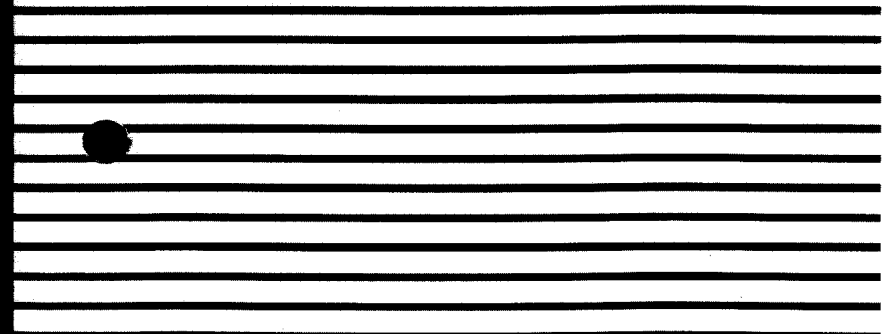


YAMAHA

RHYTHM PROGRAMMER

RY10



OPERATING MANUAL

FCC INFORMATION (U.S.A.)

1. IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT!

This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Yamaha may void your authority, granted by the FCC, to use the product.

2. IMPORTANT: When connecting this product to accessories and/or another product use only high quality shielded cables. Cable/s supplied with this product MUST be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.

3. NOTE: This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class "B" digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in a residential environment will not result in harmful interference with other electronic devices. This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the users manual, may cause interference harmful to the operation of other electronic devices. Compliance with FCC regulations does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determined by turning the unit "OFF" and "ON", please try to eliminate the problem by using one of the following measures:

Relocate either this product or the device that is being affected by the interference.

Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter/s.

In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to co-axial type cable.

If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. If you can not locate the appropriate retailer, please contact Yamaha Corporation of America, Electronic Service Division, 6600 Orangethorpe Ave, Buena Park, CA 90620

* This applies only to products distributed by YAMAHA CORPORATION OF AMERICA.

CANADA

THIS DIGITAL APPARATUS DOES NOT EXCEED THE "CLASS B" LIMITS FOR RADIO NOISE EMISSIONS FROM DIGITAL APPARATUS SET OUT IN THE RADIO INTERFERENCE REGULATION OF THE CANADIAN DEPARTMENT OF COMMUNICATIONS.

LE PRESENT APPAREIL NUMERIQUE N'EMET PAS DE BRUITS RADIOELECTRIQUES DEPASSANT LES LIMITES APPLICABLES AUX APPAREILS NUMERIQUES DE LA "CLASSE B" PRESCRITES DANS LE REGLEMENT SUR LE BROUILLAGE RADIOELECTRIQUE EDICTE PAR LE MINISTERE DES COMMUNICATIONS DU CANADA.

* This applies only to products distributed by YAMAHA CANADA MUSIC LTD.

Dette apparat overholder det gældende EF-direktiv vedrørende radiostøj.

Cet appareil est conforme aux prescriptions de la directive communautaire 87/308/CEE.

Diese Geräte entsprechen der EG-Richtlinie 82/499/EWG und/oder 87/308/EWG.

This product complies with the radio frequency interference requirements of the Council Directive 82/499/EEC and/or 87/308/EEC.

Questo apparecchio è conforme al D.M.13 aprile 1989 (Direttiva CEE/87/308) sulla soppressione dei radiodisturbi.

Este producto está de acuerdo con los requisitos sobre interferencias de radio frecuencia fijados por el Consejo Directivo 87/308/CEE.

YAMAHA CORPORATION

Litiumbatteri!

Bör endast bytas av servicepersonal.
Explosionsfara vid felaktig hantering.

VAROITUS!

Lithiumparisto, Räjähdyksvaara.
Pariston saa vaihtaa ainoastaan alan ammattimies.

ADVARSEL!

Lithiumbatteri!
Ekspløsningsfare. Udskiftning må kun foretages af en sagkyndig, - og som beskrevet i servicemanualen.

SPECIAL MESSAGE SECTION

This product utilizes batteries or an external power supply (adapter). DO NOT connect this product to any power supply or adapter other than one described in the manual, on the name plate, or specifically recommended by Yamaha.

WARNING: Do not place this product in a position where anyone could walk on, trip over, or roll anything over power or connecting cords of any kind. The use of an extension cord is not recommended! If you must use an extension cord, the minimum wire size for a 25' cord (or 1 cm) is 18 AWG. NOTE: The smaller the AWG number, the larger the current handling capacity. For longer extension cords, consult a local electrician.

This product should be used only with the components supplied or; a cart, rack, or stand that is recommended by Yamaha. If a cart, etc., is used, please observe all safety markings and instructions that accompany the accessory product.

SPECIFICATIONS SUBJECT TO CHANGE: The information contained in this manual is believed to be correct at the time of printing. However, Yamaha reserves the right to change or modify any of the specifications without notice or obligation to update existing units.

Do not attempt to service this product beyond that described in the user-maintenance instructions. All other servicing should be referred to qualified service personnel.

This product, either alone or in combination with an amplifier and headphones or speaker/s, may be capable of producing sound levels that could cause permanent hearing loss. DO NOT operate for long periods of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist. **IMPORTANT:** The louder the sound, the shorter the time period before damage occurs.

Some Yamaha products may have benches and/or accessory mounting fixtures that are either supplied with the product or as optional accessories. Some of these items are designed to be dealer assembled or installed. Please make sure that benches are stable and any optional fixtures (where applicable) are well secured **BEFORE** using. Benches supplied by Yamaha are designed for seating only. No other uses are recommended.

NOTICE: Service charges incurred due to lack of knowledge relating to how a function or effect works (when the unit is operating as designed) are not covered by the manufacturer's warranty, and are therefore the owners responsibility. Please study this manual carefully and consult your dealer before requesting service.

ENVIRONMENTAL ISSUES: Yamaha strives to produce products that are both user safe and environmentally friendly. We sincerely believe that our products and the production methods used to

produce them, meet these goals. In keeping with both the letter and the spirit of the law, we want you to be aware of the following:

Battery Notice: This product MAY contain a small non-rechargeable battery which (if applicable) is soldered in place. The average life span of this type of battery is approximately five years. When replacement becomes necessary, contact a qualified service representative to perform the replacement.

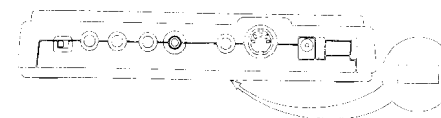
This product may also use "household" type batteries. Some of these may be rechargeable. Make sure that the battery being charged is a rechargeable type and that the charger is intended for the battery being charged.

When installing batteries, do not mix old batteries with new, or with batteries of a different type. Batteries **MUST** be installed correctly. Mismatches or incorrect installation may result in overheating and battery case rupture.

Warning: Do not attempt to disassemble, or incinerate any battery. Keep all batteries away from children. Dispose of used batteries promptly and as regulated by the laws in your area. Note: Check with any retailer of household type batteries in your area for battery disposal information.

Disposal Notice: Should this product become damaged beyond repair, or for some reason its useful life is considered to be at an end, please observe all local, state, and federal regulations that relate to the disposal of products that contain lead, batteries, plastics, etc. If your dealer is unable to assist you, please contact Yamaha directly.

NAME PLATE LOCATION: The graphic below indicates the location of the name plate for this model. The model number, serial number, power requirements, etc., are located on this plate. You should record the model number, serial number, and the date of purchase in the spaces provided below and retain this manual as a permanent record of your purchase.



Model _____

Serial No. _____

Purchase Date _____

PLEASE KEEP THIS MANUAL

Introduction

The Yamaha RY10 is a great-sounding, easy-to-use rhythm machine that is the perfect musical partner for guitarists, keyboard players, and other instrumentalists. It also offers the performance and features required for many demanding recording applications. Yamaha's AWM (Advanced Wave Memory) tone generator system delivers vibrant, true-to-life sound, while a refined control interface including a large multi-function liquid-crystal display panel makes the RY10 easy and efficient to use. It has 50 preset verse patterns and 50 preset fill-in patterns covering a wide variety of musical styles that you can use right away. You can also edit the presets or create your own patterns from scratch using either the real-time or step record mode, and store the results in any of 50 internal pattern memory locations — 50 verse and 50 fill-in. Patterns can be combined to create complete songs, up to 36 of which can be stored in the internal song memory. The RY10 even has an internal amplifier and speaker so you can program and play anywhere without the need for external equipment. The fact that the RY10 allows battery power further facilitates this type of musical freedom.

The RY10 has many other features that make it one of the most enjoyable rhythm programmers available today. Please read this operation manual carefully in order to familiarize yourself with the RY10 and its features — and keep the manual in a safe place for later reference.

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Precautions

!! PLEASE READ THIS BEFORE PROCEEDING !!

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- 1. AVOID EXCESSIVE HEAT, HUMIDITY, DUST AND VIBRATION**
Keep the RY10 away from locations where it is likely to be exposed to high temperatures or humidity — such as near radiators, stoves, etc. Also avoid locations which are subject to excessive dust accumulation or vibration which could cause mechanical damage.
- 2. AVOID PHYSICAL SHOCKS**
Strong physical shocks to the RY10 can cause damage. Handle it with care.
- 3. DO NOT OPEN THE CASE OR ATTEMPT REPAIRS OR MODIFICATIONS YOURSELF**
This product contains no user-serviceable parts. Refer all maintenance to qualified Yamaha service personnel. Opening the case and/or tampering with the internal circuitry will void the warranty.
- 4. MAKE SURE POWER IS OFF BEFORE MAKING OR REMOVING CONNECTIONS**
Always turn the power OFF prior to connecting or disconnecting cables.
- 5. HANDLE CABLES CAREFULLY**
Always plug and unplug cables by gripping the connector, not the cord.
- 6. CLEAN WITH A SOFT DRY CLOTH**
Never use solvents such as benzine or thinner to clean the unit. Wipe clean with a soft, dry cloth.
- 7. ALWAYS USE THE CORRECT POWER SUPPLY**
When not using the specified batteries (see page 13), use an optional Yamaha PA-1B AC Adaptor to power your RY10. Use *only* the PA-1B for mains power, as other adapters may cause damage to the RY10. Also, make

sure that the adaptor you have is appropriate for the AC mains supply voltage in the area where you intend to use the RY10 (the correct INPUT voltage is marked on the adaptor).

8. ELECTRICAL INTERFERENCE

Since the RY10 contains digital circuitry, it may cause interference and noise if placed too close to TV sets, radios or similar equipment. If such a problem does occur, move the RY10 further away from the affected equipment.

9. MIDI CABLES

When connecting the RY10 to MIDI equipment, be sure to use high-quality cables made especially for MIDI data transmission. Also avoid cables longer than about 15 meters, as longer cables can pick up electrical noise that can cause data errors.

10. MEMORY BACKUP

The RY10 contains a special long-life battery that retains the contents of its internal RAM memory even when the power is turned OFF. The backup battery should last for several years. When the backup battery needs to be replaced "BAT ERR2" will appear on the display when the power is turned on. When this happens, have the backup battery replaced by qualified Yamaha service personnel. **DO NOT ATTEMPT TO REPLACE THE BACKUP BATTERY YOURSELF!**

IMPORTANT!: We recommend that you use the RY10 cassette interface to transfer important data to cassette tape for safe long-term storage. Yamaha cannot be held responsible for data loss caused by battery failure or improper operation of the RY10!

11. THIRD-PARTY SOFTWARE

Yamaha can not take any responsibility for software produced for this product by third-party manufacturers. Please direct any questions or comments about such software to the manufacturer or their agents.

About the Manual

The following simple icons are used throughout this manual to draw attention to important points and information where necessary. The icons also make it easier to differentiate between information that you should read immediately and information that can be skipped until later, hopefully helping you to become familiar with the RY10 in the quickest, most efficient manner possible.



This icon warns of possible hardware damage, software malfunction, or any other serious problem that may occur due to improper operation or set up.



This icon marks information that you *must read* — i.e. important steps or procedures that are essential for proper, efficient, or easy operation.



The magnifying-glass icon indicates information that may not be essential for general operation, but is a more detailed explanation of a feature, a description of the principle involved, etc. You can skip this information if full details are not required immediately.



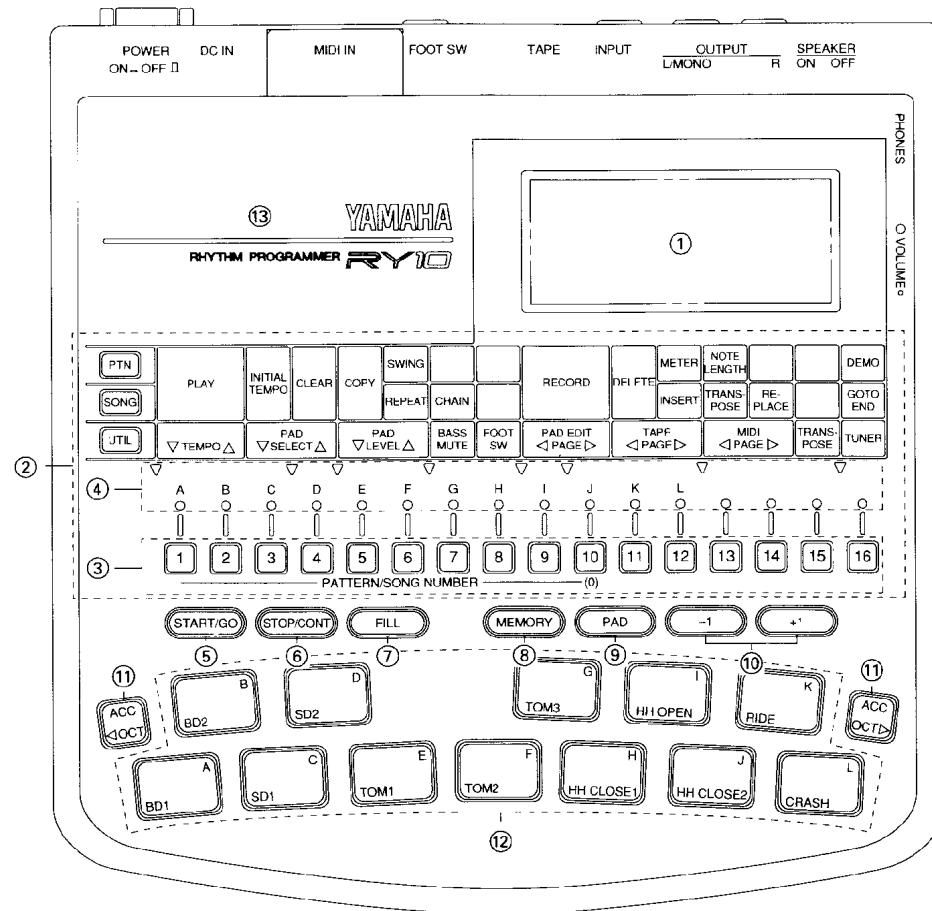
Suggestions as to how a feature or function can be applied musically are identified by this icon.



Hints or ideas that are not specifically musical but may make operation easier or more interesting are marked by the light-bulb icon.

Controls & Connections

Top Panel



① Liquid Crystal Display Panel

This large multi-function liquid crystal display panel shows all parameters and prompts you need to operate the RY10 with optimum ease and efficiency.

② Function Selection Matrix

The function select matrix includes the mode keys — [PTN], [SONG], and [UTIL] — and the number keys — [1] through [16]. Any of the functions listed on the panel can be selected by pressing the corresponding number key while holding the corresponding mode key. For example, to select the PATTERN RECORD you would press either the [9] or [10] number key while holding the [PTN] key. To select SONG REPEAT you would press the [6] number key while holding the [SONG] key, etc.

③ Number Keys

In addition to working as part of the RY10 function select matrix, the number keys can be used to enter pattern or song numbers in the PATTERN PLAY and SONG PLAY modes, respectively. In the step record mode, the number keys are used to enter and delete notes, each number key corresponding to a specific beat within the measure.

See page 31 for further details.

④ Beat Indicators

The 8 triangle and 16 dot LED indicators above the number keys form the RY10 “beat indicator.” Depending on the selected meter (time signature), the triangle indicators show the 1/4-note divisions while the dot indicators corresponding to 16th notes.

The beat indicator shows the progress of each measure in a pattern or song that is playing. It also shows the beats of the measure on which a selected instrument has been entered in the pattern step record mode.

See page 45 and 46 for further details.

⑤ [START/GO] Key

Starts playback (or recording if a record mode has been selected) of the selected pattern or song. The [START/GO] key is also used to execute some other functions, such as PATTERN CLEAR.

See page 32 for further details.

⑥ [STOP/CONT] Key

Stops playback or recording. If you press the [STOP/CONT] key again after stopping a pattern or song, playback will resume from the point at which it was stopped. The [START/GO] key described above will always start the pattern or song from the beginning.

See page 32 for further details.

⑦ [FILL] Key

Each of the RY10 patterns has an associated fill-in pattern that can be selected by pressing this key. If you press the [FILL] key while a pattern is playing, the fill-in will play from the point the [FILL] key was pressed until the beginning of the next measure. If you press the [FILL] key before starting pattern playback, the first measure played will be the fill-in pattern. The [FILL] key is also used when recording or clearing your own fill-ins, and when adding fill-ins to a song.

See page 34 for further details.

⑧ [MEMORY] Key

Selects the preset or internal pattern memory when the PATTERN PLAY mode is engaged. The preset memory — indicated by “PRE” above the pattern number on the display — contains 50 pre-recorded patterns (50 verse patterns and 50 fill-ins) that cannot be modified or overwritten. The internal memory — indicated by “INT” above the pattern number on the display — also provides 50 memory locations that can be used for storage of 50 original patterns and 50 fill-ins. Patterns in the internal memory can be modified or cleared as required. The [MEMORY] key also selects the internal or preset pad bank when the PAD BANK function is engaged.

See page 30 for further details.

⑨ [PAD] Key

Selects the drum, percussion, or bass voices from the currently selected pad bank. The RY10 has 16 preset and 16 programmable internal pad banks which can be selected and used as required. Each pad bank holds 12 drum voices, 12 percussion voices, and one bass voice. While the preset pad banks contained pre-programmed drum “kits,” any of the RY10’s 250 voices can be assigned to the internal pad banks in any combination that you need.

See page 23 for further details.

⑩ [-1] and [+1] Keys

The [-1] and [+1] keys are used to select patterns or songs, and to generally edit parameter values in any of the RY10 modes. Either key can be pressed briefly for single stepping in the specified direction, or held for continuous scrolling.

⑪ [ACC/OCT] Keys

These keys allow adding accents to the instrument sounds when programming drum and percussion voices. The level of the accent can be programmed to produce the overall balance you want. When the bass voice is selected the [ACC/OCT] keys shift the pitch of the bass voice up or down by one octave, providing a total range of three octaves.

See page 64 and 49 for further details.

⑫ Instrument Pads

The RY10 12 instrument pads — A through L — allow the associated instruments to be played and entered into patterns being recorded.

Please note that the instrument names on the pads will not always correspond exactly to the instrument played. The RY10 has 16 preset and 16 programmable “pad banks” that assign completely different sets of instruments to the pads.

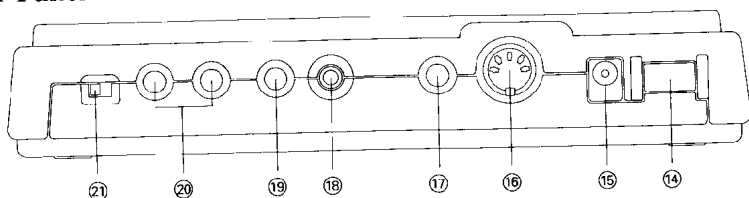
See page 22 for further details.

⑬ Internal Speaker

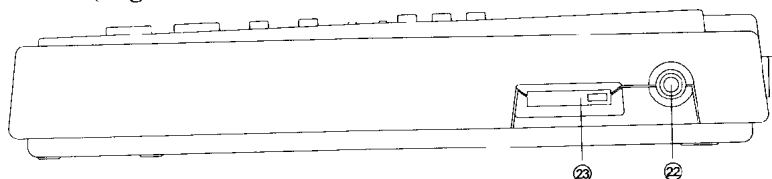
The RY10’s internal speaker is mounted behind this slot. When the rear-panel SPEAKER switch is turned ON, the RY10 sound plus any signal fed to the INPUT jack is played via the internal speaker.

Rear & Side Panels

■ Rear Panel



■ Side Panel (Right)



⑭ [POWER] Switch

Press to turn the RY10 power ON or OFF. Always turn the POWER switch OFF when the RY10 is not in use to prevent unnecessary wear on the batteries.

⑮ DC IN Jack

When not using batteries, the DC output cable from an optional Yamaha PA-1B AC Adaptor should be connected here. When the AC Adapter is used the batteries are automatically disconnected. When connecting the power supply, make sure that the RY10 POWER switch is in the OFF position. (extended), then plug the AC adaptor output cable into the DC IN jack, and finally the adaptor's AC plug into a convenient AC wall outlet.



Do not attempt to use a different AC adaptor to power the RY10. The use of an incompatible adaptor may cause irreparable damage to the RY10, and might pose a serious shock hazard!

⑯ MIDI IN Connector

The MIDI IN connector receives the data from a sequencer or other MIDI keyboard which is to control the RY10.

See page 110 for further details.

⑰ FOOT SW Jack

An optional Yamaha FC4 or FC5 footswitch plugged into this jack can be used to start and stop pattern or song playback and recording in the same way as the panel [START/GO] and [STOP/CONT] keys. The UTILITY mode FOOT SW function also allows the footswitch to be assigned to FILL or NEXT operation.

See page 108 for further details.

⑱ TAPE Jack

This jack allows the RY10 to be interfaced to a standard cassette recorder via a cassette cable, so that data can be economically stored to and retrieved from cassette tape as required.

See page (Please use a cable without an attenuator.) 116 for further details.

⑲ INPUT Jack

Your electric guitar or bass can be plugged directly into this jack, as can any other low-level source. The signal received via the INPUT jack is mixed with the RY10 sound and delivered via the OUTPUT jacks, and the internal speaker when it is turned on.

⑳ OUTPUT L/MONO & R Jacks

These 1/4" phone jacks are the main stereo outputs from the RY10. If a plug is inserted only into the L/MONO jack, the left and right-channel signals are combined and delivered via this jack (for connection to a monaural sound system). The [VOLUME] control adjusts the level of the signal sent to these jacks.

⑳ SPEAKER ON/OFF Switch

The RY10 features a small internal amplifier and speaker which are activated when the SPEAKER switch is turned ON. This allows the RY10 to be programmed and played anywhere, without the need for external amplification equipment.

㉑ PHONES Jack

Accepts a standard pair of stereo headphones (stereo mini-phone plug) for headphone monitoring of the RY10 sound without the need for external amplification equipment.

㉒ [VOLUME] Control

Adjusts the volume of the sound delivered via the rear-panel OUTPUT (L/MONO and R) jacks and the PHONES jack.

Power Supply

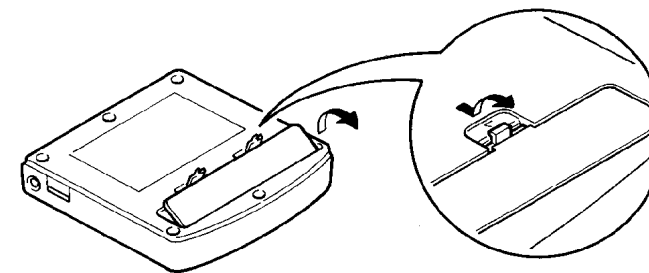
Your RY10 Rhythm Programmer will run either from batteries or an optional AC adapter. Follow the instructions below according to the power source you intend to use.

Using Batteries

Six 1.5V AA size (SUM-3 or R6P) or equivalent alkaline batteries must first be installed in the battery compartment.

1 Open Battery Compartment Cover

Open the battery compartment cover — located on the instrument's bottom panel — by pressing the cover clips and pulling outward, as shown in the illustration.

**2 Insert Batteries**

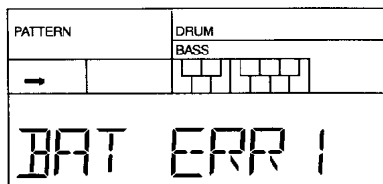
Insert the six batteries, being careful to follow the polarity markings on the bottom panel.

3 Replace Cover

Replace the compartment cover, making sure that it locks firmly in place.

When to Replace the Batteries

When the batteries run down and are no longer able to operate the RY10, the sound may become distorted and the following display will appear:



When this display appears, replace the batteries with a complete set of six new batteries. NEVER mix old and new batteries!

To prevent possible damage due to battery leakage, remove the batteries from the instrument if it is not to be used for an extended period of time.

Using a Power Adapter

Plug the DC output cable from a Yamaha PA-1B AC Adapter (available from your Yamaha dealer) into the DC IN jack on the rear panel, then plug the adapter into a convenient wall AC power socket.

Do not attempt to use an AC adapter other than the specified unit or an appropriate replacement provided by your Yamaha dealer to power the RY10. The use of an incompatible adapter may cause irreparable damage to the RY10, and might pose a serious shock hazard!

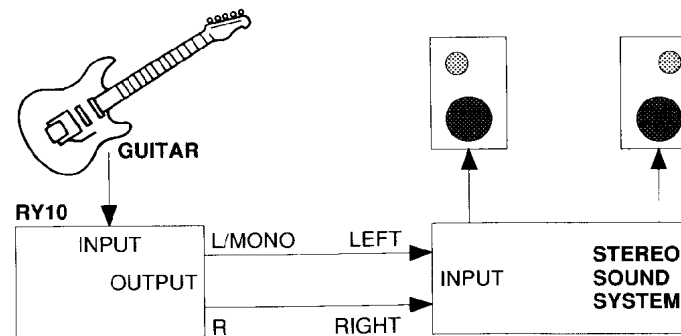
Be sure to unplug the AC adapter from the AC mains socket when the RY10 is not in use.

Setting Up Your System

What you will connect the RY10 to, and what you will connect to the RY10, will depend entirely on your individual requirements, and it would be impossible to cover all possibilities here. The following are a few examples to help you get started.

Audio Connections

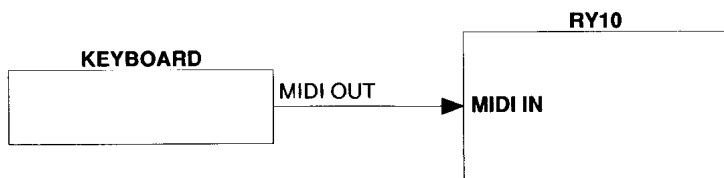
If your RY10 is to be connected to a stereo sound system, use the OUTPUT L/MONO and R jacks. If you have a monaural sound system, connect only the L/MONO jack. If you intend to use the RY10 to provide rhythm accompaniment for your electric guitar or bass, plug the guitar (or the output of any effects units used with the instrument) into the RY10's rear-panel INPUT jack. The guitar sound will be mixed with the RY10 sound and delivered via the OUTPUT jacks to your sound system.



Make sure that both the RY10 and your sound system are turned OFF when making connections.

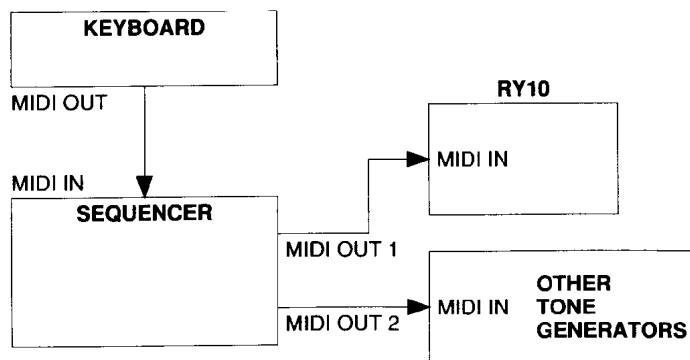
MIDI Connections

Since the RY10 instrument pads are not velocity sensitive, you might prefer to use a MIDI keyboard to play the RY10 instruments. This can be accomplished by connecting the MIDI OUT connector of the keyboard to the MIDI IN connector of the RY10. You'll also have to make sure that the receive channel of the RY10 is set to match the transmit channel of your keyboard (see page 110 for RY10 MIDI channel setup procedures).

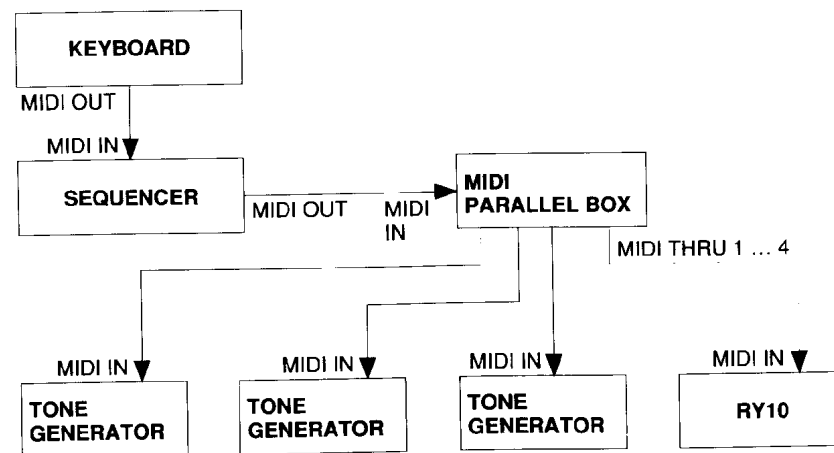
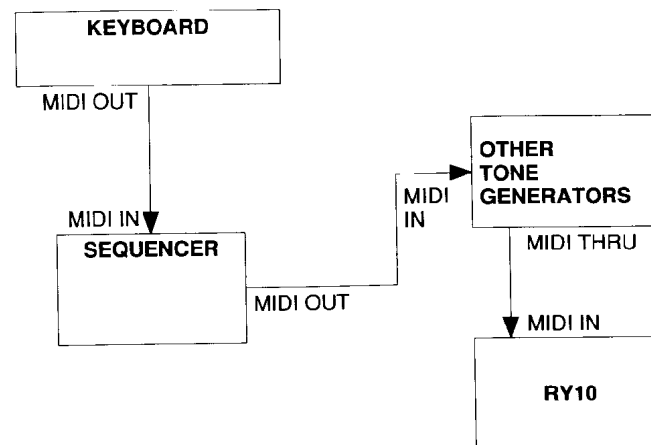


More complex MIDI systems may require the RY10 to be interfaced to a sequencer and perhaps MIDI tone generators and other devices in addition to a master keyboard. In such cases the location of the RY10 in the MIDI chain will have to be planned carefully, since the RY10 does not have a MIDI THRU connector.

If your sequencer provides multiple MIDI OUTs, the RY10 can simply be connected to one while your other tone generators, etc., are connected to the other(s).



If your sequencer only has a single MIDI OUT, however, the most logical place for your RY10 is at the end of the MIDI chain, after the other tone generators. If there will be more than about 3 or 4 devices in the chain, however, it is a good idea to use a MIDI parallel or distribution box to minimize the possibility of delays.

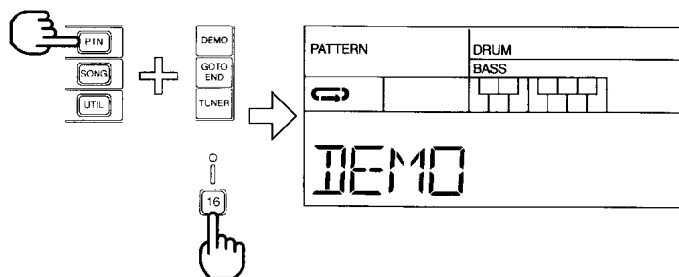


How To Play the Demo

The RY10 is programmed with a demonstration song that you might enjoy listening to after setting up your system. Take a short break and enjoy the demo:

1 Engage the DEMO Function

Press the [16] number key while holding the [PTN] key to engage the DEMO function.



2 Press [START/GO] To Start the Demo

The demonstration song will begin playback as soon as the [START/GO] key is pressed. Set the [VOLUME] control for a comfortable listening level.



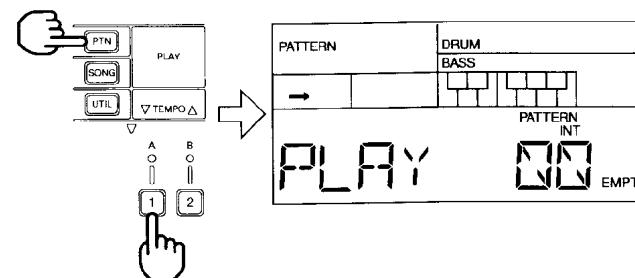
3 Press [STOP/CONT] To Stop the Demo

Press the [STOP/CONT] key to stop demo playback.



4 Return To the PATTERN PLAY Mode

Press the [1] or [2] key while holding the [PTN] key to return to the initial PATTERN PLAY mode.



The RY10 Instruments & Pads

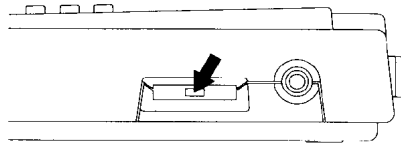
The RY10 has 250 preset voices including standard drums and percussion, a range of innovative electronic percussion sounds, and bass (see the voice list on page 126). The voices can be assigned to “pad banks” that can be selected and played via the 12 instrument pads, or a MIDI instrument connected to the MIDI IN connector. Refer to “MIDI Functions” section beginning on page 110 if you intend to play the RY10 via the MIDI interface.

Playing the Pads

Try out some of the preset voices by playing the RY10 instrument pads.

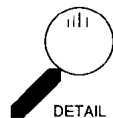
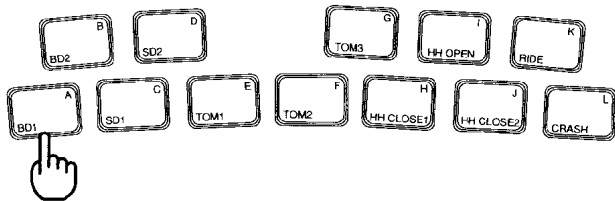
1 Check Connections and Volume

After making the necessary connections (see page 15) and turning the RY10 on, set the [VOLUME] control about half way between its lowest and highest settings.



2 Play the Pads

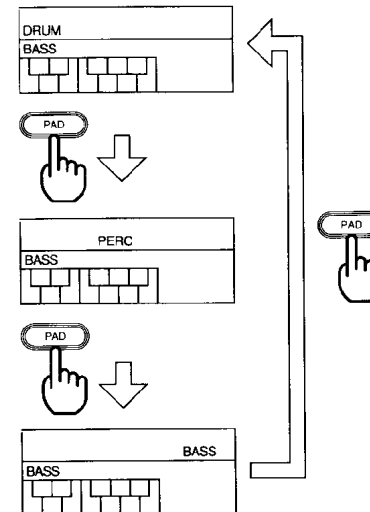
Tap the instrument pads (don't use excessive force). You should hear the 12 instruments currently assigned to the pads.



Note that the LED with the corresponding letter (A through L) lights whenever a pad is played. If you select the BASS instrument, as described in the following step, dots will appear on the corresponding key of the bass keyboard in the display.

3 Try the DRUM, PERC, and BASS Instruments

Each time you press the [PAD] key, the currently available drum, percussion, or bass instruments will be assigned to the instrument pads, as indicated by "DRUM," "PERC," or "BASS" at the top of the display. Use the [PAD] key to select the different instruments, and try playing them via the pads.

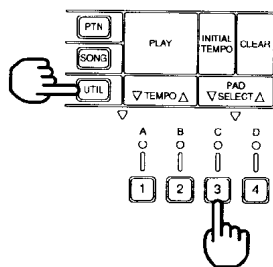


The Pad Banks

The RY10 has 16 preset and 16 programmable internal “pad banks” that are essentially different sets of instruments assigned to the instrument pads. Each pad bank contains 12 drum, 12 percussion, and 1 bass instrument, selected via the [PAD] key. You played one of the pad banks if you followed the steps given above. Here’s how you can select and play the others:

1 Select the PAD SELECT Function

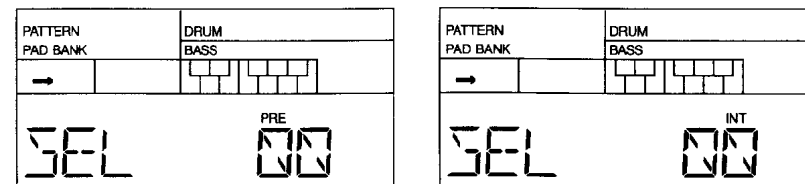
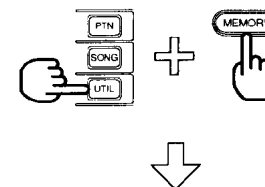
Press the [3] or [4] number key while holding the [UTIL] key to access the PAD SELECT function (don’t release the [UTIL] key yet).



The number shown on the display is the number of the currently selected pad bank (00 through 15).

2 Select the Preset Pad Bank Memory

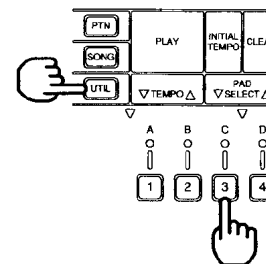
“INT” above the pad bank number indicates that the internal (programmable) pad bank memory is selected, while “PRE” indicates that the preset pad bank memory is selected. If “INT” appears, press the [MEMORY] key to select “PRE” (keep holding the [UTIL] key).



The PAD EDIT functions — described on pages 96 through 105 of this manual — allow you to make your own instrument-to-pad assignments for the internal pad banks, to create custom drum and percussion kits that suit your individual musical requirements.

3 Select a Different Bank and Play the Pads

While still holding the [UTIL] key, press the [4] number key (corresponding to “PAD SELECT △”) to increment the bank number or the [3] key (corresponding to “PAD SELECT ∇”) to decrement the bank number.



4 Release the [UTIL] Key When Done

When you're finished making a selection, release both the number and [UTIL] keys to exit from the PAD SELECT function.

Try selecting the various pad banks and playing the pads to hear the various voices they contain.

Initial Pad Bank Assignments

When the RY10 is initially shipped, the internal pad banks are set up as follows:

Pad	Bank	BD1 A	BD2 B	SD1 C	SD2 D	TOM1 E	TOM2 F	TOM3 G	HHC1 H	HHC2 I	HHC3 J	RIDE K	CR L
00 Ambient	Drum	BD22	BD34	SD26	SD22	TM7H	TM7M	TM7L	HHC2	HHC6	HHC8	RD04	CR06
	Perc	SE07	SE11	SE06	SE25	SE13	SE18	CABS	TMB1	COW2	TIML	SE05	TIMH
	Bass	BAS3											
01 Dry	Drum	BD08	BD10	SD15	SD35	TM1M	TM1L	TM1F	HHC3	HHC7	HHC4	RD01	CR01
	Perc	CG1H	CLV1	CG1M	CG1S	CG1L	TMB2	SHKR	TMB1	COW3	BNGH	FING	BNGL
	Bass	BAS2											
02 Analog	Drum	BD02	BD04	SD02	SD05	TS1H	TS1M	TS1L	HHC1	HHC7	HHC3	RD05	CR07
	Perc	SE02	CLV2	SE01	SE21	SE22	TMB2	FAJR	ACW3	ACW1	ACW2	ACLP	FING
	Bass	BAS4											
03 SE	Drum	BD44	BD07	SD10	SD44	TS3M	TS3L	TS3F	HHC5	HHC6	HHC9	RD04	CR06
	Perc	SE04	SE16	SE08	SE12	SE15	SE03	SE09	SE14	SE06	SE10	SE07	SE17
	Bass	BAS9											
04 Dance	Drum	BD24	BD32	SD17	SD08	TM6H	TM6M	TM6L	HHC4	HHC6	HHC3	RD01	CR05
	Perc	CG1H	CLV1	CG1M	CG1S	CG1L	TMB2	CABS	TMB1	COW1	TIML	ACLP	TIMH
	Bass	BAS1											
05 Heavy Rock	Drum	BD22	BD22	SD21	SD27	TM7M	TM7L	TM7F	HHC4	HHC2	HHC6	CR03	CGNG
	Perc	SE04	SE11	SE08	SE12	SE13	SE18	COW2	TMB1	COW1	TIML	SE05	TIMH
	Bass	BAS5											
06 Light Rock	Drum	BD15	BD12	SD45	SD24	TM3M	TM3L	TM3F	HHC3	HHC7	HHC4	RD01	CR01
	Perc	CG1H	CLV1	CG1M	CG1S	CG1L	TMB2	CABS	TMB1	COW3	TRI2	SHKR	TRI1
	Bass	BAS2											
07 Reggae	Drum	BD35	BD33	SD46	SD33	TM4H	TM4M	TM4F	HHC6	HHC3	HHC2	RD02	CR04
	Perc	CG1H	CLV1	CG1M	CG1S	CG1L	TKD1	SHKR	TKD2	AG2H	TIML	AG2L	TIMH
	Bass	BAS6											
08 Jazz	Drum	BD18	BD17	SD46	SD38	TM1H	TM1M	TM1L	HHC6	HHC6	HHC3	RD06	RD03
	Perc	CG1H	CLV1	CG1M	CG1S	CG1L	TMB2	CABS	TMB1	FING	BNGH	SHKR	BNGL
	Bass	BAS2											

Pad	Bank	BD1 A	BD2 B	SD1 C	SD2 D	TOM1 E	TOM2 F	TOM3 G	HHC1 H	HHC2 I	HHC3 J	RIDE K	CR L
09 Rap	Drum	BD01	SE23	SD03	SE26	TS4H	TS4M	TS4L	HHC1	HHC7	HHC6	RD05	CR09
	Perc	SE20	CLV1	SE19	SE29	SE24	SE28	SE27	SE30	ACW1	SE26	ACLP	SE23
	Bass	BAS8											
10 Funk	Drum	BD37	BD36	SD40	SD12	TM2H	TM2M	TM2L	HHC3	HHC7	HHC4	RD02	CR01
	Perc	CG1H	CLV1	CG1M	CG1S	CG1L	TM22	SURD	TMB1	COW1	SE18	ACLP	SE23
	Bass	BAS1											
11 Ballad	Drum	BD14	BD24	SD29	SD25	TM6M	TM6L	TM6F	HHC2	HHC6	HHC8	RD01	CR03
	Perc	CG1H	CLV1	CG1M	CG1S	CG1L	TMB2	CABS	TMB1	FING	TRI2	SHKR	TRI1
	Bass	BAS2											
12 Latin	Drum	BD21	BD09	SD11	SD18	TM3H	TM3M	TM3L	HHC5	HHC2	HHC3	RD02	CR01
	Perc	CG1H	CLV1	CG1M	CG1S	CG1L	BNGH	BNGL	TMB1	COW1	TIML	WHSL	TIMH
	Bass	BAS2											
13 Euro Beat	Drum	BD40	BD03	SD19	SD05	TM6H	TM6M	TM6L	HHC7	HHC7	HHC4	RD01	CR02
	Perc	SE02	CLV1	SE01	SE21	SE22	SE03	SHKR	TMB1	SE13	FAJR	ACLP	SE07
	Bass	BAS8											
14 Techno	Drum	BD38	BD26	SD06	SD23	TM8M	TM8L	TM8F	HHC8	HHC7	HHC4	RD05	CR08
	Perc	CG2H	SE11	CG2M	CG2S	CG2L	SE18	SE25	SURD	ACW4	AG1H	SE05	AG1L
	Bass	BAS7											
15 R&B	Drum	BD10	BD29	SD09	SD39	TM5M	TM5L	TM5F	HHC6	HHC6	HHC4	RD01	CR01
	Perc	CG1H	CLV1	CG1M	CG1S	CG1L	TMB2	CABS	TMB1	COW1	SHKR	ACLP	FING
	Bass	BAS1											

Playing Patterns

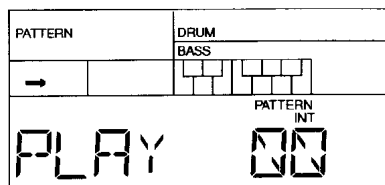
The RY10 has 50 preset memory locations — numbered 00 through 49 — covering a wide range of musical styles. Each memory location contains a verse pattern and a corresponding fill-in pattern. It also has 50 memory locations that can be used to store patterns and fill-ins you create yourself (creating original patterns is described in the next section).

Selecting and Playing a Pattern

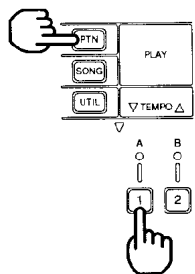
This is the procedure you'll use to select and play both preset and internal patterns.

1 Make Sure the PATTERN PLAY Mode Is Selected

"PATTERN" and "PLAY" appear on the display when the PATTERN PLAY mode is selected.

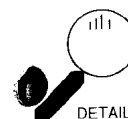
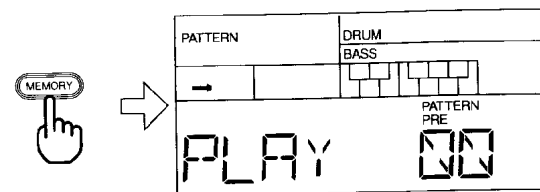


If a different mode is engaged, select the PATTERN PLAY mode by pressing the [1] or [2] key while holding the [PTN] key.



2 Select the Preset or Internal Memory

Use the [MEMORY] key to select the preset ("PRE" above the pattern number) or internal ("INT" above the pattern number) memory. If you're just beginning with the RY10, select "PRE" to hear the preset patterns.

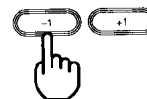


The "INT" memory is blank when the RY10 is initially shipped.

3 Select a Pattern Number

Use either the [-1] and [+1] keys or the number keys to select a pattern number from "00" to "49."

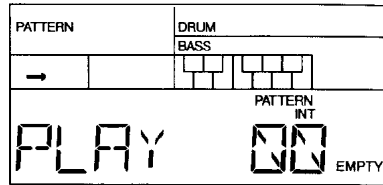
Use the [-1] and [+1] keys decrease (decrement) or increase (increment) the pattern number by one. You can also hold either the [-1] or [+1] key for continuous scrolling in the specified direction.



Use the number keys to directly enter any pattern number. To select pattern number 37, for example, press [3] and then [7]. The [10] key is used to enter a "0" — to select pattern number 20, press [2] and then [10].



If you select a pattern that contains no data (e.g. a blank internal pattern), "EMPTY" will appear next to the pattern number and no sound will be heard if the pattern is played.



4 Press [START/GO] to Begin Playback

Press the [START/GO] key to start playback of the selected pattern.



Note that the triangular LEDs in the “beat indicator” above the number keys flash to indicate the progress of the pattern during playback, while the LED dots (A through L) flash according to the pads/instruments that are playing. When the DRUM instruments are selected (via the [PAD] key), the LED dots correspond to the drum instruments only. When the PERC instruments are selected, the dots correspond to the percussion instruments only. When the BASS instrument is selected, the dots correspond to both the drum and percussion instruments.

5 Press [STOP/CONT] to Stop Playback

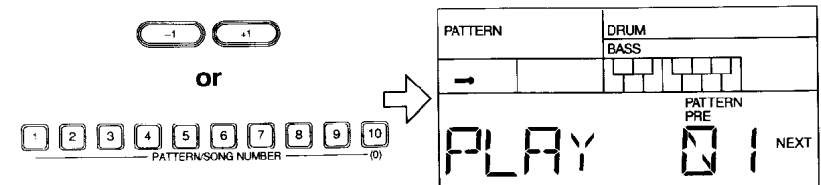
Press the [STOP/CONT] key when you want to stop playback.



The [STOP/CONT] key can also be used to re-start playback from the point at which it was last stopped (“CONT” is short for “continue”).

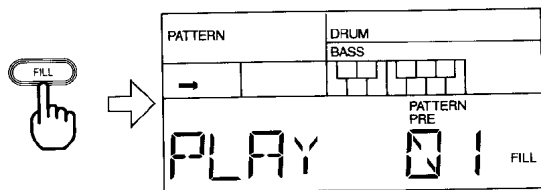
Changing Pattern Numbers During Playback

A different pattern number can be selected while a pattern is already playing by using the [-1] and [+1] or number keys, as described in step 3, above. “NEXT” will appear to the right of the newly selected pattern for the remainder of the current measure, and the new pattern will begin playing from the beginning of the next measure.



Fill-ins

Each RY10 preset pattern has an associated fill-in pattern (you can create your own fill-ins for original patterns). To play a fill-in while a pattern is playing, simply press the [FILL] key. The fill-in will play from the point at which the [FILL] key is pressed to the end of the measure, then playback of the normal pattern will resume. "FILL" appears to the right of the pattern number while the fill in is playing.



If you press the [FILL] key before starting playback, the fill-in will play for the first measure when you press the [START/GO] key.

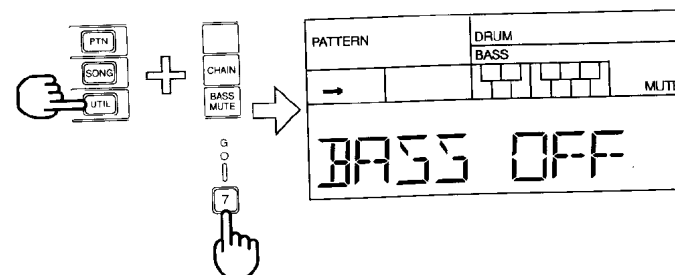


DETAIL

If you select a different pattern number and press the [FILL] key, both "NEXT" and "FILL" will appear on the display and the fill-in of the newly selected pattern will start playing from the beginning of the next measure.

Muting the Bass Part

Some of the preset patterns include a bass part. If you want to hear only the rhythm, without the bass part, mute the bass part by pressing the [7] number key while holding the [UTIL] key.



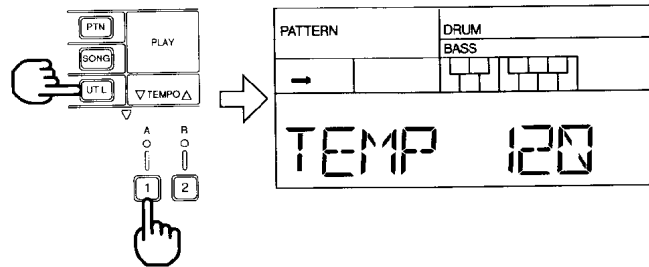
This activates the BASS MUTE function. "MUTE" will appear next to the keyboard in the "BASS" section of the display.

The BASS MUTE function is disengaged by repeating the same procedure.

Tempo Control

The playback tempo can be set to any value from 40 to 250 beats per minute by using the [1] and [2] keys while holding the [UTIL] key.

When the [UTIL] key is initially pressed the current tempo is shown on the display. While still holding the [UTIL] key use the [1] key to decrement the tempo value or the [2] key to increment the tempo value. The [1] or [2] key can be held for continuous scrolling in the specified direction.



Creating Original Patterns

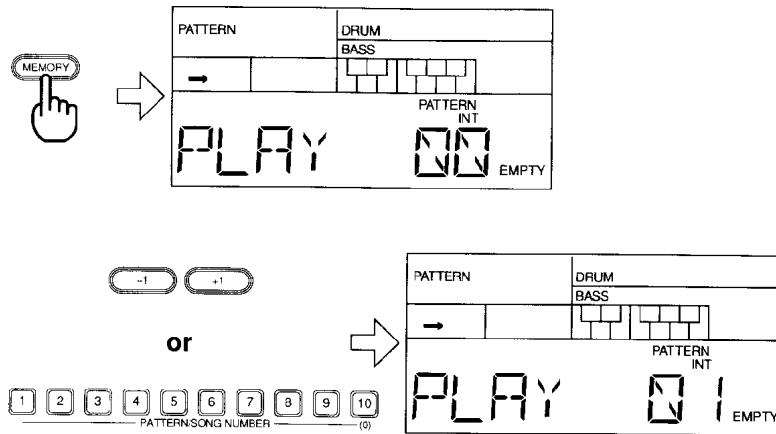
The RY10 can store 50 original patterns and 50 fill-ins in its internal memory. The internal memory features battery backup so your patterns are retained in memory even when the RY10 power is turned off (see the "MEMORY BACKUP" precaution on page 2).

Real-time Record — Record As You Play

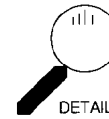
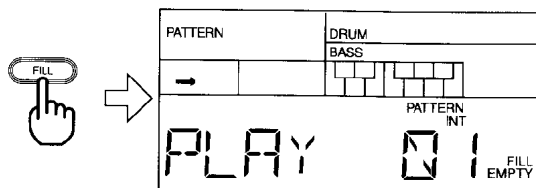
The RY10 real-time record mode lets you record patterns by simply playing the instrument pads in real time.

1 Select an Internal Pattern Number

While in the PATTERN PLAY mode use the [MEMORY] key to select the internal (INT) memory, then use the [-1] and [+1] keys or the number keys to select the number of the pattern you want to record.



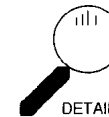
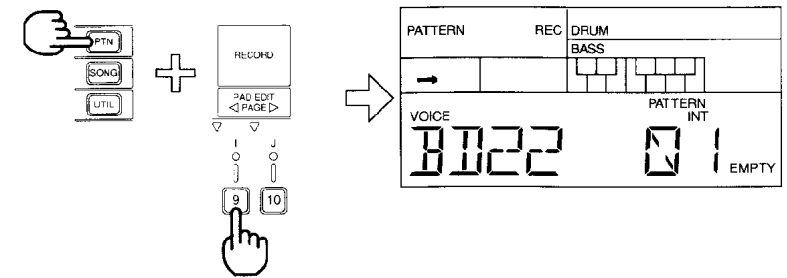
If you want to record a fill-in for the selected pattern, press the [FILL] key so that "FILL" appears next to the pattern number.



If you're just starting with the RY10 it will not be necessary to "clear" previous pattern from the selected location because the internal pattern memory is blank when the RY10 is initially shipped. Later, however, you may want to completely clear a pattern from the internal memory so you can program a new pattern "from scratch" in that location. Use the PATTERN CLEAR function described on page 52.

2 Select the PATTERN RECORD Mode

Press the [9] or [10] key while holding the [PTN] key.



If you attempt to select the pattern record mode while the preset memory is selected, "PRESET" will appear on the display and you will be automatically returned to the previous mode.

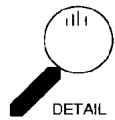
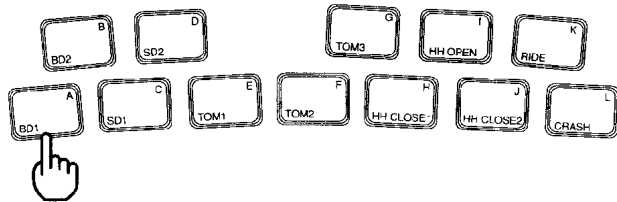
3 Press [START/GO] to Start Recording

As soon as you press the [START/GO] key you'll hear the RY10 metronome, with a accent of the first beat of the measure.



4 Play the Pads to Record

While the metronome is playing, anything you play on the pads will be recorded. Of course, you don't have to record everything at once. The RY10 continuously cycles through the same measure as you record. You can start with just the bass drum, for example, then record the snare, cymbals, and so on until your pattern is complete.



While recording you can change the tempo, use the [PAD] key to select the DRUM, PERC, or BASS voices (see "Recording a Bass Line" on page 49), or use the PAD SELECT function to select different pad banks. Please note, however, that only the last pad bank selected while recording is actually recorded with the pattern.



Since the last PAD BANK number selected while recording is stored along with the pattern data, that pad bank will be selected whenever the pattern is played (as long as the CHASE mode described on page 103 is turned ON). This makes it possible to automatically select the appropriate set of instruments for each pattern whether the patterns are selected manually or automatically in a song (see "Creating and Playing Songs" on page 67).

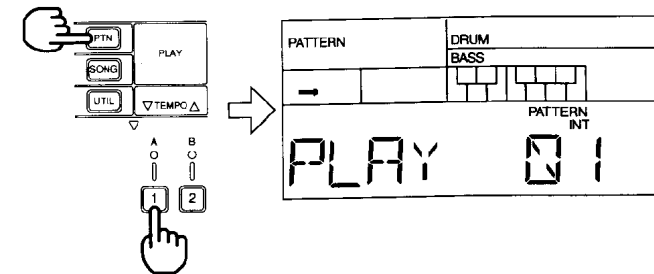
5 Press [STOP/CONT] to Stop Recording

Recording stops when the [STOP/CONT] key, but the pattern record mode remains active. In other words, to resume recording all you have to do is press the [START/GO] key.



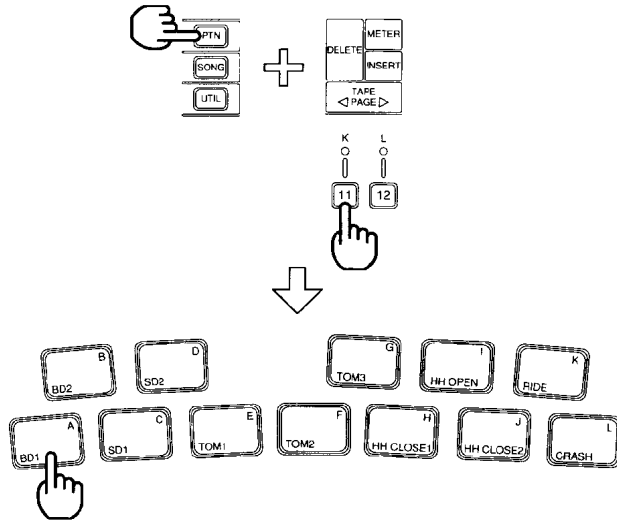
6 Return To the PATTERN PLAY Mode When Done

To hear your pattern (without the metronome sound) when finished, hold the [PTN] key and press the [1] or [2] key to return to the PATTERN PLAY mode, then play the pattern in the normal way.



Deleting Instruments During Real-time Record

Press [11] while holding [PTN] to engage the DELETE function then, while still holding the [PTN] key, press the pad corresponding to the instrument you want to delete. The specified instrument will be deleted only for the duration that the pad is held, so it is possible to delete a single note or a few notes without disturbing others. When the BASS instrument is selected, any pad deletes the bass notes, regardless of pitch.

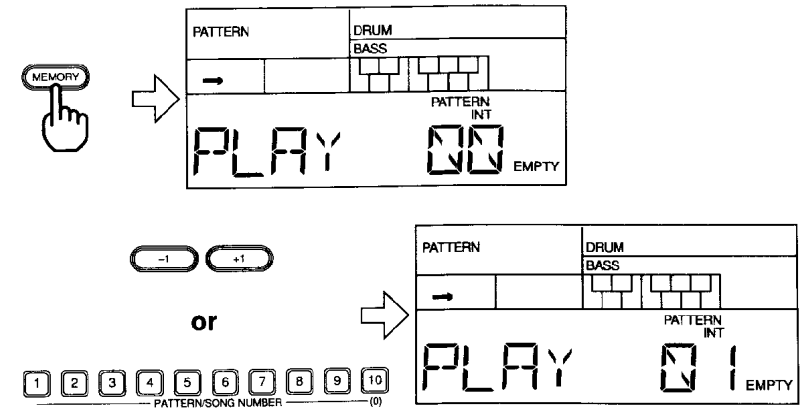


Step Record — One Note At a Time

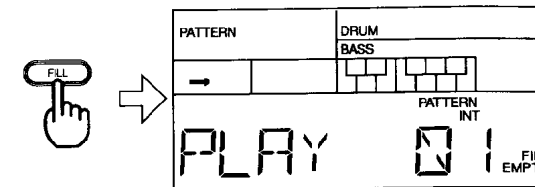
The step record mode lets you enter one note at a time, without having to play in time with the metronome. This makes it possible to enter extremely fast or complex patterns that would be impossible to record in real time.

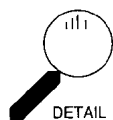
1 Select an Internal Pattern Number

While in the PATTERN PLAY mode use the [MEMORY] key to select the internal (INT) memory, then use the [-1] and [+1] keys or the number keys to select the number of the pattern you want to record.



If you want to record a fill-in for the selected pattern, press the [FILL] key so that "FILL" appears next to the pattern number.

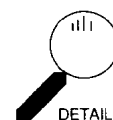
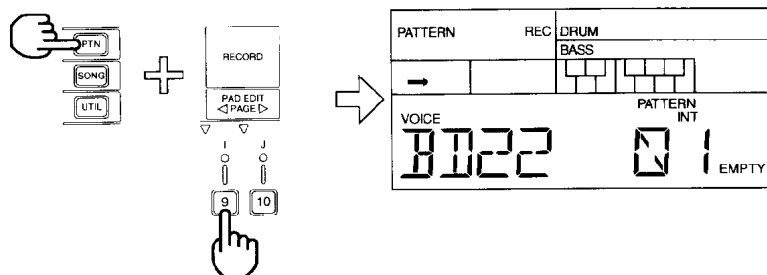




If you need to clear a previous pattern from the selected memory location, use the **PATTERN CLEAR** function described on page 52.

2 Select the Pattern Record Mode

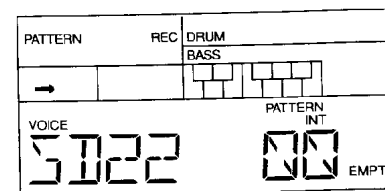
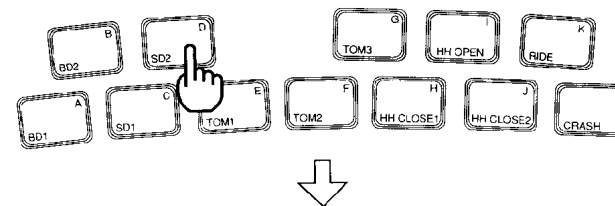
Press the [9] or [10] key while holding the [PTN] key.



If you attempt to select the pattern record mode while the preset memory is selected, "PRESET" will appear on the display and you will be automatically returned to the previous mode.

3 Press a Pad To Select an Instrument

Press the pad corresponding to the first instrument you want to enter. The abbreviated name of the instrument appears on the display (see the instrument list on page 126 for the meanings of the abbreviations). You can also use the [PAD] key to select the DRUM, PERC, or BASS instruments (see "Recording a Bass Line" on page 49) before pressing a pad.

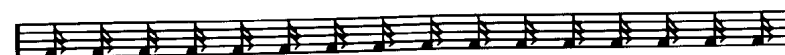
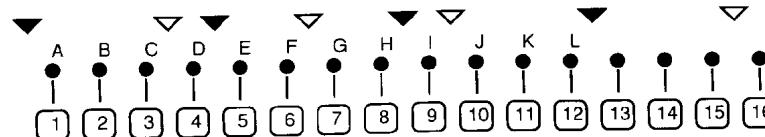


4 Enter the Instrument On the Required Beats

For step recording, the number keys are used to enter the selected instrument on as many beats as required. Here's how the number keys and the LED indicators above them correspond to the beats in the measure (in this example the default meter is selected — a 4/4 measure with 16th note resolution):

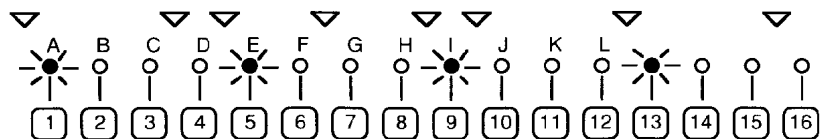
4/4 METER

Quarter notes.



16th notes.

To enter the bass drum on every quarter note, for example, first press the bass drum pad (normally pad A or B), then press number keys [1], [5], [9], and [13]. The display will look like this:

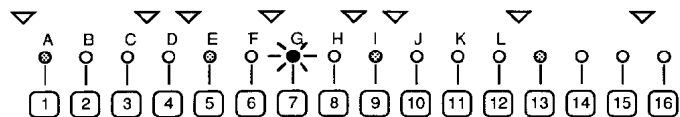
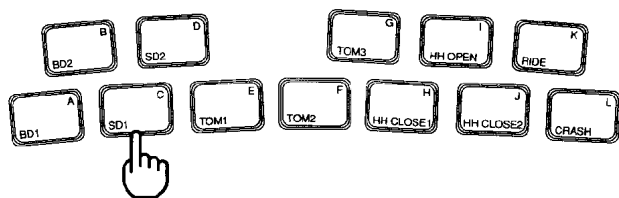


You can press the [START/GO] key to hear the result ... then press [STOP/CONT] to resume step recording.

5 Select and Enter the Next Instrument

Once the first instrument has been entered, press the pad corresponding to the next instrument to be entered (using the [PAD] key first, if necessary), then enter the instrument on the appropriate beats via the number keys. Note that only the currently selected instrument is displayed on the LED indicators above the number keys.

For example, to add a snare drum beat between the second and third bass drum beats we entered in the previous step, press the snare drum pad, then press the [7] number key (half way through the second quarter note = the fourth 8th note of the measure).



⊗ = Previously entered bass drum.
● = Snare drum.

6 Repeat Until Done

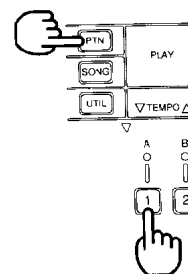
Continue selecting instruments and entering beats until your pattern is complete.



You can press the [START/GO] key at any point during step recording to hear how your pattern is progressing. You can also add instruments in the real-time record mode while the pattern is running, if you like.

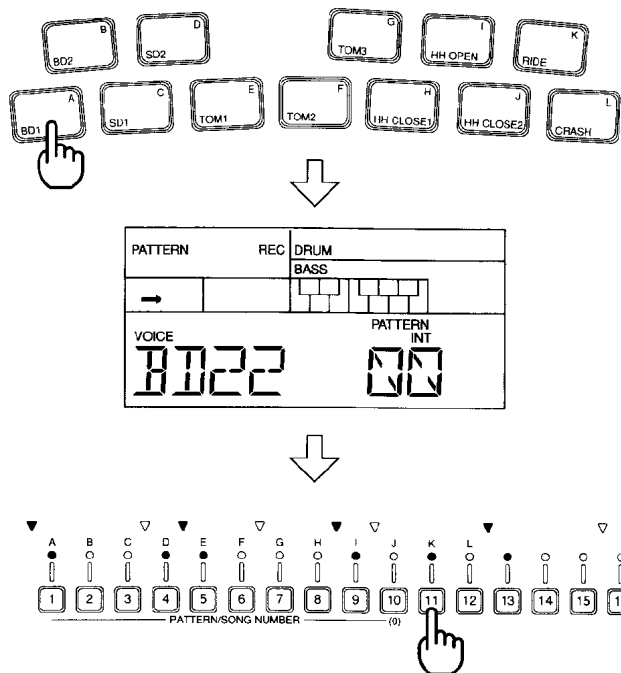
7 Return To the PATTERN PLAY Mode When Done

To hear your pattern when finished, hold the [PTN] key and press the [1] or [2] key to return to the PATTERN PLAY mode, then play the pattern in the normal way.



Deleting Instruments During Step Record

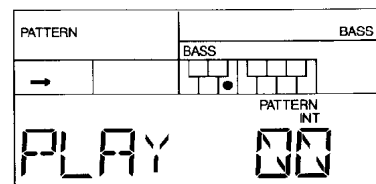
A single beat of a specific instrument can be deleted in the step record mode by first pressing the pad corresponding to the instrument to be deleted, and then the number key corresponding to the beat to be deleted (the beat indicator LED will go out).



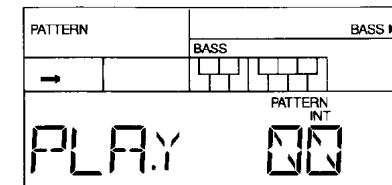
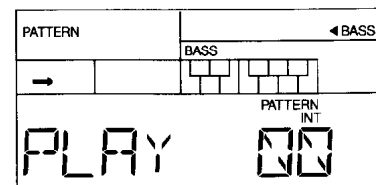
You can also press the [START/GO] key to enter the real-time record mode, and delete instruments using the DELETE function, as described on page 42.

Recording a Bass Line

When the BASS voice is selected (by using the [PAD] key), the instrument pads function as a keyboard, with each key playing the bass voice at a different pitch. The keys are arranged in the same way as a piano keyboard, the bottom row of keys corresponding the “white keys” and the top row to the “black keys.” Watch the keyboard symbol in the BASS section of the display and you’ll see a dot appear on the corresponding note whenever a pad is played.



The [< OCT] and [OCT >] keys, to the left and right of the pad keys, can be used to shift the pitch of the entire “keyboard” down or up one octave. The selected octave is indicated by arrows to the left or right of “BASS” in the display.



Real-time Bass Recording

You can enter a bass line in the real-time record mode by simply selecting the BASS voice via the [PAD] key, and then playing the required bass notes on the pads. The length of the note entered corresponds to the length of time the pad is held — except that a long note will be cut off by any other note played before it ends. The length of each bass note can be changed by using the NOTE LENGTH function, described below.

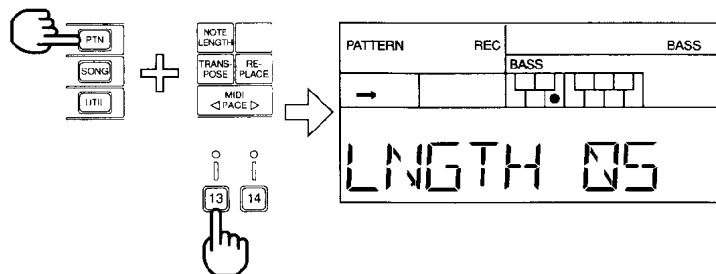
Step-record Bass Recording

In the step record mode, bass notes are entered by pressing the pad corresponding to the note to be entered (the selected note is indicated by a dot on the keyboard in the BASS section of the display), and then the number key (or keys), as described in the normal step record procedure, above. Bass notes entered in the step record mode all have a fixed length, but this can be changed by using the NOTE LENGTH function, described below.

Changing The Bass Note Length

1 Engage the NOTE LENGTH Function

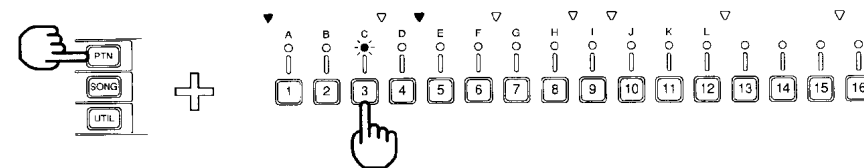
Press the [13] key while holding the [PTN] key to engage the NOTE LENGTH function (don't release the [PTN] key).



The PATTERN STEP RECORD mode and the BASS voice are automatically selected when the NOTE LENGTH function is engaged.

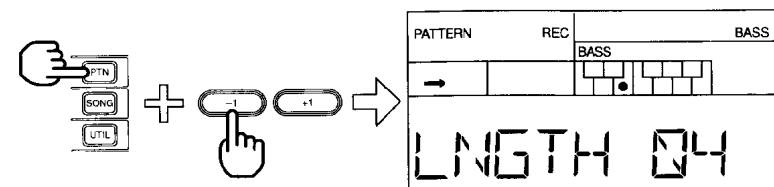
2 Select a Bass Note To Edit

While still holding the [PTN] key, press the number key corresponding to the bass note you want to edit. The beat indicator LED corresponding to the selected note will flash (keep holding the [PTN] key).



3 Specify the Note Length

Use the [-1] and [+1] keys to set the desired gate time for the selected note.



4 Release the [PTN] Key

Release the [PTN] key to complete the operation.

Clearing a Pattern From Memory

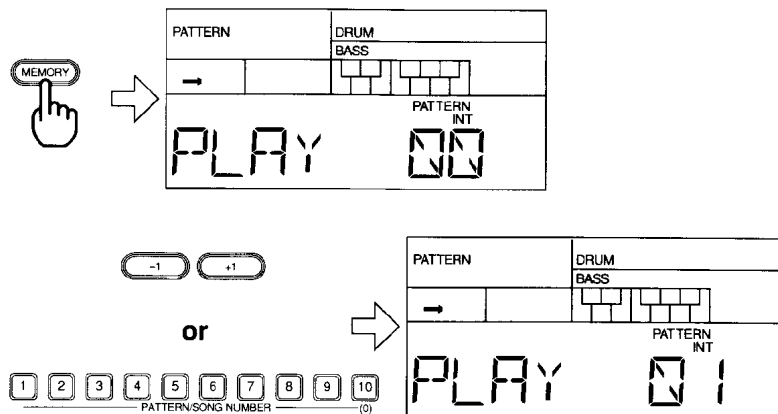
Use this function to erase patterns that you no longer need (or those that don't come up to your musical standards) from a specified pattern number.



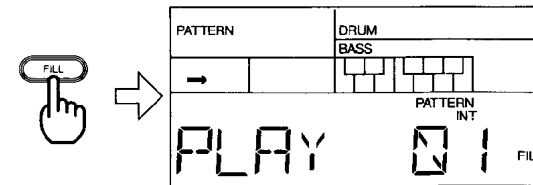
Be sure you don't want to keep the original data, because once a pattern is cleared there's no way to get it back. If you have previously saved the data to tape (see "Using the Tape Interface" on page 116), then it can re-loaded whenever you need it. Otherwise, you'll have to re-program the pattern from scratch.

1 Select the Internal Pattern To Be Cleared

While in the PATTERN PLAY mode use the [MEMORY] key to select the internal (INT) memory, then use the [-1] and [+1] keys or the number keys to select the number of the pattern you want to clear.

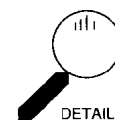
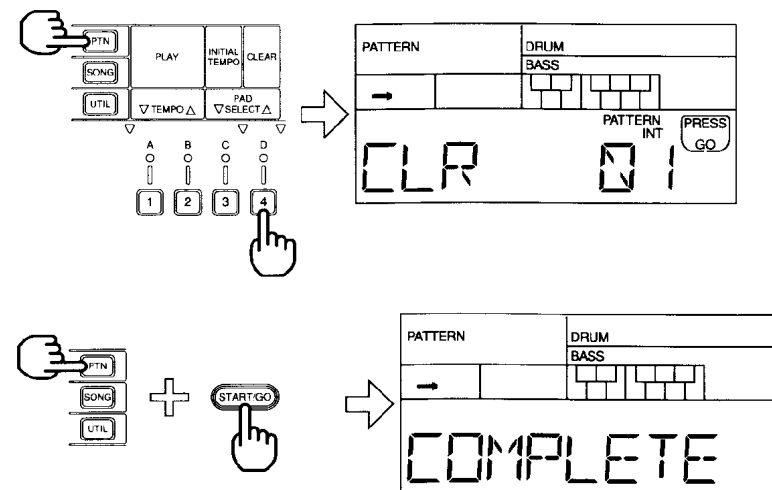


If you want to clear the fill-in for the selected pattern, press the [FILL] key so that "FILL" appears next to the pattern number.



2 Clear the Pattern

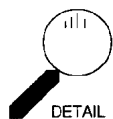
Press the [4] key while holding the [PTN] key to engage the PATTERN CLEAR function and then, while still holding the [PTN] key, press the [START/GO] key. "COMPLETE" will appear briefly on the display when the pattern data has been cleared.



It is also possible to select a different pattern to be cleared after engaging the PATTERN CLEAR function (i.e. before pressing the [START/GO] key) by using the [-1] and [+1] keys, the [MEMORY] key and/or the [FILL] key.

3 Release the [PTN] Key

Release the [PTN] key to complete the operation.



The *PATTERN CLEAR* function can not be executed if the preset (*PRE*) memory is selected. Also note that the *PATTERN CLEAR* function does not affect the pattern's initial tempo (page 59), meter (page 61), pad bank (page 24), and swing settings (page 65).

Copying a Pattern To a Different Pattern Number

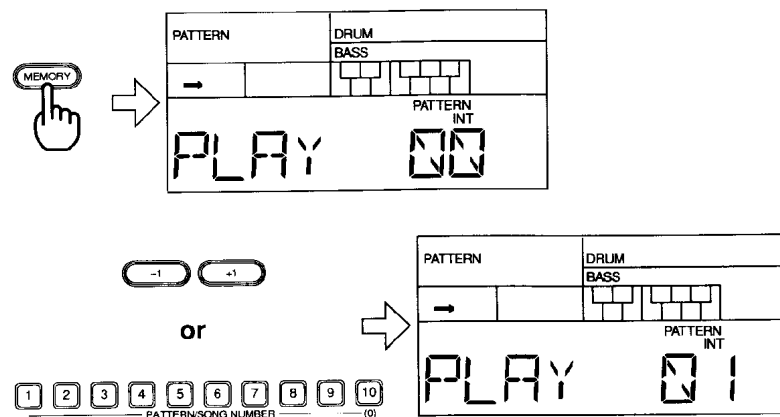
This function lets you copy a pattern — preset or internal — to a different pattern number (internal).



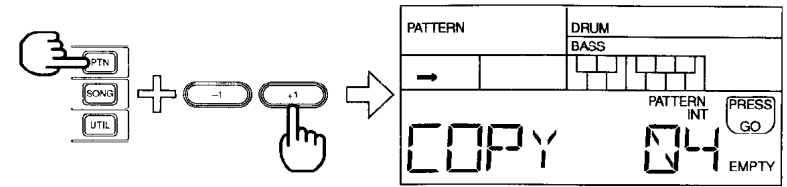
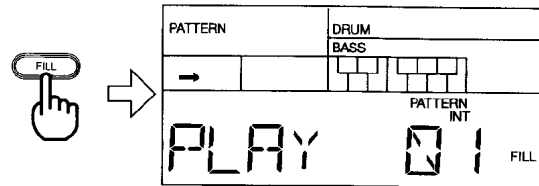
The *PATTERN COPY* function provides a great way to create modified versions of existing patterns. Copy the original pattern to a new location, then use the real-time and/or step record methods to delete and add material as required.

1 Select the Pattern To Be Copied

While in the *PATTERN PLAY* mode use the [MEMORY] key to select either the preset (*PRE*) or internal (*INT*) memory, then use the [-1] and [+1] keys or the number keys to select the number of the pattern you want to copy to a different internal memory location (the "source" pattern).

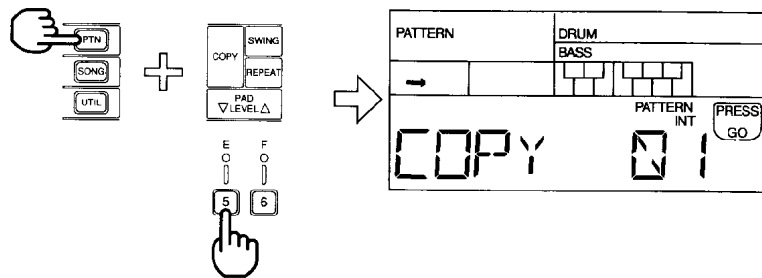


If you want to copy the fill-in for the selected pattern, press the [FILL] key so that "FILL" appears next to the pattern number.

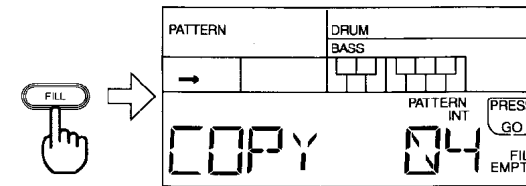


2 Engage the PATTERN COPY Function

Press the [5] key while holding the [PTN] key to engage the PATTERN COPY function (don't release the [PTN] key yet).



If you want to copy the source data to the fill-in of the destination pattern, press the [FILL] key so that "FILL" appears next to the destination pattern number.



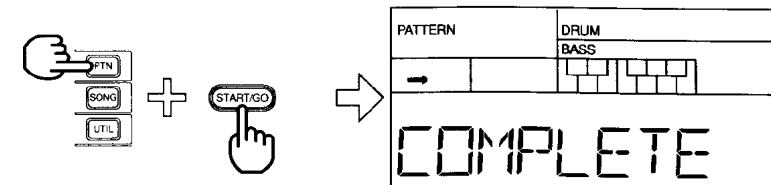
You can copy the data from a pattern to its own fill-in (i.e. the fill-in of the same pattern number), then edit the copied data to create a fill-in that is a modified version of the original pattern.

3 Specify the Destination Pattern Number

While still holding the [PTN] key, use the [-1] and [+1] keys to specify the pattern number to which you want the source pattern to be copied (the INT memory is automatically selected for this step) — keep holding the [PTN] key.

4 Execute the PATTERN COPY Function

Still holding the [PTN] key, press the [START/GO] key to actually execute the PATTERN COPY function. "COMPLETE" will appear briefly on the display when the pattern data has been copied.





Any existing data in the destination pattern number will be erased when the copy function is executed. This includes initial tempo (page 59), swing (page 65), and currently selected pad bank (page 24) settings, since these settings are also copied.

If the destination pattern has a meter setting that is different from the source pattern, the "ILLEGAL" display will appear and the copy function will be aborted.

5 Release the [PTN] Key

Release the [PTN] key to complete the operation.

Setting an Initial Pattern Tempo

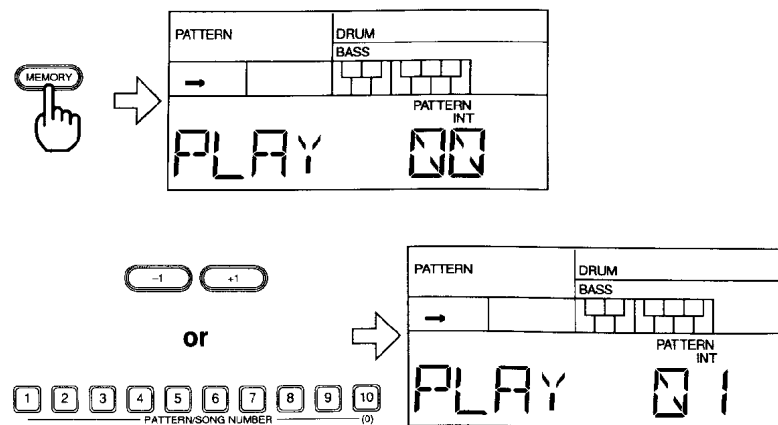
Each pattern in internal memory can be programmed with an "initial tempo" which takes effect when the pattern begins playing. When the initial tempo function is turned OFF, the pattern will be played at the current tempo — as set by the TEMPO function described on page 36 — when it is selected (i.e. no tempo change will occur). When an initial tempo is set, however, the pattern will be played at that tempo when selected, as will all subsequently selected patterns until a pattern with a different initial tempo setting is selected.



The INITIAL TEMPO will not take effect if playback is started using the [STOP/CONT] key.

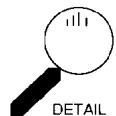
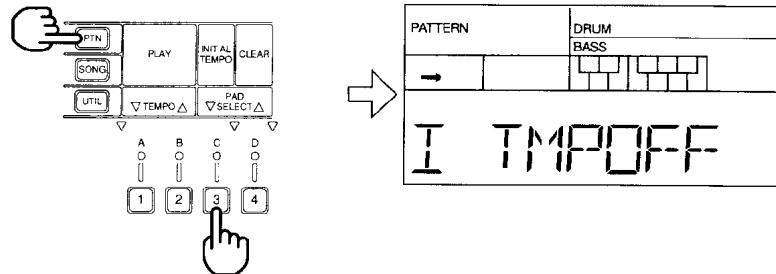
1 Select an Internal Pattern

While in the PATTERN PLAY mode use the [MEMORY] key to select the internal (INT) memory, then use the [-1] and [+1] keys or the number keys to select the number of the pattern for which you want to program an initial tempo.



2 Engage the INITIAL TEMPO Function

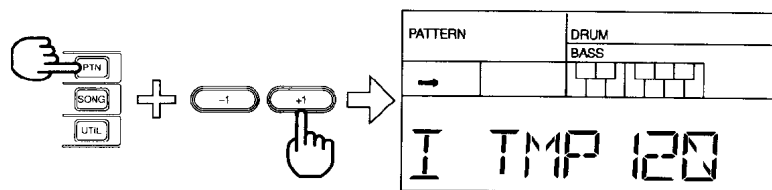
Press the [3] key while holding the [PTN] key to engage the INITIAL TEMPO function (don't release the [PTN] key yet).



The INITIAL TEMPO setting can not be changed if the preset (PRE) memory is selected.

3 Specify the Desired Initial Tempo

While still holding the [PTN] key, use the [-1] and [+1] keys to specify the initial tempo for the selected pattern.



4 Release the [PTN] Key

Release the [PTN] key to complete the operation.

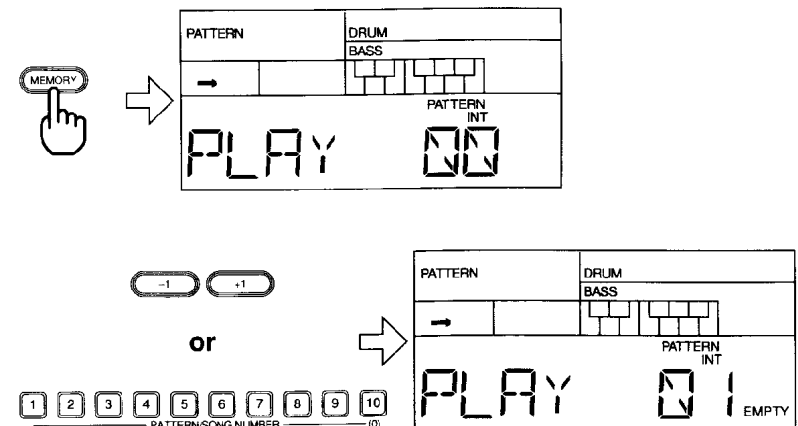
Setting the Meter — 3/4 and Other Time Signatures

Of course, you won't always want to record in 4/4 time, so the RY10 gives you a choice of other time signatures — and note resolutions. The note resolution determines the smallest note length that can be entered in the pattern. A note resolution of 16, for example, means that even if you play 32nd notes, all notes will be aligned to the nearest 16th-note.

The METER setting can only be changed before programming a new pattern in a blank (cleared) memory location.

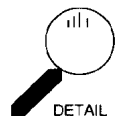
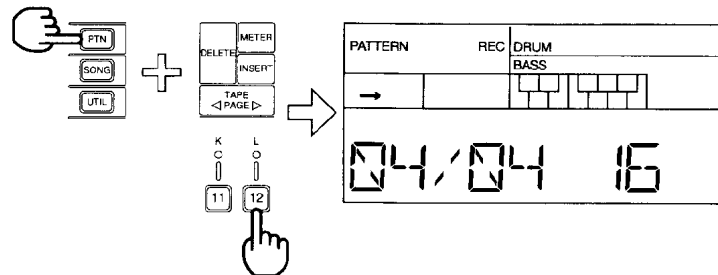
1 Select an Internal Pattern

While in the PATTERN PLAY mode use the [MEMORY] key to select the internal (INT) memory, then use the [-1] and [+1] keys or the number keys to select the number of the blank pattern for which you want to program a new meter.



2 Engage the METER Function

Press the [12] key while holding the [PTN] key to engage the METER function (don't release the [PTN] key yet).



The METER setting can not be changed if the selected pattern or its fill-in already contains data.

3 Specify the Desired Meter

While still holding the [PTN] key, use the [-1] and [+1] keys to specify the desired meter (see list below).

4 Release the [PTN] Key

Release the [PTN] key to complete the operation.

Here's a list of the METER settings you can choose:

Time signature list

Display	Time Signature & Resolution
1/4 12	1/4 time, 12th note resolution (8th-note triplets)
1/4 16	1/4 time, 16th note resolution
1/4 24	1/4 time, 24th note resolution (16th-note triplets)
1/4 32	1/4 time, 32nd note resolution
2/4 12	2/4 time, 12th note resolution (8th-note triplets)
2/4 16	2/4 time, 16th note resolution
2/4 24	2/4 time, 24th note resolution (16th-note triplets)
2/4 32	2/4 time, 32nd note resolution
3/4 12	3/4 time, 12th note resolution (8th-note triplets)
3/4 16	3/4 time, 16th note resolution
4/4 12	4/4 time, 12th note resolution (8th-note triplets)
4/4 16	4/4 time, 16th note resolution
5/4 12	5/4 time, 12th note resolution (8th-note triplets)
1/8 16	1/8 time, 16th note resolution
1/8 24	1/8 time, 24th note resolution (16th-note triplets)
1/8 32	1/8 time, 32nd note resolution
3/8 16	3/8 time, 16th note resolution
3/8 24	3/8 time, 24th note resolution (16th-note triplets)
3/8 32	3/8 time, 32nd note resolution
5/8 16	5/8 time, 16th note resolution
5/8 24	5/8 time, 24th note resolution (16th-note triplets)
7/8 16	7/8 time, 16th note resolution
1/16 16	1/16 time, 16th note resolution
1/16 32	1/16 time, 32nd note resolution
3/16 16	3/16 time, 16th note resolution
3/16 32	3/16 time, 32nd note resolution
5/16 16	5/16 time, 16th note resolution
5/16 32	5/16 time, 32nd note resolution
7/16 16	7/16 time, 16th note resolution
7/16 32	7/16 time, 32nd note resolution
9/16 16	9/16 time, 16th note resolution
11/16 16	11/16 time, 16th note resolution
13/16 16	13/16 time, 16th note resolution
15/16 16	15/16 time, 16th note resolution

Using Accents

Your patterns will have a lot more life and vitality if you use accents to create some dynamic variation. To accent a note while simply playing the pads, hold either of the [ACCENT] keys while playing the instrument pad.

The accent level of each instrument pad can be set independently by using the Accent Level function in the PAD EDIT mode (see page 99).

Real-time Accents

In the real-time record mode accents are added by tapping one of the [ACCENT] keys at the appropriate times. Accents are deleted in the same way as the other instruments — by engaging the DELETE function and holding either of the [ACCENT] keys over accents you want to delete (see page 42).

Step-record Accents

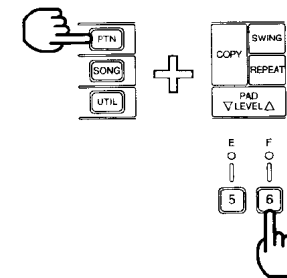
In the step record mode accents are entered (and deleted) in exactly the same way as instruments — press one of the [ACCENT] keys to select accents, then enter the accents at the required points in the pattern via the number keys (see page 43).

Creating a Swing Feel

The SWING function can be used to give the selected internal pattern a looser “swing” feel by slightly delaying odd-numbered 8th or 16th notes. Each internal pattern/fill-in can be programmed with a different SWING setting.

1 Engage the SWING Function

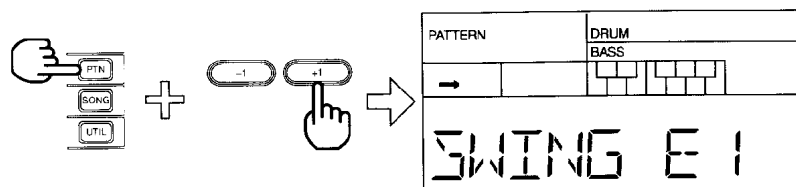
While in the PATTERN PLAY mode, press the [6] key while holding the [PTN] key to engage the SWING function (don't release the [PTN] key yet).



The SWING setting can not be changed if a preset pattern is selected.

2 Specify the Desired SWING Value

While still holding the [PTN] key, use the [-1] and [+1] keys to specify the desired swing value:



- E1** Odd-numbered 8th notes advanced by 1 clock.*
- E2** Odd-numbered 8th notes advanced by 2 clocks.
- E3** Odd-numbered 8th notes advanced by 3 clocks.
- E4** Odd-numbered 8th notes advanced by 4 clocks.
- E5** Odd-numbered 8th notes advanced by 5 clocks.
- E6** Odd-numbered 8th notes advanced by 6 clocks.
- E7** Odd-numbered 8th notes advanced by 7 clocks.
- E8** Odd-numbered 8th notes advanced by 8 clocks.
- E9** Odd-numbered 8th notes advanced by 9 clocks.
- S1** Odd-numbered 16th notes advanced by 1 clock.
- S2** Odd-numbered 16th notes advanced by 2 clocks.
- S3** Odd-numbered 16th notes advanced by 3 clocks.
- S4** Odd-numbered 16th notes advanced by 4 clocks.
- S5** Odd-numbered 16th notes advanced by 5 clocks.

* A "clock" is 1/24th of a quarter-note.



Obviously, a SWING setting of, say, "S5" is going to have no audible effect if the pattern contains no notes on the odd-numbered 16th note beats. Be sure to select a SWING setting that matches the content of your pattern.

3 Release the [PTN] Key

Release the [PTN] key to complete the operation.

Creating & Playing Songs

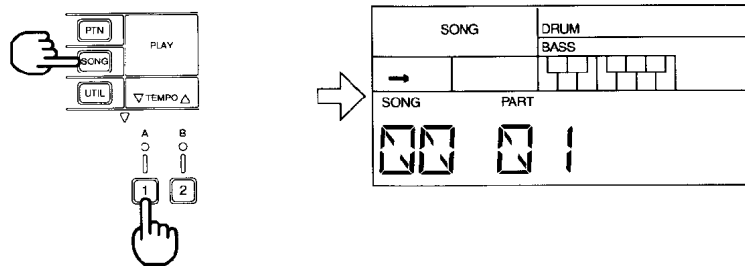
The RY10 has memory locations for 36 different "songs." A song is actually a sequence of patterns — for example, an intro pattern, a verse pattern with fill-ins, a chorus pattern with fill-ins, an ending pattern, etc. Before you begin programming a song, you should create the various patterns that your song will contain in the PATTERN RECORD mode.

Step Record — Create the Basic Song Structure

The step record mode is the way you should normally begin programming a song. The real-time record mode, described later, is more suited to adding fill-ins after the basic structure of the song has been programmed in the step record mode.

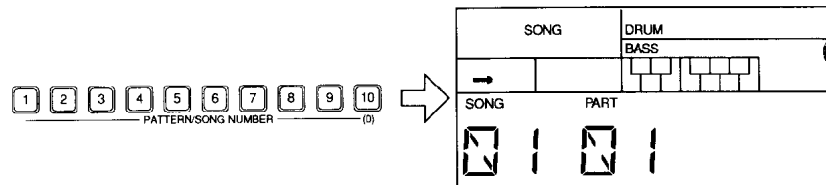
1 Select the SONG PLAY Mode

Press the [1] or [2] key while holding the [SONG] key to engage the SONG PLAY mode.



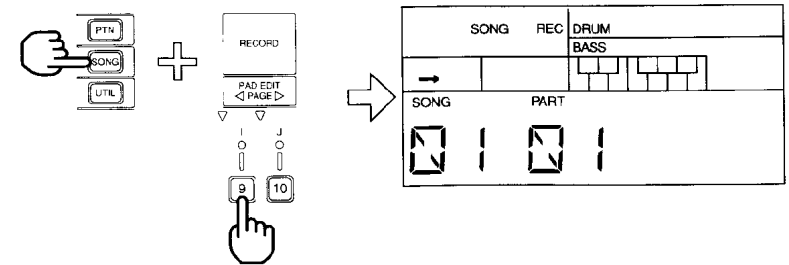
2 Select a Song Number

While in the SONG PLAY mode, use the number keys to select the number of the song you want to record — 00 through 35.



3 Select the SONG RECORD Mode

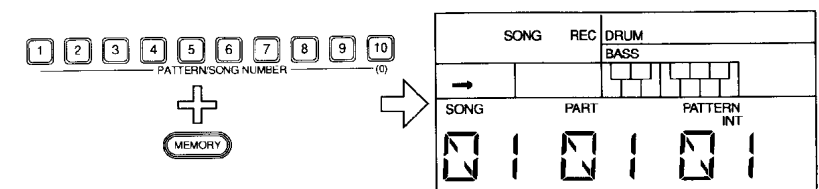
Press the [9] or [10] key while holding the [SONG] key.

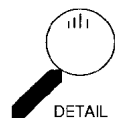


The leftmost number on the display is the selected song number. The next number is the “part” number — in the song mode a pattern or fill number is assigned to each “part.”

4 Enter the Pattern Number For the First Part

Use the number keys to enter the number of the pattern that is to be the first part of the song. The pattern number appears to the right of the part number. You can also use the [MEMORY] key to select an INT or PRE pattern, or the [FILL] key to enter the fill-in of the selected pattern.

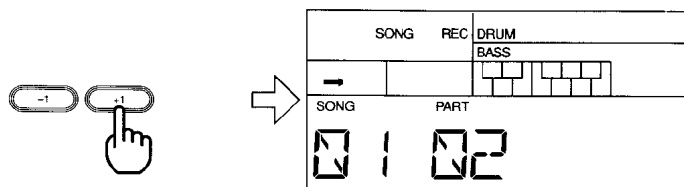




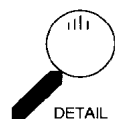
When entering a fill-in it is possible to specify the 16th-note from which the fill-in is to begin by using the [-1] and [+1] keys while the [FILL] key is held. The step number is shown in the center of the display, under "STEP," while the [FILL] key is held. To start the fill-in from the third beat of a 4/4 measure, for example, set a step value of 9. The fill can also be turned off by selecting "OF," the setting below "01."

5 Go To the Next Part, Enter the Next Pattern Number, and Repeat

Press the [+1] key to move forward to the next part, then select the pattern number for that part, as in the previous step.



Continue entering the pattern/fill numbers for parts in this way until your song is complete.

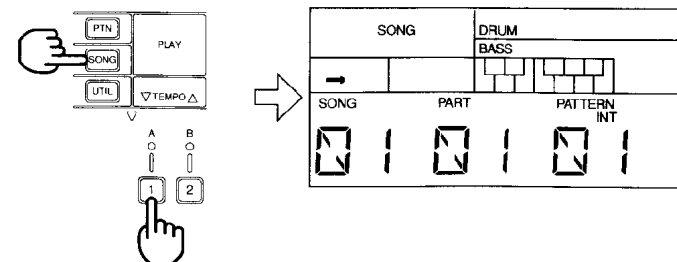


A song can have a maximum of 199 parts. If you require more parts, use the CHAIN function described on page 88 to play two or more songs in sequence.

6 Add Fill-ins, Edit, Or Return To the SONG PLAY Mode

If you want to add more fill-ins, go on the real-time record mode, described next. You can also edit the song you've created, changing pattern numbers, deleting patterns, or inserting patterns, as described in "Editing a Song" on page 79.

When your song is finished, press [1] or [2] while holding the [SONG] key to return to the SONG PLAY mode.



Real-time Record — Add Fill-ins

The real-time song record mode is most useful for entering fill-ins after the basic structure of your song has been programmed in the step record mode. The advantage of using the real-time record mode for this procedure is that the fills can be started at precisely the timing you require.

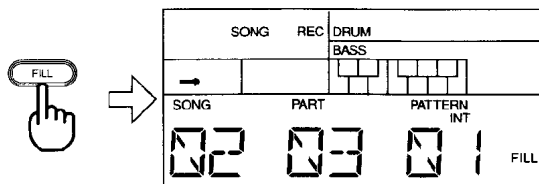
1 Press [START/GO] To Start Recording

Assuming you're already in the SONG RECORD mode (if not, do steps 1 through 3 of the step record procedure, above), press the [START/GO] key to start real-time recording.

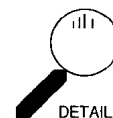


2 Press the [FILL] Key At the Appropriate Times

As the previously-recorded song plays through, press the [FILL] key at the points you want to enter fills.



The fill entered will naturally be the fill associated with the pattern that is playing at the time the [FILL] key is pressed.



It is also possible (though sometimes difficult) to enter new pattern numbers in the real-time record mode — the pattern number entered while a part is playing will be assigned to the next empty part and all subsequent parts until a new pattern number is entered or the [STOP/CONT] key is pressed. If you start real-time recording with a blank song, the metronome will sound and the RY10 will wait for you to enter a pattern number. The same occurs when an empty part is reached during real-time recording.

3 Press [STOP/CONT] To Stop Recording

Press the [STOP/CONT] key to stop recording, then go on and edit the song, if necessary, or return to the SONG PLAY mode (press [1] or [2] while holding [SONG]).



Changing Time Signature During a Song

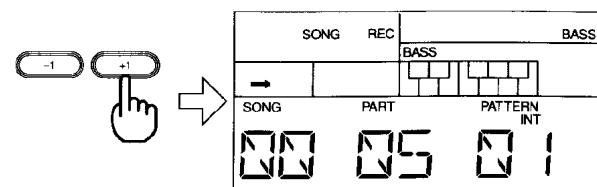
To change the time signature in the middle of a song, place a pattern that has the appropriate METER setting (see page 61) at the point at which you want the change to occur.

Transposing the Bass Part

In the SONG RECORD mode it is possible to transpose the bass part of individual patterns up or down by a maximum of one octave in semitone steps.

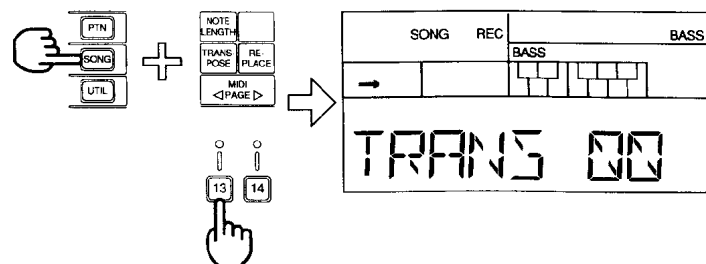
1 Select the Part To Be Transposed

In the SONG RECORD mode, use the [-1] and [+1] keys to locate the part you want to transpose.



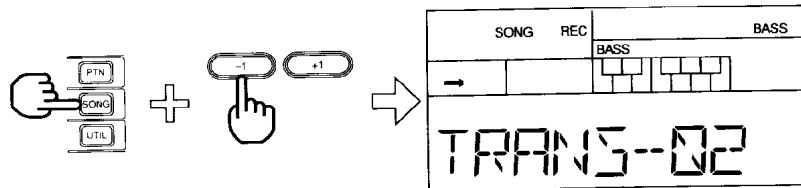
2 Engage the TRANSPOSE Function

Press the [13] key while holding the [SONG] key to engage the TRANSPOSE function (don't release the [SONG] key).



3 Set the Degree Of Transposition

While still holding the [SONG] key, use the [-1] and [+1] keys to set the desired degree of transposition. Each increment corresponds to a semitone. A setting of -12, for example, transposes the corresponding bass part down one octave, while a setting of +7 transposes up a fifth (from C to G, for example).



"TRANPOSE" appears in the BASS section of the display when the TRANPOSE function is used, and when a transposed part is playing during song playback.

4 Release the [SONG] Key

Release the [SONG] key to complete the operation.



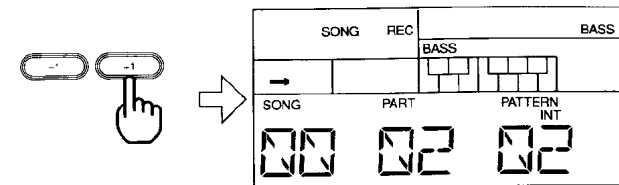
This is actually an easy way to create harmonic bass progressions. For a "three-chord" progression in the key of C, for example, start with a bass line in C, then transpose up to F (+5 semitones) for the subdominant section, and then up to G (+7 semitones) for the dominant section.

Using the Bass Part From a Different Pattern

The REPLACE function can be used in the SONG RECORD mode to replace the bass line of the selected part with that from any internal or preset pattern.

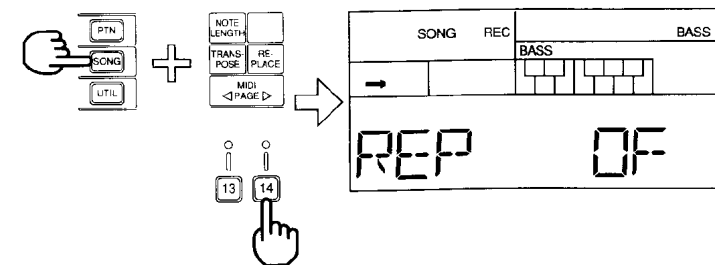
1 Select the Bass Part To Be Replaced

In the SONG RECORD mode, use the [-1] and [+1] keys to locate the part in which you want to use a different bass line.



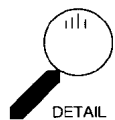
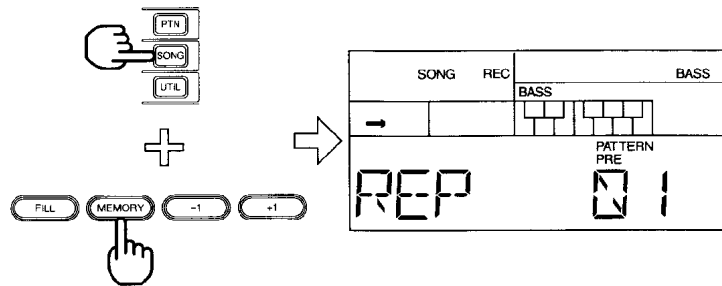
2 Engage the REPLACE Function

Press the [14] key while holding the [SONG] key to engage the REPLACE function (don't release the [SONG] key).



3 Select the Pattern From Which the Bass Part Is To Be Used

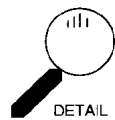
While still holding the [SONG] key, use the [-1] and [+1] keys to select the pattern containing the bass part you want to use. Use the [MEMORY] key to select a preset or internal pattern, and the [FILL] key to select a fill pattern, as required.



“REPLACE” appears in the BASS section of the display when a replaced part is playing during song playback.

4 Release the [SONG] Key

Release the [SONG] key to complete the operation.



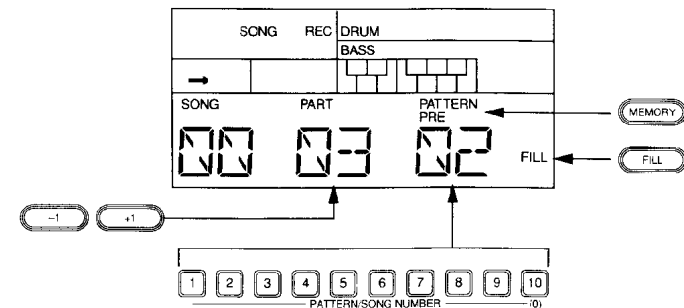
If the replace pattern is shorter than the original pattern, the remaining portion of the original pattern will play when the replace pattern finishes. Also note that the SWING setting of the original pattern is applied to the replace pattern.

Editing a Song

A song that has already been entered can be edited while in the SONG RECORD mode. You can change pattern numbers, delete parts, and insert parts as required.

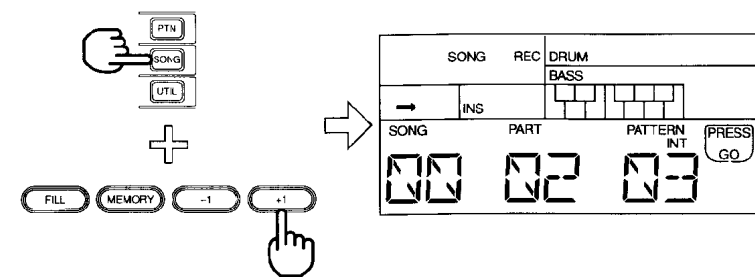
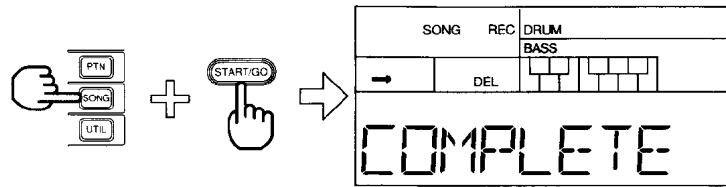
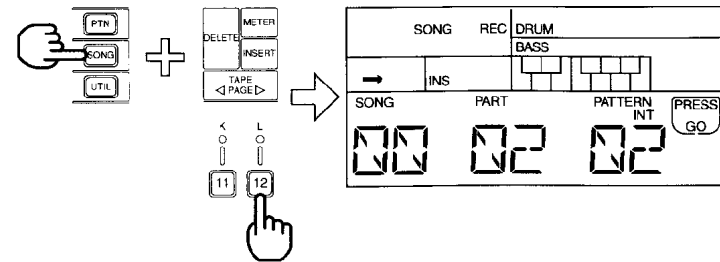
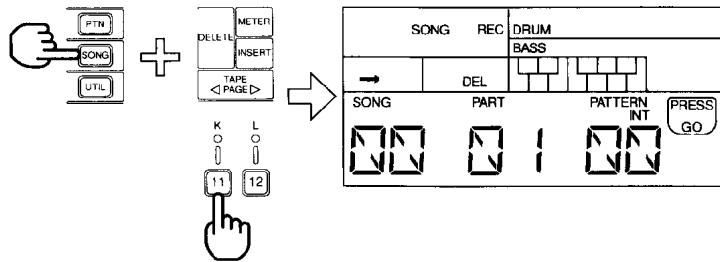
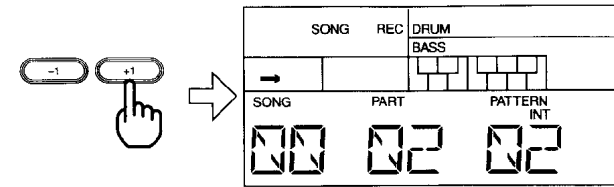
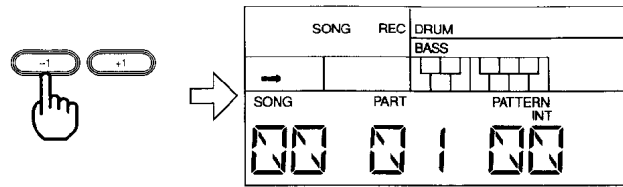
Changing Part Numbers

It is possible change pattern numbers that have already been entered by simply using the [-1] and [+1] keys to move to the part number you want to change, and then entering a new pattern number using the [MEMORY], number, and [FILL] keys as required.



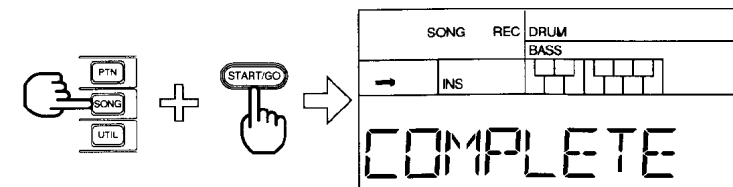
Deleting Parts

To delete a part and move all subsequent parts back to take up the space left by the deleted part, first select the part to be deleted, then press [11] while holding [SONG] to engage the SONG DELETE function, and finally, while still holding the [SONG] key, press the [START/GO] key to actually execute the delete operation. “COMPLETE” appears on the display when the delete operation has finished.



Inserting Parts

To insert a new part and move all subsequent parts forward to make space for the inserted part, first press [12] while holding [SONG] to engage the SONG INSERT function, then (still holding [SONG]) use the [-1], [+1], [MEMORY], and or [FILL] keys to select the part at which the new pattern is to be inserted, and finally (still holding the [SONG] key) press the [START/GO] key to actually execute the insert operation. The inserted pattern is the same as the pattern that was previously at the insert point. You can now change the pattern number or the inserted part, if necessary.



The GOTO END Function

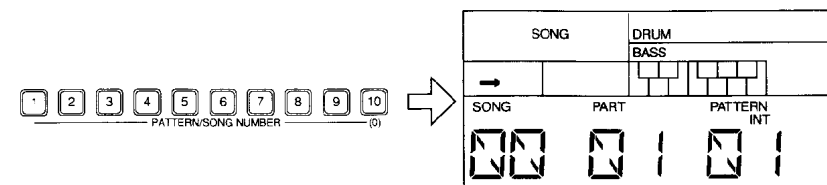
This function can make editing or adding new material to a long song easier by taking you directly to the last part in the song. To go to the last part, simply press [16] while holding [SONG] in the SONG RECORD or SONG PLAY mode.

Clearing a Song From Memory

Use the CLEAR SONG function to completely erase a song from memory.

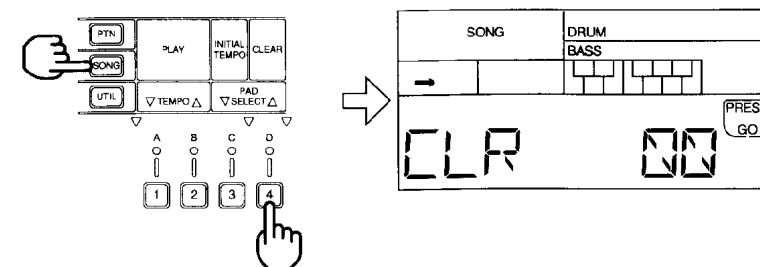
1 Select the Song To Be Cleared

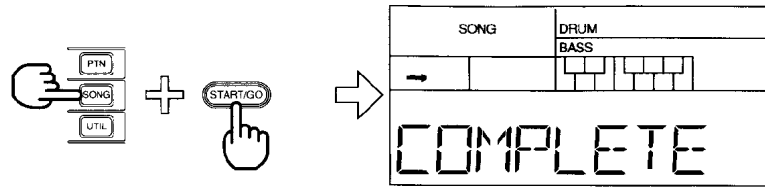
While in the SONG PLAY mode use the number keys to select the number of the song you want to clear.



2 Clear the Song

Press the [4] key while holding the [SONG] key to engage the SONG CLEAR function and then, while still holding the [SONG] key, press the [START/GO] key. "COMPLETE" will appear briefly on the display when the song data has been cleared.





It is also possible to select a different song to be cleared after engaging the SONG CLEAR function (i.e. before pressing the [START/GO] key) by using the [-1] and [+1] keys.



3 Release the [SONG] Key

Release the [SONG] key to complete the operation.



Be sure you don't want to keep original data, because once a song is cleared, there's no way to get it back. If you have previously saved the data to tape, then it can re-loaded whenever you need it. Otherwise, you'll have to re-program the song from scratch.



The song's initial tempo is not cleared by the SONG CLEAR function, and will remain in effect unless specifically changed by using the INITIAL TEMPO function described on page 90.

Copying a Song To a Different Song Number

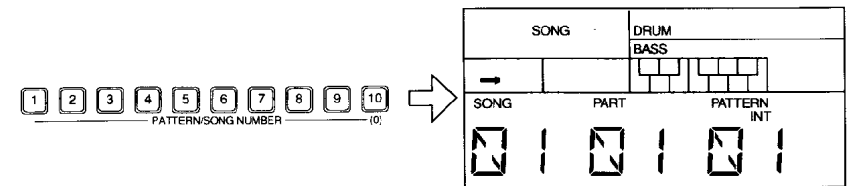
This function lets you copy a song to a different song number.



The SONG COPY function provides a convenient way to create modified versions of existing songs. Copy the original song to a new location, then edit the copied song as required.

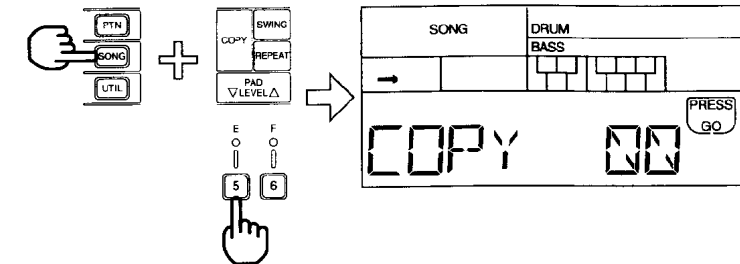
1 Select the Song To Be Copied

While in the SONG PLAY mode use the number keys to select the number of the song you want to copy to a different memory location (the "source" song).



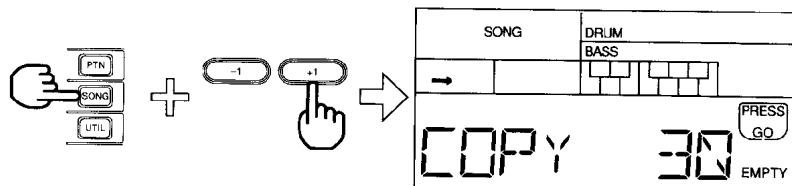
2 Engage the SONG COPY Function

Press the [5] key while holding the [SONG] key to engage the SONG COPY function (don't release the [SONG] key yet).



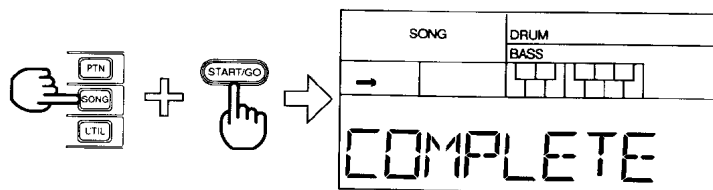
3 Specify the Destination Song Number

While still holding the [SONG] key, use the [-1] and [+1] keys to specify the song number to which you want the source song to be copied — keep holding the [SONG] key.



4 Execute the SONG COPY Function

Still holding the [SONG] key, press the [START/GO] key to actually execute the SONG COPY function. “COMPLETE” will appear briefly on the display when the song data has been copied.



Any existing data in the destination song number will be erased when the copy function is executed, including the initial tempo setting (the initial tempo setting is also copied).

5 Release the [SONG] Key

Release the [SONG] key to complete the operation.

Song Playback

Songs can be played in several ways: a single song can be played from beginning to end, a single song can be repeated continuously, up to 35 songs can be played in sequence, or a sequence of songs can be repeated continuously.

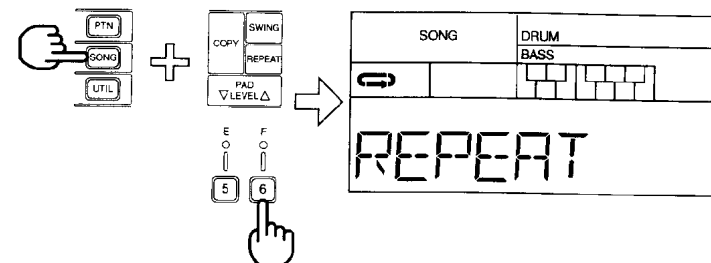
Once-through Playback

Playing a song through once is essentially the same as playing a pattern: In the SONG PLAY mode select the song to be played by using the number keys, then press [START/GO]. The [STOP/CONT] key can be used to stop playback at any point, or re-start playback from the point at which it was stopped. The [START/GO] key always starts playback from the beginning of the song.

Repeat Playback

In the SONG PLAY mode, press the [6] key while holding the [SONG] key to engage the repeat function. When REPEAT is engaged the song will play through to the end, then start again from the beginning, and continue to do so until the [STOP/CONT] key is pressed.

When the REPEAT function is engaged the repeat symbol appears in the display:



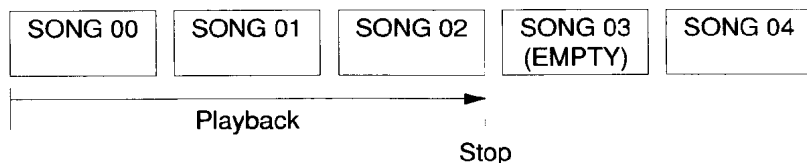


The REPEAT function can be combined with the footswitch "NEXT" mode (see page 108) to allow individual parts of a song to be repeated as many times as required, then the next part is selected when the footswitch is pressed. To do this, the different parts of your song — A, B, and C, for example — should be recorded as separate songs in consecutive song numbers.

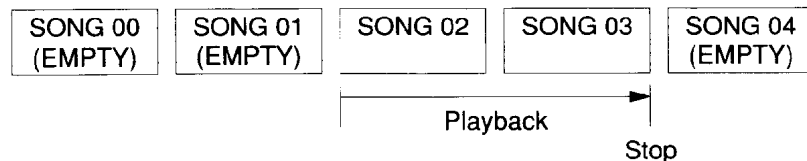
Chain Playback

The CHAIN function is engaged by pressing the [7] key while holding the [SONG] key in the SONG PLAY mode. When CHAIN is engaged consecutive songs containing data are played back one after another, starting with song number 00 (or the lowest song number that contains data). The chain stops when the last recorded song ends.

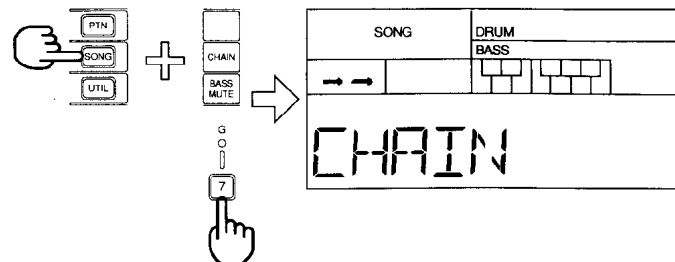
In this case, SONG 00, 01, and 02 play in sequence, then playback stops because SONG 03 contains no data.



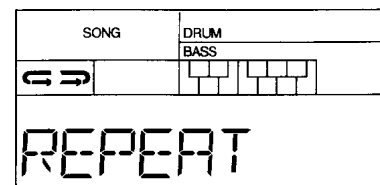
In this case playback starts at SONG 02 since SONG 00 and 01 contain no data.



The chain symbol appears on the display when the CHAIN function is engaged.

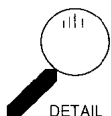


The CHAIN and REPEAT functions can be engaged simultaneously, causing the chain to play continuously until stopped. In this case the repeat chain symbol appears in the display.



Setting an Initial Song Tempo

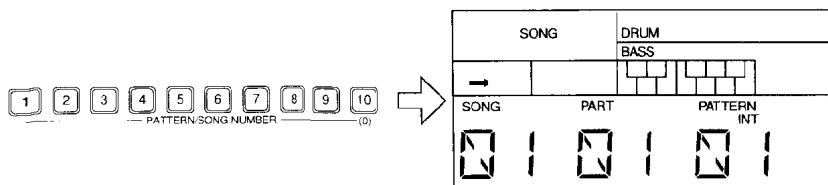
Like the internal patterns, each song can be programmed with an “initial tempo” which takes effect when the song is selected. This can be used to simply specify the tempo at which a song is to start, or, by combining songs having different initial tempos in a chain, it is possible to change tempo in the middle of the chain.



The INITIAL TEMPO will not take effect if playback is started using the [STOP/CONT] key.

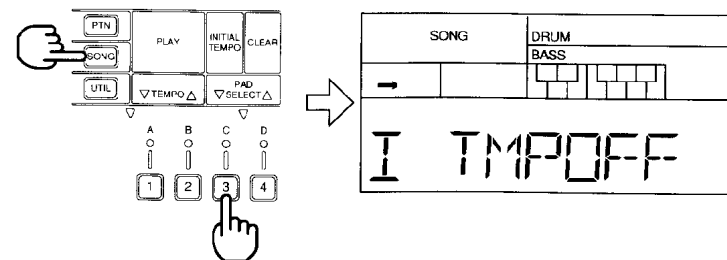
1 Select a Song

While in the SONG PLAY mode use number keys to select the number of the song for which you want to program an initial tempo.



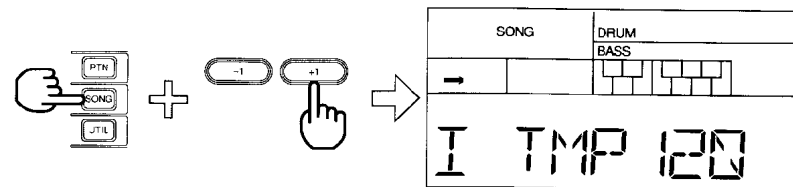
2 Engage the INITIAL TEMPO Function

Press the [3] key while holding the [SONG] key to engage the INITIAL TEMPO function (don't release the [PTN] key yet).



3 Specify the Desired Initial Tempo

While still holding the [SONG] key, use the [-1] and [+1] keys to specify the initial tempo for the selected song. The initial tempo can be set from 40 to 250 beats per minute, or “OFF” if no initial tempo is required.



4 Release the [SONG] Key

Release the [SONG] key to complete the operation.

Utility Functions

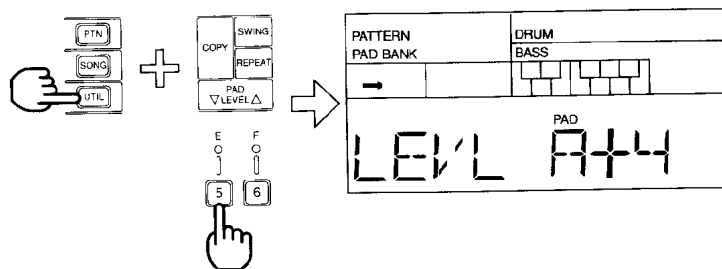
In addition to the utility functions already described in other sections of this manual, the RY10 [UTIL] key provides access to a range of utility functions that let you set up the instrument pads to match your musical needs, determine how the RY10 will respond to MIDI data received from an external MIDI instrument, determine how a footswitch connected to the FOOT SW jack will function, save and load RY10 data to and from cassette tape, and even tune your guitar.

Pad Level Adjustment

The level of each of the instrument pads can be individually adjusted to set the ideal balance or “mix” between instruments.

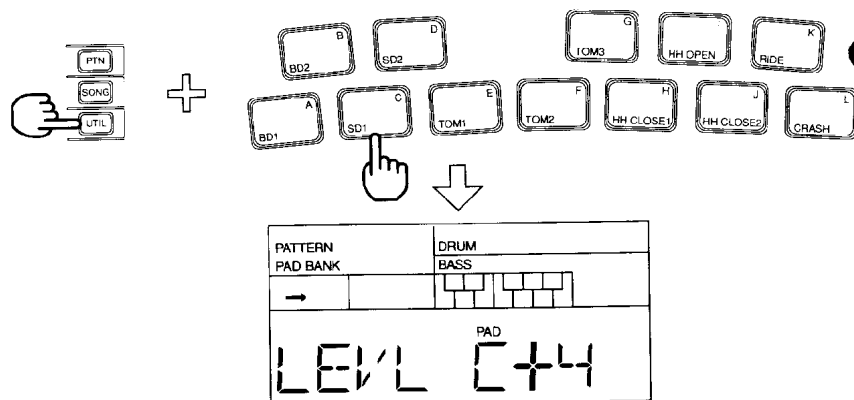
1 Select the PAD LEVEL Function

Press the [5] or [6] key while holding the [UTIL] key to engage the PAD LEVEL function (don't release the [UTIL] key).



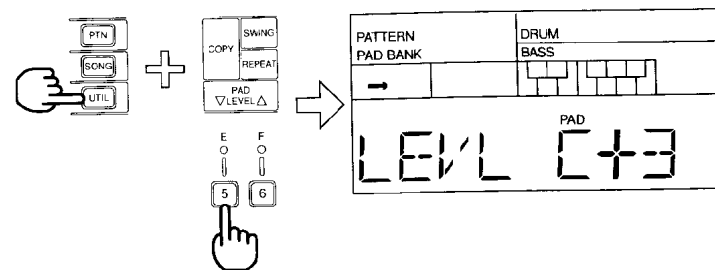
2 Select a Pad

While still holding the [UTIL] key, press the instrument pad for which you want to set a new level value. The letter of the selected pad (A through L) appears under “PAD” in the display (keep holding the [UTIL] key).



3 Set the Level

While still holding the [UTIL] key use the [5] key to decrement the level value or the [6] key to increment the level value. The [5] or [6] key can be held for continuous scrolling in the specified direction. The level can be set from -7 to +7, with “-7” being minimum level (no sound), “+3” is normal level, and “+7” is maximum level.



4 Release the [UTIL] Key to Exit

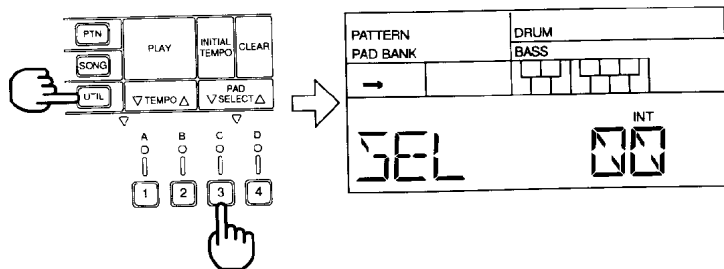
The PAD EDIT Mode

The PAD EDIT mode provides access to 6 different functions that affect the RY10 instrument pads and voices, making it possible to customize the sound to fit your own music and style of expression. PAD EDIT functions affect the currently selected pad bank (internal 0 ... 15 only).

To use the PAD EDIT functions, first select the pad bank you want to edit, enter the PAD EDIT mode (it is also possible to select different pad banks while in the PAD EDIT mode), select the desired PAD EDIT function, and finally set as required.

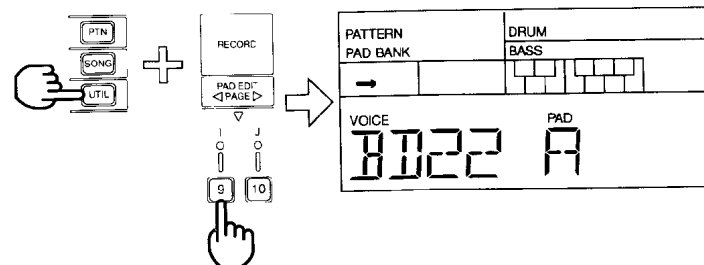
1 Select an Internal Pad Bank

Press the [3] or [4] key while holding the [UTIL] key to engage the PAD SELECT function, press the [MEMORY] key if necessary to select the internal (INT) pad bank memory, then use the [3] and [4] keys to select the desired pad bank (0 through 15). Finally, release the [UTIL] key.



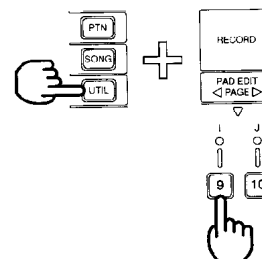
2 Engage the PAD EDIT Mode

Press the [9] or [10] key while holding the [UTIL] key to engage the PAD EDIT mode. You can release the [UTIL] key once the PAD EDIT mode has been selected.

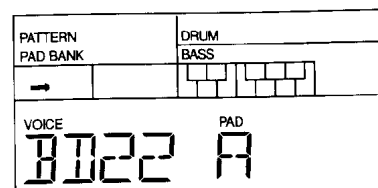


3 Select a PAD EDIT Function

Use the [9] and [10] keys to step through the PAD EDIT functions and locate the function you want to use. The individual PAD edit functions are described below.



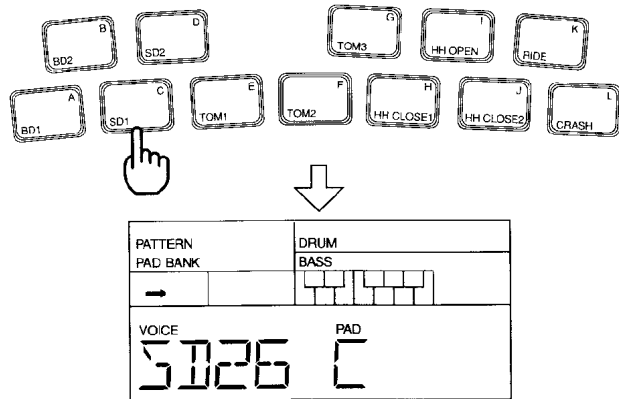
Voice Assign



This function lets you assign any of the RY10's 250 preset voices to the instrument pads in order to create custom drum and percussion "kits." Note that "VOICE" appears above the voice name abbreviation when the voice assign function is selected.

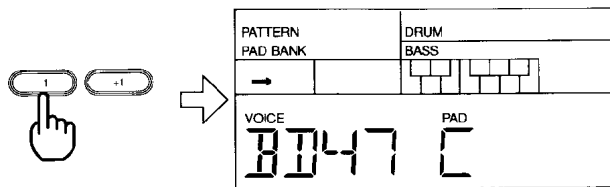
1 Select a Pad

Press the instrument pad to which you want to assign a new voice. The letter of the selected pad (A through L) appears under "PAD" in the display. Also use the [PAD] key if necessary to select the DRUM, PERC, or BASS instruments of the current pad bank.



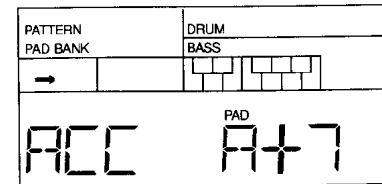
2 Assign a New Instrument To the Selected Pad

Use the [-1] and [+1] keys to select the instrument to be assigned. The abbreviation of the selected voice name appears under "VOICE" on the display.



Refer to the voice list on page 126 for a complete list of the RY10 voices and voice-name abbreviations.

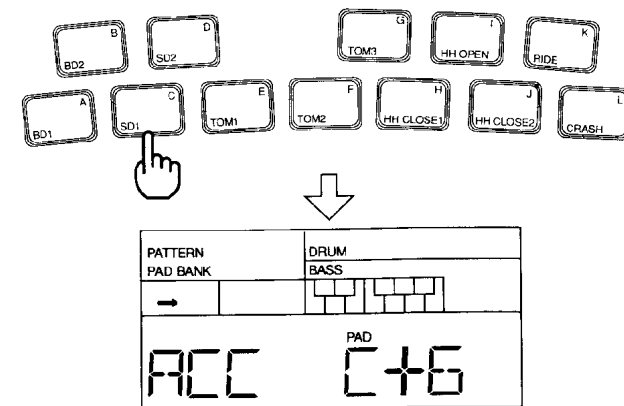
Pad Accent Level



This function lets you individually change the level of accents applied to each pad (accents are applied via the [ACCENT] keys when playing the pads or recording patterns — see "Using Accents" on page 64). "ACC" appears in the display when the pad accent level function is selected.

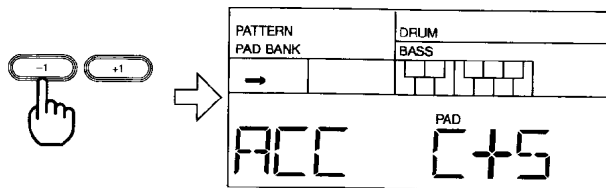
1 Select a Pad

Press the instrument pad for which you want to set a new accent level. The letter of the selected pad (A through L) appears under "PAD" in the display. Also use the [PAD] key if necessary to select the DRUM or PERC instruments of the current pad bank (accent levels cannot be set for the BASS instrument).

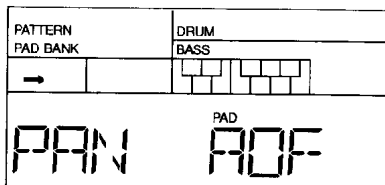


2 Set the Accent Level For the Selected Pad

Use the [-1] and [+1] keys to set the accent level. The accent value range is from -7 to +7. When the pad accent level is set to "0," no accent is applied even when the [ACCENT] keys are used. Minus settings produce a "reverse accent" with the accented note sounding softer than normal notes. Positive settings produce normal accents. The higher the value, the more pronounced the accent.



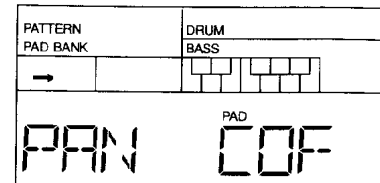
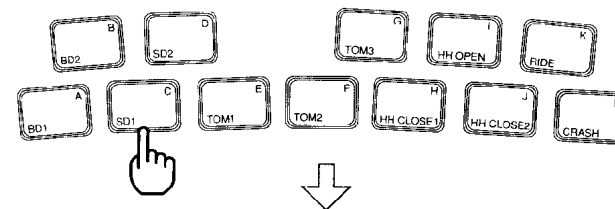
Pan



Pans the selected pad/voice to any position between full left or full right in the stereo sound field — this lets you define the "stereo image" of your custom drum kit. "PAN" appears in the display when the pan function is selected.

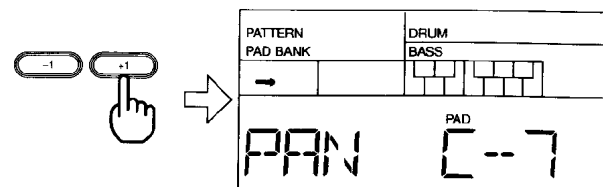
1 Select a Pad

Press the instrument pad you want to pan. The letter of the selected pad (A through L) appears under "PAD" in the display. Also use the [PAD] key if necessary to select the DRUM, PERC, or BASS instruments of the current pad bank.

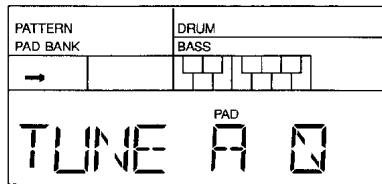


2 Pan the Selected Pad

Use the [-1] and [+1] keys to pan the pad. The pan value range is from -7 to +7, with 0 corresponding to center position. An "OF" setting is also available (the next setting below "-7") which selects the preset pan position for that voice. A setting of -7 positions the voice assigned to the selected pad fully left (i.e. the sound will come from the left channel only), while a setting of +7 pans full right. Other settings pan to the corresponding in-between positions.



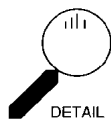
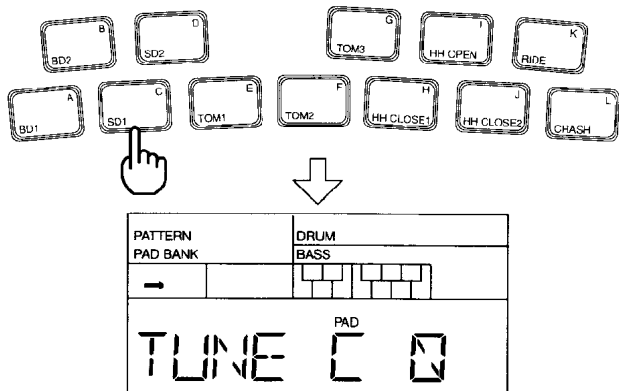
Pad Tune



Tunes the selected pad over a range of ± 200 cents (100 cents = 1 semitone). "TUNE" appears in the display when the pad tune function is selected.

1 Select a Pad

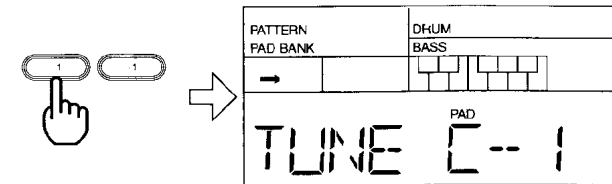
Press the instrument pad you want to tune. The letter of the selected pad (A through L) appears under "PAD" in the display. Also use the [PAD] key if necessary to select the DRUM, PERC, or BASS instruments of the current pad bank.



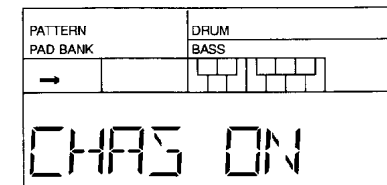
For the BASS instrument only, the pad tune settings apply to all pad banks.

2 Tune the Selected Pad

Use the [-1] and [+1] keys to tune the pad. The tune value range is from -7 to +7, with 0 corresponding to normal pitch. A setting of -7 tunes down by about a semitone (minus 200 cents), while a setting of +7 tunes up by about a semitone (plus 200 cents).



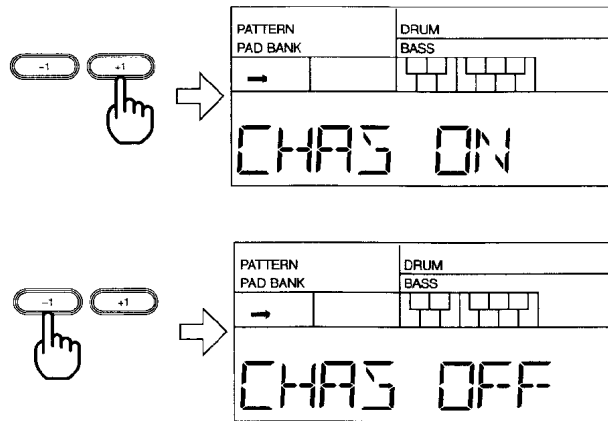
Chase



This function determines whether the pad bank number will change each time a pattern with a different pad bank number is selected, or whether the selected pad bank will remain in effect continuously.

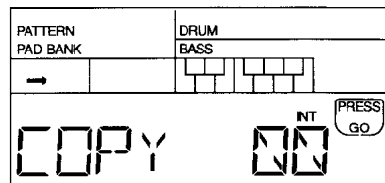
1 Select the Desired Chase Mode

Use the [-1] and [+1] keys to turn the chase function ON or OFF. The pad bank numbers are switched automatically according to the selected pattern when the chase function is turned ON. When chase is OFF the pad bank will only change when selected manually via the PAD SELECT function (see page 24).



The last pad bank selected while recording a pattern is recorded along with the pattern whether the chase mode is turned ON or OFF.

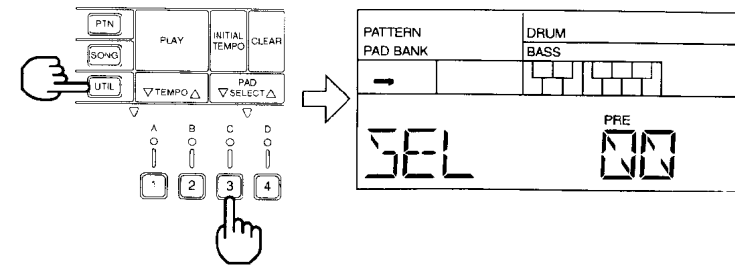
Copy



This function lets you copy the PAD EDIT settings from the selected pad bank to a different pad bank.

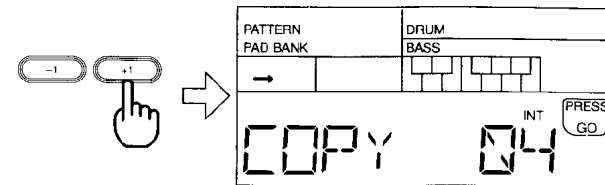
1 Select the Pad Bank To Be Copied, If Necessary

If you want to copy a pad bank other than the currently selected one, use the PAD SELECT function to select the pad bank you want to copy (use the [3] and [4] keys, and the [MEMORY] key if necessary, while holding the [UTIL] key).



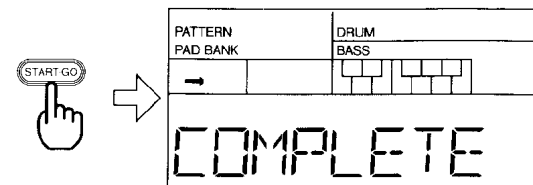
2 Specify the Destination Pad Bank Number

Use the [-1] and [+1] keys to specify the pad bank number to which you want the source pad bank data to be copied.



3 Execute the COPY Function

Press the [START/GO] key to actually execute the pad bank copy function. "COMPLETE" will appear briefly on the display when the pad bank has been copied.



IMPORTANT

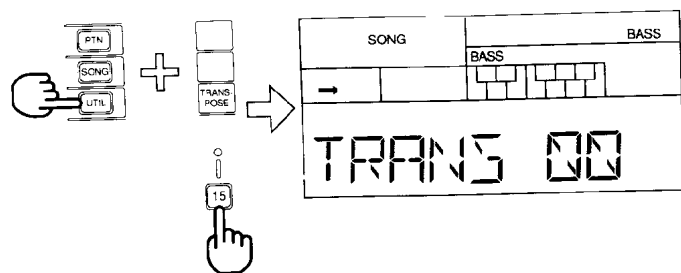
Any existing data in the destination pad bank will be erased when the copy function is executed.

Transpose

The transpose function described here is different from the one described previously in “Transposing the Bass Part” (page 75) in that it transposes the bass sound for *all* patterns and songs. This transpose function also affects the instrument pads.

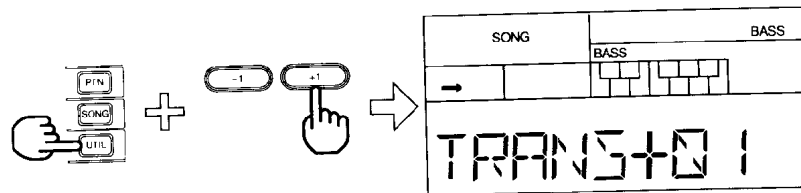
1 Engage the TRANSPOSE Function

Press the [15] key while holding the [UTIL] key to engage the TRANSPOSE function (don't release the [UTIL] key).



2 Set the Degree Of Transposition

While still holding the [UTIL] key, use the [-1] and [+1] keys to set the desired degree of transposition. Each increment corresponds to a semitone. A setting of -12, for example, transposes the bass sound down one octave, while a setting of +7 transposes up a fifth (from C to G, for example).



3 Release the [UTIL] Key

Release the [UTIL] key to complete the operation.

Using a Footswitch

An optional Yamaha FC4 or FC5 footswitch connected to the rear-panel FOOT SW jack can be used to control pattern and song playback in a number of ways:

The "STOP" Mode

The footswitch alternately starts and stops the selected pattern or song.

The "FILL" Mode

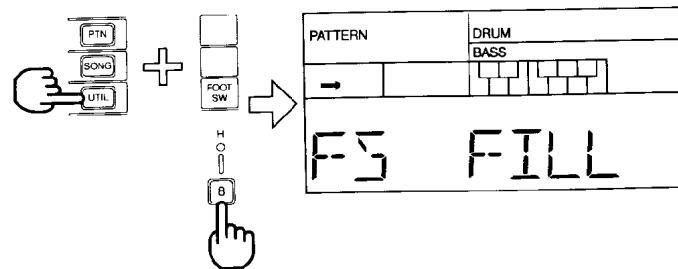
The first press on the footswitch starts the selected pattern. Once pattern playback has been started, the footswitch functions in the same way as the top-panel [FILL] key. The footswitch can also be used in this way in the real-time song record mode.

The "NEXT" Mode

The first press on the footswitch starts the selected pattern or song. Subsequent presses on the footswitch cause playback of the next pattern or song (i.e. the pattern or song with the next highest number) to begin as soon as the current pattern or song part ends.

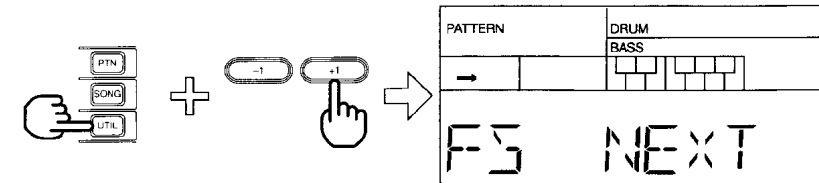
1 Engage the FOOT SW Function

Press the [8] key while holding the [UTIL] key (don't release the [UTIL] key). The currently selected footswitch mode will appear on the display.



2 Select the Desired Footswitch Mode

While still holding the [UTIL] key, use the [-1] and [+1] keys to select the desired footswitch mode: "STOP", "FILL", or "NEXT" on the display.



3 Release the [UTIL] Key to Exit

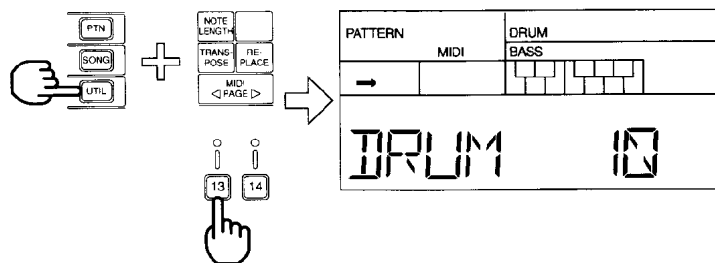
MIDI Functions

The RY10 can be controlled — i.e. the instruments can be played, song numbers can be changed, and playback can be started or stopped — from an external MIDI instrument such as a MIDI keyboard, sequencer, music computer, or a MIDI data filer with playback capability such as the Yamaha MDF2. The MIDI OUT connector of the controlling MIDI instrument must be connected to the RY10 MIDI IN terminal.

The MIDI mode provides access to 5 different functions that determine how the RY10 responds to MIDI data. To use the MIDI functions, first engage the MIDI mode, select the desired MIDI function, and finally set as required.

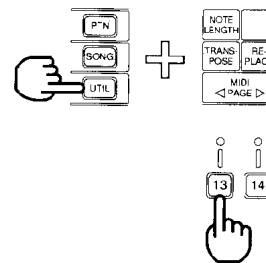
1 Engage the MIDI Mode

Press the [13] or [14] key while holding the [UTIL] key to engage the MIDI mode. You can release the [UTIL] key once the MIDI mode has been selected.

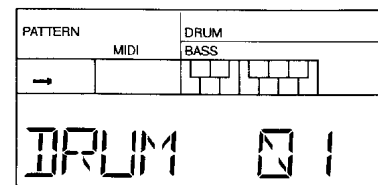


2 Select a MIDI Function

Use the [13] and [14] keys to step through the MIDI functions and locate the function you want to use. The individual MIDI functions are described below.



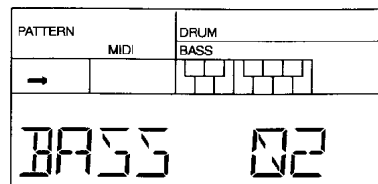
Drum Receive Channel



This function sets the MIDI channel via which the RY10 drum instruments can be played. A separate channel is provided for bass instrument control (see the following function).

Use the [-1] and [+1] keys to select MIDI channel 1 through 16, or "OF" (off) if you do not want the RY10 drum instruments to respond to MIDI commands.

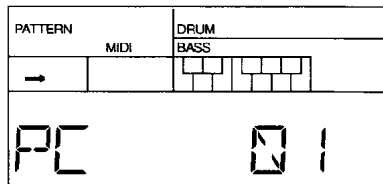
Bass Receive Channel



Sets the MIDI channel via which the RY10 bass instruments can be played. If the BASS channel is set to the same channel number as the DRUM channel (above), only the drum instruments will be played via that channel.

Use the [-1] and [+1] keys to select MIDI channel 1 through 16, or "OF" (off) if you do not want the RY10 bass instruments to respond to MIDI commands.

Program Change Channel



This function sets the MIDI channel on which program change commands will be received.

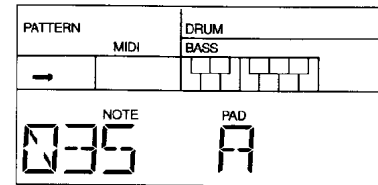
MIDI "program change" commands are used to change pad bank numbers. Program change numbers are transmitted, for example, by a MIDI keyboard whenever one of its voice selectors are pressed. Normally, if you press voice selector 12, the keyboard will transmit the corresponding MIDI program change number, and this will cause pad bank number 12 to be selected on the RY10.

Use the [-1] and [+1] keys to select MIDI channel 1 through 16, or "OF" (off) if you do not want the RY10 to respond to MIDI program change commands.

Program Change/Pad Bank Number Correspondences

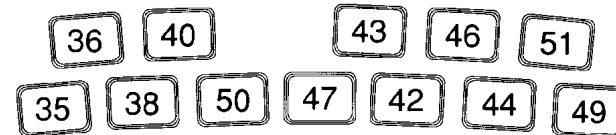
MIDI Program Change Number	Pad Bank Number
0 ... 15	Internal 00 ... 15
16 ... 31	Preset 00 ... 15
32 ... 127	Ignored

Note Number Assign

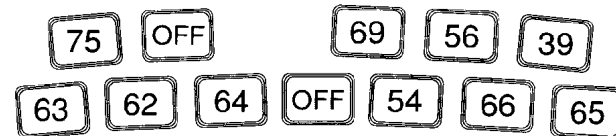


Assigns MIDI note numbers to the RY10's 12 instrument pads. In MIDI instruments each note has a specific "note number" which is transmitted via the MIDI OUT connector whenever the note is played. Middle C on a keyboard, for example, normally transmits MIDI note number 60. C# transmits note number 61, while Bb below middle C transmits note number 59, and so forth. This function lets you determine which MIDI note number will play which of the RY10 instrument pads. The initial note number assignments programmed when the RY10 is shipped are as follows:

Pad DRUM Note Assignments



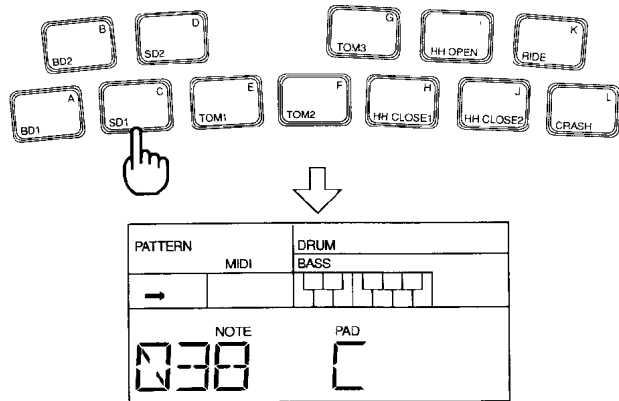
Pad PERC Note Assignments



"The same note assignments apply whether the DRUM, or PERC instruments are selected via the [PAD] key. The BASS note assignments are fixed and cannot be changed: notes C1 through B3 correspond to MIDI note numbers 36 through 71.

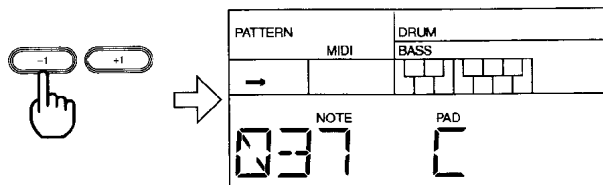
1 Select a Pad

Press the instrument pad to which you want to assign a new note number. The letter of the selected pad (A through L) appears under "PAD" in the display.

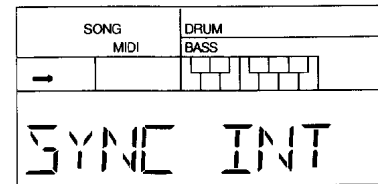


2 Assign a Note Number to the Selected Pad

Use the [-1] and [+1] keys to select MIDI note number 0 through 127, or "OFF" if you do not want the selected pad to respond to any MIDI note number.



Sync Mode



Determines whether the RY10 timing is synchronized by its own internal clock or an external MIDI clock.

Use the [-1] and [+1] keys to select the internal clock (INT) or an external MIDI clock (MIDI).

"INT" is the normal setting when the RY10 is being used alone. If you are using the RY10 with an external sequencer, MIDI computer, or other MIDI device, and you want the RY10 to be synchronized to the external device, set this function to "MIDI." In the latter case, the external device must be transmitting an appropriate MIDI clock signal.



MIDI start, stop, and continue commands are recognized by the RY10 whether the INT or MIDIsync mode is selected.

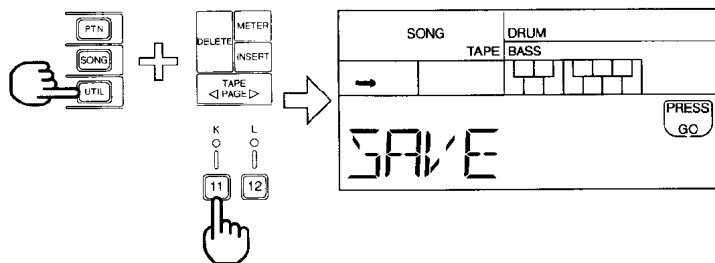
Using the Tape Interface

The RY10 tape interface provides a convenient way to store your original patterns, songs, and other data on external cassette tape.

The TAPE mode lets you save the RY10 data to tape, verify that the data has been properly saved, and load data from tape into the RY10 memory whenever it is needed.

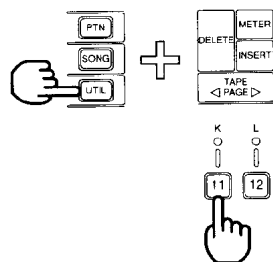
1 Engage the TAPE Mode

Press the [11] or [12] key while holding the [UTIL] key to engage TAPE mode. You can release the [UTIL] key once the TAPE mode has been selected.

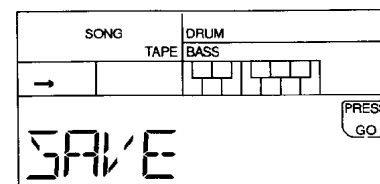


2 Select a TAPE Function

Use the [11] and [12] keys to locate the function you want to use (SAVE, VRFY, or LOAD). The individual TAPE functions are described below.



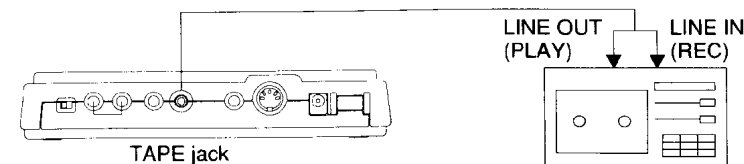
Save



Saves all pattern, song, voice, and setup data to a standard cassette deck connected to the rear-panel CASSETTE IN/OUT jack. The saved data can later be re-loaded using the CASSETTE LOAD job described on page 121.

1 Connect the Cassette Recorder

Use a miniature phone plug cable to connect the rear-panel TAPE jack to the microphone or input jack of a cassette recorder. Any standard cassette recorder of reasonable high quality can be used, but a cassette recorder specifically designed for data recording is highly recommended.

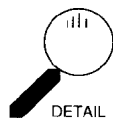
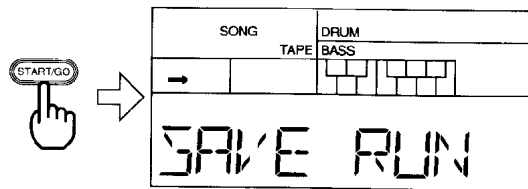


2 Prepare the Tape and Start the Recorder

Load a good quality cassette tape into the recorder, run the tape to a point past the leader, and engage the cassette deck record mode.

3 Press [START/GO] to Save

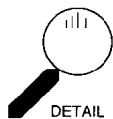
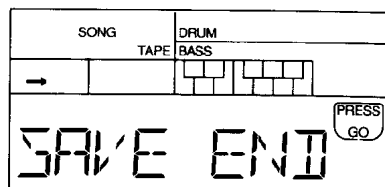
Press the RY10 [START/GO] key. "SAVE RUN" will appear on the display while the data is being recorded.



The save operation can be interrupted at any time by pressing the [STOP/CONT] key. In this case "SAVE BRK" will appear on the display.

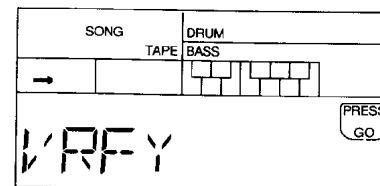
4 Stop the recorder When "SAVE END" Appears

When "SAVE END" appears on the display, stop the cassette recorder.



Data saved by this job includes all pattern data and song data (including initial tempos, swing settings, and pad bank setting), all PAD EDIT settings, and all setup data (i.e. MIDI function settings).

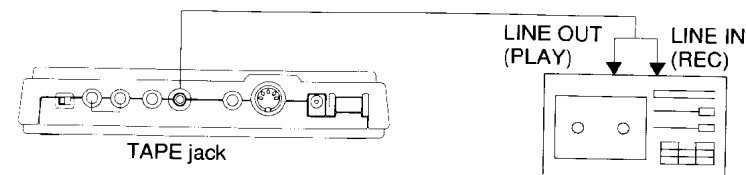
Verify



This function compares the data recorded on the cassette tape with that in the RY10 memory to verify that a previous SAVE operation has been successful.

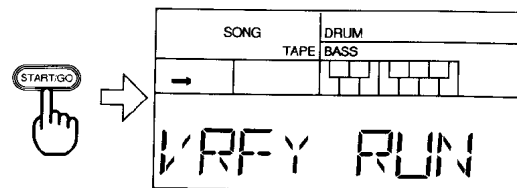
1 Connect the Cassette Recorder

For a verify operation the earphone or output jack of the cassette recorder must be connected to the RY10 TAPE jack via a miniature phone plug cable.

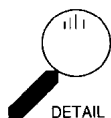


2 Prepare the Tape and Start the Verify Operation

Rewind the tape to a point before the beginning of the recorded data, press the RY10 [START/GO] key, then start playback of the cassette. "VRFY RUN" will appear on the display while the RY10 is reading the data from the cassette and comparing it with the data in memory.



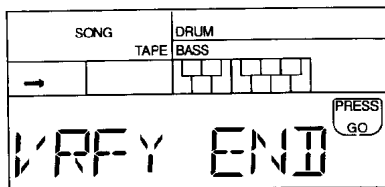
If an error in the data is detected, "VRFY ERR" will appear on the display. If this happens, try saving and verifying the data again. If the error persists, you may need to adjust the level settings of your cassette recorder or use a different tape.



The verify operation can be interrupted at any time by pressing the [STOP/CONT] key. In this case "VRFY BRK" will appear on the display.

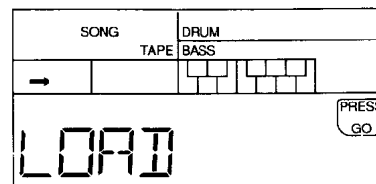
3 Stop the recorder When "VRFY END" Appears

When "VRFY END" appears on the display, indicating that the verify operation has finished and that the data on the cassette is OK, stop the cassette recorder.



It is important to use the cassette verify function immediately after saving data using the cassette save function, otherwise any changes you make to the RY10 memory contents after saving the data might be interpreted by the RY10 as a verify error.

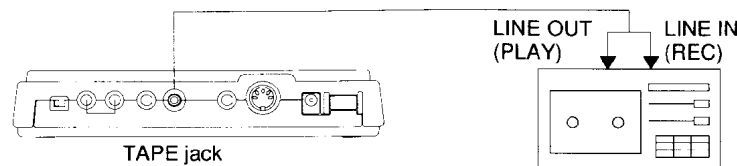
Load



This function reloads data you have previously saved to cassette tape using the SAVE function described on page 117.

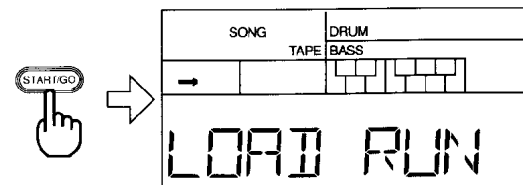
1 Connect the Cassette Recorder

Connect the earphone or output jack of the cassette recorder to the RY10 TAPE jack via a miniature phone plug cable.



2 Prepare the Tape and Start the Load Operation

Rewind the tape to a point before the beginning of the recorded data, press the RY10 [START/GO] key, then start playback of the cassette. "LOAD RUN" will appear on the display while the RY10 is loading the data from the cassette.

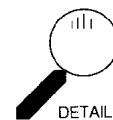
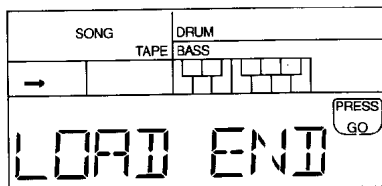




The load operation can be interrupted at any time by pressing the [STOP/CONT] key. In this case "LOAD BRK" will appear on the display. In this case the factor-preset internal memory contents are automatically restored.

3 Stop the recorder When "LOAD END" Appears

When "LOAD END" appears on the display, indicating that the load operation has finished and that the data has been loaded successfully, stop the cassette recorder.



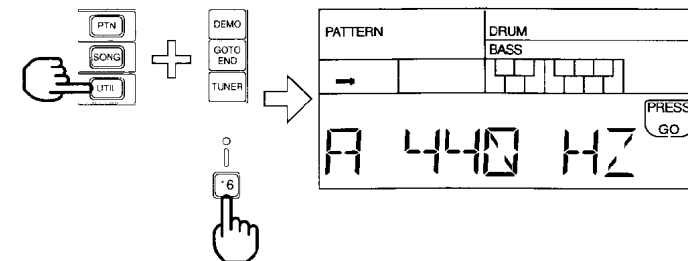
If an error is detected during the load operation, "LOAD ERR" will appear on the display. In this case the factor-preset internal memory contents are automatically restored. You might have to adjust the recorder's volume control to find the right level for loading data into the RY10.

Using the Guitar Tuner

The RY10's guitar tuner function adds significantly to its "guitar friendliness." To use the tuner, plug your electric guitar (or bass) into the rear-panel INPUT jack, then proceed as follows:

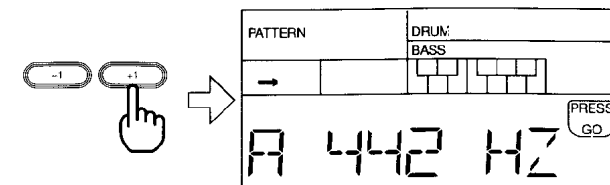
1 Select the Tuner Function

Press [16] while holding the [UTIL] key to engage the guitar tuner function.



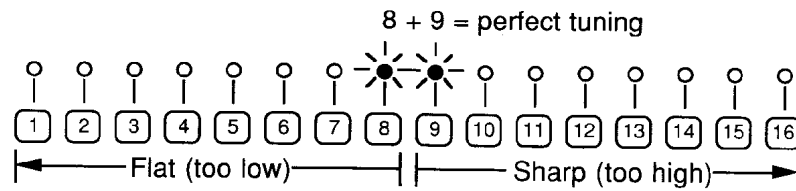
2 Adjust and Use the Standard Pitch, If Required

When the tuner function is initially engaged the RY10 functions as a sophisticated tuning fork, producing a standard pitch (normally A = 440 Hz) to which you can tune your guitar or other instrument. The [-1] and [+1] keys can be used to adjust the standard pitch from 440 to 445 Hz.



3 Press [START/GO] to Engage Auto-tune

Auto-tuner operation begins as soon as you press the [START/GO] key. The RY10 will automatically identify a note played, and display the detected note on the LCD _ e.g. E, Eb, etc. The beat indicator LEDs indicate how far from perfect pitch the detected note is, as follows:

**4** Press [STOP/CONT] to Return to Standard Pitch

When you're finished with the auto-tuner, press [STOP/CONT] to return to the standard pitch, then select any other mode as required.

Appendix

Voice List

#	Voice	#	Voice	#	Voice	#	Voice	#	Voice
1	BD01	51	SD04	101	HHC7	151	TM7M	201	TRI2
2	BD02	52	SD05	102	HHC8	152	TM7L	202	WHSL
3	BD03	53	SD06	103	HHC9	153	TM7F	203	CABS
4	BD04	54	SD07	104	HHC1	154	TM8H	204	SHKR
5	BD05	55	SD08	105	HHC2	155	TM8M	205	ACW1
6	BD06	56	SD09	106	HHC3	156	TM8L	206	ACW2
7	BD07	57	SD10	107	HHC4	157	TM8F	207	ACW3
8	BD08	58	SD11	108	HHC5	158	TS1H	208	ACW4
9	BD09	59	SD12	109	HHC6	159	TS1M	209	FING
10	BD10	60	SD13	110	HHC7	160	TS1L	210	TIMH
11	BD11	61	SD14	111	RD01	161	TS2H	211	TIML
12	BD12	62	SD15	112	RD02	162	TS2M	212	SE01
13	BD13	63	SD16	113	RD03	163	TS2L	213	SE02
14	BD14	64	SD17	114	RD04	164	TS3H	214	SE03
15	BD15	65	SD18	115	RD05	165	TS3M	215	SE04
16	BD16	66	SD19	116	RD06	166	TS3L	216	SE05
17	BD17	67	SD20	117	CR01	167	TS3F	217	SE06
18	BD18	68	SD21	118	CR02	168	TS4H	218	SE07
19	BD19	69	SD22	119	CR03	169	TS4M	219	SE08
20	BD20	70	SD23	120	CR04	170	TS4L	220	SE09
21	BD21	71	SD24	121	CR05	171	TS5H	221	SE10
22	BD22	72	SD25	122	CR06	172	TS5M	222	SE11
23	BD23	73	SD26	123	CR07	173	TS5L	223	SE12
24	BD24	74	SD27	124	CR08	174	AG1H	224	SE13
25	BD25	75	SD28	125	CR09	175	AG1L	225	SE14
26	BD26	76	SD29	126	GONG	176	AG2H	226	SE15
27	BD27	77	SD30	127	TM1H	177	AG2L	227	SE16
28	BD28	78	SD31	128	TM1M	178	ACLP	228	SE17
29	BD29	79	SD32	129	TM1L	179	BNGH	229	SE18
30	BD30	80	SD33	130	TM1F	180	BNGL	230	SE19
31	BD31	81	SD34	131	TM2H	181	CG1H	231	SE20
32	BD32	82	SD35	132	TM2M	182	CG1S	232	SE21
33	BD33	83	SD36	133	TM2L	183	CG1M	233	SE22
34	BD34	84	SD37	134	TM3H	184	CG1L	234	SE23
35	BD35	85	SD38	135	TM3M	185	CG2H	235	SE24
36	BD36	86	SD39	136	TM3L	186	CG2S	236	SE25
37	BD37	87	SD40	137	TM3F	187	CG2M	237	SE26
38	BD38	88	SD41	138	TM4H	188	CG2L	238	SE27
39	BD39	89	SD42	139	TM4M	189	TKD1	239	SE28
40	BD40	90	SD43	140	TM4L	190	TKD2	240	SE29
41	BD41	91	SD44	141	TM4F	191	SURD	241	SE30
42	BD42	92	SD45	142	TM5H	192	FAJR	242	BAS1
43	BD43	93	SD46	143	TM5M	193	CLV1	243	BAS2
44	BD44	94	SD47	144	TM5L	194	CLV2	244	BAS3
45	BD45	95	HHC1	145	TM5F	195	COW1	245	BAS4
46	BD46	96	HHC2	146	TM6H	196	COW2	246	BAS5
47	BD47	97	HHC3	147	TM6M	197	COW3	247	BAS6
48	SD01	98	HHC4	148	TM6L	198	TMB1	248	BAS7
49	SD02	99	HHC5	149	TM6F	199	TMB2	249	BAS8
50	SD03	100	HHC6	150	TM7H	200	TRI1	250	BAS9

BD: Bass Drum
SD: Snare Drum
HHC: Hi-Hat Closed
HHC: Hi-Hat Open
RD: Ride Cymbal
CR: Crash Cymbal
TM: Tom

TS: Synth Tom
AG: Agogo Bell
BNG: Bongo
CG: Conga
TKD: Talking Drum
CLV: Claves
COW: Cowbell

TMB: Tambourine
TRI: Triangle
WHSL: Whistle
CABS: Cabasa
SHKR: Shaker
ACW: Analog Cowbell

FING: Finger Snap
TIM: Timbale
SE: Sound Effect
BAS: Bass Guitar
SURD: Surdo
FAJR: Fajero

Pattern List

	PATTERN STYLE	PAD BANK	TEMPO	METER	SWING
00	Funk1	10	108	4/4,16	Off
01	Funk2	10	108	4/4,16	Off
02	Funk Shuffle	1	84	2/4,24	Off
03	Power Funk	11	96	4/4,16	Off
04	Dance Funk	0	100	4/4,16	S2
05	Fusion	1	116	15/16,16	Off
06	Hip Hop1	4	96	4/4,16	S2
07	Hip Hop2	4	94	4/4,16	S2
08	Techno Pop	14	120	4/4,16	Off
09	Techno	14	124	4/4,16	Off
10	Rap1	9	90	4/4,16	S2
11	Rap2	3	92	4/4,16	Off
12	Rap3	9	100	4/4,16	S1
13	Euro Beat1	13	124	4/4,16	Off
14	Euro Beat2	13	124	4/4,16	Off
15	House1	2	124	4/4,16	Off
16	House2	2	124	4/4,16	Off
17	House3	1	95	4/4,16	S1
18	House4	13	105	4/4,16	S1
19	Dance1	4	120	4/4,16	Off
20	Dance2	7	120	4/4,16	Off
21	Nu Age	11	70	2/4,32	Off
22	African Thang	3	110	4/4,16	S1
23	R & B1	15	98	4/4,16	Off
24	R & B2	15	100	4/4,16	S1
25	Zydeco	6	100	4/4,16	Off
26	Blues Shuffle	1	114	2/4,12	Off
27	12/8 Shuffle	5	96	4/4,12	Off
28	Rock'n Roll1	6	136	4/4,16	Off
29	Rock'n Roll2	11	120	4/4,16	Off
30	Rock'n Roll3	8	120	4/4,16	Off
31	Pop Rock1	1	124	2/4,16	Off
32	Pop Rock2	6	116	4/4,16	Off
33	Pop Rock3	6	115	4/4,16	Off
34	Pop Rock4	11	110	4/4,16	Off
35	Pop Rock5	11	110	4/4,16	Off
36	Metal1	5	140	4/4,16	Off
37	Metal2	5	124	4/4,16	Off
38	Metal Shuffle	5	150	4/4,16	S1
39	Reggae1	7	74	4/4,16	S2
40	Reggae2	7	78	4/4,16	S2
41	Bossa	6	64	4/4,16	Off
42	Samba	8	120	4/4,16	Off
43	Latin Funk	12	122	4/4,16	Off
44	Latin (Songo)	12	136	4/4,16	Off
45	Jazz Swing	8	144	4/4,16	S1
46	Jazz Waltz	8	140	3/4,16	Off
47	3/4 Ballad	11	85	3/4,16	Off
48	4/4 Ballad1	11	95	4/4,16	Off
49	4/4 Ballad2	6	100	4/4,16	Off

Troubleshooting

If you encounter one of the problems listed below, please check the possible causes and solutions given before assuming that your RY10 is faulty.

Problem	Possible Causes & Solutions
<ul style="list-style-type: none"> No sound. 	<ul style="list-style-type: none"> If your RY10 is not connected to an external sound system, make sure that the rear-panel SPEAKER ON/OFF switch is turned ON. Make sure that the side-panel VOLUME control is turned up to a reasonable level. The VOLUME control affects both the internal speaker and the signal delivered via the OUTPUT jacks. If you are using an external sound system, check the connections between the RY10 and the sound system, and make sure the cables used are not shorted or open. Make sure the volume control(s) of your external sound system is turned up to a reasonable level. Make sure that the RY10 either contains a set of good batteries (installed properly) or is properly connected to the specified optional Yamaha AC adapter, and that the POWER switch is turned ON.
<ul style="list-style-type: none"> Distorted sound. 	<ul style="list-style-type: none"> If you are using batteries to power the RY10, they may be run down and need replacing. If replacing the batteries with a fresh set does not solve the problem, check the following points. Bad connections and faulty audio cables can cause distorted sound. Make sure the cable plugs are clean, and that all internal cable connections are secure. If your RY10 is connected to an external sound system, check that the RY10 volume control is not turned up too high, thereby overloading the input of your sound system and causing distortion.
<ul style="list-style-type: none"> The pads produce sound, but the patterns or songs do not run. 	<ul style="list-style-type: none"> This problem is most likely caused by an improper Sync Mode setting (see page 115). If you are not synchronizing the RY10 to an external MIDI clock signal, make sure that the Sync Mode is set to "INT" (internal clock). If you are synchronizing the RY10 to an external MIDI device and have set the Sync Mode function to "MIDI" (MIDI clock), make sure that the MIDI OUT connector of the external MIDI device is properly connected to the RY10 MIDI IN connector, and that the external device is transmitting an appropriate MIDI clock signal to the RY10.
<ul style="list-style-type: none"> The RY10 does not respond to MIDI control. 	<ul style="list-style-type: none"> Check that the receive channel of the RY10 is set to match the transmit channel of the controlling MIDI device. The RY10 has three MIDI receive channel settings — drum receive channel (page 111), bass receive channel (page 111), and program change receive channel (page 112). Make sure that these parameters are set properly according to the type of MIDI control you are attempting. Check your MIDI connections and cables carefully.

Error Messages

In addition to the error messages described at appropriate points in the manual, the following error messages may appear to warn you of an improper operation or other problem.

PRESET

This message will appear any time you attempt to edit the RY10's preset data. Please remember that only the data in INTERNAL memory can be edited or changed in any way.

MEM FULL

If this message appears the RY10 memory is full and no more data can be recorded. Delete unwanted patterns and songs to make more memory available.

MIDI FUL

If extremely dense or complex MIDI data is received by the RY10 the MIDI receive buffer can become full, resulting in this error message. The only solution is to reduce the amount and/or complexity of the data being received.

ILLEGAL

This message may appear if you attempt to make a parameter setting that is out of range or simply not recognized by the RY10.

BAT ERR1

The battery voltage has dropped to a level that is too low to operate the RY10. Replace the batteries as described on page 13 and 14, or use an AC adapter.

BAT ERR2

The internal memory backup battery has run down and cannot retain the RY10 memory contents. Have the backup battery replaced by qualified Yamaha service personnel — DO NOT ATTEMPT TO REPLACE THE BACKUP BATTERY YOURSELF!

Restoring the Factory Settings

If you ever want to restore all RY10 parameters to their original factory settings simply turn the power on while holding both the [PTN] and [OCT >] keys. "INIT" will appear briefly on the display, then the normal PATTERN PLAY mode will be engaged.



When you do this all internal pattern, song, pad bank and setup will be erased! Make sure you save data you want to keep to tape before restoring the factory settings.

Specifications

Tone Generator	AWM. 28-note polyphony.
Voices	250.
Patterns	Preset (ROM): 50 main + 50 fill-in Internal (RAM): 50 main + 50 fill-in, initial tempo individually programmable.
Tempo	40 ... 250
Resolution	Record: 1/32 note. Play: 1/96 note.
Songs	36 (internal RAM).
Song Events	Pattern number., Fill-in (incl. start timing)., Bass transpose., Bass replace.
Other Song Functions	Initial tempo. Repeat playback. Chain playback.
Pad Banks	Preset (ROM): 16. Internal (RAM): 16.
Pad Edit Parameters	Voice assign. Pad level. Pad accent level. Pan. Pad tune.
MIDI Parameters	Drum receive channel. Bass receive channel. Program change receive channel. Note number assign table. MIDI sync (internal/MIDI).
Displays	LCD: Multi-function. LED: 24, "beat display."

Connectors

Headphone.
Line out L/Mono and R.
Footswitch.
MIDI in.
Tape in/out.
External input., DC in.

Power Requirements

3.5W
LR6 (AM3) or "AA" size alkaline batteries ×6, or
optional PA-1B AC adapter.

Dimensions (W × D × H)

196.5 × 197.8 × 36.3 mm
(7-3/4" × 7-3/4" × 1-1/2")

Weight

0.7 kg (1 lbs 9 oz)

Optional Accessories

FC5 footswitch.
PA-1B AC adapter.

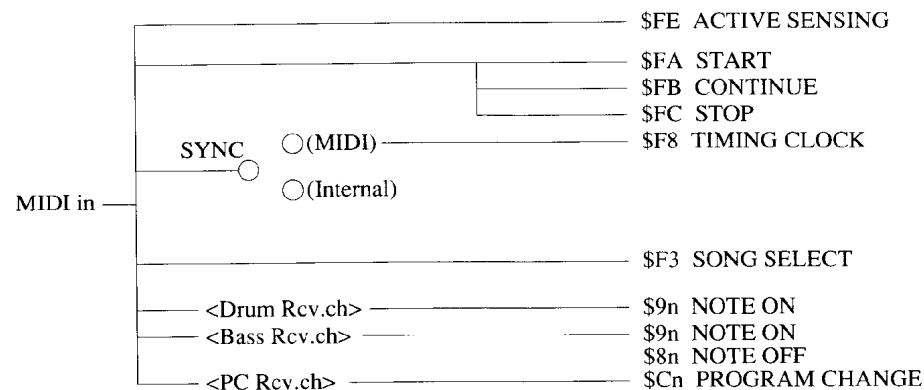
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MIDI Data Format

1. MIDI Receive Conditions



SYNC : Internal or MIDI Sync
 Drum Rcv.ch : Receive Channel for Drum and Percussion Voice off, 1 ... 16
 Bass Rcv.ch : Receive Channel for Bass Voice off, 1 ... 16
 PC Rcv.ch : Receive Channel for Program Change off, 1 ... 16

2. Receive Data

2.1. System Real-time Messages

TIMING CLOCK	1111 1000 (F8H)
START	1111 1010 (FAH)
CONTINUE	1111 1011 (FBH)
STOP	1111 1100 (FCH)
ACTIVE SENSING	1111 1110 (FEH)

2.2. Channel Messages

2.2.1. Note On

2.2.1.1. Receive Note Range

● Drum & Percussion Voices

The chart below shows which MIDI note numbers are assigned to which of the RY10's instrument pads. When one of the listed note numbers is received, the voice currently selected for the corresponding pad will sound.

GROUP	PAD NAME & MIDI NOTE NUMBER (These factory settings can be changed)
DRUM	A=B0 (35) B=C1 (36) C=D1 (38) D=E1 (40) E=D2 (50) F=B1 (47) G=G1 (43) H=F#1 (42) I=A#1 (46) J=G#1 (44) K=D#2 (51) L=C#2 (49)
PERC	A=D#3 (63) B=D#4 (75) C=D3 (62) D=off E=E3 (64) F=off G=A3 (69) H=F#2 (54) I=G#2 (56) J=F#3 (66) K=D#1 (39) L=F3 (65)

● Bass Voice C1(36) ... B3(71)

2.2.1.2. Velocity Range

1 ... 127 (Note on reception only)

Caution: The bass voice will not sound if the drum and bass receive channels are set to the same channel number.

2.2.2. Program Change

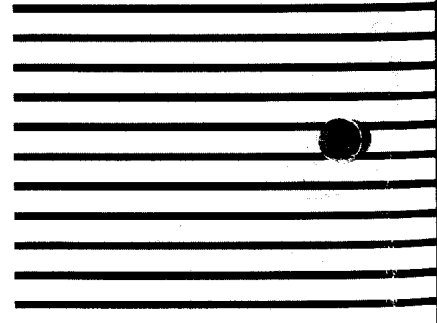
When a program change message is received, the corresponding pad bank is selected, as shown in the chart below.

Program Change #	Pad Bank #
0 ... 15	Internal 0 ... 15
16 ... 31	Preset 0 ... 15
32 ... 127	Ignored

Function ...	Transmitted	Recognized	Remarks
Basic Default	: x	: 1 - 16	: memorized
Channel Changed	: x	: 1 - 16	:
Mode Default	: x	: 3	:
Mode Messages altered	: x	: x	:
Note Number : True voice	: x : *****	: 0-127/36-71 *1 : x	:
Velocity Note ON	: x	: o 9nH, v=1-127	:
Velocity Note OFF	: x	: x	:
After Touch Key's Ch's	: x : x	: x : x	:
Pitch Bender	: x	: x	:
Control Change	:	:	:
Prog Change : True #	: x : *****	: o 0 - 31 : x	: pad bank select
System Exclusive	: x	: x	:
common : Song Sel.	: x	: o 0 - 35	:
: Tune	: x	: x	:
System :Clock	: x	: o	:
Real Time :Commands	: x	: o	:
Aux :Local ON/OFF	: x	: x	:
: All Notes OFF	: x	: x	:
Mes- :Active Sense	: x	: o	:
sages:Reset	: x	: x	:
Note : *1 = Drum and percussion voice			
: =a different voice sounds by each note.			
: Bass voice			
: =single voice sounds over a three-octave range.			
: (Note# range:36-71)			

Mode 1 : OMNI ON, POLY Mode 2 : OMNI ON, MONO o : Yes
 Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF, MONO x : No

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