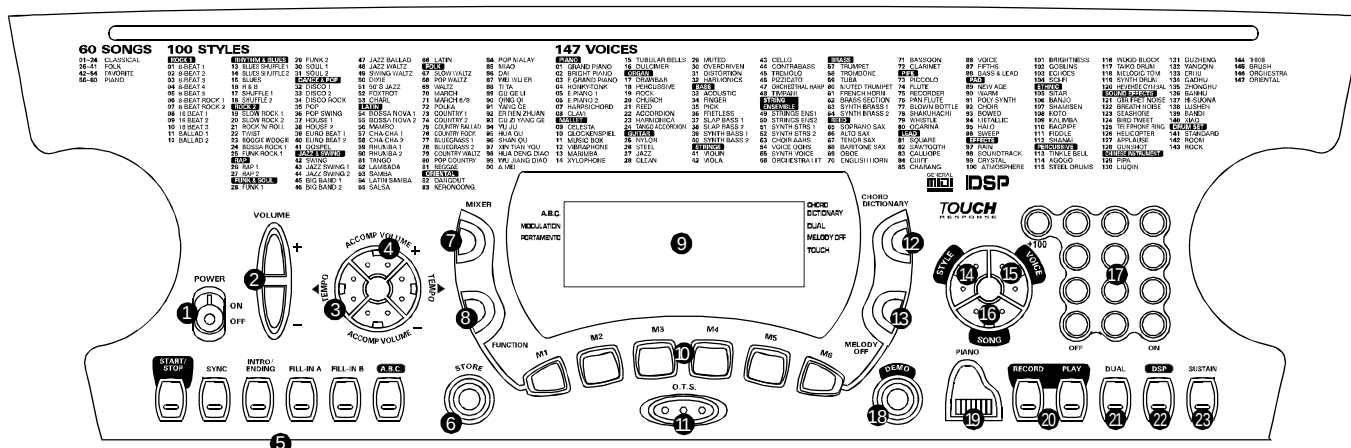


CONTENT

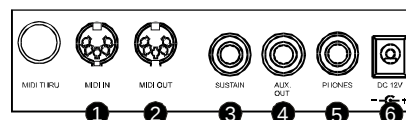
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General Guide



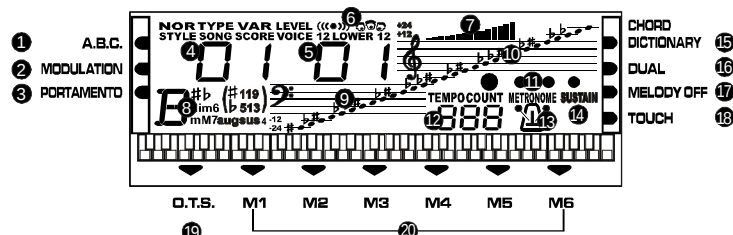
1. FRONT PANEL

- 1 POWER SWITCH
- 2 MASTER VOLUME +/-
- 3 TEMPO +/-
- 4 ACCOMP VOLUME +/-
- 5 ACCOMPANIMENT CONTROL
 - START/STOP
 - SYNC
 - INTRO/ENDING
 - FILL-IN A
 - FILL-IN B
 - A.B.C.
- 6 STORE
- 7 MIXER
- 8 FUNCTION
- 9 LCD
- 10 MEMORY 1-6
- 11 O.T.S.
- 12 CHORD DICTIONARY
- 13 MELODY OFF
- 14 STYLE
- 15 VOICE
- 16 SONG
- 17 NUMERIC KEYPAD
- 18 DEMO
- 19 PIANO
- 20 RECORD/PLAY
- 21 DUAL
- 22 DSP
- 23 SUSTAIN



2. REAR PANEL

- 1 MIDI IN PORT
- 2 MIDI OUT PORT
- 3 SUSTAIN JACK
- 4 AUX. OUT JACK
- 5 PHONES JACK
- 6 DC 12V JACK



3. LCD DISPLAY

- 1 A.B.C.
- 2 MODULATION
- 3 PORTAMENTO
- 4 STYLE/SONG
- 5 LOWER/VOICE 1/
VOICE 2
- 6 DSP
- 7 VOLUME
- 8 CHORD
- 9 BASS CLEF
- 10 TREBLE CLEF
- 11 BEAT
- 12 TEMPO
- 13 METRONOME
- 14 SUSTAIN
- 15 CHORD DICTIONARY
- 16 DUAL
- 17 MELODY OFF
- 18 TOUCH
- 19 O.T.S.
- 20 MEMORY 1-6

Introduction

Thank you for purchasing the electronic keyboard. This keyboard provides you with the following features and functions:

- 147 PCM voices + Drum and Percussion Sounds
- 100 Styles
- 60 Demo Songs with playing along feature
- Auto Accompaniment with Normal, Fingered and Single Finger control modes
- One Touch Setting
- Record and Playback
- MIDI compatibility

Care of your keyboard

Your keyboard will give you years of playing pleasure if you follow the simple rules below:

- Do not expose the keyboard to the high temperature, direct sunlight, and excessive dust places
- Avoid physical shocks caused by dropping, bumping, or placing heavy objects on the keyboard.
- Never use cleaners such as alcohol or thinner to clean the keyboard.
- Always turn power off when making any connections.

Power Supply

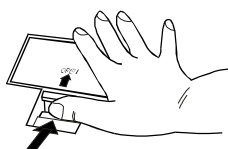
This keyboard can be powered by current from a standard household wall outlet (by using the specified AC adaptor) or by batteries. Always turn off the keyboard when you are not using it.

Using batteries

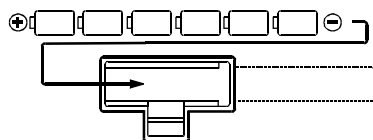
Always turn off the keyboard before loading or replacing batteries.

To load batteries:

1. Remove the battery compartment cover.



2. Load six "D size" (SUM-1 or R20) batteries into the battery compartment, being careful to follow the polarity markings on the cabinet.



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

Important battery information:

Any of the following symptoms indicate low battery power. Replace batteries as soon as possible whenever any of the following occurs.

- Dim, difficult to read display.
- Abnormally low speaker/headphone volume.
- Distortion of sound output.
- Sudden power failure when playing at high volume.
- Abnormal rhythm or demo song plays.
- Dimming of the display when playing at high volume.

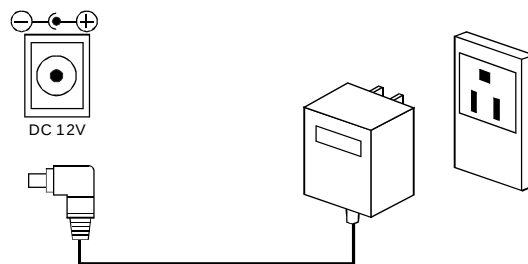
Cautions:

Improper handling of batteries can cause them to burst and leak, which creates the danger of personal injury or damage of the keyboard. Be sure to note the following precautions:

- Never mix batteries of different types.
- Never mix old batteries with the new ones.
- Replace batteries as soon as possible after any sign of running out.
- Remove the batteries from the keyboard when not using for an extended period of time.

Using the AC adaptor

Use only the specified AC adaptor for this keyboard. The adaptor shall be 12V DC output, 2200mA, and center positive type. Turn off the keyboard before you connect the adaptor into the AC wall outlet and the cord into the unit.



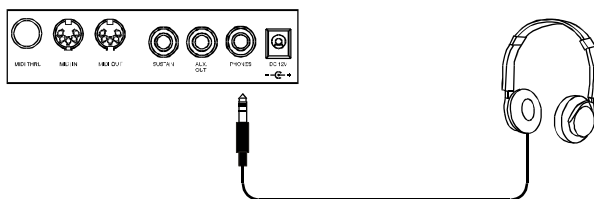
Cautions:

- Use only the specified AC adaptor. Use of another type of adaptor creates the danger of fire and electronic shock.
- For safety sake, unplug the AC adaptor from the wall outlet when leaving the keyboard unattended for a long time

Connections

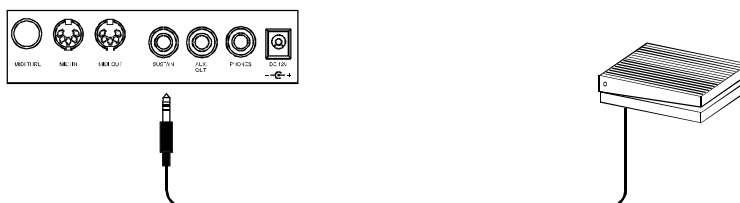
The headphones jack

A standard pair of stereo headphones can be plugged in **PHONES** jack for private practice or late night playing. The internal speaker system is automatically shut off when the headphones are plugged into the **PHONES** jack.



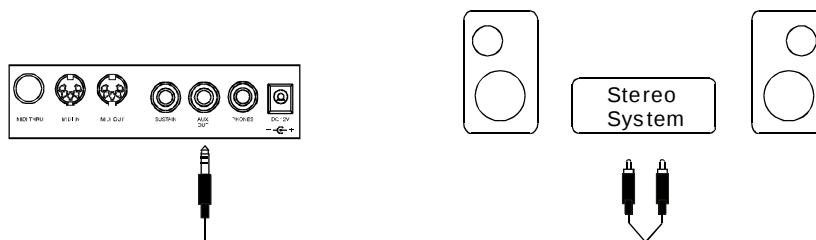
The sustain jack

An optional foot switch can be plugged into the **SUSTAIN** jack for sustain control. The foot switch functions like the pedal on a piano—press for sustain, release for normal sound.



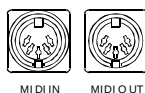
The AUX.OUT jack

The **AUX.OUT** jack delivers the output of the keyboard for the connection to an external amplifier. Using audio cord, plug into **AUX.OUT** jack located on the rear panel. Then plug the other end of the cord into **LINE IN** or **AUX.IN** of the amplifier.



The MIDI IN/OUT jacks

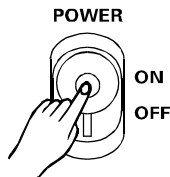
The **MIDI IN** connector receives MIDI data from an external MIDI device. The **MIDI OUT** connector transmits MIDI data generated by the keyboard to an external MIDI device.



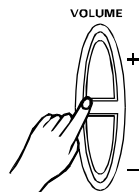
Play demo songs

A selection of 60 demo songs come built-in for your listening pleasure or play along fun. They will give you a good idea of what your keyboard can do.

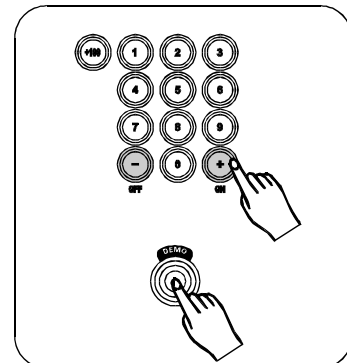
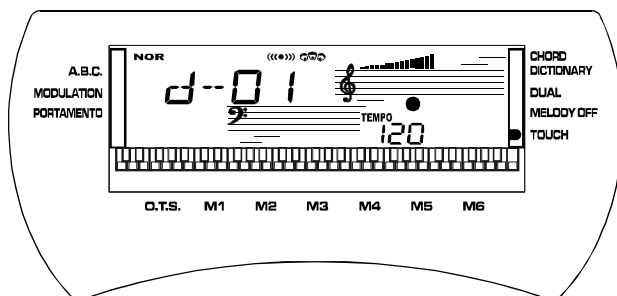
1. Turn the power ON by pushing the **[POWER]** switch upwards.



2. Adjust the volume to a appropriate level by pressing the **[VOLUME+/-]** button.

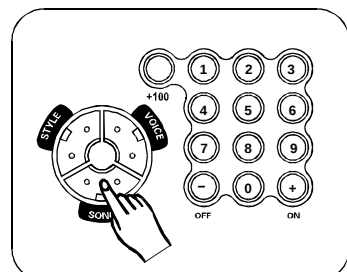
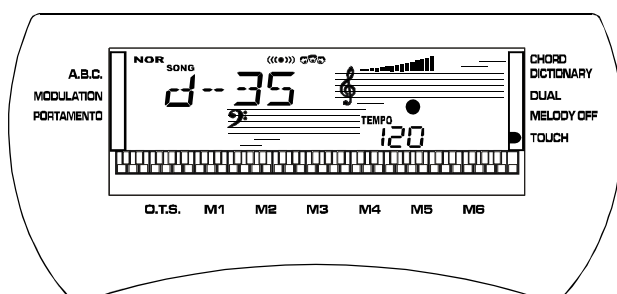


3. Press the **[DEMO]** button . The keyboard starts to play the demo songs. While the keyboard is playing the demo song, you can press the **[-/OFF]** or **[+/ON]** button to step to the next demo song in the corresponding direction . Press the **[DEMO]** button again to stop the play.

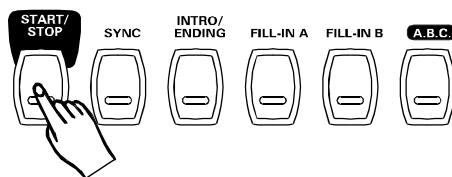


Listen to a particular demo song

1. Select the SONG mode by pressing the **{SONG}** button.
2. Use the NUMBER buttons to input the two-digit number of a demo song. For example, to select 35 input 3 and then 5.



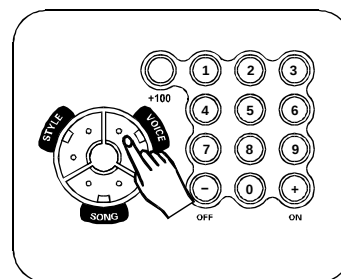
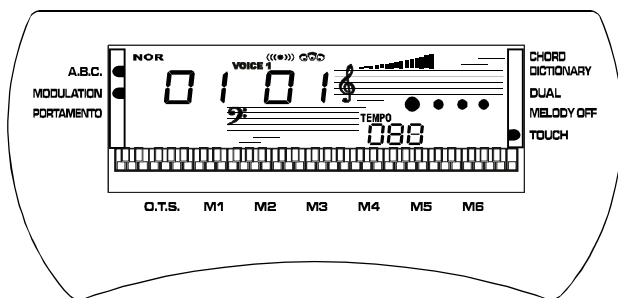
- Press the **[START/STOP]** button to start playing the demo song. The song will play in endless loop, re-starting after it reaches the end. Press the **[START/STOP]** button again to stop the play.



Basic Operation

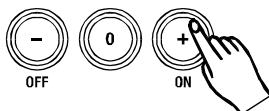
Selecting & playing voices

The keyboard has 147 PCM voices and percussion kits that you can select and play on the keyboard. Before you select a voice, make sure you have selected **VOICE** mode. Press the **[VOICE]** button to select the **VOICE** mode.



The **[-/OFF]** and **[+/ON]** buttons:

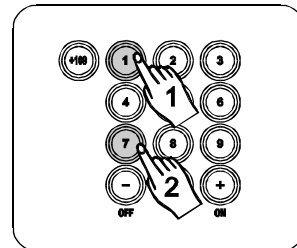
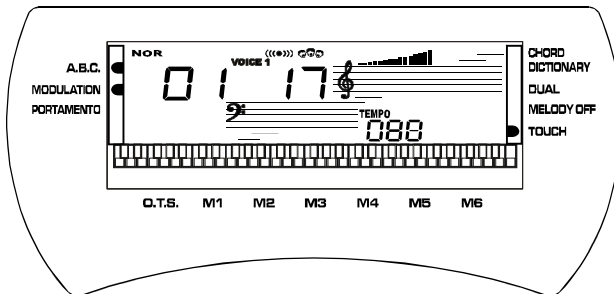
When the **VOICE** mode is selected, these buttons step up or down through the voices list. Press these buttons briefly to step to the next voice in the corresponding direction, or hold the button to scroll rapidly through the voices in the corresponding direction. The selected voice number shows in the display.



The number buttons:

The number buttons can be used to directly enter the number of the desired voice, thereby immediately selecting that voice without having to step through a number of other voices.

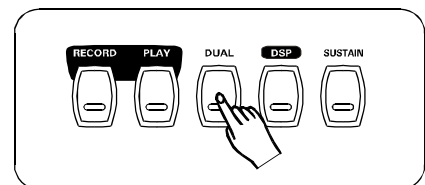
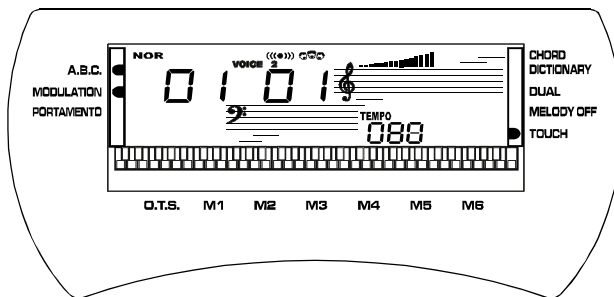
Two-digit voice number are selected simply by entering the two digits in sequence--e.g. to select voice number 17, briefly press the **[1]** button and then the **[7]** button.



Three digit voice number are entered by first pressing the **[+100]** button, then press the remaining two digits in sequence.

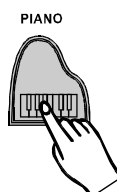
Dual voice:

To create a dual voice effect, use the number buttons to input the first voice digits. Pressing the **[DUAL]** button, a word **VOICE 2** appears in the display. Then input the selected second voice digits. Press the **[DUAL]** button again to turn this function off, and a word **VOICE 1** appears in the display.



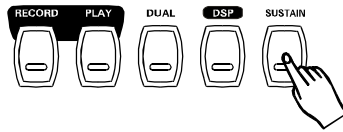
Instant select Piano voice:

You can select the piano voices immediately by pressing the **[PIANO]** button. Press the **[PIANO]** button again to return to the previously selected voice.



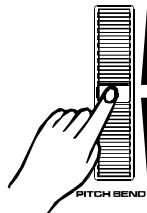
Sustain voice effect

You can add a sustain voice effect to the overall of the sound simply by pressing the **[SUSTAIN]** button. Press the **[SUSTAIN]** button again to turn this function off.



Pitch bend

The **[PITCH BEND]** wheel allows the pitch of notes played on the electronic keyboard to be bend up or down-roll the wheel away from you to bend up, and towards you to bend down. The pitch bend range is from -2 to +2 in semitone.



Modulation/Portamento

When you turn on the keyboard, the Modulation indicator appears in the display, indicates that the Modulation mode is selected.

You can play the voice vibrating over and over again in pitch on the electronic keyboard by holding the **[MODULATION/PORTAMENTO]** button and play the keyboard.

When you release the **[MODULATION/PORTAMENTO]** button, the vibration function turns off immediately.



To select the Portamento mode, you need to press the **[FUNCTION]** button to enter the "Key" menu, for details please see the section "Function Select".

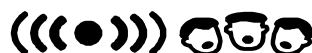
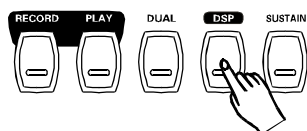
You can play the voice sliding on the electronic keyboard by holding the **[MODULATION/PORTAMENTO]** button and play the keyboard.

When you release the **[MODULATION/PORTAMENTO]** button, the vibration function turns off immediately.

Note: 1. To activate the Portamento effect, you need to hold the key and then play another key.
2. When the Split mode is activated, the Portamento effect at the left section will not take effect.

Digital Signal Processor (DSP)

The Digital Signal Processor (DSP) consist of two units (Reverb and Chorus) which process the Performances with Reverb and Chorus effects. To turn on/off the DSP, simply press the DSP button.

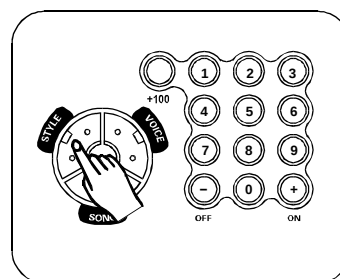
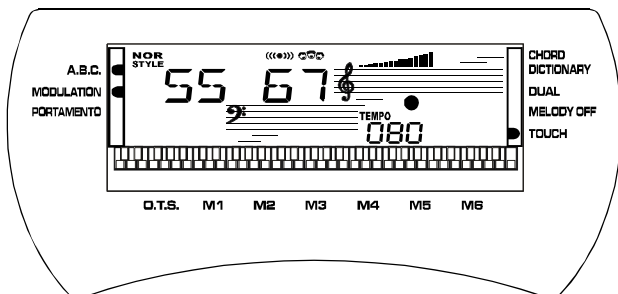


The Reverb and Chorus icon

Auto-Accompaniment

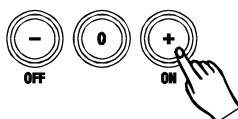
Selecting a style

The keyboard has 100 different auto-accompaniment styles that can be used to provide fully-orchestrated accompaniment. Its sophisticated Auto Accompaniment system can provide automated bass and chord backing that is perfectly matched to the selected accompaniment style. Before you select a style, make sure you have selected **STYLE** mode. Press the **[VOICE/STYLE/SONG]** button to select the **STYLE** mode.



The [-/OFF] and [+ /ON] buttons:

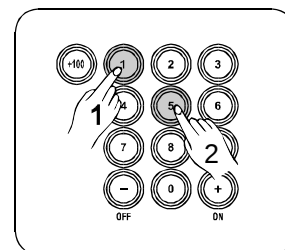
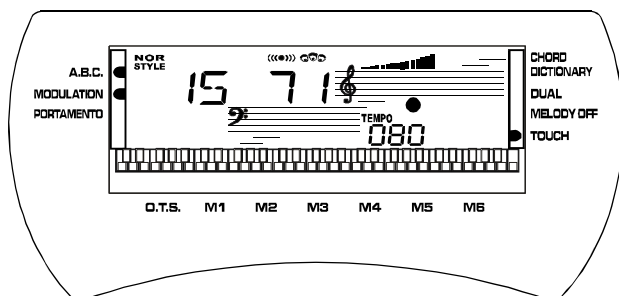
When the **STYLE** mode is selected, these buttons step up or down through the styles list. Press these buttons briefly to step to the next style in the corresponding direction, or hold the button to scroll rapidly through the styles in the corresponding direction. The selected style number shows in the display.



The number buttons:

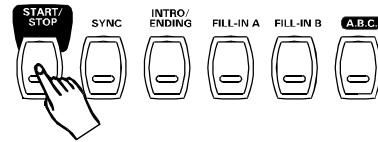
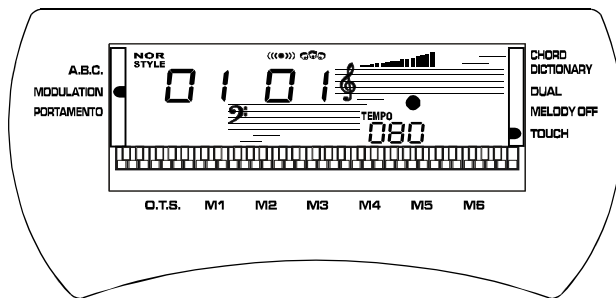
The number buttons can be used to directly enter the number of the desired style, thereby immediately selecting that style without having to step through a number of other styles.

To select a style simply enter the two digits in sequence--e.g. to select style number 15, briefly press the **[1]** button and then the **[5]** button.



Playing a selected Style

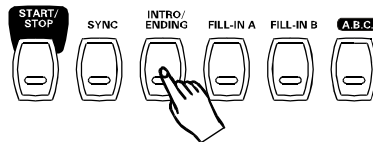
1. Press the **[START/STOP]** button to start playing the selected style.



2. To stop the style, press the **[START/STOP]** button again.

To start the style with introductory pattern

1. Press the **[INTRO/ENDING]** button to put the keyboard into introduction start standby.
2. Press the **[START/STOP]** button, and then play a chord on the keyboard.
The keyboard plays an introductory pattern and then the selected style.

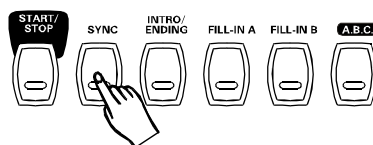


To stop the style with ending phrase

While the style is playing, press the **[INTRO/ENDING]** button and the keyboard will play an ending phrase and then stop the play.

Use synchro to start the style

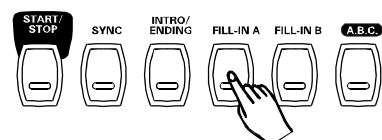
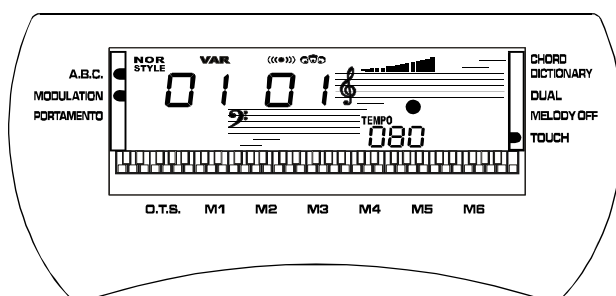
1. Press the **[SYNC]** button, the display shows the flashing beat indicator and put the keyboard into synchro start standby.
2. Play a chord on the keyboard and the style starts to play automatically.



Select the Fill In and change Style Variation

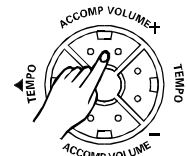
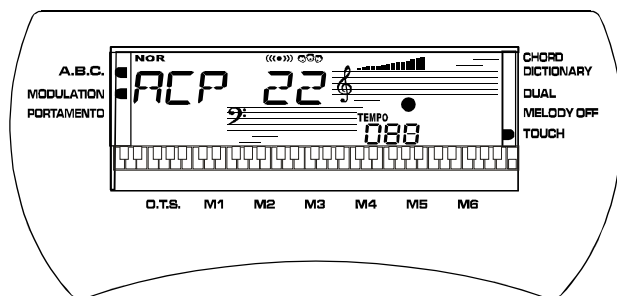
Each Style has two accompaniment patterns, NORMAL and VARIATION, which you can select at any time before or after starting to play the Styles by pressing the corresponding button. The status is shown in the display, A is Normal, and B is Variation.

When you press the **[FILL-IN A]** or **[FILL-IN B]** button during playback, the current pattern is interrupted by an appropriate Fill in, then it proceed with the same pattern or variation, depending on which button you press.



Accompaniment Volume

1. You can adjust the Accompaniment Volume with the **[ACCOMP+]**/**[ACCOMP-]** buttons. The volume level ranges from 00 to 31.

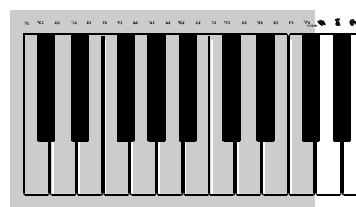
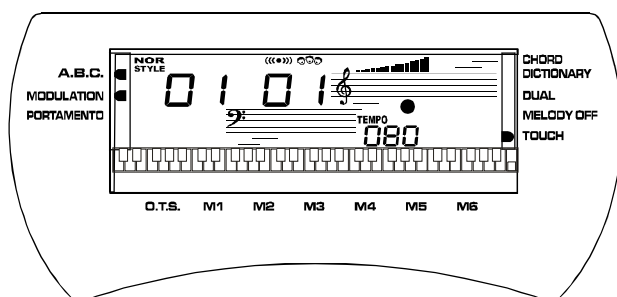


2. You can turn off the accompaniment volume by pressing the **[ACCOMP+]** and **[ACCOMP-]** buttons simultaneously, the display shows the message "ACPoff". In this situation, you can turn back on the accompaniment volume by pressing the **[ACCOMP+]** and **[ACCOMP-]** buttons simultaneously.

Note: You can adjust the accompaniment volume rapidly by holding the **[ACCOMP+]** or **[ACCOMP -]** buttons.

Auto Bass Chord

1. Press the **[A.B.C.]** Button to activate the Auto Bass Chord function, at this time, play the left section of the keyboard (from note C2 up to note F#3) to hear the effect.



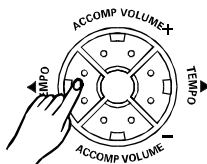
Auto Bass
Chord

The keyboard allows you to play in Fingered or Single Finger mode, if you play correspond with the Fingered mode, then the keyboard respond with Fingered mode, otherwise, the keyboard respond with Single Fingered mode.

2. To turn off the Auto Bass Function, press the **[A.B.C.]** Button again.

Set the Tempo

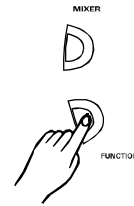
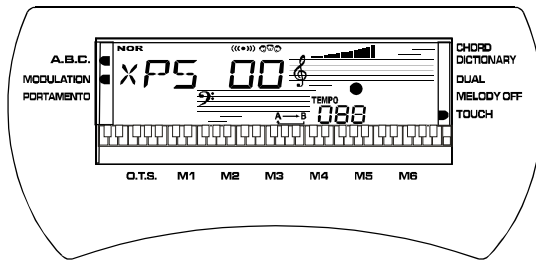
When you select a different style, the "default" tempo for that style is also selected, You can change the tempo to any value between 30 and 280 beats per minute by using **TEMPO [+]** and **[-]** buttons. Press either button briefly to increase or decrease the tempo value by one, or hold the button for continuous decrement or increment. The default tempo for the selected style can be recalled at any time by pressing both the **TEMPO [+]** and **[-]** buttons simultaneously.



Function Select

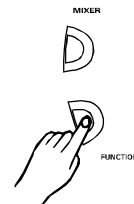
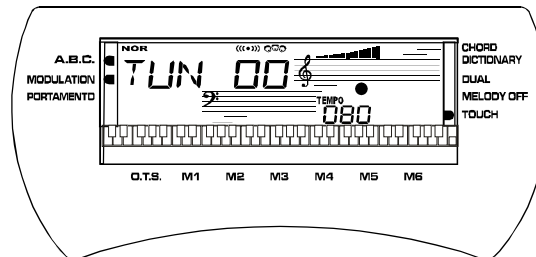
1. Transpose

Press the [FUNCTION] button as many time as necessary until "xPS xx" appear in the display, you can use the [-/NO]/[+/YES] button to adjust the level.



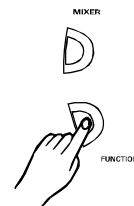
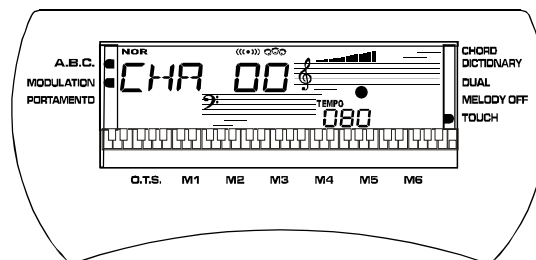
2. Tune

Press the [FUNCTION] button as many time as necessary until "TUN xx" appear in the display, you can use the [-/NO]/[+/YES] button to adjust the level.



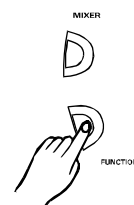
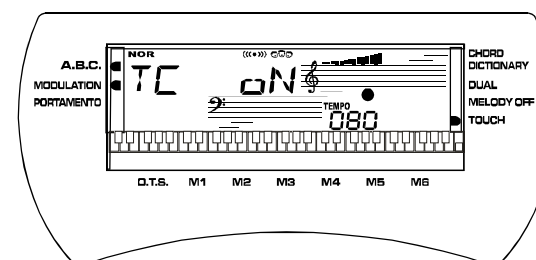
3. MIDI Channel

Press the [FUNCTION] button as many time as necessary until "CHA xx" appear in the display, you can use the [-/NO]/[+/YES] button to adjust the level.



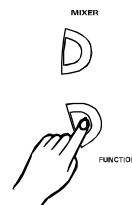
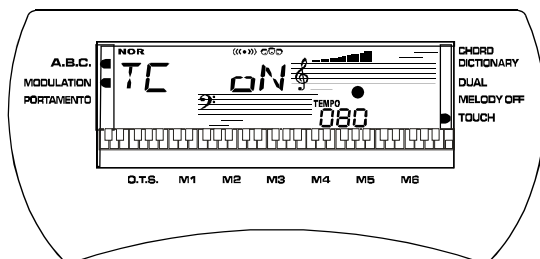
4. Touch Response

Press the [FUNCTION] button as many time as necessary until "TC oN" appear in the display, you can use the [-/NO]/[+/YES] button to turn on/off the touch response function.



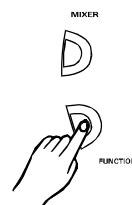
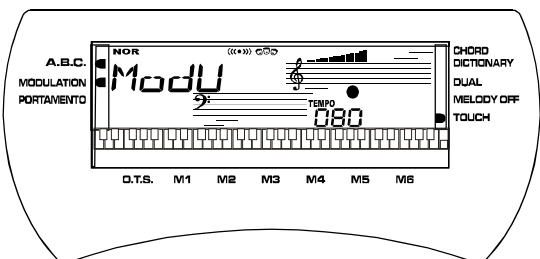
5. Octave

Press the [FUNCTION] button as many time as necessary until "oCT xx" appear in the display, you can use the [-/NO]/[+/YES] button to adjust the level.



6. Modulation/Portamento

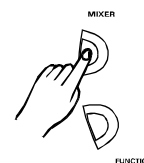
Press the [FUNCTION] button as many time as necessary until "ModU" appear in the display, you can use the [-/NO]/[+/YES] button to switch between ModU(modulation) or PoRT(portamento).



Mixer Control

Press the [MIXER] button as many time as necessary until your desired track appear in the display, you can use the [-/NO]/[+/YES] button to adjust the volume level of each track.

Track	On Display	Range	Default Setting
Oc Volume	OC	0...31	23
Up Volume	UP	0...31	28
Drum Volume	dR	0...31	23
Bass Volume	bS	0...31	23



When you press the [-/NO] and [+/YES] buttons simultaneously, the keyboard will shut down the volume of the selected track. Press the two buttons simultaneously again to turn the accompaniment track volume on.

Memorize panel settings

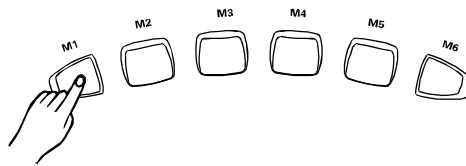
The keyboard has 6 memory pads which can be used to memorize the control-panel setups. You can press one of the **MEMORY** button (M1-M6) to recall the setups at any time.

Register the settings:

When you have finished the settings, you press and hold the **[STORE]** button, then press one of the **MEMORY** button. Any data that was previously in the selected location is erased and replace by the new settings.

Note:

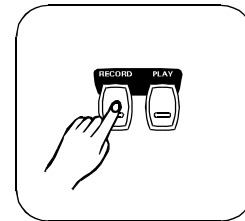
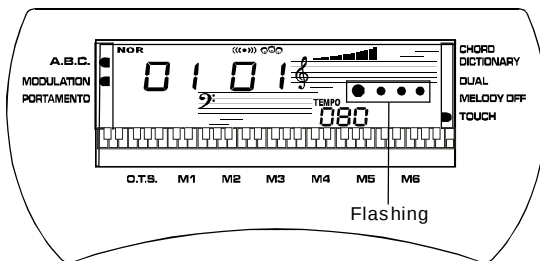
When you turn off the keyboard, the setting will be erased.



Record

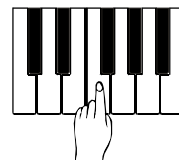
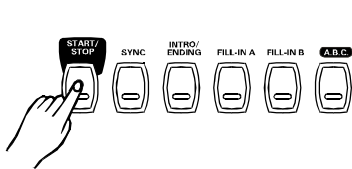
Getting Ready to Record

Press the **[RECORD]** button to engage the Record Ready mode. The Beat Indicator will start to flash, and you can select the voice, style and track to record.



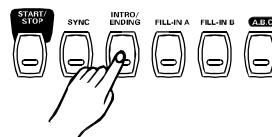
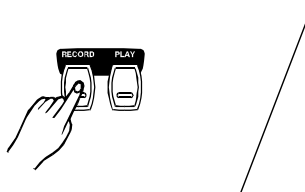
Start Recording

Recording will start as soon as you play a note on the keyboard or press the **[START/STOP]** button, and the Beat indicator will begin as in the Auto Accompaniment mode.



Stop Recording

Stop recording by pressing the **[RECORD]** button. If you press the **[INTRO/ENDING]** button while recording the Accompaniment track, recording will stop automatically with an ending phrase.



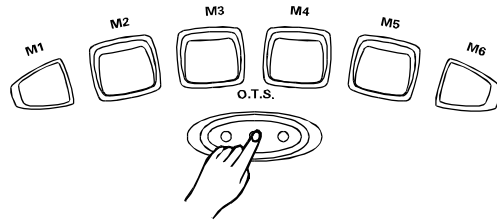
Playback

After you have recorded a performance, you can press the **[PLAY]** button to playback the recorded performance.

One Touch Setting

One Touch Setting lets you instantly select the appropriate panel settings suitable for the current style. Each style contains four variations.

1. Press the [OTS] button.



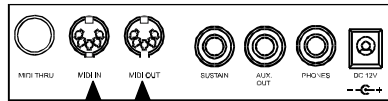
2. Press the [START/STOP] button to play the selected style. While playing the style, you can press one of the One Touch Setting buttons - [M1] through [M4] to select the appropriate settings. [M1] or [M2] is for FILL-IN A mode, [M3] or [M4] is for FILL-IN B mode.
3. Press the [OTS] button again to turn off this function.

MIDI

The MIDI IN and MIDI OUT terminals, located on the rear panel of the unit, offer broadened musical possibilities through use of MIDI. The following shows the description of MIDI and how can you use MIDI with the keyboard.

What is MIDI?

MIDI stand for Musical Instrument Digital Interface. MIDI is a world wide standard that makes it possible for various electronic musical instruments and other devices, such as computers, to "communicate with each other".



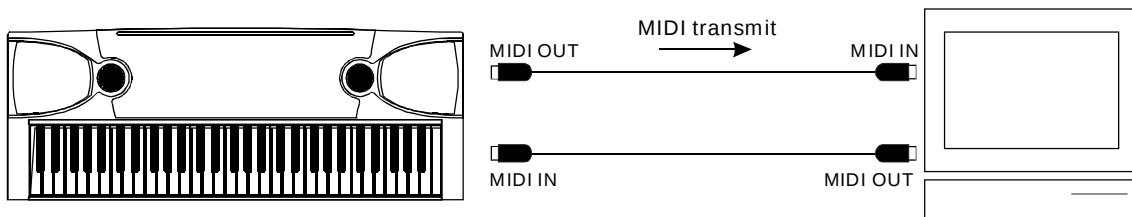
MIDI IN/OUT
Terminals

The keyboard is equipped with two types of MIDI terminals, both are located on the rear panel.

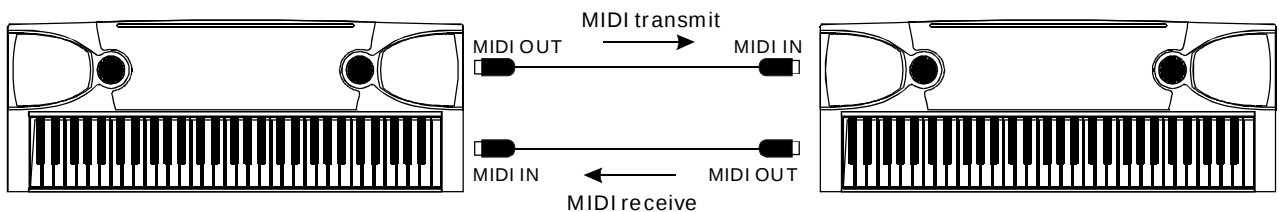
- **MIDI IN**
Data transmitted from other MIDI instruments via MIDI, is received at this terminal.
- **MIDI OUT**
Data produces by the keyboard, is transmitted to other MIDI instruments via MIDI from this terminal.

What you can do with MIDI?

- Record performance data using the keyboard Auto Accompaniment on a external sequencer . After recording, edit the data with the sequencer, ther play it again on the keyboard.



- Play music from another keyboard .



Specifications

Keys:	61 keys with Touch Response
Voices:	147 PCM voices
Polyphony:	64-note (max.)
Styles:	100 styles
Accompaniment Control:	Sync, Intro/Ending, FILL-IN, OTS
DEMO Song:	60 demo songs
Overall Control:	Transpose, Tune, MIDI Channel, Octave, Pitch Bend, Portamento, Modulation
Other Control:	Record & Playback
Connectors:	DC 12V, Phones, Aux. Out, Sustain, MIDI IN/OUT
Weight:	6.2 kg(without batteries)
Dimensions:	975(W) x 350(D) x 135(H)mm

Appendix: Chord Table

	Chord Name [Abbreviation]	Normal Voicing	Chord	Display
0	Major[M]	1-3-5	C	C
1	Major sixth [6]	1-(3)-5-6	C6	C6
2	Major seventh [M7]	1-3-(5)-7	CM7	CM7
3	Major seventh sharp Eleventh [M7#11]	1-(2)-3-#4-(5)-7	CM7#11	CM7#11
4	Major add ninth [Madd9]	1-2-3-5	Cmadd9	Cm(9)
5	Major ninth [M9]	1-2-3-(5)-7	Cm9	CM7(9)
6	Major sixth add ninth [6 9]	1-2-3-(5)-6	C6 9	C6(9)
7	augmented [aug]	1-3-#5	Caug	Caug
8	Minor [m]	1-b3-5	Cm	Cm
9	Minor sixth [m6]	1-b3-5-6	Cm6	Cm6
10	Minor seventh [m7]	1-b3-(5)-b7	Cm7	Cm7
11	Minor seventh flatted fifth [m7b5]	1-b3-b5-b7	Cm7b5	Cm7b5
12	Minor add ninth [madd9]	1-2-b3-5	Cmadd9	Cm(9)
13	Minor ninth [m9]	1-2-b3-(5)-b7	Cm9	Cm7(9)
14	Minor eleventh [m11]	1-(2)-b3-4-5-(b7)	Cm11	Cm7(11)
15	Minor major seventh [mM7]	1-b3-(5)-7	CmM7	CmM7
16	Minor major ninth [mM9]	1-2-b3-(5)-7	CmM9	CmM7(9)
17	Diminished [dim]	1-b3-b5	Cdim	Cdim
18	Diminished seventh [dim7]	1-b3-b5-6	Cdim7	Cdim7
19	Seventh [7]	1-3-(5)-b7	C7	C7
20	Seventh suspended Fourth [7sus4]	1-4-5-b7	C7sus4	C7sus4
21	Seventh flatted Fifth [7b5]	1-3-b5-b7	C7b5	C7b5
22	Seventh Ninth [7 9]	1-2-3-(5)-b7	C7 9	C7(9)
23	Seventh sharp eleventh [7#11]	1-2-3-#4-(5)-b7 or 1-(2)-3-#4-5-b7	C7#11	C7(#11)
24	Seventh thirteen [7 13]	1-b2-3-(5)-b7 or 2-3-5-6-b7	C7 13	C7(13)
25	Seventh flatted Ninth [7b9]	1-b2-3-(5)-b7	C7b9	C7(b9)
26	Seventh flatted Thirteen [7b13]	1-3-5-b6-b7	C7b13	C7(b13)
27	Seventh sharp ninth [7#9]	(1)-#2-3-(5)-b7	C7#9	C7(#9)
28	Major Seventh augmented [M7aug]	1-3-#5-7	CM7aug	CM7aug
29	Seventh augmented [7 aug]	(1)-3-#5-b7	C7aug	C7aug
30	Suspended Fourth [sus4]	1-4-5	Csus4	Csus4
31	One plus two plus five [1+2+5]	1-2-5	C1+2+5	C