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 features 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 Ranges"
Part 3: "Using One Finger Ad-Lib"
Part 4: "Preset, 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 Radiation Interference Regulations, IC, R.C., c.374.

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.
- Replace the batteries as a set. Never mix batteries of different ages or different types. Never 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 an 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

<table>
<thead>
<tr>
<th>Key</th>
<th>49 MIDI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tone</td>
<td>24 (260 Draw Variations)</td>
</tr>
<tr>
<td>Effects</td>
<td>Vibrato, Sforzando, Pitch Bend</td>
</tr>
<tr>
<td>Pedal</td>
<td>Pédale de soudure, Pedal B</td>
</tr>
<tr>
<td>Sustain</td>
<td>START/STOP, SYNCHRONIZE, INTRO/ENDING</td>
</tr>
<tr>
<td>Synthesizer Parameter</td>
<td>LEVEL, ATTACK, DECAY, SUSTAIN</td>
</tr>
<tr>
<td>Recorder Controls</td>
<td>RECORD, PLAY/STOP</td>
</tr>
<tr>
<td>On/off Switches</td>
<td>DEMO, ONE FINGER AD-LIB, DUAL</td>
</tr>
<tr>
<td>Built-in Speakers</td>
<td>16 Watts</td>
</tr>
<tr>
<td>Connectors</td>
<td>PHONES/SPEAKER, DC IN (9VAC), MIDI IN/OUT</td>
</tr>
<tr>
<td>Dimensions (Width x Height x Depth)</td>
<td>653 x 220 x 77</td>
</tr>
<tr>
<td>Weight (loose)</td>
<td>2.4</td>
</tr>
<tr>
<td>Batteries (included)</td>
<td>6</td>
</tr>
</tbody>
</table>

See size "C"
NAMES OF PARTS AND BASIC OPERATION -- Part 1

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.
6. Rhythm & Automatic Accompaniment Section
7. START/STOP
   This switch starts and stops the rhythm or automatic accompaniment.
8. SYCHRO/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.
9. INTRO-ENDING
   Pressing this switch adds an introduction or ending to the rhythm pattern. Pressing the SYCHRO/FILL IN switch 7 for intro will synchronize the start of this bar with your first touch on the auto-accompaniment section of the keyboard.

10. 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.
11. SYNTHESIZER
    See Part 4.
12. RECORDER
    See Part 4.
13. 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.)
14. 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).
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 \( \textcircled{3} \) to select the primary tone (PIANO).
(2) Press the DUAL switch \( \textcircled{5} \) to activate the function and light the indicator.
(3) Use the TONE SELECT switch \( \textcircled{5} \) to select the secondary tone (STRINGS).
Pressing a single note then produces a mixture of the STRINGS and PIANO tones.

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 \( \textcircled{3} \) 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).

REAR PANEL

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

STEREO PHONES
This jack accepts the mini plug from a pair of stereo headphones or a cassette/adapter for connecting the instrument to another piece of audio equipment.

MIDI IN/OUT
These jacks accept 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.)
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 48-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 press 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.

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.

<table>
<thead>
<tr>
<th>No.</th>
<th>Key</th>
<th>Instrument</th>
<th>No.</th>
<th>Key</th>
<th>Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>C1</td>
<td>BASS DRUM</td>
<td>5</td>
<td>A#1</td>
<td>HIHAT OPEN</td>
</tr>
<tr>
<td>2</td>
<td>C#1</td>
<td>RIM SHOT</td>
<td>6</td>
<td>B1</td>
<td>MID TOM</td>
</tr>
<tr>
<td>3</td>
<td>D1</td>
<td>SNARE DRUM</td>
<td>7</td>
<td>C2</td>
<td>HI CONGA</td>
</tr>
<tr>
<td>4</td>
<td>D#1</td>
<td>HI CLAP</td>
<td>8</td>
<td>C#2</td>
<td>CRASH CYMBAL</td>
</tr>
<tr>
<td>5</td>
<td>E1</td>
<td>HI SNARE DRUM</td>
<td>9</td>
<td>D2</td>
<td>HI TOM</td>
</tr>
<tr>
<td>6</td>
<td>F1</td>
<td>SMALL CYMBAL</td>
<td>10</td>
<td>D#2</td>
<td>RIDE CYMBAL</td>
</tr>
<tr>
<td>7</td>
<td>F#1</td>
<td>HIHAT CLOSE</td>
<td>11</td>
<td>E2</td>
<td>SNARE ROLL</td>
</tr>
<tr>
<td>8</td>
<td>G1</td>
<td>LO TOM</td>
<td>12</td>
<td>F2</td>
<td>TOM ROLL</td>
</tr>
<tr>
<td>9</td>
<td>G#1</td>
<td>LO CLAP</td>
<td>13</td>
<td>F#2</td>
<td>CYMBAL HIT</td>
</tr>
<tr>
<td>10</td>
<td>A1</td>
<td>LO CONGA</td>
<td>14</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 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.
Kawai’s exclusive ONE FINGER AD-LIB feature sets your MS720 apart from keyboards made by all other manufacturers. 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 to "OFF".
2. Press the ONE FINGER AD-LIB button to "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. 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. Automatic accompaniment 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 during ONE FINGER AD-LIB playing, all sounds produced by the ONE FINGER AD-LIB and NORMAL MELODY Keys will use the new sound.
The Model MS720 has a built-in recorder for recording and playing back performance.

(1) Press the REC/END \(\textcircled{1}\) switch to start both the recorder and the metronome.
(2) Play. Everything you play will be recorded - the automatic accompaniment, ONE FINGER AD-UB phrases, normal melody, hand-played chords, and hand percussion.
(3) Press the REC/END \(\textcircled{1}\) switch again to stop recording.
(4) Press the PLAY/STOP \(\textcircled{2}\) switch to play back the recording.

Note: This recording remains in memory even after the POWER switch \(\textcircled{1}\) 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 \(\textcircled{1}\) PLAY/STOP \(\textcircled{2}\) switches 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 \(\textcircled{3}\) section to control the parameters for WAVE 1.
Use the SYNTH \(\textcircled{3}\) section to control the parameters for WAVE 2.

Basic Procedure

(1) First, use the TONE selector \(\textcircled{4}\) to select the sound which you would like to modify. Then press either the SYNTH \(\textcircled{3}\) or SYNTH \(\textcircled{3}\) 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 SYNTH \(\textcircled{3}\) or SYNTH \(\textcircled{3}\) 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 \(\textcircled{2}\) 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 USER \(\textcircled{5}\) switch. Press the USER \(\textcircled{5}\) switch to switch the LED indicator and select one of the user memories (1-4).
(6) Press the STORE/RECALL \(\textcircled{6}\) 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.

<table>
<thead>
<tr>
<th>TEMPO Key</th>
<th>VALUE</th>
<th>TEMPO</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEVEL</td>
<td>Low Level</td>
<td>High Level</td>
</tr>
<tr>
<td>ATTACK</td>
<td>Slow Attack</td>
<td>Fast Attack</td>
</tr>
<tr>
<td>DECAY</td>
<td>Slow Decay</td>
<td>Fast Decay</td>
</tr>
<tr>
<td>SUSTAIN</td>
<td>Low Level</td>
<td>High Level</td>
</tr>
</tbody>
</table>

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 \(\textcircled{2}\), SYNTH \(\textcircled{3}\), SYNTH \(\textcircled{3}\), STORE/RECALL \(\textcircled{6}\), or USER \(\textcircled{5}\) switches returns the instrument to regular keyboard operation. If you leave the synthesizer function by accident, press the STORE/RECALL \(\textcircled{6}\) 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 \(\textcircled{1}\) is turned off — as long as the instrument receives power from batteries.
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 switches on the left.
     - **Note**: The LEDs next to these switches then light in turn.
  3. Select the desired system function.
     - **TRANPOSE**: SYNCHRO/FILL IN [7]
     - **TUNE**: START/STOP [8]
     - **MIDI TRANSMIT**: TONE SELECT [9]
  4. To return to keyboard operation, press any key other than the ones used by the selected function.

- **RHYTHM**

- **TRANPOSE**
  2. Use the TEMPO [8] switches to change the pitch; pressing the left switch (-) lowers the pitch a semitone; pressing the right one raises it a semitone.

- **TUNE**
  2. Use the TEMPO [8] 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 [9] switches to set the MIDI transmit channel. (See illustration.)

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

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

<table>
<thead>
<tr>
<th>Channel</th>
<th>Part</th>
<th>MIDI Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 4</td>
<td>Melody</td>
<td>KEY ON/OFF, VELOCITY, VOLUME, PROGRAM CHANGE, PITCH BENDER, VIBRATO ON/OFF, HOLD ON/OFF, CHORUS ON/OFF</td>
</tr>
<tr>
<td>10</td>
<td>Drums</td>
<td>KEY ON/OFF, VELOCITY, VOLUME</td>
</tr>
</tbody>
</table>

- **Program Number Assignments**

<table>
<thead>
<tr>
<th>Piano</th>
<th>9</th>
<th>Jazz Organ</th>
<th>17</th>
<th>Acoustic Guitar</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Electric Piano</td>
<td>10</td>
<td>Rock Organ</td>
<td>18</td>
</tr>
<tr>
<td>3</td>
<td>Clav.</td>
<td>11</td>
<td>Pipe Organ</td>
<td>19</td>
</tr>
<tr>
<td>4</td>
<td>Vibes</td>
<td>12</td>
<td>Accordion</td>
<td>20</td>
</tr>
<tr>
<td>5</td>
<td>Strings</td>
<td>13</td>
<td>Sitar</td>
<td>21</td>
</tr>
<tr>
<td>6</td>
<td>Flute</td>
<td>14</td>
<td>Trumpet</td>
<td>22</td>
</tr>
<tr>
<td>7</td>
<td>Horns</td>
<td>15</td>
<td>Cosmic</td>
<td>23</td>
</tr>
<tr>
<td>8</td>
<td>Clarinet</td>
<td>16</td>
<td>Rarpy</td>
<td>24</td>
</tr>
</tbody>
</table>

- **Percussion Key Number Assignment**

<table>
<thead>
<tr>
<th>C1</th>
<th>36</th>
<th>Bass Drum</th>
<th>G#1</th>
<th>44</th>
<th>Lo Clap</th>
</tr>
</thead>
<tbody>
<tr>
<td>C#4</td>
<td>37</td>
<td>Rim Shot</td>
<td>A1</td>
<td>45</td>
<td>Lo Conga</td>
</tr>
<tr>
<td>D1</td>
<td>38</td>
<td>Snare Drum</td>
<td>A#1</td>
<td>46</td>
<td>Hihat Open</td>
</tr>
<tr>
<td>D#4</td>
<td>39</td>
<td>Hi Clap</td>
<td>B1</td>
<td>47</td>
<td>Mid Tom</td>
</tr>
<tr>
<td>E1</td>
<td>40</td>
<td>Hi Snare Drum</td>
<td>C2</td>
<td>48</td>
<td>High Conga</td>
</tr>
<tr>
<td>F1</td>
<td>41</td>
<td>Small Cymbal</td>
<td>D2</td>
<td>49</td>
<td>Crash Cymbal</td>
</tr>
<tr>
<td>F#1</td>
<td>42</td>
<td>Hihat Crash</td>
<td>D#2</td>
<td>50</td>
<td>Hi Tom</td>
</tr>
<tr>
<td>G1</td>
<td>43</td>
<td>Lo Tom</td>
<td>E2</td>
<td>51</td>
<td>Ride Cymbal</td>
</tr>
</tbody>
</table>

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OW-316E-M