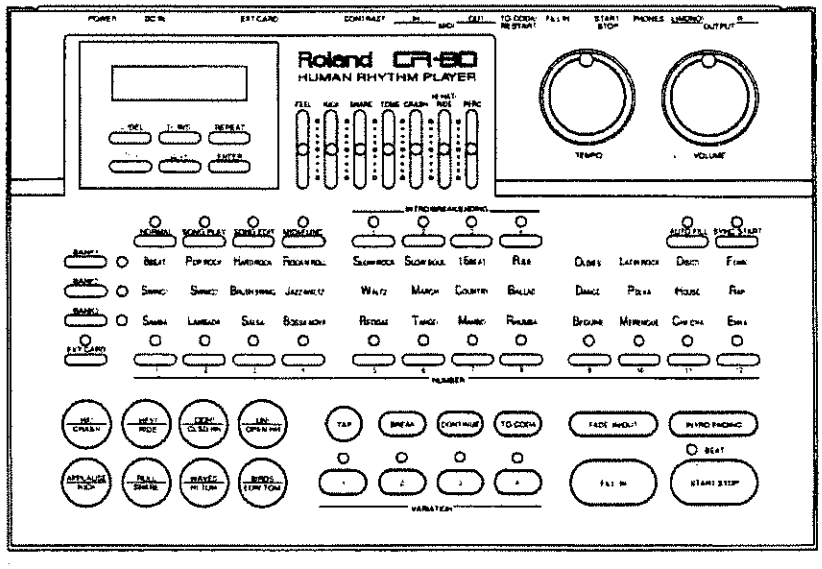
Roland

HUMAN RHYTHM PLAYER

CR-80

OWNER'S MANUAL



CR-80 HUMAN RHYTHM PLAYER

OWNER'S MANUAL

Thank you for purchasing the **Roland CR-80 Human Rhythm Player.**

The **CR-80** is a pre-programmed rhythm machine that allows you to enjoy a wide variety of rhythm patterns. To take full advantage of this unit, please read the owner's manual carefully.

FEATURES

- The **CR-80** contains **36** different **"Rhythm Styles."** A Rhythm Style contains **4** different rhythm pattern variations for each of five pattern types **[Variation/Fill-in/Break/Intro/Ending].**
- The **CR-80** contains **69** quality percussion sounds and **8** sound effects that provides **16 bit** dynamic range.
- The Feel Slider controls the rhythmic feel of the performance.
- A sequence of rhythm patterns makes up a song. You can use up to **500** parts of performance data (rhythm patterns and repeat marks) to make a song.
- The **CR-80** features MIDI IN/OUT connectors which allow you to sync the **CR-80** to an external sequencer or to use the **CR-80** as a sound module for another rhythm machine.
- The **CR-80** can use Music Style Cards from the **TN-SC1 series.**

IMPORTANT NOTES

Be sure to use only the adaptor supplied with the unit. Use of any other power adaptor could result in damage, malfunction, or electric shock.

Power Supply

- When making any connections with other devices, always turn off the power to all equipment first; this will help prevent damage or malfunction.
- Do not use this unit on the same power circuit with any device that will generate line noise, such as a motor or variable lighting system.
- The power supply required for this unit is shown on its nameplate. Ensure that the line voltage of your installation meets this requirement.
- Avoid damaging the power cord; do not step on it, place heavy objects on it etc.
- When disconnecting the AC adaptor from the outlet, grasp the plug itself; never pull on the cord.
- If the unit is to remain unused for a long period of time, unplug the power cord.

Placement

- Do not subject the unit to temperature extremes (eg. direct sunlight in an enclosed vehicle). Avoid using or storing the unit in dusty or humid areas or areas that are subject to high vibration levels.
- Using the unit near power amplifiers (or other equipment containing large transformers) may induce hum.
- This unit may interfere with radio and television reception. Do not use this unit in the vicinity of such receivers.
- Do not expose this unit to temperature extremes (eg. direct sunlight in an enclosed vehicle can deform or discolor the unit) or install it near devices that radiate heat.

Maintenance

- For everyday cleaning wipe the unit with a soft, dry cloth (or one that has been slightly dampened with water). To remove stubborn dirt, use a mild neutral detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.
- Never use benzene, thinners, alcohol or solvents of any kind, to avoid the risk of discoloration and/or deformation.

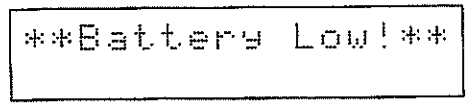
Additional Precautions

- Protect the unit from strong impact.
- Do not allow objects or liquids of any kind to penetrate the unit. In the event of such an occurrence, discontinue use immediately. Contact qualified service personnel as soon as possible.
- Never strike or apply strong pressure to the display.
- Should a malfunction occur (or if you suspect there is a problem) discontinue use immediately. Contact qualified service personnel as soon as possible.
- To prevent the risk of electric shock, do not open the unit or its AC adaptor.

Memory Backup

- The unit contains a battery which maintains the contents of memory while the main power is off. The expected life of this battery is 5 years or more. However, to avoid the unexpected loss of memory data, it is strongly recommended that you change the battery every 5 years.

  Please be aware that the actual life of the battery will depend on the physical environment (especially temperature) in which the unit is used. When it is time to change the battery, consult with qualified service personnel.
- When the main power is on, the following message may appear in the display: This means that the battery is weak and that the contents of memory may have already been lost.



- Please be aware that the contents of memory may at times be lost; when the unit is sent for repairs or when by some chance a malfunction has occurred. Important data should be written down on paper. During repairs, due care is taken to avoid the loss of data. However, in certain cases, (such as when circuitry related to memory itself is out of order) we regret that it may be impossible to restore the data.

CONTENTS

PANEL DESCRIPTIONS

FRONT PANEL

1. Display

This shows performance data, parameter values, etc.

2. ◄ /Delete, ► /Insert Keys

Use these keys to select a parameter in the MIDI/Function mode. In the Song Edit mode, these keys delete/insert parts.

3. ▼/-1, ▲/+1 Keys

These keys are mainly used for setting a parameter value in the MIDI/Function Mode. To change the value quickly, press ▼/-1 (▲/+1) while holding ▲/+1 (▼/-1) down.

4. Repeat Key

Use this key to set the Repeat function in the Song Edit mode.

5. Enter Key

This key is mainly used for entering Parts in the Song Edit mode.

6. Level Slider

This slider adjusts the volume balance of each percussion sound.

7. Feel Slider

This slider controls the rhythmic feel of the performance.

8. Tempo Control Knob

This knob changes the tempo of the rhythm.

9. Volume Control Knob

This knob adjusts the overall volume (volume of the Stereo Out Jacks/Headphone Jack).

10. Normal Mode Key

This key selects the Normal mode which allows you to change rhythm patterns while a pattern is playing.

11. Song Play Mode Key

This key selects the Song Play mode that allows you to play the song you have programmed in the Song Edit mode.

12. Song Edit Mode Key

This key selects the Song Edit mode that allows you to make a song by arranging a number of rhythm patterns.

13. MIDI/Function Mode Key

This key selects the MIDI/Function mode that allows you to change the MIDI settings and select a sound to be played from the Key Pad.

14. Bank Keys 1 - 3

Use one of these keys and a Number key to select a Rhythm Style.

15. External Card Key

Press this key when you use a Music Style Card (TN-SC1 series).

16. Number Keys 1 - 12

Use one of these keys and a Bank key or External Card key to select a Rhythm Style.

17. Intro/Break/Ending Keys 1-4

Using the relevant key, select an Intro, Break or Ending patterns.

18. Auto Fill-in Key

With this function on, fills will be automatically inserted before playing the variation pattern you select.

19. Sync Start Key

With this function on, the CR-80 starts playing when a connected MIDI keyboard is played.

20. Key Pad

Use these pads to play the sounds of the CR-80.

21. Tap Key

Tap the tempo you require on this key. The CR-80 will play the selected rhythm at that tempo.

22. Break Key

If you press this key while a rhythm is playing, a break pattern will be inserted into the rhythm. If you press this key during a break, an accent shot will be played.

23. Continue Key

Press this key to finish the break pattern and go back to the previous rhythm.

24. TO CODA Key

Press this key to exit a endless repeated portion of a song.

25. Variation Keys 1 - 4

Select one of the four Variation patterns using the relevant key.

26. Fade In/Out Key

Use this key to fade in or out the rhythm currently playing.

27. Intro/Ending Key

Use this key to insert an intro or ending pattern.

28. Fill-in Key

If you press this key while playing a rhythm, a fill will be inserted into the rhythm.

29. Start/Stop Key

This key starts or stops the play.

REAR PANEL

1. Stereo Out Jacks (L(MONO), R)

These are stereo output jacks for audio signals. Connect an amplifier, PA system, radio cassette unit etc. to these jacks. For monaural output, use the L (MONO) jack only.

2. Headphone Jack

Connect stereo headphones to this jack. Even when headphones are connected, audio signals are output from the Stereo Output jacks.

3. Start/Stop Jack

Connect a foot pedal to this jack, and the pedal will function like the Start/Stop key on the front panel.

4. Fill-in Jack

Connect a foot pedal to this jack, and the pedal will function like the Fill-in Key on the front panel.

5. To Coda/Restart Jack

Connect a foot pedal to this jack, and the pedal will function like the To Coda Key (in the Song Play mode).

It can also be used to go back to the beginning of the rhythm pattern (in the Normal mode).

6. MIDI Connectors (IN, OUT)

Connect external MIDI devices using these connectors.

7. Contrast Control Knob

This knob adjusts the contrast of the display.

8. External Card Slot

Insert a Music Style Card (TN-SC1 series) into this slot, and the CR-80 can play the rhythm patterns on the card.

9. Cord Hook

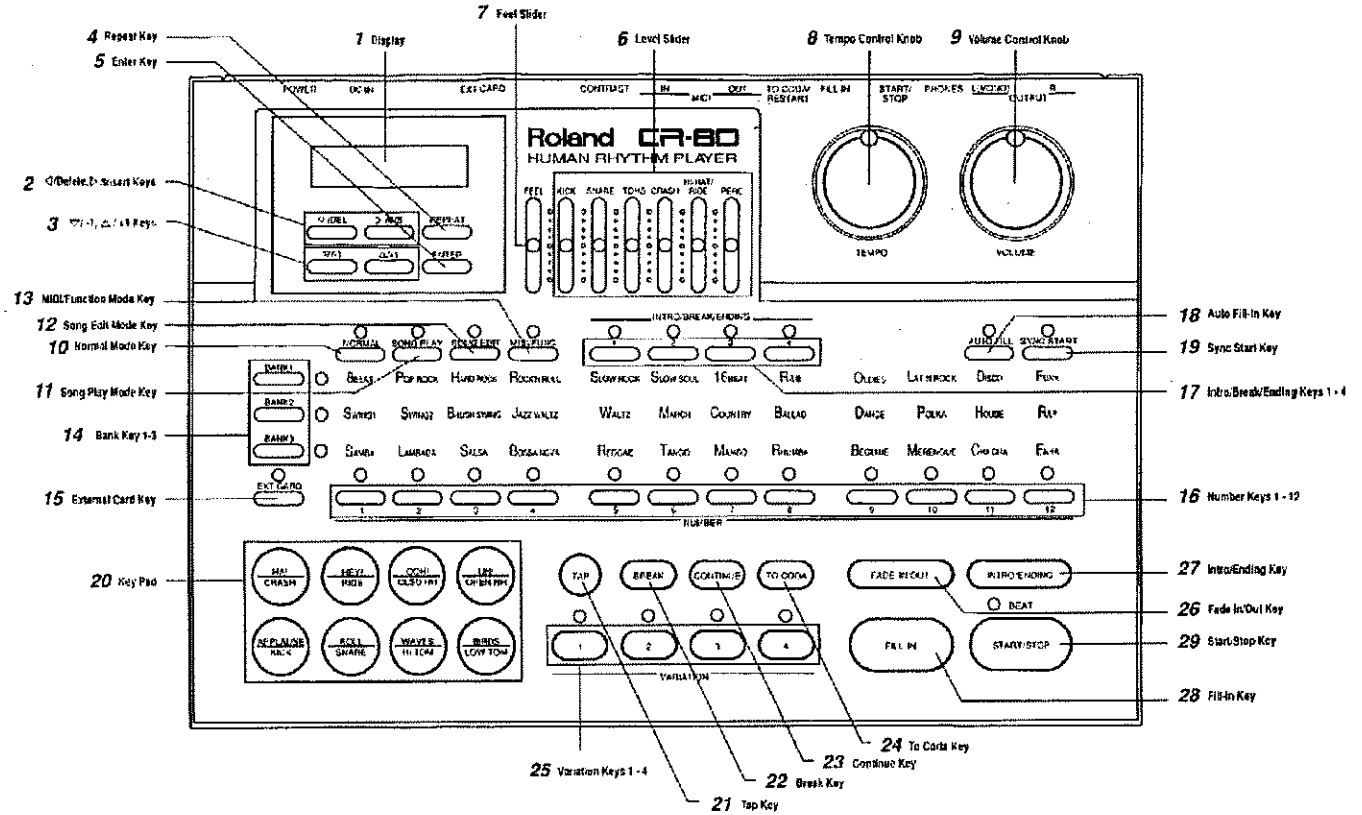
Loop the AC adaptor cord around this hook so that the cord cannot be accidentally disconnected.

10. AC Adaptor Jack

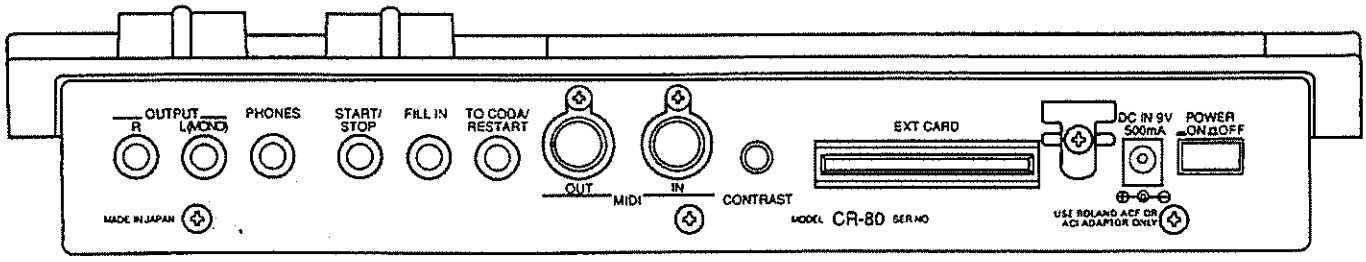
Connect the supplied AC adaptor to this jack.

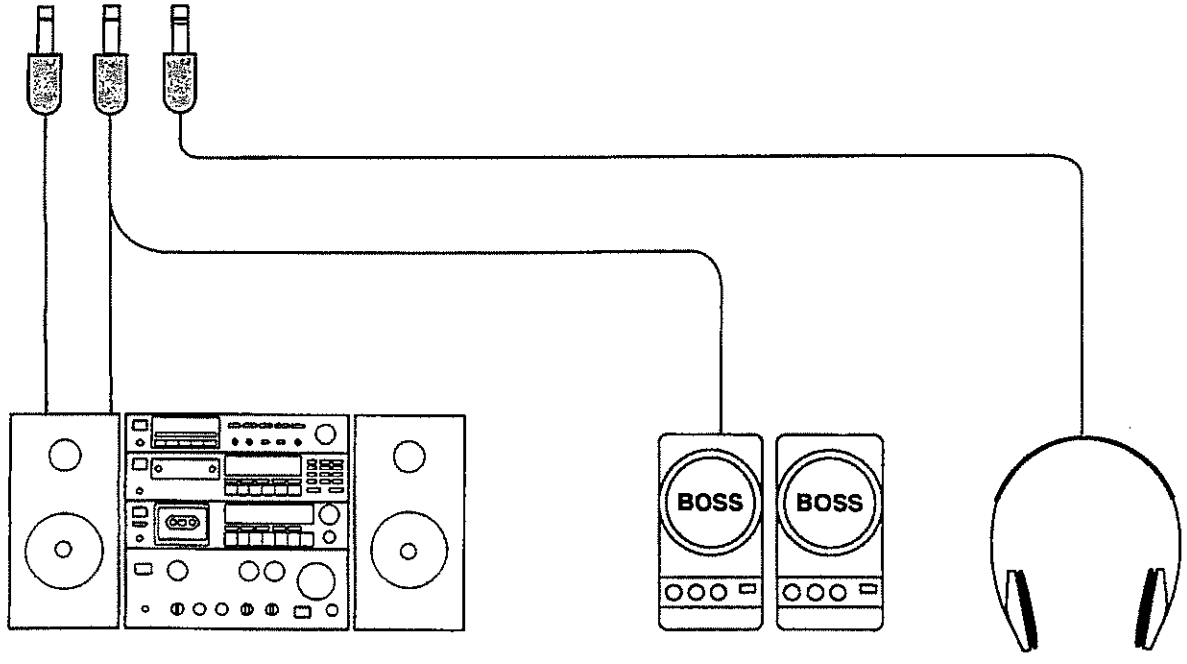
11. Power Switch

This switch turns the unit on and off.



BASIC CONNECTIONS





Audio Set

Monitor Amplifier

Headphone

4 Modes of the CR-80

The CR-80 has 4 operating modes.

- **NORMAL MODE**

  This mode allows you to change rhythm patterns while a pattern is playing. This is the mode you will normally use.

- **SONG PLAY MODE**

  This mode allows you to play the song you have made in the Song Edit mode.

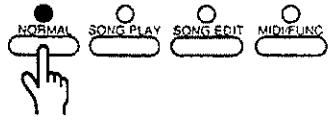
- **SONG EDIT MODE**

  This mode allows you to make a song (rhythm part) by creating a sequence of rhythm patterns.

- **MIDI/FUNCTION MODE**

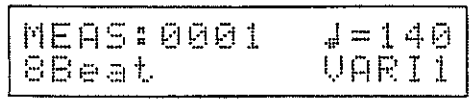
  This mode allows you to set MIDI parameters or select a sound to be played with the Key Pad.

To select one of the 4 modes, press the relevant key (NORMAL), (SONG PLAY), (SONG EDIT) or (MIDI/FUNC) when the **CR-80** is not playing. The indicator will light.



1. Power-on.

Connect the units as shown in "Basic Connections" on page 7. Turn on the **CR-80** and then the amplifier. This unit is equipped with a circuit protection device. A brief interval after power up is required before the unit will operate.



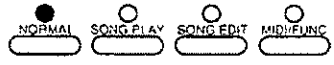
** If the memory-backup battery is weak , the warning indication "**Battery Low!**" will flash for 3 seconds. In this case, have the battery replaced at the shop where you purchased the unit, or at the nearest Roland service station.*

2. Basic Playing

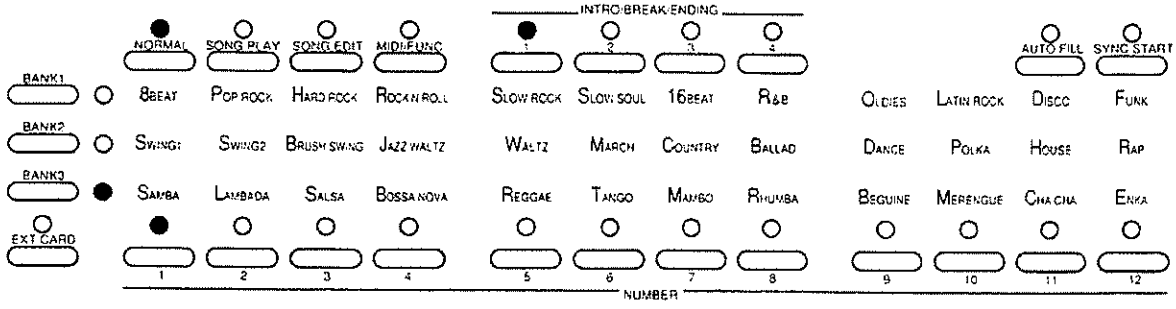
(1) Selecting a Rhythm Style and Playing

The **CR-80** contains **36** different Rhythm Styles. You can select whichever one you like.

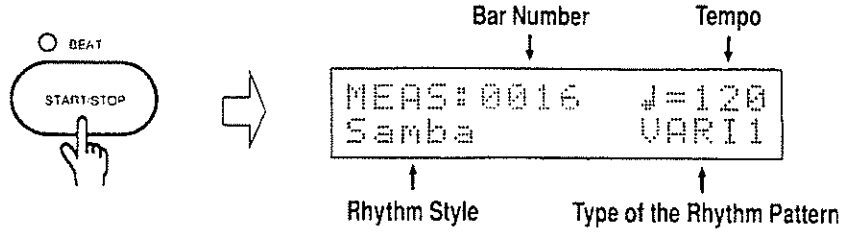
1) Press (NORMAL) to select the Normal mode (the (NORMAL) indicator will light).



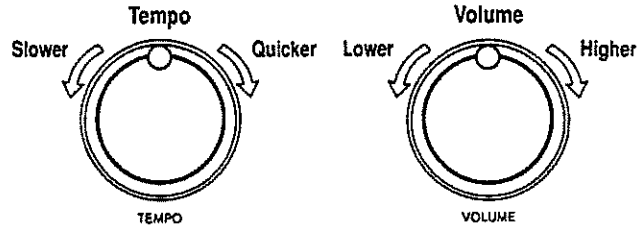
2) Select the Rhythm Style you wish to play using (BANK) (1 - 3) and (NUMBER) (1 - 12). For example, to select **SAMBA**, press (BANK 3) and (NUMBER 1) .



3) Press (START/STOP), and a 4 bars rhythm pattern will be played repeatedly.



4) Adjust the tempo with the **TEMPO** control knob and the volume with the **VOLUME** control knob. (For tempo adjusting, refer to the next section).



Even while a rhythm pattern is playing, you can select a different Rhythm Style. The new rhythm pattern you have selected will start playing from the next bar.

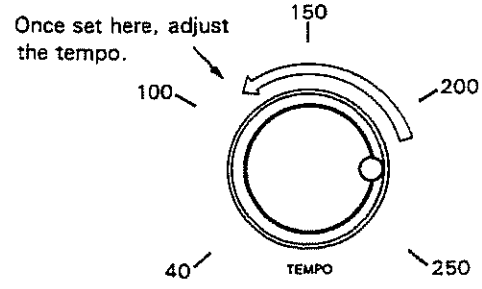
5) Press (START/STOP) to stop playing.

Each time you select a new Rhythm Style in step 2, the **CR-80 transmits MIDI message (Control Change and Program Change messages) that represent selected Rhythm Styles. (For a detailed explanation, refer to page **54**).*

(2) Tempo Write

The **CR-80** allows you to write an individual tempo that suits the rhythm performance of each Rhythm Style. The tempo you set in the Normal mode will be automatically written into the Rhythm Style currently in use. If you wish to play a rhythm pattern at the tempo written in memory, select the Rhythm Style with the **CR-80** stopped, then press (START/STOP). If you wish to change the tempo, first rotate the Tempo control knob to the position of the tempo currently written in memory to cancel it, then set a new tempo you like.

Example) When the tempo of the Rhythm Style is 120

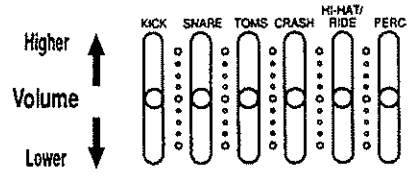


**If you change tempo in a mode other than the Normal mode, the tempo will not be written into memory.*

The tempo written in each Rhythm Style will be retained in memory even after the **CR-80 is switched off.*

(3) Adjusting the Volume Balance

The Level Sliders allows you to adjust the volume balance of the percussion sounds played in rhythm patterns or with the Key Pad.



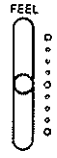
Percussion sounds of the **CR-80** are divided into 6 groups. The volume balance can be adjusted in each group. With the Level Sliders set to the lowest position, no sound is heard. How the percussion sounds are divided into groups is shown on page **52**.

The volume balance you have set will be automatically written into the Rhythm Style currently being selected. Therefore, if you call the Rhythm Style later, it will be played with the same volume balance.

** The volume balance of each Rhythm Style will be retained even after the unit is switched off.*

(4) Adjusting the Feel

The rhythmic feel of each rhythm pattern performance can be controlled with the Feel Slider.



Moving the slider will change the rhythmic feel of the performance for the percussion sound indicated in the "**Feel**" column ("○") "**Percussion Sounds Table**" on page **51**.

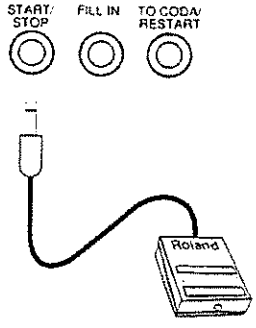
The Feel setting will be automatically written into the Rhythm Style currently selected.

** The Feel setting of each Rhythm Style will be retained even after the unit is switched off.*

[Start/Stop with the Foot Pedal]

You can start or stop the playing using an optional foot pedal.

Connect the foot pedal to the **Start/Stop** Jack as shown in the diagram.

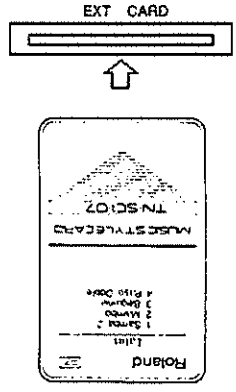


Pressing the foot pedal will start the playing, and pressing it again will stop it.

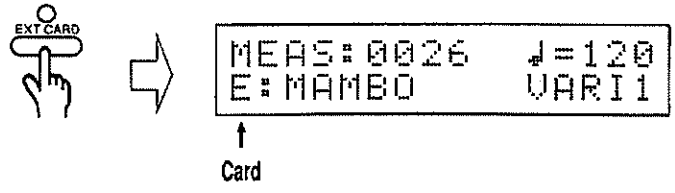
[How to use a Music Style Card]

The rhythm part of Music Style Cards (**TN-SC1 series**) can be played on the **CR-80**. One card contains up to 8 different rhythms.

1) Insert the Music Style Card into the **EXT CARD** slot on the rear of the **CR-80**. Be sure to insert the card completely.



2) Press (**EXT CARD**), then select a rhythm with (**NUMBER**) **1-12**.

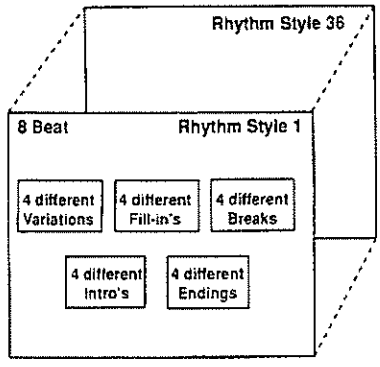


3) Press (**START/STOP**) to start the playing and press it again to stop it.

* (**NUMBER**) **9-12** *contain the same rhythms as* (**NUMBER**) **1-4.** *Also, on cards that includes only 4 different rhythms,* (**NUMBER**) **5-8** *contains the same rhythms as* (**NUMBER**) **1-4.**
* **Variation/Fill-in/Intro/Ending** *can be played when using a Music Style Card.*
* *Only 1 and 2 can be used for Variation and Fill-in, and only 1 can be used for Intro and Ending patterns. Break patterns cannot be played.*
* *Only the rhythm parts of Music Style Cards can be played.*

3. Playing Various Rhythm Patterns

The **CR-80** allows you to select one of the four different rhythm pattern variations for each of five pattern types [**Variation/Fill-in/Break/Intro/Ending**] in a Rhythm Style.

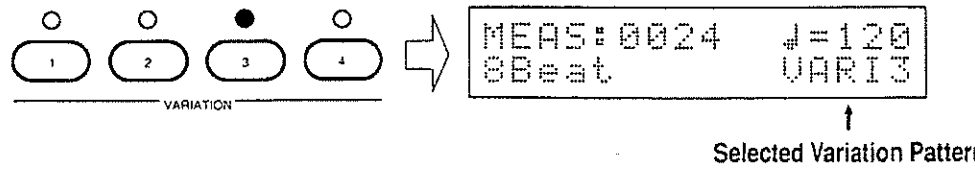


* *Every time you select* ***Variation, Fill-in, Break, Intro or Ending,*** *the* ***CR-80*** *transmits a corresponding MIDI message (Control Change and Program Change messages) that represents what rhythm pattern has been selected. (Page* ***54****)*

(1) Variation

Variation is a basic rhythm pattern in a Rhythm Style. In a Normal mode, a Variation pattern will be played repeatedly.

1) Select a Variation pattern to be played by pressing the relevant (VARIATION) (1 - 4).



Selected Variation Pattern

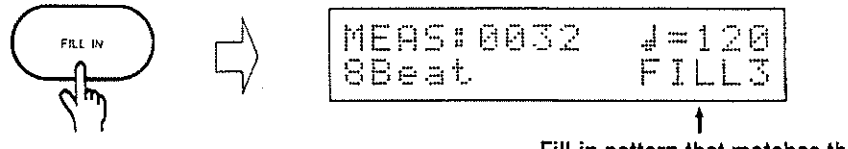
2) Press (START/STOP) and a rhythm pattern of 4 bars will be played repeatedly.

Pressing a different (VARIATION) will start a new Variation pattern from the next bar.

(2) Fill-in

A Fill-in pattern is used before the rhythm changes drastically, such as the junction of two phrases or before entering into a main rhythm. Four different patterns are available depending on the Variation pattern.

Pressing (FILL IN) while a rhythm is being played will start the Fill-in pattern that corresponds to the Variation pattern currently being used. For example, if Variation pattern 3 is selected, Fill-in pattern 3 will be played.



Fill-in pattern that matches the current variation pattern

If you press (FILL IN) just before the next bar begins, the fill-in will be played from the beginning of the next bar. (After the 4th beat in a rhythm pattern in 4/4 time, and after the 3rd beat in a rhythm pattern in 3/4 time).

When the Fill-in pattern has been played, the previous rhythm pattern will begin playing again.

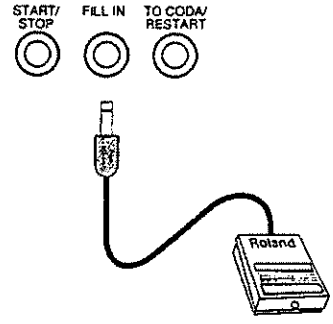
If you press (FILL IN) with the rhythm stopped, the fill-in will be played before playing the variation pattern.

** The Fill-in pattern is one bar in length.*

[Adding a Fill-in using a foot pedal]

Using a foot pedal, you can insert a Fill-in pattern.

Connect a foot pedal to the **FILL IN** Jack as shown below.

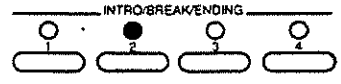


Press the foot pedal and a Fill-in pattern will be played.

(3) Break

This is a rhythm pattern used to"break" or divide a rhythm which is playing. A break can be added to introduce new sections or new solos. In the Break mode, a Break pattern will be played repeatedly.

1) Select a Break pattern by using (INTRO/BREAK/ENDING) 1 - 4.



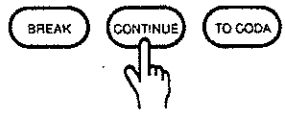
2) To select the Break mode, press (BREAK) while a rhythm is playing. By doing this, a Break pattern will be played repeatedly from the next bar. There are two types of Break patterns composed of 1 or 2 bars depending on the Rhythm Style.

Selected Break Pattern

If you press (BREAK) in the Break mode, an Accent Shot (Kick, Snare, etc.) will be played.

** The sound of the Accent Shot will vary depending on the Rhythm Style.*

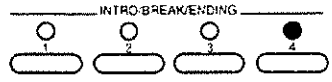
3) Press **CONTINUE**, and the Variation pattern currently selected will start from the next bar.



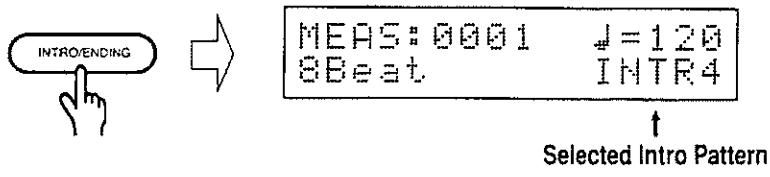
(4) Intro

This is a rhythm pattern played at the beginning of a song. It serves to introduce the song before main rhythm patterns start playing.

1) With the rhythm stopped, select an Intro pattern using **INTRO/BREAK/ENDING** 1 - 4.



2) Press **INTRO/ENDING** and the Intro pattern is played, then the Variation pattern currently selected is played repeatedly.

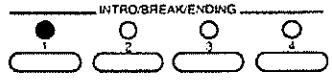


** There are different types of Intro patterns composed of 1, 2, or 4 bars depending on the Rhythm Style.*

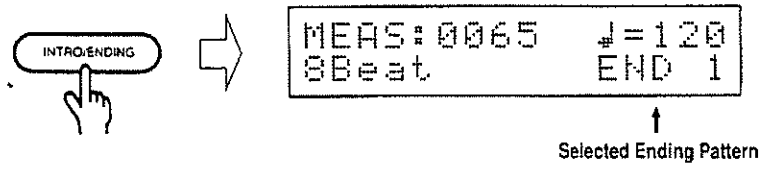
(5) Ending

This is the rhythm pattern used to conclude a song.

1) Select an Ending pattern using **INTRO/BREAK/ENDING** 1 - 4.



2) Press **INTRO/ENDING** while a rhythm is playing, and the Ending pattern will be played beginning from the next bar. When the Ending pattern has been played, the playing is stopped.



** There are different types of Ending patterns composed of 1, 2, or 4 bars depending on the Rhythm Style.*

4. Adding Variety to the Rhythm

(1) Fade In/Out — *Gradually increases or decreases the volume of a rhythm pattern as it is playing.*

This function allows you to start the playing with the volume gradually increasing (Fade-in) or finish the playing with the volume gradually decreasing (Fade-out).

·FADE IN

1) With the rhythm stopped, select a Variation pattern using (VARIATION) 1 - 4.

2) Press (FADE IN/OUT), and the selected Variation pattern will be played with the volume gradually increasing. The rhythm pattern indication in the display will flash.

·FADE OUT

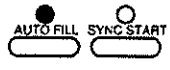
Press (FADE IN/OUT) while a rhythm is playing, and the volume will gradually decrease until no sound is heard with the rhythm pattern indication in the display flashing. At this point, the rhythm will stop.

* *Applause, snare roll, waves and birds (P.20) will be played at a specific volume level even during fade in/out.*

(2) Auto Fill-in — *inserts a fill when you change Variation patterns*

When you change Variation pattern, the Auto Fill-in function automatically inserts a fill before playing the new Variation pattern.

1) Press (AUTO FILL) (the indicator will light).



2) Press (VARIATION) **1-4** while a rhythm is playing. The **CR-80** will insert a fill, and then the new Variation pattern will start playing.

The Fill-in pattern played here corresponds to the previous Variation pattern. For example, if you change Variation 1 to Variation 2, Fill-in 1 is played and when changing Variation 4 to 3, Fill-in 4 is played.

* *When you select the same Variation pattern currently being played, a Fill-in will be played.*

3) To cancel the Auto Fill-in function, press (AUTO FILL) again. The indicator will go out.

(3) Tap Tempo — *Tempo setting by tapping a key*

This function allows you to set a tempo of a rhythm by tapping a key. In this way, you can easily set the desired tempo.

With the **CR-80** stopped, tap (**TAP**) four times (for a 4 beat rhythm pattern) at the desired tempo. Tap (**TAP**) three times for a 3 beat rhythm pattern.

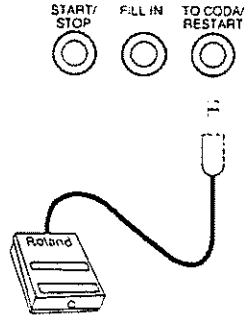
The interval between key taps will be used to set the tempo of the rhythm.

** If the detected tempo exceeds the range of 40 - 250 beats per minute, it will be ignored.*

(4)Restart — *Synchronizing rhythm patterns using a foot pedal*

The **CR-80** allows you to control rhythm patterns using a foot pedal. When there is timing gap between the **CR-80** and another instrument, this function automatically returns the rhythm pattern to the beginning each time you press the foot pedal.

Connect a foot pedal to the **TO CODA/RESTART** jack on the rear of the **CR-80.**



Press the foot pedal when a rhythm is playing in the Normal mode, and the **CR-80** will automatically return to the head of the rhythm pattern.

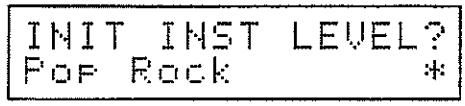
** In the Song Play mode, the foot pedal works differently. (See page 31)*

5. Initializing the Volume Balance

The **CR-80** allows you to return the volume balance you have edited for each Rhythm Style (page 11) to the initial value.

1) With the **CR-80** stopped, press (**MIDI/FUNC**) to select the following display.

2) Select the Rhythm Style to be initialized using (**BANK**) **1-3**, (**EXT CARD**) and (**NUMBER**) **1-12**.



If you have selected the Rhythm Style whose volume balance had been edited, a " * " mark will appear in the far right of the display.

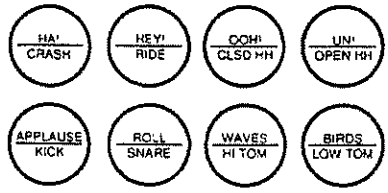
3) Press (**ENTER**) and the volume balance is returned to the initial value.

To cancel the initializing mode, press (**NORMAL**) in stead of (**ENTER**).

4) Press (**NORMAL**) to return to the Normal mode.

PLAYING THE CR-80 WITH THE KEY PADS

Using the eight key pads, you can play the percussion sounds of the **CR-80** at any time. You can add a cymbal or tom sound to the rhythm, or create original rhythm patterns by playing the key pads by themselves.



The percussion sounds which you can use for key pad performance include sound effects (written on the upper line of the key pads) and drum sounds (written on the lower line). The drum sounds include 7 different drum sets.

Effect Sounds		4 different human voices/applause/ snare roll/waves/birds
Drum Sets	DRY/U＊DRY	Basic voices
	ROOM/U＊ROOM	Sounds that include reverb
	POWER/U＊POWER	Sounds that include ambience
	ELECTRIC/U＊ELEC.	Voices of the Roland Rhythm Composer TR-808
	JAZZ/U＊JAZZ	Drum voices for Jazz
	BRUSHES/U＊BRUSHES	Sounds played using a brush
	MT-E-CM	Sounds for the Roland Multi Timbre Sound Module MT-32 etc.

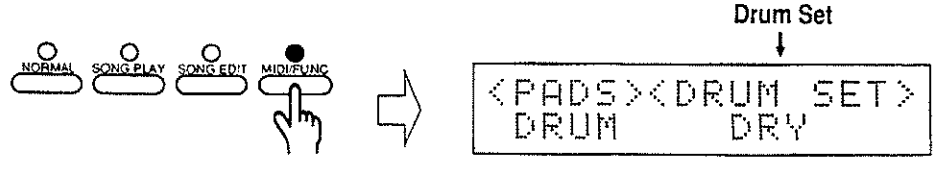
＊ *The drum sets with the "U＊" mark contain the same drum voices. Refer to page* ***40****.*

If you hold down the key pad of the applause, snare roll, waves and birds sounds included in the sound effects group for a while, the sound will keep playing even after you release your finger from the key pad.

If you wish to stop the sound, press the key pad again. The snare roll sound will change to a kick and crash cymbal.

• Selecting a Percussion Sound to be played with the Key Pads

1) Press (MIDI/FUNC) until the following display appears.



2) Press ◀/DEL to move the cursor (flashing) to the far left of the display.

3) Select the Drum Set (**DRUM**) or Sound Effect group (**EFCT**) using ▼/-1 or ▲/+1.

When you have selected the Sound Effect group, press NORMAL to return to the Normal mode, and proceed to step 6).

When you have selected one of the drum sets, proceed to step 4.

4) Move the cursor to the far right with ▶/INS, then select a drum set you like with ▼/-1 and ▲/+1.

5) Press NORMAL return to the Normal mode.

6) Play the Key Pads to hear the percussion sound you have selected.

* *The drum set "**MT-E-CM**" contains the same percussion sounds as "**DRY**". For a detailed explanation on using the **MT-E-CM** drum set, refer to page **41**.*
* *The Key Pad sound you have selected will be retained even after the **CR-80** is switched off.*
* *When you use the **CR-80** as a MIDI sound module, the drum set you select here will be played. (See page **40**.)*
* *Every time you select a drum set in step 4, a MIDI message (Control Change and Program Change messages) that represents the new drum set will be transmitted. (See page **54**)*

You can make a song by arranging rhythm patterns in a sequence. Four songs can be programmed using up to **500 PARTS** each.

❑ WHAT IS A PART

A song is made of rhythm patterns and two kinds of repeat marks (repeat begin/end). Rhythm patterns and repeat marks are called Parts. These Parts are numbered from the beginning of a song to the end.

Part Number	001	002	003	004	005	006
	8 Beat	8 Beat	8 Beat	8 Beat	Pop Rock	Pop Rock
	Intro 1	Variation 2	Variation 3	Fill-in 4	Variation 1	Fill-in 3

❑ Variation Programming

When programming a Variation pattern (consisting of 4 bars), each of the four bars is counted as one Part. A song is divided into sections, each of which contains 4 Parts. However, in a song, the Parts are numbered consecutively from beginning to end.

Part Number	001	002	003	004	005	006	007	008	009	010	011	012	013
Bar number that corresponds to the variation pattern.	1	2	3	4	1	2	3	4	1	2	3	4	1

When you enter the first measure of the Variation pattern into the song, it must be placed in the first part of a section ie. in part number 1, 5, 9, 13···.

When you enter the second measure of the Variation pattern into the song, it must be placed in the second part of a section ie. in part number 2, 6, 10, 14···.

The following shows some examples of programming a Variation pattern.

Example 1) To simply enter a 4 bar Variation

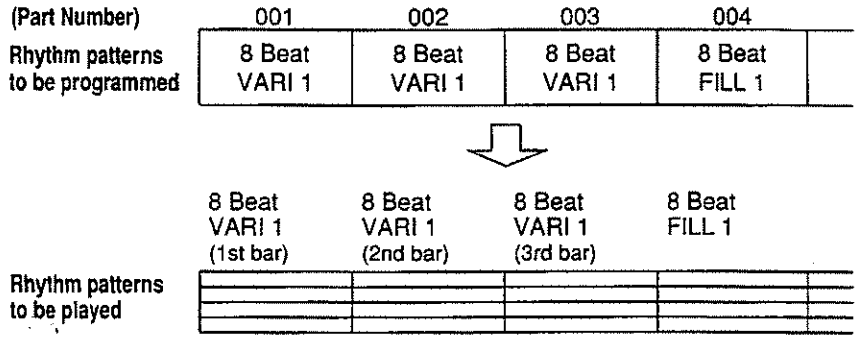
As shown below, enter a same Variation pattern four times.

(Part Number)	001	002	003	004
Rhythm patterns to be programmed	8 Beat VARI 1	8 Beat VARI 1	8 Beat VARI 1	8 Beat VARI 1

	8 Beat VARI 1 (1st bar)	8 Beat VARI 1 (2nd bar)	8 Beat VARI 1 (3rd bar)	8 Beat VARI 1 (4th bar)
Rhythm patterns to be played				

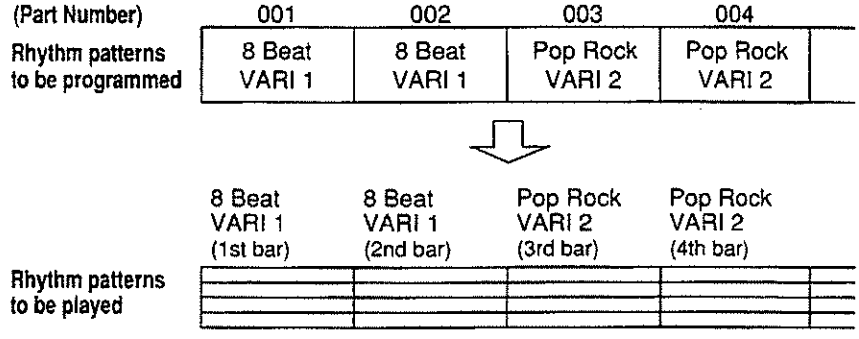
Example 2) To enter a Fill-in in the 4th bar

Enter a Variation pattern three times, then enter the Fill-in pattern.



Example 3) To combine different Variation patterns

You can make a completely new rhythm pattern by entering a different Variation pattern into each part of the section.

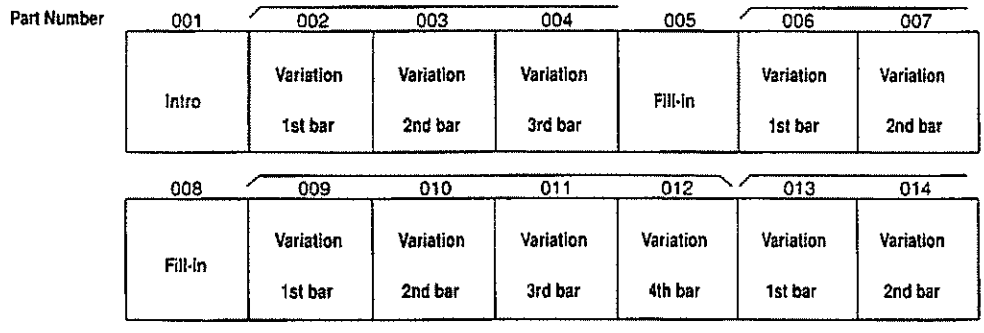


Even when different rhythm patterns are programmed as above.

4 bars are still counted as one section.

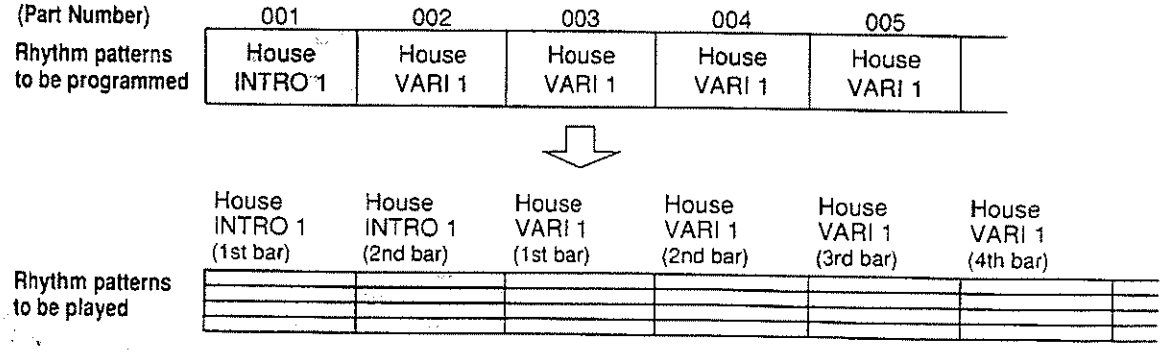
Example 4) When a rhythm pattern other than Variation is entered.

If you enter a repeat mark or a rhythm pattern (Intro/Fill-in/Break/Ending) other than a Variation in the beginning or middle of a song as shown below, the next Part will be counted as the 1st bar of the new section.



❑ Entering Intro/Fill-in/Break/Ending Patterns

An Intro (1-4 bars), Ending (1-4 bars), Fill-in (1bar) or Break (1 or 2 bars) pattern which is played in the Normal mode is counted as one Part. For instance, a 2 bars Intro pattern played in the Normal mode is counted as one Part.

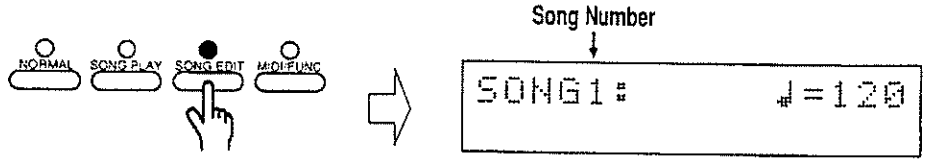


That is, the number of bars included in one Part differs depending what kind of rhythm pattern is entered in that Part.

1. Programming a Song

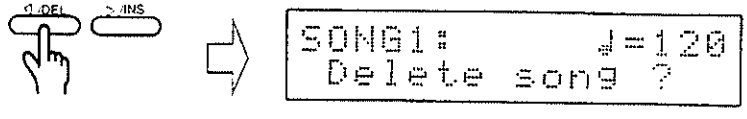
(1) Song Entry

1) Press (SONG EDIT) (with the **CR-80** stopped).



2) Select a song number (1 - 4) with (▼/-1) and (▲/+1).

3) Press (◀/DEL) and you will be asked whether you wish to delete the existing data.

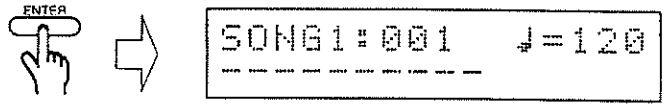


** If there is no data in the song, the display will read "No song data." for a few seconds. In this case,proceed to step 5.*

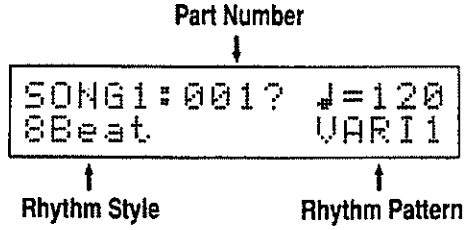
4) To delete the existing data in the song, press (ENTER).

** If you wish to retain the data, press (◀/DEL) again and repeat from step 2.*

5) Press (ENTER) to return to the Song Entry Display.



6) Select a Rhythm Style using (BANK) 1-3 and (NUMBER) 1-12.



* *No rhythm pattern can be selected from a Music Style Card.*

7) Select a rhythm pattern using (VARIATION) 1-4.

Pressing (START/STOP) will play the selected rhythm pattern. If you wish to select a different rhythm pattern, repeat step 7. If you wish to change the rhythm style, repeat from step 6.

8) Press (ENTER).

The rhythm pattern is entered in the song and the Part indicator advances by one.

Repeat steps 6 - 8 until you have completed the song.

9) Press (START/STOP) to stop the playing.

If you wish to program another song, repeat from step 1.

10) Press (NORMAL) to return to the Normal mode.

* *The song you have made will be retained even after the **CR-80** is switched off.*

(2) Fill-in/Break/Intro/Ending Pattern Selection

To enter a Fill-in, Break, Intro or Ending pattern, follow this procedure instead of steps 7 and 8 in "**(1) Song Entry**".

•FILL-IN

1) Press (FILL IN).

2) Select a Fill-in rhythm pattern with (VARIATION) 1-4.

3) Press (ENTER) to enter it into the song.

4) Press (FILL IN) again to return to the previous Variation pattern.

•INTRO/ENDING

1) Press (INTRO/ENDING).

Each time you press the key, Intro and Ending patterns are alternately selected.

2) Select an Intro/Ending rhythm pattern using (INTRO/BREAK/ENDING) 1-4.

3) Press (ENTER) to enter the pattern.

4) Press (VARIATION) 1-4 to return to the previous Variation pattern.

•BREAK

1) Press (BREAK).

2) Select a Break rhythm pattern using (INTRO/BREAK/ENDING) 1-4.

3) Press (ENTER) to enter the rhythm pattern you have selected.

4) Press (VARIATION) 1-4 to return to the previous Variation pattern.

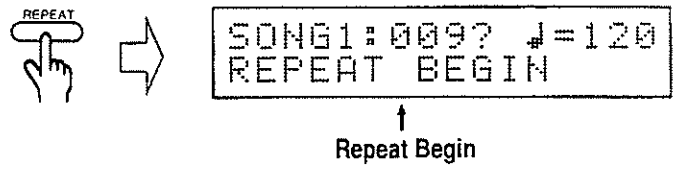
(3) Repeat Setting

The **CR-80** allows you to set Repeat points that will have rhythm patterns play repeatedly. Set the Repeat function using the Repeat Begin (**REPEAT BEGIN**) and Repeat End (**REPEAT END** X **REPEAT NUMBER**) parameters.

The number of repeats can be set from 1 to 99. You can also set it to "**LP**" which plays the specified portion endlessly. To leave the LP mode, press (TO CODA).

To set the Repeat function, follow this procedure instead of steps 7 and 8 in "**(1) Song Entry**".

1) Press (REPEAT) before entering the rhythm pattern you wish to have repeated.

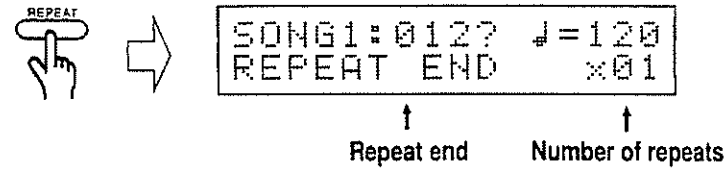


** To cancel the Repeat function, press (REPEAT) again.*

2) Press (ENTER) to enter Repeat Begin.

3) Enter the rhythm pattern to be repeated.

4) Press (REPEAT) again.

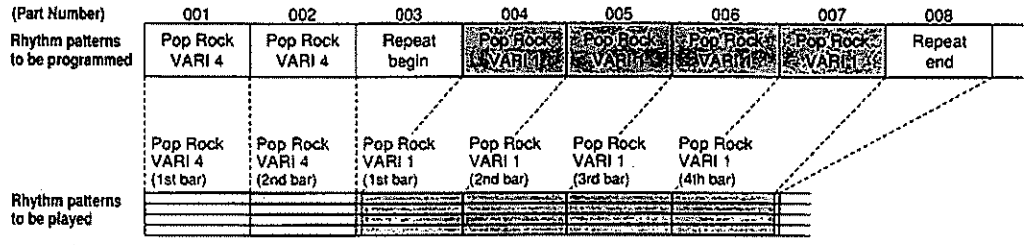


5) Set the number of repeats (1 - 99/LP) with (▼/-1) and (▲/+1) .

6) Press (ENTER) to enter Repeat End and return to the previous Variation pattern.

* *You can set the Repeat function as many times as you like in a song. However, it is not possible to set another Repeat inside a set of Repeat marks.*
* *When the number of Repeat Begins and Repeat Ends differ, the extra Repeat bigin/end mark will be ignored.*

Example



(4) About the Tempo of a Song

The **CR-80** can store a different tempo for each song.

If you change the tempo while entering a song, the last tempo set will be written in the song.

When you select a song in the Song Play mode, the stored tempo will be automatically recalled. If you wish to change the tempo, rotate the TEMPO control knob to the position of the tempo of a song once and set the desired tempo.

* *It is not possible to set a tempo for each Part.*
* *If you do not change the tempo while entering a song, the song will be played with the tempo of the rhythm pattern entered into the first bar (see page 11).*

2. Editing a Song

The **CR-80** allows you to edit an existing song.

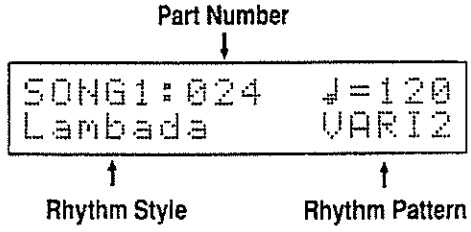
(1) Part Change

You can change the rhythm pattern that you have entered by mistake or that you find unsatisfactory.

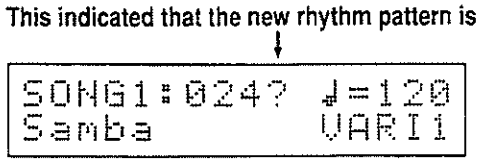
1) Press (SONG EDIT) (with the rhythm stopped).

2) Select the song (1-4) to be edited with (▼/-1) and (▲/+1), and then press (ENTER).

3) Specify the Part to be changed with (▼/-1) and (▲/+1).



4) Select the new rhythm pattern to replace the existing one.



** To set the Repeat, press* (REPEAT).

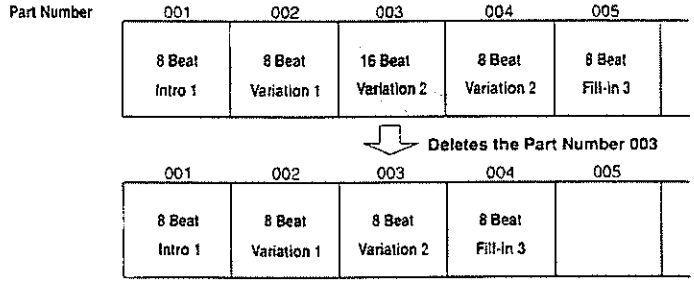
5) Press (ENTER) to enter the rhythm pattern in the song.

Repeat steps 3 to 5 as many times as necessary.

6) Press (NORMAL) to return to the Normal mode.

(2) Part Delete

This function deletes a rhythm pattern from a song.

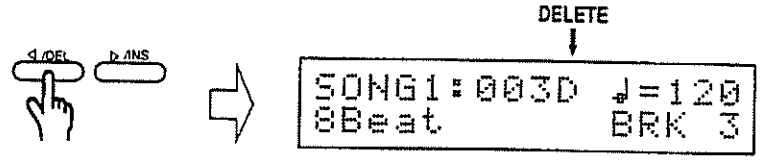


1) Press (SONG EDIT) (with the rhythm stopped).

2) Select the song (1-4) to be edited with (▼/-1) and (▲/+1) and then press (ENTER).

3) Specify the Part to be deleted with (▼/-1) and (▲/+1).

4) Press (◀/DEL).



5) Press (ENTER) to delete the Part.

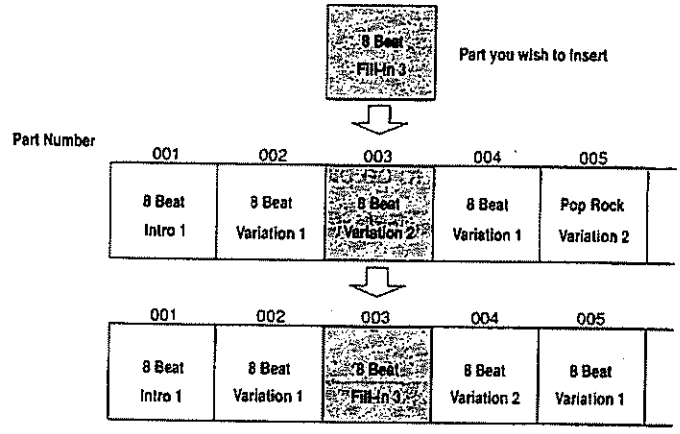
To exit the Delete mode, press (◀/DEL) again.

Repeat steps 3 to 5 as many times as necessary.

6) Press (NORMAL) to return to the Normal mode.

(3) New Part Insertion

This function inserts a new rhythm pattern into a song.

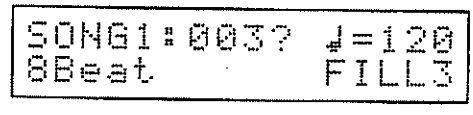


1) Press (SONG EDIT) (with the rhythm stopped).

2) Select the song (1-4) to be edited with (▼/-1) and (▲/+1) and then press (ENTER).

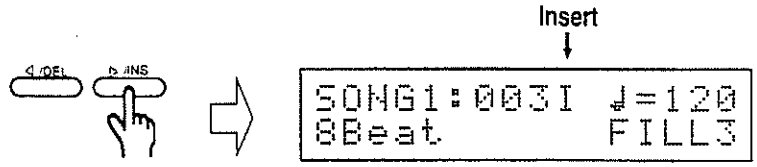
3) Specify the Part where the new rhythm pattern is to be inserted. Use (▼/-1) and (▲/+1).

4) Select the new rhythm pattern to be inserted.



** To set the Repeat, press (REPEAT).*

5) Press ▶/INS .



6) Press ENTER to insert the rhythm pattern you have selected.

To exit the Part Insertion mode, press ▶/INS again.

Repeat steps 3 to 6 as many times as necessary.

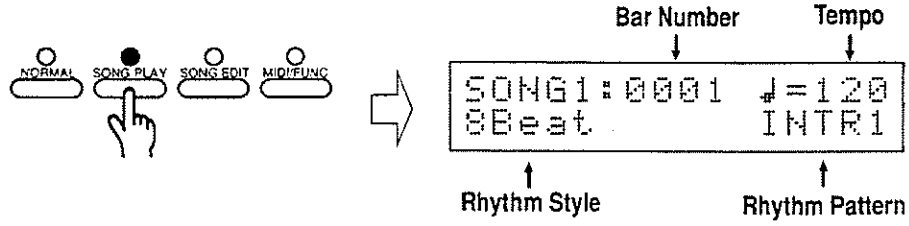
7) Press NORMAL to return to the Normal mode.

3. Playing a Song

You can now play the song you have programmed in the Song Edit mode.

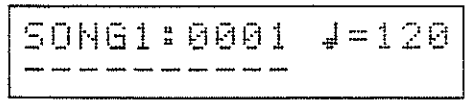
(1) How to play a song

1) Press SONG PLAY (with the rhythm stopped).



2) Select the song (1-4) to be played with ▼/-1 and ▲/+1 .

When there is no data in the selected song, the following message will appear in the display.



3) Press START/STOP to play the song.

If you press FADE IN/OUT instead, the song will be start with the volume gradually increasing.

* *You cannot play an Intro pattern with* INTRO/ENDING .
* *During song playing, you cannot change the Rhythm Styles or add a Fill-in or Break.*
* *Even if you move the level sliders or the feel slider in the Song Play mode, the volume balance or rhythmic feel of the performance will not change.*

4) Press START/STOP to stop the song. If you press FADE IN/OUT instead, the volume will gradually decrease until there is no sound. Playback will stop at that point.

* *You cannot play an Ending pattern with* INTRO/ENDING

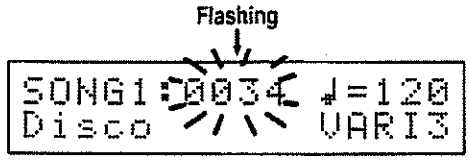
To play a different song, repeat steps **2** to **4.**

5) Press NORMAL to return to the Normal mode.

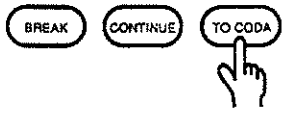
(2) How to use TO CODA

When playing a song where the number of Repeats is set to **"LP"** (infinite repeat), use TO CODA .

While the LP portion is being played, the bar indication in the display flashes.

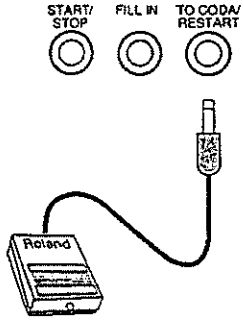


Press TO CODA to stop the repeated play of the LP portion, and move onto the next rhythm.



Pressing TO CODA will allow the rhythm be played until the end of the repeat portion and then it moves on to play the next part.

An optional foot pedal connected to the **TO CODA/RESTART** jack will work in exactly the same way as TO CODA in the Song Play mode.



** In the Normal mode, the foot pedal works differently (see page 18).*

1. About MIDI

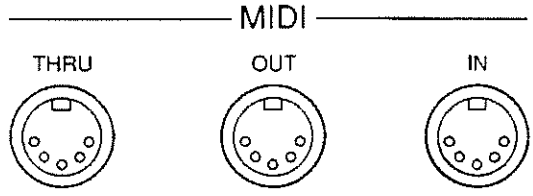
MIDI stands for Musical Instrument Digital Interface which is an international digital communications standard. Through MIDI, music performance data can be transmitted and received by MIDI instruments of different manufacturers. With MIDI, events such as playing on a keyboard or depressing a pedal are handled as MIDI message.

(1) MIDI Message Communication

The following explains how MIDI messages are transmitted and received.

❑ MIDI Connectors

To transfer MIDI messages between MIDI devices, the following three connectors are used.



MIDI IN : This connector receives MIDI message from another MIDI device.
MIDI OUT : This connector transmits MIDI message to another MIDI device.
MIDI THRU : This connector transmits an exact copy of the MIDI message received at the MIDI IN connector.

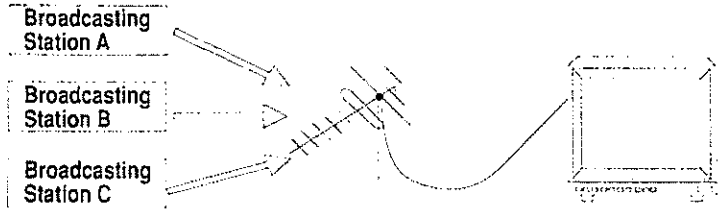
** Using MIDI THRU connectors, several MIDI devices could be connected to one another. The practical limit, however, is 4 or 5 devices. This limitation is due to the signal deterioration that occurs when data is re-transmitted repeatedly.*

** The **CR-80** features MIDI IN and MIDI OUT connectors.*

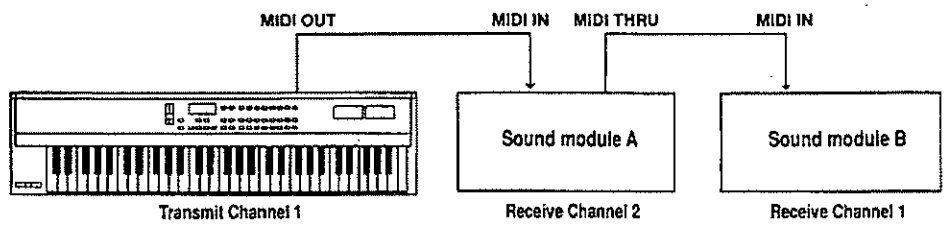
❑ MIDI Channels

MIDI allows you to transmit different messages to different devices, using only one cable. This is because MIDI uses 16 different channels, and different messages can be sent via each channel. In a sense, the concept of MIDI channels is similar to that of TV broadcasting.

You can select the program you wish to watch from various channels. This is because the corresponding channel message is received when the channel numbers of the transmitter (TV station) and receiver (you) are the same.



MIDI channels behave the same way. A MIDI instrument transmits MIDI messages to the receiving instrument when the MIDI channel number of both units is the same. If the MIDI channels are set as follows, only sound module B will sound when playing the keyboard.



(2) MIDI Messages

There are various kinds of MIDI messages that represent performance information. MIDI messages are divided into two main types; messages transmitted on a MIDI channel (Channel Messages) and messages transmitted regardless of the channel (System Messages).

The following describes which MIDI messages apply to the **CR-80**.

❑ Channel Messages (messages transmitted separately on a MIDI channel)

Channel messages transmit performance controlling information. Normally, these messages cover almost all the controls. How each MIDI message controls the performance is determined by the settings on the sound module unit.

• Note Messages

This is performance information of rhythm patterns (equivalent to keyboard performance information). Note messages include the following:

	Rhythm Machine	Keyboard
Note Number	Selects a percussion sound to be played	Number that represents the position on the key
Note On	Plays the percussion sound	Press a Key
Note Off	—	Release a Key
Velocity	The volume of the percussion sound	The strength of your key playing

Note numbers (0 - 127) represent the notes on a keyboard, with number 60 corresponding to Middle C (C4).

Generally speaking, Note numbers are used to distinguish pitches. On a rhythm machine (or rhythm sound module), however, Note numbers are used to distinguish the percussion sounds.

** On the **CR-80**, a specific Note Number is assigned to each percussion sound.*

• Pitch Bender Messages

These messages transmit bender lever (pitch) control data.

** The **CR-80** does not receive or transmit this type of message.*

• Aftertouch Messages

These messages transmit keyboard aftertouch data (the function that causes changes in the volume, tone, vibrato etc. of a note after it has been played).

** The **CR-80** does not receive or transmit this type of message.*

• Program Change Message

Generally, these messages are used to change patches. Using program numbers (1 - 128), you can change sound patches.

** The **CR-80** uses Program Change messages (together with Control Change messages) to change Drum Sets or Rhythm Patterns. (See page **54**).*

• Control Change Messages

These messages control performance enhancement: sustain,modulation, pitch bend etc. Each function is specified by a Control number. The functions that can be controlled vary depending on the specific MIDI device.

** The **CR-80** uses Control Change messages to adjust the volume and to change Drum Sets, Rhythm Styles or Rhythm Patterns together with Program Change messages (See page **54**).*

❑ System Messages (messages transmitted regardless of the MIDI channel)

System messages include Exclusive messages, Sync messages, system monitoring messages, etc.

• Common

These include Song Select and Song Position Pointer messages.

** The **CR-80** can transmit and receive Song Select messages.*

• Realtime

These include data for synchronized performance: Clock (for tempo setting), Start/Stop and Continue Start (resume playback).

** The **CR-80** can transmit Start/Stop and Clock, and receive Start/Stop, Clock and Continue Start.*

• Active Sensing

These messages monitor the integrity of MIDI connections. They insure that cables are secure and functioning properly.

** The **CR-80** can transmit and receive Active Sensing messages.*

• All Note Off

This message turns off all voices. In the event of a MIDI malfunction, some note may "hang on" or be "stuck". This message will turn off all such voices.

** The **CR-80** can receive All Note Off messages.*

• Exclusive Messages

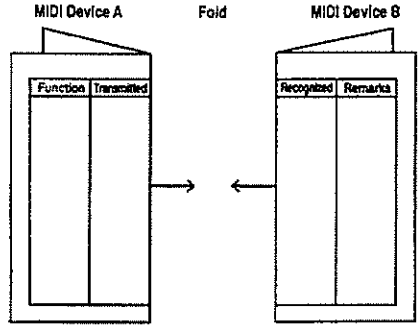
Exclusive messages are related to sounds unique to an instrument. Basically, Exclusive messages can be transferred between identical units of a manufacturer.

** The **CR-80** does not transmit or receive Exclusive messages.*

★ MIDI Implementation Chart

Although MIDI makes it possible for various instruments to communicate with each other, this does not necessarily mean all instruments are able to transmit/receive all MIDI messages.

For example, if you wish to use aftertouch on a keyboard, but the connected sound module does not respond to aftertouch messages, aftertouch effects cannot be obtained. In other words, MIDI messages which can be exchanged between MIDI instruments are those which are common to both devices. To quickly determine what information each instrument transmits and receives, a MIDI implementation chart is provided in every owner's manual. By studying the MIDI implementation charts of the two devices, you can determine what MIDI messages can be exchanged between those devices. All MIDI implementation charts are standardized, making it easy to compare instruments.

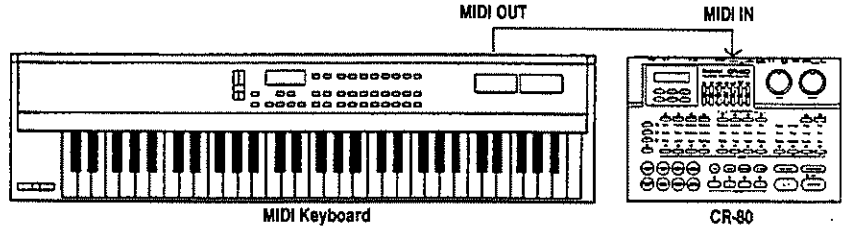


2. Starting the CR-80 by playing a keyboard (Sync Start)

When connected to a MIDI keyboard, the **CR-80** can be started by playing the keyboard.

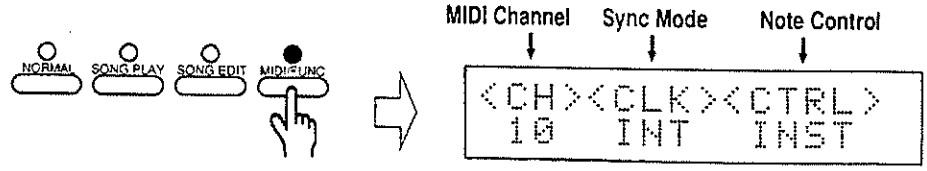
[CONNECTION]

Using a MIDI cable, connect the **CR-80**'s MIDI IN connector to the MIDI OUT connector on the keyboard.



[PROCEDURE]

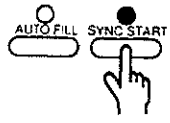
1) With the rhythm stopped, press (MIDI/FUNC) to select the following display.



2) Move the cursor to the center of the display with (▶/INS) . Select "**INT**" with (▼/-1) and (▲/+1) (See page **38**).

3) Press (NORMAL) to return to the Normal mode. To play a song, press (SONG PLAY) (to select the Song Play mode). Then select the song (1 - 4) to be played.

4) With the rhythm stopped, press (SYNC START) (the indicator will light).



To cancel the Sync Start mode, press (SYNC START) again.

5) Play the keyboard and the **CR-80** will start.

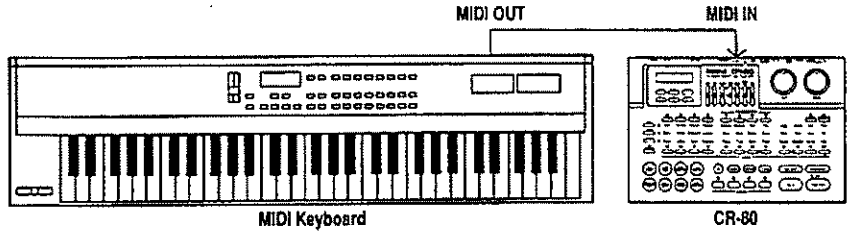
6) Press (START/STOP) to stop the **CR-80.**

3. Controlling the Volume of the CR-80 from the keyboard

When using the **CR-80** to provide an accompaniment to a keyboard performance, this volume controlling function allows you to adjust the volume of the **CR-80** in relation to the keyboard part played by the left hand. You can adjust the overall volume of the **CR-80** depending on how strongly you play the lower range (Lower than Note Number 55 (G3)) of the keyboard.

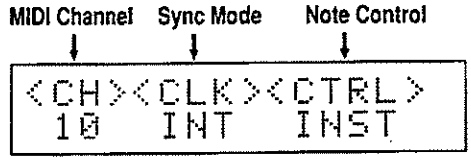
[CONNECTION]

Using a MIDI cable, connect the MIDI IN connector of the **CR-80** to the MIDI OUT connector on the keyboard.



[PROCEDURE]

1) With the rhythm stopped, press (MIDI/FUNC) to select the following display.



2) Move the cursor to the right side of the display with (▶/INS). Select **"VOL."** with (▼/-1) and (▲/+1) (See page 42).

** When **"VOL."** is selected, the CR-80 does not play the internal percussion sounds even if it receives Note messages.*

3) Press (NORMAL) to return to the Normal mode. To play a song, press (SONG PLAY) (to select the Song Play mode). Then select the song (1 - 4) to be played.

4) Press (START/STOP) to start playback.

If you play the lower pitch range (Lower than Note Number 55 (G3)) of the keyboard while the **CR-80** is playing, the overall volume of the **CR-80** will change depending on how strongly you play the keyboard.

** The volume of the percussion sounds played with the Key Pads changes at the same time.*

** When the SYNC mode is set to **"EXT"**, the volume does not change.*

** The parameter setting will be retained even after the **CR-80** is switched off.*

4. Synchronization with an external device

This function allows you to sync the **CR-80** to an external MIDI device, such as a sequencer or rhythm machine.

❑ Sync Mode (INT/EXT)

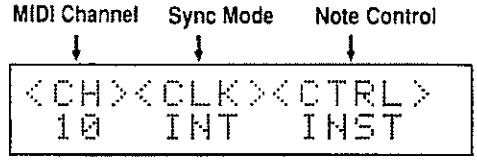
This setting determines whether start/stop and tempo functions are controlled by the **CR-80** or the external MIDI device.

INT .....In this mode the **CR-80** will be the master device.
Normally, this is the mode you will use.

EXT .....In this mode the **CR-80** will be the slave device.

- When the **CR-80** is set to EXT mode, playback will not be possible until the timing clock has arrived even if you press (START/STOP).
- When in the EXT sync mode, the **CR-80** does not play the internal sound even if it receive Note messages.
- When the Sync mode is set to EXT, the Tempo indication in the display will change to "**EXT**". It changes to "ext" when the rhythm starts playing.

1) With the rhythm stopped, press (MIDI/FUNC) to select the following display.



2) Move the cursor to the center of the display using (◀/DEL) or (▶/INS). Select the Sync mode (INT or EXT) using (▼/-1) and (▲/+1).

3) Press (NORMAL) to return to the Normal mode.

** The Sync mode setting will be retained even after the CR-80 is switched off.*

• Using the CR-80 as a slave device

To control the start/stop and tempo functions from an external device, follow this procedure.

1) Connect the MIDI IN connector of the **CR-80** to the MIDI OUT connector of the external (master) MIDI device.

2) Set the **CR-80**'s Sync mode to "**EXT**".

3) Start the master device, and the **CR-80** will sync to it.

** If the master device can transmit MIDI Song Select messages, the Song Number (1 - 4) selected on the master device will be selected on the **CR-80**. However, the **CR-80** can only receive Song Select messages in the Song Play mode.*

• Using the CR-80 as a master device

To control the start/stop and tempo functions from the **CR-80**, follow this procedure.

1) Connect the MIDI OUT connector on the **CR-80** to the MIDI IN connector on the external (slave) device.

2) Set the **CR-80**'s Sync mode to **"INT"**.

3) Set the slave device to MIDI Sync mode (refer to the operation manual of the slave device).

4) Press the **CR-80**'s (**START/STOP**) , and the slave device will sync to **CR-80**.

** If the slave device can receive MIDI Song Select messages, the Song Number (1 - 4) selected on the **CR-80** will be selected on the slave device.*

5. Using the CR-80 as a MIDI Sound Module

The **CR-80** can be used as an external MIDI sound module for a Pad Controller, Rhythm Machine or Sequencer. To use the **CR-80** as an external sound module, set the following parameters.

• MIDI Channel (1-16)

Set the **CR-80**'s MIDI channel to match the transmit channel of the external MIDI device.

** The MIDI channel set on the **CR-80** is used for both reception and transmission.*

** For a detailed explanation of MIDI channels, refer to page 32.*

• Selecting a Drum Set and Note Number (DRY/ROOM/POWER/ELECTRIC/JAZZ/BRUSHES/MT-E-CM)

The **CR-80** contains 7 different Drum Sets. Each Drum Set includes the percussion sounds shown in **"Note Numbers : Default Settings"** on page **52**. All sounds from **"KICK"** to **"BELL"** inclusive, and **"COWBELL"** change depending on the drum set you select.

Percussion Sounds stored in the Drum Sets

Drum Sets / Sounds	DRY/U＊DRY	ROOM/U＊ROOM	POWER/U＊POWER
KICK	Dry kick	Room kick	Face kick
SIDE_STICK	Side stick	Side stick	Side stick
SNARE 1	Real snare	Reverb snare	Birch snare
SNARE 2	Real snare	Reverb snare	Birch snare
LOW_TOM	Low attack tom	Low room tom	Low attack tom
MID_TOM	Mid attack tom	Mid room tom	Mid attack tom
HIGH_TOM	High attack tom	High room tom	High attack tom
CLOSED_HH	Closed hi-hat	Closed hi-hat	Closed hi-hat
PEDAL_HH	Pedal hi-hat	Pedal hi-hat	Pedal hi-hat
OPEN_HH	Open hi-hat	Open hi-hat	Open hi-hat
CRASH	Crash cymbal	Crash cymbal	Crash cymbal
RIDE	Ride cymbal	Ride cymbal	Ride cymbal
BELL	Ride cymbal bell	Ride cymbal bell	Ride cymbal bell
COWBELL	Cowbell	Cowbell	Cowbell

Drum Sets / Sounds	ELECTRIC/U＊ELEC.	JAZZ/U＊JAZZ	BRUSHES/U＊BRUSHES	MT-E-CM
KICK	808 kick	Jazz kick	Jazz kick	Dry kick
SIDE_STICK	Side stick	Side stick	Brush-'swish' snare	Side stick
SNARE 1	808 snare	Birch snare	Brush-snare roll	Real snare
SNARE 2	808 snare	Birch snare	Brush-snare slap	Real snare
LOW_TOM	Low 808 tom	Low attack tom	Brush-low slap tom	Low attack tom
MID_TOM	Mid 808 tom	Mid attack tom	Brush-mid slap tom	Mid attack tom
HIGH_TOM	High 808 tom	High attack tom	Brush-high slap tom	High attack tom
CLOSED_HH	808 closed hi-hat	Closed hi-hat	Brush-closed hi-hat	Closed hi-hat
PEDAL_HH	Pedal hi-hat	Pedal hi-hat	Pedal hi-hat	Open hi-hat＊
OPEN_HH	808 open hi-hat	Open hi-hat	Brush-open hi-hat	Open hi-hat
CRASH	Crash cymbal	Crash cymbal	Brush-crash cymbal	Crash cymbal
RIDE	Ride cymbal	Ride cymbal	Brush-ride cymbal	Ride cymbal
BELL	Ride cymbal bell	Ride cymbal bell	Brush-ride cymbal	Ride cymbal bell
COWBELL	808 Cowbell	Cowbell	Cowbell	Cowbell

All the Drum Sets (except for **"MT-E-CM"**) have two subsets, such as **"DRY"** and **"U＊DRY"**. These two subsets have exactly the same sounds, but different Note Number assignments. The subsets without **"U＊"** have fixed Note Number assignments that follow **Roland**'s standard assignment system (**P.52**), and therefore can be used with a **Roland** MIDI device.

A subset designated by the **"U＊"** mark can have the Note Number assignments changed to accommodate any device, and therefore is ideal for a device of a different manufacturer. (How to change the Note Number assignment is shown in the next section.)

＊*The **"MT-E-CM"** Drum Set has a Note Number assignment which corresponds to that of the internal percussion sounds of the **MT-32/CM series** (Sound Module) and **E series** (Intelligent Synthesizer), etc. This drum set is basically the same as **"DRY"**, but has open hi-hat instead of **"PEDAL_HH"**. This open hi-hat, however, has a slightly shorter decay time as compared to a usual open hi-hat.*

• Note Numbers (0-127/OFF)

A different Note Number is assigned to each percussion sound on the **CR-80.** Note Numbers serve to play corresponding percussion sounds.

When using the **CR-80** as a sound source for a Pad Controller, set the Note Numbers of the pads to the Note numbers of the percussion sounds on the **CR-80** you wish to play.

When using the **CR-80** as a sound source of a rhythm machine, match the Note Numbers of the internal percussion sounds on the rhythm machine to the percussion sounds on the **CR-80.** For instance, if the Note Number of the crash cymbal on the rhythm machine is 49, assign Note Number 49 to the crash cymbal on the **CR-80.** In other words, set the Note Numbers of the same percussion sounds to the same number.

To play the percussion sounds using the Note Numbers you set, select a drum set with the **"U＊"** mark.

The percussion sounds for which Note messages are not to be transmitted or received should be set to **"OFF".**

＊When the same Note Number is assigned to more than one sound, all the relevant sounds can be played simultaneously. However, the maximum number of sounds that can be played at one time is 12.

＊The assigned Note Numbers are common to all 6 drum sets which have "U＊" marks.

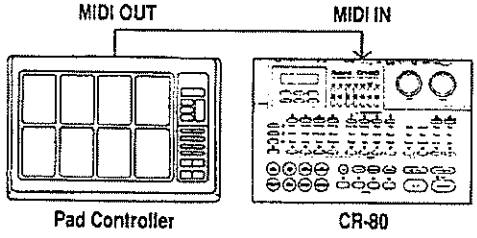
• Note Control (INST/VOL.)

This setting determines how the **CR-80** will be controlled by Note messages. When using the **CR-80** as a MIDI sound module, select "INST."

INST · · · The internal sounds of the **CR-80** can be played with Note messages sent from an external device.

VOL. · · · This setting allows control of the overall volume of the **CR-80**, depending on the velocity of Note On messages. (Note Numbers other than 0 - 54 are not received. Page **36.**)

[CONNECTION : Using a Pad Controller]

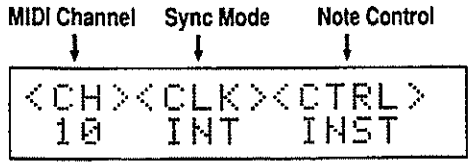


[PROCEDURE]

With the rhythm stopped, follow this procedure.

1) Connect the MIDI IN connector of the **CR-80** to the MIDI OUT connector of the external MIDI device.

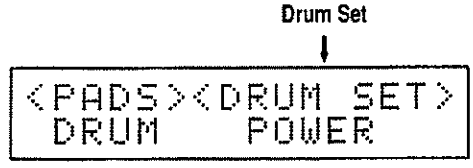
2) Press (MIDI/FUNC) to select the following display.



3) Move the cursor to the left side of the display using (◀/DEL). Using (▼/-1) and (▲/+1), set the MIDI channel (1-16).

4) Move the cursor to the right side of the display with (▶/INS). Select "INST" with (▼/-1) and (▲/+1).

5) Press (MIDI/FUNC) to select the following display.

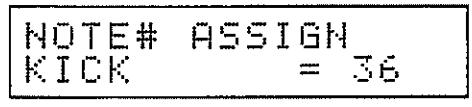


6) Move the cursor to the right side of the display with (▶/INS). Select a Drum Set with (▼/-1) and (▲/+1).

When you have selected a drum set with the "U✳" mark, proceed to step 7 to set the Note Numbers.

When you have selected a drum set without "U✳", press (NORMAL) to finish the procedure.

7) Press (MIDI/FUNC) to select the following display.



8) Using (◀/DEL) and (▶/INS), select the percussion sound to which a Note Number will be assigned.

9) With (▼/-1) and (▲/+1), specify the Note Number (0 to 127/OFF) to be assigned to the sound selected in the previous step.

If you have set the same Note Number to more than one percussion sound, a "+" mark will appear on the far right of the display.

10) Repeat steps 8 and 9 as many times as necessary.

11) Press (NORMAL) to return to the Normal mode.

*✳ MIDI setting are retained even after the **CR-80** is switched off.*

6. Playing a MIDI Sound Module with the CR-80

An external MIDI sound module can be played by the rhythm patterns or song data of the **CR-80.** To do this, set the following parameters.

• MIDI Channel (1-16)

Set the MIDI channel on the **CR-80** to match the receive channel on the external MIDI sound module.

• Drum Set and Note Number Selection (DRY/ROOM/POWER/ELECTRIC/JAZZ/BRUSHES/MT-E-CM)

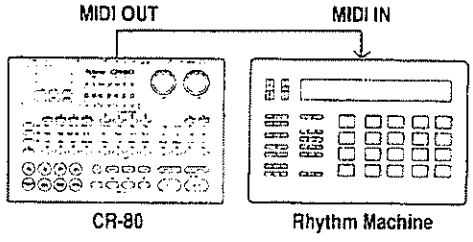
This parameter determines which Note Number assignment should be sent (as Note Messages) to the external sound module. To use **Roland**'s standard Note Number assignment (page 52), select a Drum Set without the "**U＊**" mark. To use Note Number assignments of your own, select a Drum Set with the "**U＊**" mark. The **MT-E-CM** drum set has a fixed Note Number assignment.

• Note Numbers (0-127/OFF)

When you have selected a drum set with "**U＊**" mark, set the Note Numbers of the percussion sounds on the external MIDI device to match those on the **CR-80.** When the same sound is set to **"SNARE1"** and **"SNARE2"** in the drum set, the Note Number of **"SNARE1"** will have priority.

The percussion sounds for which Note messages are not to be transmitted or received should be set to "OFF".

[CONNECTION : Using a rhythm Machine]

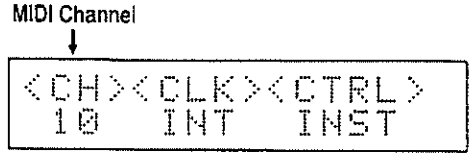


[PROCREDURE]

With the rhythm stopped, follow this procedure.

1) Connect the MIDI OUT connector of the **CR-80** to the MIDI IN connector of the external MIDI sound module.

2) Press (**MIDI/FUNC**) to select the following display.



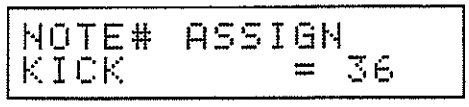
3) Move the cursor to the left side of the display using ◀/DEL . Set the MIDI channel (1-16) using ▼/-1 and ▲/+1 .

4) Press MIDI/FUNC to select the following display.

5) Move the cursor to the right side of the display with ▶/INS . With ▼/-1 and ▲/+1 , change the Drum Set to select the Note Number assignment you require.

When you have selected a drum set with the "U＊" mark, proceed to step 6 to set the Note Numbers. When you have selected a drum set without the "U＊" mark, press NORMAL to finish to procedure.

6) Press MIDI/FUNC to select the following display.



7) Using ◀/DEL and ▶/INS , select the percussion sound to which a Note Number will be assigned.

8) With ▼/-1 and ▲/+1 , specify the Note Number (0-127/OFF) to be assigned to the percussion sound selected in the previous step.If you have set the same Note Number to more than one percussion sound, a "+" mark will appear on the far right of the display.

Repeat steps **7** and **8** as many times as necessary.

9) Press NORMAL to return to the Normal mode.

＊ *MIDI setting are retained even after the* ***CR-80*** *is switched off.*

1. To restore all factory-set parameter values (this is called initialization).

1) Switch off the **CR-80.**

2) Switch on the unit while holding both (◀/DEL) and (REPEAT).

3) Press (ENTER). The display will read **"Complete.".**

To cancel initialization, press any key but (ENTER).

2. Troubleshooting

<When using the CR-80 on its own>

·No sound is heard

·Check the volume level of the **CR-80.**

Check the volume level of **CR-80,** any amplifier, mixer, PA system etc. (Page 11)

·Check if a Level Slider is lowered.

If a Level Slider is at the lowest position, the corresponding percussion group will not be heard. (Page 11)

·The CR-80 will not start playing.

·Check if the SYNC mode is set to **"INT".**

If not, set the SYNC mode to **"INT"** (Page 38).

·Check if the selected song contains data.

If not, program a song in the Song Edit mode or select a song that contains data (Page 24).

·The tempo does not change

·Check if a tempo written in the Rhythm Style or a song has been set.

.Rotate the **Tempo** control knob to the position of the tempo written in memory, then change the tempo (page 11 and 27).

·The tempo automatically changes when a different Rhythm Style is selected.

·Determine if you selected a Rhythm Style while the **CR-80** was stopped.

If you select a Rhytm Style with the **CR-80** stopped, the tempo of the selected rhythm style is automatically set (Page 11).

·When you select a different Rhythm Style, the volume balance of the percussion sound changes.

·The volume balance set with the Level Sliders is written into the memory of each Rhythm Style (Page 11).

· When you play a different song, the tempo changes.

·Each song is programmed with a different tempo (Page **27**).

·The Repeat function cannot be set.

·Determine if you are trying to set a Repeat inside a set of Repeat marks. (Page **26**).

·The Restart function does not work.

·Check if the **CR-80** is in the Song Play mode.
The Restart function is valid only in the Normal mode (Page **18**).

· Even if you select a different drum set, the key pad sound does not change.

·The **"DRY"** and **"MT-E-CM"** sets contain basically the same percussion sounds (Page **41**).

<When using the CR-80 to accompany a MIDI keyboard>

·The CR-80 does not sync-start with the keyboard.

·Check if the MIDI cable is connected correctly.

Check if the MIDI OUT connector on the keyboard is securely connected to the MIDI IN connector on the **CR-80** .

·The volume of the CR-80 does not change even if you vary the strength with which you play the keyboard.

·Check if the MIDI cable is connected correctly.

Check if the MIDI OUT connector on the MIDI keyboard is securely connected to the MIDI IN connector on the **CR-80.**

·Determine if you are playing beyond the control range.

If you play outside the control range (Higher than F#3) on the keyboard, the volume of the **CR-80** will not change (Page **36**).

·Check if Sync mode is set to **"EXT"**.
If you set the Sync mode to **"EXT"** , the volume of the **CR-80** will not change (Page **37**).

<When using the CR-80 as a MIDI Sound Module>

·No sound is heard

·Check if the MIDI cable is connected correctly.

Check if the MIDI OUT connector on the external device is securely connected to the MIDI IN connector on the **CR-80.**

·Check the volume level of the **CR-80.**

Check the volume level of **CR-80,** any amplifier, mixer, PA system etc. (Page 11).

·Check if the MIDI channel is correctly set.

Check if the transmit channel of the external MIDI device matches the MIDI channel of the **CR-80.**

·Check if the Note Numbers are assigned correctly.

Set the Note Numbers transmitted by the external device to match the Note Numbers (percussion sounds) of the **CR-80** (Page **40** and **42**).

·Check if Note Control is set to **"VOL".**

To use the **CR-80** as a MIDI sound module, set Note Control to **"INST"** (Page **42**).

·Determine if SYNC Start is set.

When SYNC Start is set, percussion sounds on the **CR-80** are not played even when Note messages are received. Press (SYNC START) so that the indicator goes out (Page **35**).

·Check if Sync mode is set to **"EXT".**
To use the **CR-80** as a MIDI sound module, set Sync mode to **"INT"** (Page **38**).

·Wrong sound is played

·Check if one Note Number is assigned to more than one percussion sound.

If the same Note Number is assigned to more than one percussion sound, all those sounds will be played simultaneously when that Note message is recieved (Page **42**).

·Changing the Note Numbers does not affect the original assignment.

·Check if you have selected a drum set without the **"U＊"** mark.
To use the Note Number assignment you have set, select a drum set with the **"U＊"** mark (Page **40**).

<When playing an external MIDI sound module with the CR-80>

·No sound is heard

·Check if the MIDI cable is connected correctly.

Check if the MIDI IN connector on the external device is securely connected to the MIDI OUT connector on the **CR-80.**

·Check the volume level of the external device.

Check the volume level of any amplifier, mixer, etc.

·Check if the MIDI channels are set correctly.

Check if the receive channel of the external device matches the MIDI channel of the **CR-80** .

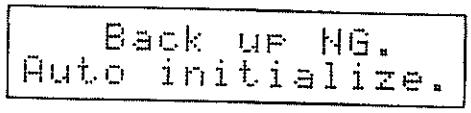
·Check if the Note Numbers are assigned correctly.

Set the Note numbers transmitted by the **CR-80** to match the Note Numbers (percussion sounds) of the external device (Page 44).

·Changing the Note Numbers does not affect the original assignment.

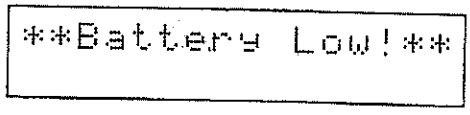
·Check if you have selected a drum set without the "**U＊**" mark.
To use the Note Number assignment you have set, select a drum set with the "**U＊**" mark (Page 44).

3. Error Message Table



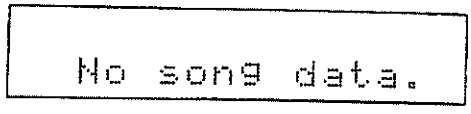
Cause: The battery that supports the **CR-80**'s memory backup is exhausted, and data in memory has been lost. The unit will be automatically initialized to the factory default settings.

What to do: Have the battery replaced at the shop where you purchased the **CR-80** or at a local **Roland service station.**

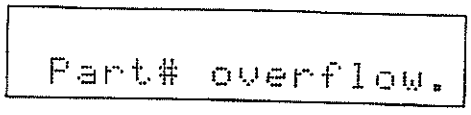


Cause: The battery that supports the **CR-80**'s memory backup is weak.

What to do: Have the battery replaced at the shop where you purchased the CR-80 or at a local **Roland service station.**

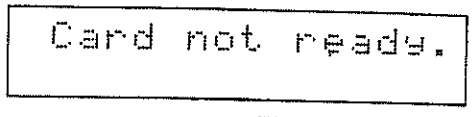


Cause: You have tried to erase a song where no data has been written.



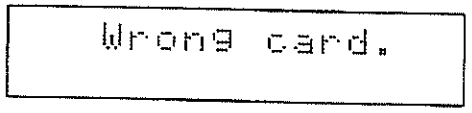
Cause: You have tried to enter more than 500 Parts into one song in the Song Edit mode.

What to do: Avoid entering more than 500 Parts into one song.



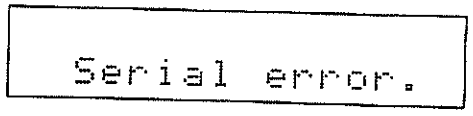
Cause: You pressed (EXT CARD) without having a Music Style card inserted properly in the EXT CARD slot on the **CR-80.**

What to do: Insert a Music Style card securely into the EXT CARD slot.



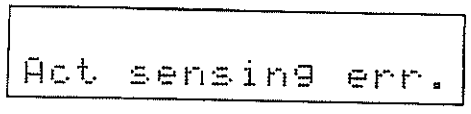
Cause: The card connected to the EXT CARD slot cannot be used on the **CR-80.**

What to do: Disconnect the card from the EXT CARD slot. Be sure not to connect any card other than a Music Style card.



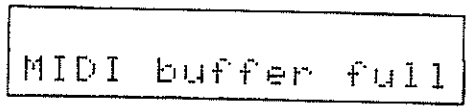
Cause: MIDI messages have not been received properly.

What to do: Check if the connection with the external device is correct, then repeat the procedure carefully. If the above error message appears repeatedly even though all connections check out, consult with the shop where you purchased the **CR-80** or a local **Roland service station.**



Cause: The MIDI cable connected to the MIDI IN connector is damaged or the connected MIDI device is switched off.

What to do: Check the connection with the external MIDI device, then repeat the procedure carefully.



Cause: An excessive amount of MIDI messages have been transmitted and therefore cannot be processed properly.

What to do: Reduce the amount of MIDI messages and repeat the procedure carefully.

4. Percussion Sounds Table

Display	Percussion Sounds	Feel
KICK	Room kick	
	Dry kick	
	Face kick	
	Jazz kick	
	808 kick	
SIDE_STICK	Side stick	
	Brush-'swish' snare	
SNARE1	Reverb snare	
	Real snare	
	Birch snare	
	808 snare	
	Brush-snare roll	
SNARE2	Reverb snare	
	Real snare	
	Birch snare	
	808 snare	
	Brush-snare slap	
LOW_TOM	Low room tom	
	Low attack tom	
	Low 808 tom	
	Brush-low slap tom	
MID_TOM	Mid room tom	
	Mid attack tom	
	Mid 808 tom	
	Brush-mid slap tom	
HI_TOM	High room tom	
	High attack tom	
	High 808 tom	
	Brush-high slap tom	
CLOSED_HH	Closed hi-hat	○
	808 closed hi-hat	○
	Brush-closed hi-hat	○
PEDAL_HH	Pedal hi-hat	○
	Open hi-hat *	○
OPEN_HH	Open hi-hat	○
	808 open hi-hat	○
	Brush-open hi-hat	○

Display	Percussion Sounds	Feel
CRASH	Crash cymbal	
	Brush-crash cymbal	
RIDE	Ride cymbal	○
	Brush-ride cymbal	○
BELL	Ride cymbal bell	○
	Brush-ride cymbal	○
HI_Q	Hi_Q	
LOW_SCRCH	Low scratch	
HI_SCRCH	Hi scratch	
HAND_CLAP	Hand clap	
TAMBOURINE	Tambourine	○
COWBELL	Cowbell	
	808 Cowbell	
VIBRASLAP	Vibraslap	
HI_BONGO	Hi bongo	
LOW_BONGO	Low bongo	
MUTE_CONGA	Mute hi conga	
HI_CONGA	Hi conga	
LOW_CONGA	Low conga	
HI_TMBL	Hi timbale	
LOW_TMBL	Low timbale	
HI_AGOGO	Hi agogo	
LOW_AGOGO	Low agogo	
CABASA	Cabasa	○
MARACAS	Maracas	○
SHORT_WHSL	Short whistle	
LONG_WHSL	Long whistle	
SHORTGUIRO	Short guiro	
LONGGUIRO	Long guiro	
CLAVES	Claves	
HI_WBLOCK	Hi woodblock	
LOW_WBLOCK	Low woodblock	
MUTE_CUICA	Mute cuica	
OPEN_CUICA	Open cuica	
MUTE_TRI	Mute triangle	
OPEN_TRI	Open triangle	
SHAKER	Shaker	○
HA!	Ha!	
HEY!	Hey!	
OOH!	Ooh!	
UN!	Un!	
APPLAUSE	Applause	
SNARE ROLL	Snare roll	
WAVES	Waves	
BIRDS	Birds	

** Any percussion sound that has **"O"** at the **"Feel"** column allows you to control the rhythmic feel of the performance with the Feel slider.*

** **"Open hi-hat *"** is the sound shortened by the decay of **"Open hi-hat"**.*

5. Note Numbers : Default Settings / Correspondence of Percussion Sounds to Level Slider

Display	Note #	Level Slider
KICK	36 (35)	KICK
SIDE_STICK	37	SNARE
SNARE1	38	SNARE
SNARE2	40	SNARE
LOW_TOM	41 (43)	TOMS
MID_TOM	45 (47)	TOMS
HI_TOM	48 (50)	TOMS
CLOSED_HH	42	HI-HAT/RIDE
PEDAL_HH	44	HI-HAT/RIDE
OPEN_HH	46	HI-HAT/RIDE
CRASH	49 (52, 55, 57)	CRASH
RIDE	51 (59)	HI-HAT/RIDE
BELL	53	HI-HAT/RIDE
HI_Q	27	PERCUSSION
LOW_SCRCH	29	PERCUSSION
HI_SCRCH	30	PERCUSSION
HAND_CLAP	39	PERCUSSION
TAMBOURINE	54	PERCUSSION
COWBELL	56	PERCUSSION
VIBRASLAP	58	PERCUSSION
HI_BONGO	60	PERCUSSION
LOW_BONGO	61	PERCUSSION
MUTE_CONGA	62	PERCUSSION
HI_CONGA	63	PERCUSSION
LOW_CONGA	64	PERCUSSION
HI_TMBL	65	PERCUSSION
LOW_TMBL	66	PERCUSSION
HI_AGOGO	67	PERCUSSION
LOW_AGOGO	68	PERCUSSION
CABASA	69	PERCUSSION
MARACAS	70	PERCUSSION
SHORT_WHSL	71	PERCUSSION
LONG_WHSL	72	PERCUSSION
SHORTGUIRO	73	PERCUSSION
LONGGUIRO	74	PERCUSSION
CLAVES	75	PERCUSSION
HI_WBLOCK	76	PERCUSSION
LOW_WBLOCK	77	PERCUSSION
MUTE_CUICA	78	PERCUSSION
OPEN_CUICA	79	PERCUSSION
MUTE_TRI	80	PERCUSSION
OPEN_TRI	81	PERCUSSION
SHAKER	82	PERCUSSION
HA!	89	-
HEY!	90	-
OOH!	91	-
UN!	92	-
APPLAUSE	93	-
SNARE ROLL	94	-
WAVES	95	-
BIRDS	96	-

* *When Note message is received, the number enclosed in parenthesis ( ) is effective as well.*

6. Number of bars in each Rhythm Pattern

Rhythm Style	Intro	Variation	Fill-in	Break	Ending
8 Beat	2	4	1	1	2
Pop Rock	1	4	1	1	2
Hard Rock	1	4	1	1	2
Rock'n Roll	2	4	1	1	2
Slow Rock	2	4	1	1	1
Slow Soul	2	4	1	1	2
16 Beat	2	4	1	1	2
R & B	2	4	1	1	2
Oldies	2	4	1	1	2
Latin Rock	2	4	1	1	2
Disco	2	4	1	1	2
Funk	2	4	1	1	1
Swing1	2	4	1	1	2
Swing2	2	4	1	1	2
Brush Swing	2	4	1	1	2
Jazz Waltz	2	4	1	1	2
Waltz	2	4	1	1	2
March	2	4	1	1	2
Country	2	4	1	1	1
Ballad	2	4	1	1	2
Dance	4	4	1	1	4
Polka	4	4	1	1	4
House	2	4	1	1	1
Rap	2	4	1	1	1
Samba	1	4	1	1	1
Lambada	1	4	1	1	1
Salsa	1	4	1	1	1
Bossa Nova	1	4	1	2	1
Reggae	1	4	1	1	1
Tango	2	4	1	1	2
Mambo	2	4	1	2	2
Rhumba	2	4	1	2	2
Beguine	1	4	1	2	1
Merengue	1	4	1	1	1
Cha Cha	2	4	1	2	2
Enka	2	4	1	1	2

1. TRANSMITTED DATA

■Channel Voice Message

Channel Voice Messages are transmitted on the channel which is set at < CH >.

●Note Event

○Note Off

Status	Second	Third
9nH	kkH	00H

n = MIDI Channel : 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
kk = Note Number : 00H - 7FH (0 - 127)

○Note On

Status	Second	Third
9nH	kkH	vvH

n = MIDI Channel : 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
kk = Note Number : 00H - 7FH (0 - 127)
vv = Velocity : 0AH - 7FH (10 - 127)

[When < DRUM SET > is set at DRY, ROOM, POWER, ELECTRIC, JAZZ, BRUSHES or MT - E - CM]
Note numbers fixedly assigned to each instrument will be used.

[When < DRUM SET > is set at U＊DRY, U＊ROOM, U＊POWER, U＊ELEC., U＊JAZZ or U＊BRUSHES]
Note numbers assigned to each instrument at 'NOTE＃ ASSIGN' will be used. If a note number is set to 'OFF', then note events for that instrument cannot be transmitted.

Gate time (the interval from 'Note On' to 'Note Off') is about 50msec.
However the sound effects 'Applause', 'Snare Roll', 'Waves' and 'Birds' transmit 'Note Off' when these sounds end.
Gate time may be shortened when an instrument sound is repeated in a short interval.

●Control Change

○Bank Select

Status	Second	Third
BnH	00H	00H

n = MIDI Channel : 0H - FH (0 - 15) 0 = ch.1 15 = ch.16

Transmitted with Program Change when < DRUM SET > is changed.
Refer to the Program Change description.

Status	Second	Third
BnH	00H	ffH
BnH	00H	ttH

n = MIDI Channel : 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
ff = Style Family ID : 01H - 7FH (1 - 127)
tt = Style Type ID : 00H - 7FH (0 - 127)

Transmitted with Program Change when rhythm is changed.
Refer to the Program Change description.

○Volume

Status	Second	Third
BnH	07H	vvH

n = MIDI Channel : 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
vv = Volume : 00H - 7FH (0 - 127)

Transmitted when FADE IN or FADE OUT is used.

●Program Change

Status	Second
CnH	ppH

n = MIDI Channel : 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
pp = Program Number : 00H - 7FH (0 - 127)

[< DRUM SET > Change]
The following messages are transmitted.

Bn 00 00 20 00
Cn pp

Drum Set	pp
DRY	00H (0)
ROOM	08H (8)
POWER	10H (16)
ELECTRIC	18H (24)
JAZZ	20H (32)
BRUSHES	28H (40)
U＊DRY	40H (64)
U＊ROOM	48H (72)
U＊POWER	50H (80)
U＊ELEC.	58H (88)
U＊JAZZ	60H (96)
U＊BRUSHES	68H (104)
MT-E-CM	7FH (127)

[Rhythm Change]
The following messages are transmitted.
(Not transmitted when < CLK > is set to 'EXT'.)

Bn 00 ff 20 tt
Cn pp

Rhythm	ff, tt	Rhythm	ff, tt
8Beat	06H, 00H (6, 0)	Country	10H, 00H (15, 0)
Pop Rock	01H, 00H (1, 0)	Ballad	04H, 00H (4, 0)
Hard Rock	01H, 01H (1, 1)	Dance	13H, 01H (19, 1)
Rockn Roll	0AH, 00H (10, 0)	Polka	13H, 00H (19, 0)
Slow Rock	05H, 00H (5, 0)	House	21H, 01H (33, 1)
Slow Soul	1FH, 00H (31, 0)	Rap	21H, 00H (33, 0)
16Beat	07H, 00H (7, 0)	Samba	1BH, 00H (27, 0)
R & B	2CH, 00H (44, 0)	Lambada	2EH, 00H (46, 0)
Oldies	0AH, 01H (10, 1)	Salsa	19H, 00H (25, 0)
Latin Rock	01H, 02H (1, 2)	Bossanova	16H, 00H (22, 0)
Disco	02H, 00H (2, 0)	Reggae	08H, 00H (8, 0)
Funk	03H, 00H (3, 0)	Tango	1AH, 00H (26, 0)
Swing1	0CH, 00H (12, 0)	Mambo	26H, 00H (38, 0)
Swing2	0CH, 01H (12, 1)	Rhumba	17H, 00H (23, 0)
Brsh Swing	0CH, 02H (12, 2)	Beguine	27H, 00H (39, 0)
Jazz Waltz	11H, 01H (17, 1)	Merengue	1BH, 01H (27, 1)
Waltz	11H, 00H (17, 0)	Cha-Cha	18H, 00H (24, 0)
March	14H, 00H (20, 0)	Enka	29H, 00H (41, 0)

Division	pp
Variation 1	00H (0)
Variation 2	01H (1)
Variation 3	02H (2)
Variation 4	03H (3)
Intro 1	40H (64)
Intro 2	41H (65)
Intro 3	42H (66)
Intro 4	43H (67)
Ending 1	48H (72)
Ending 2	49H (73)
Ending 3	4AH (74)
Ending 4	4BH (75)
Fill In 1	50H (80)
Fill In 2	51H (81)
Fill In 3	52H (82)
Fill In 4	53H (83)
Break 1	70H (112)
Break 2	71H (113)
Break 3	72H (114)
Break 4	73H (115)

■System Common Message

Transmitted only when < CLK > is set to 'INT'.

●Song Select

Status	Second
F3H	ssH

ss = Song Number : 00H - 03H (0 - 3)

Transmitted when the SONG PLAY mode is selected, or a new song is selected in the SONG PLAY mode.

■System Real Time Message

Transmitted only when < CLK > is set to 'INT'.
Timing Clocks are always transmitted even if the rhythm is not running.
When RESTART is triggered by a foot pedal, Stop and Start messages are transmitted continuously.

●Timing Clock

Status
F8H

●Start

Status
FAH

●Stop

Status
FCH

●Active Sensing

Status
FEH

Transmitted to check the MIDI connections between the CR-80 and any external equipment.

2. RECOGNIZED RECEIVE DATA

■Channel Voice Message

●Note Event

Not recognized when < CLK > is set to 'EXT'.

○Note Off

Status	Second	Third
8nH	kkH	vvH
9nH	kkH	00H

n = MIDI Channel : 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
kk = Note Number : 00H - 7FH (0 - 127)
vv = Velocity : 00H - 7FH (0 - 127)

Velocity is ignored.

○Note On

Status	Second	Third
9nH	kkH	vvH

n = MIDI Channel : 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
kk = Note Number : 00H - 7FH (0 - 127)
vv = Velocity : 01H - 7FH (1 - 127)

[When SYNC START is on]
Rhythm starts upon receiving a 'Note On' message. Triggering cannot be obtained by Note Events.If < CTRL > is set to 'VOL.', overall volume is controlled according to the velocity of a received 'Note On' message from a note number not greater than 54 (F3 #).

[When SYNC START is off and < CTRL > is set to 'VOL.']
Overall volume is controlled according to the velocity of a received 'Note On' message from a note number not greater than 54 (F3 #).

[When SYNC START is off and < CTRL > is set to 'INST']
Only the channels being set at < CH > are recognized. 'Note On' messages trigger the instruments. The sound effects 'Applause', 'Snare Roll', 'Waves' and 'Birds' are triggered upon receiving Note On, and looped (hold) until receiving Note Off. The relation between the received note number and the triggered instrument is as the followings.

[When < DRUM SET > is set at DRY, ROOM, POWER, ELECTRIC, JAZZ, BRUSHES or MT - E - CM]
Note numbers fixedly assigned to each instrument will be used.

[When < DRUM SET > is set at U * DRY, U * ROOM, U * POWER, U * ELEC., U * JAZZ or U * BRUSHES]
Note numbers assigned to each instrument at 'NOTE # ASSIGN' will be used. If a note number is set to 'OFF', then the instrument cannot be triggered through MIDI.

●Control Change

Only the channels being set at < CH > are recognized.

○Bank Select

Status	Second	Third
BnH	00H	00H

n = MIDI Channel : 0H - FH (0 - 15) 0 = ch.1 15 = ch.16

Set the Program Change function to 'Drum Set Change'.
Refer to the Program Change description.

Status	Second	Third
BnH	00H	ffH
BnH	20H	ttH

n = MIDI Channel : 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
ff = Style Family ID : 01H - 7FH (1 - 127)
tt = Style Type ID : 00H - 7FH (0 - 127)

Designates the Family/Type of rhythm style, and sets the Program Change function to 'Rhythm Change'. The rhythm cannot be changed before the Program Change has been received.
Refer to the Program Change description.

○Volume

Status	Second	Third
BnH	07H	vvH

n = MIDI Channel : 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
vv = Volume : 00H - 7FH (0 - 127)

Controls overall volume.
Ignored when < CTRL > is set to 'VOL.'.

●Program Change

Only the channels being set at < CH > are recognized.

Status	Second
CnH	ppH

n = MIDI Channel : 0H - FH (0 - 15) 0 = ch.1 15 = ch.16
pp = Program Number : 00H - 7FH (0 - 127)

[Drum Set Change]
When < CLK > is set to 'INT', the following combination of messages changes Drum Sets.

Bn 00 00
Cn pp

pp	Drum Set
00H - 07H (0 - 7)	DRY
08H - 0FH (8 - 15)	ROOM
10H - 17H (16 - 23)	POWER
18H - 1FH (24 - 31)	ELECTRIC
20H - 27H (32 - 39)	JAZZ
28H - 2FH (40 - 47)	BRUSHES
30H - 3FH (48 - 63)	Ignored
40H - 47H (64 - 71)	U*DRY
48H - 4FH (72 - 79)	U*ROOM
50H - 57H (80 - 87)	U*POWER
58H - 5FH (88 - 95)	U*ELEC.
60H - 67H (96 - 103)	U*JAZZ
68H - 6FH (104 - 111)	U*BRUSHES
70H - 7EH (112 - 126)	Ignored
7FH (127)	MT-E-CM

pp = 30H - 3FH (48 - 63)
pp = 70H - 7EH (112 - 126)
are ignored.

[Rhythm Change]
When < CLK > is set to 'EXT', the following combination of messages changes Rhythms.

Bn 00 ff 20 tt
Cn pp

ff	tt = 00H (0)	tt = 01H (1)	tt = 02H (2)
01H(1)	Pop Rock	Hard Rock	Latin Rock
02H(2)	Disco	--	--
03H(3)	Funk	--	--
04H(4)	Ballad	--	--
05H(5)	Slow Rock	--	--
06H(6)	8Beat	--	--
07H(7)	16Beat	--	--
08H(8)	Reggae	--	--
09H(9)	--	--	--
0AH(10)	Rockn Roll	Oldies	--
0BH(11)	--	--	--
0CH(12)	Swing1	Swing2	Brsh Swing
0DH(13)	--	--	--
0EH(14)	--	--	--
0FH(15)	--	--	--
10H(16)	Country	--	--
11H(17)	Waltz	Jazz Waltz	--
12H(18)	--	--	--
13H(19)	Polka	Dance	--
14H(20)	March	--	--
15H(21)	--	--	--
16H(22)	Bossanova	--	--
17H(23)	Rhumba	--	--

ff	tt = 00H (0)	tt = 01H (1)
18H(24)	Cha-Cha	--
19H(25)	Salsa	--
1AH(26)	Tango	--
1BH(27)	Samba	Merengue
1CH(28)	--	--
1DH(29)	--	--
1EH(30)	--	--
1FH(31)	Slow Soul	--
20H(32)	--	--
21H(33)	Rap	House
22H(34)	--	--
23H(35)	--	--
24H(36)	--	--
25H(37)	--	--
26H(38)	Mambo	--
27H(39)	Beguine	--
28H(40)	--	--
29H(41)	Enka	--
2AH(42)	--	--
2BH(43)	--	--
2CH(44)	R & B	--
2DH(45)	--	--
2EH(46)	Lambada	--

The Program Change is ignored if no rhythm style is assigned to the selected Family/Type.

pp	
00H (0)	Variation 1
01H (1)	Variation 2
02H (2)	Variation 3
03H (3)	Variation 4
40H (64)	Intro 1
41H (65)	Intro 2
42H (66)	Intro 3
43H (67)	Intro 4
48H (72)	Ending 1
49H (73)	Ending 2
4AH (74)	Ending 3
4BH (75)	Ending 4
50H (80)	Fill In 1
51H (81)	Fill In 2
52H (82)	Fill In 3
53H (83)	Fill In 4
70H (112)	Break 1
71H (113)	Break 2
72H (114)	Break 3
73H (115)	Break 4

Program numbers not in the table are ignored.

If only Program Change is received, the recently received Bank Select number is effective. Default Bank Select number is 0 (Bn 00 00).

■Channel Mode Message

Only the Channel Mode Messages on the channel which is set at < CH > are recognized.
Omni On/Off, Mono/Poly messages have the same effect as All Notes Off.

●All Notes Off

Status	Second	Third
BnH	7BH	00H

n = MIDI Channel : 0H - FH (0 - 15) 0 = ch.1 15 = ch.16

Mutes all looped (hold) sounds which are triggered through MIDI.

●Omni Off

Status	Second	Third
BnH	7CH	00H

n = MIDI Channel : 0H - FH (0 - 15) 0 = ch.1 15 = ch.16

●Omni On

Status	Second	Third
BnH	7DH	00H

n = MIDI Channel : 0H - FH (0 - 15) 0 = ch.1 15 = ch.16

●Mono

Status	Second	Third
BnH	7EH	mmH

n = MIDI Channel : 0H - FH (0 - 15) 0 = ch.1 15 = ch.16

●Poly

Status	Second	Third
BnH	7FH	00H

n = MIDI Channel : 0H - FH (0 - 15) 0 = ch.1 15 = ch.16

■System Common Message

Recognized only when < CLK > is set to 'EXT'.

●Song Select

Status	Second
F3H	ssH

ss = Song Number : 00H - 03H (0 - 3)

Changes songs if received in the SONG PLAY mode.

■System Realtime message

Recognized only when < CLK > is set to 'EXT'.

●Timing Clock

Status
F8H

●Start

Status
FAH

●Continue

Status
FBH

●Stop

Status
FCH

●Active Sensing

Status
FEH

Once the CR - 80 receives Active Sensing messages, it starts monitoring the interval of incoming MIDI data. If subsequent messages do not arrived within 300msec intervals, the CR - 80 turns off all currently sounding notes. Monitoring of incoming data is also terminated.

Model CR-80

MIDI Implementation Chart

Version : 1.00

Function ...		Transmitted	Recognized	Remarks
Basic Channel	Default	1 – 16	1 – 16	Memorized (Non – volatile)
	Changed	1 – 16	1 – 16	
Mode	Default	Mode 3	Mode 3	
	Messages	×	×	
	Altered	*********		
Note Number	True Voice	0 – 127 *1	0 – 127 *1	
		*********		
Velocity	Note ON	○ 9n v = 10 – 127	○	
	Note OFF	× 9n v = 0	×	
After Touch	Key's	×	×	
	Ch's	×	×	
Pitch Bender		×	×	
Control Change	0	○	○	Bank select
	7	○	○	Volume
Prog Change	True #	○ *2	○ *2	
		*********		
System Exclusive		×	×	
System Common	Song Pos	×	×	
	Song Sel	○ < CLK > = INT	○ < CLK > = EXT	
	Tune	×	×	
System Real Time	Clock	○ < CLK > = INT	○ < CLK > = EXT	
	Commands	○ < CLK > = INT	○ < CLK > = EXT	
Aux Messages	Local ON/OFF	×	×	
	All Notes OFF	×	○ (123 – 127)	
	Active Sense	○	○	
	Reset	×	×	
Notes		*1 Note number assignment for each instrument is commonly used for transmitting and receiving. Preset or user setting can be selected.		
		*2 Used for 'Drum Set Change' or 'Rhythm Change' with Bank Select.		

Mode 1 : OMNI ON, POLY
Mode 2 : OMNI ON, MONO
Mode 3 : OMNI OFF, POLY
Mode 4 : OMNI OFF, MONO

○ : Yes
× : No

CR-80 : Human Rhythm Player

- **Sound Source**

  16 bit dynamic range

- **Maximum polyphony**

  12 notes

- **Internal Voices**

  Percussion sounds : 69

  Sound effects : 8

- **Rhythm Patterns**

  Rhythm Styles : 36

  Each Rhythm Style contains 20 different rhythm patterns ; 4 Variations, 4 Fill-ins, 4 Breaks, 4 Intros and 4 Endings

- **Song**

  Songs 4

  Song length..... 500 Parts

- **Tempo**

  ♩ =40 to 250

- **Display**

  16 characters, 2 lines (backlit LCD)

- **Connectors**

  Output Jacks (Mono/Stereo)

  Headphone Jack (stereo)

  MIDI Connectors (IN/OUT)

  To Coda/Restart Jack

  Fill in Jack

  Start/Stop Jack

  AC Adaptor Jack (DC 9V)

  External Card Slot

- **Power Supply**

  DC 9V : AC Adaptor

- **Current Draw**

  320mA

- **Dimensions**

  360(W) x 242(D) x 56(H) mm

  14-3/16" x 9-1/2" x 2-3/16"

- **Weight**

  1.9 Kg

  4.2 lbs.

- **Accessories**

  AC Adaptor

  Owner's Manual

- **Options**

  Music Style Card(TN-SC1 series)

** The specifications for this product are subject to change without notice.*

INDEX

For the U.K.

IMPORTANT: THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.

BLUE : NEUTRAL
BROWN : LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

For Nordic Countries

Apparatus containing Lithium batteries

ADVARSEL!

Lithiumbatteri – Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Lever det brugte batteri tilbage til leverandøren.

VARNING!

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

ADVARSEL!

Lithiumbatteri – Eksplosjonsfare.
Ved utskifting benyttes kun batteri som anbefalt av apparatfabrikanten.
Brukt batteri returneres apparatleverandøren.

VAROITUS!

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

For Germany

Bescheinigung des Herstellers/Importeurs

Hiermit wird bescheinigt, daß der/die/das

Roland HUMAN RHYTHM PLAYER CR-80

(Gerät. Typ. Bezeichnung)

in Übereinstimmung mit den Bestimmungen der

Amtsbl. Vfg 1046/1984

(Amtsblattverfügung)

funk-entstört ist.

Der Deutschen Bundespost wurde das Inverkehrbringen dieses Gerätes angezeigt und die Berechtigung zur Überprüfung der Serie auf Einhaltung der Bestimmungen eingeräumt.

Roland Corporation Osaka/Japan

Name des Herstellers/Importeurs

For the USA

RADIO AND TELEVISION INTERFERENCE

WARNING — This equipment has been verified to comply with the limits for a Class B computing device, pursuant to Subpart J, of Part 15, of FCC rules. Operation with non-certified or non-verified equipment is likely to result in interference to radio and TV reception.

The equipment described in this manual generates and uses radio frequency energy. If it is not installed and used properly, that is, in strict accordance with our instructions, it may cause interference with radio and television reception. This equipment has been 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. These rules are designed to provide reasonable protection against such a interference in a rasidential installation. However, there is no guarantee that the 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 on and off, the user is encouraged to try to correct the interference by the following measure:

- Disconnect other devices and their input/output cables one at a time. If the interference stops, it is caused by either the other device or its I/O cable.
  These devices usually require Roland designated shielded I/O cables. For Roland devices, you can obtain the proper shielded cable from your dealer. For non Roland devices, contact the manufacturer or dealer for assistance.
  If your equipment does cause interference to radio or television reception, you can try to correct the interference by using one or more of the following measures.
- Turn the TV or radio antenna until the interference stops.
- Move the equipment to one side or the other of the TV or radio.
- Move the equipment farther away from the TV or radio.
- Plug the equipment into an outlet that is on a different circuit than the TV or radio. (That is, make certain the equipment and the radio or television set are on circuits controlled by different circuit breakers or fuses.)
- Consider installing a rooftop television antenna with coaxial cable lead-in between the antenna and TV. If necessary, you should consult your dealer or an experienced radio/television technician for additional suggestions. You may find helpful the following booklet prepared by the Federal Communications Commission:
  "How to Identify and Resolve Radio — TV Interference Problems"
  This booklet is available from the U.S. Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

For Canada

CLASS B **NOTICE**

This digital apparatus does not exceed the Class B limits for radio noise emissions set out in the Radio Interference Regulations of the Canadian Department of Communications.

CLASSE B **AVIS**

Cet appareil numérique ne dépasse pas les limites de la classe B au niveau des émissions de bruits radioélectriques fixés dans le Réglement des signaux parasites par le ministère canadien des Communications.

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