16-channel MDR-2 real-time MIDI music disk recorder, which accommodates 3.5 inch floppy disks, stores all key input data and registration settings, and allows extensive editing and overdubbing of up to 16 songs per disk. It comes with a wireless remote controller.

The RA-1 is an EIA standard system rack for mounting all module elements.

**Availability to be announced later.*

The Expander Modules





The Way it Works





The Multi-Menu

The Multi-Menu is, in effect, a powerful computer that lets you access and manipulate hundreds of functions. The backlit two-line, 32 character LCD screen provides system feedback.

Multi-Menu Controls



MENU SELECT

 : For selecting Multi-Menu Jobs and Panel Program Functions from the main menu, as well as functions within jobs (forward or reverse select).  : For moving the cursor left or right.



DATA

For data entry in increments and decrements.



ENTER

For locking in functions and advancing to the next step of a job.



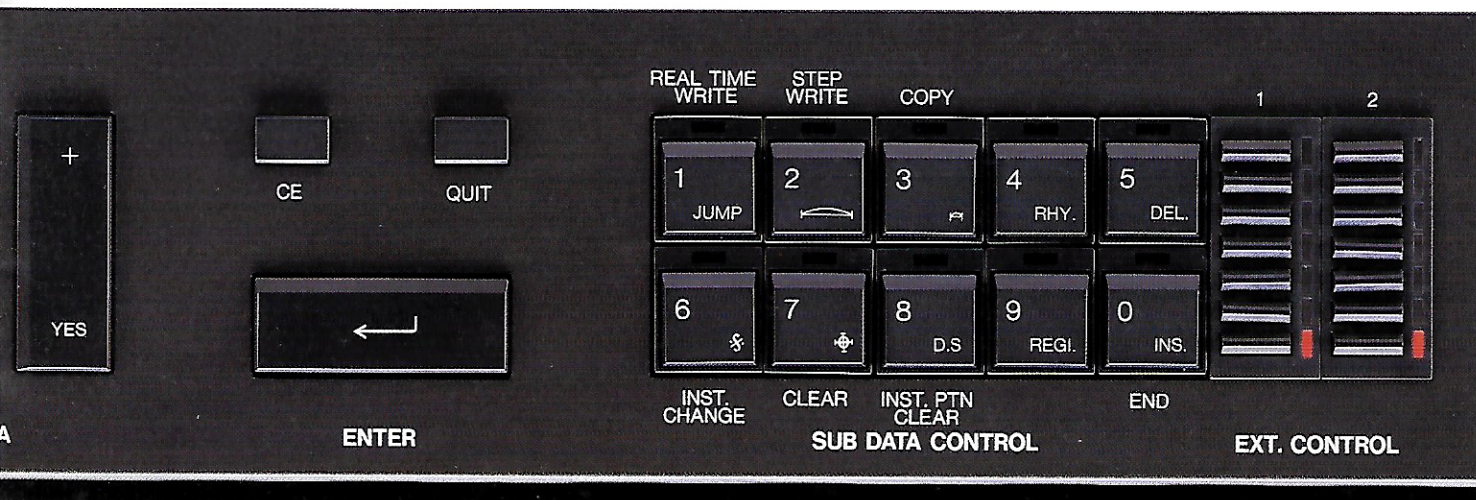
CE

For clearing an incorrect data entry.



QUIT

For instant return to the main menu.



SUB DATA CONTROL

For function or data change, controlling the sequencer and rhythm functions, and controlling expander modules.



EXT. CONTROL

For controlling external devices.

Programming Organ Combinations

Manipulating data is easy. As an example, let's step through the process of programming an organ combination voice.

1 First, press any button in either of the HX tone generator's Combination sections.

The screen will display the name of the voice previously assigned to that location:



Now the \uparrow \downarrow buttons can be used to scroll through the 16 preset organ voices and 16 user memories.

2 After selecting a user memory, press **ENTER** again to lock in the job. The screen will change to:



3 Using the \leftarrow \rightarrow buttons, place the cursor under the sound intervals or attack lengths you want to program. Select data values with the \oplus \ominus buttons, monitoring the sound as you change data.

At this point, pressing \sphericalangle advances you to step 4, or pressing **ENTER** returns you to the Multi-Menu function selected before you began to program the organ combination.

4 Now with the \sphericalangle button, advance to the following screen:



Now you can fine tune the sound's response value, turn the click stop on or off, and adjust the timbre variation.

Once again, place the cursor with the \leftarrow \rightarrow buttons, and enter data with the \oplus \ominus buttons.

At this point, pressing \wedge returns you to step 3, or pressing **ENTER** returns you to the Multi-Menu function selected before you began to program the organ combination.

Multi-Menu Features

Below is a summary of each Multi-Menu feature:

Multi-Menu Jobs

Sequencer

For recording and editing chord, registration and/or rhythm sequences in real-time or step mode for automatic playback.

Rhythm

For modifying presets or programming your own rhythm patterns in real-time or step mode; for setting each instrument's volume level and stereo panning position; for assigning percussion voices to any key on any keyboard.

Extra Function

For selecting functions such as Chord Display (screen display of chord names), MIDI Control, and 2nd Expression Pedal (EP-20 assignments).

External Control

For controlling external instruments and devices.

Panel Program Functions

Vibrato Default

Gives you the option to set your own vibrato parameters (delay, speed, depth) for each FM voice.

FM Polyphonic Voices

For selecting the preset voices and user-programmed voices.*

FM Monophonic Voices

For selecting the preset voices and user-programmed voices.*

Organ Combination Voices

For programming organ combinations, selecting the presets, and selecting your programmed voices.

Rhythm Pattern Menu

For selecting the preset rhythm patterns.

Volume Control

For precise volume controlling with 24 steps.

Touch Tone

For setting the touch sensitivity range of each voice section.

Tuning

For precision tuning (23 increments and 7 decrements).

Pack

For selecting functions like registration and voice data storage, pack initializing and copying.

Digital Effector

For programming digital effects parameters and selecting preset effects.

Auto Bass Chord Mode

For selecting ABC functions. (Functions include Single Finger, Fingered Chord, Custom ABC.)

Melody On Chord Mode

For selecting the three MOC modes.

Footswitch Assign

For assigning functions to each footswitch.

Wheels

For selecting the parameters for each function of the modulation wheel (lead slide, lead pan, wah) and pitch bend wheel (lead pitch, upper orchestral pitch, pedal pitch).

Touch Vibrato

For setting the vibrato depth rate.

**A computer and software are required to program your own voices with the basic HX system.*

MIDI Functions

The HX System has powerful MIDI functions that give it virtually limitless sound and performance potential.

You can connect any MIDI instrument or device to the HX — including other Electones, synthesizers, external tone generators, drum machines, music sequencers, computers, etc.

You control all of the HX's MIDI functions with the Multi-Menu. The functions are as follows:

Rhythm Sync Select

For selecting internal or external clock.

Basic Channel

For assigning MIDI sending and receiving channels for the upper keyboard, lower keyboard, pedal keyboard and lead instrument tone sections, keyboard percussion and control.

Bulk Data Select

For bulk data dumping of registrations and voices.

Local Control

For on/off switching of the internal tone generators for the upper keyboard, lower keyboard, pedal keyboard and lead instrument tone sections, keyboard percussion and control.

Input & Output

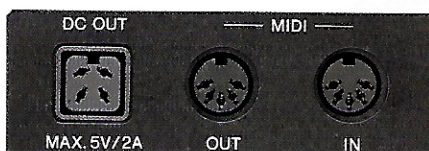
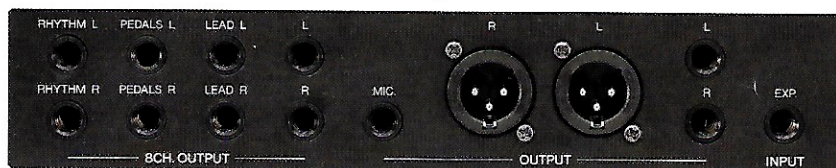
The HX System has all the necessary input and output jacks for direct signal access.

In addition to headphone outputs, both MKX keyboards have inputs for two expression pedals, a sustain pedal, and a microphone. (The microphone input section includes an input signal level controller and mike muting button.)

The MKX-5 includes a breath controller input.

Besides MIDI in and out jacks, all HX tone generators have stereo main outputs (phone jacks and XLR plugs), an EXP. IN jack that lets you connect an external electronic instrument and control its volume with the EP-10 expression pedal, and a MIC output jack for the microphone signal. They also have a special DC OUT plug for powering the MDR-2 Music Disk Recorder.

The HX-1 includes stereo outputs for the Rhythm, Pedal and Lead tone sections.



The Specs



HX System 1

POTTERS BAR MUSIC LTD.
3/4 KEMBLE PARADE, HIGH STREET
POTTERS BAR, HERTS.
TEL: P.B. (0707) 43475/57764

HX-1, HX-3 and HX-5 Tone Generators

Upper Keyboard Sections

- Combination: Memories (1, 2, 3, 4), Volume; Orchestral: FM Presets, Memories (1, 2), Touch Tone, Volume
- Orchestral Brilliance (HX-1)

Upper/Lower Keyboard Sections

- Percussive: FM Presets, Memories (1,2), Touch Tone, Volume; Lead: FM Presets, Memories (1,2), Touch Vibrato, Touch Tone, Volume
- AWM Preset: Piano (1, 2), Marimba, Strings, Pipe Organ, Touch Tone, Volume (HX-1, HX-3)
- Percussive Brilliance (HX-1)
- Lead Brilliance (HX-1, HX-3)

Lower Keyboard Sections

- Combination: Memories (1, 2, 3, 4), Volume; Orchestral: FM Presets, Memories (1, 2), Touch Tone, Volume
- Orchestral Brilliance (HX-1)

Pedals Sections

- Bass: FM Presets, Memory 1, Touch Tone, Volume; AWM Bass: Pipe Bass, String Bass, Wood Bass, Touch Tone, Volume
- Bass Memory 2 (HX-1)
- Bass Brilliance (HX-1, HX-3)
- AWM Bass: Electric Bass and Timpani (HX-1)

Ensemble

- Upper: Combination, Orchestral, Percussive, Lead; Lower: Combination, Orchestral, Percussive, Lead
- Upper and Lower AWM (HX-1, HX-3)

Tremolo Section

- Chorus, Tremolo, Upper Combi., Lower Combi.

Melody On Chord

- 3 modes

Effect Assign Section

- Phaser, Delay
- Wah (HX-1, HX-3)
- Celeste, Symphonic, Flanger (HX-1)
- Symphonic/Celeste (HX-3, HX-5)

Sustain

- Upper Sustain (Knee), Lower Sustain (Knee), Pedal Sustain, Lead Slide (Knee); Upper, Lower and Pedal Sustain (long-short) Selectors

Other Controls

- Tuning, Reverb, Manual Balance, Footswitch (Left, Right, Regist. Shift, Regist. Jump)

Programmable Rhythm Section

- Preset pattern locations (1, 2, 3, 4), Memories (1, 2, 3, 4), Variation (1, 2), Fill-in (1, 2), Balance, Volume

Keyboard Percussion

- 60 AWM sounds, assignable to any keyboard

Auto Bass Chord Section

- ABC (Single Finger, Fingered Chord, Custom ABC modes), Multi-Bass (1, 2, 3), Lower Memory, Pedal Memory

Chord Accompaniment Section

- Rhythmic (1, 2, 3, 4), Volume; Melodic (1, 2, 3, 4), Volume (HX-1)
- Rhythmic (1, 2), Volume; Melodic (1, 2), Volume (HX-3)
- Rhythmic Volume; Melodic Volume (HX-5)

Multi-Menu Controls

- Sequencer (1, 2, 3, 4), Tempo Controller, Tempo LED, Registration Number LED, Initial Touch Level LED, Expression Level LED, Initial Touch and Expression Level Display On/Off, backlit two-line 32 character LCD, Menu Select (<> ^ ^), Data Select (+ -), Clear Entry, Quit, Enter, Sub Data Control (10-key pad), External Control (1, 2)

Fittings

- MIDI In/Out, DC Out, Mic Out, EXP. In, Stereo Out (balanced XLRs and phone jacks), Music Rest
- Rhythm Stereo Out, Pedals Stereo Out, Lead Stereo Out, Remaining Stereo Out, 8-Channel and Mic 11-pin Stereo Out (HX-1)

Dimensions (WHD)

- 1092 x 218 x 301 mm (43" x 8³/₅" x 11⁴/₅") (All models)

Net Weight

- 21 kg (46.2 lbs.) (HX-1)
- 20.5 kg (45 lbs.) (HX-3)
- 19 kg (41.8 lbs.) (HX-5)

MKX-5 and MKX-4 Manual Keyboards

Keyboards

- Velocity- and Pressure-sensitive
- 61 Keys (MKX-5)
- 49 Keys (MKX-4)

Rhythm Controls

- Start, Synchro Start, Break, Fill-in, Intro, Ending

Other Controls and Indicators

- Power On/Off, Master Volume, Mic Volume, Mic Muting, Knee Lever, Data Pack Functions
- Pitch Wheel and Modes (1, 2, 3), Modulation Wheel and Modes (1, 2, 3), Pedal Dynamic Range Control (MKX-5)

Registration Memory System

- Memory Save Button
- 16 Memory Location Buttons

Fittings

- Data Pack I/O Port, Headphones Jack, Mic In, External Expression (1, 2) and Sustain Pedal Inputs
- Breath Control (MKX-5)

Dimensions (WHD)

- 1086 x 175 x 350 mm (42³/₄" x 6⁹/₁₀" x 13⁴/₅") (Both models)

Net Weight

- 23 kg (50.6 lbs.) (MKX-5)
- 20 kg (44 lbs.) (MKX-4)

PKX-F1, PKX-M1 and PKX-S1 Pedal Keyboards

Note Pedals

- 25 Velocity- and Pressure-sensitive Pedals (PKX-F1)
- 20 Velocity- and Pressure-sensitive Pedals (PKX-M1)
- 13 Pedals (MKX-S1)

Expression Pedals

- EP-10 (Mounted on all pedal keyboards)
- EP-20 mount (Option for PKX-F1, PKX-M1)

Dimensions (WHD)

- 1099 x 349 x 857 mm (43¹/₄" x 13³/₄" x 33³/₄") (PKX-F1)
- 1099 x 349 x 436 mm (43¹/₄" x 13³/₄" x 17²/₅") (PKX-M1 and PKX-S1)

Net Weight

- 26 kg (57.2 lbs.) (PKX-F1)
- 16.5 kg (36.3 lbs.) (PKX-M1)
- 15.5 kg (34.1 lbs.) (PKX-S1)

EP-10 and EP-20 Expression Pedals

Control

- Volume (EP-10)
- Rhythm Tempo, Pitch Bend Wheel Functions, Modulation Wheel Functions (EP-20)

Left Footswitch Functions

- Lead Glide, Upper Keyboard Glide and Upper/Lower Keyboard Glide, Rhythm Fill-in, Break, Stop and Ending (EP-10)

Right Footswitch Functions

- Lead Glide, Upper Keyboard Glide and Upper/Lower Keyboard Glide, Registration Shift, Registration Jump (EP-10)

STX-1 Stand

Dimensions (WHD)

- 1319 x 911 x 578 mm (51⁹/₁₀" x 35⁹/₁₀" x 22³/₄")

Net Weight

- 28 kg (61.6 lbs.)

BNX-F1 and BNX-M1 Benches

Dimensions (WHD)

- 945 x 600 x 294 mm (37¹/₅" x 23²/₃" x 11³/₅") (BNX-F1)
- 665 x 600 x 315 mm (26²/₅" x 23²/₃" x 12²/₅") (BNX-M1)

Net Weight

- 18 kg (39.6 lbs.) (BNX-F1)
- 8.5 kg (18.7 lbs.) (BNX-M1)

KA-40, KA-30, KA-20 and KA-10 Keyboard Amplifiers

Power Output

- Low: 350 W rms; High: 250 W rms (KA-40)
- 250 W rms (KA-30)
- 100 W rms (KA-20)
- 30 W rms (KA-10)

Speakers

- Woofer: 38 cm (15"); Mid: 20 cm (8") x 2; SQ: Horn; Tweeter: Horn x 2 (KA-40)
- Woofer: 38 cm (15"); Tweeter: 11 cm (4¹/₃") x 4 (KA-30)
- Woofer: 30 cm (12"); Tweeter: 11 cm (4¹/₃") x 3 (KA-20)
- 11 cm (4¹/₃") full range x 2 (KA-10)

Frequency Response

- 35 Hz - 20kHz (KA-40)
- 30 Hz - 20kHz (KA-30)
- 40 Hz - 20kHz (KA-20)
- 50 Hz - 20kHz (KA-10)

Connectors

- Input (RCA, Phone Jack, XLR), Output (Phone Jack, XLR), Remote In (5-pin DIN), Remote Out (5-pin DIN) (KA-40)
- Input (Phone Jack, XLR), Output (Phone Jack, XLR), Remote In (5-pin DIN), Remote Out (5-pin DIN) (KA-30)
- Input (Phone Jack), Output (Phone Jack), Remote In (5-pin DIN), Remote Out (5-pin DIN) (KA-20)
- Input (Phone Jack), Output (Phone Jack), Remote In (5-pin DIN), Remote Out (5-pin DIN) (KA-10)

Dimensions (WHD)

- 848 x 1000 x 662 mm (33³/₈" x 39³/₈" x 26") (KA-40)
- 608 x 939 x 496 mm (24" x 37" x 19¹/₂") (KA-30)
- 470 x 709 x 388 mm (18¹/₂" x 27⁹/₁₀" x 15¹/₄") (KA-20)
- 200 x 320 x 217 mm (7⁸/₉" x 12³/₅" x 8⁵/₉") (KA-10)

Net Weight

- 158 kg (348.3 lbs.) (KA-40)
- 88 kg (194 lbs.) (KA-30)
- 39 kg (86 lbs.) (KA-20)
- 6.6 kg (14.6 lbs.) (KA-10)

Systems

Dimensions (WHD)

- 1319 x 941 x 995 mm (52" x 37" x 39¹/₅") (System 1)
- 1319 x 941 x 585 mm (52" x 37" x 23") (System 2 - 5)

Net Weight

- 98 kg (215.6 lbs.) (System 1)
- 88.5 kg (194.7 lbs.) (System 2)
- 88 kg (193.6 lbs.) (System 3)
- 86.5 kg (190.3 lbs.) (System 4)
- 82.5 kg (181.5 lbs.) (System 5)

Expander Components*

AWM tone generator, FM tone generator, MTR-1 MIDI Multi-track Recorder, MDR-2 MIDI Music Disk Recorder, RP-3 RAM data storage pack, RA-1 EIA standard system rack, HX System computer software, and more.

*Availability to be announced later.

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