KAWAI

XR600 Electronic Organ

Owner's Manual

■ Thank you for your purchase of the Kawai XR Series Electronic Organ.

■ **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 different electrical circuit from the receiver.
— 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., c. 1374.

■ IMPORTANT SAFETY INSTRUCTIONS

WARNING: When using electric products, basic precautions should always be followed, including the following:

1. Read all the instructions before using the product.
2. Do not use this product near water -for example, near a bathtub, in a wet basement, or near a swimming pool, or the like.
3. This product, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high level. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.
4. The product should be located so that its location or position does not interfere with its proper ventilation.
5. The product should be located away from heat sources such as radiators, heat registers, or other products that produce heat.
6. The product should be connected to a power supply only of the type as marked on the product.
7. This product may be equipped with a polarized line plug. This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician to replace your obsolete outlet.
8. The power-supply cord of the product should be unplugged from the outlet when left unused for a long period of time.
9. Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

10. The product should be serviced by qualified service personnel when:
    A. The power-supply cord or the plug has been damaged; or
    B. Objects have fallen, or liquid has been spilt into the product; or
    C. The product has been exposed to rain; or
    D. The product does not appear to operate normally; or
    E. The product has been damaged.
11. Do not disassemble or attempt to modify the product.
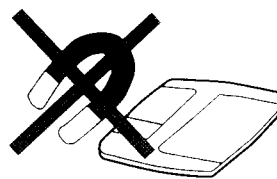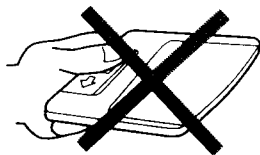
■ Note: Resetting of internal memory

The contents of the internal memory (such as Registration, Effects) are reset by turning on the POWER while holding down the E, F, A, B and C keys within the highest octave of the UPPER KEYBOARD.
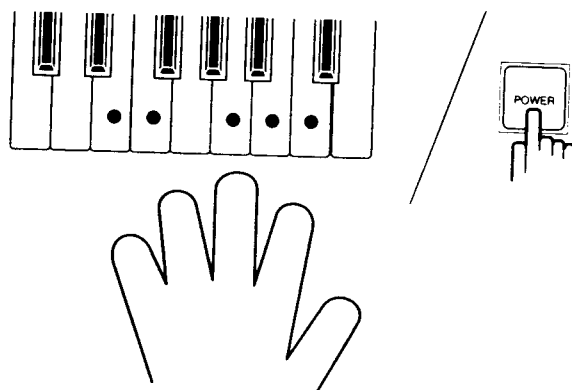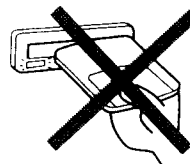

■ Care of the Floppy Disk

A floppy disk is one of the media for storing data in computers and word processors. When using a floppy disk, observe the following precautions.

• This model uses 3.5 inch 2DD floppy disks. Other types of disks cannot be used.
• Do not open the floppy disk's shutter. If the shutter is opened by hand, the interior of the disk may be damaged or foreign matter may enter, causing incorrect storage of data.

• Do not place near a magnetic source. The floppy disk uses magnetism to store data. If the disk is placed near a speaker or other magnetic source, the stored data may not be read back correctly.


IMPORTANT NOTE: Do not remove the floppy disk when the lamp of the floppy disk slot is on. If it is removed, not only may the data be lost, but there is a chance that disk or disk drive may be damaged and unable to be used again.

1

Write Protect
The purpose of the square window on the lower edge of floppy disk is to prevent data from being written over. When the window is closed, data may be written to the disk. When it is open, data writing is impossible.
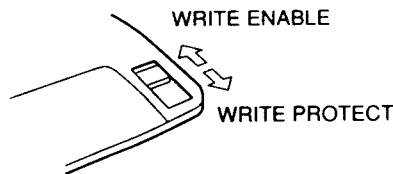
Inserting and removing the Floppy Disk
With the lable facing up, insert the floppy disk into the slot until it clicks into place. Slowly press the Eject switch to remove the disk.
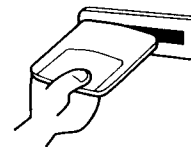
Leave the window open on disks whose contents are not to be written over or deleted.

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4 LOWER MANUAL ORCHESTRA CONTROL BLOCK (refer to P.9)
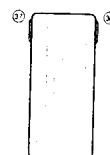5 PRESET INSTRUMENT CONTROL BLOCK (refer to P.10)
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■ Connectors
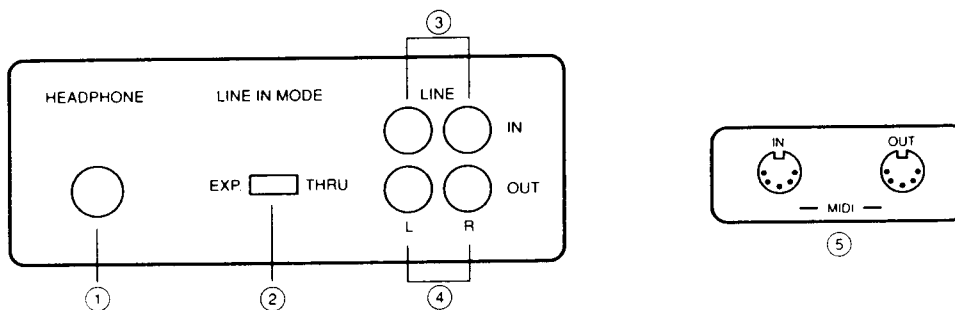
① HEADPHONE
   With a headphone plugged into this jack, you can enjoy
   playing your organ without disturbing others.
② LINE IN MODE
   If you set this switch to "EXP", you can control the
   LINE IN volume with the EXPRESSION PEDAL. If you
   set this switch to "THRU", the EXPRESSION PEDAL
   will not control the LINE IN volume.
③ LINE IN
   Receives the signals from your cassette tape deck or
   other audio equipment.
④ LINE OUT
   Connect these jacks to your cassette tape decks or other
   audio equipment.
⑤ MIDI (see the Chapter 6 "MIDI" section of this
   manual.)

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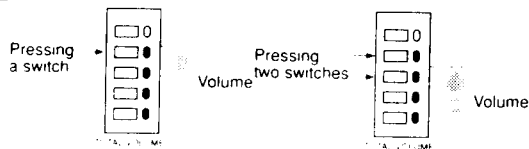# ■ Getting Ready to Play
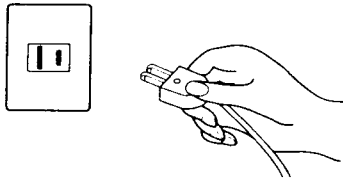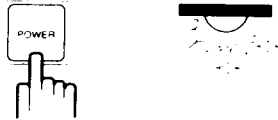
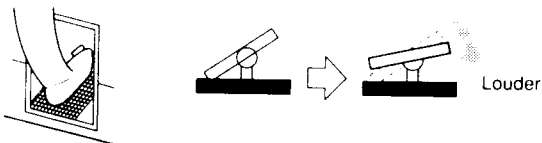1. Insert the plug end of the AC power cord into the wall outlet.

2. Press the power switch to turn the unit on. The LED will light.

◆ Volume Adjustment

3. Set the TOTAL VOLUME switches at mid range of volume.

   Note: All volume controls on your XR600 feature a convenient set of tiny instantaneously acting electronic switches, placed vertically on each volume control. The switch at the bottom of the control will turn off that block.

   As you press the switch higher up on the control the volume will increase. When two adjacent switches are pressed at the same time, the volume is set to the mid point between the levels of the two switches.

4. Depress the expression pedal halfway.
   This pedal controls the organ's overall volume. During a performance, using the pedal gives music strong and weak expressions.

   Note: About the unit's internal memory
   The XR600 is equipped with a back-up battery to maintain data in memory even when the power is turned off. This battery has a lifetime of 6-10 years although this can depend somewhat on operating conditions. When the back-up battery begins to run down, the WRITE button in the REGISTRATION MEMORY section blinks several times when you turn the power on. You cannot back up the internal memory once the back-up battery has run out of power. For a replacement back-up battery, ask at the store where you made your purchase or any authorized KAWAI dealer.

Chapter 1 BASIC OPERATION

■ Selecting Sounds

LOWER

LOWER

LOWER

LOWER
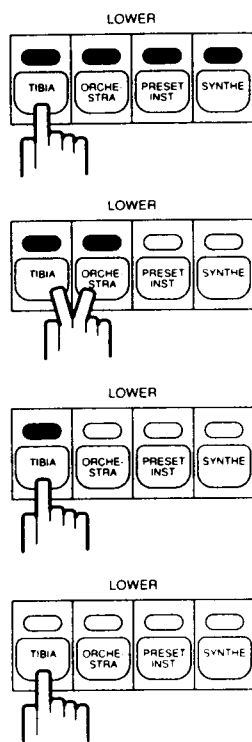
Press KEYBOARD CONDUCTOR switches and tone select switches. And, play a key on the KEYBOARD. You will hear the combination sounds of the UPPER MANUAL blocks (TIBIA, ORCHESTRA, PRESET INSTRUMENT, and SYNTHE-SIZER blocks). Two or more sounds can be mixed for the TIBIA block. Only one sound can be selected for each of the other blocks. For example, if you press the PIANO switch when the VIBRAPHONE sound is selected, the sound for the PRESET INSTRUMENT block will change from VIBRAPHONE to PIANO.

Note:
- These switches are toggles. Pressing the switch turns the switch lamp ON; pressing it a second time turns it OFF.
- Press two, three or four KEYBOARD CONDUCTOR switches simultaneously to play the layered sound.
- Only the LOWER section of the KEYBOARD CONDUCTOR BLOCK can turn all the tone sections OFF.

Adjust the volume of each tone block using the VOLUME switches. (Setting the VOLUME level of a block at its minimum level turns off the block.) If you want to play TIBIA block only for the UPPER KEYBOARD, turn the KEYBOARD CONDUCTOR switches of the other blocks OFF.
Mixed sounds of the LOWER MANUAL blocks (TIBIA, ORCHESTRA, and PRESET INSTRUMENT blocks) will also be played for the LOWER KEYBOARD. Mixed sounds of the PEDAL blocks (TIBIA and ORCHESTRA blocks) will be played for the PEDAL KEYBOARD.

■ EFFECT SETTINGS

REVERB   Deeper
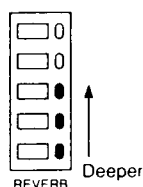
REVERB
Adjust the reverb (echo) effect to be added to the sound for UPPER, LOWER and PEDAL KEYBOARDs using the REVERB switches. Pressing the highest switch set the reverb at maximum level. And the lowest switch deactivates the reverb.

SUSTAIN
This adds a lingering SUSTAIN effect to the ORCHESTRA, PRESET INSTRU-MENT and TIBIA sounds of each KEYBOARD (with SUSTAIN switches in each block). Pressing the switch turns the switch lamp on. The display will show the length of sustain. You can adjust the length of sustain by the dial. Press the switch again and activate the effect. Press the switch once again to turn off the lamp light and to deactivate the effect.

The display will automatically turn to normal mode when you don't use the dial within two seconds.

PORTA
When the sound selected with the SYNTHESIZER is played legato, the pitch from one note to another is accomplished in a smooth, gliding manner. Pressing the switch turns the switch lamp on and activates the effect. Press the switch again to turn off the lamp light and to deactivate the effect.

TOUCH
This allows you to control tone, volume and effect of ORCHESTRA, SYNTHE-SIZER and PRESET INSTRUMENTS sound of UPPER and LOWER KEYBOARDs by varying the key force, speed, and pressure. Pressing the switch turns the switch lamp on and activates the effect. Press the switch again to turn off the lamp light and to deactivate the effect.
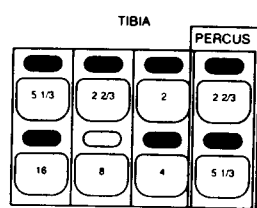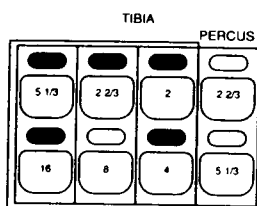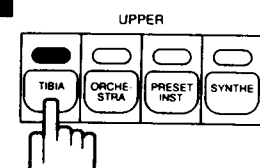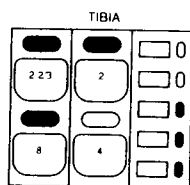
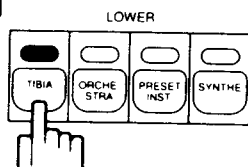(PEDAL KEYBOARD ORCHESTRA CONTROL BLOCK)

SUSTAIN
This adds a lingering SUSTAIN effect to the ORCHESTRA sounds of the PEDAL KEYBOARD.
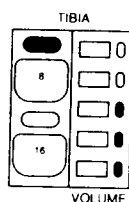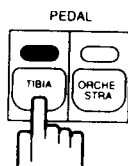
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■ TIBIA

TIBIA sounds can be selected for LOWER, UPPER, and PEDAL KEYBOARDs.

1. **UPPER TIBIA**
   Select the TIBIA sound for use on the UPPER KEYBOARD. The TIBIA section can be played by selecting from six TIBIA types (2', 2'2/3, 4', 5'1/3, 8' and 16') and two PERCUS TIBIA types (2'2/3, 5'1/3) of foot pitch combinations.
   (1) Press the TIBIA button of the KEYBOARD CONDUCTOR block for UPPER to turn its LED "ON".
   (2) Press the pitch switch in the UPPER TIBIA section to select the sound you want to play, and the lamp for the corresponding switch will light. Turn on some switches at the same time to select a desired tone combination.

   Note: These switches are toggles. Pressing the switch turns on the effect. Pressing it a second time turns it off.

   Press a key on the UPPER KEYBOARD to play the sound.

2. **LOWER TIBIA**
   Select the TIBIA sound for use on the LOWER KEYBOARD.
   (1) Press the TIBIA button of the KEYBOARD CONDUCTOR block for LOWER to turn its LED "ON".
   (2) Press the pitch switch (2', 2'2/3, 4' and 8') in the LOWER TIBIA section to select the sound you want to play, and the lamp for the corresponding switch will light. Turn on two switches at the same time to select a tone combination.

   Note: These switches are toggles. Pressing the switch turns on the effect. Pressing it a second time turns it off.

   Press a key on the LOWER KEYBOARD to play the sound. Adjust the volume as necessary using the VOLUME switches. (Setting at its minimum level turns off the LOWER TIBIA.)

3. **PEDAL TIBIA**
   Select the TIBIA sound for use on the PEDAL KEYBOARD.
   (1) Press the TIBIA button of the KEYBOARD CONDUCTOR block for PEDAL to turn its LED "ON".
   (2) Press the pitch switch (8' and 16') in the PEDAL TIBIA section to select the sound you want to play, and the lamp for the corresponding switch will light. Turn on two switches at the same time to select a tone combination.

   Note:
   • These switches are toggles. Pressing the switch turns on the effect. Pressing it a second time turns it off.
   • Press a key on the PEDAL KEYBOARD to play the sound. Adjust the volume as necessary using the VOLUME switches. (Setting at its minimum level turns off the sound of PEDAL TIBIA).

■ EFFECTS FOR TIBIA SOUND
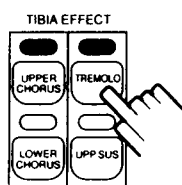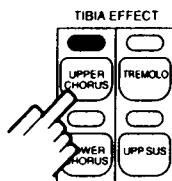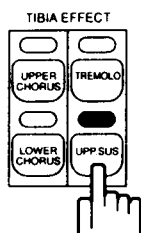
TIBIA EFFECT

REVERB and CHORUS can be added to both UPPER and LOWER TIBIA sounds. And TREMOLO can also be added to the UPPER and LOWER TIBIA sound when CHORUS is "ON". SUSTAIN can be added to UPPER TIBIA sounds.

Note: These effect switches are toggles. Pressing the switch turns on the effect; pressing it a second time turns it off.

■ Effect Switches

1. CHORUS -This adds a slow swelling to the UPPER and LOWER KEYBOARDs TIBIA. You can independently operate each switch of UPPER CHORUS and LOWER CHORUS.
2. TREMOLO -This switches the UPPER and LOWER KEYBOARD CHORUS effects, if present, to TREMOLO. The sound swells much more quickly than CHORUS.

Ex. Adding CHORUS or TREMOLO to the UPPER and LOWER KEYBOARDs.
(1) Press the UPPER CHORUS (and LOWER CHORUS) switch to light the switch lamp on. The CHORUS effect will be added to the TIBIA sound for the UPPER (and LOWER) KEYBOARD(s).
(2) Press the TREMOLO switch while the UPPER CHORUS (and LOWER CHORUS) switch lamp is lit. The CHORUS effect will be canceled and the TREMOLO effect will be added to the TIBIA sound for the UPPER (and LOWER) KEYBOARD(s).

Note: It is impossible to use TREMOLO when the CHORUS switch is not lit.

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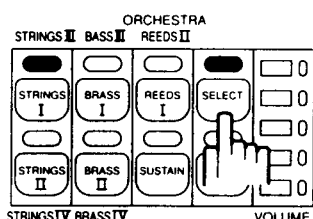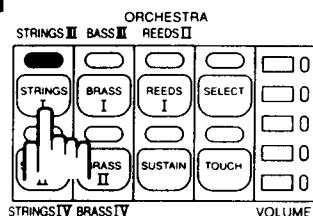
■ ORCHESTRA

The XR600 offers ORCHESTRA section for the UPPER, LOWER, and PEDAL KEYBOARDs.

1. UPPER ORCHESTRA
   (Ex. Select the STRINGS I sound for the UPPER KEYBOARD.)
   (1) Press the ORCHESTRA button of the KEYBOARD CONDUCTOR block for UPPER to turn on its switch lamp.
   (2) Press the STRINGS I switch in the UPPER MANUAL section to turn on the switch lamp. Adjust the volume as necessary using the VOLUME switches in the UPPER ORCHESTRA section. (Setting at its minimum level turns off the sound of UPPER ORCHESTRA.) Set the ORCHESTRA switch of the KEYBOARD CONDUCTOR block for UPPER "OFF" if you do not want to play sound of the UPPER ORCHESTRA section.
   (Ex. Select the STRINGS III sound for the UPPER KEYBOARD.)
   (3) Press the SELECT switch in the UPPER MANUAL section to turn on the switch lamp. (Press the SELECT switch again to turn off the switch lamp to return to the STRINGS I sound.) When the SELECT switch is activated, you can select the alternate sound (Ex. STRINGS III) indicated outside of the selector switches.

2. LOWER ORCHESTRA
   (Ex. Select the STRINGS I sound for the LOWER KEYBOARD.)
   (1) Press the ORCHESTRA button of the KEYBOARD CONDUCTOR block for LOWER to turn on its switch lamp.
   (2) Press the STRINGS I switch in the LOWER MANUAL section to turn on the switch lamp. Adjust the volume as necessary using the VOLUME switches in the LOWER ORCHESTRA section. (Setting at its minimum level turns off the sound of LOWER ORCHESTRA.) Set the ORCHESTRA switch of the KEYBOARD CONDUCTOR block for LOWER "OFF" if you do not want to play sound of the LOWER ORCHESTRA section.
   (3) Press the SELECT switch in the LOWER MANUAL section to turn on the switch lamp. When the SELECT switch is activated, you can select the alternate sound (Ex. STRINGS II) indicated outside of the selector switches.

3. PEDAL ORCHESTRA
   (Ex. Select the STRING BASS sound for the PEDAL KEYBOARD.)
   (1) Press the ORCHESTRA button of the KEYBOARD CONDUCTOR block for PEDAL to turn on its switch lamp.
   (2) Press the STRING BASS switch in the PEDAL MANUAL section to turn on the switch lamp. (Set the ORCHESTRA switch of the KEY BOARD CONDUCTOR block for PEDAL "OFF" if you do not want to play sound of the PEDAL ORCHESTRA section.) Press the SELECT switch if you want to select the alternate sound (Ex. ENSEMBLE BASS) indicated outside of the selector switches.
   (3) If you want to add extra resonance (prolongs sound), press the SUSTAIN switch to turn the switch lamp on.

■ PRESET INSTRUMENT
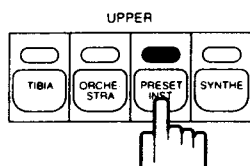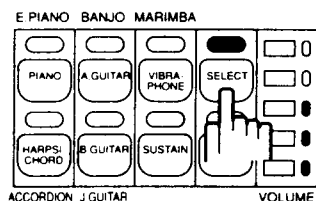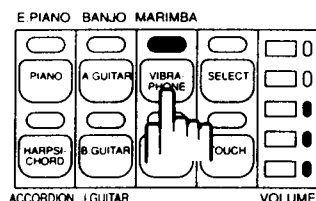
The XR600 provides PRESET INSTRUMENT for the LOWER or UPPER KEYBOARD.
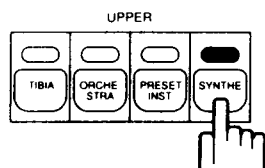
(Ex. Select PIANO sound for the UPPER KEYBOARD)
(1) Press the UPPER switch in the KEYBOARD CONDUCTOR section.
   (Or, press the LOWER switch if you want to play the PRESET INSTRUMENT sound with the LOWER KEYBOARD.)
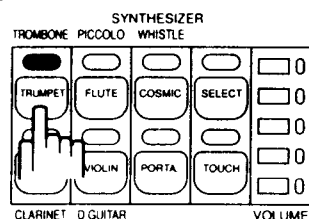(2) Press the VIBRAPHONE switch in the PRESET INSTRUMENT section.

Notes:
* Adjust the volume as necessary using the VOLUME switches in the PRESET INSTRUMENT section. (Setting at its minimum level turns off the sound of PRESET INSTRUMENT.) Set the PRESET INSTRUMENT switch of the KEYBOARD CONDUCTOR block for UPPER (and LOWER) "OFF" if you do not want to play sound of the UPPER (and LOWER) PRESET INSTRU-MENT section.
* Press the SELECT switch if you want to select the alternate sound (Ex. BANJO) indicated outside of the selector switches.

■ SYNTHESIZER

The XR600 provides SYNTHESIZER for UPPER KEYBOARD.
(You cannot play SYNTHESIZER sound on both UPPER and LOWER keyboards simultaneously.)

(Ex. Select FLUTE sound for the UPPER KEYBOARD)
(1) Press the SYNTHE in the UPPER switch of the KEYBOARD CONDUCTOR section.
   (And, press the SYNTHE in the LOWER switch if you want to play the SYNTHESIZER sound with the LOWER KEYBOARD.)
(2) Press the TRUMPET switch in the SYNTHESIZER section.

Notes:
* Only one note can be played at a time with the SYNTHESIZER section.
* Adjust the volume as necessary using the VOLUME switches in the SYNTHESIZER section. (Setting at its minimum level turns off the sound of SYNTHESIZER.)
* Press the SELECT switch if you want to select the alternate sound (Ex. PICCOLO) indicated outside of the selector switches.
* Synthesizer can be played either UPPER or LOWER keyboard.

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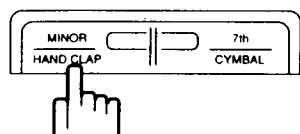
■ Hand Percussion

The XR Series organs provide not only prerecorded rhythm patterns, but also solo percussion instruments. These are accessible through two means: the LOWER keyboard and touch bars located just below that keyboard.
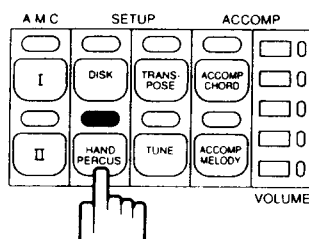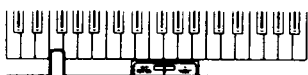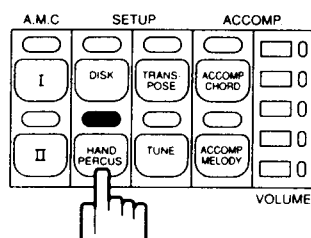
Touch bars
Press the left TOUCH BAR to play the hand clap sound. Press the right TOUCH BAR to play the cymbal crash sound.

Notes:
• When the HAND PERCUS switch lamp is lit, you cannot play HAND PERCUSSION sounds with the TOUCH BARS.
• Touch bars cannot be used for percussion on the ONE FINGER chord function.

TOUCH BAR switch: allows you to select three types of DRUM SETs when the HAND PERCUS switch lamp is lit. When the HAND PERCUS switch lamp is lit, you cannot play HAND PERCUSSION sounds with the TOUCH BARS.

LOWER KEYBOARD
(1) Press the HAND PERCUS switch so that the LED lights.
(2) You can select three types of DRUM SET.

Note: See page 39 for the drum sounds assignments.
Press the left TOUCH BAR to select the DRUM SET 3. Press again the left TOUCH BAR to return to the DRUM SET 1. (If you press once again the left TOUCH BAR, the DRUM SET 2 will be selected.) Press the right TOUCH BAR to return to the DRUM SET 1. And, by pressing both TOUCH BARs simultaneously, you can select a user-made drumset on a floppy disk which is made for XR7000/9000.

(3) Press the keys on the LOWER KEYBOARD for the desired percussion instruments.
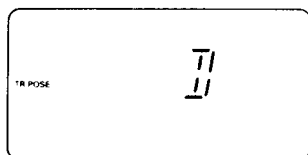(4) Press the HAND PERCUS switch again to turn off the HAND PERCUSSION.

Drum set 1 ----→ Drum set 3 ----→ Drum set 1 ----→ Drum set 2 ----→ Drum set 1
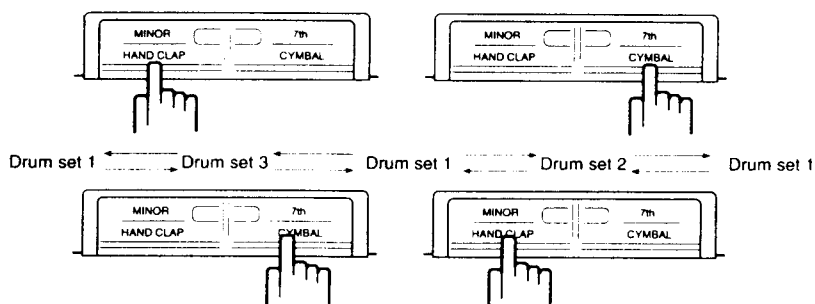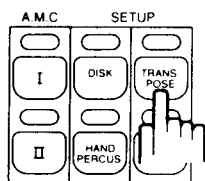
■ TRANSPOSE

1
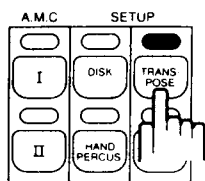
2

3

The transpose function allows you to adjust the key up 6 semi tones or down 6 semitones in semitone increments to match a vocalist or other instrument.
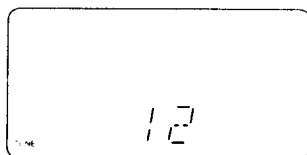
(1) Press the TRANSPOSE switch. The TRANSPOSE switch lamp lights and the display changes as follows.
(2) Use the Dial to change the parameter of the Display. You can adjust the parameter from -6 halfsteps to +6 halfsteps.
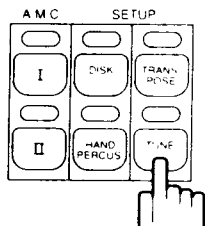(3) Press the TRANSPOSE switch again to leave the TRANSPOSE setup mode.
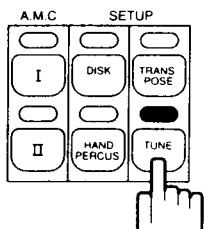
■ TUNE CONTROL

1
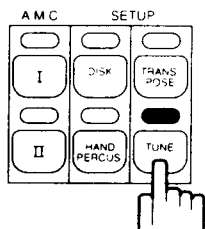
2

3

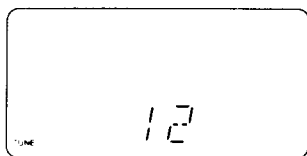This function allows you to adjust the organ's pitch to match recordings or other instruments in an ensemble.

(1) Press the TUNE switch. The TUNE switch lamp lights and the display changes as follows.
(2) Use the Dial to change the parameter (+/-63) on the Display.
(3) Press the TUNE switch twice to leave TUNE CONTROL mode.
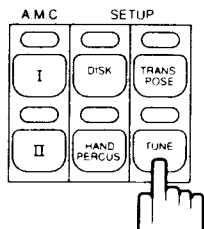
■ SYNTH. DETUNE Function

This function allows you to vary the pitch of the SYNTHESIZER sounds on the XR600 slightly from the other sounds pitch for a rich "Detune" sound effect.

1

(1) Press the TUNE switch twice. The TUNE switch lamp lights and the display changes as follows.
(2) Use the Dial to change the parameter (+ / - 63) on the Display.
(3) Press the TUNE switch again to leave SYNTH DETUNE mode.

2

3

Chapter 2 AUTO PLAY ORCHESTRA

■ SELECTING AN AUTO PLAY ORCHESTRA STYLE

The AUTO PLAY ORCHESTRA section of your XR600 provides 32 styles of automatic accompaniment. Each style consists of four elements (rhythm, bass, accompaniment chord and accompaniment melody parts).

◆ Selecting a Rhythm Pattern
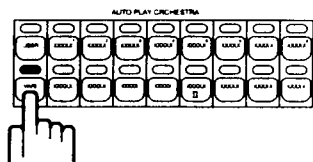
(Ex. Selecting the WALTZ rhythm.)
Press the WALTZ switch. The switch lamp lights. To select a variation pattern, press the VARI switch and the switch lamp lights. To return to the normal pattern, press the VARI switch again to turn off the switch lamp.
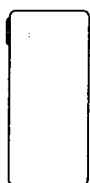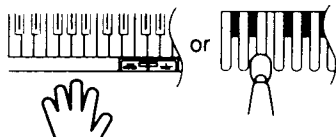
Note: AUTO PLAY ORCHESTRA switches allow you to select any one of the 16 patterns. VARI (Variation) switch allows you to select variation pattern for each of the 16 preset patterns.

◆ RHYTHM CONTROL

How to start the rhythm pattern.
(1) Press the RHYTHM switch to turn on the switch lamp.
(2) Play a note on the LOWER or PEDAL KEYBOARD to start the rhythm accompaniment.

Note: Use the RHYTHM VOLUME switches to control the rhythm volume. Change the rhythm tone using the RHYTHM TONE switches. The upper end of the RHYTHM TONE control emphasizes the percussion sounds of higher pitch while the lower end emphasizes the percussion sounds of lower pitch.

How to stop the rhythm pattern.
Press the RHYTHM switch. The RHYTHM switch lamp turns off and the rhythm accompaniment will stop. You can also stop the rhythm using the left FOOT SWITCH.

■ FILL INs, INTRO, and ENDING
The three switches in this section offer the musician four prerecorded variations of the MAIN rhythm pattern -a pattern which normally just repeats. The first two, INTRO and ENDING, provide an introduction and ending respectively. The other two produce variations of rhythm fill-ins for use during the performance.
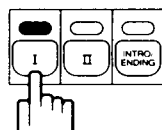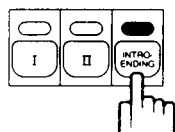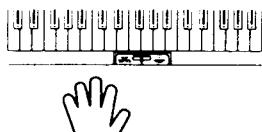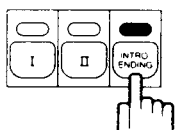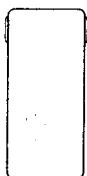
FILL INs

(1) Make sure that the rhythm accompaniment is on standby -that is, the RHYTHM switch LED is on. If the LED is off, fill-ins are not available.

(2) Press the FILL IN I (or FILL IN II) switch.
Note: You may also do this while the rhythm accompaniment is on.

(3) Activate the rhythm accompaniment and play. When you need a fill-in, press the right foot switch. The rhythm pattern first switches to the fill-in pattern and then back to the MAIN pattern when the fill-in is over.

(4) Alternatively, if the rhythm accompaniment is on standby, press the right foot switch to play the fill-in followed by the MAIN pattern.

INTRO and ENDING

(1) Make sure that the rhythm accompaniment is on standby -that is, the RHYTHM switch lamp is on. If the lamp is off, intro is not available.

(2) Press the INTRO/ENDING switch.

(3) Press the key so as to play a chord. XR600 plays an introduction. If you want to add Accompaniment Melody, Accompaniment Chord and Accompaniment Bass, turn these switches on. After an introduction, the rhythm accompaniment starts. The INTRO/ENDING switch LED lights during the introduction and then goes out.

(4) Press the INTRO/ENDING switch.

(5) When you're near the point where you want the ending, press the right foot switch. After the ending, the rhythm accompaniment stops. The LED in the INTRO/ENDING switch lights during the ending and then goes out.

FILL IN I/II switches : produce variations of rhythm fill-ins for use during the performance.
INTRO/ENDING switch : provides an introduction or ending.

◆ Tempo Control

The tempo is shown on the TEMPO DISPLAY.

(1) Turning the TEMPO/DATA INCREMENT Dial to the right (clockwise) increases tempo.

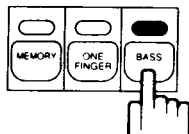(2) Turning the Dial to the left (clockwise) decreases the tempo.

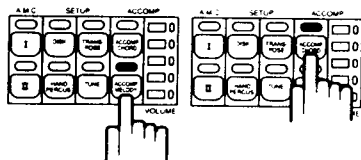Note: The organ's range is 50 -300 beats per minute.

◆ SELECTING A PART
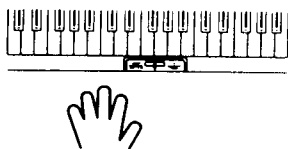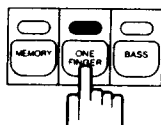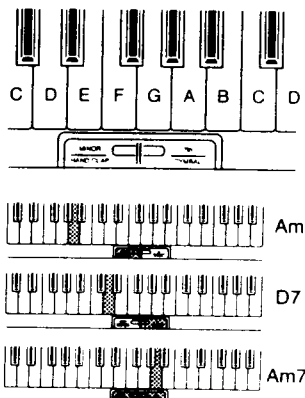
This section offers automatic bass accompaniment as well as automatic accompaniment by piano, guitar, and other instruments.

(Ex. Playing the rhythm, bass, and accompaniment melody parts.)

(1) Select a rhythm using the AUTO PLAY ORCHESTRA switches. Then, activate the RHYTHM switch.
(2) Select the parts.
Press the BASS switch to activate the "BASS" Part.
(3) Press the ACCOMP MELODY switch to activate the "accompaniment melody" Part.

> Note: PRESET INSTRUMENT sound will not play when the ACCOMP MELODY switch lamp is lit.

(4) Play a chord on the LOWER KEYBOARD. You will hear the bass, rhythm, and accompaniment melody parts.

> Note: Adjust the overall volume of the ACCOMP MELODY and BASS parts using the ACCOMP VOLUME switches.

■ CHORD DETECTION
ONE FINGER
This function allows you to play a complete major chord with only one finger and others with two fingers: one on the base (root) note and the other on TOUCH BARs.
(1) Press the ONE FINGER switch to turn on the switch lamp.
(2) – Press a root note in the LOWER KEYBOARD to play the major chord.
  – Press a root note and the left TOUCH BAR to play the minor chord.
  – Press a root note and the right TOUCH BAR to play the seventh chord.
  – Press a root note and the two TOUCH BARs simultaneously to play the minor seventh chord.
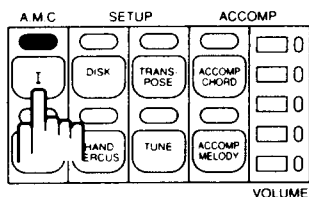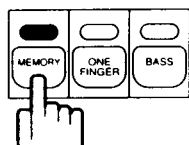
MEMORY
This repeats the current chord pattern even after you remove your hand from the LOWER KEYBOARD.

■ AUTO MELODY CHORD
If you press the A.M.C. switch to turn the lamp on, automatic harmony will be added to the UPPER KEYBOARD melody line according to the chord you are playing in the LOWER KEYBOARD. Press the A.M.C. switch again to turn off this function.

Chapter 3 EDIT MODE

■ Programming rhythm

The XR organ rhythm section provides 8 locations for storing edited versions of its standard, prerecorded rhythm patterns. You can create your patterns from scratch or you can alter prerecorded rhythm pattern, its variation, or user rhythm. You can edit and store MAIN, FILL IN I, FILL IN II, INTRO, and ENDING for the new rhythm patterns.
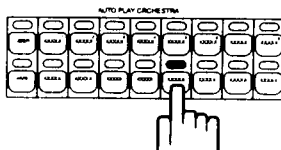
Notes:
- • If you forget to turn off the RHYTHM switch lamp after creating your pattern in INPUT mode, pressing the WRITE switch does not turn on the WRITE switch lamp. (Writing is impossible.)
- • If you want to cancel the change you made during the EDIT mode, press any switch in the EDIT section without performing the WRITE operation.
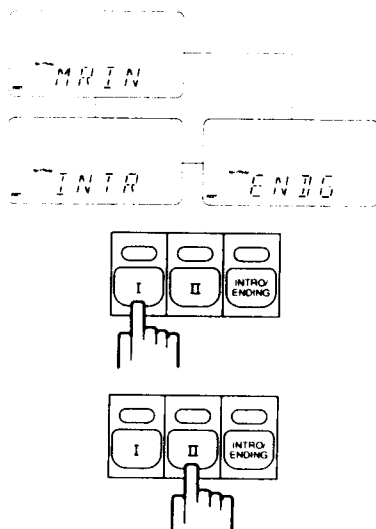
■ Programming RHYTHM part

1
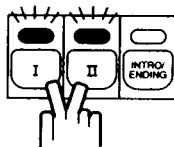
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(1) Press the FILL IN I and FILL IN II switches simultaneously.
(2) Select the rhythm using the AUTO PLAY ORCHESTRA switches. If you want to remake USER rhythm pattern you created, press the USER switch. If you want to create a new pattern from scratch, do not select any rhythm.
(3) Select the rhythm pattern that will serve as the standard point using the FILL-IN and INTRO/ENDING switches. The Display will show the currently selected pattern in abbreviation (see the chart below). If you want to edit the Main pattern, you do not have to press any switch in this step.
   (a) Press the FILL IN I switch to edit FILL IN I (FIL 1) pattern.
   (b) Press the FILL IN II switch to edit FILL IN II (FIL 2) pattern.
   (c) Press the INTRO/ENDING switch once to edit INTRO (INTO) pattern.
   (d) Press the INTRO/ENDING switch twice to edit ENDING (ENDG) pattern.
   (e) Press the INTRO/ENDING switch once again to edit MAIN (MAIN) pattern.

18

# ■ Adding Notes in Real Time

4

5

7

8
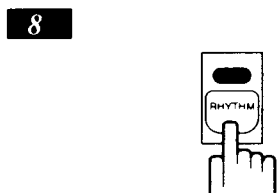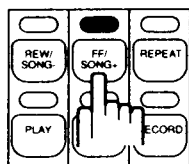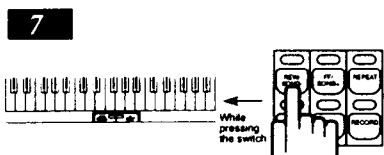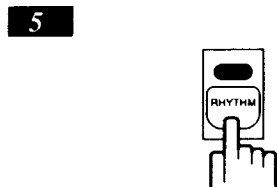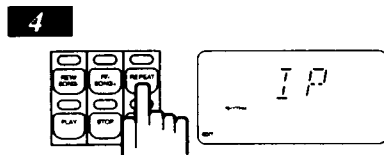
(4) Press the REPEAT switch and select IP (short for "INPUT").

(5) Press the RHYTHM switch to turn on the switch lamp. The first two measures of the counting are played. And then, you can start inputting using the LOWER KEYBOARD.

(6) Input the percussion sounds and add them to rhythm pattern by pressing the LOWER KEYBOARD.

(7) To eliminate notes of a particular instrument from the pattern, hold down the REW/SONG- switch and press the corresponding instrument key for the sections that you wish to delete.
Or, press and hold down the FF/SONG + switch. Data of the RHYTHM pattern will be removed as long as the FF switch is held down.

(8) Press the RHYTHM switch when the inputting is finished. The sound of the rhythm stops.

Notes:
• You can select any one of the three types of hand percussion assignments by pressing a TOUCH BAR. See page 39 for details.
• Adjust the tempo using the Dial.
• You can change the number of the rhythm part measures before entering the RHYTHM EDIT mode using the procedure mentioned in the page 20.
• New notes for a particular instrument already in the pattern do not replace existing ones. They should be added to the current pattern.
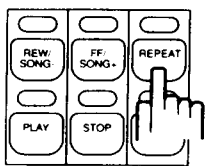
■ Storing the Rhythm

1

2
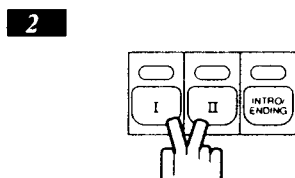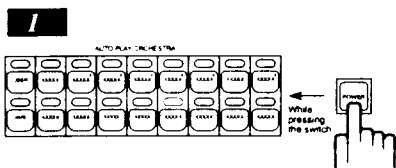
(1) Press one of the top row RHYTHM select switches (1 -8) while pressing the WRITE switch.

(2) Press FILL IN I and FILL IN II switches simultaneously.

Note: If you don't use this procedure to store the data, the rhythm you made will be totally deleted.

■ Correcting Timing Errors During Input

The XR Series provides facilities for automatically adjusting note positions so that they line up at regular intervals within the bar. When inputting the Percussion sounds, press the REPEAT switch several times to specify the timing intervals shown in the Display. When no note mark is lighting, this function is not activated. For example, if you select 8th note, all notes you will input will be moved to the nearest 8th note beat division.

■ Select a Pattern Length

2

3
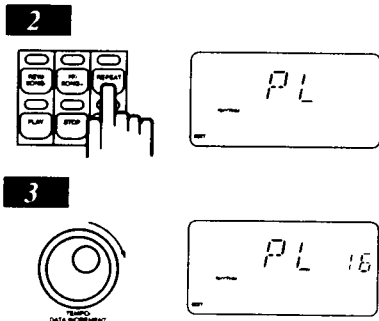
You can select a number which motives of the pattern become a theme. Selection of length is as follows.

    Main: 2, 4, 8 and 16 (mesures)
    Fill-in: 1 and 2 (mesures)
    Intro: 2, 4, 8 and 16 (mesures)
    Ending:2, 4, 8 and 16 (mesures)

(1) Repeat the steps 1 -3 of the basic procedure. (See page 18)
(2) Press the REPEAT switch several times until the Display will show "P L" (short for Pattern Length).
(3) Rotate the Dial to select any one of the lengths. The display shows numbers of measures which motives of the pattern make a theme.
(4) Perform the WRITE operation to store the edit you made.
(See the Writing section for details.) If you want to cancel the pattern, press the RHYTHM switch in the EDIT section before performing the EDIT operation.

■ Changing the Beat
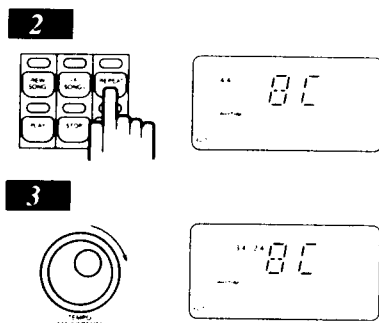
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(1) Repeat the steps 1 – 3 of the basic procedure. (See page 18)
(2) Press the REPEAT switch several times until the Display will show "B C" (short for Beat Change).
(3) Use the Dial to select any one of the 6/8, 4/4, 3/4, 2/4 and 5/4.
Turn the Dial to the left until both the 3/4 and 2/4 on the Display light if you want to select 5/4 beat.
(4) Perform the WRITE operation to store the edit you made.
(See the Writing section for details.) If you want to cancel the pattern, press the RHYTHM switch in the EDIT section before performing the EDIT operation.

20

Chapter 4 DISK PLAYER SYSTEM

The Disk Player System (disk sequencer) is a function that records and replays songs on 3.5" (2DD) floppy disk. It also records and replays a registered program or programmed rhythm used in a song at the same time.
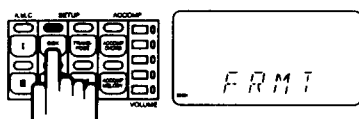
Note: Please use 3.5" (2DD) floppy disks. If you use a new disk, please format it as following procedure before recording.
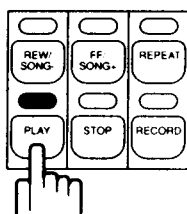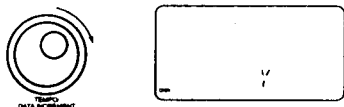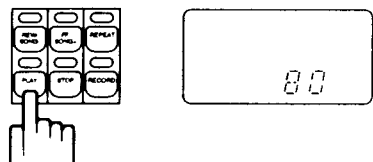
■ Formatting a Floppy Disk
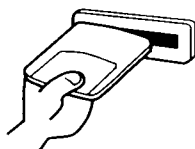
Formatting must be carried out when using a new disk.
* Turn the disk write protect off (close the window) during formatting.
  Error message will be displayed when the write protect is on.
* The disk supplied with the XR series organ does not need to be formatted.
* If a disk with data stored on it is formatted, the contents will be completely deleted.

(1) Insert a disk into the Disk Slot.
(2) Press the DISK switch. The DISK switch lamp lights.
(3) Press the PLAY switch.
(4) Change with the Dial the letter "N" (short for "No") in the Display to "Y" (short for "Yes").
(5) Press the PLAY switch to execute the format. Numbers gradually count down on the Display during formatting.
(6) When the numbers reach "1", the DISK switch lamp turns off. The formatting is finished and the Display will return to normal.

■ Selecting a Song
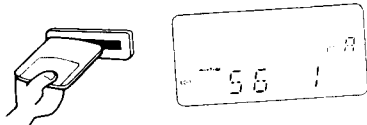
(1) Insert a disk which contains a song you recorded with this organ.
If error message appear on the Display, format the disk with your organ.
(2) Use the REW and FF switches to select a song number to play. The FF switch increases the song number while the REW switch decreases it.
If the song number selected contains data of Registration Memory data, the display shows "r". And, when the song number selected contains data of AUTO PLAY ORCHESTRA data, the display shows "A".

■ Contents of the Floppy Disk

Up to 10 songs can be stored on a floppy disk. Each song can be stored with the 8 AUTO PLAY ORCHESTRA USER patterns, a 10 set of REGISTRATION settings (5 programs each for the two Banks of the panel settings) if you turn on the SYSTEM track in recording the song. You can store or load AUTO PLAY ORCHESTRA User patterns or REGISTRATION settings separately.

■ Playback
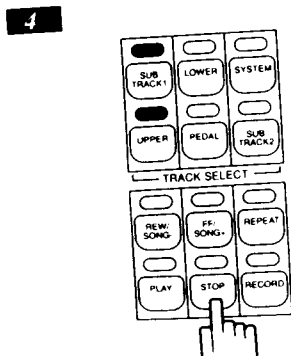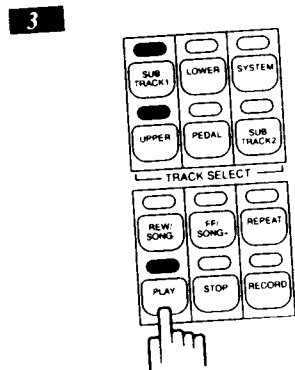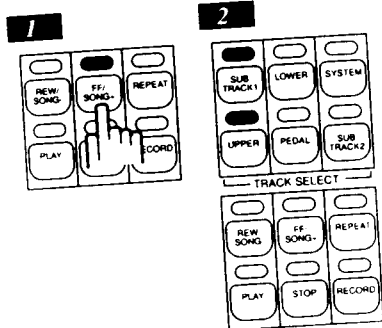
(1) Select the song number to replay using the FF and REW switches.
The track button lamp on which the selected song is recorded lights.
(2) Press a track switch whose lamp is lit if you do not want to replay that track.
If you turned off a switch lamp by mistake, press the switch again to turn on the switch lamp.
When the SYSTEM switch is lit; the previously recorded settings (tone selection, tempo, etc.) are reproduced and the song is replayed.
When the SYSTEM switch is not lit, the song is replayed under the current settings.
(3) Press the PLAY switch.

Note: When the SYSTEM switch is lit, the song can be replayed after the following data are transferred from the disk.

[Data transferred from the disk]
Contents of the program rhythm
Contents of the program registration

During the introduction, minus sign "-" will be displayed at the head of the measure number.

(4) Press the STOP switch to stop the song.

Notes:
• The tone and tempo settings can be changed during replay (except for the SUB TRACK).
• When the song is replayed all the way through, the PLAY switch lamp automatically turns off, and the Display returns to its original display
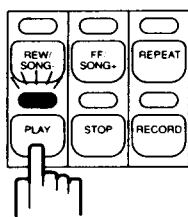
■ Pause Function

Pressing the PLAY switch during replay changes the lamp from continuously lit to flashing and replay is paused. Pressing the switch again lights the lamp continuously and the song is resumed from the point at which it was paused.

■ FF (Fast Forward) Function

Pressing the FF switch during replay turns on the FF switch lamp, and fast forwarding occurs while the switch is held down. The song is replayed at high speed. When the switch is released, the song returns to its original tempo.
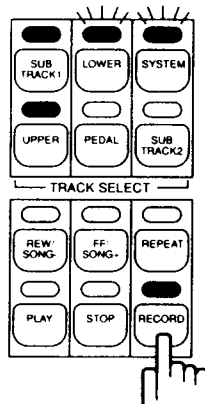
■ REW (Rewind) Function

Pressing the REW switch during replay turns on the REW switch lamp and the song rewinds in measure units. No sound is heard during rewind. If the song is rewound all the way to the beginning, the song is paused.
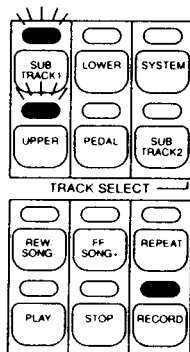
■ Recording
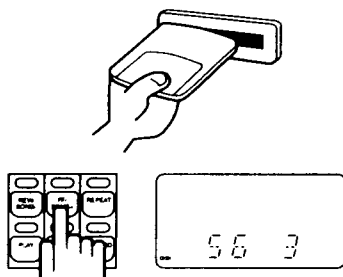
Note: Turn the disk write protect off (close the window) during recording.

(1) Insert the supplied disk or a disk formatted for your organ. Then, select the song number to be recorded using the FF and REW switches.
(2) Press the RECORD switch. The lamps of tracks that have not been recorded start flashing. The track switch lamp on which the selected song is recorded lights.
(3) Select the track to be recorded.
Track that has not yet been recorded: Pressing the track switch changes the lamp back and forth from flashing to off.
Track that has been recorded: Pressing the track switch changes the lamp from lit to flashing, from flashing to off, from off to lit and repeats this cycle.
Set the track to contain the recording so that its lamp starts flashing on and off.

Notes:
• Tracks whose lamps are lit or off cannot be recorded on. The lamp must be flashing.
• If a re-recording is carried out on a recorded track, the previous record will be lost.
• Press the STOP switch if you want to cancel recording.
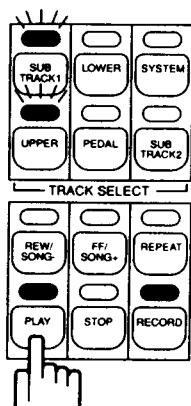
(4) Press the PLAY switch and the switch lamp lights.

Note: When the SYSTEM switch is lit: the previously recorded settings (tone selection, tempo, etc.) are recalled before the recording starts.
When the SYSTEM switch is not lit: the song is replayed under the current settings.
When the SYSTEM switch is flashing, the song can be replayed after the contents of the program rhythm and registration data is transferred from the disk.
The introduction is replayed, and recording begins. Start the performance.
The Display will show the numbers of measure and beat and you will hear the motronome sound if the rhythm is not on.

(5) Press the STOP switch when the performance is finished. Recording is stopped and the lamps in the RECORD and PLAY switches turn off.

■ SUB TRACK- Recording Hand Percussion sound

You can separately record Hand Percussion sound on the SUB TRACK 2.
(1) Turn the HAND PERCUS switch lamp on.
(2) Select the song number to be recorded using the FF and REW switches.
(3) Press the RECORD switch to turn the switch lamp on.
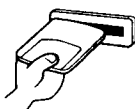(4) Press the PLAY switch to turn on the switch lamp.

Note: SUBTRACK 1 is a specialized track for PLAYBACK of the data which are recorded on the XR7000/9000. Therefore, you cannot record on SUBTRACK 1 of the XR600.
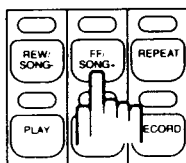
(5) Press the STOP switch when the recording is finished.
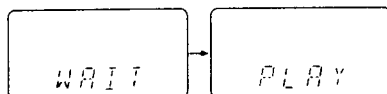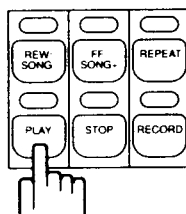
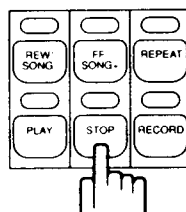# ■ PLAYING STANDARD MIDI FILE (SMF) DATA

GENERAL

MIDI

Song data which conforms to both the General MIDI and the Standard MIDI File (SMF) format can be used with the XR600.
- General MIDI (GM) is an international standard which defines a standard instrument program list, drum map, etc. GM sequences can be recognized between different brands/models of GM instruments.
- Standard MIDI File (SMF) is a file format which can be used to transfer songs between different brands of computer or sequencer.
The following chart shows the type of SMF data which XR600 can play back:

Notes:
- Data should be saved onto MS-DOS formatted 3.5-inch 2DD disks with 9 sectors (720 Kbytes). (MS-DOS is a trademark of the Microsoft Corporation.)
- You may not be able to play PRESET INSTRUMENT and SYNTHSIZER tones during playback of Standard MIDI File format data.

Data format	0, 1
Number of tracks	Maximum 16
Data size Maximum	100 Kbytes (If you try to play back song data over the 100 Kbytes, Error message will be displayed and play back is impossible in case of SMF Format 0 data. Only the tracks within the 100 Kbytes memory size will be played back in case of SMF Format 1 data.)
Tempo	50 ~ 300

1

1. Insert a Standard MIDI File (SMF) format disk whose song data conforms to General MIDI into the disk slot.

2

2. Select the song using the FF and REW switches.
3. Press the PLAY switch. The "Wait" message will be displayed. The display time varies with the song. Then, the "PLAY" message will appear indicating that you are ready to play back.

3

4. Press the PLAY switch again to start playback. Or, press the RECORD switch to start playback without using the expression data of the SMF. If you press the RECORD switch instead of the PLAY switch, expression data of every track will be set at its maximum level regardless of the value of the SMF data.

Notes:
- If your song data has time base values other than 24, 48, 96, 192, or 384, an asterisk "✳" will appear on the Display. In this case, the beat or measure number may not be displayed correctly.
- During the play back of SMF song data, some switches will not work.

4

5. Press the STOP switch to stop the playback.
6. Press the EJECT switch to eject the disk to return to the normal play mode.

5

■ Selecting The Track

1. Insert a Standard MIDI File (SMF) format disk.
2. Use the following switches to turn on or off tracks 1 to 5.
   UPPER switch: Track 1 (MIDI Channel 1)
   LOWER switch: Track 2 (MIDI Channel 2)
   PEDAL switch: Track 3 (MIDI Channel 3)
   SUB TRACK 1 switch: Track 4 (MIDI Channel 4)
   SYSTEM switch: Track 5 (MIDI Channel 5)

■ DISK PLAYER SYSTEM -Setup Mode

■ Copying Songs onto the same Floppy Disk
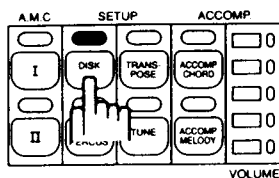
Note:
- Turn the disk write protect off (close the window) during copying.
  Error message will be displayed when the write protect is on.
- If the song number being copied to has already been recorded, the previous recording will be deleted.
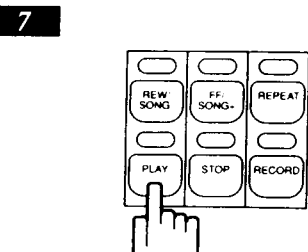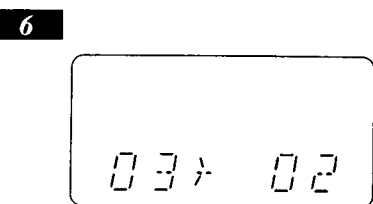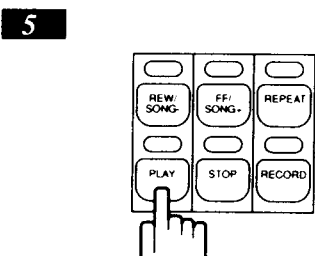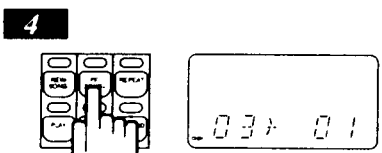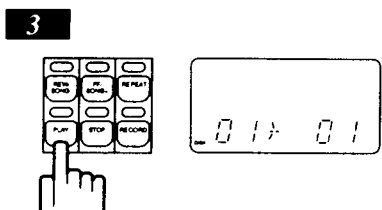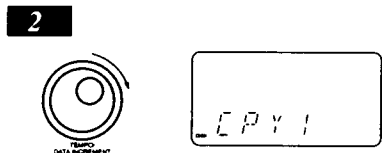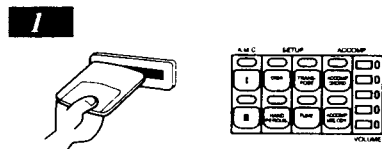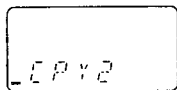
(1) Insert a disk for the XR series organ into the Disk Slot. Then, press the DISK switch. The DISK switch lamp lights.
(2) Rotate the Dial to select CPY1 (short for copy 1).
(3) Press the PLAY switch to enter the copy 1 mode.
(4) Use the REW and FF switches to select the song number of the original song in the Display.
(5) Press the PLAY switch once again. The Display shows the song number to be copied to.
(6) Use the REW and FF switches to select the song number to be copied to in the Display. If the index number selected contains data, "r", "A" or "rA" is displayed.
(7) Press the PLAY switch to start copying. When the copying is finished, the DISK switch will go out and leave the DISK mode.
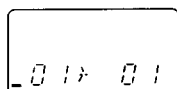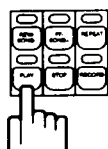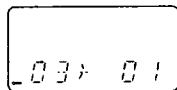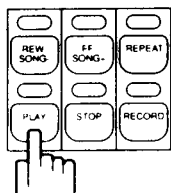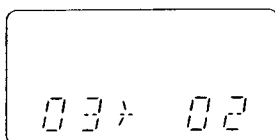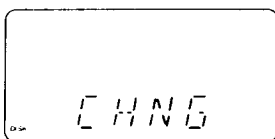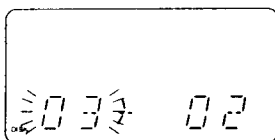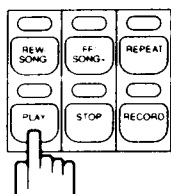
■ Copying Song Data to Another Floppy Disk

The following procedure is for copying song data onto a separate floppy disk.

Notes:
• The write protect for the disk to be copied to must be off (window closed) during copying.
• If the index number being copied to has already been recorded, the previous recording will be deleted.

(1) Insert the original disk. Then, press the DISK switch. The DISK switch lamp lights.
(2) Rotate the Dial to select CPY2 (short for copy 2).
(3) Press the PLAY switch to enter the copy 2 mode.
(4) Use the REW and FF switches to select the original index number to be copied in the Display.
(5) Press the PLAY switch once again. The Display shows the index number to be copied to.
(6) Use the REW and FF switches to select the index number to be copied to in the Display.

Note:
To stop copying halfway through, press the DISK switch.

(7) Press the PLAY switch. The original data will be loaded.
When the loading is finished, the Display shows CHNG (short for Change).

8
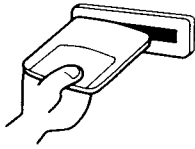
9
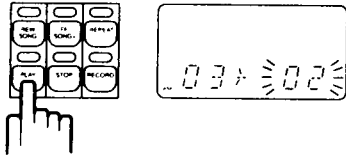
1
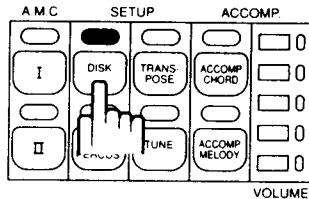
2

3
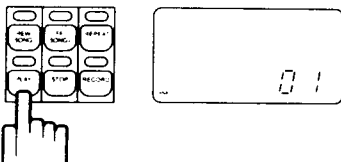
4
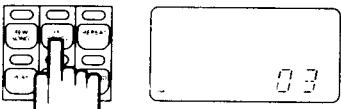
5
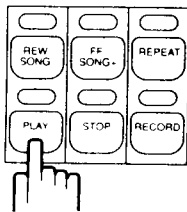
(8) Eject the original disk and insert the floppy disk to be copied to.
(9) Press the PLAY switch again. The loaded song will be copied to the disk. If the Display changes as follows, insert the original disk again.
(10) Repeat steps 7 to 9 above as many times as necessary. When copying is completely finished, the Display will show "O K".

> Note: The number of times you have to change disks depends on the volume of the song to copy.

■ Song Deletion

This is to delete unnecessary songs from the floppy disk.

Note: Turn the disk write protect off (close the window) during deleting.

(1) Insert a floppy disk for the XR organ. Then, press the DISK switch. The DISK switch lamp lights.
(2) Rotate the Dial to select the "DELT" (short for Delete) menu.
(3) Press the PLAY switch to enter the Delete mode.
(4) Use the REW and FF switches to select the song number to delete in the Display. (The song number which contains data indicates "rA" on the Display.)
(5) Press the PLAY switch once again to delete the song.
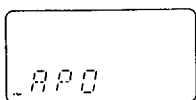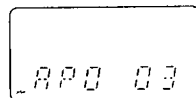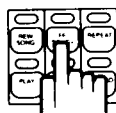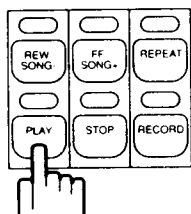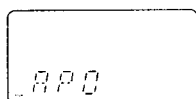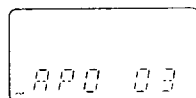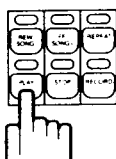
■ Saving Your Own Automatic Accompaniment

This is to save all the 8 programmable AUTO PLAY ORCHESTRA patterns as a set onto the floppy disk. You can specify one of the 10 index numbers for saving a set of 8 patterns. Each index number can contain one song data, 8 AUTO PLAY ORCHESTRA patterns, and Registration programs.

Note: Turn the disk write protect off (close the window) during saving.

(1) Insert a floppy disk. Then, press the DISK switch. The DISK switch lamp lights.
(2) Rotate the dial to select APO (short for Auto Play Orchestra).
(3) Press the REC switch to enter save mode.
(4) Use the REW and FF switches to select the index number to save in the Display.
(5) Press the PLAY switch to save the accompaniment data. When storing is finished, the DISK switch lamp turns off and the organ returns to normal mode.

■ Loading Your Own Automatic Accompaniment

This is to load AUTO PLAY ORCHESTRA patterns from the floppy disk.
(1) Insert a floppy disk. Then, press the DISK switch. The DISK switch lamp lights.
(2) Rotate the Dial to select APO (short for Auto Play Orchestra).
(3) Press the PLAY switch to enter LOAD mode.

30

4


```
_APO  03
```

6


```
_U-03  03
```

7
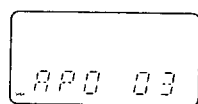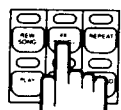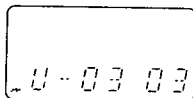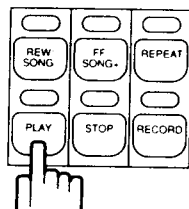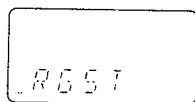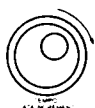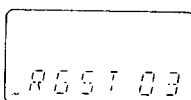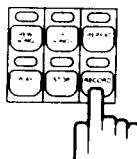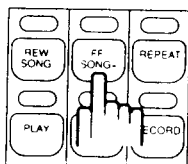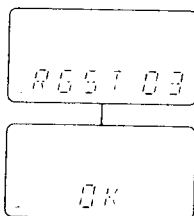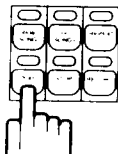
(4) Use the REW and FF switches to select the index number to load in the Display. If you want to load all the 8 User patterns of the song number, skip the step 6 mentioned below.

(5) Select a song where the automatic accompaniment you need is stored.

(6) If you want to load only particular patterns of the index number you selec ted, turn the Dial to specify the pattern. For example, "U-01" indicates the first user pattern of the song number. Or, to use all(eight) accompaniments, select "ALL". (Skipping this procedure to select a Song automatically selects " ALL")

(7) Press the PLAY switch to load the accompaniment data.

■ Saving Registration Data

A set of internal REGISTRATION data can be saved onto a disk.

(1) Insert a floppy disk. Then, press the DISK switch. The DISK switch lamp lights.
(2) Rotate the Dial to select "RGST" (short for Registration Memory).
(3) Press the RECORD switch.
(4) Press the REW and FF switches to select the Song number to save in the Display.
(5) Press the PLAY switch.

2


```
_RGST
```

3


```
_RGST  03
```

4

5


```
_RGST  03
```

```
_OK
```
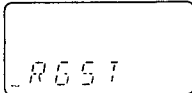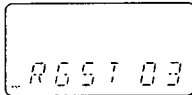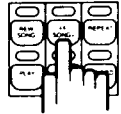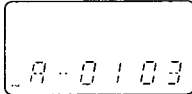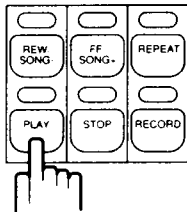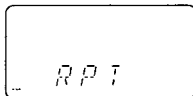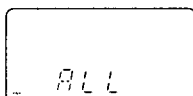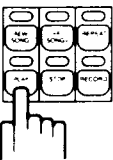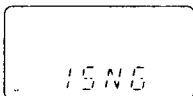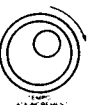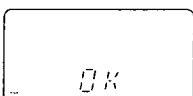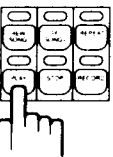
■ Loading Registration Data

This is to load your registrations from the floppy disk.
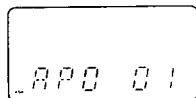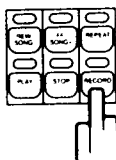
Notes: Turn the disk write protect off (close the window) during saving.

(1) Insert a floppy disk. Then, press the DISK switch. The DISK switch lamp lights.
(2) Rotate the Dial to select RGST(short for Registration Data).
(3) Press the RECORD switch.
(4) Press the REW and FF switches to select the Song number to load in the Display. If you want to load the entire set of registration data, skip step 6 mentioned below.
(5) If you want to load only one registration of the index number you selected, turn the Dial to specify the registration number (A-1, 2, 3, 4, 5 and B-1, 2, 3, 4, 5.) When the BANK switch light is off, the bank A is selected. When the BANK switch light is lit, the Bank B is selected. If you select "ALL", all the sets of registration data will be loaded.

Note: The bank A means the registration memory with the bank switch lighting during the write operation. Each Bank contains 5 setups.

(6) Press the PLAY switch to load the registration data. The DISK switch lamp turns off when the loading is finished.

■ Repeat Mode

This is to replay your songs continuously.
(1) Insert a floppy disk. Then, press the DISK switch. The DISK switch lamp lights
(2) Rotate the Dial to select "RPT" (short for repeat).
(3) Press the PLAY switch.
(4) Rotate the Dial to select "ALL" (Repeat all the songs) or "1 SNG" (Repeats one song). If you select "1 SONG", the currently selected Song is played repeatedly.
(5) Press the PLAY switch. The DISK switch lamp turns off.
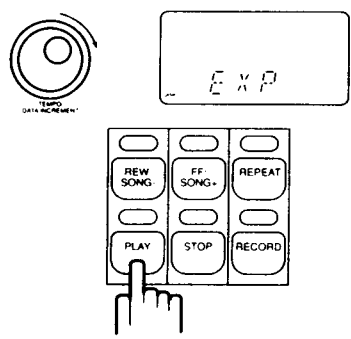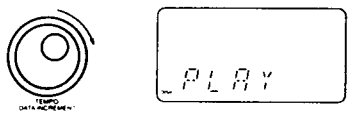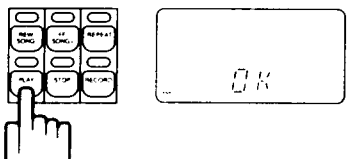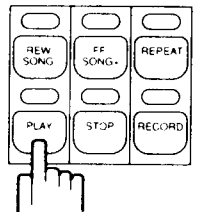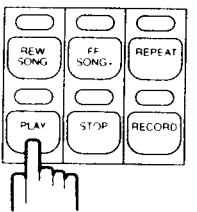
■ Expression Mode

This function locks or unlocks the volume of the disk sequencer of the organ.
(1) Insert a floppy disk. Then, press the DISK switch. The DISK switch lamp lights.
(2) Press the PLAY switch.
(3) Rotate the Dial to select "EXP". The Display shows "EXP". (short for Expression).
(4) Use the Dial to select "SEQ" or "PLAY".
If you select "SEQ ", volume changes according to the data of the SYSTEM track each time you use the disk sequencer. If you select "PLAY", the volume is changed with the expression pedal.
(5) Press the PLAY switch. The DISK switch lamp turns off.

■ System Track Mode

This controls the data transfered using the SYSTEM track switch in RECORDING and PLAYING BACK a song.
(1) Insert a floppy disk. Then, press the DISK switch. The DISK switch lamp lights.
(2) Rotate the Dial to select "SYS" (short for SYSTEM TRACK).
(3) Press the PLAY switch.
(4) Rotate the Dial to select "ALL" or "TRCK" (short for TRACK).
If you select "ALL", 8 USER PATTERNS of AUTO PLAY ORCHESTRA data and the REGISTRATION set up when you recorded the song will be loaded on the organ in recording and playing back.
If you select "TRACK", recording and playing back begins instantly without loading USER patterns and the registration setups.
(5) Press the PLAY switch. The DISK switch lamp turns off.

33
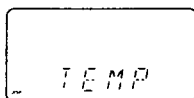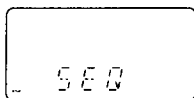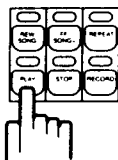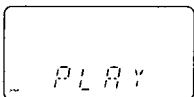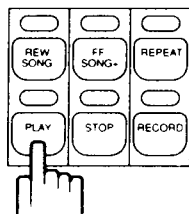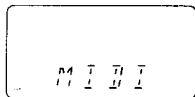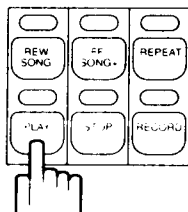
■ Tempo Play Mode

This function locks or unlocks the tempo of the disk sequencer of the organ.
(1) Insert a floppy disk. Then, press the DISK switch. The DISK switch lamp lights.
(2) Rotate the Dial to select "TEMP" (short for tempo).
(3) Press the PLAY switch.
(4) Rotate the Dial to select "SEQ" or "PLAY".
   If you select "SEQ", tempo value changes according to the tempo value of the SYSTEM track each time you use the disk sequencer. If you select "PLAY", the tempo value changes with the Dial on the front panel only.
(5) Press the PLAY switch. The DISK switch lamp turns off.

■ MIDI Recording

When you copy the data by using external MIDI musical instruments, activate this function.
(1) Connect the XR600 to external MIDI musical instrumenmts. (see p. 38 for details) And, set the MIDI channel of the external musical instruments in accordance with the track of the XR600. (Channel 1 : UPPER, Channel 2: LOWER, Channel 3: PEDAL, Channel 16: SYSTEM, Channel 10: SUB TRACK 2-Hand Percussion)
(2) Insert a floppy disk. Then, press the DISK switch. The DISK switch lamp lights.
(3) Rotate the Dial to select "MIDI".
(4) Press the PLAY switch.

5
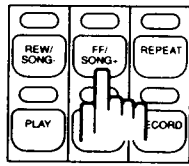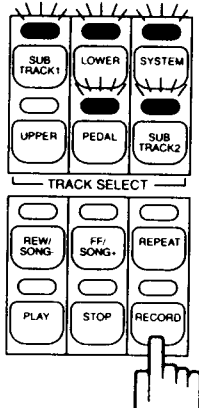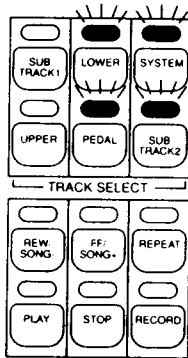
(5) Press the FF and REW switches to select the song number.
(6) Press the RECORD button.
(7) If you don't want to record particular tracks, press the buttons of TRACK SELECT block to turn the lamp off.
(8) Press the PLAY button. (During MIDI Recording, the XR600 doesn't generate sounds.)
(9) Press the STOP button when the MIDI recording is over.

6

7

Chapter 5 REGISTRATION

■ Registration Memory

While pressing the WRITE switch
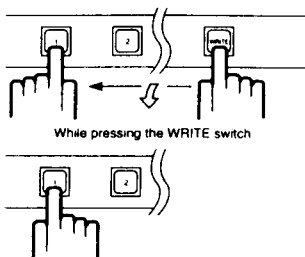
The registration memory section allows you to store up to 10 of your registration combinations for instant recall.
Each numbered switch of registration memory buttons (from 1 to 5) can store another panel settings by turning on BANK switch.

■ Storing a Registration

(1) Set the registration to be stored.
(2) While pressing the WRITE switch, press the numbered switch to be used for storage. The registration will be stored. If the numbered switch stores other data, the previously stored data will be erased.

■ Recalling a Registration

(1) Press the appropriate number switch so that it lights. The registration will be recalled.

■ ONE TWO PLAY

The ONE TWO PLAY function automatically selects an appropriate registration for the current AUTO PLAY ORCHESTRA pattern.

Press the ONE TWO PLAY switch. Panel settings automatically change to ones appropriate for the current Auto Play Orchestra pattern.

Note: Pressing the ONE TWO PLAY switch when a registration switch lamp is lit changes the current registration.

Chapter 6 MIDI

The letters MIDI stand for the Musical Instrument Digital Interface, an industry standard for connecting synthesizers, drum machines and other electronic musical instruments so that they can exchange keyboard program and other types of data. Through this interface, the organist can play a wide variety of instruments from a single instrument. (The types of data that may be controlled vary with the instruments connected through this interface.)

■ Connectors

To transmit MIDI data from your XR600 to another MIDI instrument, use an optional MIDI cable to connect the MIDI OUT jack of your XR600 to the MIDI IN jack of the other instrument. Make sure that the MIDI "transmit" channels on your XR600 match the MIDI "receive" channels of the other instrument.

To receive MIDI data from another MIDI instrument to your XR600, use a MIDI cable to connect the MIDI OUT jack of the other instrument to the MIDI IN jack of your XR600. Make sure that the MIDI "receive" channels on your XR600 match the MIDI "transmit" channels of the other instrument.

■ Channels

If the MIDI channels of the transmitting instrument and receiving instrument do not match, data cannot be exchanged.
The MIDI channels of the XR600 cannot be changed. The organ always assigns the following MIDI channels to the keyboard in transmitting and receiving MIDI data.

UPPER KEYBOARD:	Channel 1
LOWER KEYBOARD:	Channel 2
PEDAL KEYBOARD:	Channel 3
HAND PERCUSSION:	Channel 10
SYSTEM CONTROL CHANGE:	Channel 16

```
┌─────────────────────────┐
│    Synthesizer          │
│    (KII or other)       │
│                         │
├────────┬────────────────┤
│MIDI IN │       LINE OUT │
│        │                │
│MIDI OUT│       LINE IN  │
├────────┴────────────────┤
│        XR600            │
│                         │
└─────────────────────────┘
```

```
┌─────────────────────────┐
│    Sequencer            │
│    (Q-55 or other)      │
│                         │
├────────┬────────────────┤
│MIDI IN │      MIDI OUT  │
│        │                │
│MIDI OUT│      MIDI IN   │
├────────┴────────────────┤
│        XR600            │
│                         │
└─────────────────────────┘
```

```
┌─────────────────────────┐
│    Drum Machine         │
│                         │
├────────┬────────────────┤
│MIDI IN │      LINE OUT  │
│        │                │
│MIDI OUT│      LINE IN   │
├────────┴────────────────┤
│        XR600            │
│                         │
└─────────────────────────┘
```
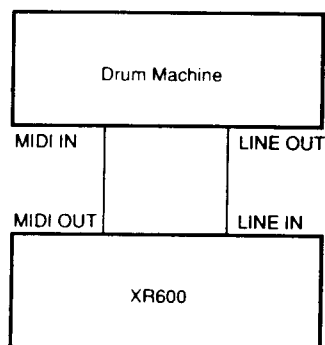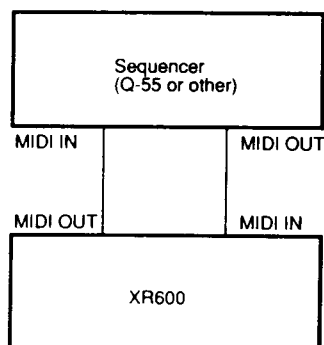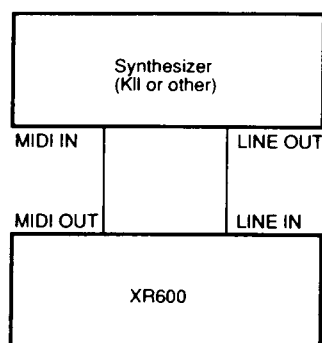
■ Connecting Examples

(Ex. Playing a synthesizer from the UPPER KEYBOARD of the organ.)

(1) Using a MIDI cable, connect the MIDI OUT terminal on the organ to the MIDI IN terminal on the synthesizer. Then, connect the LINE OUT jacks on your synthesizer to the LINE IN jacks on your XR600 using audio cables.

(2) Play a note on the UPPER KEYBOARD. Both the XR600 and your synthesizer will play if your synthesizer set to receive on channel 1. That is, you can use both tone colors of the XR600 and your synthesizer.

(Ex. Playing the XR600 using an external sequencer.)

(1) Using a MIDI cable, connect the MIDI IN terminal on the organ to the MIDI OUT terminal on the sequencer so that the sequencer can control the organ.

(2) Make sure that the MIDI "receive" channels on your XR600 match the MIDI "transmit" channels of your sequencer. (Ex. Channel 10 for percussion sounds.)

(3) Start playing the song on your sequencer and the XR600 will play.

Notes:
• Some data cannot be recognized with the XR600. See the MIDI implementation chart at the end of this manual for the data that can be recognized by the XR600.
• Tempo is controlled on the XR600.

⟨!⟩ *Turning off the power or disconnecting the interface cable while a sound is being played may cause the receiving instruments to sound continuously. Cut the power to silence the instrument.*

(Ex. Playing a drum machine from the organ.)

If your MIDI device is designed to receive clock signals, rhythm tempo of the MIDI device can be played synchronously with the AUTO PLAY ORCHESTRA of the XR600. A start/stop signal is output from the XR600 when you start or stop a rhythm or automatic accompaniment. Tempo is controlled on the XR600.

■ DRUM ASSIGNMENT

\<XR600\>

Key Name		Drum set 1	Drum set 2	Drum set 3
F1		Low F Tom		Belltree
	F#1	Close HH		Castanets
G1		Hi F Tom	BOB BD	MuteSurdo
	G#1	Pedal HH	BOB Rim	OpenSurdo
A1		Low F Tom	BOB SD	Elec.BD
	A#1	Close HH	Close HH	Elec.SD
B1		Low-Mid-Tom	BOB CloseHH.	Elec.Lo Tom2
C2		Hi-Mid-Tom	BOB LoTom1	Elec.Lo Tom1
	C#2	TopCym1	BOB MidTom2	Elec.Mid Tom2
D2		High F Tom	BOB OpenHH	Elec.Mid Tom1
	D#2	SidCym1	BOB MidTom1	Elec.Hi Tom2
E2		ChinaCym.	BOB Cym.	Elec.Hi Tom1
F2		RideBell	BOB HiTom2	ReverseCym.
	F#2	Tambourline	BOB HiTom1	Brush Tap
G2		SplashCym2	BOB Cowbell	Brush Slap
	G#2	Cowbell	BOB HiConga	Brush Swir
A2		TopCym2	BOB MidConga	Jazz BD
	A#2	Vibraslap	BOB LowConga	Concert BD2
B2		SidCym2	BOB Maracas	Concert BD1
C3		Hi Bongo	BOB Claves	Concert SD
	C#3	Lo Conga	MONDO Kick	Timpani F
D3		Mute Hi conga	Gated SD	Timpani F#
	D#3	Open Hi Conga	PowerTomLow2	Timpani G
E3		Lo Conga	PowerTomLow1	Timpani G#
F3		Hi Timbale	PowerTomMid2	Timpani A
	F#3	Lo Timbale	PowerTomMid1	Timpani A#
G3		High Agogo	PowerTomHi2	Timpani B
	G#3	Lo Bongo	PowerTomHi1	Timpani C
A3		Cabasa	**MUTE**	Timpani C#
	A#3	Maracas	HighQ	Timpani D
B3		Short Whistle	Slap	Timpani D#
C4		Long Guiro	Scrach Push	Timpani E
	C#4	Short Whistle	Scrach Pull	Timpani F
D4		Long Guiro	Sticks	Concert Cym2
	D#4	Claves	Square Click	Concert Cym1
E4		Hi Wood Block	Metronome Click	Applause
F4		Lo Wood Block	Metronome Bell	Room Tom Low2
	F#4	Mute Triangle	Ac Bass Drum 2	Room Tom Low1
G4		Open Triangle	Bass Drum 1	Room Tom Mid2
	G#4	Mute Triangle	Side Stick	Room Tom Mid1
A4		Open Triangle	Ac Snare 1	Room Tom Hi2
	A#4	Shaker	HandClap	Room Tom Hi1
B4		Jingle bell	Ac Snare 2	EFF Clap
C5		Belltree	Low F Tom	Echo Gras

■ TROUBLE SHOOTING

PLAY MODE

Symptom	Check the following
The keyboard makes no sound.	Select the tone block for a keyboard using the KEYBOARD CONDUCTOR switches.
The product generates noise.	Motors, neon, or other equipment can be a source of electrical interference creating noise in the sound output. Try changing locations and plug into an outlet that is not being used by devices that draw a lot of current.
You can hear the TV or radio sound.	This may happen when there is a broadcasting station near the organ. Consult your KAWAI dealer.
TREMOLO is not available.	TREMOLO is not available when the CHORUS switch is off. Press both the TREMOLO and CHORUS switches on to activate the TREMOLO effect.
Rhythm or auto accompaniment does not start.	Rhythm or auto accompaniment will not start when the switch lamp for each section is not lit. Press the switch to turn on each section.
Hand Percussion sound is not available.	Hand Percussion sound may not be available for every key. See the chart on page 39 for details.
The chord you play on the LOWER keyboard is not displayed on the Display	There are some chords that your organ cannot recognize.
Disk Sequencer recording is not available.	(a) Turn the disk write protect off (close the window of the disk). (b) Format the floppy disk with your XR series organ. (c) When there is little memory space left in the disk, you may not be able to record a song. Use a floppy disk which has enough memory space for recording.

EDIT MODE

Symptom	Check the following
You cannot perform the WRITE operation with the following setting.	If you forget to turn off the RHYTHM switch lamp after creating your pattern in INPUT mode, pressing the WRITE switch does not turn on the WRITE switch lamp. (Writing is impossible.)
In INPUT mode, you cannot record the part with the timing you want.	Select the appropriate quantizing note value with the RE- PEAT switches.

SETUP MODE

Symptom	Check the following
You cannot change the contents of the disk (ex. Formatting is impossible).	Turn the disk write protect off (close the window).
Error message will be displayed	If you cancel or operate the disk function inadequately, error message may be displayed.

■ SPECIFICATIONS

KEYBOARDS (Upper/Lower/Pedal)		49/49/20
TONE COLORS		
TIBIA	UPPER	2', 2'2/3, 4', 5'1/3, 8', 16' (PERCUS TIBIA: 2'2/3, 5'1/3)
	LOWER	2', 2'2/3, 4', 8'
	PEDAL	8', 16'
ORCHESTRA	UPPER	10 Tone Colors
	LOWER	6 Tone Colors
	PEDAL	4 Tone Colors
PRESET INSTRUMENTS	UPPER/LOWER	10 Tone Colors
SYNTHESIZER	UPPER	10 Tone Colors
EFFECTS		DIGITAL REVERB
	UPPER/LOWER (TIBIA)	CHORUS, TREMOLO, UPPER SUSTAIN
	(ORCHESTRA)	SUSTAIN, TOUCH
	(PRESET INSTRUMENT)	SUSTAIN, TOUCH
	(SYNTHESIZER)	TOUCH, PORTAMENTO
	PEDAL (ORCHESTRA)	SUSTAIN
PERCUSSION		128 Percussion Instruments
AUTO PLAY ORCHESTRA		32 Preset Styles (Tempo, Intro/Ending, Fill-In I, II, One Finger, Memory, Auto Melody Chord I, II, Rhythm, Bass, Accompaniment Chord, Accompaniment Melody, Rhythm Volume/Tone) 8 USER Styles (Input, Pattern Length, Changing Beat, Quantize)
DISK PLAYER SYSTEM	SONG	FORMAT, RECORD, COPY 1/2, DELETE, REPEAT, EXPRESSION, SYSTEM TRACK, TEMPO, MIDI REC.
	AUTO PLAY ORCHESTRA	SAVE, LOAD
	REGISTRATION	SAVE, LOAD
REGISTRATION MEMORY		10
DISPLAY		LCD
CONTROL		Increment Dial, One Two Play, Tuning, Transpose, Expression Pedal, Foot Switch(L, R), Touch Bar (L, R)
JACK		Headphones, LINE IN (L, R), LINE OUT (L, R), MIDI (IN, OUT), LINE IN MODE
SPEAKER		25 cm × 2, 6 cm × 2 40W × 2
DIMENSIONS		120 × 56 × 99 (cm)
WEIGHT		75 kg

Specifications subject to change without notice

Electronic Organ
Model : XR600

MIDI IMPLEMENTATION CHART

Date: May, 1994
Version: 1.0

Function		TRANSMITTED	RECOGNIZED	REMARKS
Basic Channel	(Default)	1,2,3,4,10,16 *1 (1 – 16) *2	1,2,3,10,16 *1	*1 1: UPPER 2: LOWER 3: PEDAL 4: SUB TRACK 2 10: DRUMS 16: SYSTEM CONTROL CHANGE *2 SMF
	(Changed)	X	X	
Mode	(Default)	3	3	
	(Changed)	X	X	
	(Altered)	X	X	
Note Number		31 – 102 *3	0 – 127	*3 UPPER: 48 – 102 LOWER: 36 – 90 PEDAL: 31 – 54
	(True Voice)	–	–	
Velocity	(Note ON)	O V = 0 – 127	O V = 1 – 127 *4	*4 Except channel 16
	(Note OFF)	X	X	
After Touch	(Key's)	X	X	
	(Channel's)	X	X	
Pitch Bend		X	X	
Control Change 7		O *4	O *5	Volume (Main) Expression *5 : Channel 16 only (Except SMF)
11		O *4	O *5	
Program Change		X	X	
System Exclusive		O	O	
System: Common				
(Song Position)		X	X	
(Song Select)		X	X	
(Tuning)		X	X	
System: Real Time				
(Clock)		O	X	
(Commands)		O	X	(FA, FC)
Others				
(Local ON/OFF)		X	X	
(All Notes OFF)		O	O	(123)
(Active Sense)		O	O	
(Reset)		X	X	

Mode 1: OMNI ON, POLY
Mode 3: OMNI OFF, POLY

Mode 2: OMNI ON, MONO
Mode 4: OMNI OFF, MONO

O : YES
X : NO

KAWAI