KAWAI MS720 Owner's Manual

Thank you for your purchase of this MS720 Personal Keyboard from Kawai. The MS720 is a **Powerful musical instrument** whether it's used for learning, teaching, or just having fun! You'll be playing great music in no time with Kawai's exclusive **One Finger Ad-Lib** feature. Plus, the MS720's other exciting feature will keep on challenging you for a long time to come.
Enjoy your new keyboard -- and thanks again for choosing Kawai!

OVERVIEW OF THE MS720 OWNER'S MANUAL

This manual is divided into five different parts;

Part 1 -- "Names of Parts and Basic Operations"
Part 2 -- "Using the Three Keyboard Regions"
Part 3 -- "Using One Finger Ad-Lib"
Part 4 -- "Recorder, Synthesizer"
Part 5 -- "System, MIDI Function"

Be sure to read the important information below before you proceed through the rest of the manual.
Enjoy exploring your new Kawai MS720.

Cautions

- This instrument contains precision electronic components. Do not subject it to severe shocks or use it in an area where it is exposed to direct sunlight, high temperature, high humidity, or dust.
- Be careful not to allow objects such as pins or coins to fall into the spaces between the keys or buttons.
- Never take the MS720 apart, as it may result in damage to the instrument or electric shock.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-- Consult the dealer or an experienced radio/TV technician for help.

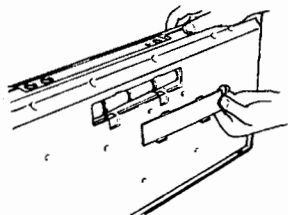■ This instrument complies with the limits for a class B digital apparatus, pursuant to the Radio Interference Regulations, C.R.C.,c1374.

Power Supply

This instrument runs on both batteries and regular household current.

■ Battery Operation

Insert six size "C" dry cells into the compartment under the instrument.

Notes:
- Make sure that the terminals all point in the same direction and in the direction indicated on the bottom of the battery compartment.
- If the volume fades or there are sound quality problems during battery operation, it is time to replace the batteries.
- Replace the batteries as a set. Never mix batteries of different ages or different types.
- Do not leave batteries inside the instrument during storage or long periods of disuse.

■ AC Operation

An AC adaptor (Model PS-121 or PS-123) is also available.

Notes
- Make sure that the voltage rating listed on the label of the adaptor matches that of the power supply.
- When you connect adaptor with the instrument, be sure that power switch is off.

■ Connection

Connection to a stereo, radio-cassette combination, or other type of audio equipment requires a special cable or adaptor with a mini stereo plug on one end and two RCA plugs on the other. These cables or adaptors are available from most sales outlets handling audio equipment and accessories.
Connecting the MS720 to other MIDI instruments requires standard MIDI cables available at most music stores which carry electronic instruments.
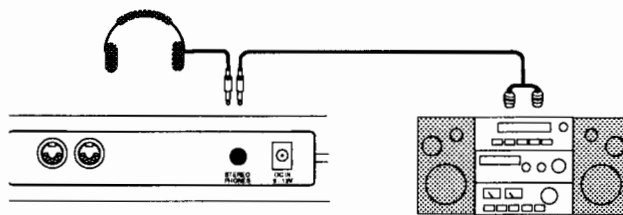
SPECIFICATIONS

| Keys	49 Mid
Tones	24 (288 Dual Variations)
Rhythm Patterns	24
Effects	Vibrato, Stereo Chorus, Pitch Bend
Percussion Pads	4
Rhythm Controls	START/STOP, SYNCHRO/FILL IN, INTRO/ENDING
Synthesizer Parameters	LEVEL, ATTACK, DECAY, SUSTAIN
Recorder Controls	REC/END, PLAY/STOP
Other ON/OFF Switches	DEMO, ONE FINGER AD-LIB, DUAL
Built-in Speakers	10 cm x 2
Connectors	PHONES(mini jack), DC IN (9-12V), MIDI IN/OUT
Dimensions(WxDxH mm)	653 x 232 x 77
Weight (kg)	2.4
Batteries (included)	Six size "C"

① **Power switch**

② **MASTER VOLUME**
This controls the total output level.

③ **LOWER MODE SELECT**
This three-position (OFF/AUTO/DRUM) switch controls the lower section of the keyboard. (See Part 2)

④ **TONE SELECT**
Pressing these switches lets you cycle through the available tones. Model MS720 has LEDs that indicate the current selection.

⑤ **RHYTHM SELECT**
These switches select the different rhythms. Model MS720 has LEDs that indicate the current rhythm selected.

Rhythm & Automatic Accompaniment Section

⑥ **START/STOP**
This switch starts and stops the rhythm or automatic accompaniment.

⑦ **SYNCHRO/FILL IN**
This switch synchronizes the start of the rhythm or automatic accompaniment with your first touch on the auto-accompaniment section of the keyboard. If the rhythm is playing, this switch becomes a "fill-in" switch which inserts a brief fill in to the rhythm pattern.

⑧ **INTRO/ENDING**
Pressing this switch adds an introduction or ending to the rhythm pattern. Pressing the SYNCHRO/FILL IN switch ⑦ for intros will synchronize the start of this bar with your first touch on the auto-accompaniment section of the keyboard.

⑨ **TEMPO**
These switches control the tempo of the rhythm pattern or automatic accompaniment. The left switch (-) decreases the tempo; the right one (+) increases it. Holding a switch down provides continuous changes. Pressing either of the TEMPO switches once (immediately after selecting a new rhythm) will change the tempo to a "standard" rate that suits that new rhythm. The indicator next to the tempo switches flashes on every beat.

⑩ **SYNTHESIZER**
See Part 4.

⑪ **RECORDER**
See Part 4.

⑫ **ONE FINGER AD-LIB**
This switch activates the ONE FINGER AD-LIB function. ONE FINGER AD-LIB is on when the corresponding LED indicator is lit. (See Part 3.)

⑬ **EFFECTS Section**

• **VIBRATO**
This ON/OFF switch controls the vibrato effect for use with melody tones.

• **STEREO CHORUS**
This ON/OFF switch controls the stereo chorus effect for use with melody tones.

• **PITCH BEND**
Holding down one of these switches temporarily changes the pitch of any melody tone. The left switch lowers the pitch (BEND DOWN); the right one raises it (BEND UP).

FRONT PANEL
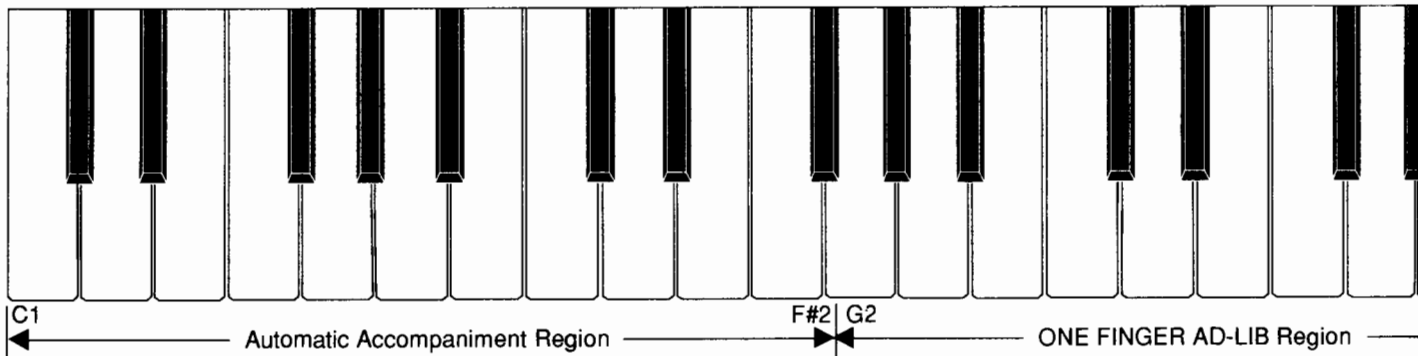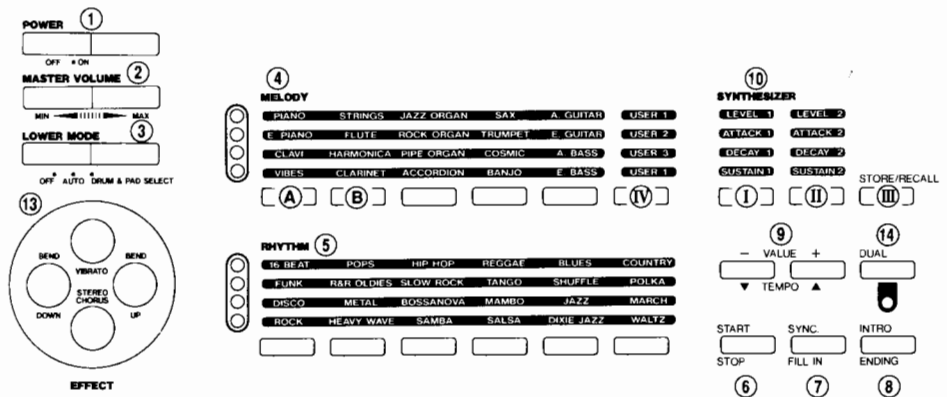
⑭ DUAL

This ON/OFF switch activates the DUAL function. (See the following description and procedure.)

■ DUAL

This function allows you to add a second tone to the notes played on the keyboard.

Example: Adding STRINGS to PIANO

(1) Use the TONE SELECT switch Ⓐ to select the primary tone (PIANO).
(2) Press the DUAL switch ⑭ to activate the function and light the indicator.
(3) Use the TONE SELECT switch Ⓑ to select the secondary tone (STRINGS).
Pressing a single note then produces a mixture of the STRINGS and PIANO tones.

⑮ SOUND SELECT PADS

The percussion pads allow you to add drum solos to the rhythm and automatic accompaniment. This function allows you to assign different percussion sounds or phrases to the percussion pads.

Example: Assigning TOM ROLL to a pad

(1) Move the Lower MODE SELECT switch ③ to its DRUM & PAD SELECT position.
(2) Hold down one of the blue percussion PADS and press the key (F2) assigned to the percussion instrument (TOM ROLL).

F2
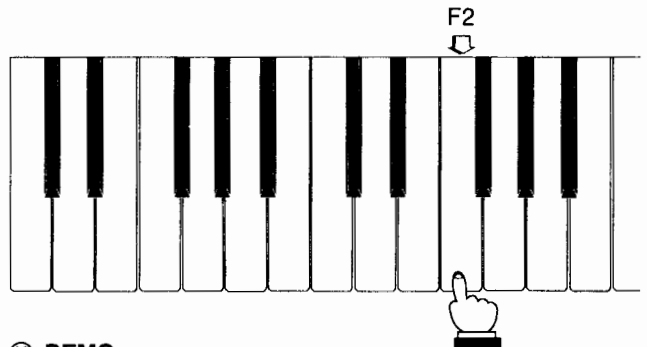
⑯ DEMO

This switch starts and stops a built-in performance that demonstrates the impressive sounds of the instrument.

AI

ᴑNE FINGER AD-LIB
FINGER AD-LIB button.

section(at left),select "AUTO".
ᴑn.
the ONE FINGER AD-LIB section.

ᴑ-LIB FEATURE
ᴑVER THE EXCITEMENT OF
A "PRO�" IN NO TIME AT
ANYONE CAN DO IT. WITH
ᴎGER PLAY HUNOREDS OF
IES THAT WILL MAKE YOUR
FUᴎ! ONE FINGER AD-LIB
ᴎSTANT MUSICIAN. MAKING
E MORE FUN THAN EVER!

BOARD
?O

RECORDER
⑰ REC/STOP PLAY/STOP ⑱
└─ ERASE ─┘
⑯ DEMO   ⑫ ONE FINGER AD LIB
⑮

SOUND SELECTABLE PADS

► NORMAL

16 bit PCM. STEREO. MIDI.
288 DUAL VARIATIONS.

ONE FINGER AD-LIB ™

B3 | C4 ◄──── Normal Melody Region ────► C5
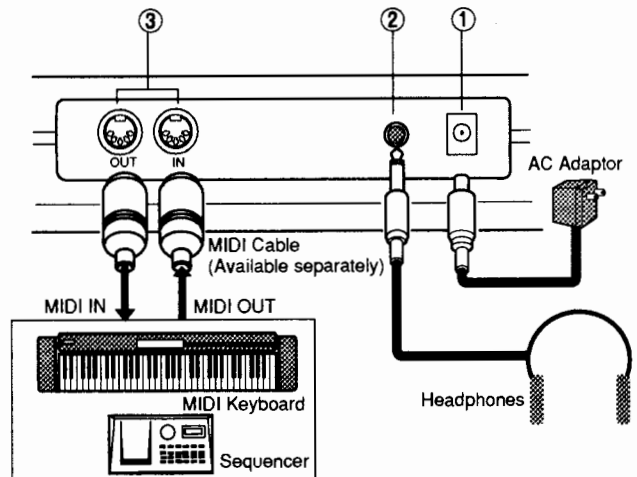
REAR PANEL

① DC IN

This jack accepts the plug from the optional AC adaptor (PS-121 or PS-123).

② STEREO PHONES

This jack accepts the mini plug from a pair of stereo headphones or a cable/adaptor for connecting the instrument to another piece of audio equipment.

③ MIDI IN/OUT

These jacks accepts standard MIDI cables (available separately) for connecting your keyboard to a personal computer, sequencer, or other MIDI equipped instrument. (For further details, see Part 5.)
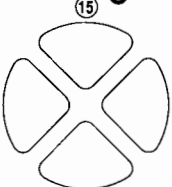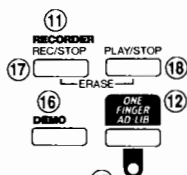
③   ② ①

OUT IN   AC Adaptor

MIDI Cable
(Available separately)

MIDI IN   MIDI OUT

MIDI Keyboard   Headphones

Sequencer

USING THE THREE KEYBOARD REGIONS -- Part 2

The MS720 is divided into three separate keyboard regions -- The LOWER KEYBOARD REGION, the ONE FINGER AD-LIB REGION (discussed in greater detail in Part 3 of this manual), and the NORMAL REGION. Each of these regions and their capabilities are outlined below. (See the drawing in Part 1 for the locations of each region.)

LOWER MODE and the Lower Keyboard Region

The Lower Keyboard region of the MS720 is quite versatile. It can be used for melody sounds, chord sensing, bass/chord sounds, or percussion sounds. The paragraphs below will show you how to use the Lower Mode select switch to assign any of these functions to the Lower Keyboard region.

1) USING THE LOWER KEYBOARD REGION FOR MELODY TONES.

When LOWER MODE select switch is set to "OFF", the LOWER MODE is set in the "OFF" position. When LOWER MODE is "OFF", the entire 49-note keyboard (which includes the Lower Keyboard region) plays the MELODY sound that you have selected. Up to ten notes can be played simultaneously.

2) When the LOWER MODE select switch is set to "AUTO", two different functions can be utilized:

(a) AUTOMATIC ACCOMPANIMENT WITH "CHORD SENSING" -- after you have selected a rhythm and pressed a START/ STOP button to get the rhythm going, setting LOWER MODE switch to "AUTO" will activate automatic accompaniments and "chord sensing" in the Lower Keyboard region. Automatic accompaniments will be played according to the chord form you select. Chords which can be used are shown below.

(b) BASS/CHORD SOUNDS -- If the rhythm function is deactivated, single-finger Bass/Chord sounds are played when you touch notes in the Lower Keyboard region.

■ **Playable Chords (for C)**
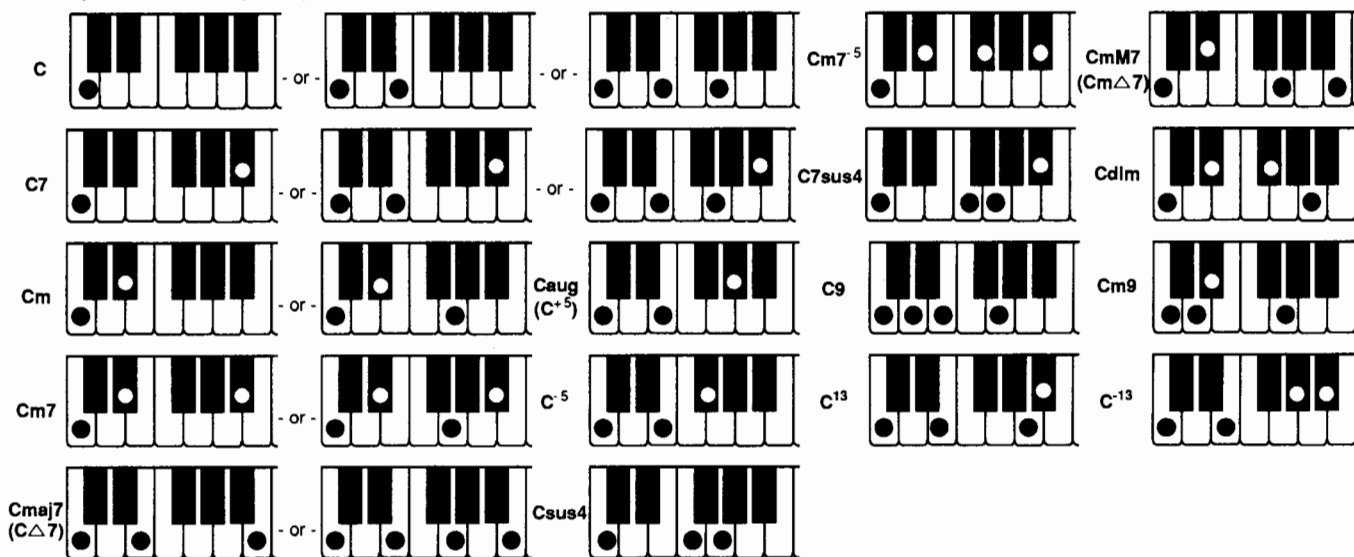
3) DRUM SOUNDS

When the LOWER MODE select switch is set to "DRUM", each key in the Lower Keyboard region will play the percussion sound or phrase assigned to that key. The instrument assignments are shown in picture form above each key on the MS720. The drawing and chart below list the names and note locations of each of the percussion sounds.
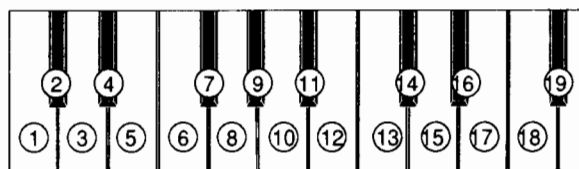
No.	Key	Instrument	No.	Key	Instrument
①	C1	BASS DRUM	⑪	A#1	HIHAT OPEN
②	C#1	RIM SHOT	⑫	B1	MID TOM
③	D1	SNARE DRUM	⑬	C2	HI CONGA
④	D#1	HI CLAP	⑭	C#2	CRASH CYMBAL
⑤	E1	HI SNARE DRUM	⑮	D2	HI TOM
⑥	F1	SMALL CYMBAL	⑯	D#2	RIDE CYMBAL
⑦	F#1	HIHAT CLOSE	⑰	E2	SNARE ROLL
⑧	G1	LO TOM	⑱	F2	TOM ROLL
⑨	G#1	LO CLAP	⑲	F#2	CYMBAL HIT
⑩	A1	LO CONGA			

● **The ONE FINGER AD-LIB Region**

Each key in the ONE FINGER AD-LIB region of the keyboard generates a different "AD-LIB" phrase when the ONE FINGER AD-LIB function ⑫ is "ON". Your selected MELODY sound is played when the ONE FINGER AD-LIB function is "OFF". See Part 3 of this manual for more details.

● **The NORMAL Melody Region**

The selected MELODY sound is played at all times in this region allowing you to alternate between ONE FINGER AD-LIB phrases and manually played melodies.

USING ONE FINGER AD-LIB -- Part 3

Kawai's exclusive ONE FINGER AD-LIB feature sets your MS720 apart from keyboards made by all other manufactures. One finger Ad-Lib lets you play like a "pro" in seconds. Follow the instructions below and you'll be playing great music in no time.

■ ONE FINGER AD-LIB Operation

1) Set the LOWER MODE select switch ③ to "OFF".
2) Press the ONE FINGER AD-LIB button ⑫ "ON" to light the indicator.
3) Hold down any one of the keys in the ONE FINGER AD-LIB region of the keyboard. Each key pressed will play a different phrase.
4) Next, set the LOWER MODE select switch to "AUTO".
5) Press the START button ⑥. Rhythm and automatic accompaniment will begin with a complete chord progression.
6) Hold down various ONE FINGER AD-LIB keys one at a time. The different phrases for each key pressed will change automatically according to the preset chord progression.
7) Now, select a different rhythm with the RHYTHM selector ⑤. Automatic accompaniment with a **different** chord progression will begin. Now, when the ONE FINGER AD-LIB keys are pressed, different AD-LIB phrase will be heard. Have fun!

*1: If you would like to play your own chord progressions, press the keys in the Lower Keyboard region for the chord form you desire. The automatic chord progression will stop and your left hand can control the automatic accompaniments. ONE FINGER AD-LIB phrases will also change to match the chords you select.
*2: The Kawai MS720 is equipped with specific chord progressions and ONE FINGER AD-LIB phrase for **each** rhythm pattern.
*3: If you change sounds with the TONE selector ④ during ONE FINGER AD-LIB playing, **all** sounds produced by the ONE FINGER AD-LIB and NORMAL MELODY Keys will use the new sound.

■ RECORDER

The Model MS720 has a built-in recorder for recording and playing back performance.

● Recording & Playback

(1) Press the REC/END ⑰ switch to start both the recorder and the metronome.

(2) Play. Everything you play will be recorded - the automatic accompaniment, ONE FINGER AD-LIB phrases, normal melody, hand-played chords, and hand percussion.

(3) Press the REC/END ⑰ switch again to stop recording.

(4) Press the PLAY/STOP ⑱ switch to play back the recording.

Note: This recording remains in memory even after the POWER switch ① is turned off - as long as the instrument receives power from batteries. You can record a maximum of around 500 notes. Upon reaching the maximum, it automatically stops recording.

● Erasing

When you make a new record, you have to erase contents which recorder contains.

(1) Simultaneously press the REC/END ⑰ PLAY/STOP ⑱switches to erase the recording.

■ SYNTHESIZER

The model MS720 has a built-in synthesizer for creating 4 user defined tones to complement the 20 preset tones programmed at the factory.

Every tone on the MS720 is comprised of two waveforms, WAVE 1 and WAVE 2. Each wave has four parameters which can be changed by the user.

Use the SYNTH ① section to control the parameters for WAVE 1.

Use the SYNTH ⑪ section to control the parameters for WAVE 2.

● Basic Procedure

(1) First, use TONE selector ④ to select the sound which you would like to modify. Then press either the SYNTH① or SYNTH ⑪ button to activate the synthesizer and deactivate the tempo indicator. The tempo switches are now used to select synthesizer waves or values.

(2) Use the SYNTH① or SYNTH ⑪ buttons to shift the LED indicator to the row containing the parameter to be changed. (See the list of parameters below.)

(3) Use the TEMPO ⑨ switches to change the value of the parameter you have selected. (See note 3.) You will hear the character of the tone change each time you change a parameter value.

(4) Repeat Steps 2 and 3 as often as desired.

(5) Once you have created a tone that you would like to store for later use, select a memory location with the USER⑭ switch. Press the USER ⑭ switch to shift the LED indicator and select one of the user memories (1-4).

(6) Press the STORE/RECALL ⑪ switch to store the tone and return to regular keyboard operation.

* When you store a new synthesized tone on a user memory, any previously stored tone on that memory location will be erased.
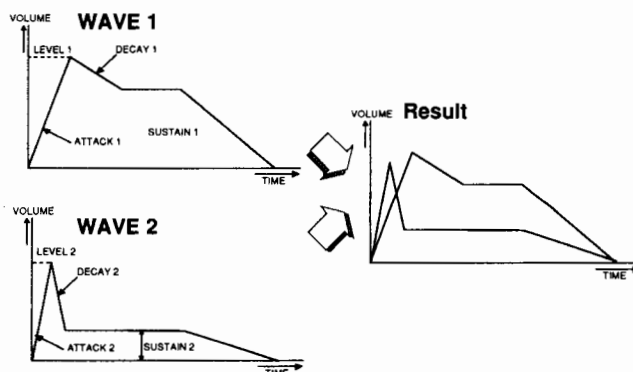
● Synthesizer Parameters

LEVEL This parameter determines the size of the peak or the maximum volume level of the wave. You have a choice of 16 levels - ranging from soft 1 to loud 16.

ATTACK This parameter determines how long the waveform takes to reach its peak. The user can select from 16 different attack times - ranging from slow 1 to fast 16.

DECAY Determines the time that the sound takes to fall from the peak to the SUSTAIN level. The user can select from 16 different decay times - ranging from slow 1 to fast 16.

SUSTAIN Determines, relative to the peak, the volume when keys are held down.

TEMPO Key	VALUE TEMPO ▼	▲
LEVEL	Low Level	High Level
ATTACK	Slow Attack	Fast Attack
DECAY	Slow Decay	Fast Decay
SUSTAIN	Low Level	High Level

Notes:

1. The release time, the time that the sound takes to die out after the key is released, is determined by the tone in effect when the synthesizer function is activated. For example, if you were playing strings tone before activating the synthesizer function, the release time would be very long since strings die out slowly after the key is released.

2. Pressing any switch other than the TEMPO ⑨, SYNTH ①, SYNTH ⑪ , STORE/RECALL ⑪ , or USER ⑭ switches returns the instrument to regular keyboard operation. If you leave the synthesizer function by accident, press the STORE/RECALL ⑪ switch to undo such a mistake.

● Erasing User-Defined Tones

Holding down the first two keys on the keyboard while turning on the power both erases the recorder and synthesizer contents and resets the user-defined tones to their factory preset state.

These parameters settings remain in memory even after the POWER switch ① is turned off— as long as the instrument receives power from batteries.

SYSTEM, MIDI FUNCTIONS -- Part 5

SYSTEM Function

The SYSTEM mode provides the capability for transposing the instrument pitch in semitone steps, fine-tuning the pitch to match other instruments, and changing the MIDI transmit channel.

● General Procedure

(1) Make sure that the rhythm, automatic accompaniment, ONE FINGER AD-LIB, and recorder are all off.

(2) Simultaneously press the first three RHYTHM SELECT ⑤ switches on the left.
   Note: The LEDs next to these switches then light in turn.

(3) Select the desired system function.

   TRANSPOSE: SYCHRO/FILL IN ⑦
   TUNE: START/STOP ⑥
   MIDI TRANSMIT: TONE SELECT ④

(4) To return to regular keyboard operation, press any key other than the ones used by the selected function.

RHYTHM

16 BEAT	POPS	HIP HOP	REGGAE
FUNK	R&R OLDIES	SLOW ROCK	TANGO
DISCO	METAL	BOSSANOVA	MAMBO
ROCK	HEAVY WAVE	SAMBA	SALSA
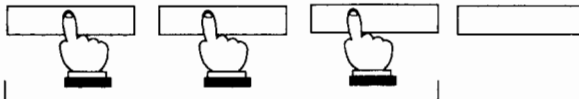
Simultaneously pressing these switches makes this equipment enter the SYSTEM mode.

■ TRANSPOSE

(1) Press the SYNCHRO/FILL IN ⑦ switch.

(2) Use the TEMPO ⑨ switches to change the pitch: pressing the left switch (-) lowers the pitch a semitone; pressing the right one raises it a semitone.

■ TUNE

(1) Press the START/STOP ⑥ switch.

(2) Use the TEMPO ⑨ switches to change the pitch: pressing the left switch (-) lowers the pitch; pressing the right one raises it.

■ MIDI TRANSMIT

(1) Press one of the four leftmost TONE SELECT ④ switches to set the MIDI transmit channel. (See illustration.)

MELODY

1ch	5ch	9ch	13ch
2ch	6ch	10ch	14ch
3ch	7ch	11ch	15ch
4ch	8ch	12ch	16ch

MIDI Implementation

When connected to a sequencer, personal computer, or other MIDI equipped device, the MS720 supports the following features:

■ Transmitting

The MS720 transmits the following MIDI data on a single MIDI channel (which may be changed with a SYSTEM function):

   • Key ON/OFF (which key and how long)
   • Program (tone) change
   • Pitch bend
   • Vibrato ON/OFF
   • Chorus ON/OFF

■ Receiving

The instrument responds to different types of MIDI data on the following fixed channels.

Channel	Part	MIDI data
1 - 4	Melody	KEY ON/OFF, VELOCITY, VOLUME, PROGRAM CHANGE, PITCH BENDER, VIBRATO ON/OFF, HOLD ON/OFF, CHORUS ON/OFF
10	Drums	KEY ON/OFF, VELOCITY, VOLUME

● Program Number Assignments

1	Piano	9	Jazz Organ	17	Acoustic Guitar
2	Electric Piano	10	Rock Organ	18	Electric Guitar
3	Clavi.	11	Pipe Organ	19	Acoustic Bass
4	Vibes	12	Accordion	20	Electric Bass
5	Strings	13	Sax	21	User 1
6	Flute	14	Trumpet	22	User 2
7	Harmonica	15	Cosmic	23	User 3
8	Clarinet	16	Banjo	24	User 4

● Percussion Key Number Assignment

C1	36	Bass Drum	G#1	44	Lo Clap
C#2	37	Rim Shot	A1	45	Lo Conga
D1	38	Snare Drum	A#1	46	Hihat Open
D#1	39	Hi Clap	B1	47	Mid Tom
E1	40	Hi Snare Drum	C2	48	High Conga
F1	41	Small Cymbal	C#2	49	Crash Cymbal
F#1	42	Hihat Close	D2	50	Hi Tom
G1	43	Lo Tom	D#2	51	Ride Cymbal

OW-316E-M