

KORG

CONCERT **C-40**

OWNER'S MANUAL



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Before You Begin

■ Location

To prevent damage to the unit's electronics, do not use or store it for extended periods where it may be exposed to:

- direct sunlight
- extreme temperature or humidity
- sand or dust
- excessive vibration

■ Power Supply

- Use only the AC adapter included with the unit. Use only electrical outlets matching the specifications on the name plate of the adapter.
Note: If necessary, add the appropriate step-up or step-down transformer. Using the wrong polarity or voltage can irreparably damage the C-40.
- To help prevent noise and poor sound quality, avoid connecting the C-40 to the same electrical circuit as motors or large appliances.
- For the same reasons, never overload the electrical circuit with too many extension cords.
- Always start with the volume at a low level and gradually increase it— especially when the unit is connected to external equipment.

■ Interference

To minimize the risk of radio frequency interference:

- Keep the C-40 away from fluorescent light fixtures and other sources of radio-frequency noise that may disrupt operation of the C-40's main microprocessor.
- Never use the C-40 in the immediate vicinity of a radio, television set, or similar equipment as the equipment may pick up radio-frequency noise from the microprocessor.
- If operation becomes erratic or unpredictable or the unit fails to respond, reset the microprocessor by turning off the C-40, waiting a few seconds, and then turning it on again.

■ Rear Connections

- Use only pin jacks and connectors matching the corresponding connectors and connectors available at the rear of the C-40.

■ Handling

- Never apply excessive force to keys, switches, terminals, and other components.
- Avoid dropping the C-40.

■ Clearance

- Do not place the C-40 directly against a wall. Always leave a little space behind it to allow the sound to project from the back, bounce off the walls, ceiling and floor, and thus create a richer sound.

■ Cleaning

- Wipe the exterior of the C-40 with a clean, dry cloth to remove dust and dirt.
- Never use harsh cleansers, organic solvents, or flammable polishes.

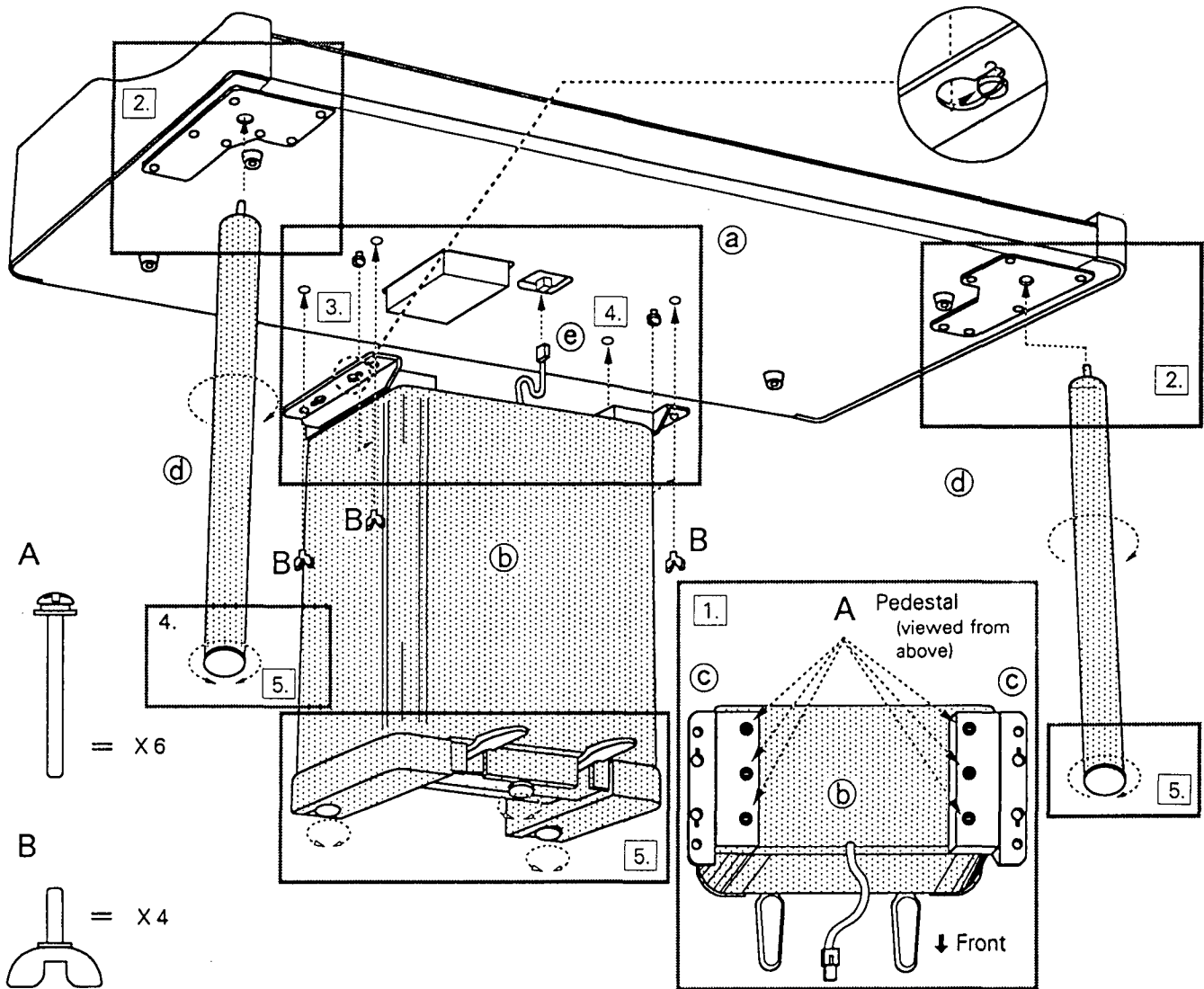
■ Warranty

Have your warranty certificate validated by the manufacturer and keep it in a safe place until the warranty period expires.

■ Manual

This manual is your guide to using the unit properly and effectively. Keep it in a safe place.

Assembling the Stand

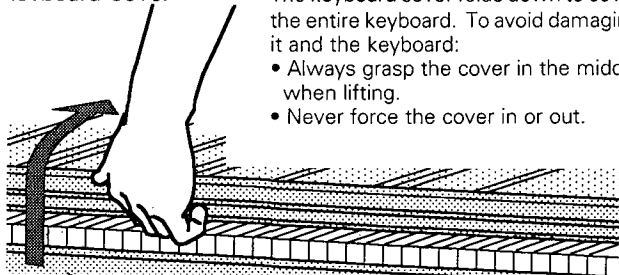


Note: Before attaching the pedestal and legs to the piano, rest the piano on its back, with the rear panel resting on the floor. For safe and secure assembly, enlist the aid of another person when performing the following steps.

1. Use the long screws (Part A) to attach the metal brackets (Part (c)) to the top of the pedestal (Part (b)). Make sure that the protruding parts of the bracket are on the same side as the pedals. (See illustration.)
2. Screw the front legs (Part (d)) into the metal plates on the underside of the piano (Part (a)) under the corners of the keyboard.
3. Fit the two screws protruding from the underside of the piano into the forward holes in the metal brackets, slide the piano forward, and lock it into position with the four wing nuts (Part B).
4. Fit the connector at the end of the pedal harness (Part (e)) into the matching connector on the underside of the piano.
5. With the aid of another person, set the piano upright.
6. Adjust the knobs at the end of the legs and under the pedestal until the piano stands firmly on the floor.

Note: A wobbly piano is not only more difficult to play, it may introduce excessive vibration to the sound.

• Keyboard Cover

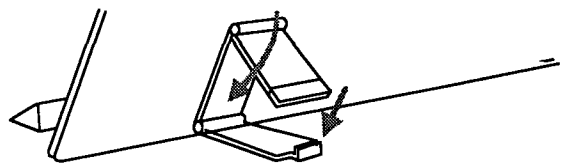


The keyboard cover folds down to cover the entire keyboard. To avoid damaging it and the keyboard:

- Always grasp the cover in the middle when lifting.
- Never force the cover in or out.

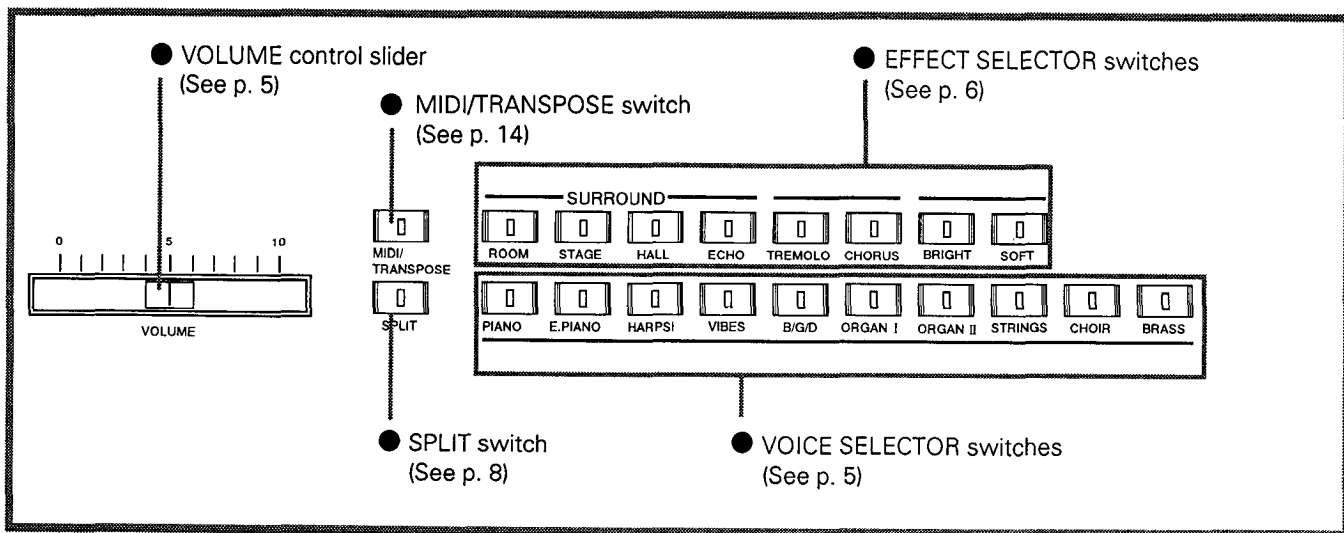
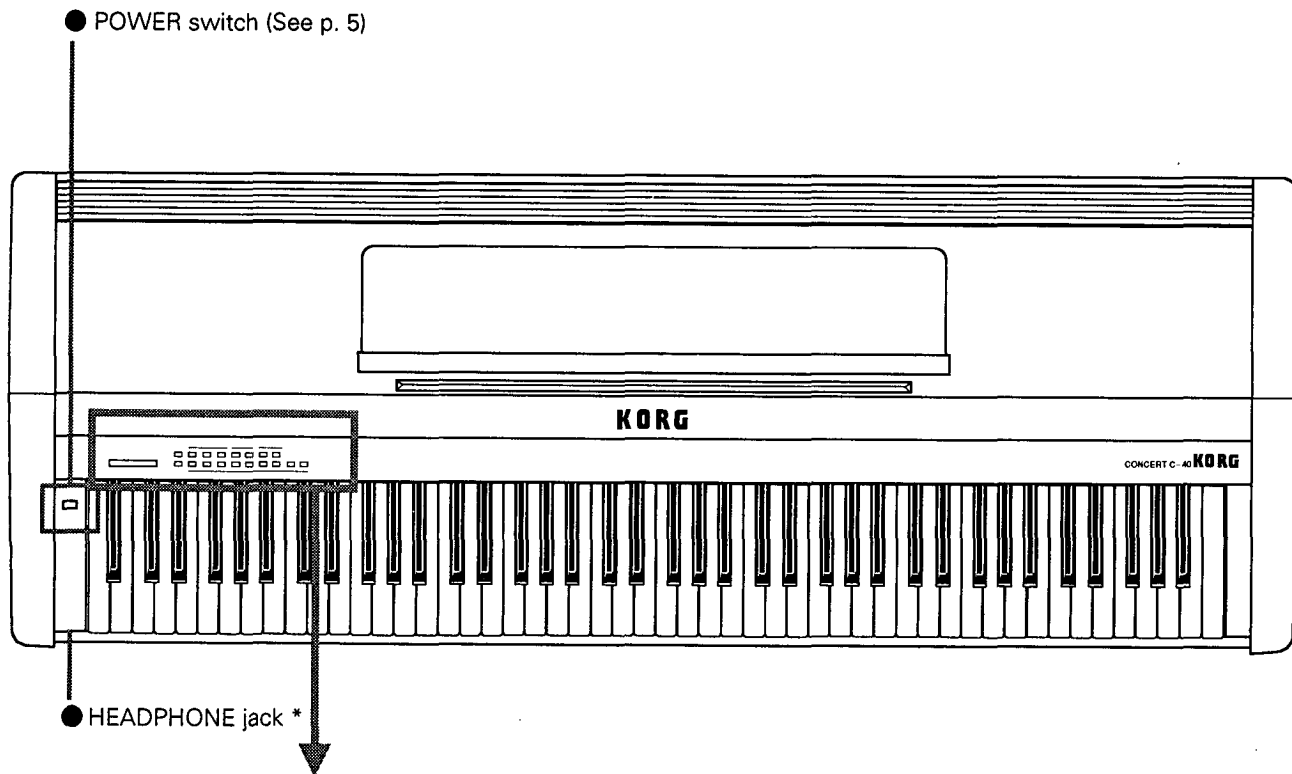
• Music Stand

To prop up the music stand, pull out the two flaps and fit them into the base, forming a triangle.



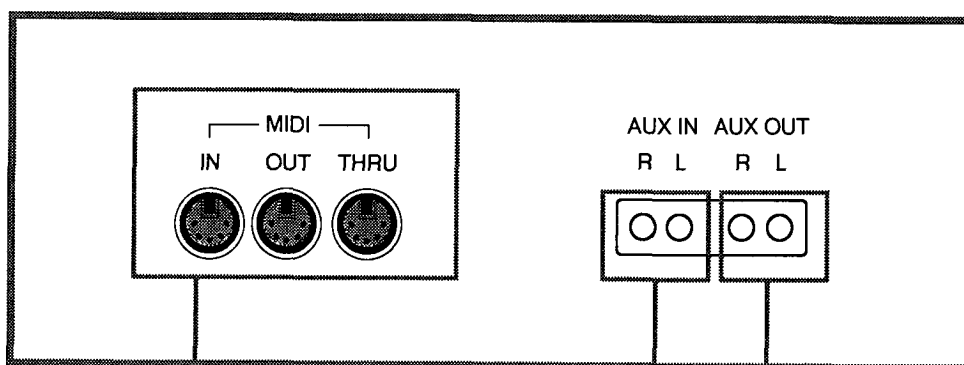
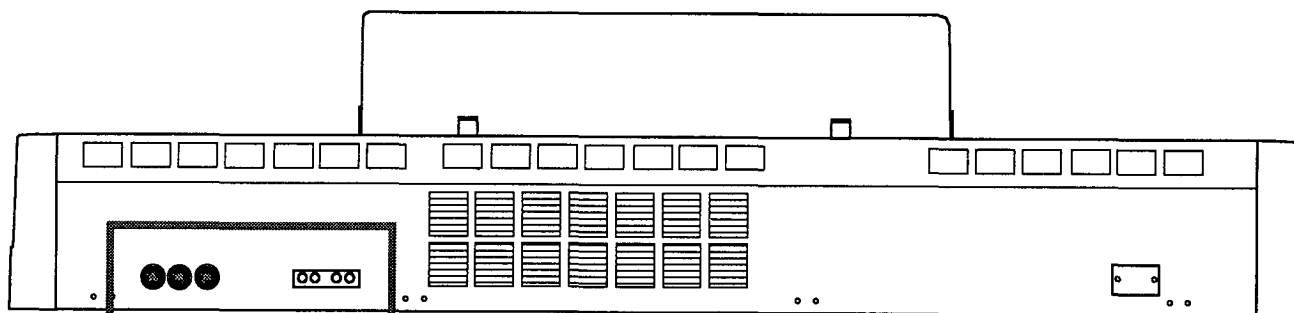
Control Functions

Front Panel



* This jack is for connection of a set of stereo headphones. It allows you to play the instrument at any volume level without disturbing others; the sound of the internal speakers are turned off when headphones are connected.

Rear Panel



● **MIDI (IN/OUT/THRU):**

These DIN connectors accept the optional MIDI cables for connecting the C-40 to synthesizers, sequencers, and other MIDI devices. In addition, the connectors are for the exchange of different types of performance data. (See p. 17)

● **AUX OUT (L/R):**

These RCA jacks are for connecting the C-40 to the AUX (or LINE) IN jacks on mixers, tape recorders, or home audio systems—for routing output to a different speaker system, for example. Note: The VOLUME slider on the front panel controls the output level.

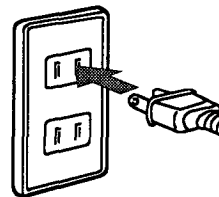
● **AUX IN (L/R):**

These RCA jacks are for connecting audio signals from synthesizers, drum machines, and other equipment to the C-40's built-in speakers. Note: Adjust the volume of the connected instrument from that instrument's controls.

Trying Out the Unit

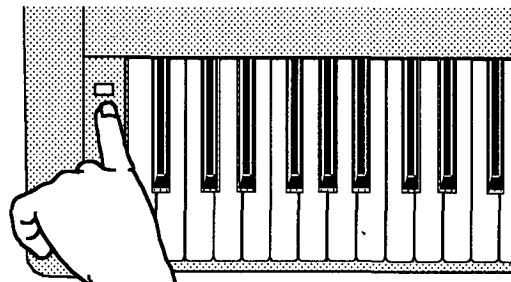
1. Plug in the unit.

Plug the AC power supply cord into an appropriate power outlet. (See "Before You Begin" on p. 1.)



2. Press the POWER switch and wait two seconds.

Note: When the C-40 is turned on, the C-40 is set to the PIANO voice.

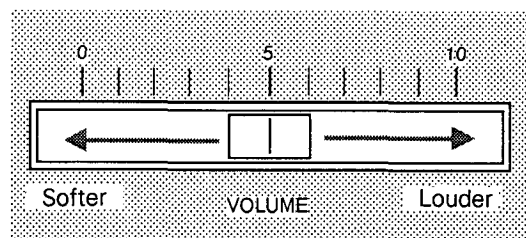


3. Adjust the volume.

Slide the volume control to the left to lower the output level, and slide it to the right to increase the output level.

Note: It is a good idea to always start with the volume at a low level and gradually increase it—especially when the C-40 is connected to external equipment.

Note: This control determines the output level for the built-in speakers, headphone jack, and the AUX OUT jacks.

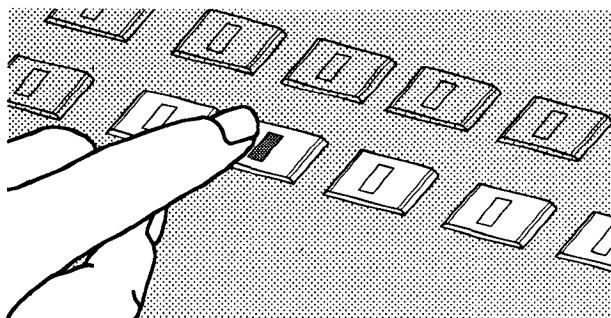


Trying different voices

Changing voices is as easy as pressing the VOICE SELECTOR switches.

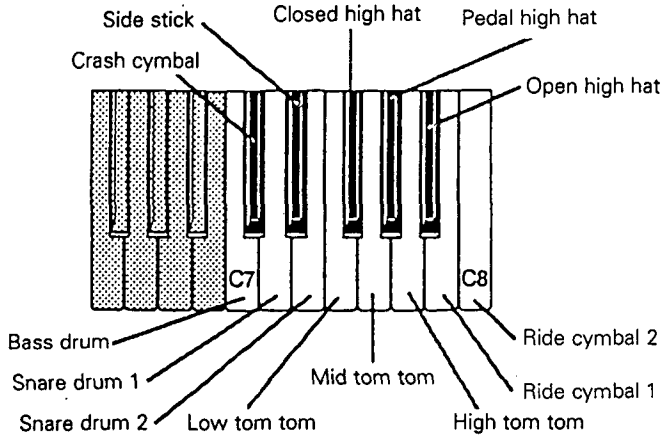
Note: The LED indicator inside the selected switch lights to indicate the current voice.

Note: It is also possible to use two voices at the same time. (See p. 8.)

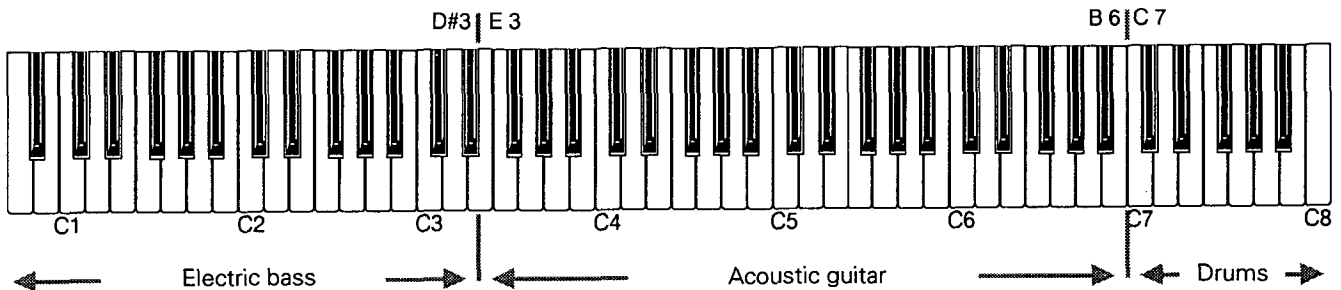


- PIANO : Bright acoustic grand piano.
- E. PIANO : Electric piano.
- HARPSI : Traditional harpsichord.
- VIBES : Jazz vibraphone.
- B/G/D : Combination of three sounds—electric bass, acoustic guitar, and drum kit across three zones of the keyboard. (See illustration below)

- The drum voices are assigned as follows:



MIDI note number	Programs (instruments)
96 (60H)	Bass drum
97 (61H)	Crash cymbal
98 (62H)	Snare drum 1
99 (63H)	Side stick
100 (64H)	Snare drum 2
101 (65H)	Low tom tom
102 (66H)	Closed hi hat
103 (67H)	Mid tom tom
104 (68H)	Pedal hi hat
105 (69H)	High tom tom
106 (6AH)	Open high hat
107 (6BH)	Ride cymbal 1
108 (6CH)	Ride cymbal 2



Note: The TRANSPOSE function changes the above regions. (See p. 13.)

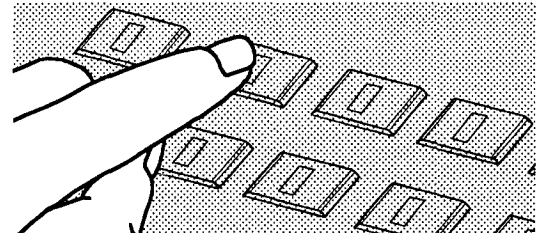
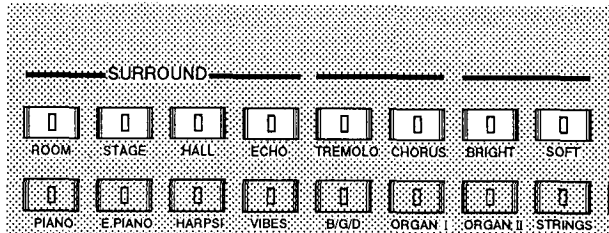
- ORGAN I : Jazz organ sound.
- ORGAN II : Pipe organ sound.
- STRINGS (*) : String section.
- CHOIR (*) : Full-voice choir.
- BRASS (*) : Brass section.

The asterisks indicate the voices that use keyboard velocity to change the attack and decay of the sound. With this function, staccato playing produces a sound with rapid attack and decay, while legato playing results in slower attack and decay.

Adding effects

Adding, changing, and deleting effects is as easy as pressing the EFFECT SELECTOR switches.

Note: The LED indicators inside the EFFECT SELECTOR switches light to indicate which effects are on.



Effects

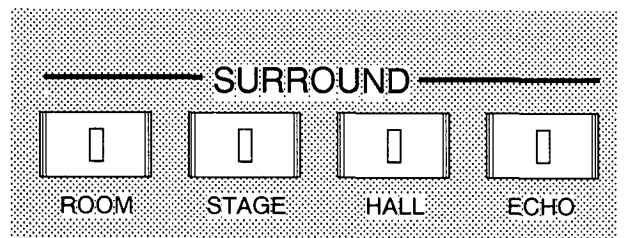
The C-40 offers the following three groups of effects. These groups may be combined to create many different sonic environments

Note: The limit is one effect per group.

1. SURROUND

The four switches in this group add measured amounts of reverberation to simulate the ambience of different sized rooms.

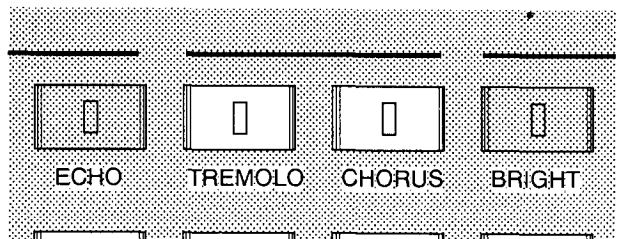
- ROOM : Small room.
- STAGE : Medium-sized hall or auditorium stage.
- HALL : Large concert hall.
- ECHO : Delayed reflections.



2. Modulation

The two switches in this group add modulation to produce a richer, fuller sound.

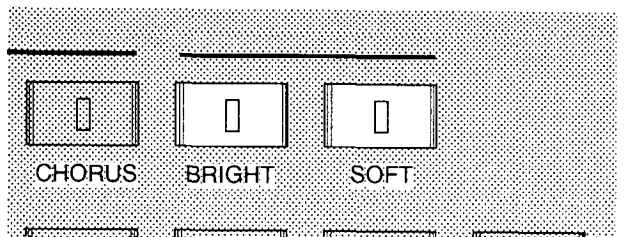
- TREMOLO : Rapid alternation between left and right audio channels.
- CHORUS : Slight detuning to make one instrument sound like many.



3. Equalizer

The two switches in this group add effects based on an equalizer, an electronic circuit that makes the sound brighter or softer.

- BRIGHT : Emphasizes the high frequencies.
- SOFT : De-emphasizes the high frequencies.



- Lines above the EFFECT SELECTOR switches divide them into three independent groups: SURROUND, Modulation and Equalizer effects. Pressing a switch changes the setting for that group only. You may add one effect from as many or as few groups as you wish.
- Pressing a switch with a lit LED indicator turns off the corresponding effect—and the effect group.

- Any changes that you make affect only the current voice. The new effect settings for that voice remain in effect through all subsequent voice changes until you change them—even if you turn off the C-40.

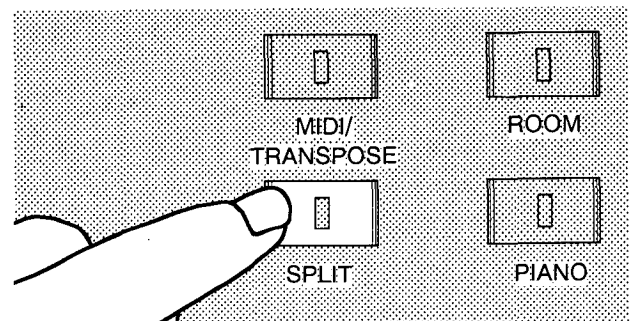
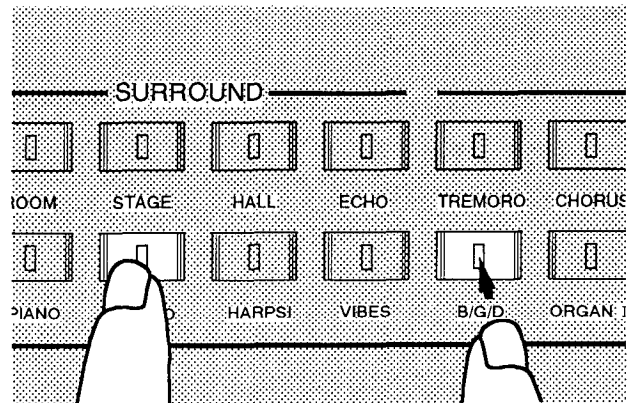
One- and Two-Voice Modes

The C-40 provides three voice modes, two of which, LAYER and SPLIT, simultaneously use two different voices at the same time:

- **SINGLE** : This, the normal performance mode, uses one sound over the entire range of the keyboard.
 - **LAYER** : This mode simultaneously uses two voices over the entire range of the keyboard.
 - **SPLIT** : This mode divides the keyboard into two zones, upper and lower, each with its own voice.
- Note: Since the LAYER mode uses two voices simultaneously, a maximum of eight notes, instead of the normal sixteen, can be played at a given time.
- Note: The LED indicators in the switches light to indicate which voice or voices are currently in use.

Changing Modes

- **SINGLE** : Press a VOICE selector switch and every note across the range of the keyboard will sound the selected voice (for example, PIANO).
- Note: The LED indicator inside the switch lights to indicate the VOICE selected.
- **LAYER** : Hold down one VOICE SELECTOR switch and press another and every note over the range of the keyboard will sound both selected voices. (for example, E. PIANO and B/G/D)
- Note: The LED indicators inside the switches light to indicate the VOICES selected.
- **SPLIT** : Press the appropriate VOICE SELECTOR switch to select the desired voice for the upper zone of the keyboard. Press the SPLIT switch to change to SPLIT mode. This automatically assigns a voice (the voice last selected in SPLIT mode) to the lower zone of the keyboard. To select a new voice for the lower zone of the keyboard, see Changing Voice Modes below.
- Note: If necessary, press a single VOICE SELECTOR switch to change from LAYER to SINGLE mode.
- Note: To change this setting, use the procedure under "Changing Voices in Two-Voice modes" on p. 9.



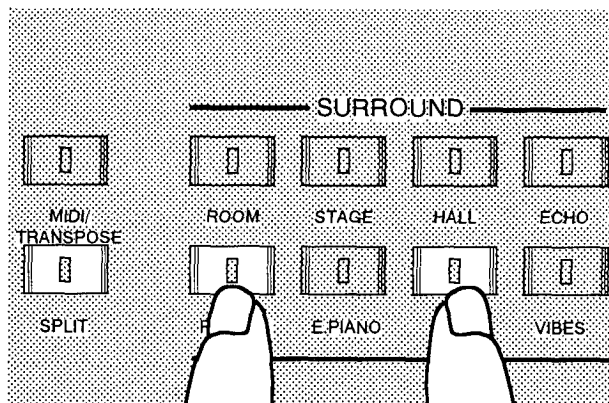
Canceling Modes

- To leave the LAYER or SPLIT mode, simply specify a different mode.
- To cancel the SPLIT mode and return to SINGLE mode, press the SPLIT switch and turn off its LED indicator.

Note: The C-40 returns to the VOICE previously selected for the upper zone of the keyboard.

Changing Voices in Two-Voice Modes

- To change voices in the LAYER or SPLIT mode, select a new voice or pair of voices.
- To change the voice for the upper zone of the keyboard in SPLIT mode, press another VOICE SELECTOR switch.
- To change both voices in the SPLIT mode, hold down the VOICE SELECTOR switch for the upper zone of the keyboard and then press the switch for the lower zone.



Changing the Split Point

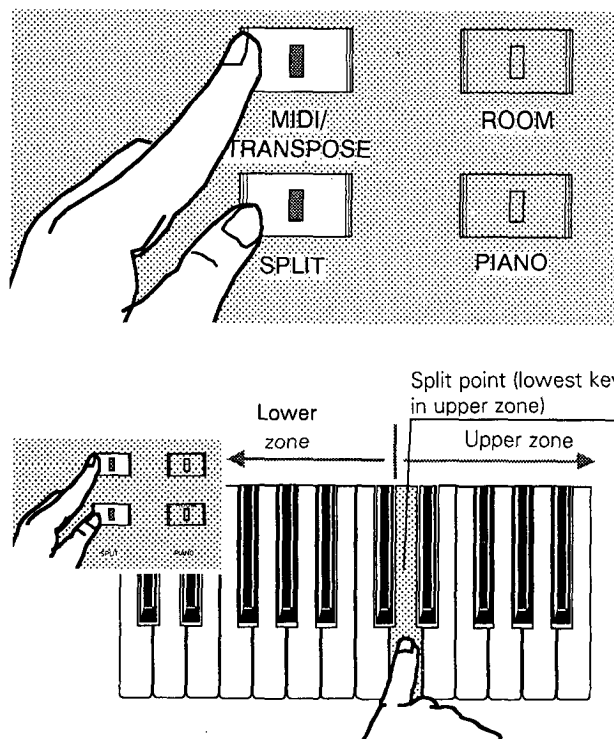
The split point marks the boundary between the upper and lower zones of the keyboard. You specify its position by pressing the lowest key for the upper zone.

1. Switch to the SPLIT mode—if not already there.
2. If necessary, change the voice for the lower zone of the keyboard.

Note: This step is sometimes necessary because the split point and volume balance cannot be changed when the lower zone is using a previously selected voice in the SPLIT mode.

3. Hold down the MIDI/TRANSCOPE switch, press the SPLIT switch, and then press the key corresponding to the new split point.

Note: Any changes that you make affect only the current voice. The new split point and volume balance settings remain in effect through all subsequent voice changes until you change them.



ADJUSTING THE RELATIVE VOLUME

Since the LAYER and SPLIT modes both use two voices, you may wish to adjust the relative loudness of the voices:

1. Switch to the SPLIT mode—if not already there.
2. If necessary, change the voice for the lower zone of the keyboard.

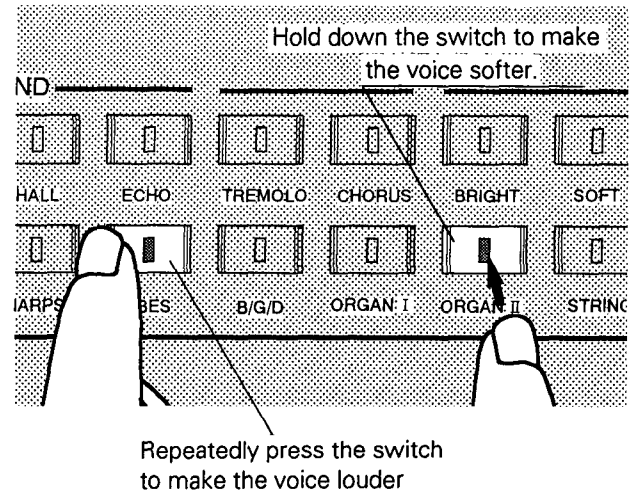
Note: This step is sometimes necessary because the split point and volume balance cannot be changed when a previously selected voice is occupying the lower zone of the keyboard.

3. Hold down the VOICE SELECTOR switch corresponding to the voice that you wish to make softer.

4. Make the other voice louder by pressing the corresponding VOICE SELECTOR switch as often as necessary to achieve the desired balance.

Note: Any changes that you make affect only the current voice. The new split point and volume balance settings remain in effect through all subsequent voice changes until you change them. When turning the unit on again, the volume balance settings and the split point are retained in memory.

Example: When selecting VIBES and ORGAN II



Using the Pedals

Pedal Effects

The two pedals, SOFT/SOSTENUTO and DAMPER, provide three effects:

DAMPER

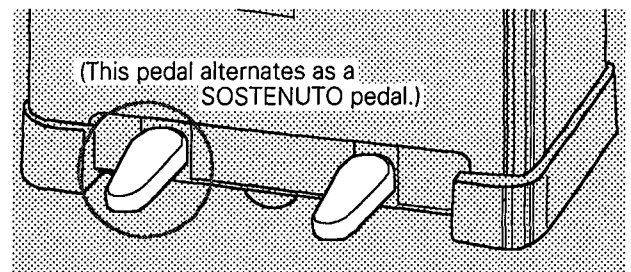
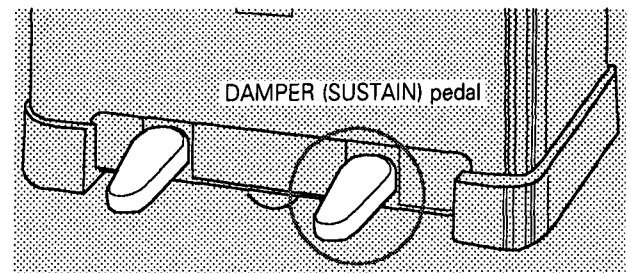
This pedal simulates the effect of a damper pedal on an acoustic piano. When the pedal is depressed on an acoustic piano, small felts, called dampers, are lifted from the strings. This allows all strings to vibrate, whether the key for those strings has been struck or not. When the pedal is released, strings vibrating without keys depressed are damped.

SOFT

This pedal simulates the effect of a soft pedal on an acoustic piano. When the pedal is depressed on an acoustic piano, the sound produced is softer, as the hammers strike one fewer string per-key.

SOSTENUTO

This pedal simulates the effect of a sostenuto pedal on an acoustic piano. When this pedal is depressed on an acoustic piano, dampers for keys depressed when the pedal is depressed are suspended above the string until the pedal is released. This allows certain strings to vibrate freely while other strings are struck and damped by depressing and releasing keys.

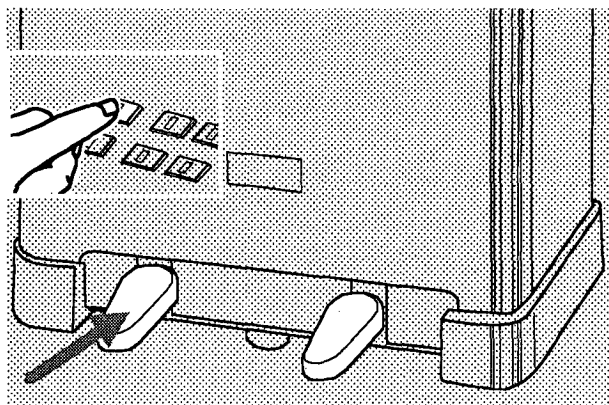


Switching Between SOFT and SOSTENUTO Effects

To switch the SOFT/SOSTENUTO pedal between the two effects:

- Hold down the MIDI/TRANPOSE switch.
- Press the SOFT/SOSTENUTO pedal.

Note: When the power is turned on, the SOFT/SOSTENUTO pedal functions as a SOFT pedal.

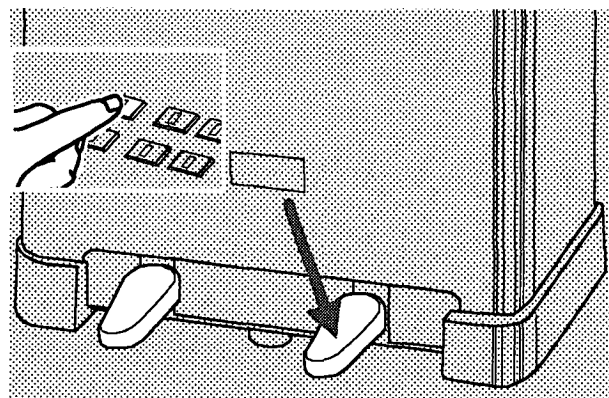
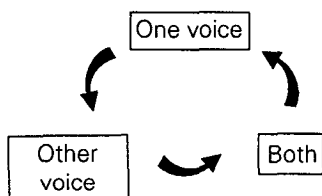


Using the Pedals with LAYER and SPLIT Mode

In the LAYER and SPLIT modes, the pedals may be used with just one voice or with both. To change between the three possible pedal settings:

1. Hold down the MIDI/TRANPOSE switch.
2. Press the damper pedal.

Note: The changes are cyclical. (See illustration.)



Note: The LED indicators in the VOICE selector switches light to indicate the voice or voices that use the pedals.

Note: The individual pedal settings for the LAYER and SPLIT modes remain in effect through all subsequent mode changes until you turn off the C-40. When the C-40 is turned on, the pedals always start with the BOTH setting for the LAYER and SPLIT modes.

Note: Although the pedal settings are selected with the damper pedal, the setting selected affects both pedals.

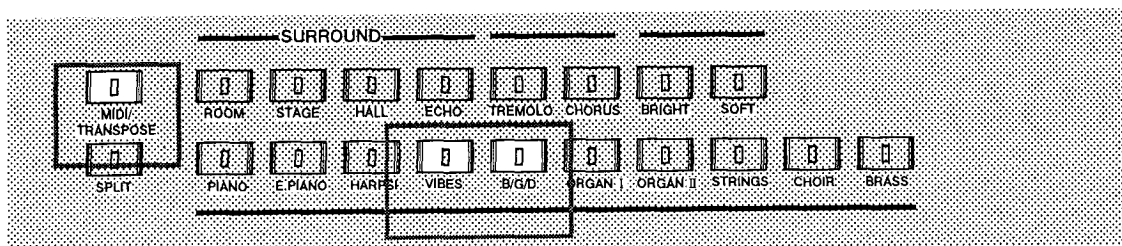
Changing the Harpsichord Temperament

In recent history, musical instruments have used a tuning system, or temperament, that divides an octave (for example, C4 to C5) into 12 equal steps, called half-steps or semitones. Before the 19th century, however, musical instruments made use of many different temperaments that were based on scales with different sized semitones.

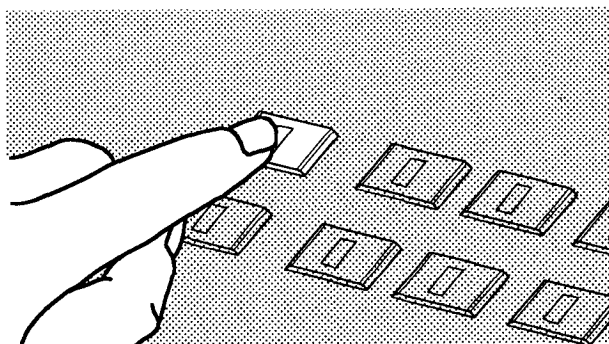
The C-40's Harpsichord voice can be assigned an alternate temperament for realistic performance of early music. The two alternate temperaments are:

- * Kirnberger
- * Werckmeister

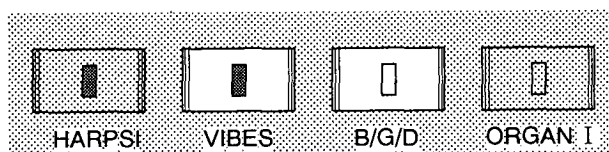
Note: The temperament setting applies only to the harpsichord voice. All other voices use equal temperament at all times.



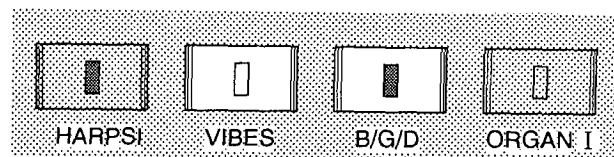
1. Hold down the MIDI/TRANPOSE switch to display the current harpsichord temperament, the temperament is indicated by the lit or unlit VIBES and B/G/D (Bass/Guitar/Drums) selector switches.



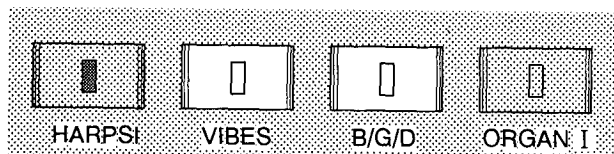
- VIBES only
Kirnberger temperament



- B/G/D (Bass/Guitar/Drums) only
Werckmeister temperament



- Neither
Equal temperament



2. While holding down the MIDI/TRANSCOPE switch, press the appropriate VOICE selector switch (VIBES OR B/G/D) to choose the desired temperament. The LED indicator representing the selected temperament will light.

Note: The temperament setting remains in effect through all subsequent uses of the harpsichord voice until you change it or turn off the C-40. When the power is turned on, the C-40 begins with the equal temperament setting.

Changing Pitch: *TRANSCOPE* and *TUNE*

The *TRANSCOPE* function shifts the pitch of the keyboard up or down in semitones, or half-step intervals. The *TUNE* function moves the pitch up or down in smaller increments, called cents.

Note: When the power is turned on, the C-40 always starts with the standard key (C) and pitch (A4 = 440 Hz).

- The *TRANSCOPE* function changes the general key of the instrument, shifting the pitch up or down in semitones. The range of transposition is up a perfect fourth (5 semitones) and down a tri-tone (6 semitones). This function eliminates the need to change fingering when changing keys — making it easy to transpose to match a vocalist's range, for example.
- The *TUNE* function, which uses a much smaller increment of pitch, called cents, provides the ability to fine-tune the C-40 to another instrument. The range is 40 cents on either side of the standard pitch.

TRANSCOPE FUNCTION

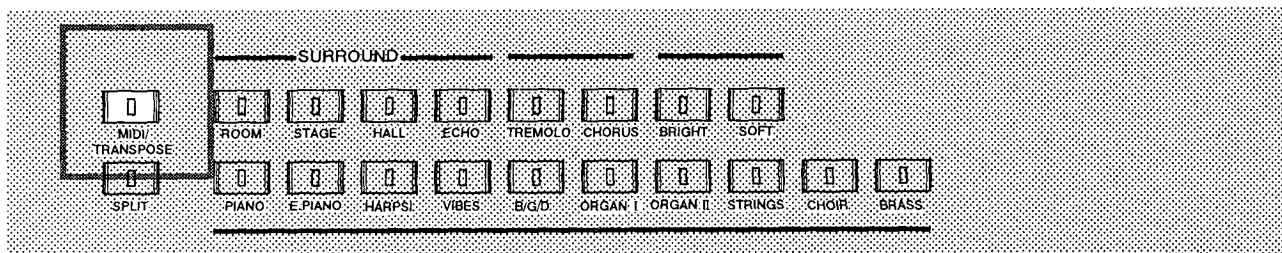
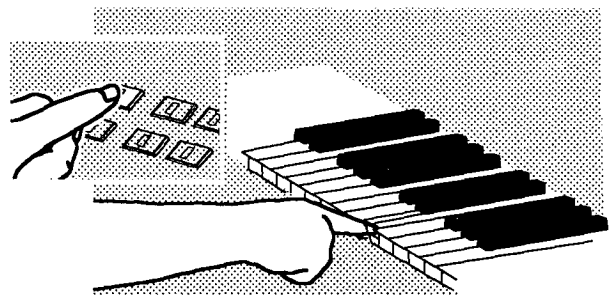
To transpose the keyboard:

1. Hold down the MIDI/*TRANSCOPE* switch.
2. Press a key between F#6 and F7 to select the interval of transposition.

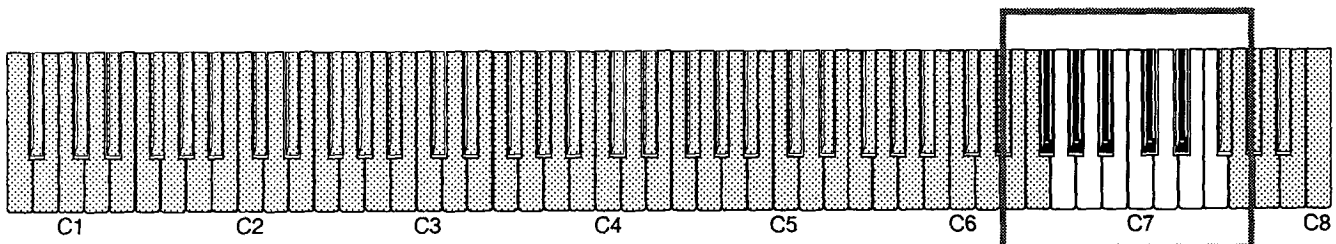
Note: The difference between that key and C7 becomes the new interval of transposition. Selecting a key below C7 transposes the key down. Selecting a key above C7 transposes the key up.

Note: The LED in the MIDI/*TRANSCOPE* switch remains lit while the keyboard is in any key other than the original.

To cancel the transposition and restore the original key (C), just press the MIDI/*TRANSCOPE* switch and release.



Key control (*TRANSCOPE*) keys (F6#-F7)



Example: Transposing up one half-step

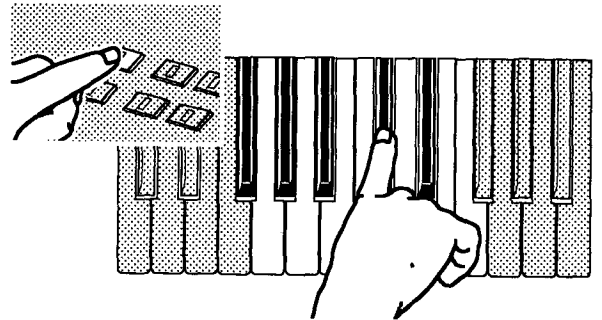
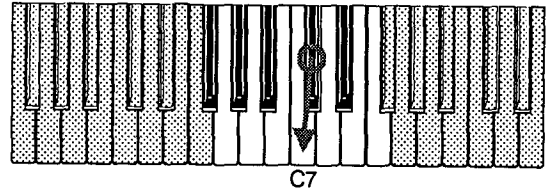
While holding down the MIDI/TRANPOSE switch, press C#7. This transposes the pitch of the instrument so that a piece played in the key of C will sound as if it is being played in C#.

Transposing up one half-step.



The C7 key sounds as C#7.

C#7



Example: Transposing down one whole - step

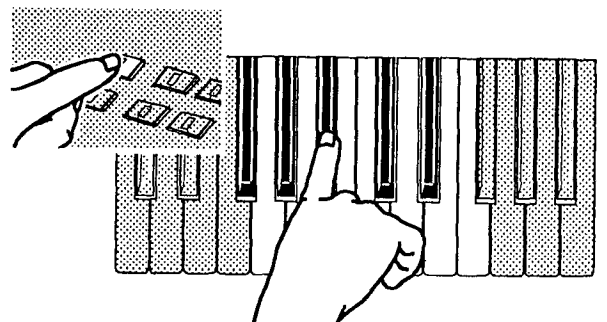
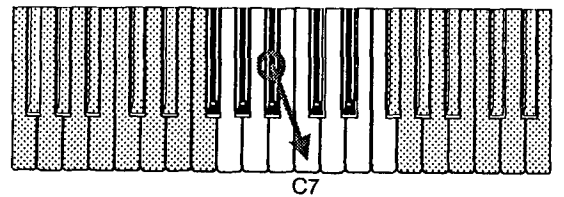
While holding down the MIDI/TRANPOSE switch, press A#6. This transposes the pitch of the instrument so that a piece played in the key of G will sound as if it is being played in F.

Transposing down one whole step.



The C7 key sounds as A#6.

A#6



TUNE Function

To fine-tune the keyboard:

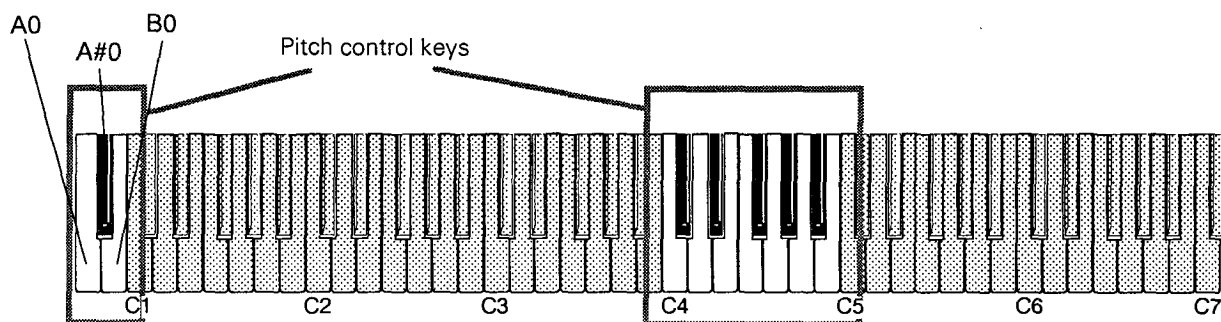
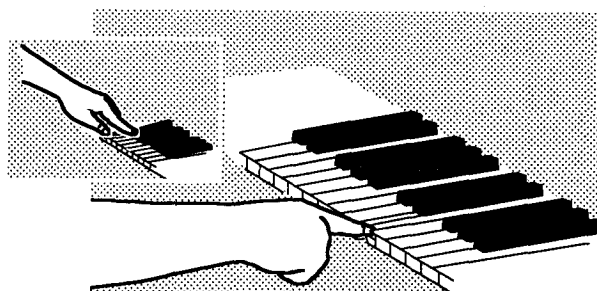
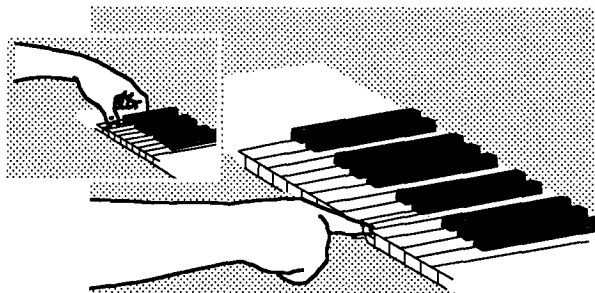
1. Specify the tuning direction—up or down—by holding down the appropriate key combination at the lower end of the keyboard with your left hand:

UP Lowest two white keys (A0 and B0)
DOWN Lowest white and lowest black keys
 (A0 and A#0)

2. Press any key between C4 and B4 on the keyboard with your right hand to shift the pitch one step in the specified direction.

Note: One step is approximately 1.2 cents. The value can be changed over a range of +/- 40 cents. (1 cent is 1/100 of a semitone.) The tuning will automatically return to the original setting (A4 = 440Hz) when the power is turned off.

3. Repeat the above two steps as often as necessary.



Using the MIDI Functions

What is MIDI?

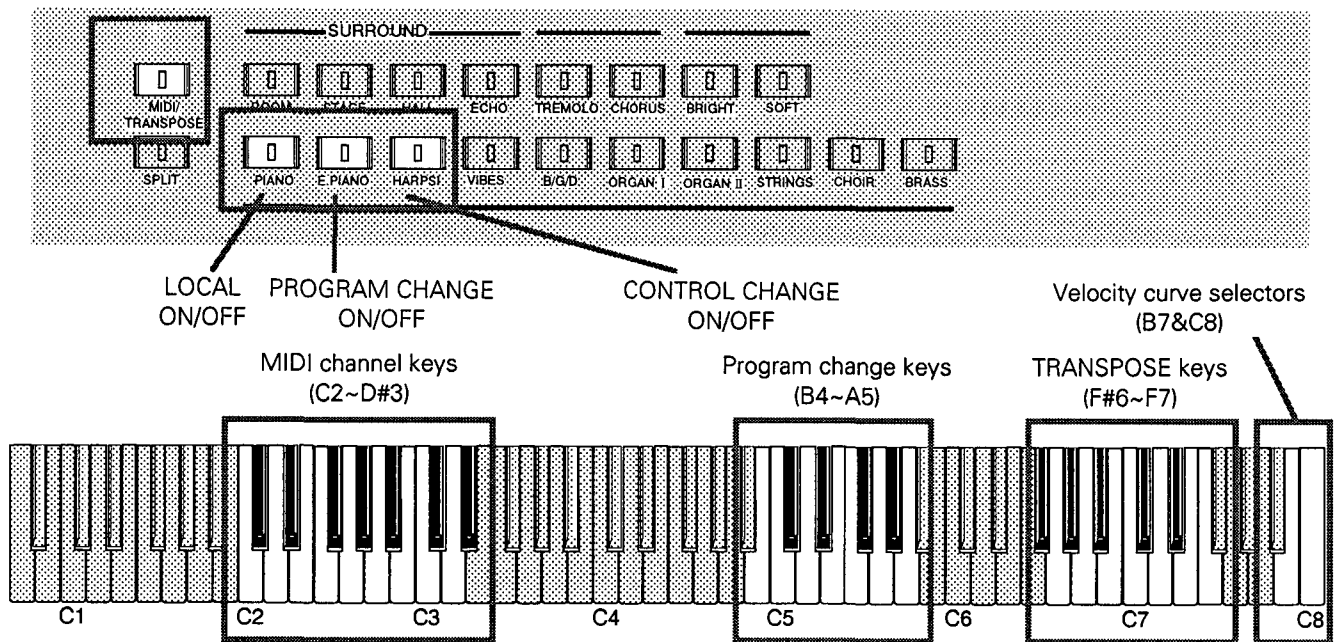
MIDI stands for Musical Instrument Digital Interface, an internationally recognized standard for connecting electronic musical instruments, personal computers, and other electronic equipment so that they may communicate with one another and thus work together as a single MIDI network. You may, for example, connect the C-40 to a synthesizer and play both instruments together as an ensemble from a single keyboard. The discussion below describes how to use the C-40's MIDI controls. For further details, consult the manuals included with your synthesizer, drum machine, or other MIDI equipment or any of the fine reference materials now available.

MIDI Controls

Various MIDI functions can be selected by holding down the MIDI/TRANPOSE switch and pressing certain VOICE SELECTOR switches and keys on the keyboard.

Note: The current MIDI settings are displayed by the LED indicators. These settings are in effect when the C-40 is turned on.

MIDI/TRANPOSE



MIDI Default Values

When the power is turned on, the C-40 defaults to the following MIDI settings.

MIDI transmission channel.....	1
MIDI receiving channel	1 (See "MIDI MULTI Function" below.)
LOCAL	ON
PROGRAM CHANGE	ON
CONTROL CHANGE	ON

1. Changing the MIDI Channel

The MIDI standard provides 16 separate channels for the transmission of performance data. MIDI master keyboards (controllers) can therefore control up to 16 individual slaves (or groups of slaves acting in unison) by sending channel messages. Performance data messages always include a channel number. Each device on the network reads all messages, but only responds to messages that match the connected instrument's MIDI Receive channel.

Note: There are also system messages, which have no channel numbers because they are intended for all devices. The most important are the timing messages that synchronize networks.

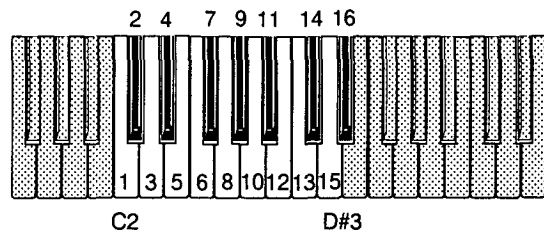
Note: Sequencers and other MIDI recording devices also have an OMNI mode which allows them to simultaneously receive performance data on all channels.

To change the MIDI transmission channel, hold down the MIDI/TRANSCOPE switch and press the appropriate key between C2 and D#3. (See illustration.)

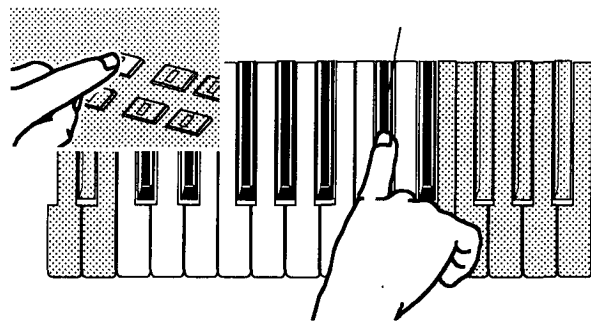
Note: When the power is turned on, the C-40 transmits on channel 1.

Example: Changing to MIDI channel 14

MIDI transmission channel



Selecting channel 14



2. Changing LOCAL ON/OFF Setting

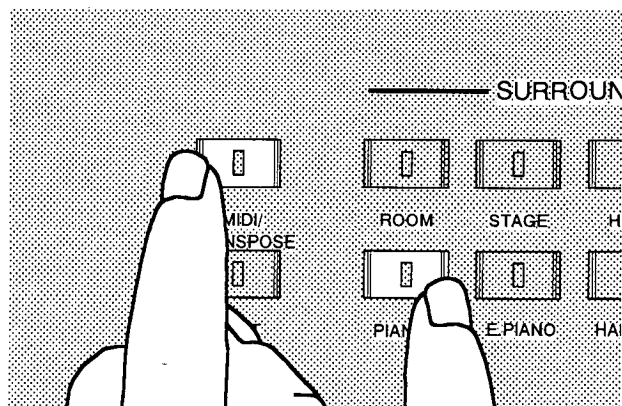
The LOCAL ON/OFF setting allows you to use the C-40 as a "silent" MIDI controller. When LOCAL is set to OFF, the C-40 internal voices will not sound, and only the sounds of the connected MIDI devices will be heard.

To change the setting, hold down the MIDI/TRANSCOPE switch and press the PIANO switch.

LED indicator off: LOCAL ON

LED indicator on: LOCAL OFF

Note: When the power is turned on, the C-40 defaults to LOCAL mode ON.

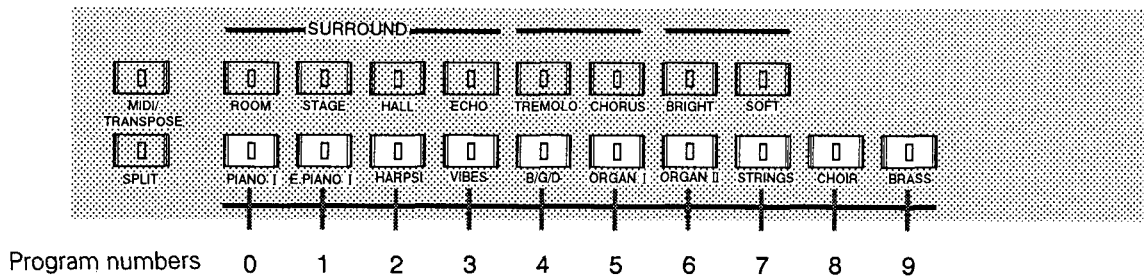


3. Sending a PROGRAM CHANGE Request

A PROGRAM CHANGE request is a channel message that asks devices on that channel to change the sound that the other instrument is currently playing.

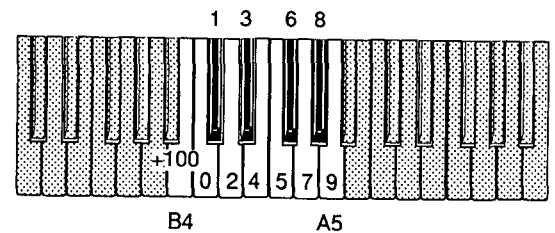
Note: The definition of "program" varies widely between MIDI devices. To verify terminology, consult the manual for the device being controlled

Pressing a VOICE SELECTOR switch transmits a Program Change message. The program number can be selected from the VOICE SELECTOR switches as shown below:



Most synthesizers offer more than ten programs, so it becomes necessary to use the PROGRAM CHANGE zone of the keyboard to specify the new program number:

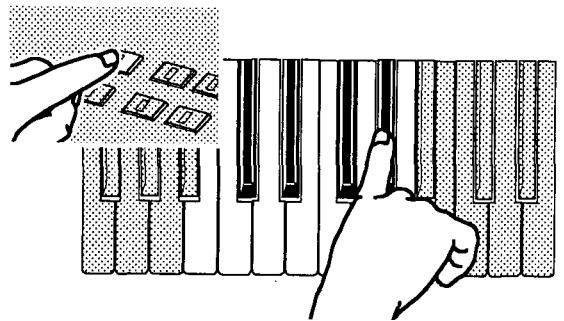
MIDI PROGRAM CHANGE keyboard



1. Hold down the MIDI/TRANPOSE switch.
2. If the number is greater than 99, press the "100" key (B#3).

Note: The highest possible program number is 127.

3. Specify the two digits with the keys C4 through A5.



Examples:

Program #0	<input type="text" value="0"/> <input type="text" value="0"/>
Program #1	<input type="text" value="0"/> <input type="text" value="1"/>
Program #99	<input type="text" value="9"/> <input type="text" value="9"/>
Program #100	<input type="text" value="+ 100"/> , <input type="text" value="0"/> , <input type="text" value="0"/>
Program #101	<input type="text" value="+ 100"/> , <input type="text" value="0"/> , <input type="text" value="1"/>
Program #127	<input type="text" value="+ 100"/> , <input type="text" value="2"/> , <input type="text" value="7"/>

Note: The above procedure always transmits a PROGRAM CHANGE request—regardless of the PROGRAM CHANGE CANCEL setting. (See "Inhibiting PROGRAM CHANGE Requests" below.)

PROGRAM CHANGE Requests: LAYER Mode

- Changing to LAYER Mode or changing voices within that mode (See p. 8.) transmits a PROGRAM CHANGE request for only the second VOICE SELECTOR switch pressed.
- A PROGRAM CHANGE request from another MIDI device affects only the voice whose VOICE SELECTOR switch appears first on the panel (when reading from the left).

Note: Requests for program numbers outside the C-40's range (0-9) are ignored.

PROGRAM CHANGE Requests: SPLIT Mode

- Changing to SPLIT Mode or changing voices within that mode (See p. 8.) transmits a PROGRAM CHANGE request for only the upper zone of the keyboard. If the new voice combination leaves the upper zone of the keyboard with either old voice, no request is transmitted.
- A PROGRAM CHANGE request from another MIDI device affects only the voice for the upper zone of the keyboard.

Note: Requests for program numbers outside the C-40's range (0-9) are ignored.

Note: A request for the same program number as the left VOICE SELECTOR switch is not ignored, but instead returns the C-40 to the SINGLE mode.

Note: When a VOICE SELECTOR switch is used to change one of the two voices already selected for the upper zone of the keyboard, the program number will not be transmitted.

Note: Using external program change message to change the internal programs of the instrument will not change the program of the lower zone of the keyboard.

Inhibiting PROGRAM CHANGE Requests

When the PROGRAM CHANGE function is set to OFF, all incoming and outgoing PROGRAM CHANGE messages are ignored.

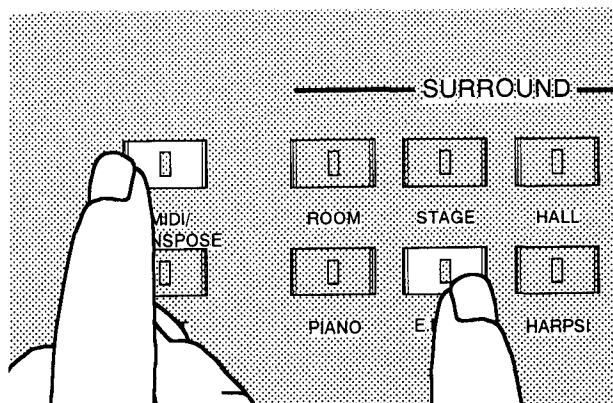
Note: This function does not affect selection of internal voices from the front panel VOICE SELECTOR switches.

To switch the function on and off, hold down the MIDI/TRANSCOPE switch and press the E. PIANO switch.

LED indicator out: PROGRAM CHANGE ON

LED indicator on: PROGRAM CHANGE OFF

Note: When the power is first turned on, the C-40 always begins with the PROGRAM CHANGE function ON.



3. Suppressing CONTROL CHANGE Requests

When the CONTROL CHANGE function is set to OFF, all incoming CONTROL CHANGE requests are ignored, including those generated by the pedals. To switch the function on or off, hold down the MIDI/TRANSCOPE switch and press the HARPSI switch.

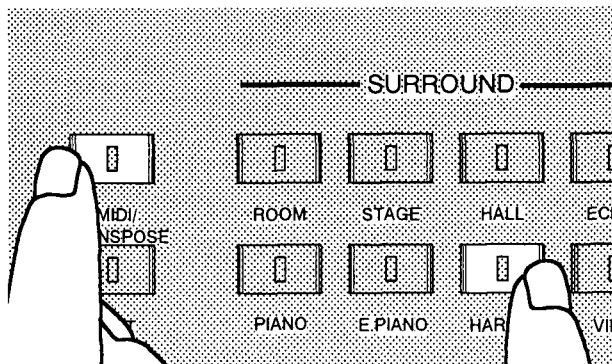
LED indicator out: CONTROL CHANGE OFF

LED indicator on: CONTROL CHANGE ON

Do not press down on the pedal when executing control changes.

Note: External control change is effective for both voices in the LAYER mode and SPLIT mode regardless of the individual internal pedal settings. (Refer to the section, Using pedals in SPLIT and LAYER Modes)

Note: When the power is turned on, the C-40 always begins with the CONTROL CHANGE function ON.



4. Changing the MIDI Velocity Curve

Velocity curves determine how the volume and tone respond to velocity, the speed at which the keys are struck. Since the piano has a curve much different from other instruments, the C-40 offers a choice of two curves for MIDI output:

- Piano : Curve duplicating that of an acoustic piano
- Synthesizer : Curve for other instruments or other MIDI sound sources, like synthesizers and tone modules.

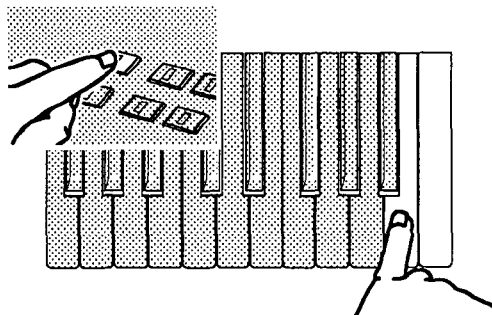
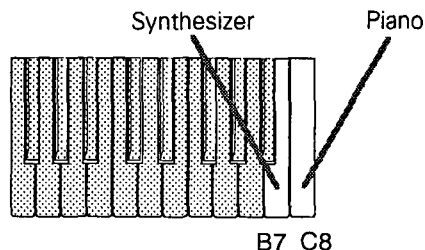
Note: This setting affects only other MIDI sound sources. The C-40 always uses the PIANO velocity curve for its internal voices.

To change the MIDI velocity curve, hold down the MIDI/TRANSCOPE switch and press the appropriate key at the right end of the keyboard:

- B7 Synthesizer-like velocity curve
- C8 Piano-like velocity curve

Note: When the power is turned on, the C-40 is set to the PIANO velocity curve.

Velocity Curve Controls



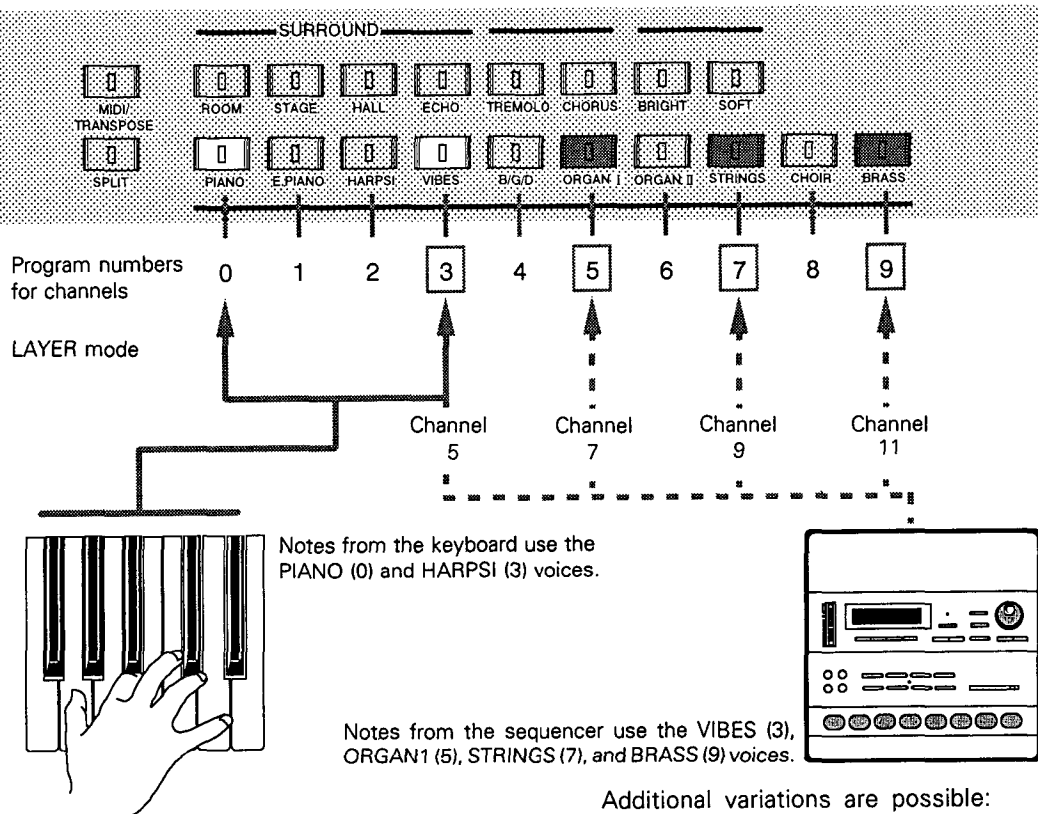
MIDI MULTI Function

The LAYER and SPLIT modes allow you to use two different voices at the same time. However, the MIDI MULTI FUNCTION allows you to control more of the C-40's built-in voices from external MIDI devices, such as sequencers and other MIDI recorders.

Note: The total number of notes sounding at any given time must not exceed the total number of sound sources (16) available on the piano. In LAYER mode, each key sounds two different voices, reducing the total number of available voices to eight.

Note: The piano gives higher precedence to the notes played first—that is, ignores additional notes until the older ones are released. In contrast, most synthesizers drop older notes in favor of newer ones.

MIDI MULTI Function



In the illustration above, two different voices are being played on the C-40 in the LAYER mode, while four additional parts, each with its own voice, are being played from a sequencer. The sequencer begins by sending PROGRAM CHANGE requests for program numbers 3, 5, 7 and 9 over MIDI channels 5, 7, 9 and 11. The result is a rich blend of five of the ten available voices.

Even further variations are possible:

Additional variations are possible:

- Each channel operates independently not only for note and voice messages, but for pedal movements and other CONTROL CHANGE messages as well.
- Channel 1 always uses the voice—or, with the LAYER or SPLIT modes, voices—specified on the panel. When the power is turned on, the C-40 always begin with the following voice assignments for each channel:

CHANNEL 1	CHANNEL 2	CHANNEL 3	CHANNEL 4	CHANNEL 5	CHANNEL 6	CHANNEL 7	CHANNEL 8
Front panel setting	PIANO	E.PIANO	HARPSI	VIBES	B/G/D	ORGAN I	ORGAN II
CHANNEL 9	CHANNEL 10	CHANNEL 11	CHANNEL 12	CHANNEL 13	CHANNEL 14	CHANNEL 15	CHANNEL 16
STRINGS	CHOIR	BRASS	PIANO	E.PIANO	HARPSI	VIBES	B/G/D

MIDI Implementation Chart

Function	Transmitted	Recognized	Remarks
Basic channel	Default Changed	1 1 – 16	1 – 16
Mode	Default Message Altered	× × *****	3 ×
Note number	:True voice	15 – 113 *****	0 – 127 21 – 108
Velocity	Note ON Note OFF	1 – 127 ×	1 – 127 ×
After touch	Key's Channel's	× ×	× ×
Pitch bender		×	○ *1
Control change	6	×	○ Data entry (MSB) *2
	7	×	○ Volume *3
	38	×	○ Data entry (LSB) *2
	64	○	○ Damper Pedal *3
	66	○	○ Sostenuto Pedal *3
	67	○	○ Soft pedal *3
	96	×	○ Data increment *2
	97	×	○ Data decrement *2
	100	×	○ LSB *2
101	×	○ MSB *2	
Program change	:True #	0 – 127 *****	0 – 9 0 – 9 *4
System exclusive		○	○ Device Inquiry
System common	:Song pos :Song sel :Tune	× × ×	× × ×
System Realtime	:Clock :Commands	× ×	× ×
Aux Messages	:Local ON/OFF :All notes OFF :Active sensing :Reset	× × ○ ×	○ ○ 123 – 127 ○ ×
Notes	*1 Range will be changed 0 – 1200 cent by Pitch bend sensitivity of RPC *2 Pitch bend sensitivity, Master fine tune *3 Receive if CONTROL CHANGE set to ENABLE *4 Transmit/receive if PROGRAM CHANGE set to ENABLE		

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

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

○ : Yes
× : No

Specifications

■ Keyboard	:	88 keys (A0-C8) with velocity sensitivity
■ Voice	:	Piano, Electric Piano, Harpsichord, Vibes, Bass/Guitar/Drums, Strings, Organ 1, Organ 2, Choir, Brass
■ Polyphony	:	16 Note
■ Effects	:	Advanced Surround Sound (Room, Stage, Hall, Echo, Tremolo, Chorus, Bright, Soft)
■ Controls	:	MIDI Transpose, Split, Power, Volume
■ Pedal Controls	:	Damper, Soft/Sostenuto
■ Main Amplifier	:	30W × 2 channels (Focused Sound System)
■ Speakers	:	6 in., 4 in. × 2, 2 in. × 2 (16cm, 10cm × 2, 5.4cm × 2)
■ Connections	:	HEADPHONES, AUX IN (L,R), AUX OUT (L,R), MIDI IN-OUT-THRU, PEDALS
■ Power Supply	:	Local Voltage — AC, 50/60 Hz
■ Power Consumption	:	137W
■ Color And Grain	:	Simulated Black Walnut
■ Dimensions	:	55 in. (W) × 19 in. (D) × 33 in. (H) (1388 × 493 × 212.5 mm)
■ Weight	:	116 lbs. (39 kg)
■ Accessories	:	Key Cover, Music Stand (included)

THE FCC REGULATION WARNING

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause 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 the receiving antenna.
- Relocate the equipment with respect to the receiver.
- Move the equipment away from the receiver.
- Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio - TV Interference Problems". This booklet is available from the US Government Printing Office, Washington, D.C. 20492, stock No. 004 - 000 - 0003454.

CANADA

THIS APPARATUS COMPLIES WITH THE "CLASS B" LIMITS FOR RADIO NOISE EMISSIONS SET OUT IN RADIO INTERFERENCE REGULATIONS.

CET APPAREIL EST CONFORME AUX NORMES "CLASSE B", POUR BRUITS RADIOELECTRIQUES. TEL QUE SPECIFIE DANS LE REGLEMENT SUR LE BROUILLAGE RADIOELECTRIQUE.

VAROITUS

Paristo voi rajahtaa, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suositteluun tyyppiin. Havita käytetty paristo valmistajan ohjeiden mukaisesti.

ADVARSEL!

Lithiumbatteri – Eksplosionsfare ved fejlagtig
håndtering.
Udskiftning må kun ske med batteri
af samme fabrikat og type.

ADVERSEL

Lithiumbatteri – Eksplosjonsfare.
Ved utskifting benyttes kun batteri som
anbefalt av apparatfabrikanten.
Brukt batteri returneres apparatleverand ø ren.

VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som
rekommenderas av apparattillverkaren.
Kassera anvant batteri enligt fabrikantens instruktion.



NOTICE

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KORG KORG INC.

15-12, Shimotakaido 1-chome, Suginami-ku, Tokyo, Japan.

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