Roland

C-180

PORTABLE ORGAN

Owner's Manual

Thank you for purchasing a Roland C-180 Portable Organ. The C-180 is a new organ designed for religious congregations and all other occasions that call for high-quality organ or orchestral music in a portable instrument.

Two modes: Organ and Orchestra

The C-180 comes with the finest organ sounds Roland, and its organ division, Rodgers, have to offer. On top of that, it also features excellent instrument sounds for orchestral music.

In Organ mode, you can use the C-180 as "full works" instrument by switching on all ten Manual organ sounds simultaneously.

Bass and Manual parts

Though a single-keyboard instrument, the C-180 allows you to play monophonic bass parts (polyphonic in Orchestra mode) and polyphonic instrument sounds. The instrument sounds can be played via the entire keyboard, while the bass notes can be triggered via the left half of the keyboard. Whenever you play two-hand parts (and perhaps even chords with your left hand), the bass part will sound the lowest note of every chord you play.

Record your own performances

The C-180 makes it easy to record your own performances.

Before using this instrument, carefully read the section on page 2. It provides important information concerning the proper operation of the C-180.

To get the most out of the C-180 and to ensure many years of trouble-free service, we urge you to read through this Owner's Manual thoroughly.

To avoid confusion, let's agree to use the word "button" for all keys on the front panel, and only use "key" when referring to the C-180's keyboard.

USING THE UNIT SAFELY

INSTRUCTIONS FOR THE PREVENTION OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

About ⚠ WARNING and ⚠ CAUTION Notices

⚠ **WARNING**	Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.
⚠ **CAUTION**	Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly. * Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets.

About the Symbols

⚠	The △ symbol alerts the user to important instructions or warnings.The specific meaning of the symbol is determined by the design contained within the triangle. In the case of the symbol at left, it is used for general cautions, warnings, or alerts to danger.
⊘	The ⊘ symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the unit must never be disassembled.
●	The ● symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the power-cord plug must be unplugged from the outlet.

-------------------------------- **ALWAYS OBSERVE THE FOLLOWING** ----------------------------------

⚠ WARNING

- Before using this instrument, make sure to read the instructions below, and the Owner's Manual.

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- Do not open (or modify in any way) the instrument, and avoid damaging the supplied adapter.

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- Do not attempt to repair the instrument, or replace parts within it (except when this manual provides specific instructions directing you to do so). Refer all servicing to your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

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- Never use or store the unit in places that are:
  Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are
  • Damp (e.g., baths, washrooms, on wet floors); or are
  • Humid; or are
  • Exposed to rain; or are
  • Dusty; or are
  • Subject to high levels of vibration.

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- Be sure to use only the adapter supplied with the instrument. Also, make sure the line voltage at the installation matches the input voltage specified on the name plate.

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- Avoid damaging the adapter's cord. Do not bend it excessively, step on it, place heavy objects on it, etc. A damaged cord can easily become a shock or fire hazard. Do not use the adapter when it shows clear signs of damage.

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- This instrument 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 volume level, or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should immediately stop using the unit, and consult an audiologist.

⚠ WARNING

- Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the instrument.

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- Immediately turn the power off, remove the adapter from the outlet, and request servicing by your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page when:
  • The the adapter has been damaged; or
  • Objects have fallen into, or liquid has been spilled onto the instrument; or
  • The instrument has been exposed to rain (or otherwise has become wet); or
  • The unit does not appear to operate normally or exhibits a marked change in performance.

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- In households with small children, an adult should provide supervision until the child is capable of following all the rules essential for the safe operation of the unit.

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- Protect the unit from strong impact. Do not drop it!

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- Do not force instrument to share an outlet with an unreasonable number of other devices. Be especially careful when using extension cords—the total power used by all devices you have connected to the extension cord's outlet must never exceed the power rating (watts/amperes) for the extension cord. Excessive loads can cause the insulation on the cord to heat up and eventually melt through.

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- Before using the unit in a foreign country, consult with your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

⚠ CAUTION

- The instrument and the adapter should be located so their position does not interfere with their proper ventilation.

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- Always grasp only the plug or the body of the adapter when plugging into, or unplugging from, an outlet or this instrument.

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- Whenever the unit is to remain unused for an extended period of time, disconnect the adapter.

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- Try to prevent cords and cables from becoming entangled. Also, all cords and cables should be placed so they are out of the reach of children.

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- Never climb on top of, nor place heavy objects on the unit.

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- Never handle the adapter with wet hands when plugging into, or unplugging from, an outlet or this unit.

⚠ CAUTION

- Before cleaning the unit, turn off the power and unplug the adapter from the outlet (see page 7).

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- Whenever you suspect the possibility of lightning in your area, disconnect the adapter from the outlet.

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Contents

1. Panel descriptions

1.1 Front panel

① **VOLUME slider**

This slider allows you to increase or decrease the volume of all sound sections. For optimum sound quality, we recommend you set this slider to the 3/4 position.

② **BASS slider**

This slider controls the volume of the bass sounds (in Organ or Orchestra mode). (See page 7). It also allows you to set the Reverb level (see page 11) and the volume of the Layer sounds in Orchestra mode (see page 13).

③ **BASS tilt tabs**

These tabs allow you to switch on/off the corresponding Organ bass sound (SUB BASS or OCTAVE) or Orchestra bass tone (STR. BASS or E. BASS).

④ **MANUAL tilt tabs**

In Organ mode (when the ORCHESTRA indicator does *not* light), these tabs allow you to switch on the corresponding organ register. You can activate all registers if you like.

In Orchestra mode (when the indicator of the same name lights), you can press one of these to select the orchestral sound whose name is printed below the tab you pressed. It is also possible to select two sounds simultaneously.

⑤ **DEMO button**

Press this button to activate the C-180's Demo mode. See page 8.

⑥ **TRANSPOSE button**

Use this button to transpose the keyboard. This allows you to play in your favorite key, while the notes you play are sounded in another key. See page 12.

⑦ **REVERB button**

Press this button to switch the digital Reverb effect on (indicator lights) or off. See page 11.

⑧ **ORCHESTRA button**

Press this button if you want to use the C-180's orchestral sounds rather than the organ sounds. See page 13.

⑨ **CANCEL, M1~M4 buttons**

Your C-180 comes with four memories that can be accessed via the [M1]~[M4] buttons. There are four memories for either mode (Organ and Orchestra). Press the [CANCEL] button to override the settings of the currently selected memory.

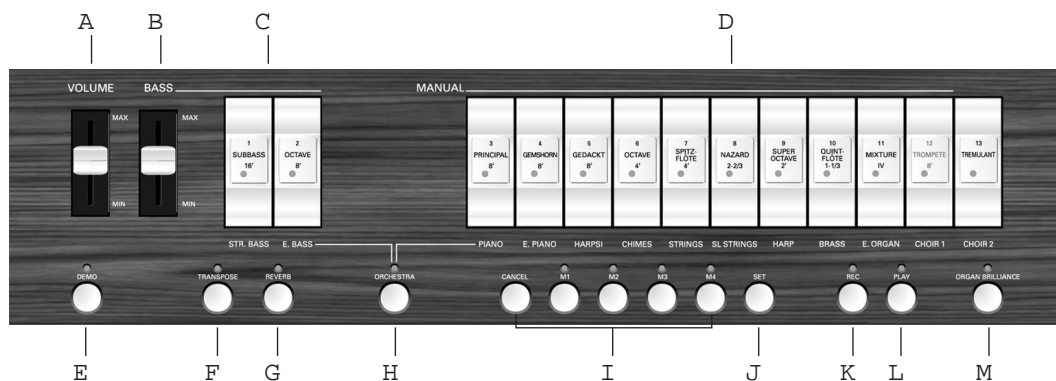⑩ **SET button**

Hold down this button while pressing an [M1]~[M4] button to save the current panel settings to the corresponding memory.

⑪ **REC button**

Your C-180 also contains a digital recording function. Press this button to select the record standby mode. (Next, press [PLAY] to start recording.)

Note: There are four song memories. See page 15.

⑫ **PLAY button**

The function of this button depends on the REC indicator: if it flashes, pressing [PLAY] will start the recording of a new song. If the REC indicator is off, [PLAY] allows you to listen to a previously recorded song.

⑬ **ORGAN BRILLIANCE button**

In Organ mode, this button allows you to make the organ sound(s) brighter. In Orchestra mode, it is used to select a second bank of orchestral sounds (see page 13).

1.2 Rear panel
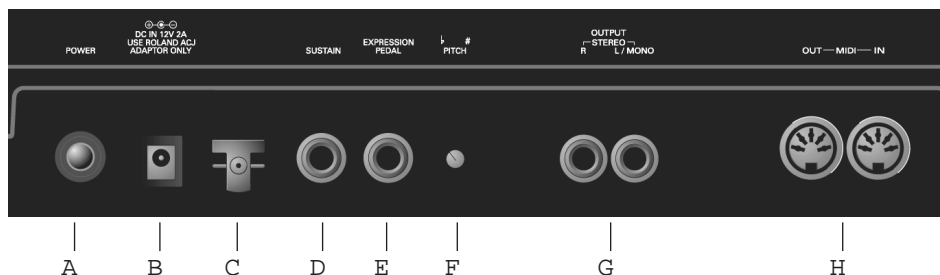
① **POWER button**

Press this button once to switch the C-180. Press it again to switch the C-180 off.

② **DC IN connector**

This where you need to connect the supplied ACJ adapter. If it is damaged or out of order, be sure to replace it with the same ACJ model. Do not use other adapters as these may damage your C-180 beyond repair.

③ **Cord hook**

Allows you to anchor the adapter's power cord. See page 7.

④ **SUSTAIN connector**

This is where you can connect an optional DP-2, DP-6, or BOSS FS-5U footswitch that allows you to hold the notes you are playing on the keyboard.

⑤ **EXPRESSION PEDAL connector**

Connect an optional Roland EV-5, or FV-300L pedal to this jack so as to be able to control the C-180's output level.

⑥ **PITCH control**

Allows you to tune the C-180 to acoustic instruments. Turn it towards the "♭" symbol to tune the C-180 flatter (lower), and towards "#" to tune it higher.

⑦ **OUTPUT STEREO R, L/MONO connectors**

The C-180 boasts an excellent internal stereo amplifier and speaker system that do away with the need for external amplification. Yet there may be times, when you prefer the C-180's sound to be distributed via the public address system of the hall or church where you are performing – or you may want to record the C-180's sound without background noises.

⑧ **MIDI OUT/IN connectors**

Use these connectors for transmitting (OUT) and receiving (IN) MIDI messages to/from other instruments.

1.3 Headphone connectors

The C-180 features two headphone jacks. This allows two people to listen through headphones simultaneously, making it very useful for lessons. Additionally, this allows you to play without having to worry about bothering others around you, even at night.

For optimum sound quality, be sure to use optional Roland RH-25 or RH-50 headphones.

2. Getting started

2.1 Connecting the adapter

Note: To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power of all devices before making any connections.

1. Connect the supplied ACJ adapter to the DC IN jack on the rear panel of the C-180.

2. Connect the other end to an AC outlet.
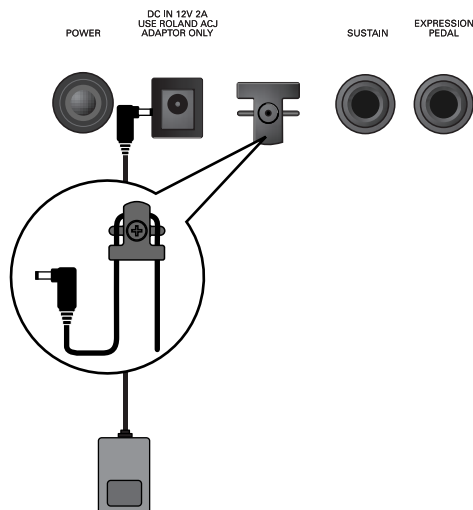
2.2 Turning the power on and off

Your C-180 is fitted with an amplifier and speakers so that you do not need additional devices.

1. Turn the volume all the way down.
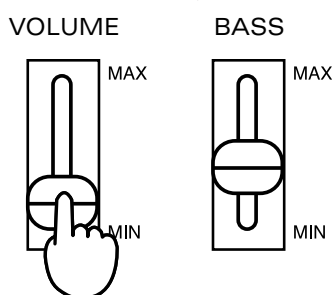
2. Press the [POWER] switch on the rear panel to turn on the power.
Press at least one tab, because all sounds will be off immediately after switching on the C-180. Adjust the volume to your liking.

Note: Your C-180 is equipped with a protection circuit. A brief interval after power up is required before it will operate normally.

Turning off the power

1. Set the [VOLUME] slider to the minimum position.

2. Press the [POWER] switch to turn off the power.

2.3 Adjusting the volume

The C-180 features two volume sliders. The [VOLUME] slider is used to change the global volume, while the [BASS] slider allows you to set the level of the bass sounds with respect to the organ or orchestral sounds.
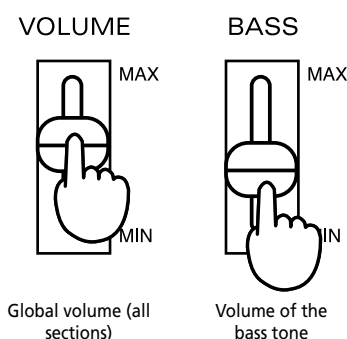
2.4 Connecting headphones (sold separately)

The C-180 features two headphone jacks. This allows two people to listen through headphones simultaneously, making it very useful for lessons. Additionally, this allows you to play without having to worry about bothering others around you, even at night.

1. Turn the volume all the way down.

2. Plug a pair of headphones (Roland RH-25, RH-50) into a PHONES jack on the lower-left panel of the C-180.

3. Adjust the volume.
By connecting headphones to the C-180, you switch off its speakers, which is ideal for playing or practising without disturbing others.

Note: Be sure to use stereo headphones.

Precautions to take when using headphones

To avoid damaging or severing the headphone cord, be sure to handle the headphones by holding the phones themselves, and grasping the plug rather than the cord when pulling the headphone plug.

• Connecting the headphones when the volume of connected equipment is turned up may result in damage to the headphones. Connect the headphones only after turning the volume down completely.

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• Listening at excessively high volume levels will not only damage the headphones, but may also cause hearing loss. Listen at appropriate levels.

2.5 Listening to the demo songs

The C-180 features seventeen internal demo songs you may want to listen to before starting to play yourself.

Selecting a demo song

The C-180's demo songs reside in four banks that can be selected using the [M1]~[M4] buttons.

[M1] BAROQUE

TILT TAB	Title	Composer
Principal 8'	DORICA	Bach
Gemshorn 8'	CHORALE	Bach
Gedackt 8'	TRIO IN MAJOR	Bach
Octave 4'	FUGUE	Telemann

[M2] Bridal

TILT TAB	Title	Composer
Principal 8'	BRIDAL MARCH	Bach
Gemshorn 8'	AVE MARIA	Gounoud
Gedackt 8'	AVE MARIA	Schubert
Octave 4'	ALLEGRO	Bach

[M3] Largo

TILT TAB	Title	Composer
Principal 8'	REQUIEM INTROITUS	Mozart
Gemshorn 8'	CHORALE BWV626	Bach
Gedackt 8'	PASSACAGLIA	Bach
Octave 4'	LARGO	Händel

[M4] Classical

TILT TAB	Title	Composer
Principal 8'	VOLUNTAR	Stanley
Gemshorn 8'	TOCCATA	Paradisi
Gedackt 8'	"BALLO DEL GRAN DUCA"	Sweelinck
Octave 4'	SPRING	Vivaldi
Spitzflöte 4'	HARPSICHORD CONC.	Bach

1. Press the [DEMO] button (indicator lights).
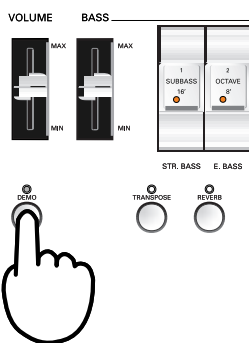
2. In the above table, select the song you want to listen to.

3. Press the [M] button that corresponds to the bank that contains the desired demo song.
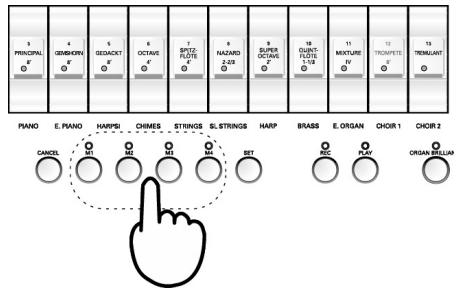
Here's an example: if you wanted to listen to the "Requiem Introitus" by Mozart, you would have to press the [M3] button.

4. Press the tilt tab that is assigned to the desired demo song to start playback of that song.
For the "Requiem Introitus", press [PRINCIPAL 8'].
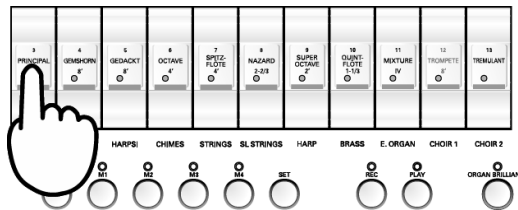
Alternatively, press [SET] to listen to all songs of the selected [M] bank.

5. Press [PLAY] (or set the tilt tab you pressed above to the off position) to stop demo song playback.
Press [SET] again to stop playback of the selected song bank, if you pressed [SET] above to listen to all songs of that bank.

6. To leave the Demo mode, press [DEMO] again (indicator goes dark).
Note: All rights reserved. Unauthorized use of this material for purposes other than private, personal enjoyment is a violation of applicable laws.

Note: In Demo mode, the keyboard cannot be played.

Note: The data of the demo songs are not transmitted to the C-180's MIDI OUTput.

3. Playing organ music (Organ mode)

The C-180 features two modes that are mutually exclusive:

- **Organ mode**: In this mode, the C-180 can be used as a high-quality organ with a main and a bass section. This mode is active when the ORCHESTRA indicator does not light. The orchestral sounds are not available while the C-180 is in Organ mode. In Organ mode, the keyboard is not velocity-sensitive. This is also true of note messages the C-180 receives via MIDI.

- **Orchestra mode**: In this mode, the C-180 allows you to play orchestral sounds (i.e. sounds that are not related to organ sounds). In Orchestra mode, too, you can add a bass sound to your left-hand playing.

3.1 Setting registers in Organ mode

In Organ mode, the white tilt tabs serve the same purpose as the stops on a church organ: they allow you to decide which registers should be audible.

Note: Be sure to press at least one tilt tab. Otherwise, you won't hear anything.

Registering the Manual section

1. Make sure the ORCHESTRA indicator does not light. Press the corresponding button if that is the case.

2. Use the MANUAL tilt tabs to activate or switch off the assigned registers.
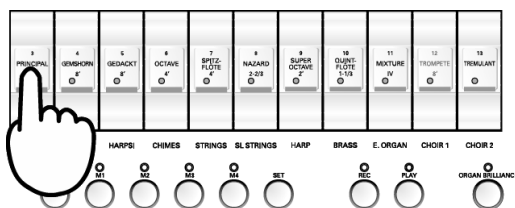
If the indicator of a tab lights, the corresponding register is audible. You can activate as many registers as you like.

Note: The SUSTAIN function is not available in Organ mode. An optional footswitch connected to the SUSTAIN jack will thus not allow you to hold the notes.

Note: The [TREMULANT] register cannot be used by itself. It must be combined with at least one other MANUAL register. It has no effect on the BASS sounds.

3. Press the [ORGAN BRILLIANCE] button (indicator goes off) if you want to make the organ sound mellower.

Registering the Bass sound

The C-180 also features a bass section that can either be triggered via the keyboard, or via an optional PK-5 dynamic MIDI pedal unit.

There are in fact two ways of triggering the bass notes:

- A bass note corresponding to the lowest note you play to the left of the "▼" symbol is sounded by the BASS tone and added to the MANUAL tone.

- Bass-only triggering without the MANUAL sound. See "Playing only bass notes to the left of the split point" on page 10.

Use the two BASS tabs ([SUB BASS 16'] and OCTAVE 8']) to add one or two bass notes to your playing.
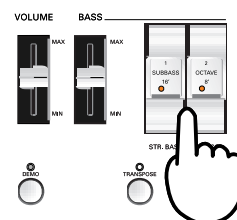
The bass note corresponds to the lowest note you play.

Selecting various organ timbres

By default (and as long as you do not save your own registrations), the four [M] buttons allow you to vary the timbre of the organ registrations:

Press [M1] to select a soft timbre and volume, [M2] for a "p" ("piano") sound, [M3] for an "mf" ("mezzo-forte") sound, and [M4] for the "tutti" ("full works") sound. The corresponding indicator lights.

Note: Only one memory can be active at any one time.

Note: See page 15 for how to save and recall your own settings to these memories.

Note: Press [CANCEL] to switch off all registers.

3.2 BASS functions

Changing the split point

As stated above, the left-hand part of the keyboard can be used to add bass notes to your playing. The C-180 scans all keys from the far left up to the split point to decide which bass notes to play. After activating this split function, only the BASS part will sound: it will sound the lowest note you play to the left of the "▼" symbol.

BASS range (can be changed)

MANUAL range (without BASS split)

MANUAL range (with BASS split, see below)
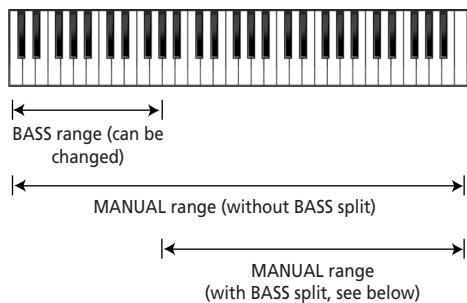
Note: Do not forget to switch on at least one BASS tab in order to hear the bass notes.

At first, the split point is located at the "▼" symbol (the G#3 key), but this can be changed:

1. Activate one of the two BASS registers (the SUB BASS or OCTAVE 8' indicator must light).

2. Press and hold the tab you just pressed until its indicator starts flashing.

3. Now press the key where you would like the new split point to be.
You can select any key in the indicated area:

Press and hold either tab…

+

…press any key in this range
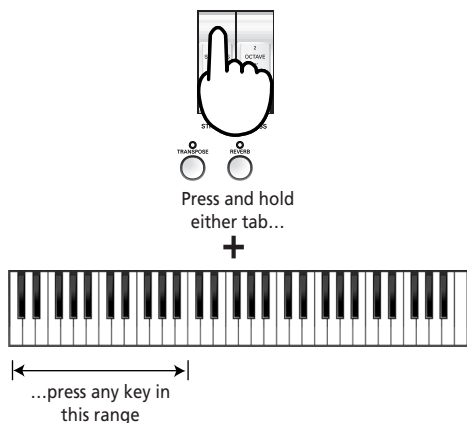
Playing only bass notes to the left of the split point

You can also activate a BASS split function that will mute the MANUAL part to the left of the split point, leaving only the BASS part in the left half of the keyboard:

1. Press and hold a BASS tab, whose indicator does not light, in the off position (press the side closer to the rear panel).
Its indicator starts flashing and goes dark when you release the tab

2. Start playing with your left and right hands.
This time, the left half of the keyboard can be used to play monophonic bass lines (one note at the time), while the right half allows you to trigger the organ registers (see page 9).

To switch off this BASS split mode, press and hold the BASS tab in the "off" position until it flashes again.

Playing the bass notes with an optional PK-5

The C-180's BASS registers can also be triggered via MIDI. The best way to do so is by using an optional PK-5 MIDI bass pedal unit.

With the following procedure you can set the C-180 so that the entire keyboard triggers the MANUAL organ registers, while the PK-5 (or another MIDI instrument) plays the BASS notes.

1. Switch off the C-180 and the PK-5.

2. Connect the PK-5's MIDI OUT port to the C-180's MIDI IN connector.

3. Switch on the PK-5 and set it to transmit on MIDI channel "14".

4. Hold down one of the BASS tabs (in the "on" position) while switching on the C-180.

5. Start playing on the keyboard and on the PK-5.

3.3 Additional functions

Note: See page 15 for how to save your settings to a registration memory.

Adding Reverb

The C-180 allows you to add reverberation to what you play on the keyboard. The Reverb effect provides a pleasant reverberation that gives the impression that you are performing in a concert hall or similar space.

Note: In Orchestra mode (see page 13), the Reverb effect is not applied to the BASS sound.

1. Press the [REVERB] button (indicator lights).
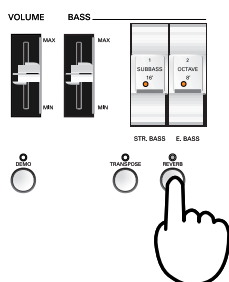
2. To cancel the Reverb effect, press the [REVERB] button once again.
Its indicator goes dark.

Changing the Reverb level

If you like the Reverb effect but think it is too prominent or too faint, here's how to change the Reverb depth:

3. Press and hold the [REVERB] button until its indicator starts flashing.

4. Use the [BASS] slider to set the desired Reverb depth.

Selecting different tunings

Tuning the C-180

There may be times when you accompany acoustic instruments that are difficult or impossible to tune. In that case, use the [PITCH] control on the C-180's rear panel to adapt the C-180's tuning to that of the acoustic instrument.

Turn the [PITCH] control towards the "♭" to tune the C-180 lower (so that the A4's frequency drops below the default "440Hz" setting).

Turn it towards the "#" symbol to tune the C-180 higher.

Using different temperaments

Like all digital instruments, the C-180 relies on the standard tuning system for western music, where the distance (interval) is the same for all semitones of an octave. This is called "equal temperament".

Not so long ago, however, other tunings were used for performing classical western music. These tunings are characterized by varying intervals between the semi-

tones of an octave. The C-180 allows you to select from among five different tuning methods ("temperaments"):

1. Hold down [CANCEL] while pressing one of the following buttons:

Button combination	Temperament
[CANCEL] + [M1]	Mean Tone
[CANCEL] + [M2]	Pythagorean
[CANCEL] + [M3]	Kirnberger
[CANCEL] + [M4]	Werckmeister
[CANCEL] + [SET]	Equal (default)

See step 2 to specify the key of the selected temperament.

Mean Tone—A partial compromise of the Just Major tuning (purer tuning than "Equal"), created to make transposition possible. As the intervals between two neighboring semitones depends on their pitch, this temperament may sound out of tune to untrained ears.

Pythagorean—Developed in ancient Greece as a method of tuning that resolved the ambiguity of fourths and fifths. As a result, melodies sound cleaner, while triads may appear to be flat.

Kirnberger—This temperament is relatively tolerant towards transposition, and can be used to play in all keys.

Werckmeister—A combination of the Mean Tone and Pythagorean tunings. This tuning can be used in all keys.

Equal—With this tuning, the octave is divided into twelve equal intervals. Regardless of the interval, very little ambiguity is produced.

For the Mean Tone and Pythagorean temperaments, you also need to specify the key in which you want to play:

2. Hold down [CANCEL] and the selected [M] button while pressing the key on the keyboard that corresponds to the tonic of the desired key.
Note: When performing in ensemble with other instruments, be aware that, depending on the key, there may be some shifting of the pitch. Please tune to the other instruments in the ensemble.

Note: When you play back your recorded song, it will use the temperament that was selected at the time of recording. This may be different from the currently selected temperament.

Using an expression pedal

In Organ mode (as well as in Orchestra mode, page 13), you can connect an optional EV-5 or FV-300L expression pedal to the EXPRESSION PEDAL jack. Doing so allows you to control the C-180's global volume by foot for swelling effects.

Transposing (same fingering, different notes)

You can have the C-180 sound in a different key while still playing the same notes on the keyboard. That way, even songs originally written in a difficult key with many ♯ (sharps) or ♭ (flats) (i.e. many black keys), can be played in a more convenient way. This is especially useful when you are used to playing a given song in one key, while someone else wants you to play it in another key: just change the Transpose setting and you're there.

The transposition remains in effect until you change it or until you switch off the C-180.

1. While holding down the [TRANSPOSE] button, press the tonic (root) of the key to which you want to transpose. The TRANSPOSE lights
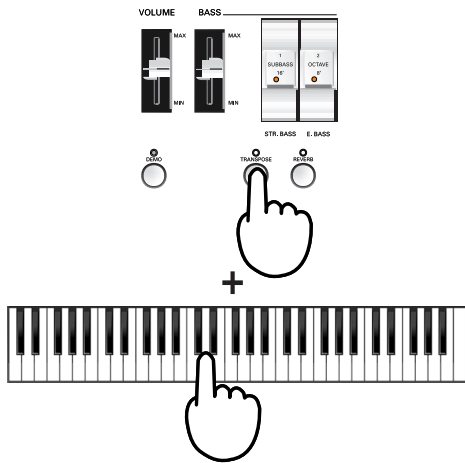
2. To return to normal pitch, hold down the [TRANS-POSE] button while pressing a C key. The TRANS-POSE indicator goes dark.

Example: playing in C but sounding in E

If you want the E pitch to sound whenever you play a C key, hold down the [TRANSPOSE] button and press an E key.

While holding down   Press
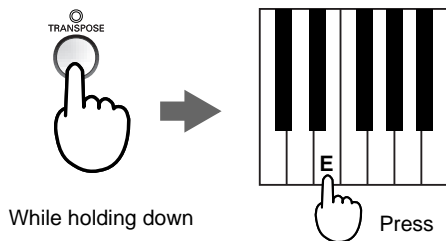
Note: The transposition only applies to the notes you play on the C-180's keyboard. It does not apply to note messages received via the MIDI IN connector, or the notes played by the Recorder.

4. Playing other kinds of music (Orchestra mode)

The C-180's second mode is called ORCHESTRA. When you select it, the organ sounds are no longer available. In return, you can select from two banks of other instrument sounds, including piano, electronic piano, strings, harpsichord, etc. In this mode, the keyboard is velocity sensitive.

4.1 Selecting Manual sounds

Like in Organ mode (see page 9), there are two sections: the MANUAL section that can spread across the entire keyboard, and the BASS section that allows you to play a bass part with your left hand (in split mode).

Let us first look at how to select a MANUAL sound:

1. Press the [ORCHESTRA] button to make its indicator light.
There are two Orchestra tone banks. The first contains sounds for all 11 tabs, while the second adds another 8 sounds.

2. Use the [ORGAN BRILLIANCE] button to select bank A (indicator dark) or B (indicator lights):
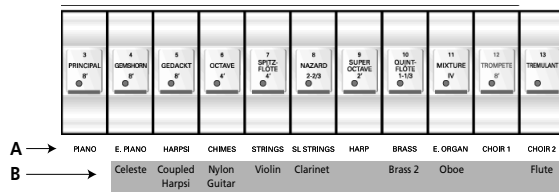
Orchestral sounds in bank 'B'
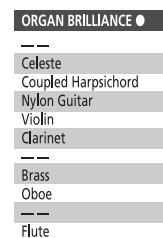
3. Press a MANUAL tab to select the sound whose name is printed below the tab (indicator lights).
Example: to select the "HARP" sound, press the [SUPER OCTAVE 2'] tab. To select a sound of the "B" bank, be sure to press the [ORGAN BRILLIANCE] button to make its indicator light.

Additional orchestral sounds

The C-180 provides eight additional sounds that can only be selected via MIDI (not via the front panel). You could use an optional PC-300/180A/160A keyboard or a sequencer for doing so. Here are the sounds we are referring to and their MIDI-addresses:

Sound	CC00 (Bank Select MSB)	CC32 (Bank Select LSB)	Program Change number
Trumpet	00	00	57
French Horn	00	00	61
Piano 1w	08	00	01
Fantasia	00	00	89
Church Bell	08	00	15
Soft Pad	00	00	90
Nylon + Steel	09	00	26
Whistle	00	00	79

Layering two Manual sounds

Unlike the Organ mode, the Orchestra mode does not allow you to switch on all instrument sounds. You can, however, combine one sound with another, which is called "layering". Be aware that this reduces the polyphony (number of notes you can play simultaneously) by half, though.

1. Select one instrument sound by pressing a tab (see above). Keep holding this tab.

2. While holding the tab of the first sound, select a second instrument sound by pressing another tab.
The indicators of both sounds light.

Note: It is not possible to combine a sound from bank A with another one from bank B (or vice versa).

3. Set the volume of the second sound with respect to the first:
• Hold down the tab of the second sound until its indicator starts flashing.
• Use the [BASS] slider to set the volume of the layer sound.

Using a sustain pedal

Connect an optional DP-2, DP-6, or BOSS FS-5U footswitch to the C-180's SUSTAIN jack to be able to hold the notes of the MANUAL section in the same way as on an acoustic piano.

This only applies to the MANUAL sound (or layer). The BASS notes cannot be held.

Note: You can also use an optional expression pedal in Orchestra mode. See page 11.

4.2 Adding Bass sounds

Like in Organ mode, you can also play one bass sound by pressing the desired BASS tab. There are four bass sounds: two in bank A, and two others in bank B.

1. Use the [ORGAN BRILLIANCE] button to select bank A (indicator dark) or B (indicator lights):
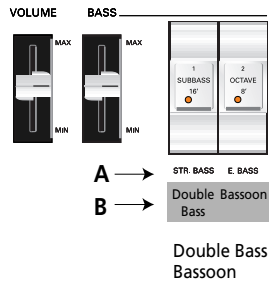
2. Press a BASS tab to select a sound for the left half of the keyboard.
The indicator of this tab lights, and the keyboard is split into a right (MANUAL) and left (BASS) section. At first, the split point is located at the "▼" symbol (G#3). Feel free to select another split point, however. See page 10 for details.

If necessary, use the [BASS] slider to set the bass sound's volume with respect to the MANUAL sound(s).

Note: In Orchestra mode, the BASS sounds are polyphonic. You can thus play chords with your left hand.

Note: Some MANUAL sounds (such as the Piano sound) are transposed one octave down to provide a more consistent note distribution when you add a BASS sound.

Note: The Reverb effect is not applied to the BASS sounds in Orchestra mode.

4.3 Additional functions

The following functions are also available in Orchestra mode:

- Reverb effect (see page 11) for the MANUAL and Layer sounds
- Transposition (see page 12)
- The registration memories M1~M4. By default (and after initializing the C-180), these memories already contain four different setups for the Orchestra mode.

Note: See page 15 for how to save your settings to a registration memory.

5. Convenient functions

5.1 Recording your performance

You can record what you play on your C-180 and then play it back whenever you like. There are four song memories that can be selected using the [M1]~[M4] buttons.

The Recorder not only memorizes the notes you play, but also the sounds you use, the temperament and the Reverb setting. It is even possible to switch from Organ to Orchestra mode during recording. Especially for the temperament, be sure to select the same setting for the keyboard (see page 11) as the one you used while recording if you plan on playing live to your recorded performance. Otherwise, your part may be out of tune with respect to the recorded music.

Recording

1. Hold down the [REC] button while pressing an [M1]~[M4] button to select the song memory.
The REC indicator starts flashing.

Press — While holding down

Note: This will erase the song in the selected memory.

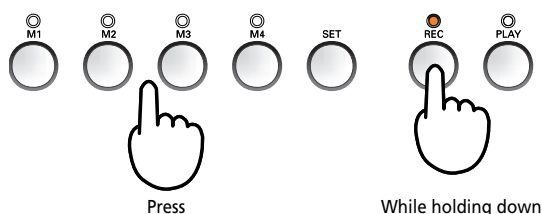**2. Press the [PLAY] button to start recording, and start playing.**

3. Press [PLAY] again to stop recording.

Playing back a recorded song

To listen to your new (or a previously recorded) song, proceed as follows:

1. Press and hold the [PLAY] button while pressing an [M1]~[M4] button to select a song memory.

2. Press [PLAY] to stop playback.
Note: The recorded song data are not transmitted to the C-180's MIDI OUT port.

5.2 Using the C-180's memories

Saving your settings as registrations

The C-180 comes with 2 x 4 memories where you can save the panel settings ("registrations") for convenient recall at a later stage. There are two sets: four memories for Organ mode (see page 9), and four others for Orchestra mode (see page 13).

Here's what is saved in these memories:

ORGAN mode	ORCHESTRA mode
Registration (which tabs are on)	Selected Manual sound(s) (single or layer) & Bass status
Reverb status and depth	Reverb status and depth
ORGAN BRILLIANCE setting	BASS volume
Temperament	Layer sound volume
	ORGAN BRILLIANCE setting (i.e. the sound bank)

When the C-180 is shipped, these eight memories already contain useful settings, but feel free to overwrite their contents with your own registrations.

Note: We strongly recommend you switch on the C-180 at least once a week. This is necessary to recharge the memory backup system. After approximately two weeks, the backup system becomes depleted, which means that you will lose your registrations and song recordings (see left).

1. Select the Organ (ORCHESTRA indicator off) or Orchestra mode (ORCHESTRA indicator lights) and make the settings you wish to store.

2. Hold down the [SET] button and press the [M1]~[M4] button that corresponds to the memory where you wish to save your settings.

Press — While holding down
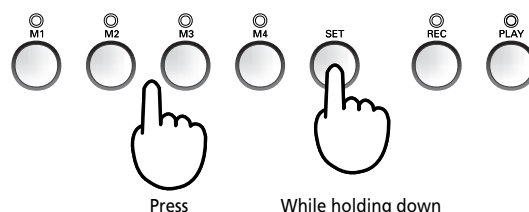
Note: The settings previously saved in this memory will be overwritten by your new registration.

Loading the settings of a memory

Press an [M1]~[M4] button to load the registration of the corresponding memory. Do not forget to first select the Organ or Orchestra mode to have access to the desired memories.

You can cancel all settings (switch off all tabs) by pressing the [CANCEL] button.

5.3 Using the audio outputs

The C-180 comes with two audio outputs that may come in handy for two things:

· When you need to perform in a large venue and fear that the C-180's on-board amplification system is not powerful enough, or when you are asked to connect the C-180 directly to the PA system;

· To record your playing (either with or without Recorder backing) to cassette, MD, etc.

To do so, connect the C-180 as follows:
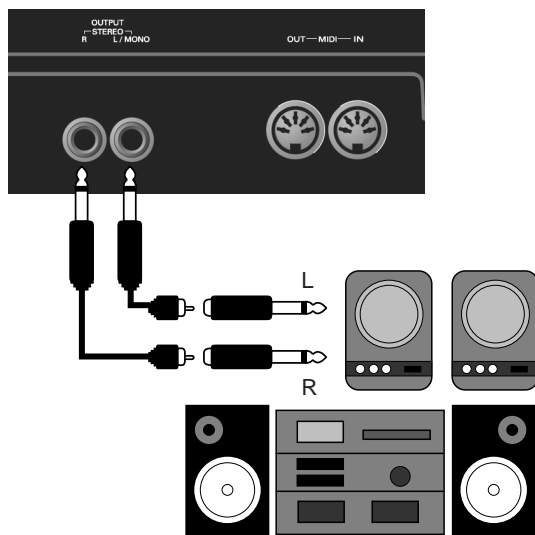
Cassette deck, MD recorder
external amplifier, mixing console

Note: If the external device is mono, use only the OUT-PUT L/MONO connector.

Note: Connecting jacks to the outputs does not switch off the internal amplification system.

5.4 Initializing your C-180 (Factory setup)

After working extensively with your C-180, you may want to recall the original factory settings.

· Initializing your C-180 means that all four memories M1 to M4 both in Organ and Orchestra mode will be replaced with the original settings except for the recorder songs that will be empty after initializing your C-180.

Here is how to initialize your C-180:

1. Switch Off your C-180.

2. Hold down the [SET] button while turning your C-180 back on again.

Once the 4 memorie indicators (M1-M4) start flashing, your C-180 has been succesfully initialized.

6. Connecting the C-180 to MIDI devices

Read this chapter if you wish to connect the C-180 to an external MIDI device.

If the C-180 is connected to a MIDI sequencer (Roland MT series or a computer with sequencer software), you can record your playing using that device. The Recorder songs, however, are not transmitted via MIDI.

When the C-180 is connected to an MT series sequencer, the rich variety of sounds built into the MT can be played from the C-180's keyboard.

About MIDI

MIDI, short for "Musical Instrument Digital Interface," was developed as a standard for the exchange of performance data between electronic instruments and computers.

The C-180 is equipped with two MIDI connectors to allow such exchange of performance data with external equipment and devices. Connecting the C-180 to other devices via these jacks provides you with an even greater variety of ways to use your instrument.

About the MIDI connectors

MIDI In connector—Use a MIDI cable (sold separately) to connect this port to the MIDI OUT connector of the external MIDI device.

MIDI messages sent from connected external equipment will be received here. As a result, the C-180 will produce sound, change tones, or perform other operations.

MIDI Out connector—Use a MIDI cable (sold separately) to connect this port to the MIDI IN connector of the external MIDI device. Performance data detailing what has been played on the keyboard, and other data, such as that generated when the optional footswitch or expression pedal is used, is transmitted from here to external MIDI devices.

6.1 Making the connections

Note: To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and switch off the power on all devices before making any connections.

1. Turn the volume down completely on all equipment.

2. Switch off the C-180 and any other device to be connected.

3. Use an optional MIDI cable to connect the external MIDI device to the MIDI connector on the C-180. Take a look at the connection examples.

4. You should also make the settings below as needed.

5. Turn on the power to all equipment.

6. Adjust the volume.

Connecting to a sequencer (Roland MT series)

Note: The MT-80s has no MIDI OUT connector.

Connecting to a MIDI sound module

6.2 MIDI functions supported by the C-180

The C-180 can transmit and receive various MIDI message types, some of which are straightforward, while others require some insight into the workings of the MIDI standard.

MIDI channels used by the C-180

The C-180 uses the following MIDI channels for sending and receiving MIDI messages:

ORGAN mode	Rx/Tx channel
Manual part	12
Bass part	14
ORCHESTRA mode	Channel
Bass part	3
Manual part	4
Layer part (see page 13)	5

These channels cannot be changed, so be sure to set the external device to the channel number of the desired C-180 part.

Note messages

The C-180 transmits and receives note messages that translate which keys you pressed on the keyboard.
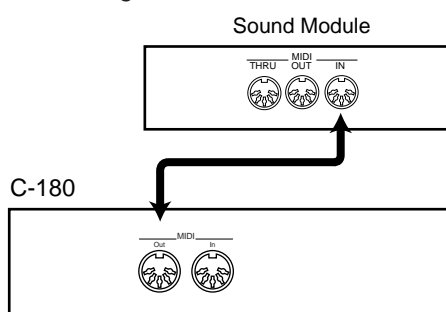
Program change, bank select messages

In Orchestra mode, pressing a tab to select the desired sound will cause the C-180 to send two bank numbers (Bank Select MSB & LSB) as well as a program change number. When receiving such a cluster, the C-180 selects the corresponding sound. Note that only the following numbers are recognized. The ones in the grey box can only be selected via MIDI, and are thus only received.

For Orchestra mode

	ORGAN BRILLIANCE ○	CC00	CC32	PC	ORGAN BRILLIANCE ●	CC00	CC32	PC
BASS	String Bass	00	00	55	Double Bass	00	00	44
	Electric Bass	00	00	36	Bassoon	00	00	71
MANUAL	Piano	00	00	01	— —			
	Electric Piano	00	00	05	Celeste	00	00	09
	Harpsichord	00	00	07	Coupled Harpsichord	08	00	07
	Chimes	00	00	115	Nylon Guitar	00	00	25
	Strings	00	00	50	Violin	01	00	41
	Slow Strings	00	00	55	Clarinet	00	00	72
	Harp	00	00	47	— —			
	Warm Brass	00	00	62	Brass	32	00	62
	Electric Organ	00	00	17	Oboe	00	00	69
	Church Choir	00	00	53	— —			
	Choir	10	00	53	Flute	00	00	74
(MIDI)	Trumpet	00	00	57				
	French Horn	00	00	61				
	Piano1 w	08	00	01				
	Fantasia	00	00	89				
	Church Bell	08	00	15				
	Soft pad	00	00	90				
	Nylon+Steel	09	00	26				
	Whistle	00	00	79				

Control changes

In Orchestra mode, the C-180 transmits and receives CC64 messages that describe when the optional SUSTAIN footswitch is pressed and released. Furthermore, the C-180 sends and receives CC11 messages that describe the movements of the EXPRESSION PEDAL.

Other control changes that the C-180 transmits are CC07 for the volume (Organ/Orchestral Bass & Layer) and CC91 to communicate the Reverb depth setting (see page 11).

Note: Some of the above MIDI messages are only available in Orchestra mode. See also the MIDI implementation chart at the end of this manual.

SysEx messages

The C-180 also transmits SysEx messages that have a rather complex structure and are thus only meaningful to seasoned MIDI enthusiasts. If you work with the internal Recorder or an external sequencer, it may, however, be possible to record them without even knowing what they look like. See your sequencer's manual for details.

If the sequencer does accept SysEx messages, you can also record the settings of the BASS and MANUAL tabs as well as of the temperament in Organ mode, and transmit these registration data back to the C-180 for realtime automation.

SysEx messages sent and received when the tilt tabs are operated in Organ mode:

F0h	Beginning of the SysEx string
41h	Roland manufacturer's ID
10h	Model ID (C-180)
30h	Instrument type (30= generic organ data)
12h	Data set

These data are followed by the SysEx body comprised of a Sub-Command byte, an optional Offset byte, 34 data bytes, the Checksum and "F7" (End of exclusive).

The Checksum value can be calculated using the formula $[128 - (Offset\ byte + data\ bytes)]$.

The data bytes respresent the new state of the bitmap. The registers (tilt tabs) are assigned to the values listed below.

SysEx assignments of the C-180's tilt tabs:

[MANUAL]	Byte	Bit	
	0	3	8' Principal
	1	1	8' Gemshorn
	1	0	8' Gedackt
	1	5	4' Octave
	1	6	4' Spitzflöte
	9	5	2 2/3 Nazard
	2	1	2' Super Octave
	2	3	1 1/3 Quintflöte
	2	6	IV Mixture
	3	2	8' Trompete
	4	4	Manual Temulant
[BASS]	21	4	16' Subbass
	22	2	8' Octave

7. Appendix

7.1 Troubleshooting

If you are encountering problems with the C-180, please read the section below before assuming that there is a malfunction.

The C-180 cannot be switched on

Is the adapter connected properly (see page 7)?

No sound is produced

Is the [VOLUME] slider set to the minimum position (see page 7)?

Are headphones connected (see page 7)? Disconnect them.

Cannot hear the BASS sound

Is the [BASS] slider set to the minimum position (see page 7)?

Does the indicator of one of the two BASS tabs light?

Cannot select orchestral sounds

Does the ORCHESTRA indicator light? Press the [ORCHESTRA] button to make its indicator light.

The organ sounds are not available

Does the ORCHESTRA indicator light? Press the [ORCHESTRA] button to make its indicator go dark.

Two sounds are produced when the keyboard is played

Have you layered two Tones (see page 13)?

The pitch of the keyboard sounds incorrect

Is the [PITCH] setting correct (see page 11)?

Is the Transpose setting correct (see page 12)?

Is the temperament setting correct (see page 11)?

The C-180 does not respond to your playing

Does the DEMO indicator light? Press its button to make it go dark (see page 8).

The recorded performances have been deleted

This happens if you wait longer than two weeks before switching the C-180 on again.

In Orchestra mode, some sounds are transposed one octave down when a BASS sound is selected

This is normal and intended to provide a more natural distribution of the pitches for the left and right sections.

The Manual sound is not available to the left of the split point

In Organ mode: did you select the split bass mode (see page 10)? Switch it off. In Orchestra mode, this is normal whenever you select a BASS sound.

Bass notes sound wrong/buzzing or vibration occurs

If you don't hear the problem in the *headphones*: When playing at high volumes, resonance may occur in the instrument itself, or in objects near the C-180. At times, other objects in the room, such as fluorescent lights or glass doors, could start vibrating. To minimize such unwanted resonance, please observe the following:

· Locate the instrument at least 10~15 cm away from the walls.

· Reduce the volume.

· Increase the distance from the object that is resonating.

If you can hear the problem in the *headphones*, there may be another reason. Please contact your dealer.

When the C-180 is connected to an external device

Are the connections between the C-180 and the MIDI sequencer or the other external device correct (see page 17)?

7.2 Suggested registrations

FLUTE	Gedackt 8'
FOUNDATIONS p	Gedackt 8' Spitzflöte 4'
FOUNDATIONS mf	Principal 8' Spitzflöte 4'
FOUNDATIONS f	Principal 8' Gedackt 8' Octave 4' Spitzflöte 4'

| FOUNDATIONS ff | Principal 8'
Gedackt 8'
Octave 4'
Spitzflöte 4'
Super Octave 2'
Mixture IV |
| FULL | Principal 8'
Gedackt 8'
Octave 4'
Spitzflöte 4'
Super Octave 2'
Mixture IV
Trompete 8' |

7.3 Demo song list

[M1] BAROQUE
TILT TAB	Title	Composer
Principal 8'	DORICA	Bach
Gemshorn 8'	CHORALE	Bach
Gedackt 8'	TRIO IN MAJOR	Bach
Octave 4'	FUGUE	Telemann

[M2] Bridal
TILT TAB	Title	Composer
Principal 8'	BRIDAL MARCH	Bach
Gemshorn 8'	AVE MARIA	Gounoud
Gedackt 8'	AVE MARIA	Schubert
Octave 4'	ALLEGRO	Bach

[M3] Largo
TILT TAB	Title	Composer
Principal 8'	REQUIEM INTROITUS	Mozart
Gemshorn 8'	CHORALE BWV626	Bach
Gedackt 8'	PASSACAGLIA	Bach
Octave 4'	LARGO	Händel

[M4] Classical
TILT TAB	Title	Composer
Principal 8'	VOLUNTAR	Stanley
Gemshorn 8'	TOCCATA	Paradisi
Gedackt 8'	"BALLO DEL GRAN DUCA"	Sweelinck
Octave 4'	SPRING	Vivaldi
Spitzflöte 4'	HARPSICHORD CONC.	Bach

7.4 Specifications

C-180: Roland Portable Organ

Keyboard
61 keys (velocity sensitive in Orchestra mode)
Velocity messages are always transmitted to the MIDI
OUT connector

Tone generation & sounds
PCM Sound Generation, 24-voice polyphony
Tones—The best PCM samples from the Roland GS
and Rodgers sound libraries

Manual organ tones
Principal 8', Gemshorn 8', Gedackt 8', Octave 4',
Spitzflöte 4', Nazard 2 2/3, Super octave 2', Quintflöte
1 1/3, Mixture IV, Trompete

Bass organ tones
Sub bass 16', Octave 8' (monophonic)

Orchestral tones
17 + 8 selectable via MIDI, 4 Bass tones (polyphonic)

Digital effect
Reverb with adjustable depth

Demo songs
17 complete songs

Panel controls
Volume slider, Bass volume slider,
13 tilt tabs with orange indicators,
11 buttons with indicators (except two),
Organ Brilliance button,
4 memory buttons for 2 x 4 registrations (Organ
mode: 4, Orchestra mode: 4), Set button,
Orchestra button

Transpose
–5/+6 semitones

Recorder
1 track, 4 song memories, records notes and settings

Connections
MIDI IN & OUT, Output Stereo (L/mono - Right);
Sustain, Expression Pedal, 2 headphone connectors

Amplification
7W + 7W rms
Speakers (12 cm full range)

Power supply
ACJ series adapter

Dimensions
963 (W) x 121 (H) x 321 (D) mm

Weight
7.5kg (C-180 only)

Options
Stand KS-C-180 (911 x 670 x 397 mm),
PK-5 dynamic MIDI pedal unit,
DP-2, DP-6, or BOSS FS-5U footswitch,
EV-5 or FV-300L expression pedal,
RH-25, RH-50 headphones

*Note: In the interest of product improvement, the specifi-
cations and/or appearance of this instrument are subject to
change without prior notice.*

ENGLISH