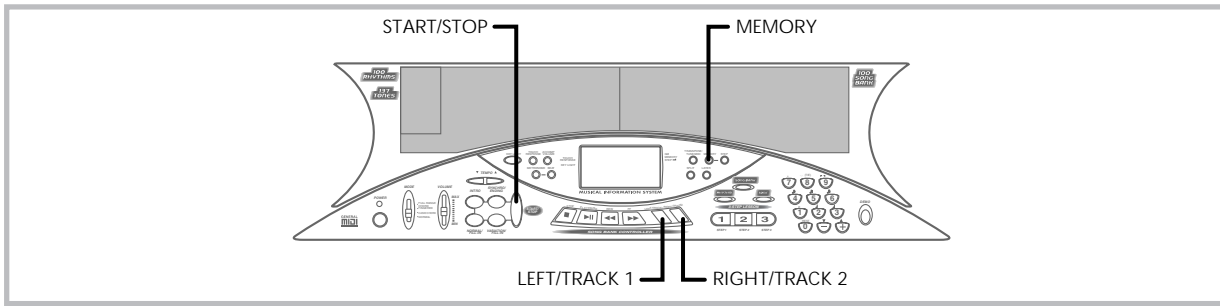# Memory Function

START/STOP   MEMORY

LEFT/TRACK 1   RIGHT/TRACK 2

You can store up to two separate songs in memory for later playback. There are two methods you can use to record a song: real-time recording where you record the notes as you play them on the keyboard, and step recording where you input chords and notes one-by-one.

Tracks

The memory of this keyboard records and plays back notes much like a standard tape recorder. There are two tracks, each of which can be recorded separately. Besides notes, each track can be assigned its own tone number. During playback you can adjust the tempo to change the speed of playback.
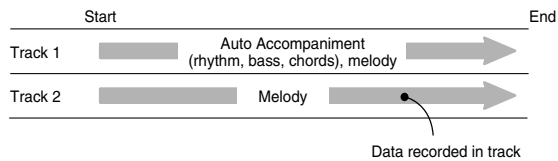

NOTES
- Track 1 is the basic track, which can be used to record Auto Accompaniment along with the melody. Track 2 can be used for melody only, and is for adding to what is recorded in Track 1.
- Note that each track is independent of the other. This means that if you make a mistake while recording, you need to re-record only the track where the mistake was made.

Memory Button Operation

Each press of the MEMORY button cycles through the functions shown below.
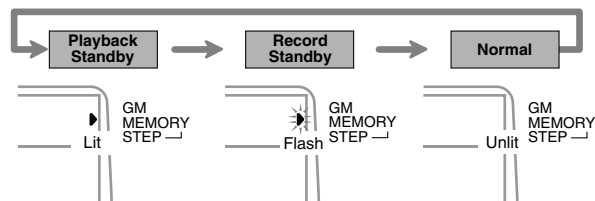
Selecting a Track

Press the LEFT/TRACK 1 button to select Track 1 and the RIGHT/TRACK 2 button to select Track 2. The letter "L" (left) appears on the display to indicate Track 1 is selected, and the letter "R" (right) appears to indicate Track 2 is selected.
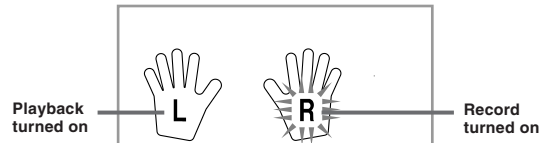
Playback

Each press of the LEFT/TRACK 1 and RIGHT/TRACK 2 button while the keyboard is in playback standby (see "Memory Button Operation" above) toggles playback of the corresponding track on and off. The letter that identifies a track (L or R) appears on the display whenever playback of that track is turned on.
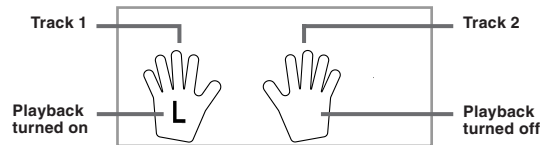
- With the above setting, Track 1 will play while Track 2 will not play.

Record

Each press of the LEFT/TRACK 1 and RIGHT/TRACK 2 button while the keyboard is in record standby (see "Memory Button Operation") toggles recording to the corresponding track on and off. The letter that identifies a track (L or R) flashes on the display whenever recording to that track is turned on.
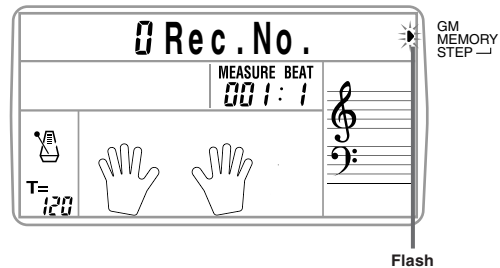

- The above indicates that Track 1 will play back while Track 2 is being recorded to.
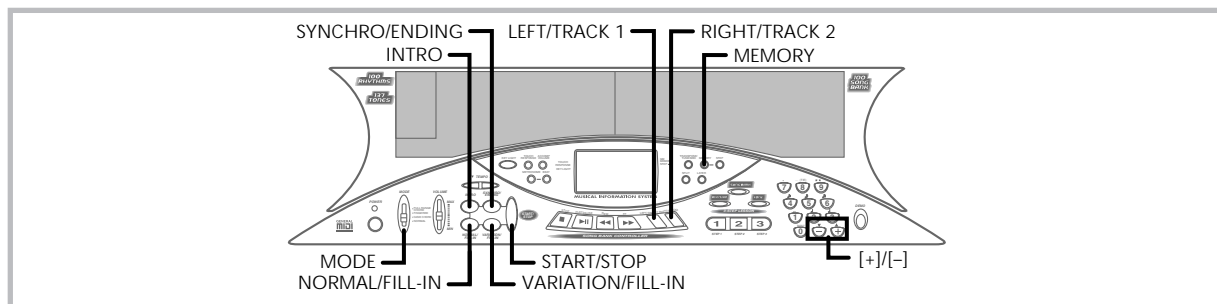
Real-time Recording to Track 1

With real-time recording, the notes and chords you play on the keyboard are recorded as you play them.

To record to Track 1 using real-time recording

1. Use the **MEMORY button** to enter record standby.

SYNCHRO/ENDING — LEFT/TRACK 1 — RIGHT/TRACK 2
INTRO — MEMORY
MODE — START/STOP
NORMAL/FILL-IN — VARIATION/FILL-IN
[+]/[–]

2. Use **[+]** and **[–]** to select 0 or 1 as the song number.
   • The track is not yet selected at this point.
   • The above song number screen remains on the display for about five seconds. If it disappears before you have a chance to select a song number, use the MEMORY button to display it again.

Song number

$$ \textit{i Rec.No.} $$

3. Press the **LEFT/TRACK 1 button** to select Track 1.
   • The "L" flashes on the display to indicate the track that will be recorded to.

Flash
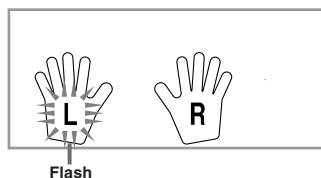
4. Make any of the following settings if you want.
   • Tone number (page E-14)
   • Rhythm number (page E-16)
   • MODE switch (page E-16)
   • If you are not confident about playing at a fast tempo, try using a slower tempo setting (page E-16).

5. Press the **START/STOP button** to start real-time recording to Track 1.

6. Play something on the keyboard.
   • Any melody and accompaniment you play on the keyboard (including Auto Accompaniment chords played on the accompaniment keyboard) is recorded.
   • If you use a pedal during recording, pedal operations are also recorded.

7. Press the **START/STOP button** to end recording when you are finished playing.

• If you make a mistake while recording, stop the record operation and begin over again from step 1.

❚ NOTE ❚
Using real-time recording to record to a track that already contains recorded data replaces the existing recording with the new one.

Track 1 Contents After Real-time Recording

In addition to keyboard notes and accompaniment chords, the following data is also recorded to Track 1 during real-time recording. This data is used whenever Track 1 is played back.

• Tone number
• Rhythm number
• INTRO, SYNCHRO/ENDING, NORMAL/FILL-IN, VARIATION/FILL-IN button operations
• Pedal operations

Memory Capacity

The keyboard has memory for approximately 5,200 notes. You can use all 5,200 notes for a single song, or you can divide memory between two different songs.
• The measure number and note number flash on the display whenever remaining memory is less than 100 notes.

Flash
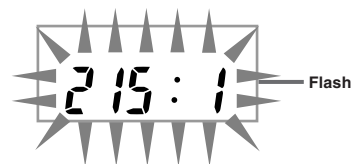
• Recording automatically stops (and Auto Accompaniment and rhythm stops playing if they are being used) whenever memory becomes full.

Memory Data Storage

• Anything previously stored in memory is replaced whenever you make a new recording.
• Memory contents are retained as long as the keyboard is supplied with electrical power. Unplugging the AC adaptor when batteries are not loaded or when loaded batteries are dead cuts off the keyboard's electrical power supply, causing all data stored in memory to be deleted. Be sure to plug the keyboard into an electrical outlet with the AC adaptor before replacing batteries.
• Turning off the keyboard while a record operation is in progress causes the contents of the track you are currently recording to be lost.

Track 1 Real-time Recording Variations

The following describes a number of different variations you can use when recording to Track 1 using real-time recording. All of these variations are based upon the procedure described under "To record to Track 1 using real-time recording" on page E-25.

To record without rhythm

Skip step 5. Real-time recording without rhythm starts when you press a keyboard key.

To start recording with synchro start

In place of step 5, press the SYNCHRO/ENDING button. Auto Accompaniment and recording will both start when you play a chord on the accompaniment keyboard.

To record using an intro, ending, or fill-in

During recording, the INTRO, SYNCHRO/ENDING, NORMAL/FILL-IN, and VARIATION/FILL-IN buttons (pages E-18 through E-19) can all be used as they normally are.

To synchro start Auto Accompaniment with an intro pattern

In place of step 5, press the SYNCHRO/ENDING button and then the INTRO button. Auto Accompaniment will start with the intro pattern when you play a chord on the accompaniment keyboard.

To start Auto Accompaniment part way into a recording

In place of step 5, press the SYNCHRO/ENDING button and then play something on the melody keyboard to start. When you reach the point where you want Auto Accompaniment to start, play a chord on the accompaniment keyboard.

Playing Back from Memory

Use the following procedure to play back memory contents.

To play back from memory

1. Use the **MEMORY button** to enter playback standby, and then use **[+]** and **[–]** to select 0 or 1 as the song number.
   • The above song number screen remains on the display for about five seconds. If it disappears before you have a chance to select a song number, use the MEMORY button to display it again.

$$i\,P\,l\,a\,y \quad N\,o.$$

2. Press the **START/STOP button** to start playback of the song you selected.
   • During memory playback you can use the LEFT/TRACK 1 and RIGHT/TRACK 2 buttons to turn playback of either track on or off.
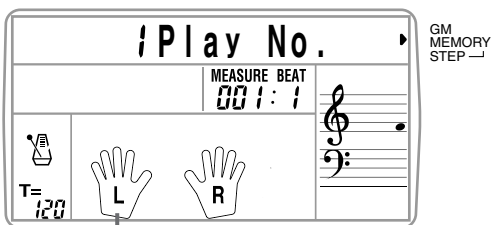
Indicator appears

   • You can use the TEMPO buttons to adjust the tempo.

3. Press the **START/STOP button** again to stop playback.

▌ NOTES ▌
• During memory playback, the entire keyboard functions as a melody keyboard, regardless of the MODE switch setting.
• You can play along on the keyboard while playing back from memory. You can also use layer (page E-32) and split (page E-32) to play along with more than one tone.
• You cannot use pause, fast forward or fast reverse operations with memory playback.

Real-time Recording to Track 2

After you record Track 1, you can use real-time recording to add a melody in Track 2.

To record to Track 2 while playing back Track 1

1. Use the **MEMORY button** to enter record standby, and then use **[+]** and **[–]** to select 0 or 1 as the song number.
   • The song number you select should be the one where you previously input Track 1.

$$i\,R\,e\,c.N\,o.$$

   • The track is not yet selected at this point.

2. Press the **RIGHT/TRACK 2 button** to select Track 2.

Flash   **Flash**
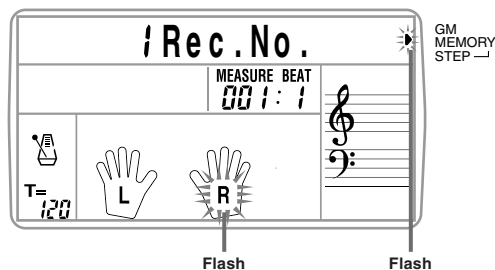
3. Make any of the following settings if you want.
   • Tone number (page E-14)
   • If you are not confident about playing at a fast tempo, try using a slower tempo setting (page E-16).

4. Press the **START/STOP button** to start real-time recording to Track 2 along with playback from Track 1.

5. Listening to the playback from Track 1, play what you want to record to Track 2 on the keyboard.

6. Press the **START/STOP button** to end recording when you are finished playing.
   • If you make a mistake while recording, stop the record operation and begin over again from step 1.

▌ NOTE ▌
Track 2 is a melody-only track, so chords cannot be recorded there. Because of this, the entire keyboard is a melody keyboard, regardless of the MODE switch setting.
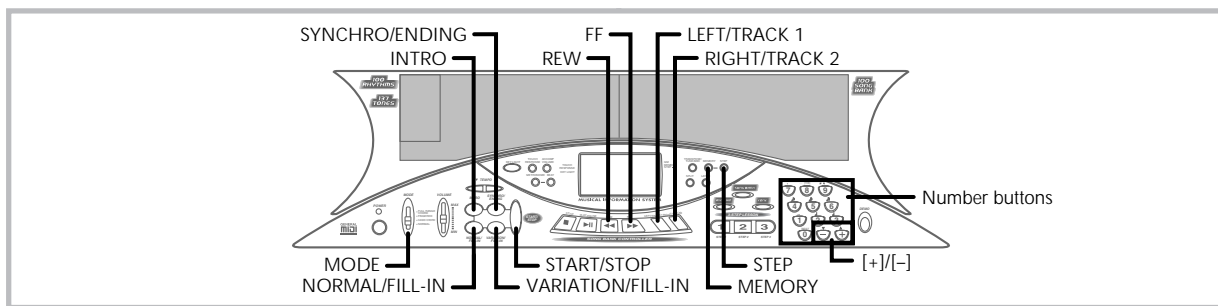
To record to Track 2 without playing back Track 1

1. Use the **MEMORY button** to enter record standby.

2. Press the **LEFT/TRACK 1 button** to turn off playback of Track 1.

3. Continue from step 1 under "To record to Track 2 while placing back Track 1."
   • Note that the above procedure does not turn off rhythm and Auto Accompaniment.

Track 2 Contents After Real-time Recording

The following data is recorded to Track 2 during real-time recording.

• Tone number
• Rhythm number
• Pedal operations

SYNCHRO/ENDING   FF   LEFT/TRACK 1
INTRO   REW   RIGHT/TRACK 2

Number buttons

MODE   START/STOP   STEP   [+]/[−]
NORMAL/FILL-IN   VARIATION/FILL-IN   MEMORY

## *Recording Chords with Step Recording*

With step recording, you can record a chord progression in Track 1 chord-by-chord. You can then use the chord progression as an Auto Accompaniment or later add melody notes to Track 2.
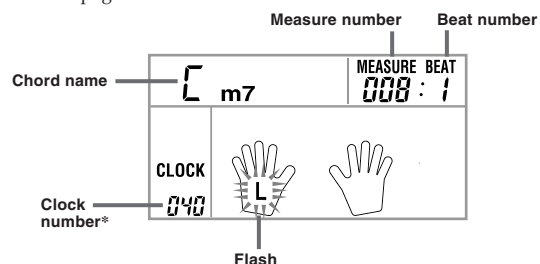
To record chords to Track 1 using step recording

1. Use the **MEMORY button** to enter record standby, and then use **[+]** and **[−]** to select 0 or 1 as the song number.

$$\text{\large Rec.No.}$$

2. Press the **LEFT/TRACK 1 button** to select Track 1.

3. Press the **STEP button**.

GM
MEMORY
STEP

Flash
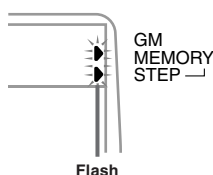
4. Make any of the following settings if you want.
  • Rhythm number (page E-16)
  • MODE switch (page E-16)

5. Press the **SYNCHRO/ENDING button**.

6. Play a chord.
  • Use the chord play method that is specified by the current MODE switch setting: FINGERED, CASIO CHORD, NORMAL.
  • When the MODE switch is set to NORMAL, specify the chord using the root input keyboard and chord type input keyboard. See "Specifying Chords in the Normal Mode" on this page for details.

Measure number   Beat number

Chord name

MEASURE BEAT
C m7 $008 : 1$

CLOCK
040

Clock number*

Flash

* 48 clocks = 1beat

7. Input the length of the chord (how long it should be played until the next chord is played).
  • Use the number keys to specify the length of a chord. See "Specifying the Length of a Note" on page E-29 for details.
  • Repeat steps 6 and 7 to input all the chords you want.
  • If you make a mistake while step recording chords, use the procedure under "Editing Data While Step Recording" to make corrections.

8. After you finish step recording, press the **START/STOP**, **MEMORY**, or **STEP button**.
  • This enters playback standby for the song you have just input. Pressing the START/STOP button plays it back.

▮ NOTES ▮
• You can use the FF and REW buttons to change the current input position during step recording. See "Editing Data While Step Recording" on page E-30 for details.
• Pressing the [0] button in step 7 inputs a rest. Note, however, that any rests you input do not have any effect on Auto Accompaniment.

Track 1 Contents After Step Recording

In addition to chords, the following data is also recorded to Track 1 during step recording.

• Tone number
• Rhythm number (step 4)
• INTRO, SYNCHRO/ENDING, NORMAL/FILL-IN, VARIATION/FILL-IN button operations (step 6)

Specifying Chords in the Normal Mode

When the MODE switch is set to NORMAL during step recording, you can specify chords using a method that is different from CASIO Chord and Fingered fingerings. This chord specification method can be used to input 18 different chord types using only two keyboard keys, so chords can be specified even if you don't know how to actually play them.

Root input keyboard   Chord specification keyboard
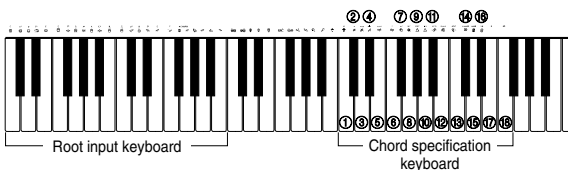
① **Major**
② **Minor**
③ **Augmented**
④ **Diminished**
⑤ **Suspended fourth**
⑥ **Seventh**
⑦ **Minor seventh**
⑧ **Major seventh**
⑨ **Minor major seventh**
⑩ **Seventh flat five**
⑪ **Minor seventh flat five**
⑫ **Seventh suspended four**
⑬ **Diminished seventh**
⑭ **Minor add ninth**
⑮ **Add ninth**
⑯ **Minor sixth**
⑰ **Sixth**
⑱ **Six ninth**

474A-E-030A

To specify a chord, hold down the key on the root input keyboard that specifies the root, and press the key in the chord type input keyboard to specify the chord type. When inputting a chord with a specified bass note, pressing two keys of the root input keyboard causes the lower note to be specified as a bass note.

Example 1: To input Gm7, hold down G on the root input keyboard and press the m7 key on the chord type input keyboard.

Hold down key to specify chord root. (G) ⟶ Press key to specify chord type. (m7)
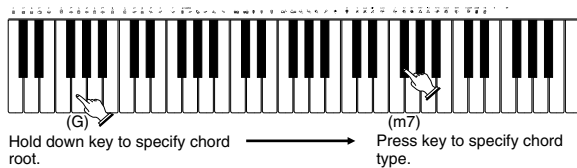
Example 2: To input Gm/C, hold down C and G on the root input keyboard and press the m key on the chord type input keyboard.

Hold down keys to specify on bass and chord root. (C) (G) ⟶ Press key to specify chord type. (m)
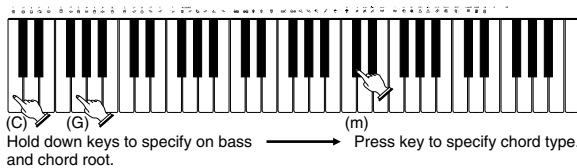
Specifying the Length of a Note

During step recording, the number buttons are used to specify the length of each note.

- **Note lengths**
  Use number buttons [1] through [6] to specify whole notes (𝅝), half notes (𝅗𝅥), quarter notes (♩), eighth notes (♪), 16th notes (♬), and 32nd notes (♬).

  Example: To specify a quarter note (♩), press [3].

- **Dots (•) and triplicates (⌐3¬)**
  While holding down the [7] (dot) or [9] (triplicate), use buttons [1] through [6] to input the lengths of the notes.

  Example: To input a dotted eighth notes (♪.), hold down [7] and press [4].

- **Ties**
  Press [8] and then input the first and then the second note.

  Example: To input ♪ ♪, press [8] and then press [4] (note length) while holding down [7] (dot). This note will be tied to the next note you input (16th note in this example).

- **Rest**
  Hold down [0] and then use number buttons [1] through [9] to specify the length of the rest.

  Example: To input an eighth note rest, hold down [0] and press [4].

Track 1 Step Recording Variations

The following describes a number of different variations you can use when recording to Track 1 using step recording. All of these variations are based upon the procedure described under "To record chords to Track 1 using step recording." on page E-28.

To start accompaniment with an intro pattern

In step 5, press the INTRO button after the SYNCHRO/ENDING button.

To switch to a rhythm variation

In step 6, press the VARIATION/FILL-IN button immediately before inputting the chord.

To insert a fill in

In step 6, press the NORMAL/FILL-IN or VARIATION/FILL-IN button at the measure or beat immediately before the chord or beat where you want to insert the fill in.

To insert an ending

In step 6, press the SYNCHRO/ENDING button at the measure or beat immediately before the chord where you want to insert the ending.

──── IMPORTANT! ────

The length of the ending depends on the rhythm you are using. Check the length of the pattern you are using and set the length of the chord accordingly in step 7. Making the chord too short in step 7 can result in the ending pattern being cut off.

To step record chords without rhythm

After performing steps 1 through 4, you can use the number buttons to input the length of the specified chord. Skipping step 5 (not pressing the SYNCHRO/ENDING button) creates chord without rhythm, so you can input a rest by pressing the [0] button in step 6 and then specifying the length of the rest in step 7.

To add chord accompaniment part way through rhythm play

In step 6, input all rests from the beginning of the recording up to the point where you want accompaniment to start. Next, input the chords.
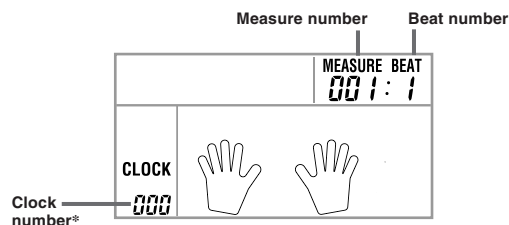
Step Recording Melody to Track 2

You can use step recording to input notes one-by-one in Track 2. This technique is perfect for those who want to make original recordings, but are not accomplished enough to play along with rhythm.
Note that step recording of melody notes can be performed in Track 2 only.

To step record melody to Track 2

1. Use the **MEMORY button** to enter record standby, and then use **[+]** and **[–]** to select 0 or 1 as the song number.
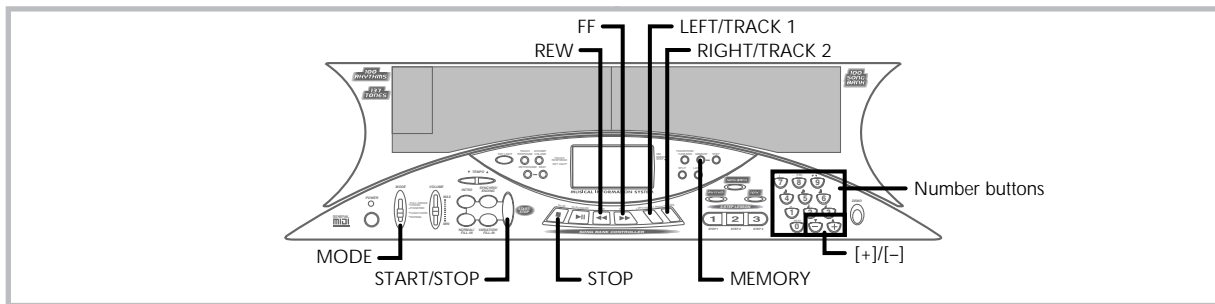

2. Press the **RIGHT/TRACK 2 button** to select Track 2.

3. Press the **STEP button** to start step recording.

Measure number   Beat number

MEASURE BEAT
001:1

CLOCK
000

Clock number*

* 48 clocks = 1beat

4. Select a tone number if you want.

FF — LEFT/TRACK 1
REW — RIGHT/TRACK 2
Number buttons
MODE
START/STOP — STOP — MEMORY
[+]/[−]

5. Use the keyboard keys or the **[+]** and **[−] buttons** to input notes, and the **[0] button** to input rests.
- When touch response is turned on, the amount of pressure you use to press keyboard keys is also recorded. You can also use keyboard keys to input chords.
- With [+] and [−] button input, a staff appears on the display showing the note you are inputting. The loudness or softness of a note input using these buttons is the same as the note immediately before it.
- To cancel input of a rest, press [0] again.

6. Use **number buttons [1]** through **[9]** to input the length of each note or rest.
- After input the length of a note or rest, the keyboard stands by for the next input.

7. Repeat steps 5 and 6 to input all the notes you want.
- If you make a mistake during input, you can make corrections using the procedures under "Editing Data While Step Recording" on this page.

8. After you are finished inputting notes, press the **START/STOP**, **MEMORY**, or **STOP button** to quit step recording.

∎ NOTES ∎
- During step recording of a melody, the entire keyboard is a melody keyboard, regardless of the MODE switch setting.
- During step recording you can use FF and REW to move the input point forward and back. See "Editing Data While Step Recording" on this page for details.

## Track 2 Contents After Step Recording

In addition to notes, tone numbers can also be recorded.

## Editing Data While Step Recording

Memory data can be thought of as a musical score that progresses from left to right, with the input point normally at the far right of the recorded data. The following procedure describes how to move the input point to the left in order to make changes in data you have already input. Note, however, that moving the input point to the left and changing data automatically deletes all of the data to the right of the input point.

To edit data while step recording

1. While a step recording operation is in progress, use the **FF** and **REW button** to move the input point to the location where you want to edit the data you have already input.
- If notes are already recorded, each press of FF or REW moves the input point to the next successive note. The data recorded at the current input point appears on the display.

Input point

MEASURE BEAT
020 : 1
CLOCK
040
R
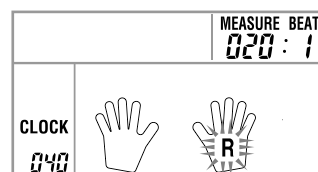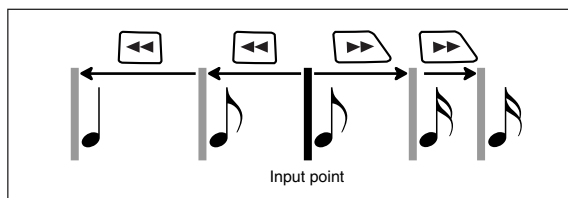
- If notes are not recorded, each press of FF or REW moves the input point to the next successive beat.

1 beat   1 beat   1 beat
Input point

MEASURE BEAT
025 : 1
CLOCK
040
R
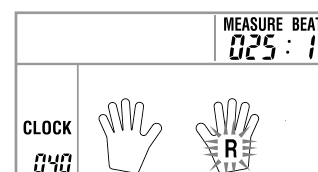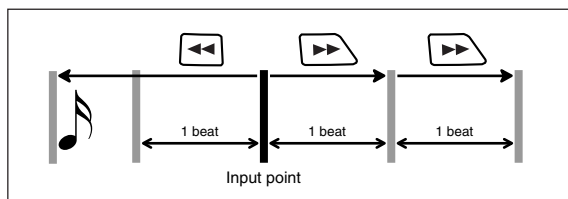
- If you move from an area that contains note data to an area that does not contain note data, each press of FF moves the input point to the next beat. Pressing the REW button, however, causes the input point to jump back to the location of the first note or rest to the left.

2. Press **[+]** and **[−]**.

Rewrite?

3. Press **[+]** to start the data editing operation or **[–]** to clear the data editing screen without changing anything.
   - Pressing [+] automatically clears all data to the right of the current input point. Next, the keyboard stands by for input of step recording data.
   - Pressing [–] clears the data editing screen and returns to the step recording screen where you can move the input point.

▋ NOTE ▋
The message [TrackEnd] appears on the display when the input point reaches end of the current data stored in Track 2. At this point you can perform steps 2 and 3 to add more data.

Deleting the Contents of a Specific Track

Use the following procedure to delete all of the data currently recorded in a specific track.

### To delete all of the data in a specific track

1. Use the **MEMORY button** to enter record standby, and then use **[+]** and **[–]** to select the song (0 or 1) whose track you want to delete.

$$\boxed{\mathbf{\textit{l}Rec.No.}}$$

2. Hold down the **MEMORY button** until the track delete screen appears on the display.

$$\boxed{\mathbf{\textit{l}Tr.Del.?}}$$

3. Use the **LEFT/TRACK 1** or **RIGHT/TRACK 2 button** to select the track whose data you want to delete.
   Example: To select Track 1

Flash
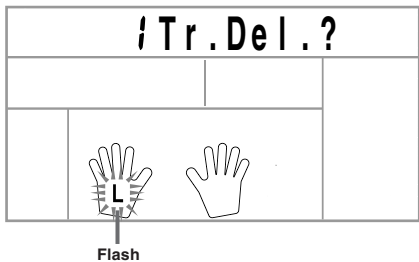
4. Press the **[+] button**.
   - This deletes the selected track and enters memory playback standby.

▋ NOTES ▋
- The track delete screen is cleared from the display automatically if you leave the keyboard with the track delete message on the display for about five seconds without doing anything.
- Once you select a track in step 3, you cannot change to a different track without quitting the track delete operation and starting again.
- You cannot select a track for deletion if that track does not contain any data.
- Pressing the MEMORY button while the track delete screen is on the display returns to record standby.