

MUSIC ACCOMPANIMENT PLAYER

QR10

OWNER'S 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 coaxial 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

The above statements apply **ONLY** to those products distributed by Yamaha Corporation of America or its subsidiaries.

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

Bescheinigung des Importeurs

Hiermit wird bescheinigt, daß der/die/das

Music Accompaniment Player Typ: QR10

(Gerät, Typ, Bezeichnung)

in Übereinstimmung mit den Bestimmungen der

VERFÜGUNG 1046/84

(Amtsblattverfügung)

funk-entstört ist.

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

Yamaha Europa GmbH

Name des Importeurs

Dette apparat overholder det gaeldende 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 radio-disturbi.

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!
Eksplosionsfare. Udsiftning må kun foretages af en sagkyndig, – og som beskrevet i servicemanualen.

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.

SPECIAL MESSAGE SECTION

This product utilizes 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 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.

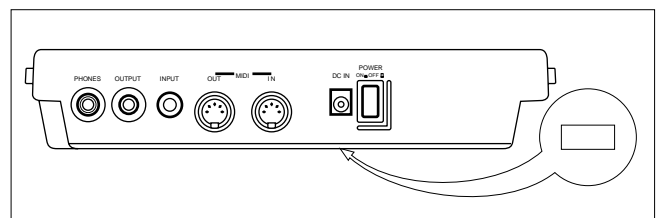
This product may also use "household" type batteries. Some of these may be rechargeable. Make sure that the battery being charged is a rechargeable type and that the charger is intended for the battery being charged.

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



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■ Precautions

Your QR10 will give you years of reliable service if you follow the simple rules given below:

■ Location

Do not expose the instrument to the following conditions to avoid deformation, discoloration, or more serious damage.

- Direct sunlight (e.g. near a window).
- High temperatures (e.g. near a heat source, outside, or in a car during the daytime).
- Excessive humidity.
- Excessive dust.
- Strong vibration.

■ Power Supply

- Turn the power switch OFF when the instrument is not in use.
- If you use an AC power adaptor, unplug the adaptor from the AC outlet if the instrument is not to be used for an extended period of time.
- Do not attempt to use an AC adaptor other than the specified unit (PA-3) or an appropriate replacement provided by your Yamaha dealer to power the QR10. The use of an incompatible adaptor may cause irreparable damage to the QR10, and might pose a serious shock hazard!
- Unplug the AC power adaptor during electric storms.
- Avoid plugging an AC power adaptor used with the QR10 into the same AC outlet as appliances with high power consumption, such as electric heaters or ovens. Also avoid using multi-plug adaptors since these can result in reduced sound quality and possibly damage.

■ Turn Power OFF When Making Connections

- To avoid damage to the instrument and other devices to which it is connected (a sound system, for example), turn the power switches of all related devices OFF prior to connecting or disconnecting audio and MIDI cables.

■ Handling and Transport

- Never apply excessive force to the controls, connectors or other parts of the instrument.
- Always unplug cables by gripping the plug firmly, not by pulling on the cable.
- Disconnect all cables before moving the instrument.
- Physical shocks caused by dropping, bumping, or placing heavy objects on the instrument can result in scratches and more serious damage.

■ Cleaning

- Clean the cabinet and panel with a dry soft cloth.
- A slightly damp cloth may be used to remove stubborn grime and dirt.
- Never use cleaners such as alcohol or thinner.
- Avoid placing vinyl objects on top of the instrument (vinyl can stick to and discolor the surface).

■ Electrical Interference

- This instrument contains digital circuitry and may cause interference if placed too close to radio or television receivers. If this occurs, move the instrument further away from the affected equipment.

■ Data Backup

- The QR10 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, “ERR 9” 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!**
- Internal memory data can be corrupted due to incorrect operation. We recommend that you use the QR10 MIDI bulk dump utility (see page 43 for details) to transfer important data to a MIDI data recorder such as the Yamaha MDF2 for safe long-term storage. Yamaha cannot be held responsible for data loss caused by battery failure or improper operation of the QR10!
- Always turn the QR10 OFF before disconnecting the AC power adaptor to minimize unnecessary drain on the backup battery.

■ Service and Modification

- The QR10 contains no user serviceable parts. Opening it or tampering with it in anyway can lead to irreparable damage and possibly electric shock. Refer all servicing to qualified YAMAHA personnel.

YAMAHA is not responsible for damage caused by improper handling or operation.

■ About This 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, helping you to become familiar with the QR10 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.

1: QR10 Features & Applications

Features

The QR10 is a new concept in musical accompaniment. For the first time ever it gives singers, guitarists, and other performers fully orchestrated backing that's easy to produce and fun to use. Most important of all, the QR10 doesn't require any keyboard skills or programming ability. Accompaniments are created by playing "patterns" and changing chords manually in real time, or by recording the required pattern and chord changes in the form of complete "songs" that can then be played back as required. Selecting patterns and changing chords is a simple process that can be learned in just a few minutes. Recording the pattern and chord changes is no more difficult. Many other easy-to-use features give the QR10 the versatility needed to create accompaniments for all types of music and performance styles.

Here are a few of the QR10's most important features ...

- 50 preset accompaniment patterns covering a wide variety of musical styles that you can simply select and play. Each pattern has six variations that can be selected at the touch of a button: introduction, normal, variation, fill-in 1, fill-in 2, and ending. All patterns have two chord parts, a bass part, and a rhythm part (> page 10).
- Change chords simply by pressing large, clearly-marked keys on the QR10 panel (> page 14).
- 24 chord types are provided — from simple major and minor triads to jazz-style tension chords (> page 16).
- 40 "combination patterns" let you easily combine the chord 1, chord 2, bass, and rhythm parts from different patterns to create an endless variety of new patterns (> page 36).
- 10 fully-programmable patterns are provided for those who want to program totally original patterns from scratch (> page 37).
- 69 superb normal voices and 60 percussion voices — change the voices in the preset patterns as required, and assign them to your combination and original patterns (> page 17).
- Built in "sampler" function lets you record two different sounds — either via the built-in microphone or line-in jack — that can be selected and used in patterns in the same way as the preset voices (> page 19).
- Song mode includes 50 preset songs with common chord progressions that you can simply select and play or practice along with (> page 23).
- 50 programmable songs can be used to store patterns and chord progressions that you specify (> page 28).
- Songs are recorded by simply changing patterns and chords in real time — no complex step-record or editing procedures required (> page 28).
- A unique "Chord Progression" recording mode makes it simple to enter even complex chord progressions with perfect timing (> page 33).
- Two "phrase" keys play special phrases individually programmed for each preset song: 50 preset songs × 2 phrase keys = 100 phrases (> page 26).
- Built in speaker lets you play without the need for external equipment and cables (> page 8).
- Input jack accepts guitar or keyboard input so you can play along with the QR10 without additional amplification (> page 4).

Applications

Here are a few ideas on how you can use the QR10. There's no way we can cover all possibilities, but the ideas presented might help to spark some new and interesting applications.

■ A Super Practice Tool

Create accompaniments that you can practice with on your guitar, keyboard, or any other instrument (vocals too, of course). That way you have the advantage of practicing with a bass line and chords instead of just a metronome or drum machine.

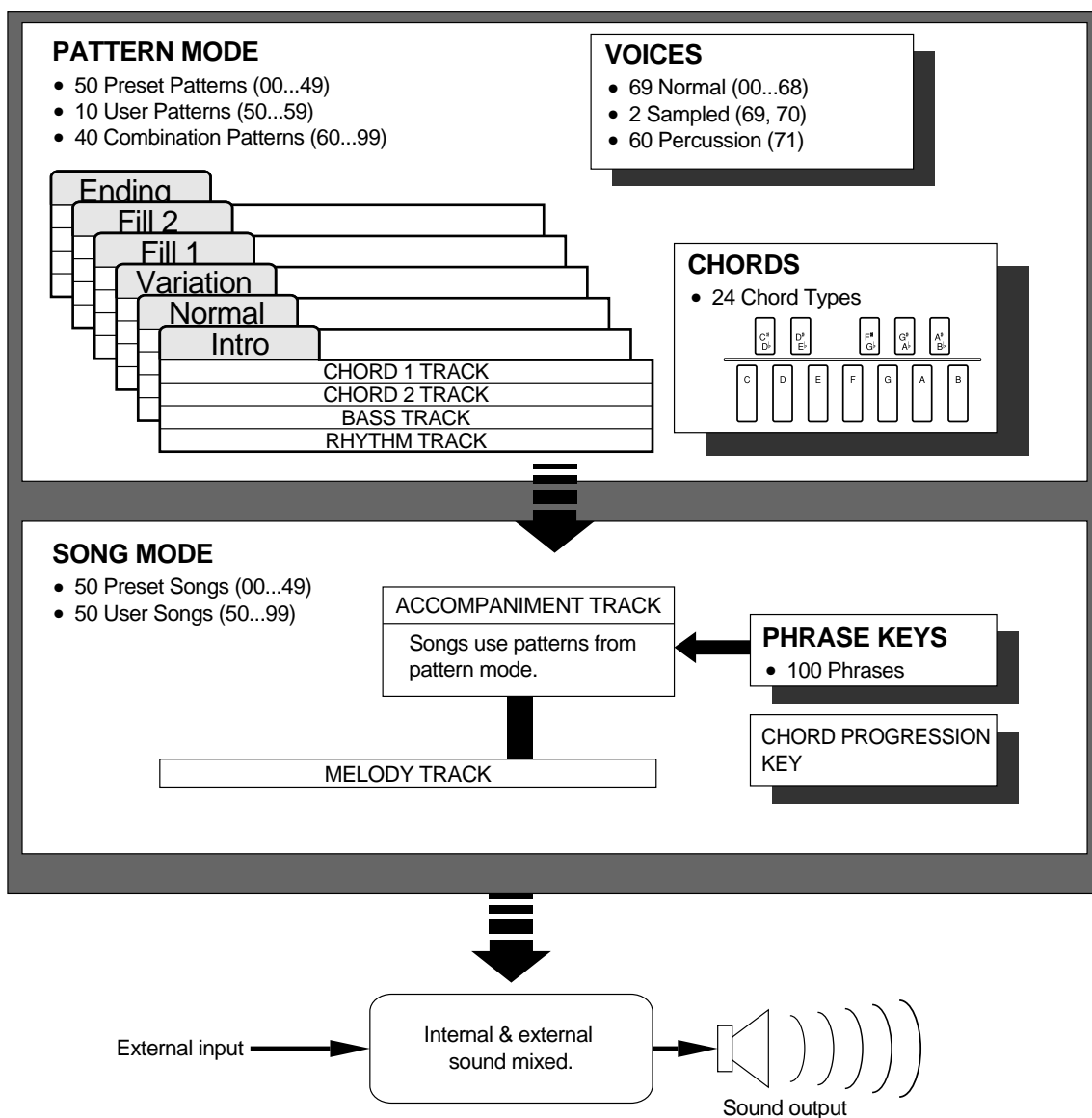
■ Accompaniment for Live Performance

The QR10's excellent sound quality makes it a super accompaniment tool for live performances, too. Sing, rap, or play along with the QR10 anywhere, anytime.

1: QR10 Features & Applications (continued)

- Use It as a Drum Machine** Use the rhythm tracks of the preset patterns or program your own. The QR10's drum sounds are just as realistic and powerful as those on many dedicated rhythm machines.
- Develop Musical Ideas** The QR10's outstanding voices and versatile programming features make it an ideal tool for trying out musical ideas. It's also a great way to present your ideas to others.
- Use it in a MIDI Music System** Use the QR10 as an adjunct to music recording and production in a MIDI music system. It can, for example, be MIDI-clock synchronized to other MIDI equipment in order to add extra tracks to an arrangement.
- Use It as a Tone Generator** The QR10's AWM (Advanced Wave Memory) tone generator is in no way a compromise. You get outstanding AWM sound quality that's on a par with some of the finest full-size synthesizers. You can play the QR10 remotely from just about any MIDI keyboard, computer, or other controller.
- Add ABC Capability to Your MIDI Keyboard** Use the QR10 as an "ABC expander" for your MIDI keyboard. Auto-accompaniment can make playing at home more fun, and it can be a tremendous sound-booster at 1-performer live gigs.

QR10 System Overview



2: Setting Up: Power & Connections

Power Supply

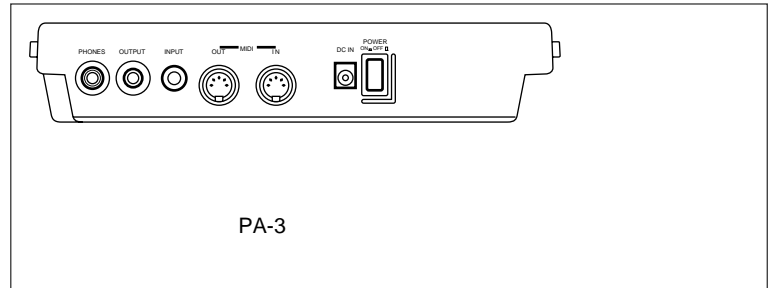
Your QR10 will run either from an optional AC adaptor or batteries. We recommend the use of the optional Yamaha PA-3 AC Adaptor for most applications. Follow the instructions below according to the power source you intend to use.

■ Using a Power Adaptor

Plug the DC output cable from an optional Yamaha PA-3 AC Adaptor (available from your Yamaha dealer) into the DC IN jack on the rear panel, then plug the adaptor into a convenient wall AC power outlet.



Do not attempt to use an AC adaptor other than the PA-3. The use of an incompatible adaptor may cause irreparable damage to the QR10, and might pose a serious shock hazard! Be sure to unplug the AC adaptor from the AC mains outlet when the QR10 is not in use.



■ Using Batteries

Six 1.5V AA size (SUM-3 or R6P) or equivalent alkaline batteries must first be installed in the battery compartment. Please note that the average life of a full set of new manganese batteries is approximately one hour or less of continuous playback at maximum volume. Alkaline batteries may last as long as four hours. Please use an AC power adaptor (see above) wherever possible.

1 Open Battery Compartment Cover

Open the battery compartment cover — located on the instrument's bottom panel — by pressing on the two latches on the cover 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

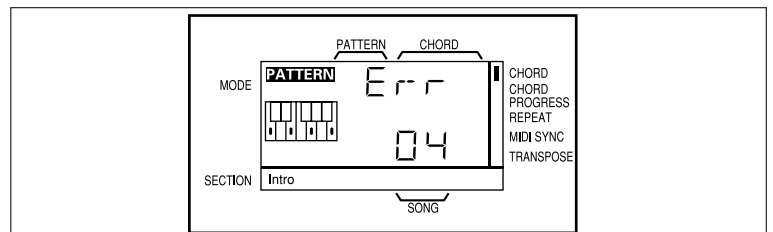
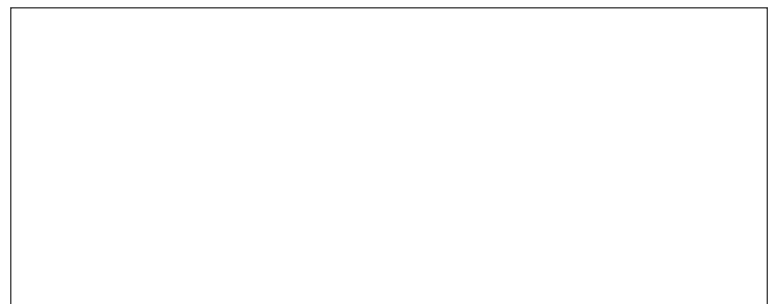
Replace the compartment cover, making sure that it locks firmly in place.

■ When to Replace the Batteries

When the batteries run down and are no longer able to operate the QR10, playback or recording will stop and the display shown to the right will appear:

If the battery voltage drops too low to maintain the error display, a random, meaningless display will appear.

When these displays appear, replace the batteries with a complete set of six new batteries. **NEVER mix old and new, or different type of batteries!**



Never unplug the AC adaptor from the QR10 when a set of batteries is installed and the power is turned ON. Turn the power OFF first.

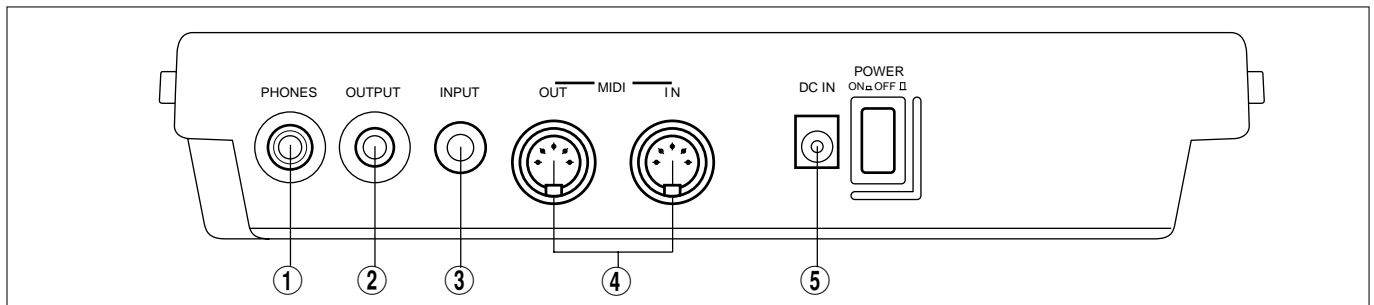


To prevent possible damage due to battery leakage, remove the batteries from the instrument if it is not to be used for an extended period of time.

Setting Up Your System

The QR10 provides plenty of musical potential by itself, without extra equipment and complicated connections. It can, however, be used with other equipment in a variety of ways to meet a wide range of individual needs. A few examples are provided below to help you get started.

■ The Connectors



① PHONES Jack

Any pair of stereo headphones with a miniature stereo phone plug can be plugged in here for convenient monitoring. The PHONES output level is adjusted via the VOLUME control on the right side panel.



The built-in speaker is automatically shut off when a pair of headphones is plugged into the PHONES jack.

② OUTPUT Jack

This miniature stereo phone plug delivers a line-level stereo output signal from the QR10 for connection to a stereo sound system (see “Audio Connections,” below). The output level is adjusted via the VOLUME control on the right side panel.

③ INPUT Jack

This 1/4" monaural phone jack accepts input from an electric guitar or bass, an electronic keyboard, a microphone (high-impedance types), or other audio source. The signal received at the INPUT jack is mixed with the QR10's own sound and delivered via the built-in speaker system, the OUTPUT jack (above), or the PHONES jack (also above) as required. The INPUT GAIN function described on page 5 should be used to match the input gain of the QR10 to the connected instrument or source.



The INPUT jack can also be used as a footswitch jack for playback start/stop and chord change operation when the FOOTSWITCH function is turned ON (> page 11).

④ MIDI IN & OUT Connectors

If you plan to use a MIDI keyboard or other instrument to play and program the QR10, it should be connected to QR10 MIDI IN connector. The MIDI OUT connector can be connected to an external MIDI data recorder such as the Yamaha MDF2 if you want to store your songs and patterns to floppy disk (> page 43).

⑤ DC IN Jack

This jack is only used when you are powering the QR10 from an optional AC adaptor instead of batteries. The DC output cable from an optional Yamaha PA-3 AC Power Adaptor is plugged in here.



The batteries are automatically disconnected when a plug is inserted into the DC IN jack.

2: Setting Up: Power & Connections (continued)

■ Audio Connections

The simplest way to monitor the QR10 sound is via the built-in speaker. If you want to keep the QR10 sound to yourself, without bothering others, a pair of stereo headphones (miniature stereo phone plug type) plugged into the PHONES jack provides convenient monitoring while automatically shutting off the internal speaker system.

If you want to use an external stereo sound system, however, use the OUTPUT jack and an optional “Y” cable (miniature stereo phone plug to dual RCA pin plugs). The white RCA pin plug goes to the left-channel input of your stereo sound system and the red plug goes to the right-channel input.

If you will be connecting a guitar or keyboard to the INPUT jack, use a standard 1/4" phone-phone plug instrument cable.

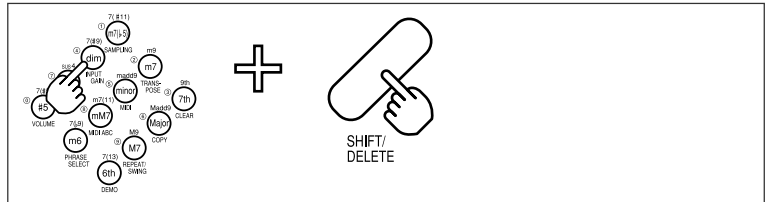


Make sure that both the QR10 and your sound system are turned OFF when making connections.

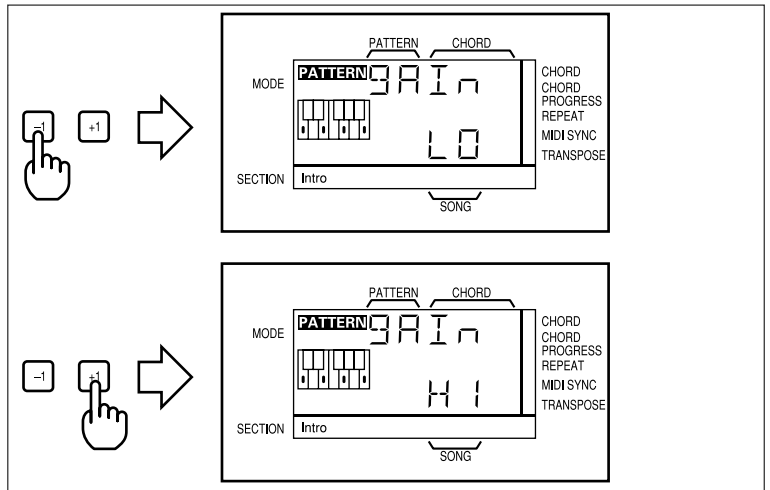
■ Setting the Input Gain

The QR10 has two input gain settings: HI (high) and LO (low). Use the HI setting for microphone input. Use the LO setting for electric guitar, bass, electronic keyboards and other line-level sources. Here's how to set the gain:

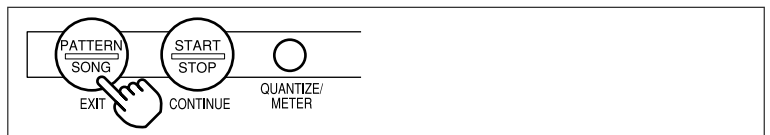
- 1 Press the [INPUT GAIN] key (this is the same as the number-4 numeric key) while holding the [SHIFT] key.



- 2 Press the [-1] key to select the LO setting, or the [+1] key to select the HI setting.

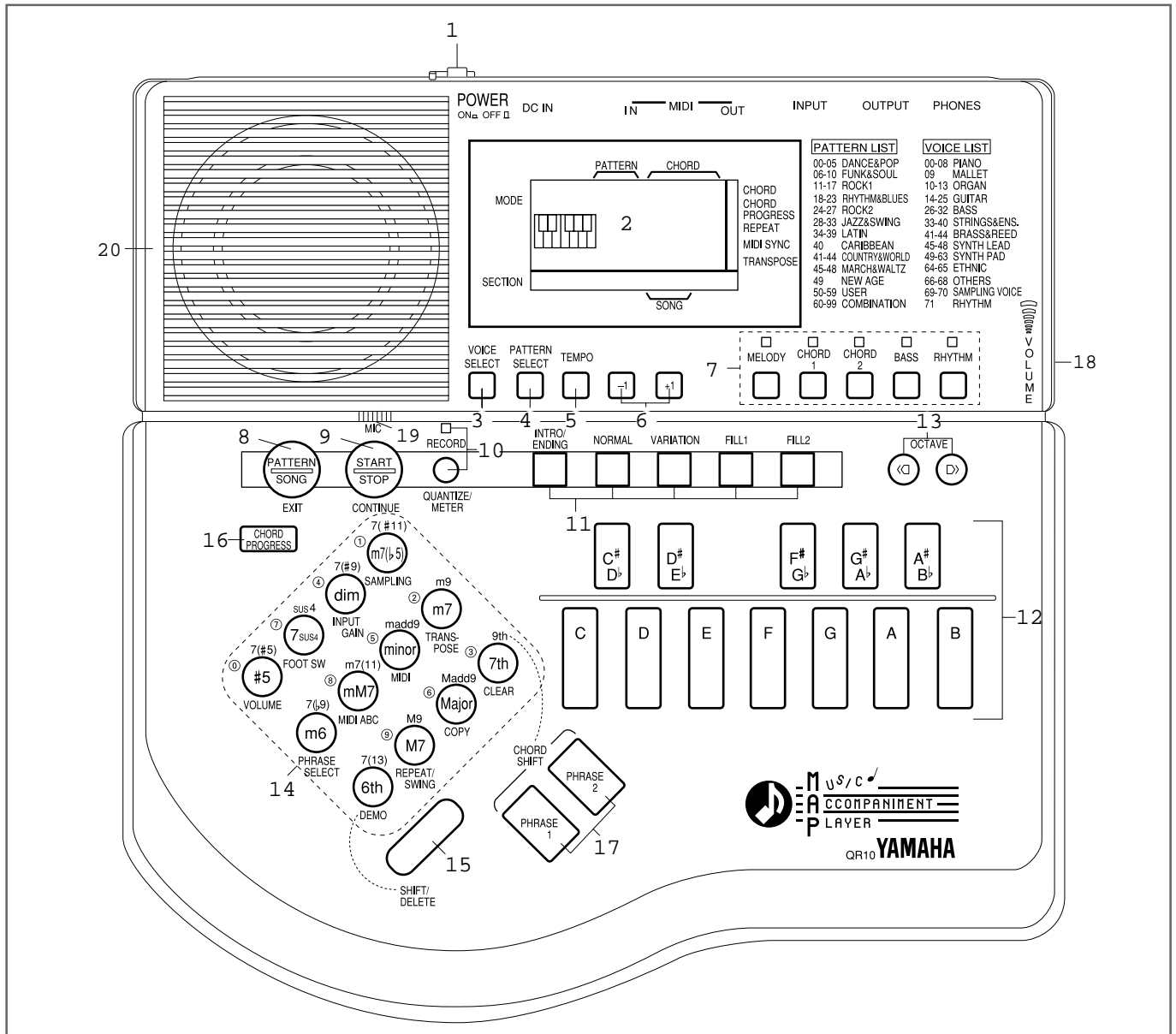


- 3 Press the [EXIT] key (this is the same as the [PATTERN/SONG] key) to exit from the INPUT GAIN function.



3: The QR10 Controls

The QR10 has simple, consistent control interface that, once understood, makes operation fast and easy. The main functions of the controls are summarized below. Full operational details are given in the following sections.



① POWER Switch

Press in to turn the QR10 on. Press again to turn it off.

② LCD Panel

This large multi-function liquid crystal display panel shows all parameters and prompts you need to operate the QR10 with optimum ease and efficiency.

③ [VOICE SELECT] Key

The [VOICE SELECT] key allows any of the QR10's voices to be assigned to the five tracks: MELODY, CHORD 1, CHORD 2, BASS, and RHYTHM (> page 17).

④ [PATTERN SELECT] Key

This key is used to select any of the QR10's 100 patterns for playback in the PATTERN or SONG mode (> page 10).

⑤ [TEMPO] Key

The tempo of pattern and song playback can be set anywhere between 40 and 250 beats per minute by using this key (> page 13).

⑥ [-1] and [+1] Keys

These keys are used to select pattern numbers, song numbers, tempo values, and many other numeric settings. The [-1] key decrements (decreases stepwise) the value, while the [+1] key increments (increases stepwise) the value. Press either key briefly to decrement or increment the parameter by one, or hold the key for continuous decrementing or incrementing in the specified direction (> page 10).

The [-1] and [+1] keys are also used to turn some functions ON (+1) or OFF (-1).

⑦ Track Keys & Indicators

The track keys are used to independently turn the QR10's five tracks (MELODY, CHORD 1, CHORD 2, BASS, and RHYTHM) ON or OFF. This makes it possible to play back any specified group of tracks, or even a single track, as required (> page 16). When a track indicator is lit, the corresponding track is turned ON.

⑧ [PATTERN/SONG] Key

Use this key to switch between the QR10's PATTERN and SONG modes. It also functions as an [EXIT] key that allows you to exit from any of the QR10's other functional modes (> pages 10, 23).

⑨ [START/STOP] Key

Press the [START/STOP] key once to begin playback of the selected pattern or song, and a second time to stop playback (> page 9).

The [START/STOP] key also has a [CONTINUE] function: press [START/STOP] while holding the [SHIFT] key to continue playback from the point at which it was last stopped rather than starting again from the beginning of the pattern or song (> pages 11, 24). Other functions include record start/stop (> pages 29, 36), clear (> pages 34, 40), and copy (> pages 35, 41).

⑩ [RECORD] Key & Indicator

The [RECORD] key is used to engage the pattern and song record modes (> pages 28, 36). This key also selects the QR10's QUANTIZE (> pages 31, 38) and METER (> page 38) functions, used when recording original patterns.

⑪ Section Keys

These keys are used to select the 6 variations or "sections" provided for each of the QR10's patterns: INTRO, NORMAL, VARIATION, FILL 1, FILL 2, and ENDING. The various sections can be selected while playing patterns in the PATTERN mode (> page 12), or in the SONG mode.

⑫ Micro-keyboard

This miniature 1-octave keyboard, used in conjunction with the chord type keys (below), makes it easy to specify chord changes for your accompaniments (> page 14). It is also used to enter single notes when recording a melody track in the song mode (> page 31).

⑬ [OCTAVE] Keys

Since the 1-octave range of the QR10 micro-keyboard may not be sufficient for some operations, the [OCT <□] and [OCT □>>] keys allow the pitch of the keyboard to be shifted up or down in octave steps, over a range of 5 octaves. Each time the [OCT <□] key is pressed the pitch of the keyboard is shifted down by one octave, until the lower limit is reached. The [OCT □>>] key shifts the pitch of the keyboard up in the same way (> page 18).

⑭ Chord Type/Number Keys

These keys perform three different functions.

When changing chords they are used to specify the chord type (e.g. major, minor, seventh, etc.) (> page 14).

They can also be used for direct number entry in many situations in which the [-1] and [+1] keys can be used to specify a value (> page 9).

If pressed while the [SHIFT] key is held these keys access a range of other important functions:

- Voice sampling (> page 19).
- Input gain (> page 5).
- Foot switch operation (> page 11).
- Track volume (> page 21).
- Transposition (> page 21).
- MIDI bulk dump & synchronization (> pages 43, 44).
- MIDI ABC (Auto Bass Chord) (> page 44).
- Phrase-key phrase selection (> page 26).
- Pattern & song clear (> pages 34, 40).
- Pattern & song copy (> pages 35, 41).
- Repeat/swing (> pages 22, 24).
- Demo playback (> page 9).

⑮ [SHIFT/DELETE] Key

As mentioned in ⑭ "Chord Type/Number Keys", above, the [SHIFT/DELETE] key is used in conjunction with those keys to access a range of "shift functions". It can also be used to delete mistakes and unwanted material in the pattern and song record modes (> pages 32, 40).

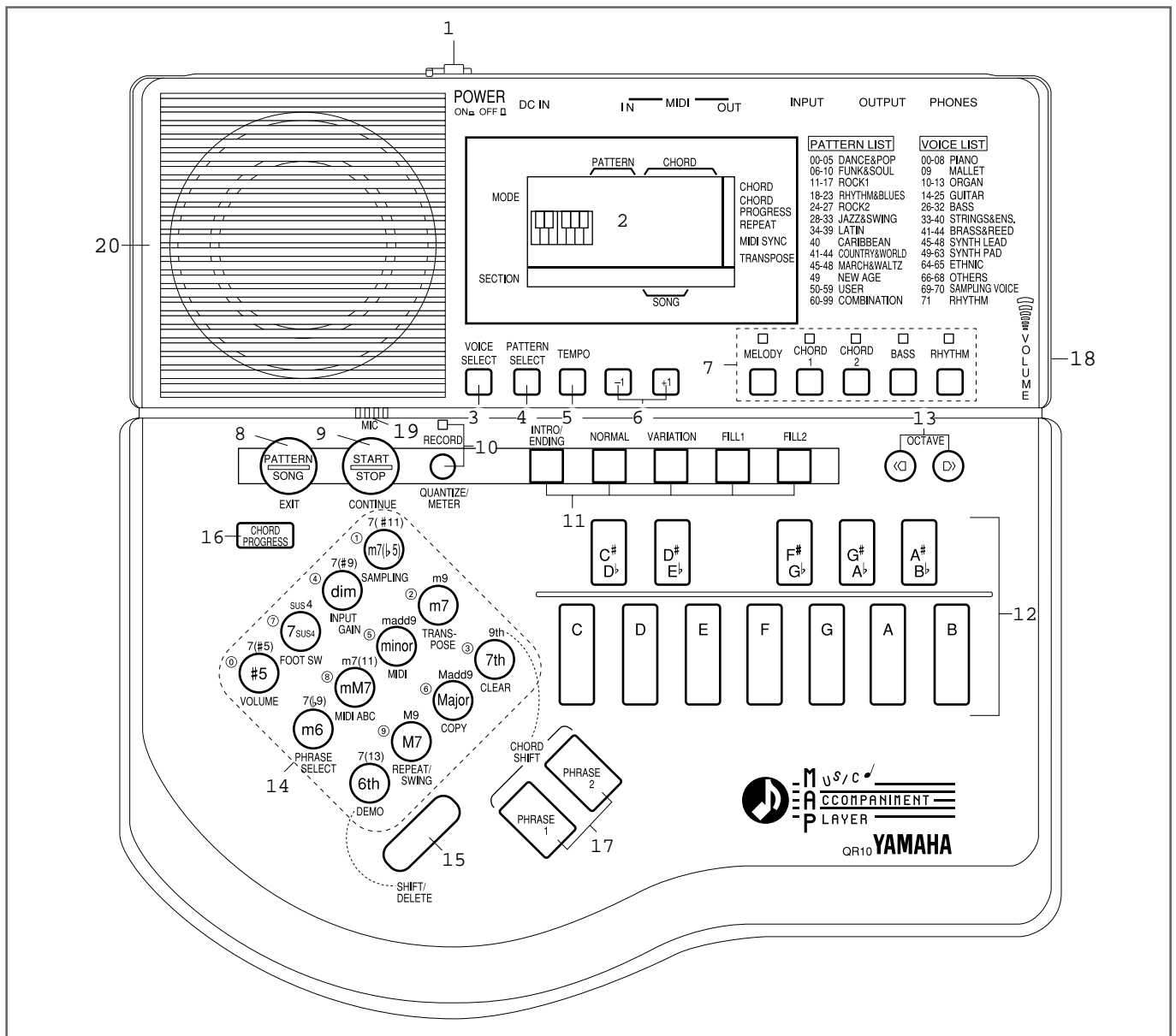
⑯ [CHORD PROGRESS] Key

When programming songs in the SONG mode, the [CHORD PROGRESS] key can make entering even fast-moving chord progressions easy (> page 33). It can also be used to shift chord timing in the song playback mode.

⑰ [PHRASE/CHORD SHIFT] Keys

In addition to playing any of 100 short phrases for added variety and creative control during song playback (> page 26), these keys are used to access the "shift chords" listed above the chord type keys (> page 15).

3: The QR10 Controls (continued)



18 VOLUME Control

The VOLUME control adjusts the volume of the sound delivered via both the OUTPUT and PHONES jacks. Slide the control toward you (i.e. toward the front of the QR10) to decrease the volume or toward the rear panel to increase the volume.



Set the VOLUME control to the lowest volume when connecting the QR10 to a sound system for the first time, then gradually raise the volume level until the required listening level is reached. This simple precaution can prevent unexpectedly high volume levels from damaging your speaker system (and maybe even your ears!).

19 Microphone

When no source is connected to the rear-panel INPUT jack, the QR10's "sampling voices" (voice numbers 69 and 70) can be recorded via this built-in microphone (> page 19).

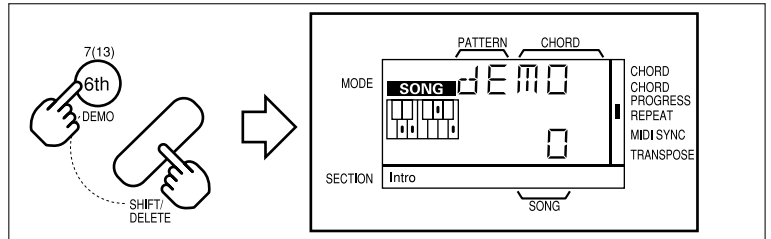
20 Speaker

The QR10's built-in amplifier and speaker system provides convenient sound output without the need for any external equipment. The speaker is automatically shut off when a pair of headphones is plugged into the rear-panel PHONES jack.

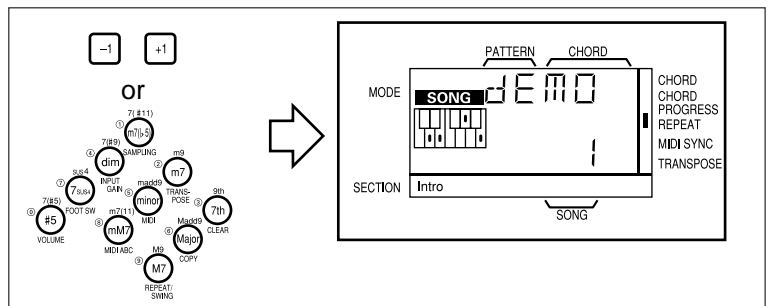
Play the Demo

Once you've set up your QR10 and become familiar with the controls, you might like to play back the pre-programmed demonstration for a sample of what the QR10 can do.

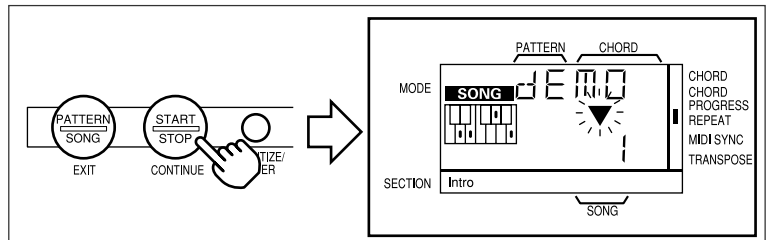
- 1 Press the **[DEMO]** key (this is the same as the "6th" chord type key) while holding the **[SHIFT]** key.



- 2 Use the **[-1]** and **[+1]** keys, or the number keys, to enter the number of the demo song you want to play (0 through 2).



- 3 Press the **[START/STOP]** key to begin playback.
If demo song number 0 or 1 is selected, demo song numbers 0 and 1 will play alternately and repeat until stopped.
If demo song number 2 is selected it will repeat until stopped.

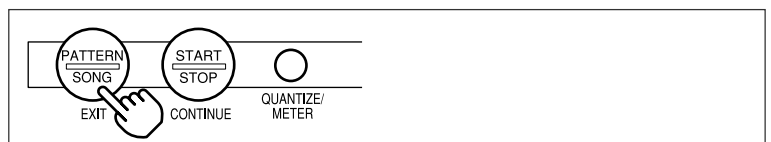


- 4 Press the **[START/STOP]** key again when you're ready to stop playback.



Demo playback will repeat continuously until stopped by pressing the **[START/STOP]** key.

- 5 Press the **[EXIT]** key (this is the same as the **[PATTERN/SONG]** key) to exit from the DEMO function.



Demo song number 0 is a complete song including melody and accompaniment parts.
Demo song number 1 shows how the QR10 Phrase function (page 26) can be used to add variety and interest to your songs.
Any of 100 phrases can be added at any point in a song simply by pressing one of the QR10 PHRASE keys.
Demo song number 2 plays all 50 preset songs in sequence.

4: Playing the Patterns & Their Variations

The QR10 allows you to select and play any of 100 different patterns:

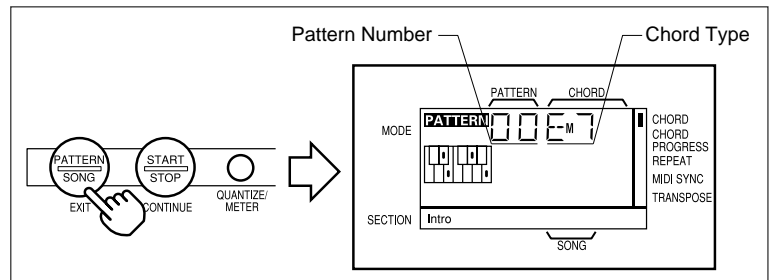
- Pattern numbers 00 through 49 are preset patterns.
- 50 through 59 are “user” patterns that you can program from scratch (these patterns are initially empty).
- 60 through 99 are “combination” patterns that can easily be “assembled” by combining parts from different preset or user patterns.

The procedures for creating original combination and user patterns are described later in the manual. For now we’ll learn how to select and play the QR10’s preset patterns and their variations.

Selecting & Playing a Pattern

1 Select the Pattern Mode

If **PATTERN** is showing in the upper left corner of the display, the pattern mode is already selected. If **SONG** is showing, however, press the **[PATTERN/SONG]** key to switch to the PATTERN mode.

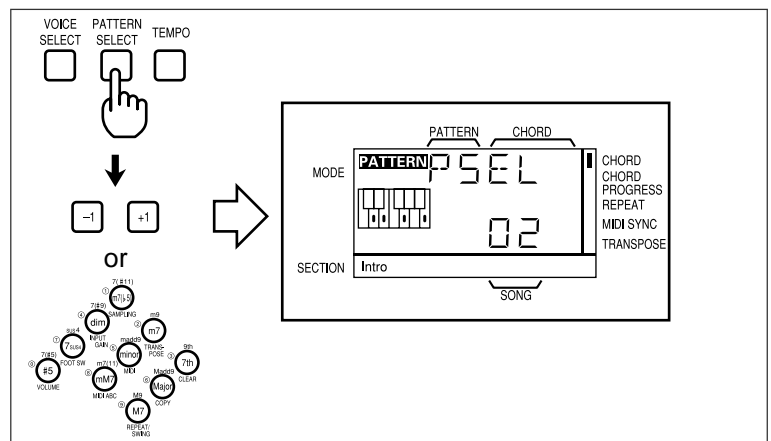


2 Select a Pattern Number

Press the **[PATTERN SELECT]** key. “PSEL” will appear on the upper line of the display (“PSEL” is an abbreviation of “PATTERN SELECT”), and the number of the currently selected pattern will appear on the lower line.

Use the **[-1]** and **[+1]** keys, or the number keys, to select the number of the pattern you want to play. When using the number keys to enter a pattern number, you must enter two digits. For example, to enter pattern number “35”, first press the **[3]** key and then the **[5]** key. To enter pattern number “9”, press the **[0]** key and then the **[9]** key.

The preset patterns are numbered from “00” to “49”.



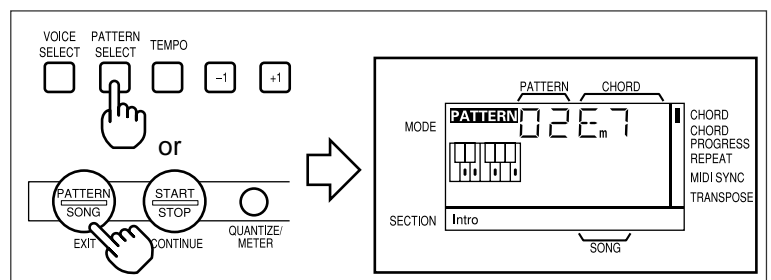
Pressing the **[-1]** key briefly decreases the pattern number by one (technically, this is known as “decrementing”), and pressing the **[+1]** key briefly increases (“increments”) the pattern number by one. If you press and hold either the **[-1]** or **[+1]** key, the pattern number will decrease or increase continuously and rapidly until the key is released. You can’t select a pattern number lower than “00” or higher than “99”.



The “Preset Pattern & Song List” to the right of the display lists the basic preset pattern categories. A complete list is given in the “Appendix” on page 47.

3 Return to the Pattern Play Mode

Return to the pattern play mode either by pressing the **[PATTERN SELECT]** key a second time, or by pressing the **[EXIT]** key (this is the same as the **[PATTERN/SONG]** key). The selected pattern number appears under “PATTERN” on the display.



4: Playing the Patterns & Their Variations (continued)

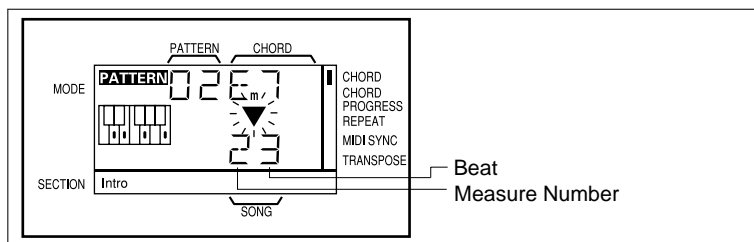
4 Start Playback

Press the [START/STOP] key to begin playback of the selected pattern. Make sure that the VOLUME control is set to an appropriate level.



■ The Beat Display

As the pattern plays, a triangular beat indicator will flash in time with the music, and two digits immediately below the flashing triangle show the current measure and beat. The left digit is the measure number, and right digit is the quarter-note or eighth-note beat within that measure.



The "Normal" variations of all the preset patterns consist of up to 4 measures that repeat continuously. The measure number will therefore go from "1" to "4", and then back to "1" again. If the pattern is in 4/4 time (i.e. 4 quarter-notes per measure), then the beat number will go from "1" to "4" within each measure. The measure and beat numbers for one full cycle of a 4-measure pattern in 4/4 time are as follows.

5 Stop Playback

Pressing the [START/STOP] key while a pattern is playing stops playback immediately.



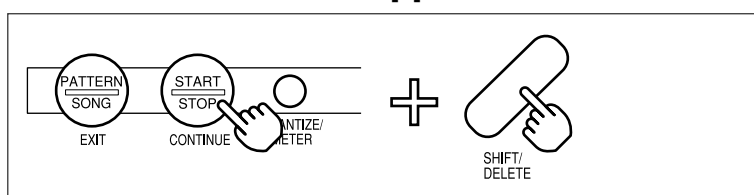
You can change patterns during playback by following the standard pattern selection procedure: press [PATTERN SELECT], use the [-1] and [+1] or number keys to select a pattern, then press [EXIT].



Whenever you turn the QR10 power on, or select the PATTERN mode from the SONG mode, the previously selected pattern number will automatically be re-selected.

■ To Continue Playback from the Point at Which It Was Stopped

Each time you press the [START/STOP] key while playback is stopped the pattern will begin playing from the first beat of the first measure. If you press the [START/STOP] key while holding the [SHIFT] key, however, playback will continue from the point at which it was stopped.

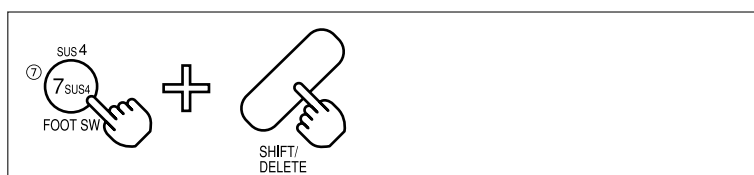


■ Using a Footswitch for Start/Stop Control

If the QR10 FOOT SW function is turned ON, you can use an optional footswitch (Yamaha FC4 or FC5) connected to the rear-panel INPUT jack to start and stop pattern playback instead of the panel [START/STOP] key. This leaves your hands free to play an instrument or perform other operations. To turn the FOOT SW function on:

1 Engage the FOOT SW Function

Press the [FOOT SW] key (the number "7" key) while holding the [SHIFT] key to engage the FOOT SW function.



4: Playing the Patterns & Their Variations (continued)

2 Turn ON or OFF

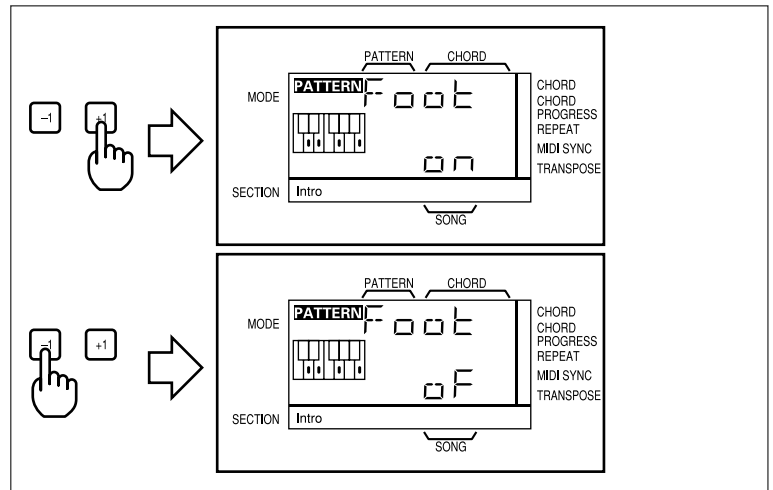
Use the [+1] key to turn the FOOT SW function “on”, or the [-1] key to turn it off (“, F” on the display).



CAUTION Do not use a footswitch when the FOOT SW function is turned off! If a footswitch is connected to the INPUT jack and the footswitch function is turned OFF, operating the footswitch may cause damage to the QR10.



IMPORTANT The sound of an instrument or other external audio source will not be heard via the QR10 speaker when the FOOT SW function is turned on. Connecting an instrument or audio source to the INPUT jack when the FOOT SW function is turned on may actually damage the connected device.



3 Exit

Press the [EXIT] key when done.

Using the Pattern Variations

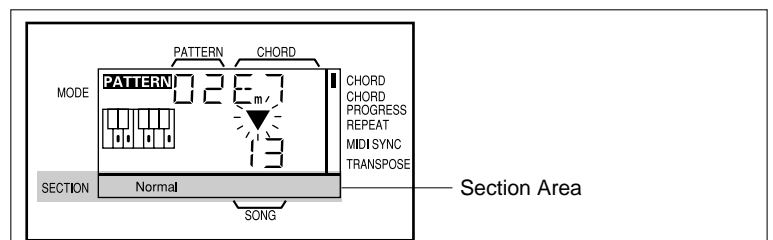
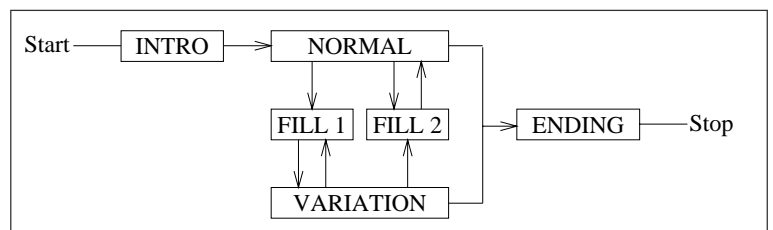
Each preset pattern has 6 variations or “sections” — INTRO, NORMAL, VARIATION, FILL 1, FILL 2, and ENDING.

- INTRO** introduction.
- NORMAL** normal pattern, used for the “verse” of a song.
- VARIATION** normally used as a chorus or bridge.
- FILL 1** fill-in 1, transition (from normal) to variation.
- FILL 2** fill-in 2, transition (from variation) to normal.
- ENDING** ending pattern.

When the INTRO, FILL 1, and FILL 2 sections are selected, the section plays through once and is automatically followed by either the NORMAL or VARIATION pattern. INTRO is followed by NORMAL, FILL 1 is followed by VARIATION and FILL 2 is followed by NORMAL. The FILL 1 and FILL 2 patterns automatically provide smooth, “musical” transitions between the NORMAL and VARIATION sections. Playback stops automatically after the ENDING section.

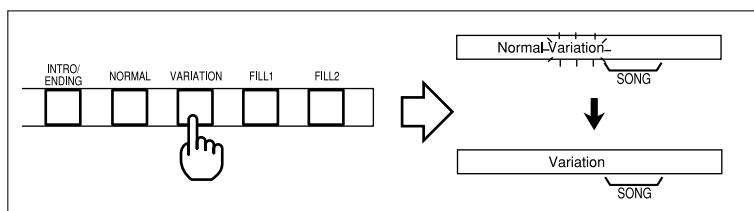
The fill-ins — FILL 1 and FILL 2 — will play repeatedly as long as the button is held.

The currently selected section is shown in the “SECTION” area of the display.



4: Playing the Patterns & Their Variations (continued)

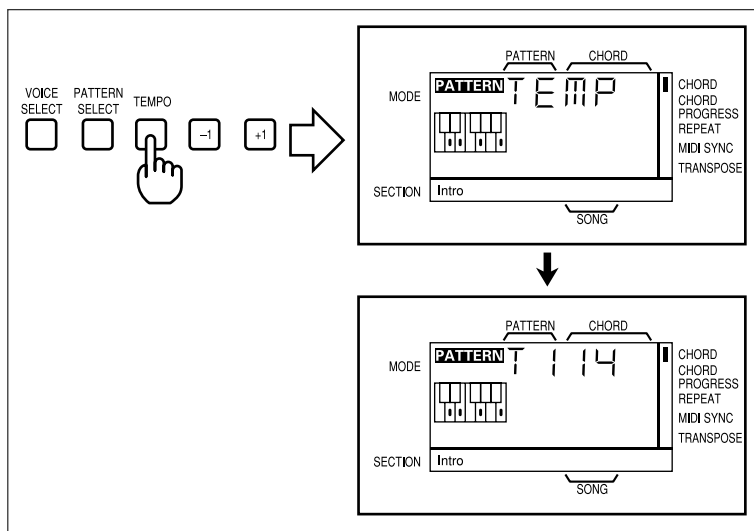
You can change sections directly by pressing the appropriate section key. The newly selected section — INTRO, NORMAL, VARIATION, or ENDING — will begin playing from the top of the next measure. FILL 1 and FILL 2 begin as soon as the key is pressed. The newly selected section name will flash on the display until the new section actually begins playing.



Changing the Tempo

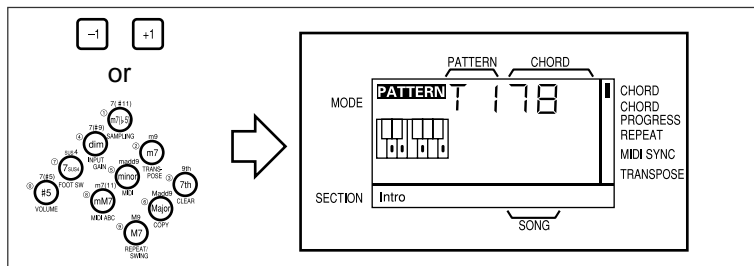
1 Engage the Tempo Change Mode

Press the [TEMPO] key to engage the tempo change mode. “TEMP” will appear on the display while the [TEMPO] key is held, the letter “T” (for Tempo) will appear, followed by the current tempo in quarter-notes per measure, when the [TEMPO] key is released.



2 Set the Tempo

Use the [-1] and [+1] keys, or the number keys, to set the tempo as required. The slowest tempo is 40 beats per minute, and the fastest is 250.



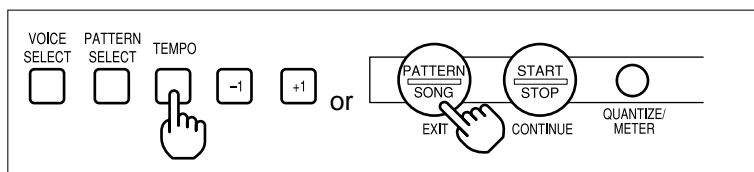
The tempo value can be adjusted in 1-beat increments. As with pattern selection, pressing the [-1] or [+1] key briefly decrements or increments the tempo value by 1, respectively. Press and hold the [-1] or [+1] key to continuously decrement or increment the tempo value. When using the number keys to enter a tempo value, you must enter two digits to enter values from 40 to 99, and three digits to enter tempo values from 100 to 250.



You can set the tempo either before starting playback of a pattern, or while a pattern is playing.

3 Return to the Pattern Play Mode

Return to the pattern play mode either by pressing the [TEMPO] key a second time, or by pressing the [EXIT] key.



4: Playing the Patterns & Their Variations (continued)



Any changes you make to the tempo of the preset patterns (00 – 49) are only temporary, and the default value will be automatically restored as soon as you select a different pattern or mode. Tempo settings you make for original combination and user patterns (pages 36 and 37), however, are retained in memory even if the QR10 power is turned off and it is disconnected from the power supply (i.e. the batteries are removed or the AC adaptor is unplugged).



When the MIDI Synchronization function described on page 44 is turned ON, a series of dashes appears on the display in place of the tempo value and the tempo cannot be changed (when MIDI Synchronization is ON the QR10's playback tempo is controlled by an external MIDI clock signal).

Changing Chords

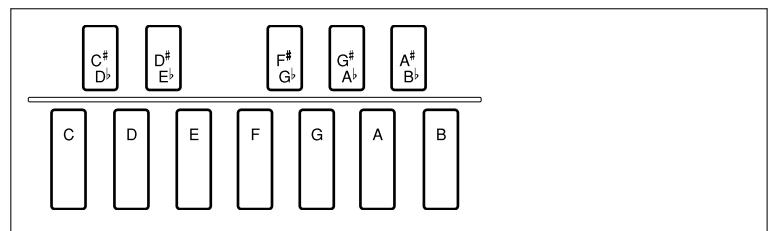
The QR10 features a sophisticated ABC (Auto Bass Chord) system that automatically re-harmonizes the accompaniment sound to match chords you specify. This makes creating complete accompaniments fast and easy ... just select a pattern, then specify the required chord changes. Here's how to specify chord changes.

1 Play a Pattern

Select and play one of the preset patterns, as described in the preceding section.

2 Enter a Chord

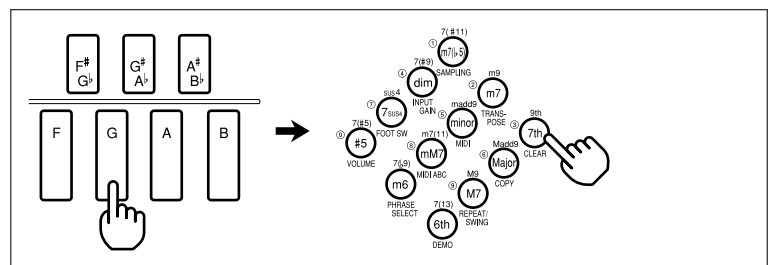
Note that the micro-keyboard is arranged in the form of a small piano keyboard, and has the appropriate chord root names "C" through "B" marked on the keys.



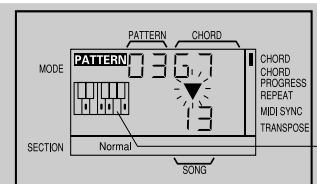
The chord type keys have chord types marked on the keys themselves as well as above the keys.



To enter a chord, press the key corresponding to the desired chord root together with the key corresponding to the desired chord type. To enter a G7 chord, for example, simultaneously press the "G" micro-keyboard key and the "7th" chord type key.



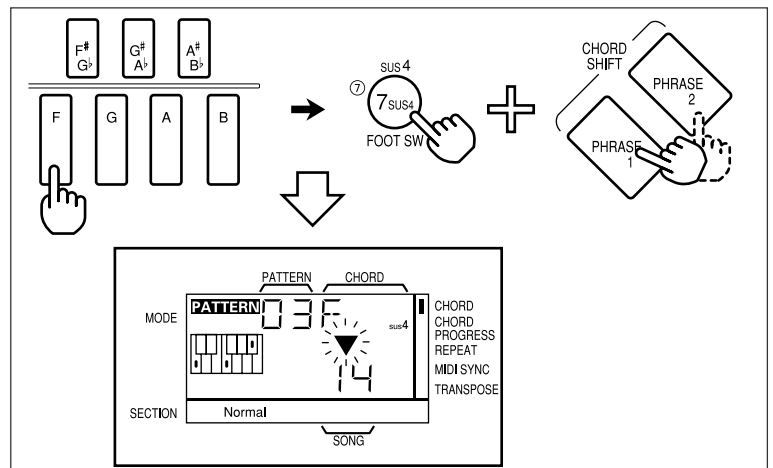
Note that the selected chord type is shown immediately below "CHORD" on the display, and that the fingering for the chord is shown by dots on the display's keyboard symbol. Standard fingerings are shown on the display and these may, in some cases, be different from the actual chord sound.



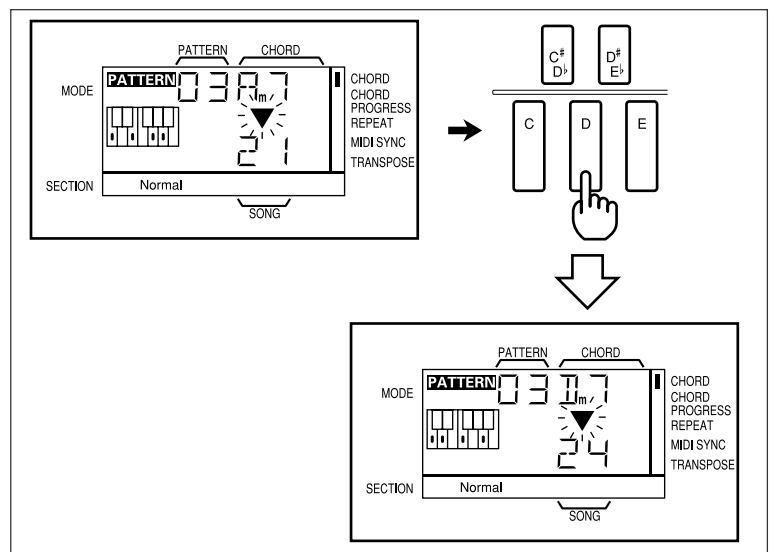
Fingering

4: Playing the Patterns & Their Variations (continued)

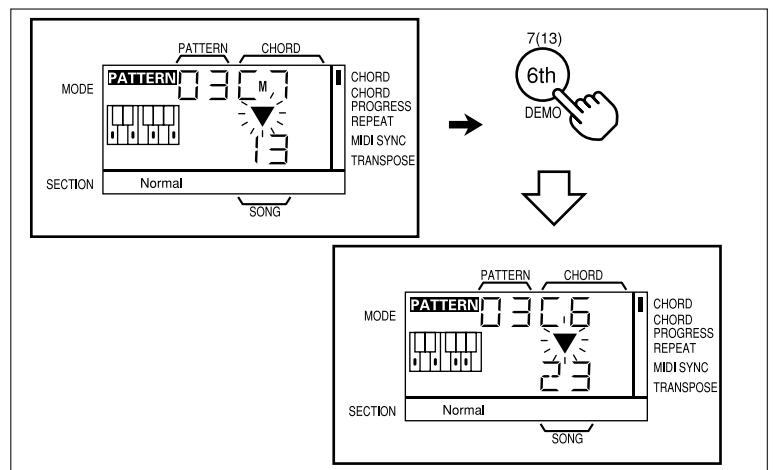
The chord types listed above the chord type keys are accessed by pressing the chord type key while holding either of the [CHORD SHIFT] keys (these are the same as the [PHRASE 1] and [PHRASE 2] keys).



To change the chord's root without changing the chord type, just press the appropriate micro-keyboard key.



You can also change only the chord type without changing the chord root by simply pressing the appropriate chord type key.



HINT You can specify the first chord to be played before starting pattern playback.



DETAIL Chords can be changed via the micro-keyboard whenever the indicator block next to "CHORD" on the display is showing.

3 Stop playback when done.

Stop playback by pressing the [START/STOP] key. You can also stop playback after an appropriate ending by selecting the ENDING section.



HINT You can hear the various chords and chord types even while playback is stopped by simply pressing the appropriate micro-keyboard and chord type keys.

4: Playing the Patterns & Their Variations (continued)

■ The Chord Types

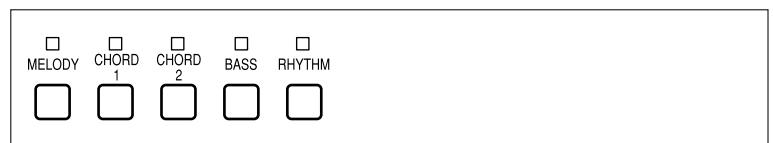
7th seventh.
9th ninth.
Major major.
Madd9 ... major added ninth.
M7 major seventh.
M9 major ninth.
6th sixth.
7(13) seventh thirteenth.

m7 minor seventh.
m9 minor ninth.
minor minor.
madd9 minor added ninth.
mM7 minor major seventh.
m7(11) minor seven eleven.
m6 minor sixth.
7(♯9)..... seventh flat nine.

m7(♯5) minor seven flat five.
7(♯11)..... seventh sharp eleven.
dim diminished.
7(♯9)..... seventh sharp nine.
7sus4 seventh suspended four.
sus4 suspended four.
♯5 augmented.
7(♯5)..... seventh sharp five.

Turning Tracks On and Off

The QR10 track keys can be used to mute (turn off) or turn on the corresponding track, either while playback is stopped or running.



If the LED indicator above a track key is lit, that track is ON, if the LED is not lit, the track is OFF (muted). Simply press the appropriate track key to turn that track on or off.



The MELODY track is only available when the QR10 is in the SONG mode (page 30). It cannot be turned on in the PATTERN mode.



The track keys are a handy way to turn tracks that you don't want to hear off. You could, for example, turn the CHORD 1 and CHORD 2 tracks off, leaving only the bass and drum accompaniment. You could also mute the bass track if you just want drums.



All tracks are automatically turned ON when the QR10 power is initially turned on and when the PATTERN mode is selected from the SONG mode, or vice-versa.

5: More Creative Control

This chapter describes a range of features and functions that add to the QR10's musical versatility: changing voices for each track, recording original "sampling voices", setting the volume of each track for the best overall balance, transposition, and giving the patterns a swing feel.

Changing Voices

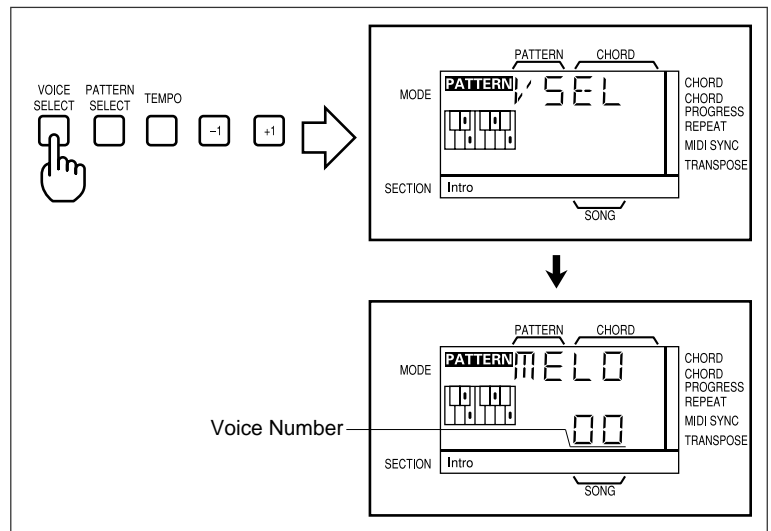
The QR10 has 70 preset voices, including a "rhythm" voice that contains 60 different drum and percussion instruments, that can be assigned to any of the accompaniment tracks. You can also record two original "sampling voices" that can be assigned in the same way (voice sampling is described in the next section).



Please note that voice changes made to the patterns are only temporary, and that the original voices will be automatically restored as soon as a different pattern or mode is selected. You can make permanent voice assignments when programming your own combination or user patterns (pages 36 and 37).

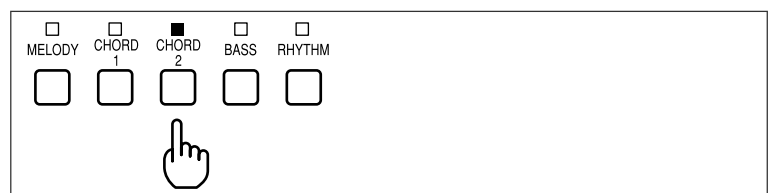
1 Press the [VOICE SELECT] Key

"VSEL" will appear on the display while the [VOICE SELECT] key is held, then "MELO" will appear when the key is released, indicating that the melody voice can now be changed. Note that at the same time the MELODY track key indicator lights while all others go out.



2 Select a Track

Press a track key to select then track for which you want to select a new voice.

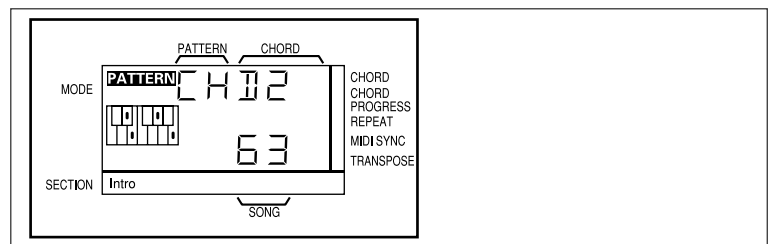


3 Select a Voice

Use either the [-1] and [+1] keys or the number keys to select a new voice for the selected track.



Refer to the "Voice List" to the right of the display for the voice categories and numbers. A complete list is given in the "Appendix" on page 46.



Notes played on an external MIDI keyboard or other controlling device that exceed the QR10's 5-octave range will not sound.

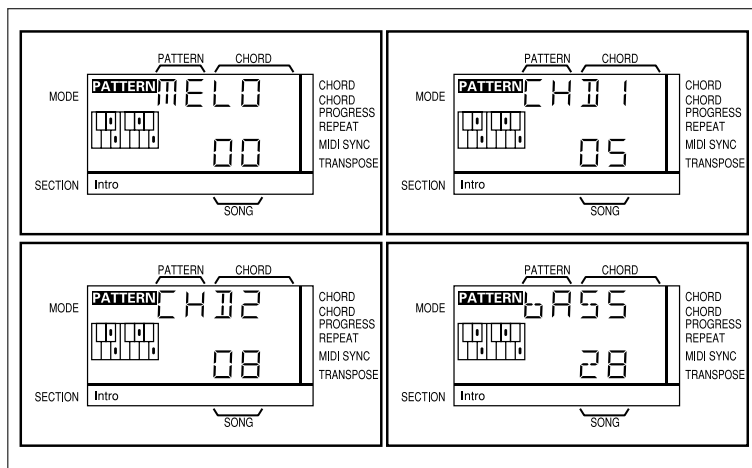
5: More Creative Control (continued)

■ The MELODY, CHORD, and BASS tracks.

To assign a voice to the MELODY, CHORD 1, CHORD 2, or BASS track, simply select the required voice number.



Voice number 71 (the rhythm voice) cannot be assigned to the CHORD 1, CHORD 2, or BASS tracks.

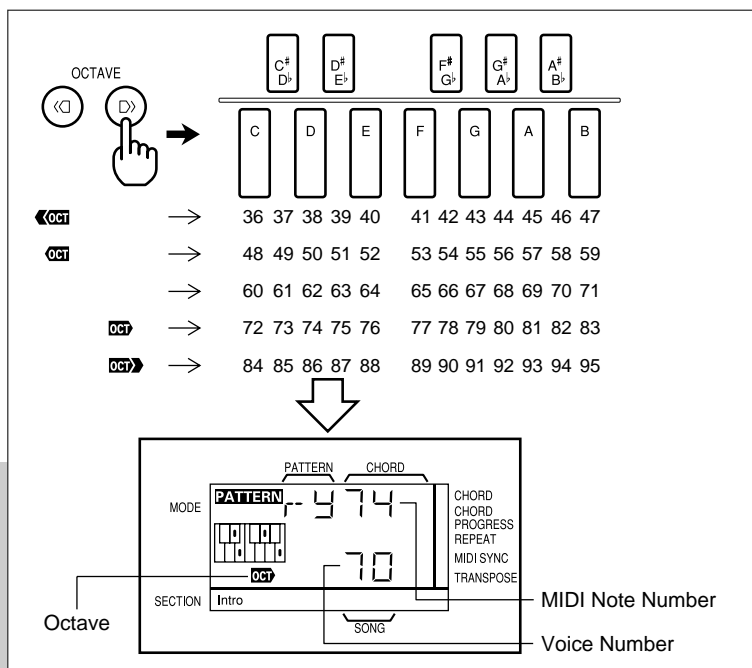


■ The RHYTHM track.

When the RHYTHM track is selected, the drum and percussion instruments included in voice number 71 are individually assigned to each note (C1 through B5). Refer to the “Rhythm Voice List” on page 47 for the percussion assignment. You can also assign voices 69 and 70 (the “sampling voices,” described below, if they contain data) to specific notes by first pressing the required note on the micro-keyboard (use the [OCTAVE] keys if necessary) and then selecting the desired voice number by using the [-1] and [+1] or number keys.

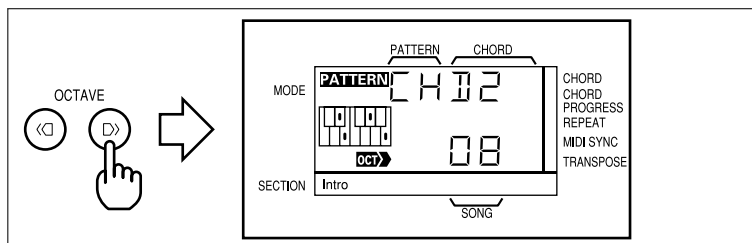


The number shown to the right of “rY” on the display when a rhythm-track note is selected is the “MIDI Note Number” corresponding to that note. The note number range is from 36 (corresponding to C1) to 95 (B5). This is a five-octave range, and you’ll need to use the [OCTAVE] keys to shift octaves in order to access the full range of notes.



4 Change the Octave As Required

Use the OCTAVE keys to select the required octaves from the QR10’s five-octave range.



5 Return to the Pattern Play Mode

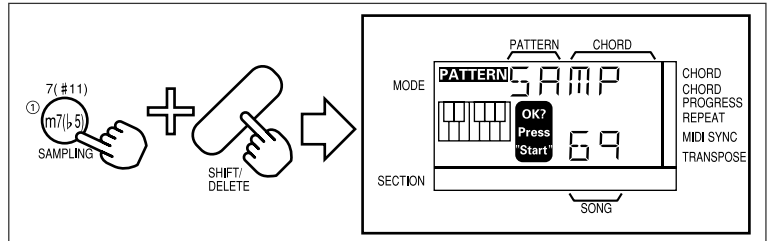
Return to the pattern play mode either by pressing the [VOICE SELECT] key a second time, or by pressing the [EXIT] key (this is the same as the [PATTERN/SONG] key).

Voice Sampling

Voices number 69 and 70 are “SAMPLING VOICES” that you can record either via the built-in microphone or a sound source connected to the INPUT jack. Once recorded, your sampling voices can be selected and used in any track (including the RHYTHM track), just like the preset voices.

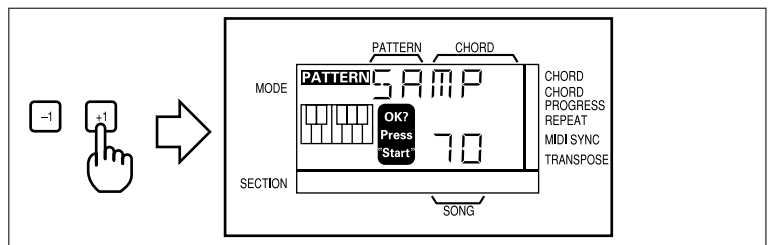
1 Engage the SAMPLING Mode

Press the [SAMPLING] key (numeric key “1”) while holding the [SHIFT] key to engage the sampling mode.



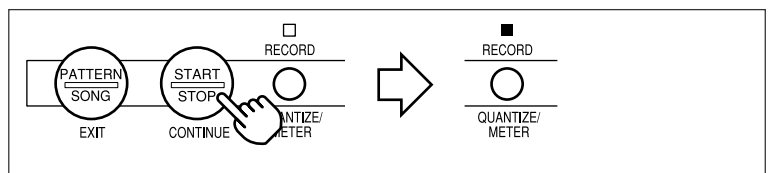
2 Select the Voice Number to Record

Use the [-1] and [+1] keys to select either voice number 69 or 70.



3 Engage the Record Mode

Press the [START/STOP] key to engage the record mode: the [RECORD] key indicator will light, but recording will not actually begin until the QR10 detects an input signal.



You can press the 3 key again at this point to exit from the sample recording mode.

4 Record

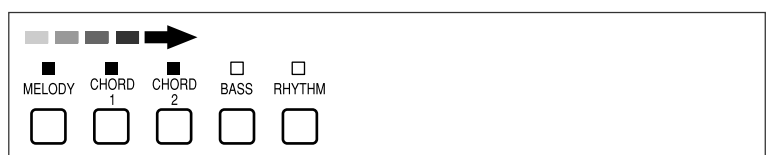
Recording will begin automatically as soon as the QR10 detects sound either via the built-in microphone or a source connected to the rear-panel INPUT jack. The [RECORD] key indicator will flash during recording, then recording will end automatically when the sampling memory is full (the recording time depends on the sampling frequency, which can be set as described in the following section).



The built-in microphone is automatically shut off when a plug is inserted into the INPUT jack. Make sure that nothing is connected to the INPUT jack if you intend to record via the internal microphone.

Input Level Indicator

During recording the track-key LED indicators function as a bar-graph type level meter. The length of the “bar” formed by the track key indicators increases to the right as input level increases. For optimum sound quality, your input signal should cause most of the indicators to light, but not all. If all indicators light in response to the input signal you’re probably overloading the input circuitry and will end up with distorted sound. At the other extreme, if none of the indicators light, or only the MELODY indicator lights, then the input signal is too small and the level of the recorded sound will be too low.



5: More Creative Control (continued)

5 Check the Recorded Sample

Play the micro-keyboard to hear how the recorded sample sounds. If the results are not satisfactory, go back to step 3 and record again. Or go back to step 2, select the next SAMPLING VOICE number, and record the next sample.



Depending on the type of sound being recorded, the beginning or “attack” of the sound may not be recorded.

6 Exit

When you’re satisfied with the recorded sample, press the [EXIT] key to exit from the SAMPLING mode.

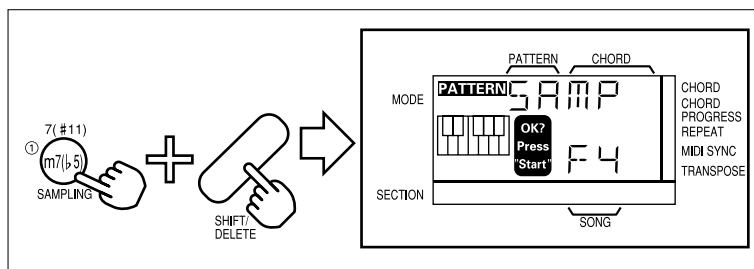
■ Setting the Sampling Frequency

The length of the sample you can record and its sound quality are determined by the “sampling frequency”. Higher sampling frequencies produce better sound quality but shorter samples; lower sampling frequencies allow longer recording but with reduced sound quality. The QR10 gives you four sampling frequency settings:

Setting	Length	Sound Quality
F1	3.2 sec.	Lowest
F2	2.0 sec.	•
F3	1.2 sec.	•
F4	0.8 sec.	Highest

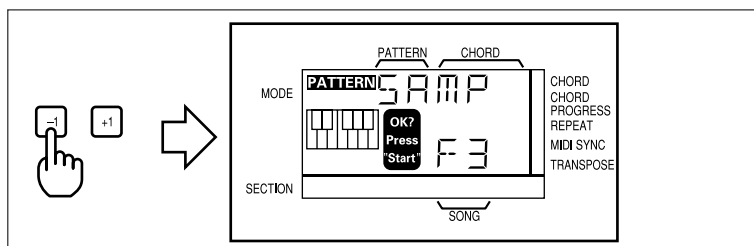
1 Select the Sampling Frequency Function.

Select the sampling frequency function by pressing the [SAMPLING] key while holding the [SHIFT] key a second time after engaging the sampling mode (or simply press [SAMPLING] twice while holding [SHIFT] when initially engaging the sampling mode). The current sampling frequency setting will appear on the lower display line (F1, F2, F3, or F4).



2 Set the Sampling Frequency

Use the [-1] and [+1] keys to set the required sampling frequency: F1, F2, F3, or F4.



3 Record or Exit

Once the sampling frequency has been set you can go ahead and record as described above (pressing [SAMPLING] while holding [SHIFT] again from this mode takes you back to the sampling voice number selection display), or press the [EXIT] key to exit.



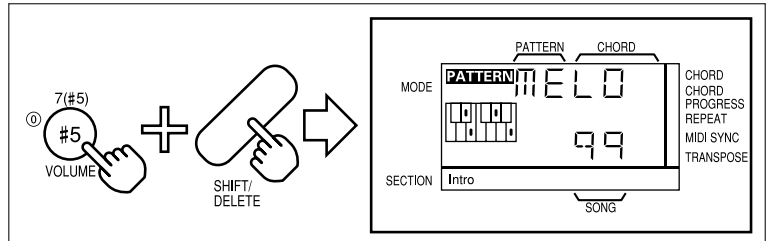
Sampled voice data can be saved to an external MIDI data recorder such as the Yamaha MDF2 MIDI Data Filer in addition to the pattern and song data (page 43).

Adjusting the Volume of the Tracks

The VOLUME function lets you individually adjust the volume of the MELODY, CHORD 1, CHORD 2, BASS, and RHYTHM tracks to achieve the overall “balance” you prefer. This can be done either while playback is stopped, or during playback so you can monitor the overall effect.

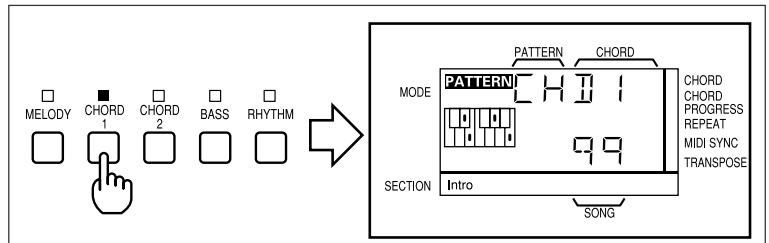
1 Engage the VOLUME Function

Press the [VOLUME] key (the number “0” key) while holding the [SHIFT/DELETE] key.



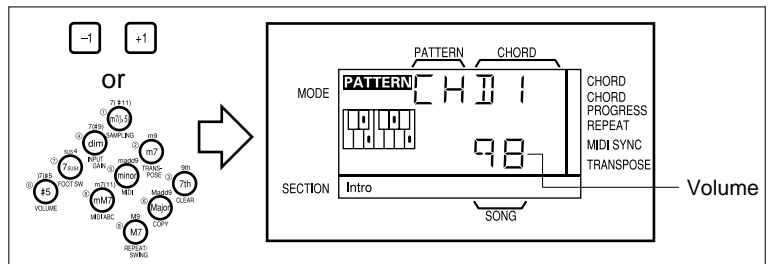
2 Select a Track

Press the track key corresponding to the track to be adjusted.



3 Set the Volume

Use the [-1] and [+1] keys, or the number keys, to set the volume of the selected track between “00” (no sound) and “99” (maximum volume).



If you are adjusting the volume while playback is stopped, you can play the micro-keyboard to hear the effect of volume changes.

4 Adjust the Remaining Tracks.

Select and adjust other tracks, as required.

5 Exit

Press the [EXIT] key when done.



Volume adjustments applied to the preset patterns are only temporary. The original default settings will be automatically restored as soon as a different pattern or mode is selected.

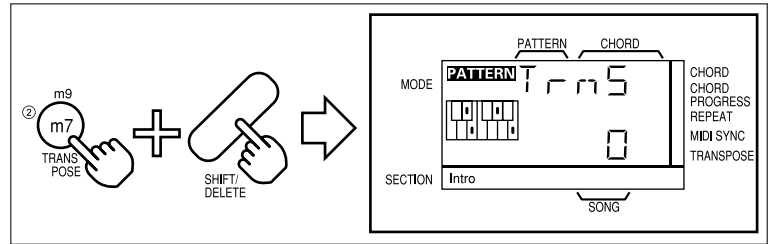
Transposition

The TRANSPOSE function makes it possible to transpose the overall playback pitch of the QR10 up or down in semitone increments over a range of two octaves (one up and one down). A transpose setting of “0” produces normal pitch. Transposition can be carried out while playback is stopped or during playback, so you can immediately hear the effect.

5: More Creative Control (continued)

1 Engage the TRANSPOSE Function.

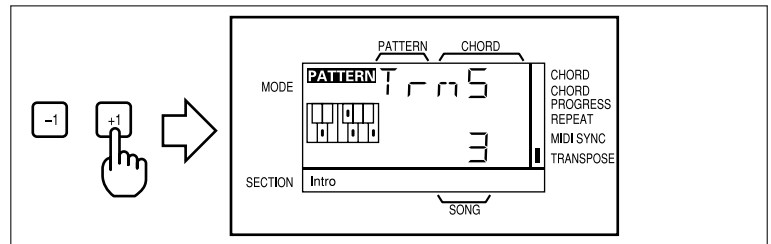
Press the [TRANSPOSE] key (the number “2” key) while holding the [SHIFT] key.



2 Set the Required Degree of Transposition

Use the [-1] and [+1] keys to set the transpose value as required. The transposition range is from “-12” (down one octave) to “+12” (up one octave). A setting of “0” produces normal pitch.

When a transpose value other than “0” is set, an indicator block will appear next to “TRANSPOSE” on the display.



3 Exit

Press the [EXIT] key when done.

Making Your Patterns Swing

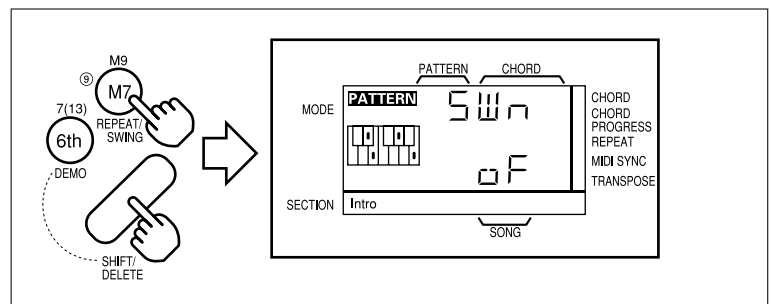
The SWING function can be used to give patterns a looser “swing” feel by slightly delaying odd-numbered 8th or 16th notes. Each pattern can be programmed with a different SWING setting. Swing settings can be made while playback is stopped or during playback, so you can immediately hear the effect.

1 Engage the SWING Function

Press the [REPEAT/SWING] key (the number “9” key) while holding the [SHIFT] key.

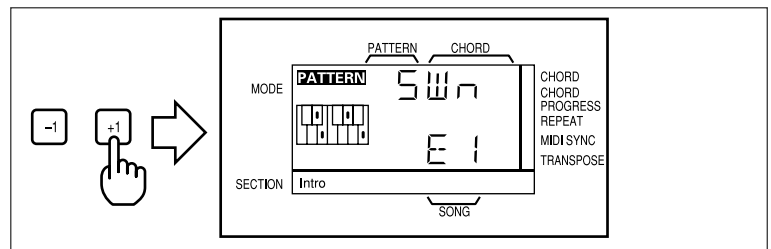


The SWING function is only available in the PATTERN mode. In the SONG mode, pressing [REPEAT/SWING] while holding [SHIFT] engages the REPEAT function (page 24).



2 Set the Swing Value

Use the [-1] and [+1] keys to set the swing value as required. The higher the value the greater the effect. The “E4” and “S2” settings produce a triplet effect. (Off, E1 — E9, S1 — S5)



3 Exit

Press the [EXIT] key when done.



Swing settings made in the PATTERN mode are retained in memory and remain in effect when the pattern is used in the SONG mode.

6: Playing the Preset Songs

The QR10 allows you to select and play any of 100 different songs:

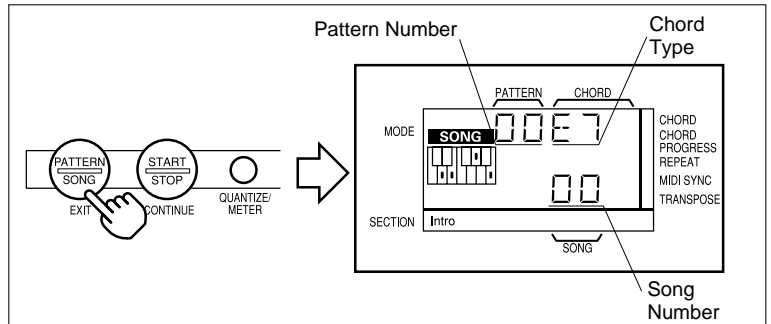
- Song numbers 00 through 49 are preset songs ... pre-programmed sequences of pattern variations and chords.
- 50 through 99 are “user” songs that you can program yourself.

We’ll learn how to create original songs in section “7: Recording Original Songs” (page 28). In this section we’ll learn how to select and play the QR10’s preset songs.

Selecting & Playing a Song

1 Select the Song Mode

If **PATTERN** is showing in the upper left corner of the display, press the **[PATTERN/SONG]** key to switch to the **SONG** mode.

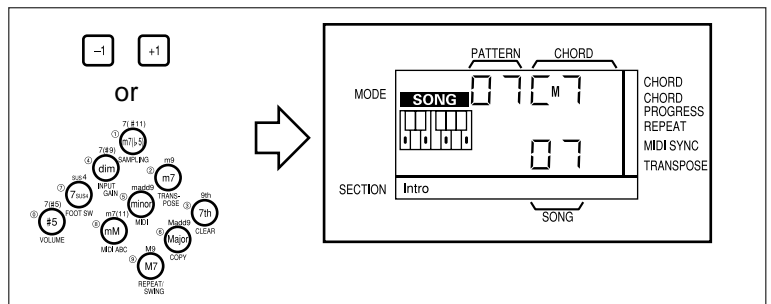
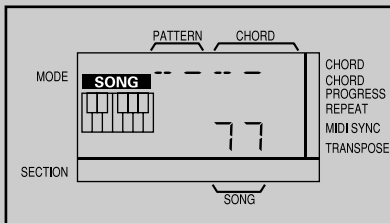


2 Select a Song Number

Use the **[-1]** and **[+1]** keys or the numeric keys to select the number of the song you want to play. The preset songs are numbered from “00” to “49”.



If you select a song number between 50 and 99, and the song has not yet been recorded, a series of dashes will appear on the display.



3 Start Playback

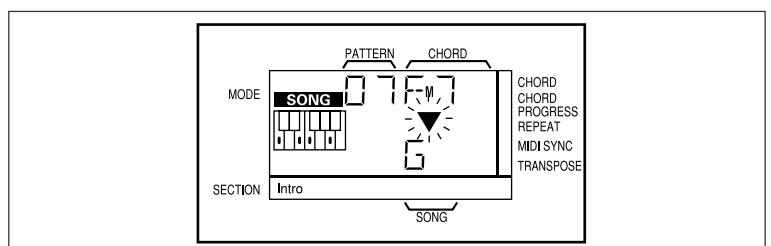
Press the **[START/STOP]** key to begin playback of the selected song. Make sure that the **VOLUME** control is set to an appropriate level. As the pattern plays a triangular beat indicator will flash in time with the music.

■ The SONG Mode Chord Display

During song playback the current chord is displayed immediately under “CHORD” on the display, and the next chord (i.e. the chord that will begin playing at the top of the next measure) is shown below the triangular beat indicator.



If you press a section key during song playback, the selected section – INTRO, NORMAL, VARIATION, or ENDING – will begin playing from the top of the next measure (FILL 1 and FILL 2 begin as soon as the key is pressed), but only until the next programmed section change.



6: Playing the Preset Songs (continued)



You can hear the current song played with a different pattern by simply selecting the desired pattern: press [PATTERN SELECT], use [-1] and [+1] or the number keys to select a pattern, then press [EXIT].

4 Playback Stops Automatically

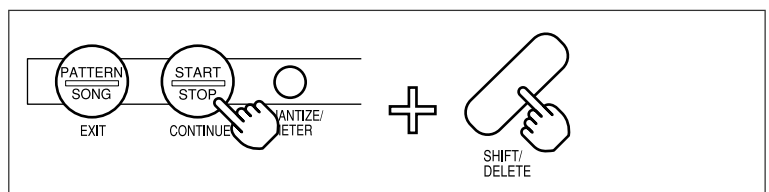
Playback will stop automatically at the end of the song. You can also stop playback at any time by pressing the [START/STOP] key.



A footswitch connected to the rear-panel INPUT jack can be used to start and stop song playback if the FOOT SW function is turned on (page 11).

■ To Continue Playback from the Point at Which It Was Stopped

Each time you press the [START/STOP] key while playback is stopped the song will begin playing from the first beat of the first measure. If you press the [START/STOP] key while holding the [SHIFT] key, however, playback will continue from the point at which it was stopped.

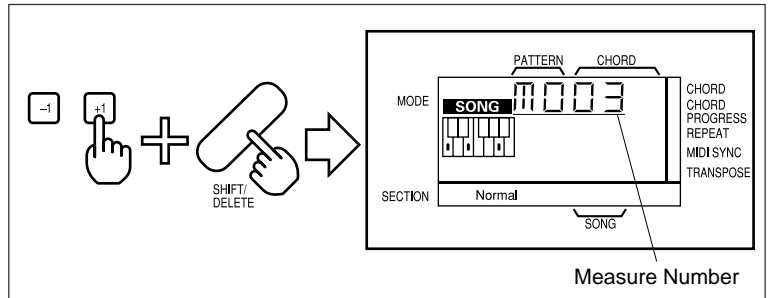


■ Starting Playback from a Specific Measure Number

You can start song playback from a specific measure number as follows:

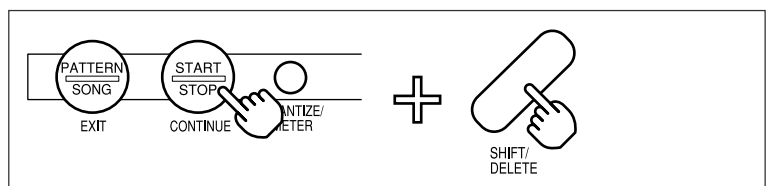
1 Specify the Starting Measure

Before starting playback, hold the [SHIFT] key and use the [-1] and [+1] keys to select the measure number from which you want playback to begin (the measure number appears after “m” on the upper line of the display). Don’t release the [SHIFT] key yet!



2 Start Playback

While still holding the [SHIFT] key, press the [START/STOP] key to start playback.



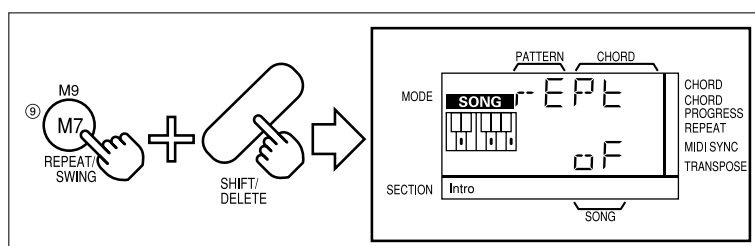
When song playback is started in this way, the current measure number appears on the upper display line instead of the usual song number and chord display. The current measure display can be selected during playback by pressing either [-1] or [+1] while holding [SHIFT]. Press [EXIT] to return to the normal song playback display. Please note, however, that the song will always start from the first measure after a temporary pattern change has been made in order to avoid improper playback due to differing time signatures.

■ Repeat Playback

The QR10 has a REPEAT function which causes the song being played to repeat continuously until stopped by pressing the [START/STOP] key. To activate the REPEAT function:

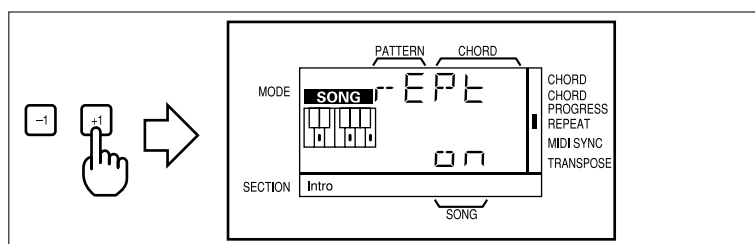
1 Engage the REPEAT Function

Press the [REPEAT/SWING] key (the number “9” key) while holding the [SHIFT] key.



2 Turn REPEAT ON or OFF

Use the [+1] key to turn the repeat function ON, or the [-1] key to turn the repeat function OFF, as required. When REPEAT is ON, an indicator block will appear next to “REPEAT” on the display.



3 Exit

Press the [EXIT] key to exit when done.

■ Segment Repeat

To repeat playback of a specified segment of a song, start playback, press [REPEAT/SWING] while holding [SHIFT] at the beginning of the segment you want to repeat (the REPEAT indicator block will flash slowly), then press [REPEAT/SWING] while holding [SHIFT] again at the end of the segment you want to repeat (the REPEAT indicator block will flash rapidly). The specified segment will continue to repeat until the segment repeat function is disengaged by pressing [REPEAT/SWING] while holding [SHIFT] a third time (the REPEAT indicator block will disappear).

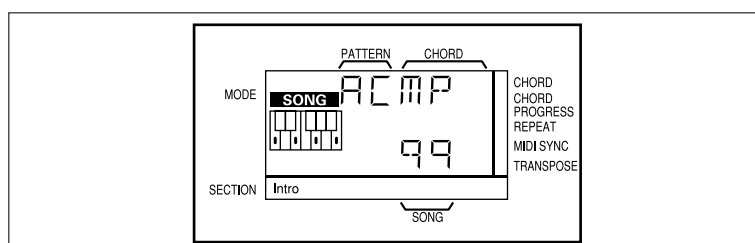
If you stop and then re-start playback without disengaging the segment repeat function, the song will initially play through to the end of the repeat segment, then the segment will repeat continuously. Also note that the segment repeat function is automatically cancelled if you select a different song or mode.

■ Tempo Settings, Track Muting, Voice Selection, and Pattern Selection in the SONG Mode

Tempo settings, track muting, voice selection, and pattern selection all function the same way in the SONG mode as they do in the PATTERN mode (selecting a different pattern changes the pattern used by the current song). With the preset songs, however, these changes are temporary and will only remain in effect until a different song or mode is selected. Further, pattern and voice changes made during preset song playback will be cancelled whenever a pre-programmed pattern or voice change is encountered during playback.

■ Volume Settings in the SONG Mode

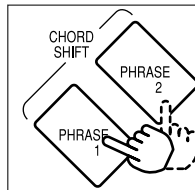
Volume settings are made in the SONG mode in basically the same way as the PATTERN mode (page 21), except that the CHORD 1, CHORD 2, BASS, and RHYTHM tracks can not be set independently. You can only select and set the volume for the MELODY track or the accompaniment (“ACMP”) tracks as a group — CHORD 1, CHORD 2, BASS, and RHYTHM. Individual track volume levels must be set for the corresponding pattern in the PATTERN mode.



6: Playing the Preset Songs (continued)

The PHRASE Keys

Each of the QR10's 50 preset songs has two pre-programmed "phrases" that can be played via the [PHRASE 1] and [PHRASE 2] keys. The phrases — short chords or decorative runs using a variety of voices — can be played at any time during playback to add extra variety to the accompaniment.



All the phrases are quite short (maximum length about 1 measure), but will only play as long as the [PHRASE] key is held. This means you can hold the key briefly to play just a short section of a phrase, as required. The phrase will repeat continuously as long as the key is held.

■ Selecting Different Phrases

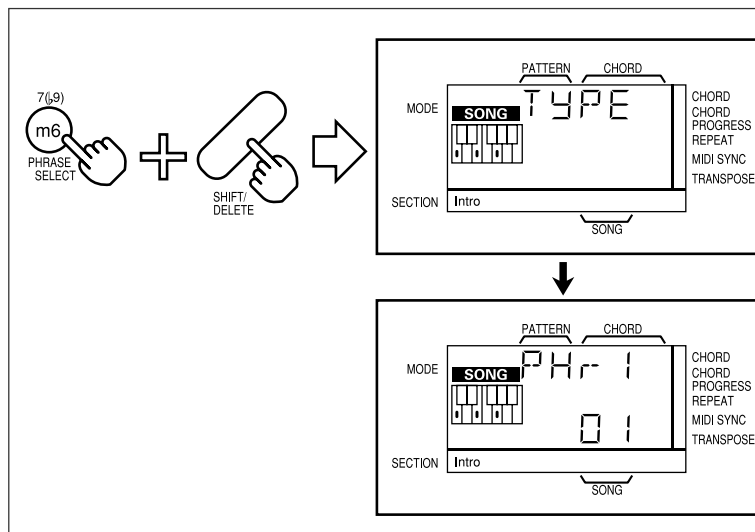
The QR10 PHRASE SELECT function makes it possible to independently select different phrases for the [PHRASE 1] and [PHRASE 2] keys. You can, for example, select the phrases from two different songs for use while playing a third song.

1 Select the Song to Play

Select the song you intend to play in the normal way.

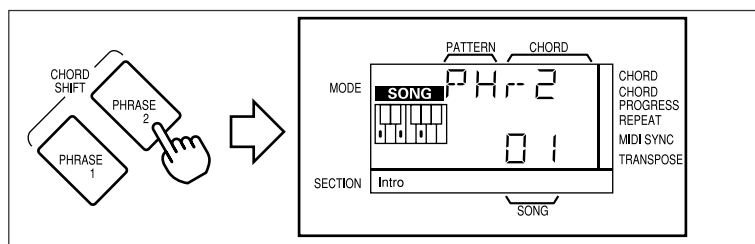
2 Engage the PHRASE SELECT Function

Press the [PHRASE SELECT] key (the "m6" chord type key) while holding the [SHIFT] key.



3 Select a [PHRASE] Key

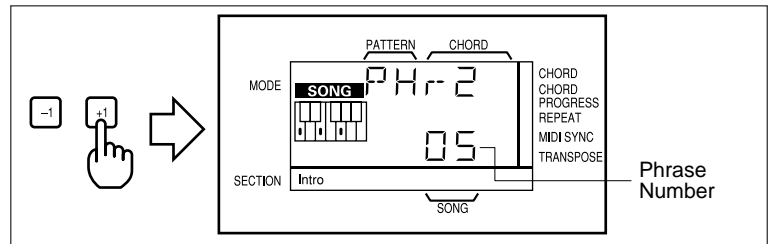
Press the PHRASE key — [PHRASE 1] or [PHRASE 2] — for which you want to select a different phrase.



6: Playing the Preset Songs (continued)

4 Select a Phrase

Use the [-1] and [+1] keys or the number keys to select the desired phrase number (between 00 and 49). You can hear the selected phrase by pressing the selected phrase key.



5 Exit

Press the [EXIT] key to exit from the PHRASE SELECT function when done.

6 Play

Play the current song and use the PHRASE keys as required.



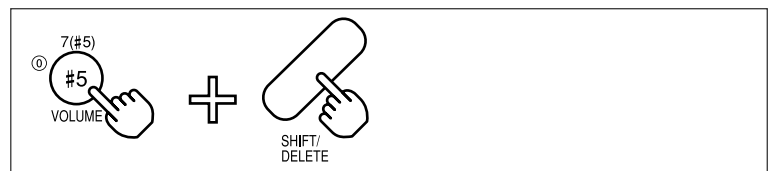
The phrase selections made for the preset songs as described above are only temporary and the default phrases will be restored as soon as a different song or mode is selected.

■ Setting the Phrase Volume

The volume of the sound produced by each of the [PHRASE] keys can be set independently in basically the same way that the track volume can be adjusted in the PATTERN mode.

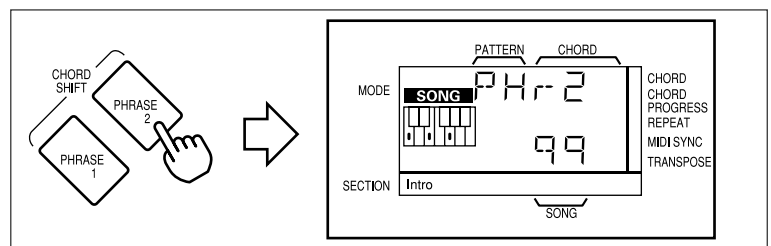
1 Engage the VOLUME Function

Press the [VOLUME] key (the number “0” key) while holding the [SHIFT] key.



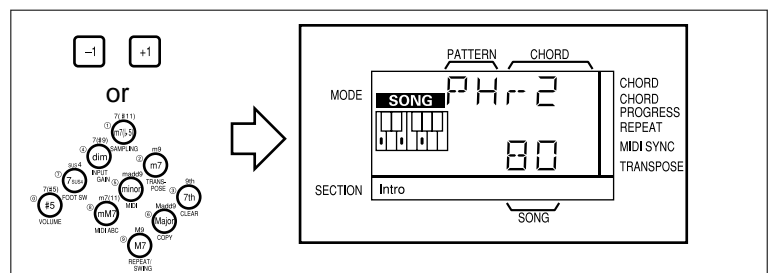
2 Select a PHRASE Key

Press the [PHRASE] key for which you want to adjust the volume.



3 Set the Volume

Use the [-1] and [+1] keys, or the number keys, to set the volume of the selected key between “00” (no sound) and “99” (maximum volume).



4 Exit

Press the [EXIT] key when done.

7: Recording Original Songs

This section describes how you can create original songs based on the preset patterns or original patterns created as described in the next chapter. You can record section, chord, pattern, and tempo changes for plenty of musical versatility. You can even record a “melody” track to add extra life to your song.

Basic Song Recording

With the QR10, recording original songs is a straightforward, simple process: once you’ve engaged the record mode and made the initial settings, all you have to do is start recording and enter the required section and chord changes.

1 Select the Song Mode

If **PATTERN** is showing in the upper left corner of the display, press the [PATTERN/SONG] key to switch to the **SONG** mode.

2 Select a Song Number

Use the [-1] and [+1] keys or the numeric keys to select the number of the song you want to record. The recordable “user” songs are numbered from “50” to “99”.



When you select an “empty” song (i.e. one that contains no data), a series of dashes appear below “PATTERN” and CHORD” on the display rather than the usual pattern number and chord. If a pattern number and chord appear on the display the song already contains data. Nothing will appear below “PATTERN” and “CHORD”, however, if the song only contains melody-track data.

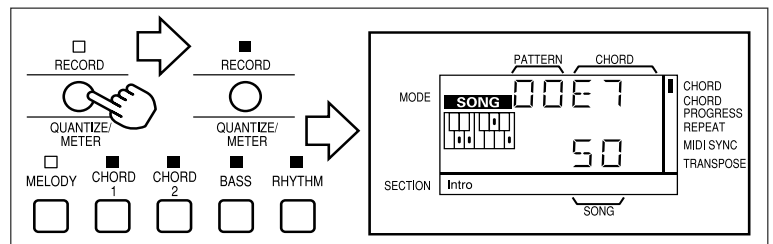


You can completely erase individual songs in the user song memory by using the CLEAR function described on page 34.

3 Engage the Record Ready Mode

Press the [RECORD] key to engage the record ready mode. The [RECORD] key indicator will light. The CHORD 1, CHORD 2, BASS, and RHYTHM track indicators should also light.

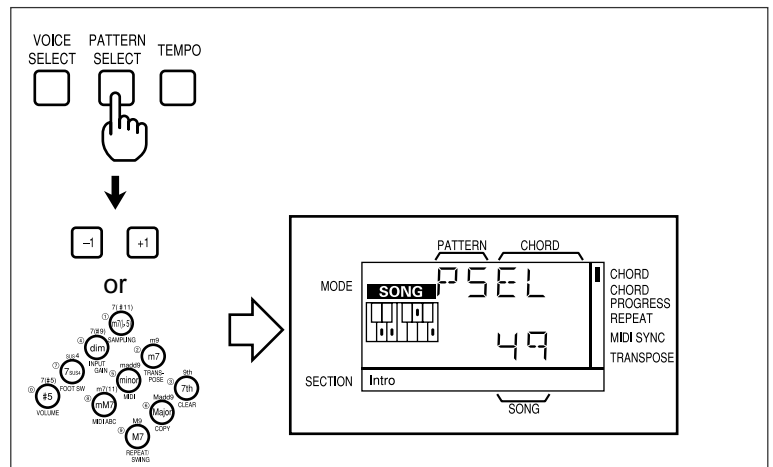
If the MELODY track indicator lights instead (this means the melody track is selected for recording — described later) press any track key other than the MELODY track key so that the CHORD 1, CHORD 2, BASS, and RHYTHM track indicators do light.



4 Select a Pattern

Select the pattern on which you want to base your song: press [PATTERN SELECT] and then use the [-1] and [+1] keys, or the number keys, to select a pattern number.

Then press [PATTERN SELECT] again, or the [EXIT] key, to return to the record ready mode.

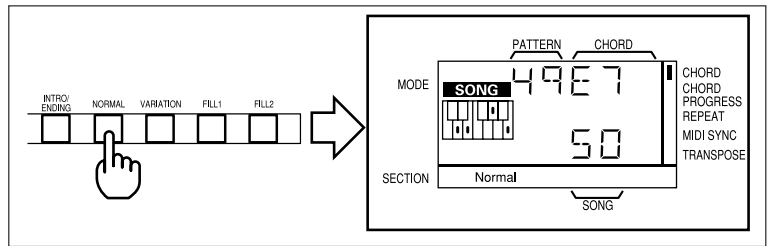


You can base your song on a preset pattern, or select an original “combination” or “user” pattern created as described on pages 36 and 37, respectively.

7: Recording Original Songs (continued)

5 Select a Section

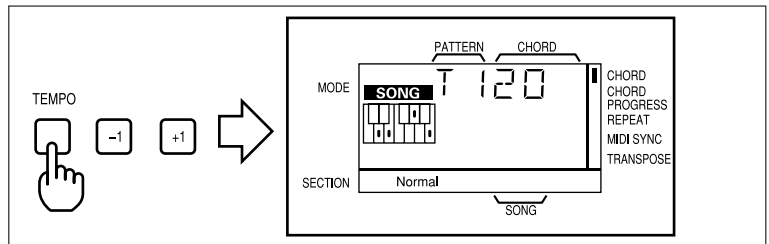
Use the section keys to select the section you want to start the song with.



6 Set the Record Tempo

You can select a slower (to make recording easier) or faster tempo as required in the normal way: press [TEMPO] and then use the [-1] and [+1] keys, or the number keys, to set the required tempo.

Then press [TEMPO] again, or the [EXIT] key, to return to the record ready mode.

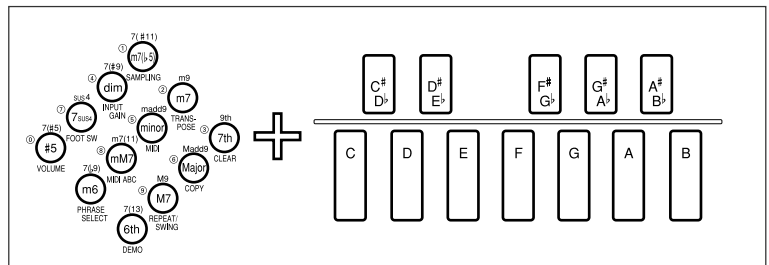


7 Enter the Starting Chord

Before actually starting to record, enter the first chord in the normal way.



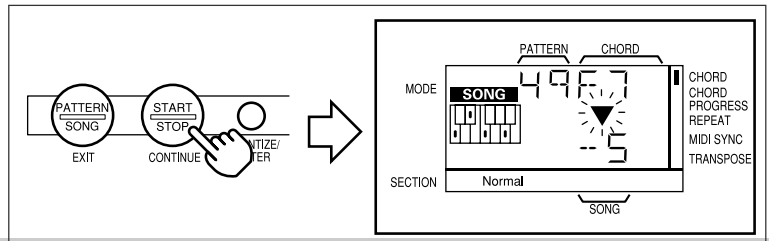
The record ready mode can be disengaged at any time prior to actually starting recording (the next step) by pressing the [RECORD] or [EXIT] key.



8 Start Recording

Press the [START/STOP] key to start recording. The QR10 metronome will sound and you will be given a two-measure count-in. The count-in is indicated on the display, below the triangular beat indicator, by minus numbers from “-8” to “-1” if the selected pattern is in 4/4 time, and from “-6” to “-1” if the selected pattern is in 3/4 time.

No recording occurs during the count-in.



The QR10 metronome accents the first beat of each measure by playing it at a higher pitch.



When recording over previously recorded data (see “Overdubbing”, below), you can start recording from any specified measure by using the technique described in “Starting Playback from a Specific Measure Number” on page 24: hold the [SHIFT] key and use the [-1] and [+1] keys to select the starting measure number, then (still holding the [SHIFT] key) press the [START/STOP] key.

9 Enter Section and Chord Changes

The initially selected pattern, section, and chord will begin playing after the count-in, and you can then enter the required section and chord changes in exactly the same way as in the PATTERN mode. All section and chord changes are recorded exactly as they are entered.



You can also record pattern changes by selecting different patterns in the normal way: press [PATTERN SELECT] and then use the number keys to select a pattern number. Then press [PATTERN SELECT] again, or the [EXIT] key, to return to the record mode. You should use the number keys rather than the [-1] and [+1] keys to record pattern changes in order to switch directly to the desired pattern. Tempo changes made in the normal way are also recorded, so you can create “accelerando” and “ritardando” passages by changing the tempo with the [+1] and [-1] keys, or sudden tempo changes by entering a new tempo via the number keys, as required.

7: Recording Original Songs (continued)

10 Stop Recording

To finish your song with the ENDING section, simply select the ENDING section. Recording will stop automatically when the ENDING section finishes playing. You can also stop recording at any time by pressing the [START/STOP] key.



A footswitch connected to the rear-panel INPUT jack can be used to start and stop song recording if the FOOT SW function is turned on (page 11).



If the QR10 memory becomes full while recording, the memory full error display – “ERR 3” – will appear. If this happens, use the pattern clear (page 40) and song clear (page 34) functions as necessary to erase unwanted data to make room for further recording.

11 Play Your Song

You can now play your song in the same way as the preset songs.

Overdubbing

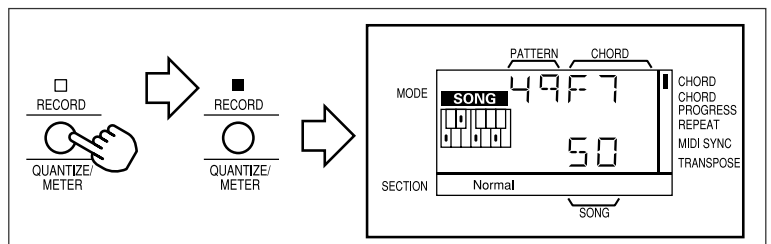
“Overdubbing” refers to the technique of recording additional section, chord, or pattern changes to a song which has already been recorded. With the QR10 this is a simple process. Simply press the [RECORD] key to engage the record ready mode, press [START/STOP] to start recording, and record the required changes. The initially recorded data is not affected by the overdubbing process, and you can overdub as many times as necessary to build up complicated chord changes, for example.

Recording a MELODY Track

After recording the basic song accompaniment tracks, you might want to record a melody track to add a little extra life to your creation. Unlike the accompaniment tracks, the melody track records exactly what you play on the QR10 micro-keyboard or an external keyboard connected to the rear-panel MIDI IN connector. You can play decorative phrases or chords, or a complete melody line. You can also assign any of the QR10’s voices to the melody track.

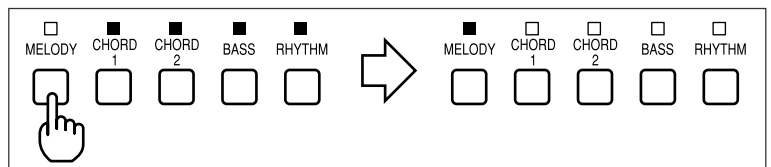
1 Engage the Record Ready Mode

After selecting the song to which you want to add a melody track, press the [RECORD] key to engage the record ready mode. The [RECORD] key indicator will light.



2 Select the MELODY Track

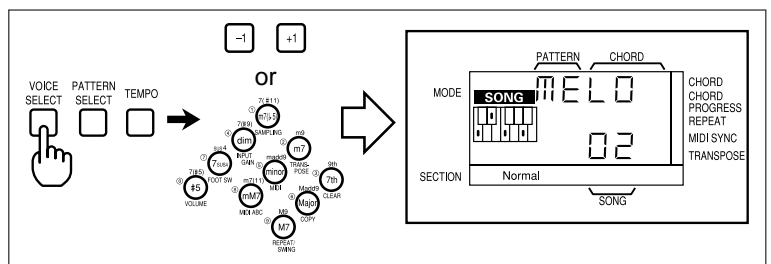
If the MELODY track indicator is not lit, press the [MELODY] track key. The MELODY track indicator will light and all other track indicators will go out.



3 Select a Voice

Select the voice you want to use for the melody track: press the [VOICE SELECT] key and, while trying out the voices on the micro-keyboard, use the [-1] and [+1] keys or the number keys to select the desired voice.

Press [VOICE SELECT] again or the [EXIT] key to return to the record ready mode when done.



7: Recording Original Songs (continued)



The record ready mode can be disengaged at any time prior to actually starting recording (the next step) by pressing the [RECORD] or [EXIT] key.

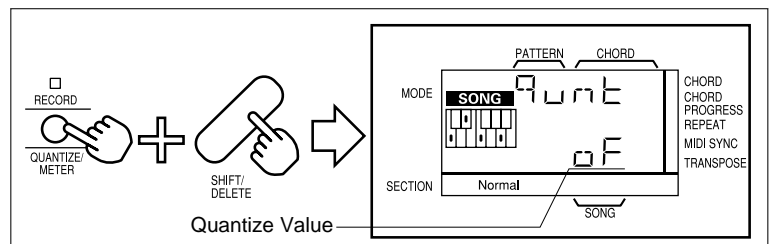


The QR10 lets you record the [PHRASE] key phrases as well as individual notes. If you intend to use the [PHRASE] keys during recording, you should also select the phrases you want to use at this point.

4 Set a Quantize Value If Necessary

Quantization ensures that all notes are aligned to the nearest specified beat. Press the [RECORD] key while holding the [SHIFT] key to engage the quantize function.

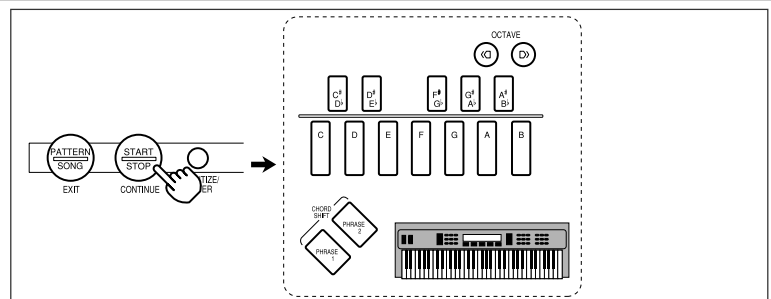
Use the [-1] and [+1] keys to turn quantization off or set an appropriate quantize value (8, 16, 32, 12, 24, 48, off). If a quantize of "16" is selected, then all notes will be aligned to the nearest 16th note. When quantization is turned off, notes are recorded with maximum resolution.



Quantization is generally used to tighten up sloppy timing. Use it judiciously, however, because timing that is too perfect can sound cold and mechanical – unless, of course, you're specifically aiming for a cold, mechanical feel. Always use a quantize value that is at least as "short" as the shortest notes you intend to record.

5 Start Recording

Press the [START/STOP] key to start recording. After the usual 2-measure count-in, you can start recording your melody track by playing on the QR10 micro-keyboard or a MIDI keyboard connected to the QR10 MIDI IN connector (you can also record phrases by pressing the appropriate [PHRASE] key). When using the QR10 micro-keyboard, you will have to use the [OCTAVE] keys to shift octaves as required.



You can also record voice changes on the melody track, either during initial recording or overdubbing, by selecting voices in the normal way. You should use the number keys rather than the [-1] and [+1] keys to record voice changes in order to switch directly to the desired voice.



If you record from an external MIDI keyboard, sustain, pitch bend, and program change (voice change) data will also be recorded.



Turning the QR10 power OFF during recording can result in the loss of all data and possibly damage the QR10!

6 Stop Recording

Press the [START/STOP] key to stop recording.



If you record on the melody track beyond the end of the accompaniment tracks, the accompaniment tracks will stop and only the melody track will continue, as recorded, when the song is played back.



The melody track can be overdubbed in the same way as the accompaniment tracks.

7: Recording Original Songs (continued)

■ Fixing Mistakes — Deleting Unwanted Changes

Mistakes and unwanted changes can easily be deleted from the accompaniment or melody tracks as follows:

1 Engage the Record Ready Mode

With the song to be corrected selected, press the [RECORD] key to engage the record ready mode. The [RECORD] key indicator will light.

2 Select the Track(s) to Correct

To correct the MELODY track, press the [MELODY] track key so that the MELODY track indicator lights and all other track indicators will go out. To correct the accompaniment tracks, press any track key other than the MELODY track key so that the CHORD 1, CHORD 2, BASS, and RHYTHM track indicators light.

3 Start Recording

Press the [START/STOP] key to start recording.

4 Delete the Unwanted Changes

The various types of recorded data can be individually deleted by pressing the keys listed below while holding the [SHIFT/DELETE] key. All corresponding changes that occur while these keys are held will be deleted.

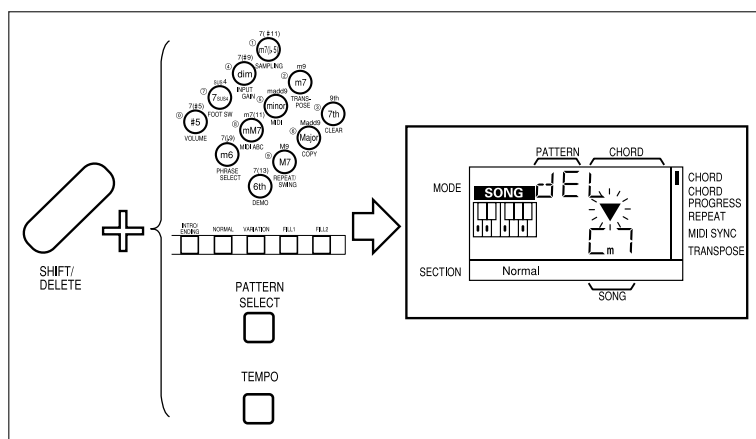
■ The Accompaniment Tracks

Chord changes are deleted by holding the [SHIFT/DELETE] key and pressing any **chord type** key.

Section changes are deleted by holding the [SHIFT/DELETE] key and pressing any **section** key.

Pattern changes are deleted by holding the [SHIFT/DELETE] key and pressing the [PATTERN SELECT] key.

Tempo changes are deleted by holding the [SHIFT/DELETE] key and pressing the [TEMPO] key.

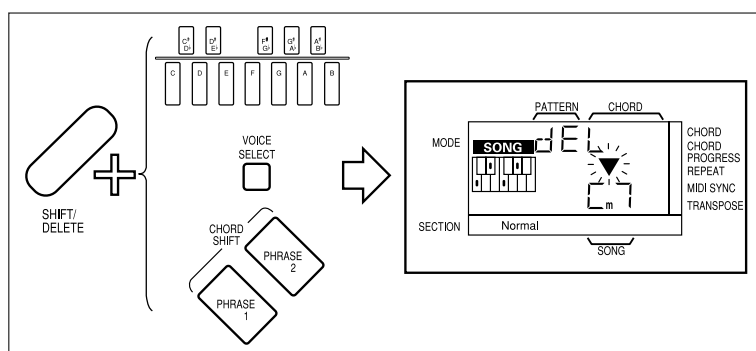


■ The Melody Track

Note, pitch bend, and sustain data are deleted by holding the [SHIFT/DELETE] key and pressing any **micro-keyboard** key.

Voice changes are deleted by holding the [SHIFT/DELETE] key and pressing the [VOICE SELECT] key.

Phrases entered by using the QR10 [PHRASE] keys are deleted by holding the [SHIFT/DELETE] key and pressing the appropriate [PHRASE] key.



5 Stop Recording

Press the [START/STOP] key to stop recording when the required corrections have been made.

Easy “CHORD PROGRESSION” Recording

The QR10 features a special CHORD PROGRESSION recording mode that makes it easy to enter complicated chord progressions and fast chord changes.

1 Record the Required Chord Changes

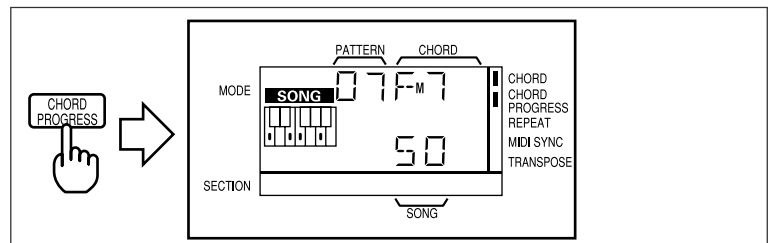
Use the normal song recording procedure to record the required chord changes (page 28). Don't worry about the timing of the chords, just enter the chords in the proper sequence. Don't enter any section, pattern changes or tempo changes yet. Stop recording when done.

2 Engage the Record Ready Mode Again

Press the [RECORD] key to engage the record ready mode. The [RECORD] key indicator will light. Make sure the accompaniment tracks are selected.

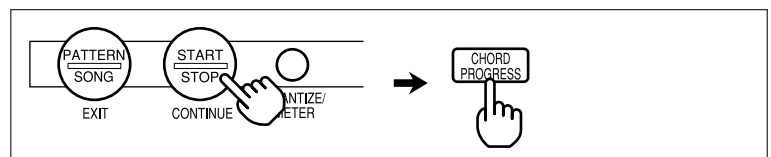
3 Engage the CHORD PROGRESSION Function

Press the [CHORD PROGRESS] key to engage the CHORD PROGRESSION function. An indicator block should appear next to “CHORD PROGRESSION” on the display.



4 Start Recording

Press the [START/STOP] key to start recording then, after the usual count-in, press the [CHORD PROGRESS] key whenever you want to switch to the next chord. Timing is easy since you only have to press a single key to progress from chord to chord.



Any section, pattern, and tempo changes recorded prior to using the CHORD PROGRESSION function will be erased.



You can use the CHORD PROGRESSION function during song playback to “rehearse” the chord timing prior to actually recording.



If you hold the [CHORD PROGRESS] key for longer than an eighth note, the next chord will also be recorded.

5 Stop Recording

Press the [START/STOP] key to stop recording when done.



A footswitch connected to the rear-panel INPUT jack can be used to start and stop chord progression recording and advance the chord progression if the FOOT SW function is turned on (page 11). The first press on the footswitch starts recording, subsequent presses switch to the next chord until that last chord in the progression has been selected, then the final press stops recording.

7: Recording Original Songs (continued)

6 Record the Required Section, Pattern and Other Changes

Once the chord progression has been recorded as required, you can go back and overdub section, pattern, and other changes (even more chord changes) to finish up your song.



If the CHORD PROGRESSION function is cancelled by pressing the [START/STOP] button before all chords have been entered, the remaining chords will be entered at eighth-note intervals.

The Song Clear & Copy Functions

■ Song Clear

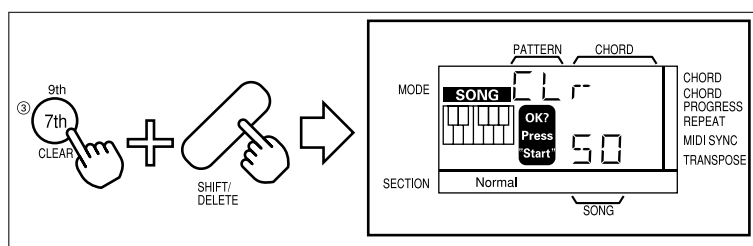
The SONG mode CLEAR function completely erases the selected “user” song. If you want to save the song data before clearing the song from the QR10 memory to make room for new material, use the MIDI BULK DUMP function, described on page 43, to transfer the song data to a MIDI data recorder such as the Yamaha MDF2 MIDI Data Filer.

1 Select a Song

Select the song you want to clear (only song numbers 50 through 99 can be cleared).

2 Engage the CLEAR Function

Press the [CLEAR] key (the number “3” key) while holding the [SHIFT] key.

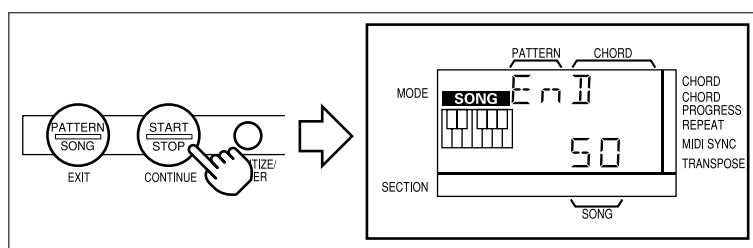


3 Select the Track(s) to Clear

You can clear the MELODY and accompaniment tracks independently by selecting the appropriate tracks prior to executing the clear function. The accompaniment tracks — CHORD 1, CHORD 2, BASS, RHYTHM — are selected as a group.

4 Press [START/STOP] to Clear

Press the [START/STOP] key to actually clear the selected song, or [EXIT] to exit from the CLEAR function.



CAUTION Turning the QR10 power OFF during execution of the clear or copy function may result in loss of all data and possibly damage the QR10!



IMPORTANT Any previous data in the specified song location will be completely erased. Make sure that the song number to be cleared does not contain any data you want to keep before executing the CLEAR function. Data can be saved prior to clearing by moving it to a different song number with the COPY function, described below, or by transferring it to an external MIDI data storage device such as the Yamaha MDF2 MIDI Data Filer by using the MIDI BULK DUMP function (page 43).

■ Song Copy

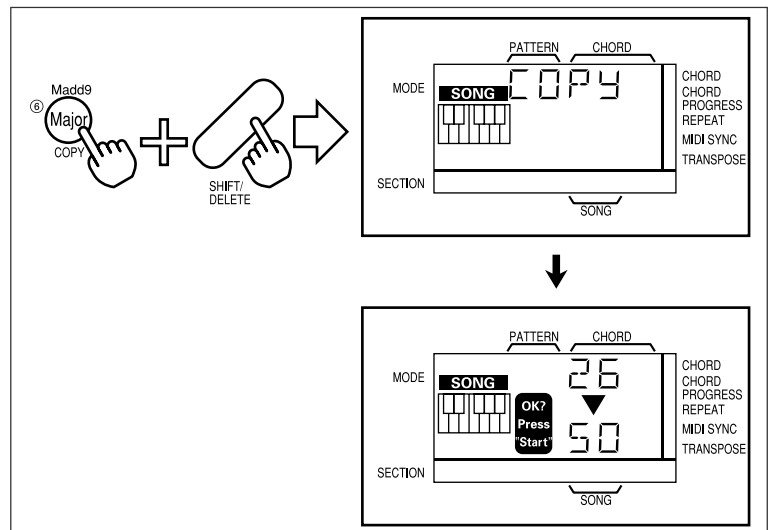
The SONG mode COPY function can simplify song programming by letting you copy an existing song, preset or user, to a new user song number, in which it can be modified as required.

1 Select the Source Song

Select the song you want to copy. This can be any of the preset or user songs.

2 Engage the COPY Function

Press the [COPY] key (the number “6” key) while holding the [SHIFT] key.

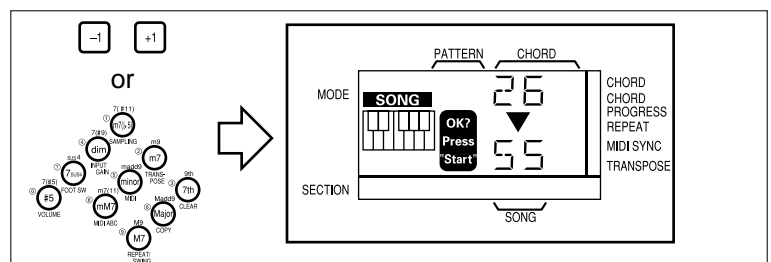


3 Select the Track(s) to Copy

You can copy the MELODY and accompaniment tracks independently by selecting the appropriate tracks prior to executing the copy function. The accompaniment tracks — CHORD 1, CHORD 2, BASS, RHYTHM — are selected as a group.

4 Select the Destination Song

Use the [-1] and [+1] keys or the number keys to enter the number of the destination song (i.e. the song number to which the source song is to be copied). The destination song number must be between 50 and 99.



5 Press [START/STOP] to Copy

Press the [START/STOP] key to actually copy the source song to the specified destination song number, or [EXIT] to exit from the COPY function.



IMPORTANT Any previous data in the destination song location will be erased and replaced by the source song when the copy function is executed.



DETAIL If the QR10 memory becomes full due to a copy operation, the memory full error display – “ERR 3” – will appear. If this happens, use the pattern clear (page 40) and song clear (page 34) functions as necessary to erase unwanted data to make room for the data to be copied.

8: Recording Original Patterns

The QR10 provides two types of patterns that you can program yourself and then use in songs in the same way as the preset patterns:

- 50 through 59 are “user” patterns that you can program from scratch.
- 60 through 99 are “combination” patterns that can easily be “assembled” by combining parts from different preset or user patterns.

Recording the Combination Patterns

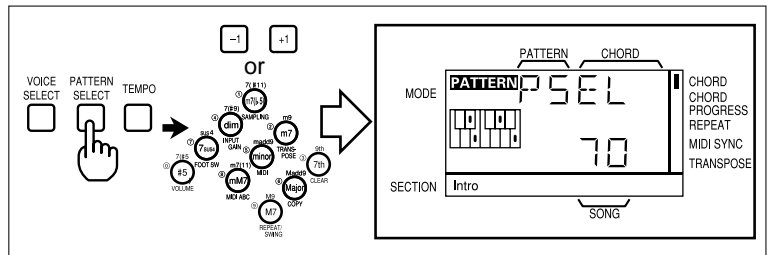
The QR10’s combination patterns — pattern numbers 60 through 99 — make it easy to create new patterns by simply combining different tracks from different patterns. You could, for example, combine a rock rhythm track with a jazz bass track and chord tracks from, say, one country and one Latin pattern. This makes it possible to create a virtually unlimited range of new sounds without the need for complicated programming procedures. Here’s how:

1 Select the PATTERN Mode

If the pattern mode is not already selected, press the [PATTERN/SONG] key to select it.

2 Select a Combination Pattern

Press the [PATTERN SELECT] key and use the [-1] and [+1] keys or the number keys to select a pattern number between 60 and 99 (the COMBINATION patterns).

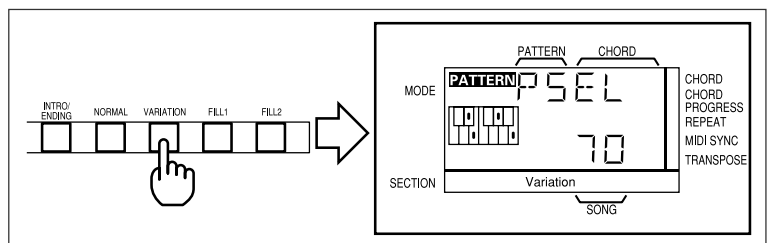


3 Select a Section

The six sections for each combination patterns can be recorded separately. Use the section keys to select the section you want to record.

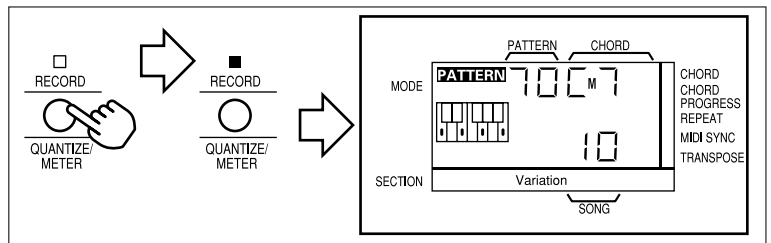


The [INTRO/ENDING] key alternately selects the INTRO and ENDING sections.



4 Engage the Record Ready Mode

Press the [RECORD] key to engage the record ready mode. The [RECORD] key indicator will light.

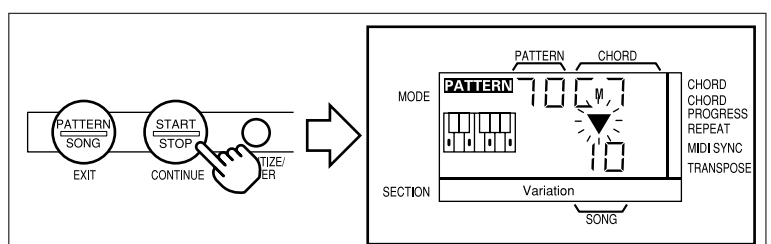


5 Start Recording

Press the [START/STOP] key to start recording.



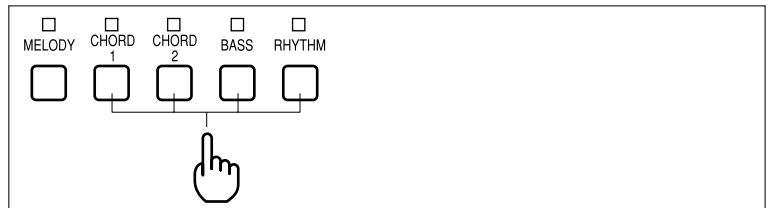
The combination patterns initially contain the same data as the first 40 preset patterns, so you’ll hear the corresponding pattern when you start recording.



8: Recording Original Patterns (continued)

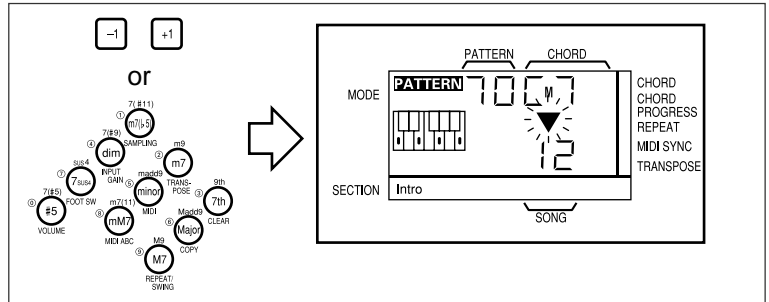
6 Select a Track

Press the track key corresponding to the part you want to change (the MELODY track cannot be selected in this mode).



7 Enter a Pattern Number

Use either the [-1] and [+1] or number keys to enter the number of the pattern from which the part for the selected track is to be taken. Playback will start from the beginning of the pattern as soon as a new pattern number is entered.



8 Repeat Steps 6 and 7 For All Tracks

Repeat steps 6 and 7 until the desired parts are assigned to all four accompaniment tracks: CHORD 1, CHORD 2, BASS, and RHYTHM.

9 Stop Recording

Press the [START/STOP] key to stop recording when your combination pattern is complete.

10 Record the Remaining Sections

Repeat the above procedure to record the remaining sections of your combination pattern.

Recording the User Patterns

1 Select the PATTERN Mode

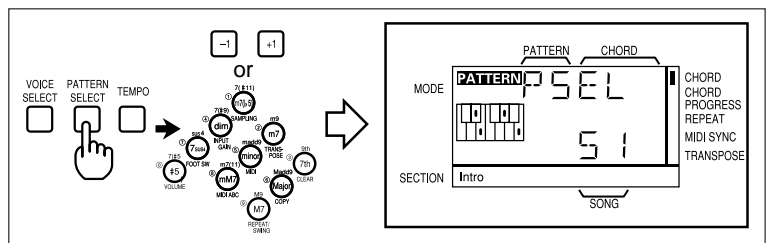
If the pattern mode is not already selected, press the [PATTERN/SONG] key to select it.

2 Select a User Pattern

Press the [PATTERN SELECT] key and use the [-1] and [+1] keys or the number keys to select a pattern number between 50 and 59 (the USER patterns).

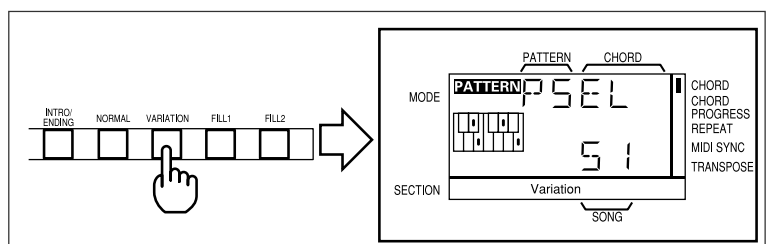


The user patterns are initially "empty" and will produce no sound until recorded.



3 Select a Section

The six sections for each user pattern can be recorded separately. Use the section keys to select the section you want to record.



8: Recording Original Patterns (continued)

4 Engage the Record Ready Mode and Set the Quantization, Time Signature, and Pattern Length (Measure)

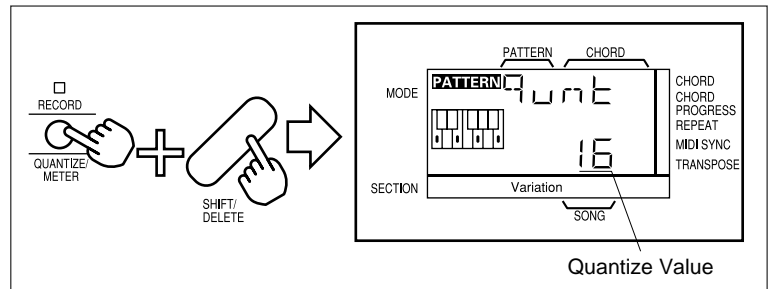
Each time the [RECORD] key is pressed while the [SHIFT] key is held, the quantize, time signature, and pattern length (Measure) functions are selected in sequence. This also engages the record ready mode (the [RECORD] key indicator will light).

■ Quantize

Use the [-1] and [+1] keys to turn quantization off or set an appropriate quantize value (8, 16, 32, 12, 24, 48, off). Quantization ensures that all notes are aligned to the nearest specified beat. If a quantize of “16” (the default value) is selected, then all notes will be aligned to the nearest 16th note. When quantization is turned off, notes are recorded with maximum resolution.



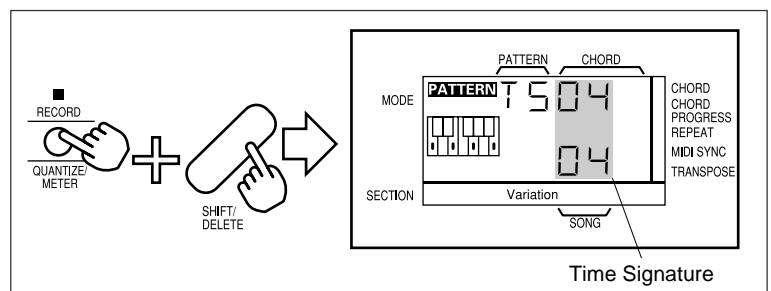
Quantization is generally used to tighten up sloppy timing. Use it judiciously, however, because timing that is too perfect can sound cold and mechanical – unless, of course, you’re specifically aiming for a cold, mechanical feel. Always use a quantize value that is at least as “short” as the shortest notes you intend to record.



■ Time Signature (TS)

Use the [-1] and [+1] keys to set the time signature as required. The available time signatures are:

1/4, 2/4, 3/4, 4/4, 5/4, 6/4, 7/4, 8/4
1/8, 2/8, 3/8, 4/8, 5/8, 6/8, 7/8, 8/8



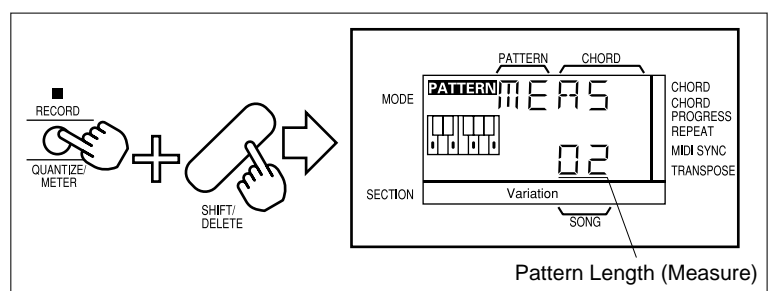
The upper number on the display (next to “TS”, for “Time Signature”), corresponds to the upper number of the time signature (i.e. the number of beats per measure), and the lower number on the display corresponds to the lower number of the time signature (i.e. the length of each beat: “4” = quarter notes; “8” = 8th notes).

■ Pattern Length

Use the [-1] and [+1] keys to specify the number of measures in the pattern — from 1 to 8 measures.



The time signature and pattern length parameters can only be changed if the selected user pattern is empty. If the selected pattern contains any data at all “Err 2” (Error 2: Illegal Input) will appear on the display. If this happens, press any key to exit from the error display.



5 Select a Track to Record

Press the track key corresponding to the first track you want to record (normally this will be the RHYTHM track).

8: Recording Original Patterns (continued)

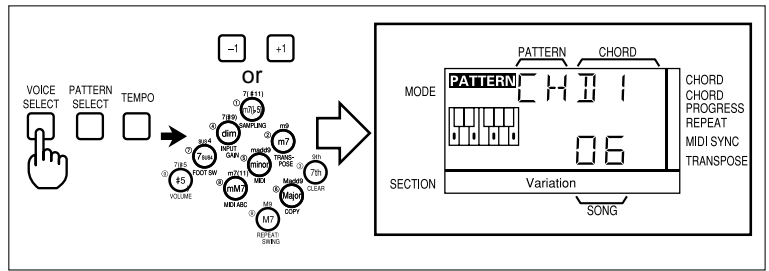
6 Select a Voice

Select the voice you want to use for the current track: press the [VOICE SELECT] key and, while trying out the voices on the micro-keyboard, use the [-1] and [+1] keys or the number keys to select the desired voice.

Press [VOICE SELECT] again or the [EXIT] key to return to the record ready mode when done.

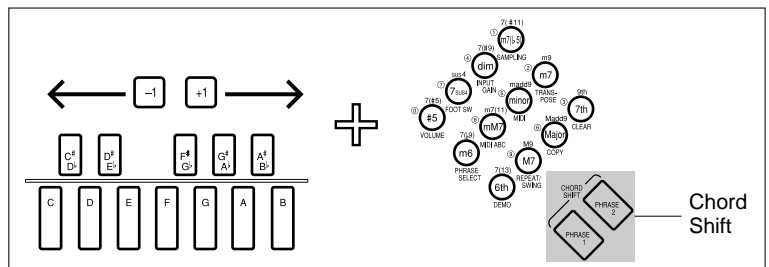


You can also change the voice assignments later in the same way.



7 Select a Chord

Select the chord you want to record with: use the chord type keys to select the chord type, and the [-1] and [+1] keys to select the chord root (i.e. “C”, “Db”, etc.). In this case the chord roots are not entered via the micro-keyboard.



Although you can select the chord you want to record with (to make recording easier), the QR10 actually memorizes the recorded pattern in CM7. The ABC system converts the pattern to the specified chord during playback. As a result, the pattern may not be played back exactly as it was recorded.



The record ready mode can be disengaged at any time prior to actually starting recording (the next step) by pressing the [RECORD] or [EXIT] key.

8 Start Recording

Press the [START/STOP] key to start recording. After the usual 2-measure count-in, you can start recording the selected track by playing on the QR10 micro-keyboard or a MIDI keyboard connected to the QR10 MIDI IN connector. When using the QR10 micro-keyboard, you will have to use the [OCTAVE] keys to shift octaves as required.

Play the required part either on the micro-keyboard or via an external MIDI keyboard. The pattern will repeat from the first to last measure, so you can continue to add notes until the current part is complete.



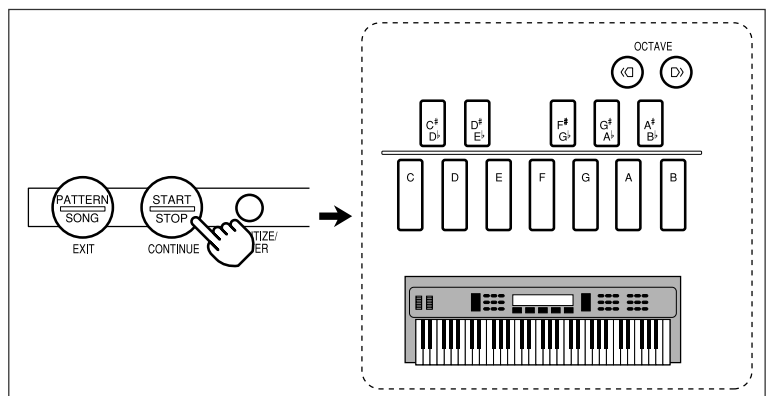
If you record from an external MIDI keyboard, sustain and pitch bend data will also be recorded on all tracks except the RHYTHM track.



It's sometimes easier to set a slow tempo for pattern recording, so you have plenty of time to enter the data.



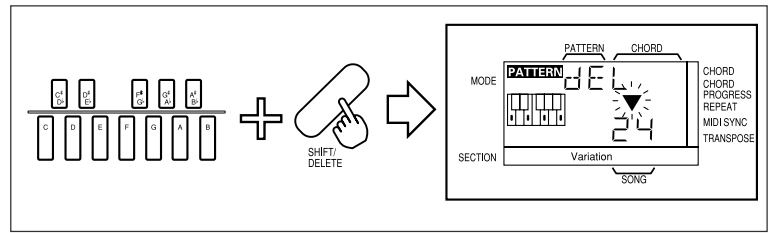
The [PHRASE] keys cannot be used when recording patterns.



8: Recording Original Patterns (continued)

9 Delete mistakes as required.

To delete mistakes, simply play any note on the **micro-keyboard** while holding the **[SHIFT/DELETE]** key (for the RHYTHM track, play the note to the instrument to be deleted). All notes that occur while the micro-keyboard key is held will be deleted.



10 Stop Recording

Press the **[START/STOP]** key to stop recording.



The pattern tracks can be overdubbed in the same way as the song tracks (page 30).

11 Record the Remaining Tracks

Complete the pattern by selecting the remaining tracks, assigning the required voices, and recording as described in steps 3 through 10, above.



If the QR10 memory becomes full while recording, the memory full error display – “ERR 3” – will appear. If this happens, use the pattern clear (page 40) and song clear (page 34) functions as necessary to erase unwanted data to make room for further recording.

The Pattern Clear & Copy Functions

■ Pattern Clear

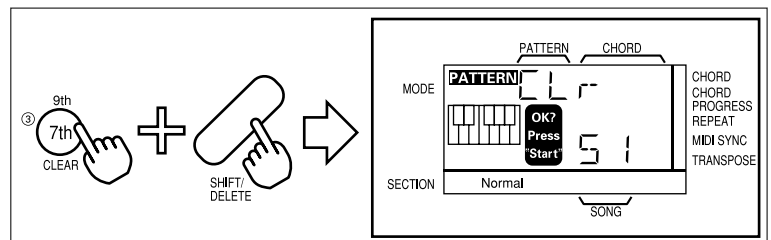
The PATTERN mode CLEAR function completely erases the specified section of the selected user pattern. If you want to save the pattern data before clearing the pattern from the QR10 memory to make room for new material, use the MIDI BULK DUMP function, described on page 43, to transfer the song data to a MIDI data recorder such as the Yamaha MDF2 MIDI Data Filer.

1 Select a Pattern and Section

Select the pattern you want to clear (only pattern numbers 50 through 59 can be cleared). Use the section keys to select the section of the pattern you want to clear.

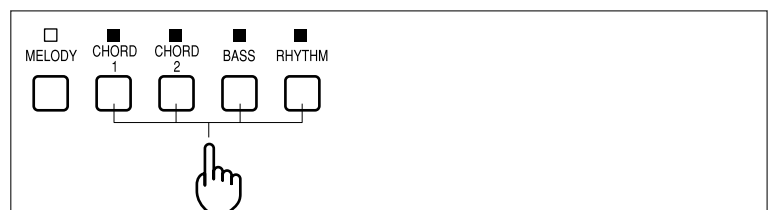
2 Engage the CLEAR Function

Press the **[CLEAR]** key (the number “3” key) while holding the **[SHIFT]** key.



3 Select the Track(s) to Clear

Use the track keys to select the track or tracks you want to clear.



8: Recording Original Patterns (continued)

4 Press [START/STOP] to Clear

Press the [START/STOP] key to actually clear the selected pattern, or [EXIT] to exit from the CLEAR function.



Turning the QR10 power OFF during execution of the clear or copy function may result in loss of all data and possibly damage the QR10!



Any previous data in the specified pattern will be completely erased. Make sure that the pattern to be cleared does not contain any data you want to keep before executing the CLEAR function. Data can be saved prior to clearing by moving it to a different pattern number with the COPY function, described below, or by transferring it to an external MIDI data storage device such as the Yamaha MDF2 MIDI Data Filer by using the MIDI BULK DUMP function (page 43).

Pattern Copy

The PATTERN mode COPY function can simplify pattern programming by letting you copy any section of an existing pattern — preset, combination, or user — to a new user pattern number, in which it can be modified as required.

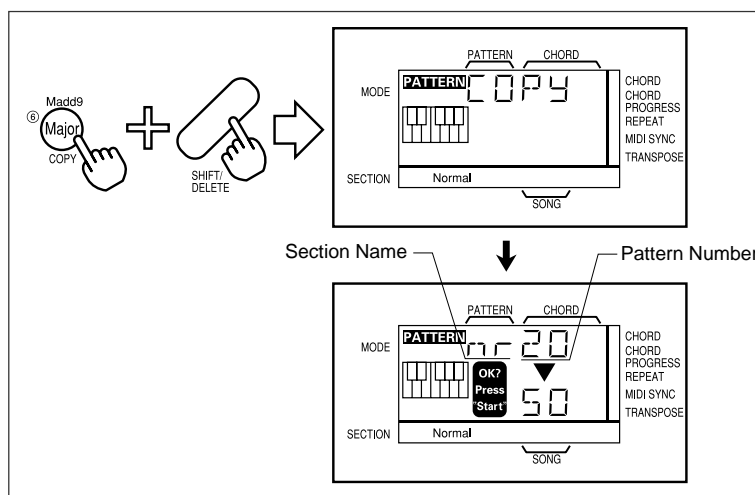
1 Select the Source Pattern and Section

Select the pattern you want to copy. This can be any of the preset, combination, or user patterns. Use the section keys to select the section of the pattern you want to copy.

2 Engage the COPY Function

Press the [COPY] key (the number “6” key) while holding the [SHIFT] key.

The pattern number and section name to be copied will appear on the display.



3 Select the Track(s) to Copy

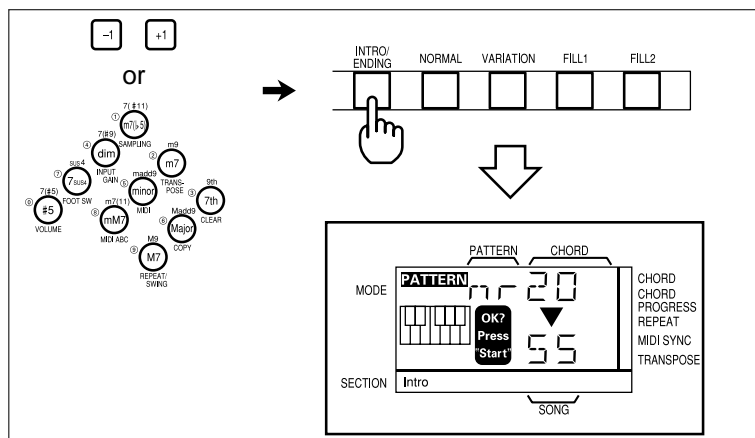
Use the track keys to select the track or tracks you want to copy.

4 Select the Destination Pattern and Section

Use the [-1] and [+1] keys or the number keys to enter the number of the destination pattern (i.e. the pattern number to which the source pattern is to be copied). The destination pattern number must be between 50 and 59. Use the section keys to select the section of the pattern you want to copy to.



You can copy between patterns having different numbers of measures, but not between patterns having different time signatures.



8: Recording Original Patterns (continued)

5 Press [START/STOP] to Copy

Press the [START/STOP] key to actually copy the source pattern to the specified destination pattern number, or [EXIT] to exit from the COPY function.



Any previous data in the destination pattern location will be erased and replaced by the source pattern when the copy function is executed.



If the QR10 memory becomes full due to a copy operation, the memory full error display - "ERR 3" - will appear. If this happens, use the pattern clear (page 40) and song clear (page 34) functions as necessary to erase unwanted data to make room for the data to be copied.

9: MIDI Utilities

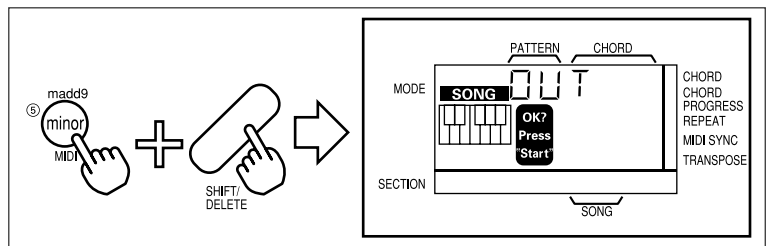
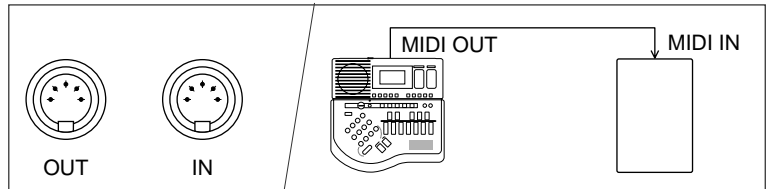
The QR10 provides two MIDI utilities — Bulk Dump and Sync — that allow it to be used with other MIDI equipment.

Bulk Dump

Although the QR10 has memory for 50 user/combination patterns and 50 user songs, you might want to save your pattern and song data to an external device to allow greater storage capacity or simply to protect your data from accidental erasure or corruption. An ideal storage device for use with the QR10 is the Yamaha MDF2 MIDI Data Filer.

To save all pattern and song data from the QR10 to the MDF2 (the sampling voice data is also saved), first connect the QR10 MIDI OUT to the MDF2 MIDI IN via a MIDI cable, and prepare the MDF2 for reception (refer to the MDF2 operation manual).

Next, press the QR10 **[MIDI]** key (the number “5” key) once while holding the **[SHIFT]** key (if you press **[MIDI]** twice while holding **[SHIFT]** you’ll select the Sync Mode function, described below).



When you’re ready to transmit the data to the MDF2, press **[START/STOP]**. A flashing triangle will appear on the display while the data is being transmitted, and “End” will appear briefly when the transmission is complete.

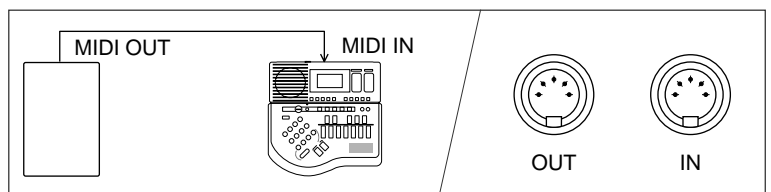


The QR10 always transmits on MIDI channel 1.

■ Bulk Reception of Song & Pattern Data

In the PATTERN or SONG mode the QR10 will automatically receive bulk song and pattern data transmitted from the MDF2.

To receive bulk data make sure that the MIDI OUT of the MDF2 (or other device) is connected to the MIDI IN of the QR10.



The QR10 always receives in the MIDI “omni” mode.



Please note that any previous data in the QR10 memory will be erased and replaced by the received data.

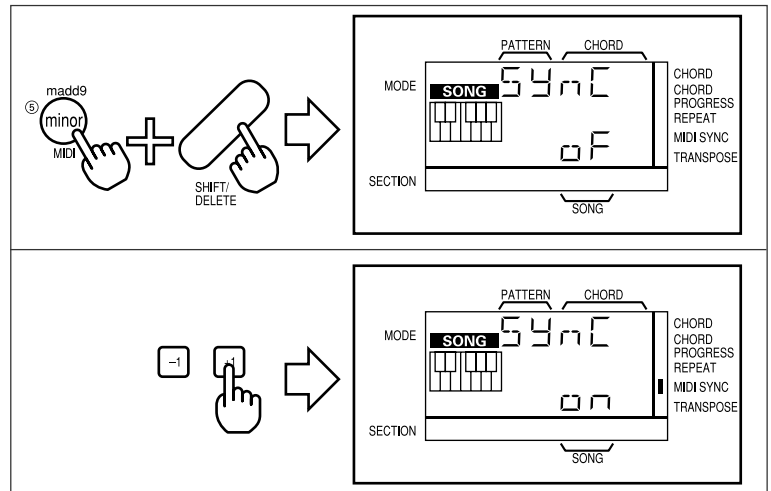
MIDI Synchronization Mode

Select this function by pressing the QR10 [MIDI] key (the number “5” key) twice while holding the [SHIFT] key (or press [MIDI] once while holding [SHIFT] if the MIDI Bulk Dump function, described above, is already selected).

Use the [-1] key to turn MIDI sync off, or the [+1] key to turn it on.

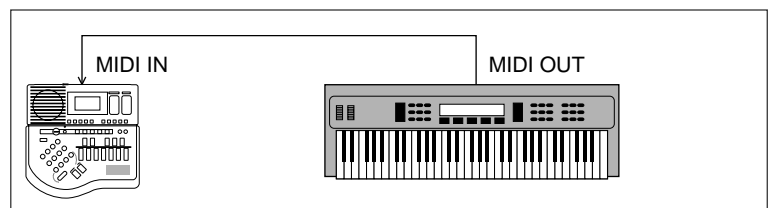
When MIDI sync is turned off (“, F” on the display) the QR10 is controlled by its own internal clock.

When turned “on”, the QR10 is controlled by a MIDI clock signal received from an external device such as a sequencer or music computer. An indicator block will appear next to “MIDI SYNC” on the display. Please note that the QR10 will not run on its own when this parameter is turned “on”.



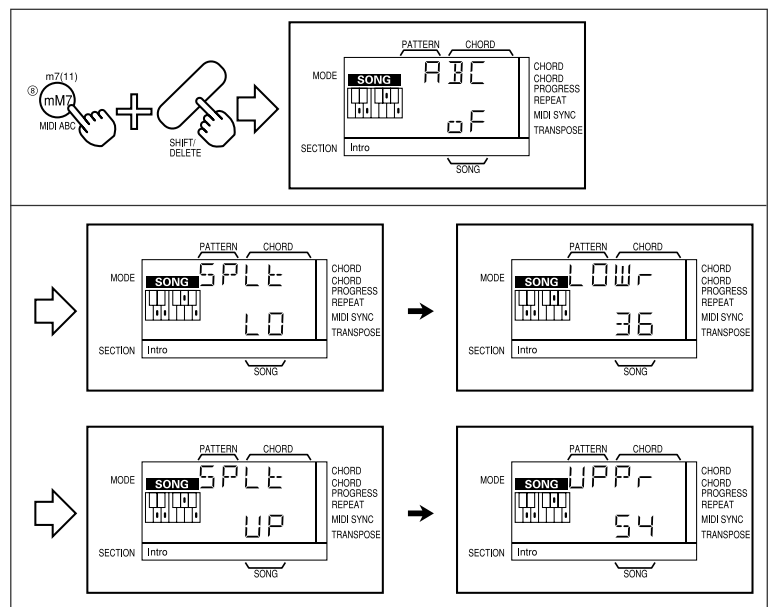
The QR10 as an ABC Expander

The QR10 features an advanced ABC (Auto Bass Chord) system that can be controlled from an external keyboard, making it useful as an ABC expander module. When the MIDI ABC function is turned on, you can change chords during pattern playback (and song accompaniment track recording) simply by playing the appropriate chord in the specified section of the external MIDI keyboard.



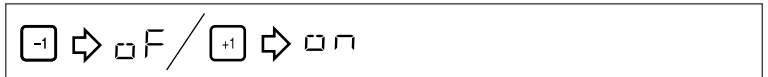
■ The ABC Settings

Each time the [MIDI ABC] key (the number “8” key) is pressed while the [SHIFT] key is held, the “ABC”, “LOWr”, and “UPPr” parameters are selected in sequence.



■ **ABC: MIDI ABC Mode ON/OFF**

Use the [-1] key to turn MIDI ABC off (“, F”) or the [+1] key to turn it “on”, as required.

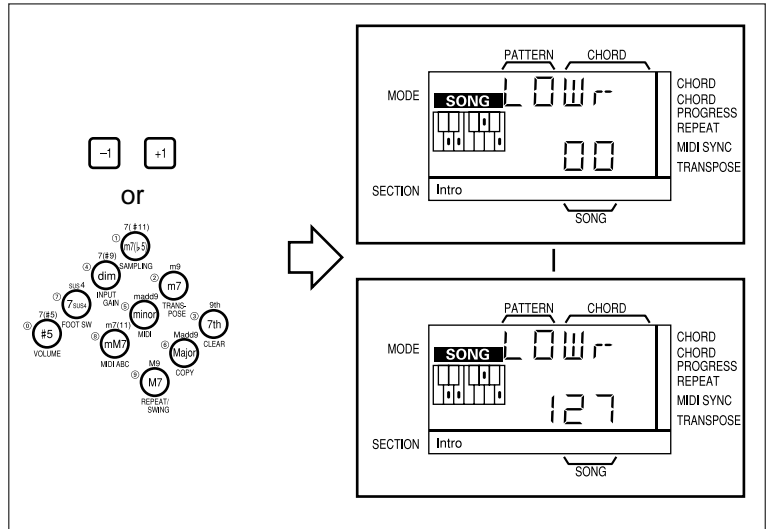


■ **LOWr: Lower ABC Zone Limit**

■ **UPPr: Upper ABC Zone Limit**

The “LOWr” and “UPPr” parameters set the range of notes in which chords played will be recognized by the QR10 ABC system. “LOWr” specifies the lowest note, and “UPPr” specifies the highest note in the range. The maximum range is from “00” (the MIDI note number representing C-2) to “127” (the MIDI note number representing G8).

When ABC is turned “on”, chords played within the specified ABC range will be recognized by the ABC system and the accompaniment chord will change accordingly during pattern playback or song accompaniment track recording. Chords played within the specified range of an external MIDI keyboard connected to the QR10 MIDI IN connector are recognized.



IMPORTANT MIDI ABC will only function when an indicator block is showing next to “CHORD” on the display.



DETAIL The UPPr parameter can not be set to a lower number than the LOWr parameter. If you do set the UPPr parameter lower than the LOWr setting, the LOWr number will automatically be set to the same number as the UPPr number. The opposite is also true: i.e. the LOWr parameter cannot be set to a higher number than the UPPr parameter.



DETAIL When ABC is ON, the QR10 will not sound in the specified ABC zone.

Appendix

Total Reset Procedure

The following procedure can be used to reset all QR10 parameters to their initial default settings, and clear all user memory (user patterns and songs — the combination patterns are reset to their default contents).



This procedure will erase any patterns and songs you have recorded! Be sure to save data you want to keep to an MIDI storage device such as the Yamaha MDF2 MIDI Data Filer before carrying out the total reset procedure.

- 1 Turn the QR10 power OFF.
- 2 Turn the power on while holding the [PHRASE 1], [PHRASE 2], and [PATTERN SELECT] keys. "INIT" will appear briefly on the display before the normal PATTERN mode display.

Voice List & Polyphony Information

The QR10 has 28-note "polyphony." This simply means that it can produce a maximum of 28 notes at the same time. If the maximum polyphony is exceeded — this includes all notes on the accompaniment and melody tracks — some of the notes will be truncated and will therefore not sound. Also note that some of the voices listed below use more than one "element" (the "EL" column). Each element uses one polyphony note, so when notes having multiple elements are used the maximum polyphony is actually less than 28 notes.

NO.	Category	Voice name	EL	NO.	Category	Voice name	EL	NO.	Category	Voice name	EL
0	PIANO	Acoustic Grand Piano	1	23	GUITAR	Distortion Guitar 1	2	46	SYNTH LEAD	Synth Lead 2 (saw tooth)	2
1		Bright Acoustic Piano	1	24		Distortion Guitar 2	2	47		Synth Lead 3 (fifth)	2
2		Electric Grand Piano	2	25		Distortion Guitar 3	2	48		Synth Lead 4 (bass+lead)	2
3		Honky-tonk Piano	2	26	BASS	Acoustic Bass	1	49	SYNTH PAD	Synth Pad 1 (bell strings)	2
4		Electric Piano 1	1	27		Electric Bass (finger1)	1	50		Synth Pad 2 (piano)	2
5		Electric Piano 2	2	28		Electric Bass (pick)	1	51		Synth Pad 3 (seq.)	2
6		Electric Piano 3	1	29		Fretless Bass	1	52		Synth Pad 4 (new age)	2
7		Electric Piano 4	2	30		Slap Bass	1	53		Synth Pad 5 (warm)	2
8	Clavi.	1	31	Synth Bass 1		1	54	Synth Pad 6 (choir&string)		2	
9	MALLET	Glockenspiel	1	32		Synth Bass 2	1	55		Synth Pad 7 (analog)	2
10	ORGAN	Percussive Organ	1	33		STRINGS&ENS.	Tremolo Strings	2		56	Synth Pad 8 (steam)
11		Rock Organ	1	34	String Ensemble 1		1	57	Synth Pad 9 (swish)	2	
12		Pipe Organ	2	35	String Ensemble 2		2	58	Synth Pad 10 (bell)	2	
13		Accordion	2	36	String Ensemble 3		2	59	Synth Pad 11 (harpsichord)	2	
14	GUITAR	Acoustic Guitar (steel)	1	37	Synth Strings		2	60	Synth SFX 1 (soundtrack)	2	
15		Acoustic Guitar (12strings)	2	38	Hit Strings		2	61	Synth SFX 2 (crystal)	2	
16		Electric Guitar (jazz)	1	39	Voice Oohs		2	62	Synth SFX 3 (atmosphere)	2	
17		Electric Guitar (clean1)	1	40	Orchestra Hit	1	63	Synth SFX 6 (sci-fi)	2		
18		Electric Guitar (clean2)	2	41	BRASS&REED	Trombone	1	64	ETHNIC	Banjo	1
19		Electric Guitar (clean3)	2	42		Brass Section	2	65		Kalimba	1
20		Electric Guitar (12strings)	2	43		Synth Brass	2	66	OTHERS	Tinkle Bell	2
21		Electric Guitar (muted1)	1	44	Tenor Sax	1	67	Breath		1	
22	Electric Guitar (muted2)	2	45	SYNTH LEAD	Synth Lead 1 (square)	2	68	Reverse Cymbal		1	

Preset Pattern & Song List

No.	Category	Name	Time Signature	No.	Category	Name	Time Signature	No.	Category	Name	Time Signature	
00	Dance & Pop	Disco	4/4	17	Rhythm & Blues	Heavy Metal	4/4	34	Latin	Bossa Nova	4/4	
01		Euro Beat	4/4	18		R & B	4/4	35		Mambo	4/4	
02		Dance Pop	4/4	19		Soul Rock	4/4	36		ChaCha	4/4	
03		House	4/4	20		Motown Shuffle	4/4	37		Rhumba	4/4	
04		Rap	4/4	21		Gospel	6/8	38		Tango	4/4	
05		Dance Shuffle	4/4	22		Slow Rock	4/4	39		Samba	4/4	
06	Funk & Soul	Funk Shuffle	4/4	23		Blues Boogie	4/4	40	Caribbean	Reggae	4/4	
07		16Beat Ballad	4/4	24		Rock 2	Pop Shuffle	4/4	41	Country & World	Country Ballad	4/4
08		16Beat Pop	4/4	25			Rock Shuffle	4/4	42		Country Rock	4/4
09		24Beat Pop	4/4	26			Boogie Woogie	4/4	43		Bluegrass	4/4
10		Soul Ballad	4/4	27	Rock'n' Roll		4/4	44	Lambada		4/4	
11	Rock1	Piano Ballad	4/4	28	Jazz & Swing		Swing	4/4	45		March & Waltz	March 1
12		Analog Ballad	4/4	29		Big Band	4/4	46	March 2	4/4		
13		Folk Ballad	4/4	30		Slow Swing	4/4	47	Polka	4/4		
14		8Beat Pop1	4/4	31		Swing Waltz	3/4	48	Waltz	3/4		
15		8Beat Pop2	4/4	32		Dixieland	4/4	49	New Age	New Age	4/4	
16		8Beat Rock	4/4	33		Slow Fox	4/4					

Rhythm Voice List

Note No.	Note	Rhythm Voice	Note No.	Note	Rhythm Voice	Note No.	Note	Rhythm Voice
35	B 0	Bass Drum 2	56	G _s 2	Cowbell	77	F 4	Low Wood Block
36	C 1	Bass Drum 1	57	A 2	Crash Cymbal 2	78	F _s 4	Stick High
37	C _s 1	Side Stick	58	A _s 2	Reverse Cymbal	79	G 4	Bass Drum 2
38	D 1	Acoustic Snare	59	B 2	Ride Cymbal 2	80	G _s 4	Gated Bass Drum
39	D _s 1	Hand Clap	60	C 3	Hi Bongo	81	A 4	Gated Snare
40	E 1	Rim Snare	61	C _s 3	Low Bongo	82	A _s 4	Shaker
41	F 1	Low Floor Tom	62	D 3	Mute Hi Conga	83	B 4	Power Snare
42	F _s 1	Closed Hi-Hat	63	D _s 3	Open Hi Conga	84	C 5	Power Rim Snare
43	G 1	High Floor Tom	64	E 3	Low Conga	85	C _s 5	Quarter Hi-Hat
44	G _s 1	Pedal Hi-Hat	65	F 3	High Timbale	86	D 5	Analog Bass Drum
45	A 1	Low Tom Soft	66	F _s 3	Low Timbale	87	D _s 5	Analog Snare 1
46	A _s 1	Open Hi-Hat	67	G 3	High Agogo	88	E 5	Analog Snare 2
47	B 1	Low-Mid Tom	68	G _s 3	Low Agogo	89	F 5	Analog Low Tom
48	C 2	Hi-Mid Tom	69	A 3	Cabasa	90	F _s 5	Analog Mid Tom
49	C _s 2	Crash Cymbal 1	70	A _s 3	Maracas	91	G 5	Analog Hi Tom
50	D 2	High Tom	71	B 3	Metronome Click L	92	G _s 5	Analog CHH
51	D _s 2	Ride Cymbal 1	72	C 4	Metronome Click H	93	A 5	Analog OHH
52	E 2	Chinese Cymbal	73	C _s 4	Short Guiro	94	A _s 5	Analog Hi Conga
53	F 2	Ride Bell	74	D 4	Long Guiro	95	B 5	Analog Low Conga
54	F _s 2	Tambourine	75	D _s 4	Claves			
55	G 2	Splash Cymbal	76	E 4	Hi Wood Block			

Troubleshooting

If you can't get a function to work properly, or your QR10 appears to be malfunctioning, please check the symptoms and possible causes listed below before assuming that your QR10 is faulty.

Symptom	Possible Cause/Cure
• No power.	<ul style="list-style-type: none"> • Make sure that the AC adaptor is plugged in properly. • If you're not using an AC adaptor, make sure that a full set of fresh batteries is installed. • Make sure that the batteries are installed facing the right way (i.e. correct polarity).
• No sound.	<ul style="list-style-type: none"> • Check that the volume control is set to a reasonable level (page 11). • Make sure that the individual track volume parameters are set to reasonable levels (page 21). • Make sure that the tracks you want to play back are selected (page 16). • No sound will be produced if you have selected a sampling voice that has not yet been recorded (page 19). • No sound will be produced by the internal speaker if anything is plugged into the PHONES jack (page 4). • The sound of an external source plugged into the INPUT jack will not be heard if the FOOT SW function is turned ON (page 11).
• Distorted sound.	<ul style="list-style-type: none"> • The batteries may be running low. • If the sound of an external source plugged into the INPUT jack is distorted, the input level is probably too high (page 5).
• The micro-keyboard produces the wrong pitch.	<ul style="list-style-type: none"> • Make sure that the TRANSPOSE parameter is set to "0" (page 21). • If you're using the micro-keyboard to input chords, then you'll hear the sound of a chord, not just the pitch of the key pressed (page 14).
• Some notes aren't played.	<ul style="list-style-type: none"> • You may be exceeding the maximum polyphony of the QR10 (max. 28 notes).
• The [START/STOP] keys does not function.	<ul style="list-style-type: none"> • Playback will not start if you have selected a user pattern or song that has not been recorded (pages 10, 23). • The [START/STOP] key does not function if the MIDI SYNC mode is turned ON and no MIDI clock signal is received via the MIDI IN connector (page 44).
• Time signature cannot be set.	<ul style="list-style-type: none"> • You cannot change the time signature of a pattern that has already been recorded (page 38).
• Chords cannot be changed via the micro-keyboard during song playback.	<ul style="list-style-type: none"> • You cannot change chords via the micro-keyboard in the SONG mode. In this mode chords can only be changed via the [CHORD PROGRESS] button if the CHORD PROGRESS function is turned ON (page 33).
• The [PHRASE] keys produce no sound.	<ul style="list-style-type: none"> • The phrase keys do not produce sound in the PATTERN mode (they function as CHORD SHIFT keys in this mode — page 39).
• The footswitch does not function.	<ul style="list-style-type: none"> • The FOOT SW function must be turned ON in order for the footswitch to work (page 11).
• ABC does not function.	<ul style="list-style-type: none"> • Make sure that the ABC function is turned ON (page 44). • Make sure that you are playing chords within the specified ABC range (page 45).
• Bulk data not received.	<ul style="list-style-type: none"> • Bulk data can only be received when the initial SONG or PATTERN play mode display is showing and playback is stopped.

Error Messages

The following error messages will appear on the QR10 display to warn you of operation errors and other problems.

E ; : 01	Preset data! You have attempted to edit a preset parameter that can not be changed.
E ; : 0@	Illegal input! You have attempted to enter a value that is outside the range of the selected parameter or is not recognized by the QR10.
E ; : 0#	Memory full! This message will appear if the QR10 memory becomes full. Use the pattern or song clear function to make room for further recording.
E ; : 0\$	Low batteries! The dry batteries powering the QR10 are exhausted and must be replaced.
E ; : 0%	MIDI buffer full! The MIDI input buffer is full and can handle no more data. Reduce the amount or complexity of the MIDI data being sent to the QR10.
E ; : 0^	Bulk receive failed! Bulk data could not be properly received by the QR10.
E ; : 0&	Unrecognizable bulk data! Bulk data has been received but is not recognizable by the QR10.
E ; : 0*	Bulk receive interrupted! Bulk data being received was interrupted before the reception was complete.
E ; : 0(Backup battery low! The internal memory backup battery is too low to retain the data in memory and must be replaced. Have the backup battery replaced by qualified Yamaha service personnel!

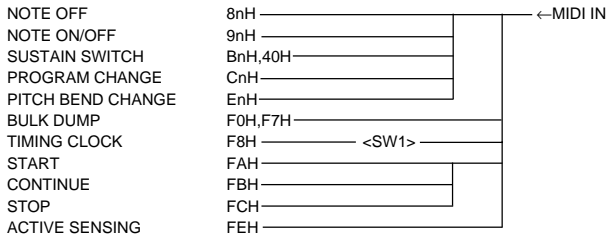
Specifications

Tone Generator	
Type	AWM (Advanced Wave Memory)
Polyphony	28 notes max.
Normal voices	69
Percussion voices	60
Sampled voices	2
Patterns	
Preset	50
Combination	40
User	10
Sections per pattern	6: INTRO, NORMAL, VARIATION, FILL 1, FILL 2, ENDING
Tracks	4: CHORD 1, CHORD 2, BASS, RHYTHM
Chord roots	12: C, C#, D, D#, E, F, F#, G, G#, A, A#, B
Chord types	24: Major, minor, 7th, m7, M7, mM7, 7sus4, dim, m7(-5), 6th, m6, +5, Madd9, madd9, 9th, m9, M9, 7(+9), 7(-9), 7(+11), m7(11), 7(13), sus4, 7(+5)
Note resolution	1/96 note
Recordable data	Note, Pitch bend, Control change (sustain) (Note only on rhythm track)
Other function	Swing
Songs	
Preset	50
User	50
Tracks	Melody, Accompaniment
Recordable data	Accompaniment: pattern number, section, chord, tempo change. Melody: note, program change, phrase, control change (sustain), pitch bend
Other function	Repeat
System	
Functions	Sampling, MIDI bulk dump/sync, MIDI ABC, Phrase type, Transpose, Footswitch, Input gain, Demo playback
Sampling quantization	8 bit linear
Sampling time	Up to 3.2 seconds
Others	Internal microphone & speaker
Connectors	
	MIDI IN, OUT Line out (mini stereo phone jack) Headphone (mini stereo phone jack) EXT IN (mono phone jack) DC IN
Power Supply	
Voltage	9V DC
Impedance	Input impedance ... 330k Ω , Output impedance ... 1k Ω
Battery	1.5V (SUM3 or equiv.) \times 6
AC adaptor	Yamaha PA-3
Dimensions (W \times D \times H)	242.6 \times 245.4 \times 45.7 mm
Weight	930 grams w/o batteries
Options	PA-3 AC Adaptor, FC-5/4 Footswitch

MIDI Data Format

1. Reception Conditions

1-1. Reception Data & Conditions



SW1: MIDI sync ON/OFF.
Determines whether the internal clock or an external MIDI clock signal controls the QR10.

1-2. Reception Data

1-2-1. System Realtime Message

TIMING CLOCK	11111000 (F8H)
START	11111010 (FAH)
CONTINUE	11111011 (FBH)
STOP	11111100 (FCH)
ACTIVE SENSING	11111110 (FEH)

* After FEH has been received at least once, valid MIDI data must be received within 400 millisecond (max.) otherwise all notes and the sustain switch will be forced OFF.

1-2-2. Channel Message

1) NOTE OFF

STATUS	1000nnnn (8nH)	n = 0-15 VOICE CHANNEL NUMBER
NOTE NUMBER	0kkkkkkk	k = 0 (C-2)-127 (G8)
VELOCITY	0vvvvvvv	v is ignored. 0-127

2) NOTE ON/OFF

STATUS	1001nnnn (9nH)	n = 0-15 VOICE CHANNEL NUMBER
NOTE NUMBER	0kkkkkkk	k = 0 (C-2)-127 (G8)
VELOCITY	0vvvvvvv (v≠0)	NOTE ON v = 1-127
	00000000 (v≠0)	NOTE OFF

3) CONTROL CHANGE

STATUS	1011nnnn (BnH)	n = 0-8,10-15 VOICE CHANNEL NUMBER
CONTROL NUMBER	01000000 (40H)	SUSTAIN SWITCH
CONTROL VALUE	0vvvvvvv	v = 0-63:OFF,64-127:ON

4) PROGRAM CHANGE

STATUS	1100nnnn (CnH)	n = 0-8,10-15 VOICE CHANNEL NUMBER
PROGRAM NUMBER	0ppppppp	p = 0-127

* The program numbers corresponding to each voice channel of the internal tone generator are as follows:

VOICE CH.No.	PROGRAM No.
0, 4-8, 10-15	0-71
1-3	0-70

5) PITCH BEND CHANGE

STATUS	1110nnnn (EnH)	n = 0-8,10-15 VOICE CHANNEL NUMBER
LSB	0vvvvvvv	PITCH BEND CHANGE LSB
MSB	0vvvvvvv	PITCH BEND CHANGE MSB

* Channel messages are always received in the omni mode during recording.

1-2-3. System Exclusive Message

System exclusive messages can only be received when the initial SONG or PATTERN mode display is showing.

1) BULK DUMP

All four BULK DUMP data groups listed below must be received or the received data will be ignored.

(Tone Generator System)

STATUS	11110000 (F0H)	
IDENTIFICATION	01000011 (43H)	
SUB STATUS	00000000 (00H)	
FORMAT NUMBER	01111110 (7EH)	
BYTE COUNT(MSB)	0bbbbbbb	
BYTE COUNT(LSB)	0bbbbbbb	
CLASSIFICATION NAME	01001100 (4CH) ASCII'L	data
	01001101 (4DH) ASCII'M	
	00100000 (20H) ASCII'_	
	00100000 (20H) ASCII'_	
DATA FORMAT NAME	00110000 (30H) ASCII'0	
	00110001 (30H) ASCII'1	
	00110010 (31H) ASCII'2	
bytes	00111011 (38H) ASCII'3	
	01010100 (54H) ASCII'T	
	01010011 (53H) ASCII'S	
DATA	0ddddddd	
	0ddddddd	
CHECK SUM	0eeeeeee	2's complement of 7 bits sum of all data bytes
EOX	11110111 (F7H)	

(Sample Data)

STATUS	11110000 (F0H)	
IDENTIFICATION	01000011 (43H)	
SUB STATUS	00000000 (00H)	
FORMAT NUMBER	01111110 (7EH)	
BYTE COUNT(MSB)	0bbbbbbb	
BYTE COUNT(LSB)	0bbbbbbb	
CLASSIFICATION NAME	01001100 (4CH) ASCII'L	data
	01001101 (4DH) ASCII'M	
	00100000 (20H) ASCII'_	
	00100000 (20H) ASCII'_	
DATA FORMAT NAME	00110000 (30H) ASCII'0	
	00110001 (30H) ASCII'1	
	00110010 (31H) ASCII'2	
bytes	00111011 (38H) ASCII'3	
	01010111 (57H) ASCII'W	
	01000100 (44H) ASCII'D	
DATA	0ddddddd	
	0ddddddd	
CHECK SUM	0eeeeeee	2's complement of 7 bits sum of all data bytes
EOX	11110111 (F7H)	

(Sequencer System)

STATUS	11110000 (F0H)	
IDENTIFICATION	01000011 (43H)	
SUB STATUS	00000000 (00H)	
FORMAT NUMBER	01111110 (7EH)	
BYTE COUNT(MSB)	0bbbbbbb	
BYTE COUNT(LSB)	0bbbbbbb	
CLASSIFICATION NAME	01001100 (4CH) ASCII'L	data
	01001101 (4DH) ASCII'M	
	00100000 (20H) ASCII'_	
	00100000 (20H) ASCII'_	
DATA FORMAT NAME	00110000 (30H) ASCII'0	
	00110001 (30H) ASCII'1	
	00110010 (31H) ASCII'2	
bytes	00111011 (38H) ASCII'3	
	01010011 (53H) ASCII'S	
	01010011 (53H) ASCII'S	
DATA	0ddddddd	
	0ddddddd	

CHECK SUM	0eeeeeee	2's complement of 7 bits sum of all data bytes	
EOX	11110111	(F7H)	
 (Sequence Data)			
STATUS	11110000	(F0H)	
IDENTIFICATION	01000011	(43H)	
SUB STATUS	00000000	(00H)	
FORMAT NUMBER	01111110	(7EH)	
BYTE COUNT(MSB)	0bbbbbbb		}
BYTE COUNT(LSB)	0bbbbbbb		
CLASSIFICATION	01001100	(4CH) ASCII'L	}
NAME	01001101	(4DH) ASCII'M	
	00100000	(20H) ASCII'_'	
	00100000	(20H) ASCII'_'	
DATA FORMAT	00110000	(30H) ASCII'0	
NAME	00110001	(30H) ASCII'1	
	00110010	(31H) ASCII'2	
bytes			}
	00111011	(38H) ASCII'3	
	01000010	(42H) ASCII'B	
	01010011	(53H) ASCII'S	
DATA	0ddddddd		
	0ddddddd		
CHECK SUM	0eeeeeee	2's complement of 7 bits sum of all data bytes	
EOX	11110111	(F7H)	

* FEH transmitted approximately once every 180 milliseconds.

2-2-2. Channel Message

1) NOTE ON/OFF

STATUS	1001nnnn	(9nH) n = 0-7,9	VOICE CHANNEL NUMBER
NOTE NUMBER	0kkkkkkk	k = 0 (C-2)-127 (G8)	
VELOCITY	0vvvvvvv	(v≠0) NOTE ON v = 1-127	
	00000000	(v≠0) NOTE OFF	

2) CONTROL CHANGE

STATUS	1011nnnn	(BnH) n = 0-3	VOICE CHANNEL NUMBER
CONTROL NUMBER	01000000	(40H)	SUSTAIN SWITCH
CONTROL VALUE	0vvvvvvv	v = 0-127	

3) PROGRAM CHANGE

STATUS	1100nnnn	(CnH) n = 0	VOICE CHANNEL NUMBER
PROGRAM NUMBER	0ppppppp	p = 0-127	

4) PITCH BEND CHANGE

STATUS	1110nnnn	(EnH) n = 0-7	VOICE CHANNEL NUMBER
LSB	0vvvvvvv		PITCH BEND CHANGE LSB
MSB	0vvvvvvv		PITCH BEND CHANGE MSB

2. Transmission Conditions

2-1. Transmission data & Conditions

NOTE ON/OFF	9nH	<SW1>	} →MIDI OUT
SUSTAIN SWITCH	BnH,40H		
PROGRAM CHANGE	CnH		
PITCH BEND CHANGE	EnH		
BULK DUMP	FOH,F7H		
TIMING CLOCK	F8H	<SW2>	
START	FAH		
CONTINUE	FBH		
STOP	FCH		
ACTIVE SENSING	FEH		

SW1: Track mute ON/OFF.
Turns transmission ON or OFF for each track. The transmit channel is fixed for each channel (0 – 3,6,7,9).

SW2: MIDI sync ON/OFF.
Determines whether the internal clock or an external MIDI clock signal controls the QR10.

2-2. Transmission data

2-2-1. System Realtime Message

TIMING CLOCK	11111000	(F8H)
START	11111010	(FAH)
CONTINUE	11111011	(FBH)
STOP	11111100	(FCH)
ACTIVE SENSING	11111110	(FEH)

2-2-3. System Exclusive Message

1) BULK DUMP

The data is the same as that for reception. Four types of bulk data are transmitted in sequence.

MIDI IMPLEMENTATION CHART

[-1]/[+1] keys	7, 10	Pattern length	38
ABC	44	Pattern mode	10
ABC zone	45	Pattern number	10
AC adaptor	3	Pattern recording	37
Applications	1	Pattern select key	6, 10
Audio connections	5	Pattern variations	12
Backup	i, 43	Pattern/song key	7, 10, 23
Batteries	3	Phones jack	4
Beat display	11	Phrase volume	27
Bulk dump	43	Phrase/chord shift keys	7, 15, 26
Chord display	14, 23	Phrases	26
Chord progress key	7, 33	Polyphony information	46
Chord progress recording	33	Power supply	i, 3
Chord shift keys	15	Power switch	6
Chord type/number keys	7, 9, 14	Preset patterns	10
Chord types	16	Preset pattern & song list	47
Chords	14	Preset songs	23
Clear, pattern	40	Quantize	31, 38
Clear, song	34	Record key	7, 28, 36
Combination patterns	36	Repeat	24
Connectors	4	Rhythm voice list	47
Continue playback	11, 24	Sampling	19
Copy, pattern	41	Sampling frequency	20
Copy, song	35	Section	12
DC IN jack	4	Section keys	7, 12
Delete	32, 40	Segment repeat	25
Demo	9	Shift/delete key	7, 32, 40
Ending	12	Song mode	23
Error messages	48	Song mode settings	25
Exit key	7, 10	Song number	23
Features	1	Song recording	28
Fill	12	Speaker	8
Footswitch	11	Start/stop key	7, 9, 35, 41
Icons	ii	Starting measure	24
Input gain	5	Swing	22
Input jack	4	System overview	2
Input level indicator	19	Tempo key	6, 13
Intro	12	Time signature	38
LCD panel	6	Total reset procedure	46
Melody track recording	32	Track keys	7, 16
Micro-keyboard	7, 14, 31	Track volume	21
Microphone	8, 19	Transposition	21
MIDI	43	Troubleshooting	48
MIDI connectors	4	User patterns	37
MIDI data format	50	User songs	28
MIDI synchronization	44	Variation	12
Normal	12	Voice list & polyphony information	46
Octave keys	7, 18	Voice select key	6, 17
Output jack	4	Voices	17
Overdubbing	30	Volume control	8, 11

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