Princeton SP-88 Portable Ensemble

USER'S MANUAL

Princeton

For a more musical life™

Using the Instruction Manual

Thank you for purchasing this high quality Digital Piano. Your new Piano is easy to use and easy to transport. It has powerful and useful features that make it perfect for real-time performance or as a versatile instrument for your home. Your piano offers powerful and useful features including: programmable panel memories, SYNTH-feature (create your own sounds!), multi-track record, built-in music styles, EZ-play features and lots more!!!

Before you use the piano, we recommend you read through this manual. Please keep this manual handy for future reference.

Precautions

Please read the following carefully before use:

- Do not expose the piano to high temperature, direct sunlight or excessive dust.

- Do not place the piano too close to other electrical appliances such as televisions and radios (the electronic signals from these devices may cause interference).

- Avoid Liquids and excessive humidity – in particular, avoid placing liquid containers (vase, glass, etc…) on the piano to prevent damage of the internal components (being an electrical instrument, your piano is very sensitive to liquids!).

- Always unplug your piano by gripping the AC plug firmly (near the plug) – do not pull on the cord.

- Do not apply excessive force to the switches and buttons.

- When the piano is not in use or during electrical storms, please disconnect the power supply

- Avoid adjusting the volume to the maximum level or to a level that you feel uncomfortable, it is recommended that you limit the volume level to two-thirds of the max to prevent any damage of your auditory sense

- Unplug the power cable before cleaning the piano. Do not connect or disconnect the power cable with a wet hand.

- Check and clean the power plug periodically.

- To avoid damage to the piano and other devices to which it is connected, turn the power switches of all related devices off prior to connecting or disconnecting cables.

- Clean the piano and remove the dust with a dry soft cloth or a slightly damp cloth. – never spray any cleaners directly on or into your piano.

- Never use cleaners such as thinner or alcohol. To prevent any damage on the surface of the LED display, please use lens cleaning tissue to clean the display.
- If the piano power cord is damaged in any way, please do not use the piano. A damaged power cord risks fire or electrical hazard.

- In case of malfunction due to improper handling of the piano, please switch your piano off and wait 30 seconds before turning on again.

- Do not attempt to disassemble or repair the piano by yourself. If the piano does not work properly, please contact your authorized reseller or service technician.

Main Features

- Keyboard: 88 hammer action key
- Modifying Parameters: Use the round DIAL & the [+/YES] / the [-/NO] buttons or numeric keypad to select Menus & Parameters
- Program (Voice): there are 350 incredible sound presets (including user-editable presets)
- Synth: you can use the SYNTH feature to create your own sounds
- Demo: three built-in demos
- Style: 130 built-in Music Styles
- Language: the large LCD display screen can be viewed in several languages
- The piano has a friendly interface, especially the menu operation. You can use BACK/NEXT/+/-/DIAL to operate all features
- Chord: A.B.C mode. This is the "EZ-Play" feature that allows the keyboard to read your chords in the left hand while playing your melody in the right hand
- Record: you piano can record two songs. Each one has 4 melody tracks and an

accompaniment track.

- Read and write SM (smartmedia®) card: the piano can play or record Standard MIDI files from your SM card - save songs and other storage data onto your SM card. Supports 16MB, 32MB, 64MB, and 128MB SM cards
- Panel Memories: 48 total – with 8 Banks -   6 Memories each
- PitchBend & Modulation "joystick": horizontal movement of the joystick controls Pitch Bend., vertical movement controls the Modulation effect
- Album: your piano provides a set of default parameters for 100 songs to get optimal performance effects
- Other functions: Your piano features other great features like ONE-Touch-Setup, DSP (Digital Signal Processing) and a lot more!
- MIDI: Your piano can easily be connected with other MIDI instruments through your MIDI IN/OUT ports.
- Online HELP button: virtual help menu whenever you need it!

Basic Description of Features
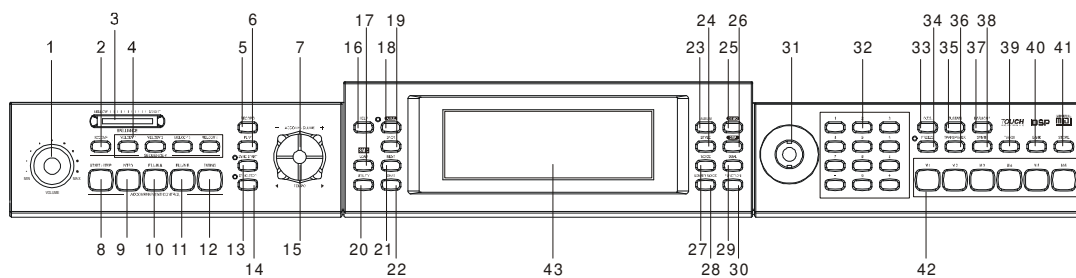
1. FRONT PANEL

|			
1) MASTER VOLUME	15) TEMPO +/-	29) DUAL
2) ACCOMP	16) HELP	30) FUNCTION
3) BRILLIANCE SLIDER	17) SMC LOAD	31) DIAL
4) SONG TRACKS	18) A.B.C (Auto Chord)	32) NUMERIC KEYPAD
5) RECORD	19) BACK	33) O.T.S.
6) PLAY	20) UTILITY	34) FREEZE
7) ACCOMP VOLUME +/-	21) NEXT	35) SUSTAIN
8) START/STOP	22) SAVE	36) TRANSPOSE
9) INTRO	23) ALBUM	37) HARMONY
10) FILL-IN A	24) STYLE	38) SYNTH
11) FILL-IN B	25) DEMO	39) TOUCH
12) ENDING	26) DSP	40) BANK
13) SYNC START	27) VOICE	41) STORE
14) SYNC STOP	28) LOWER VOICE	42) M1-M6
		43) LCD DISPLAY
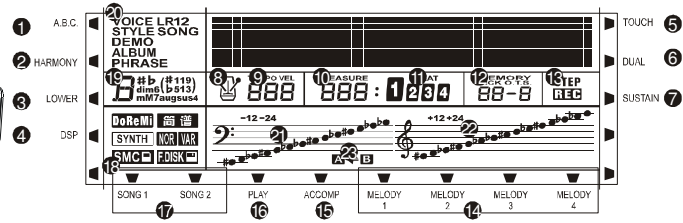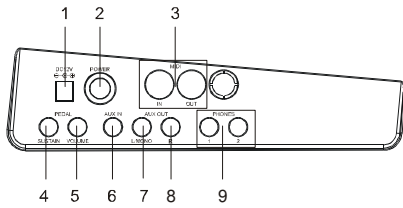
2. L.H. SIDE

1) DC12V POWER JACK
2) POWER
3) MIDI IN/MIDI OUT
4) SUSTAIN PEDAL
5) VOLUME PEDAL
6) AUX.IN
7) AUX.OUT L/MONO
8) AUX.OUT RIGHT
9) PHONES1/PHONES 2

3. LCD DISPLAY

1) A.B.C.
2) HARMONY
3) LOWER
4) DSP
5) TOUCH
6) SUAL
7) SUSTAIN
8) METRONOME
9) TEMPO VEL
10) MEASURE
11) BEAT
12) MEMORY/O.T.S. /TICK
13) STEP/REC

14) MELODY 1-4
15) ACCOMP
16) PLAY
17) RECORD SONG 1/2
18) SYNTH/NOR/VAR/SMC/
19) DISK
20) CHORD
21) VOICE/STYLE/SONG/
22) DEMO/ALBUM/PHRASE
23) BAS CLEF
24) TREBLE CLEF
25) FILL-IN A/FILL-IN B

4. REAR PANEL

3.3 SMC SLOT

SMC BASE

5. JOY STICK
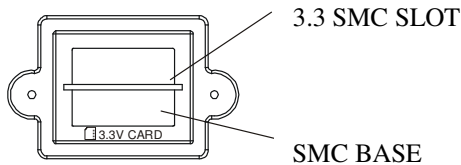
Pitch bend/
modulation joystick
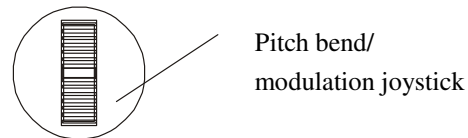
Connections

## The power jack

Your piano can be powered from a standard household wall outlet by using the specified AC adaptor. The power jack is located on the left panel of the piano body. Make sure that only the AC adaptor specified for this piano is used. The adaptor shall be 12V DC output, and center positive type.

Make sure to turn off the piano before you connect the adaptor into the AC wall outlet.
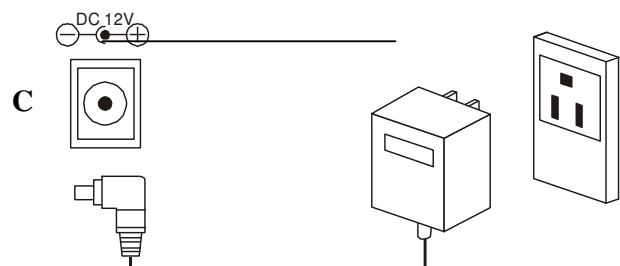
Use of a different type of adaptor risks
fire and/or electrical shock. For safety sake,
make sure to unplug the AC adaptor from the
wall outlet whenever leaving the piano
unattended for a long time or during an electrical
storm.

The headphone jack

There are two headphones jacks – jack "1" lets
you listen through BOTH the headphones and
internal speakers, jack "2" lets you listen
through the HEADPHONES ONLY (disconnects
the internal speakers).
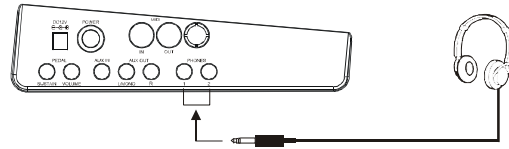
Caution!

Never use the headphones with high volume,
as it may cause damage to your ears. In addition,
to prevent damage to your speakers,
ensure that the volume is set to the minimum
level before connecting any other device.
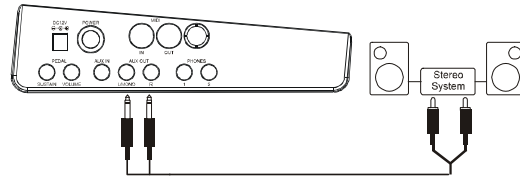
The AUX.OUT jack

When you want to listen to your piano with an
External amplifier or speaker, connect to the
AUX OUT L/MONO and R jacks on the left
panel. The volume is adjusted with the
VOLUME button. (For monaural playback, use
the L/MONO jack. For stereo playback, connect
both L/MONO and R jacks.)

The AUX.IN jack

The audio output from a CD player or other
audio equipment can be connected to the AUX
IN jack on the left panel so it can be mixed with
the sound of your piano. This function is
convenient when you want to play along with a
favorite song. The volume of the external signal
is adjusted with the MASTER VOLUME button.
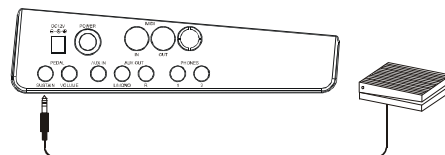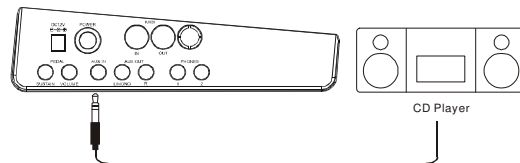
The sustain jack

An optional footswitch can be plugged into the
SUSTAIN jack for sustain control. The
footswitch functions like the sustain pedal on a
piano.

The volume jack

An optional footswitch can be plugged into the VOLUME jack for adjusting the volume of your piano – this is particularly useful for live performance situations.
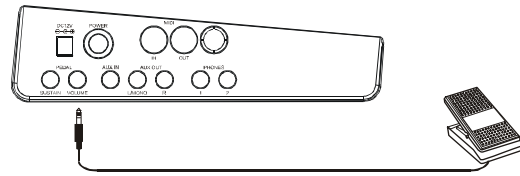
The MIDI IN/OUT jack

MIDI stands for "Musical Instrument Digital Interface.". MIDI is a world wide standard that makes it possible for various electronic musical instruments and devices (including computers) to communicate with one another.
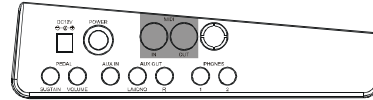
MIDI IN:
Data transmitted from other MIDI instruments via MIDI is received by this terminal.
MIDI OUT:
Data produced by your Digital Piano is transmitted to other MIDI instruments via MIDI from this terminal.

Basic operations

Default & Reset Settings

1. To reset the instrument to the FACTORY DEFAULT (Including Memory data, Record data, Language set, SYNTH data etc.), press the [+]/[-] button synchronously.

2. To clear the record data, press the [RECORD] & the [PLAY] button at the same time.

3. To set all the memory data to default settings, press the [STORE] & the [M1] button at the same time.

4. To reset all the SYNTH parameters, press the [STORE] & the [SYNTH] button at the same time.
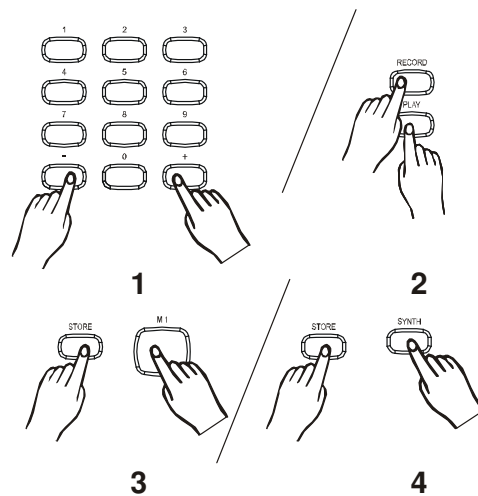
Master volume control

Turn the VOLUME KNOB to adjust the MASTER VOLUME.
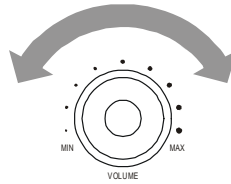
Brilliance

For a brighter sound, move the BRILLIANCE slider to the right.
For a mellower sound, move the BRILLIANCE slider to the left.
You can change the keyboard brilliance as you wish.
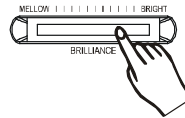
Demo

There are 3 Built-in Demos.

Press the [DEMO] button, the DEMO icon on the LCD lights. It displays the first demo name "World", and plays all 3 demos.
Press the [DEMO] button again or press the [START/STOP] button to stop playing and exit demonstration mode.

Press and hold the [DEMO] button for 3 seconds to play current demo repeatedly.

While playing, press the [+] & the [-] button or rotate the DIAL to select the DEMO you want. After the DEMO name flashes for 3 seconds, it plays the new demo immediately.

When playing the demo, press the [TEMPO+] & the [TEMPO-] button or rotate the DIAL or step TEMPO/TAP pedal to adjust the current tempo.
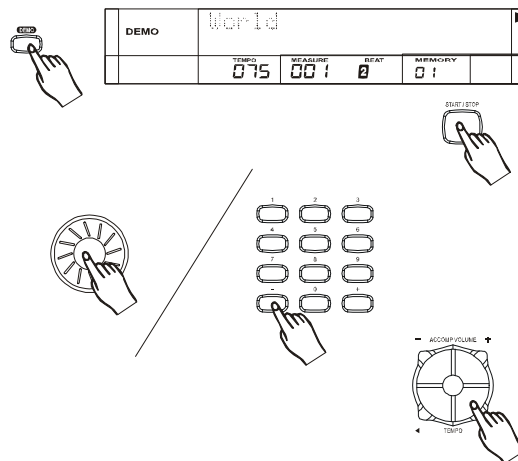
Voice effect

Voice select

There are 350 VOICES. (See "APPENDIX 1 VOICE LIST") which includes 293 GM Sounds, 35 Chinese Sounds, 13 percussion Sets and 9 User Sounds.

When the voice feature is activated, the LCD highlights the "VOICE R1" flag and the selected sound appears in the upper line. ex: "001 Piano). It displays the style name "001 8 Beat 1" on a second line. Use the [+] & the [-] button and numeric keypad to select the voice you desire.

Note:

The keyboard will automatically check the validity of your number choice when you use the numeric keypad to select the voice.
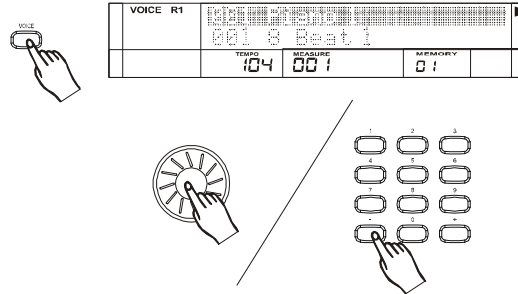
Dual

Press the [DUAL] Button . The LCD lights the DUAL and VOICE R2, and highlights the Voice name on upper line "144 Sound Track1". (See "APPENDIX 1 VOICE LIST")

Use the [+] & the [-] button or the DIAL and numeric keypad to select the DUAL VOICE.

Press the [DUAL] button again to exit DUAL mode.

In DUAL mode, press the [VOICE] button to switch to other voice modes (VOICE R1/ LOWER)
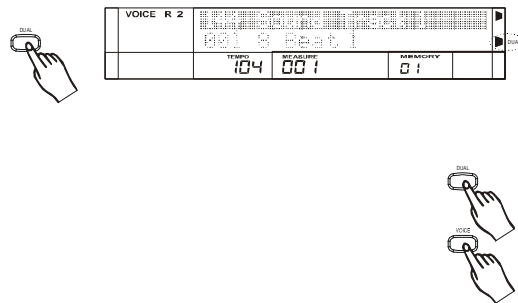
Note:

When A.B.C and lower Voice is off, the whole keyboard will be set as VOICE R2.Otherwise, only the right part will be set as VOICE R2. The piano will check the validity of number input when you use the numeric keypad to select the voice.

Lower voice

Press the [LOWER VOICE] button. LCD lights the lower icon and "VOICE L" . The LCD highlights the Voice name on upper line "144 Sound Track1".
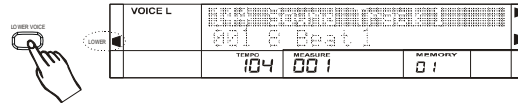
Use the [+] & the [-] button or the DIAL and numeric keypad to select the LOWER VOICE.

In LOWER VOICE mode, press the [VOICE] button to switch to other voice modes (VOICE R1/DUAL).

Note:
The piano will check the validity of your number input when you use the numeric keypad to select the voice.

Sustain effect

This feature applies SUSTAIN effect to the keyboard.

The default value when you turn on the instrument is SUSTAIN effect OFF
Press the [SUSTAIN] button to turn on the SUSTAIN effect. LCD lights the SUSTAIN icon. It will apply sustain effect when playing the keyboard. Press the [SUSTAIN] button again to turn off the SUSTAIN effect.
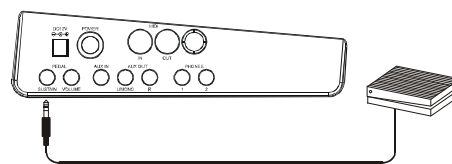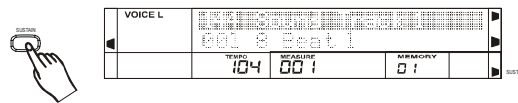
When the PEDAL is assigned as SUSTAIN PEDAL (See FUNCTION menu for details), pressing the [SUSTAIN] button and stepping SUSTAIN PEDAL can take out their respective sustain effect simultaneously.

Note:
SUSTAIN via the pedal is better than the SUSTAIN EFFECT.

DSP effect

DSP effects help enhance the sounds in your keyboard.

The default DSP setting is ON. DSP icon is lit. Press the [DSP] to turn on/off the DSP effect.

The DSP effect is determined by 4 parameters including REVERB TYPE, REVERB LEVEL, CHORUS TYPE and REVERB LEVEL.
(See FUNCTION menu for details)
It offers 8 REVERB & CHORUS TYPES. These levels can be adjusted from 0~127. The default REVERB TYPE
and LEVEL is HALL2 and 92;The default CHORUS TYPE and LEVEL is CHORUS3 and 0.

Note:
Turning the DSP ON/OFF while you're playing will interfere with the sound
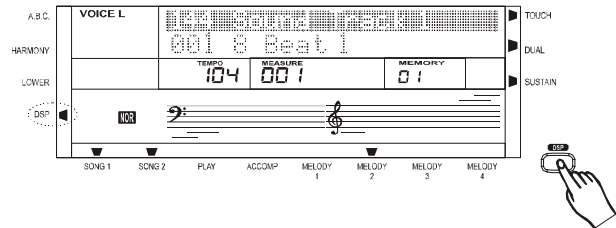
Harmony effect

There are 8 Harmony types. (See FUNCTION menu for details)

The default HARMONY setting is OFF. Take Harmony duet, one of 8 harmony types as an example. Press the [HARMONY] button to turn on the HARMONY effect and the LCD lights the Harmony icon. It displays
  "Harmony Duet" temporarily. Playing a valid CHORD in the left/chord zone before playing the note in the right hand zone, the DUET effect will function.

Note:
The HARMONY effect only works when the A.B.C is on.
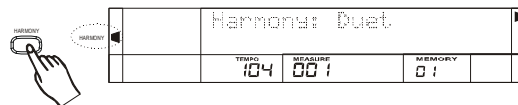
Touch response

There are 3 types of Touch Response. (See
FUNCTION menu for details).

The default Touch setting is Medium. Touch
icon is lit on the LCD.   Press the [TOUCH]
button. The LCD displays the current Touch
Response type "Touch Mode: Medium"
Press the [TOUCH] again to turn off the Touch
Response and displays "Touch Mode: Off".
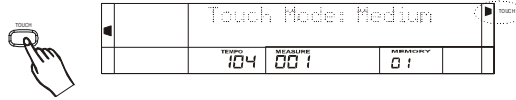
Transpose

Press the [TRANSPOSE] button. LCD displays
"Transpose = 000? Use the [+]& [-] button or
the DIAL to adjust the transpose value.

In TRANSPOSE setting , press the [+] & [-]
At the same time will set the value to 0.
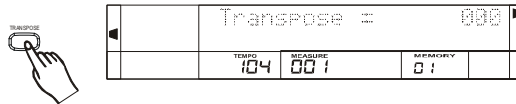
Pitch bend/modulation joystick

Turn left and right the joystick to activate the
PITCH BEND effect. This adjusts the tuning
from -2 semitones to +2 semitones in default
range and you can also set the range from -12
semitones to -12 semitones.
(See FUNCTION menu for details)

Pushing the joystick up and down will activate
the MODULATION effect.

Style

Style select

There are 130 styles in all. (See "APPENDIX
3 STYLE LIST")

When power is on, the LCD displays the style
name "001 8 Beat 1" at the bottom line.

Press the [STYLE] button to illuminate the
STYLE icon. Style name "001 8 Beat 1"at the
upper line will appear.

Use the [+] & [-] button, the DIAL and the
numeric keypad to select the style.

Note:
The piano will check the validity of number
input when you use the numeric keypad to
select the style.

Style start

Start directly:
Press the [START/STOP] button to start playing the style.

Start after INTRO:
When the style is not playing, press the [INTRO] button, and then press the [START/STOP] button to start the INTRO. The NORMAL style will be followed by an INTRO section.

Start after ENDING:
When the style is not playing, press the [ENDING] button, and then press the [START/STOP] button to start the ENDING. The NORMAL style will be followed by ENDING section.

SYNC start:
Press the [SYNC START] button. LCD flashes 4 beats with current tempo. Press the [INTRO] or the [ENDING] button to insert INTRO or ENDING. In this mode, playing the keyboard will start the style automatically.

Note:
If A.B.C mode is off, the style will start by playing any key on keyboard.
If A.B.C mode is on, the style will start by playing the keys in the LH chord area only.

Fill in A/B

In NORMAL mode, press the [FILL-IN A] button to insert a 1-measure fill and LCD flashes "NOR" icon. Then, it returns to the NORMAL style playing.

In VARIATION mode, press the [FILL-IN B] button to insert 1 measure fill and LCD flashes "VAR" icon. Then, it returns to the VARIATION style playing.

In NORMAL mode, press the [FILL-IN B] button to insert 1 measure fill and LCD flashes "VAR" icon. Then, it changes to the VARIATION style playing.

In VARIATION mode, press the [FILL-IN A] button to insert 1 measure fill and LCD flashes "NOR" icon. Then, it changes to the NORMAL style playing.

Note:
If you press the [FILL-IN A] or the [FILL-IN B] in the last beat of a measure, a fill is inserted after the current measure finished.
Press and hold the [FILL-IN A] or the [FILL-IN B] button. It will play FILL A/FILL B repeatedly until you release the button.
Press the [ENDING] button when style is playing. It will stop the style after ENDING playing unless you pressthe [FILL-IN A] or the [FILL-IN B] button before it finished.

Style stop

Stop directly:
Press the [START/STOP] button to stop style.

Stop after ENDING:
Press the [ENDING] button. The style will stop after ENDING is over.

SYNC Stop:
When A.B.C is on and style is playing, press the [SYNC STOP] button, SYNC STOP and SYNC START LED is lit, the style stops playing and the 4 beats flash at the same time. In this mode, press the keyboard to start the style and release the keyboard to stop it.

In SYNC STOP mode, press the [SYNC STOP]. The [DEMO] or the [RECORD] button can quit SYNC STOP mode.

Note:
When A.B.C mode is off, you cannot turn on SYNC STOP mode.

ACCOMP volume

Press the [ACCOMP VOLUME +] or the [ACCOMP VOLUME-] button. LCD displays "Accomp Volume = 021 ". Press the [ACCOMP VOLUME +] & the [ACCOMP VOLUME -] button or the [+] & [-] button and the DIAL can adjust the accompaniment volume from 0 ~ 31.

Press the [ACCOMP VOLUME +] and the [ACCOMP VOLUME -] synchronously or the [+] and the [-] button synchronously can mute the accompaniment. LCD displays "Accomp Volume= off ".

Auto bass chord

Press the [A.B.C] button to turn on the Auto Bass Chord mode. A.B.C icon is lit. In this mode, the keys below split point are known as the AUTO ACCOMPANIMENT section (left / chord area).

To exit the A.B.C mode, press the [A.B.C] button again.

There are 2 ways to detect the chord: Single Finger Detect and Fingers Detect. If the chord playing accords with Fingers Detect, it is recognized as the Fingers Chord. If not, Single Finger Chord will be recognized.

Single Finger Chord: Chords that can be produced in single finger operation are major, minor, seventh and minor seventh. The illustration shows how to play the four chord types. To play a major chord, press the root note of the chord. To play a seventh chord, simultaneously press the root key and a white key to its left.To play a minor chord, simultaneously pressthe root key and a black key to its leftTo play a minor-seventh chord, simultaneously press the root key and both a white and black key to its left.

Fingered Chord: the Fingered Chord detect mode lets you finger your own chords on the AUTO ACCOMPANIMENT section of the keyboard. The piano supplies appropriately orchestrated rhythm, bass and chord accompaniment to the selected style. The Fingered Chord can recognize the following chords:

Tempo

Press the the [TEMPO+] or the [TEMPO-] button to adjust the tempo. The tempo value will flash. It can be adjusted in the range of 30-280.

Press the the [TEMPO+] and the [TEMPO-] simultaneously to return to the default tempo.

When the pedal is assigned as TAP TEMPO (See Function menu for details), the pedal can adjust the tempo by double clicking the pedal. (See Pedal for details)

Function

Press the [FUNCTION] button to enter the Function menu. Use the dial, the [+] or the [-] button to select functions. Use the [NEXT] button to enter the next page, and use the [BACK] button to go to previous page.

To exit the function menu, press the [FUNCTION] button or press the [BACK] and the [NEXT] button simultaneously.

Items which can be adjusted in the function menu are as follows.

First series	Second series	Third series		Default
	Next ⟶	Next ⟶	Next ⟶	
	Back ⟵	Back ⟵	Back ⟵	
Metronome		Off、Voice、Pad		Off
Digital Effect	Reverb Type	Room 1/Room 2/Room 3/Hall 1/ Hall2/ Plate/ Delay/ Pan Delay		Hall2
	Reverb Level	0~127		92
	Chorus Type	Chours1/ Chours2/ Chours3/Chours4/Feedback/ Flanger/ Short DElay/ FBDelay		Chorus 3
	Chorus Level	0~127		0
	Harmony Type	Duet/ 1+5/ COuntry/TRio/BLock/4 Close 1/ 4 Close 2/4 Open		Duet
Utility	Tune Value	-50--50		0
	Touch Type	Soft/ MEdium/Hard		Medium
	VoiceR1Octave	-1、0、1		0
	VoiceR2Octave	-1、0、1		0
	VoiceL Octave	-1、0、1		0
	Pitch Bend Range	0- 12		2
	Split Point	1-- 88 （88Keys）		34
	Pedal Assign	Sustain Pedal/Soft Pedal/ Start/Stop Pedal/ Tempo/TapPedal/Memory Select Pedal		Sustain Pedal
MIDI	Transmit	1~16		1
	Receive	1~16 ,ALL		ALL
Mixer	Orchestra1 Volume	0--31		27
	Orchestra2 Volume	0--31		27
	Orchestra 3 Volume	0--31		27
	Voice R1 Volume	0--31		27
	Voice R2 Volume	0--31		18
	Voice L Volume	0--31		12
	Bass Volume	0--31		28
	Drum Volume	0--31		28
Language		English /Chinese		English

Metronome

Press the [FUNCTION] button to enter the metronome menu. Press the [NEXT] button to enter its sub-menu.   LCD displays "metronome OFF". Use the [+] & [-] or DIAL to select the metronome type. It includes "Metronome:Voice" and "Metronome:Pad"

Note:

Metronome can be turned while the style is playing.

Digital effect

Press the [FUNCTION] button to enter the "Digital Effect" menu. Press the [NEXT] button to enter its sub-menu. LCD highlights "Reverb

Type" and displays "Reverb Level". Choosing "Reverb Type" /"Reverb Level"/"Chorus Type"/ "Chorus Level"/"Harmony Type" by rotating the dial, or using the [+] button / the [-] button. Press the [NEXT] button to enter to parameter setting menu.

Reverb Type

A total of 8 different reverb types are available. Use the dial, the [+] button or the [-] button to select the reverb type. LCD take turns display Room1/Room2/Room3/Hall1/Hall2/Plate/Delay/ Pan Delay. The default type is Hall2.

Reverb Level

It ranges from 0 to 127. Use the dial, the numeric keypad [0]-[9] button, the [+]

button or the [-] button to adjust the level value. The LCD displays the current level value. The default value is 92.

Chorus Type
A total of 8 different chorus types are available. Use the dial,the [+] button or the [-] button to select the chorus type. LCD takes turns to display Chorus1/Chorus2/Chorus3/Chorus4/ Feedback/Flanger/Short delay/FB delay. The default type is Chorus3.

Chorus Level
It ranges from 0 to 127. Use the dial, the numeric keypad [0]-[9] button, the [+] button or the [-] button to adjust the level value.
The LCD displays the current level value. The default value is 0.

Harmony Type
You can add a variety of harmony notes to your performance in the right-hand section.
A total of 8 different harmony types are available. Use the dial, the [+] button or the [-] button to select the harmony type.   LCD takes to turns display Duet/1+5/Country/Trio/Block/ 4 Close1/4 Close2/4 Open. The default type is Duet.

Utility

Press the [FUNCTION] button. Select "Utility" menu. Press the [NEXT] button to select Tune Value/Touch Type/Voice R1 Octave/Voice R2 Octave/Voice L Octave/Pitch Bend Range/Split Point/Pedal Assign. Use the dial, the [+] button or the [-] button to select the utility sub-menu. Press the [NEXT] button to enter parameter setting.

Tune Value
In the Tune Value setting, LCD displays the current tune value. Use the dial, the [+] button or the [-] button to adjust the tune value. This function can apply to the right area of keyboard. The parameter range -50 to 50.

Press the [+] button and the [-] button simultaneously will set the tune value to the default. The default value is 000.

Note:
When the tune value is +50, the note has changed 100 cents.
When the tune value is 50, the note has changed -100 cents.

Touch Type
In the touch type setting, use the dial, the [+] button or the [-] button to select the touch type. A total of 3 different touch types are available. They are Soft/ Medium/Hard. The default type is Medium.

VOICE R1 OCTAVE
In the voice R1 octave setting, LCD displays the current octave value. Use the dial, the [+] button or the [-] button to adjust the voice R1 octave value. This function can apply to the right area of keyboard. The parameter range -1 to 1. The default value is 0.
Press the [+] button and the [-] button simultaneously to set the octave value to the default.It can function after pressing the [DUAL] button and selecting VOICE R1.

VOICE R2 OCTAVE
In the voice R2 octave setting, LCD displays the current octave value. Use the dial, the [+] button or the [-] button to adjust the voice R2 octave value. This function can apply to the right area of keyboard. The parameter range -1 to 1. The default value is 0.
Press the [+] button and the [-] button simultaneously will set the octave value to the default one. It can function after pressing the [DUAL] button.

VOICE L OCTAVE

In the voice L octave setting, LCD displays the current octave value. Use the dial, the [+] button or the [-] button to adjust the voice L octave value. This function can apply to the right area of keyboard. The parameter range -1 to1. The default value is 0.

Press the [+] button and the [-] button simultaneously will set the octave value to the default one.

It can function after pressing [LOWER VOICE] button.

PITCH BEND RANGE

This function allows you to set the pitch bend range. In the Pitch Bend Range setting, LCD displays the current pitchbend range value. Use the dial, the [+] button or the [-] button to adjust its range. This function can apply to the right area of keyboard. The parameter range -12 to 12 semitones. The default value is ±2 semitones.Press the [+] button and the [-] button simultaneously will set the range value to the default.

SPLIT POINT

In the split point setting, the LCD displays the current split point value. Use the dial, the [+] button or the [-] button as well as the keyboard to change the split point. The parameter ranges from 1 to 88. The default value is 034. This function allows you to play different voices with your left and right hands by setting a split point. With the style playing mode, you can play chords below the split point and play the melody part in the right area on the keyboard.Press the [+] button and the [-] button simultaneously to set the value to the default.

PEDAL ASSIGN

In the pedal assign setting, the LCD displays the current pedal assign name. A total of 5 different assigned pedal are available. Use the dial, the [+] button or the [-] button to select the pedal assign. The LCD displays Sustain Pedal、Soft Pedal、Start/Stop Pedal、Tempo/tap Pedal、Memory Select Pedal circularly. The default value is Sustain Pedal.

MIDI

Press the [FUNCTION] button and select "Midi" menu. Press the [NEXT] button, the LCD displays transmit and receive. Use the dial, the [+] button or the [-] button to select the Midi sub-menu. The default one is Transmit. Press the [NEXT] button to enter channel setting.

Transmit

Select Transmit sub-menu. Press the [NEXT] button to enter Transmit channel setting, The LCD displays the current channel value. Use the dial, the [+] button or the [-] button to change the channel value from 1 to 16 channels. The default value is 001.

Receive

Select Receive sub-menu. Press the [NEXT] button to enter Receive channel setting, The LCD displays the current Receive value. Use the dial, the [+] button or the [-] button to change the channel value from 1 to 16, ALL channels. The default value is ALL.

Mixer

Press the [FUNCTION] button and select "MIXER"menu. Press the [NEXT] button. The LCD displays Orchestra 1 VOL、Orchestra 2 VOL、Orchestra 3 VOL、Voice R1 Volume、Voice R2Volume 、Voice L Volume 、Bass Volume、Drum Volume circularly. Use the dial, the [+] button or the [-] button to select the mixer sub-menu. Press the [NEXT] button to enter the parameter setting.

Style

In the accompaniment-channel setting, the LCD displays Orchestra 1 VOL、Orchestra 2 VOL、Orchestra 3 VOL 、Bass Volume、Drum Volume value circularly. The respective default values are 27、27、27、28、28.

Set the value with the dial, the [+] and [-] button from0 to 31.In this mode, press the [+] and the [-]simultaneously to turn OFF the volume value .

Keyboard

In the keyboard setting, the LCD displays Voice R1 Volume、Voice R2 Volume、Voice L Volume value circularly. The default value is 27、28、12 respectively. Set the value with the dial, the [+] button or the[-] button from 0 to 31. In this mode, press the [+] and the [-] simultaneously to turn off the volume value. Press them again to resume the default value.

Language

Select language menu after entering the function menu, press the [NEXT] button to enter language setting mode. Use the dial, the [+] button or the [-] button to select English or Chinese language.

The default value is English. The language setting would not be changed when the power is off. When Chinese is selected before switching off the piano, the language is set to Chinese automatically after turning on the piano.

Press the [+] and the [-] simultaneously while power is on, the language will be set as the default one.

Memory

Memory allows you to save virtually all panel settings to a registration memory setting, and then instantly recall your custom panel settings by pressing a single button.

Bank

Memory provides up to 48 complete control panel setups (8banks,6 setups each) that can be recalled instantly during your performance. The default value is bank 1.Press [BANK] button to select your desired bank. The LCD displays BANK number. Use the bank button again, dial, the [+] button or

the [-] button to cycle select the bank (1-8). The LCD displays your selected bank number.

Store and load

Press [STORE] and hold the button, press M1 (or M2-M6) at the same timee. The data will be stored to the M1 (M2~M6), the LCD displays the memory number "Bank 1 Memory 1". Press [STORE] and [M1] simultaneously while the piano powers on, the memory data will be set as the default value.

Note:

If current data is not the same as the current memory data, the corresponding memory icon on the LCD will be darkened.

Note:

The memory data can be reserved even if the piano is switched off. To clear all memory datas and restore the default setting, press the [STORE] ,[M1] simultaneously before turning on the piano. Pressing the [+],[-] button simultaneously can also clear the memory data, but it will clear all other saved setting such as recorded data as well.

Date stored in memory

Voice Data
Voice On/Off: Voice R1, Voice R2, and Voice Lower
Voice Number: Voice R1, Voice R2, and Voice Lower
Effect On/Off: DSP, Touch, Sustain, Harmony
Function: Digital Effect Parameter, Utility Parameter (except Split Point)
Transpose : Transposer Value
ACCOMP Data
Style Number, Tempo Parameter, A.B.C On/Off, Split Point, ACCOMP Volume, Normal/Variation Status.
Other Data
Midi Parameters & Mixer Parameters in Function.

Freeze

When the FREEZE function is engaged, selecting a different memory setup will not change any of the accompaniment and Voice L parameters (all other parameters will changes as programmed). This allows you to use the auto accompaniment and select different memory setups without suddenly disturbing the flow of the accompaniment.

Press the [FREEZE] button. The [FREEZE] LED lights. Press the [FREEZE] button again to exit from the FREEZE mode. The [FREEZE] LED turns off.

In the FREEZE setting, press one of the [1] -[6] memory buttons. In this situation, only the voice parameter settings memorized to each button number are recalled.

Note:
Please refer to the MEMORY function to see the detail accompaniment data.

When the style is playing, press the [O.T.S] button to turn on the O.T.S. It will automatically insert "FILL A" or " FILL B" according to the memory number.

Press the [O.T.S] button again to exit O.T.S mode.

The parameters stored in the O.T.S includes VOICE R1, VOICE R2, VOICE LOWER, their OCTAVE and VOLUME and CHORUS TYPE/LEVEL, REVERB TYPE/LEVEL value.

Note:
Pressing the [O.T.S] button will not insert the "Fill in" when the user song is being recorded.

One touch setting

One touch setting is a powerful and convenient function that lets you instantly reconfigure virtually all auto accompaniment related panel settings with the touch of a single button.
In this function, it can load 4 types of parameters (M1~M4) which are suitable for the current style.

Press the [O.T.S] button to enter this mode and the O.T.S icon on the LCD appears. Press the [M1]-[M4] button, it will load four types of parameters which are related to the style. M1 and M2 store the parameters for the normal style, while M3 and M4 store the parameters for the variation style. A.B.C mode is set to on automatically while the O.T.S is on.

Pedal

Various functions can be assigned to the footswitch connected to the SUSTAIN jack. The polarity of the footswitch can also be selected.

Foot switch

Press the [FUNCTION] button to enter the "UTILITY " menu. Press the [NEXT] button to select the pedal assign menu. Press the [NEXT] button. LCD displays the " sustain pedal " .Use the dial, the [+] button or the [-] button to select the Soft Pedal, Start/Stop Pedal, Tempo/Tap Pedal, Memory Select Pedal.

Sustain pedal

When pedal assign is set as "sustain pedal " , it has the sustain effect when stepping on the pedal. Release it to turn off sustain effect.

Soft pedal

When pedal assign is set to "soft pedal ", it has the dampens the sound when stepping on the pedal.

Start/stop pedal

When pedal assign is set to "start/stop pedal", the pedal has the same function as the [START/STOP] button.

Tempo/Tap pedal

When pedal assign is set to "Tempo/Tap Pedal " ,the ACCOMP tempo will be set as last two beat tempo before you press the pedal. If the tempo is over (below) than 280 (30), set the tempo to 280(30).

Note:
If you step the pedal successively when the style is playing, the keyboard will count the tap tempo according to the last beat you stepped on the pedal.

Memory select pedal

If pedal assign is set to "memory select pedal", it will load the 48 memory parameter starting from M1-M6 when stepping on the pedal. Volume pedal. Various functiosn can be assigned to the volume connected to the VOLUME jack. The polarity of the foot controller can also be changed. Step on the volume pedal to control the volume.

Synth

The SYNTH function provides the tools for creating new tones. Simply select one of the 328 tones and edit its parameters to create your own original sound.

Press the [SYNTH] button. The SYNTH icon appears on the LCD. The User Voice number "USER Voice = 342 " displays on the lattice area. Then, select the desired number with the dial, the [+]/[-] button between 342-350 for storing your own voice.

Press the [NEXT] button. The PCM Voice number "PCM Voice = 001 " is highlighted on the lattice area. Then, select the desired voice with the dial, the [+]/[-] button between 001-328 to adjust its parameters.

Press the [NEXT] or the [BACK] button to select these parameters: Vibrate Rate, Vibrate Depth, Vibrate Delay , Envelope. Attack, Envelope. Decay, Envelope. Release. The name & value of current parameter are highlighted on the lattice area. You can adjust the parameters with dial, the [+] & the [-], and [0]-[9] button between 000~127.

Press the [+] & the [-] button at the same time to reset the parameter to the default value 64 of each parameter. You can play the keyboard to hear the effect while changing the parameters. (See "Parameters table for SYNTH ").

Press the [SYNTH] button or press the [NEXT] and the [BACK] button synchronously to exit the SYNTH function. Then the SYNTH flag on LCD goes out. A name and its number of the User Voice selected above will display on the voice line of lattice area.

All the parameters in SYNTH function can be memorized while the power is off. Press the [STORE] & [SYNTH] button at the same time to reset the parameters to the default value.
Note:
After entering a [SYNTH] function, you are not allowed to exit by pressing a button.
To edit other parameters, press the [NEXT] or

the [BACK] button in edit mode.

It will quit the ABC mode automatically when you enter the SYNTH status.

Parameters table for SYNTH as follow:

Parameter Name	Value Range	Default								
USER Voice	342-350	342	343	344	345	346	347	348	349	350
PCM Voice	001-328	001	021	024	033	040	050	080	029	130
Vibrate Rate	0 ~127	64								
Vibrate Depth	0 ~127	64								
Vibrate Delay	0 ~127	64								
Envelope.Attack	0 ~127	64								
Envelope.Decay	0 ~127	64								
Envelope.Release	0 ~127	64								

Album

There are 100 album songs in all (see "APPENDIX 6 album list"). These parameters can not be changed. They include VOICE R1/R2, DSP, accompaniment type, OCTAVE, HARMONY etc.

Press the [ALBUM] button. The ALBUM icon on the LCD is illuminated. ABC mode is turned on and placed in the SYNC START state. The number and its name of the current song is highlighted on the top line of lattice area. You can select songs with the dial,[+],[-] & [0]-[9] button. The song starts to play after playing the keyboard in the LH chord area.

You can change the tempo while the album song is playing. Press the [TEMPO+] and the [Tempo-] button simultaneously to set the tempo to the default of each album song.

To exit the album modes, press one of the following buttons: [STYLE], [VOICE], [DUAL], [LOWER VOICE], [SYNTH], [M1]~[M6], [O.T.S.].

You can exit the ALBUM and enter the RECORD mode by pressing the [RECORD] button while ALBUM is not playing.

You can exit the ALBUM & enter the DEMO mode by pressing the [DEMO] button.

But, it can not return to the STYLE status after stopping to play the demo.

Record

There are 2 songs named User Song 1& User Song 2 that can be recorded. Every song includes 1 ACCOMP track & 4 MELODY tracks. Recorded data can be stored while power is off. Press the [RECORD] & the [PLAY] button at the same time before turning on the power. All the recorded data will be erased.

Note:

Record function does not function while it is in user voice mode. The recordable voice range is 001~341.

PCM voice can be recorded..

You can not enter the RECORD function while style & album is playing.

Reset the TUNE & TRANSPOSE parameters while waiting for record.

Metronome can be used while recording or playing the song.

Press the [DEMO] button during recording. It will exit the RECORD and enter the DEMO mode. The recorded data is not lost.

Record start

Prepare to record

Select user song: Press the [RECORD] button. The REC icon on LCD is illuminated. User Song 1 or User Song 2 is displayed on the lattice area. Its cursor on the LCD is lit, then you can select it with dial, the [+]/the [-] button.

Wait for record: Press the [RECORD] button after choosing User Song 1 or User Song 2.Four beats on the LCD flash simultaneously, which indicates that the recording is waiting. You can select desired recording track with the [ACCOMP],[MELODY 1]-[MELODY 4] buttons. Its cursor flashes once selected.

Note:

You can select simultaneously an ACCOMP track & one MELODY track, but you are not allowed to select 2 MELODY tracks at the same time.

MELODY 1 is automatically set to current track while it is in waiting mode. If the first MELODY includes data, the second MELODY is set to record automatically.

If the track includes data, its relevant cursor on LCD is lit. Press the track button while it's in waiting mode. Then, the cursor on the LCD turns off. Press the track button again. Its cursor flashes, indicating that the track is available for recording.

Start to record

You can start to record by playing the keyboard and pressing the [START/STOP]button. Four beats flash in turn and follow the current tempo. The recorded data in current track will be covered with new data during recording. During recording, you can start or stop the style by pressing the [START/STOP] button two times.

Record stop

Stop Automatically

Press the [ENDING] button when the style is playing during recording. It will stop recording automatically after the ending playing is over.

If the capacity is full during recording, it will stop recording automatically with displaying "Full Record Data!" on LCD .

Stop Manually

Press the [RECORD] button again during recording to stop recording immediately. The cursor of the recorded track is lightened.

Press the [DEMO] button in recording to stop recording and enter the DEMO mode. The data recorded will not be lost. The cursor of the recorded track is lightened.

Record play

Song select

Press the [PLAY] button. User song 1 or user song 2 is displayed on the LCD. You can select the desired song with the dial, the [+] & the[-] button.

Track select

Select the desired tracks with the [MELODY 1]-[MELODY 4] and the [ACCOMP] button after having selected the song. The lightened cursor indicates the track is going to be played. If the cursor is not lit, it indicates the track is empty .

Song play

Press the [PLAY] button to play the song after selecting tracks. Press it again to stop playing.
If the user song is empty, "Song Empty" displays temporarily on the LCD.

If no track is selected, "Select a Track" displays temporarily on the LCD.

SMC

There is a standard SMC (SmartMedia Card) external interface which supports cards of 6MB/32MB/64MB/128MB capability on the piano. It is compatible with the file system format of the MS-DOS FAT 12/16. Press the [LOAD], [SAVE], [UTILITY] button separately to enter the relative function. The SMC Icon is illuminated on the LCD. If there is no card, "NO SM Card" will display for three seconds, then exit & return to the previous status.

Load file

Press the [LOAD] button. The SMC icon is illuminated on the LCD. Three file types which will be loaded and will be displayed on the lattice area. The current type is highlighted. You can select types with the dial or the [+] & the [-] button.

If there is no file in the SMC, it will display "No File Found", and return to previous menu by pressing the [BACK] button.

Load MIDI File

Select the menu "Load MIDI File" & press the [NEXT] button. The playing modes are displayed on the lattice area. They're "Single Play" & "Chain Play". the current mode is highlighted. Single Play means only playing the current file repeatedly. Chain Play means playing all the files circularly. You can select your desired mode with the dial or the [+] & the [-] button.

Press the [NEXT] button. All the MIDI files in the root of SMC are displayed on the lattice area. The main name of the current file is highlighted. It includes 8 characters. The postfix name is MID. You can select files with dial or the [+] & the [-] button.

Press the [START/STOP] button to start playing the file selected. The SMC icon flashes. The current tempo is displayed in the TEMPO area.

The MEASURE and the BEAT areas display nothing. To stop playing the files, press the [START/STOP] button.

When the file is playing, you can select the other files with the dial or the [+] & the [-] button, then press the [START/STOP] button to stop or press the [START/STOP] again to play the new file.

When the file is playing, you can adjust the tempo with the [TEMPO +],[TEMPO -] button. Press the [TEMPO +],[TEMPO -] button at the same time, the current tempo will be set to the default tempo.

Note:
If the track number of the file is over 24,"File Track Error" will be displayed temporarily on LCD and it will exit SMC status.
If the tick number of one beat is over 960 or below 24, "File Format Error" will be displayed temporarily on LCD and it will exit SMC status.

If the file is not a MIDI format, "Not Midi File" will be displayed temporarily on the LCD and it will exit SMC status.

Load Memory File

Select the menu "Load Memory File" & press the [NEXT] button. All the MEMORY files in the root of SMC are displayed on the lattice area with two lines. The current file is highlighted. The main name of the file includes 8 characters. The postfix name is MEM. You can select files with dial or the [+] & the [-] button.

Press the [NEXT] button to load the file, then the data will overwrite all the memories, "Operation Completed" is displayed temporarily on the LCD. It will exit the SMC function and return to the previous state.

Load Song File

Select the menu "Load Song File" and press the [NEXT] button. All the RECORD files in the

root of SMC are displayed on the lattice area with two lines. The current file is highlighted. The main name of the file includes 8 characters, the postfix name is REC. You can select songs with dial or the [+] & the [-] button.

Press the [NEXT] button to affirm the desired file. The menu of "Load Into Record 1" and "Load Into Record 2" are displayed on the lattice area with two lines. The current one is highlighted. You can select them with dial or the [+] & the [-] button.

Press the [NEXT] button. The data will be loaded into the user song 1 or 2. "Operation Completed" is displayed temporarily on the LCD and it will exit SMC function and return to the previous status. The relative user song and tracks icon will be illuminated at the same time.

Save file

Press the [SAVE] button. The SMC icon is lightened on LCD. Two file types that can be saved are displayed on the lattice area with two lines, the current type is highlighted. You can select them with dial or the [+] & the [-] button.

Save Memory Data

Select the "menu Save Memory Data" and press the [NEXT] button, "A_____.MEM" is displayed on the lattice area .The letter A flashes which indicates the input state (input method see "3.file name input" below). Press the [NEXT] button again to end the input.

The file includes 48 memories' data will be saved to the root of the SMC. "Operation Completed" is displayed temporarily on the LCD and it will exit the SMC function and return to the previous state.

Save Song File

Select the menu "Save Song " & press the [NEXT] button. The menu of "Save Song 1 "
 "Save Song 2 " are displayed in the lattice area

with two lines. You can select them with the dial or the [+] & the [-] button. Then press the [NEXT] button. "A_____.REC" is displayed in the lattice area. The letter A flashes which indicates the input state (input method see "3.file name input " below). Press the [NEXT] button again to end the input. The recording data will be saved in the root of the SMC. "Operation Completed" is displayed temporarily on the LCD and it will exit the SMC function and return to the previous state.

File name Input

File name includes 1-8 characters to be input with the keyboard .

[SHIFT]: 26 letters will be displayed with capital letters by pressing the keyboard in the letter area directly. To display small letters, press the [SHIFT] button hold on.

[DELETE]: when the flashing cursor is at the last character (the eighth bit), press it to erase the current character. Otherwise, it will erase the left character.

[BACK]: move the current cursor to the left.

[NEXT]: move the current cursor to the right.

In file name input state, "A_____.MEM" or "A_____.REC" is displayed on the lattice area and the letter A flashes.

If there's nothing input, letter A will be saved as the file name by pressing the [NEXT] button. If you input the first character with keyboard, it will be displayed on LCD. The cursor moves to the right & flashes, which indicates the input state to be continued. When the last character & cursor are displayed and flashed, the file name is over 8 bits character.

You can edit the characters input with the [SHIFT],[DELETE], [BACK],[NEXT] button when inputting the character .

Press the [NEXT] button to end the filename input, "Operation Completed" is displayed temporarily on LCD and it will exit the SMC function to return to the previous status

Note:
If the filename input is same as the name that is in the card, "Exist File Name" is displayed temporarily on the lattice area and it will exit the SMC mode and return to the previous status.

If there is nothing to be input, "Invalid File Name" is displayed temporarily on the lattice area and it will exit the SMC mode to return the previous state.

If there is not enough space in the card after input, "SMC Card Full!" is displayed temporarily on the lattice area and it will exit the SMC mode to return to the previous state.

Utility

Press the [UTILITY] button. The SMC icon is illuminated on the LCD. Two tools are displayed on the lattice area with two lines. The current type is highlighted. You can select them with the dial or the [+] & the [-] button.

Delete One File
Select the menu "Delete One File" & press the "NEXT" button. All the files in the root of SMC are displayed on the lattice area with two lines. The current file is highlighted. You can select them with dial or [+],[-] button.

Press the [NEXT] button again, "Are You Sure?" is displayed on the lattice area. Press the [NEXT], [+] button separately or dial to affirm it, "Operation Completed" is displayed temporarily on the LCD and it will exit the SMC mode to return to the previous status.

If you press the [BACK], [-] button separately ,it will exit the operation and previous mode.

Note:
If there is no file in SMC, it will display "No File Found", you may return to previous menu by pressing the [BACK] button.

Format
Select the menu "Format" & press the [NEXT] button. "Are You Sure?" is displayed on the lattice area.

Press the [NEXT], [+] button separately to affirm it. The card will be formatted. "Operation Completed" is displayed temporarily on the LCD & exit the SMC mode to return the previous state.

If you press the [BACK], [-] button separately, it will cancel the operation.

MIDI

What is MIDI
MIDI is the abbreviation for "Musical instrument Digital Interface". It is a standard interface for communication between computers, perifpherals & digital music instruments.
There are two MIDI connections on your piano, including MIDI IN & MIDI OUT ports.

MIDI Connection
Connection rules
Midi connection is the equipment called "Host equipment", which controls another one called "affiliated equipment".
The host equipment's MIDI OUT connects with affiliated equipment's MIDI IN
Note that MIDI OUT cannot connect with MIDI IN on the same equipment.

Sample Connection method
Connect the MIDI interface with your PC.

Connect the MIDI interface with other digital

music instruments.

Major Application
The piano as the Host
Connect the MIDI OUT port of the piano with MIDI IN port of other equipment.

If the same MIDI channels be set to the two devices, play the keyboard & change the parameters on the piano, then the other device will receive the data from it. MIDI messages are sent from the piano. (See "appendix 7 MIDI IMPLEMENTATION CHART".)

The piano as the slave
Connect the MIDI IN port of the piano with MIDI OUT port of external device.

If the same MIDI channels are set to the two devices, play the keyboard & change the parameters on the external device, then the piano will receive the data from it. You can play on the piano at the same time. MIDI messages are received by the piano. (See "appendix 7 MIDI IMPLEMENTATION CHART".)

Connect the MIDI interface with PC and use sequencer software
Connect the MIDI IN & MIDI OUT port of the piano to your PC. Record the MIDI messages on the sequencer software on the PC by playing on the piano. Edit the MIDI messages recorded or create new file in the sequencer software on the PC.The piano will receive the data from the sequencer. You can play on the piano at the same time. MIDI messages that are recognized by the piano. (See "appendix 7 MIDI IMPLEMENTATION CHART".)

Help

The HELP function provides you a simple operation guide for the current status – just press and hold the [HELP] button.

Relative contents are displayed on the lattice area & then it goes to the next screen automatically.

You may browse the next or previous contents with the [NEXT], [BACK] button or dial. Release the [HELP] button to exit HELP and back to the previous status.

Status	Procedure	Display
DEMO	Press the [DEMO] button to enter Demo status	Press [+],[-] or use dial to select demo. Press [DEMO] for a while to single play.
VOICE R1	Press the [VOICE] button to enter voice status, the LCD will display: VOICE	Press [+],[-],the dial or the number button to select voice.
VOICE R2	Press the [VOICE] button to enter voice status, then the LCD will display: VOICE	
VOICE L	Press the [LOWER VOICE] button to enter VOICE L mode.	
STYLE	Press the [STYLE] button to enter STYLE mode.	Press [+],[-],the dial or the number button to select style.
ALBUM	Press the [ALBUM] button to enter ALBUM mode.	Press [+],[-],the dial or use dial to select song. Then, start the style by playing a chord on the

		keyboard.
SYNTH	Press the [SYNTH] button to enter SYNTH mode.	Press [+],[-],the dial or use dial to select an user voice. Press [NEXT] button to set the parameter.
	Press the [NEXT] button after entering SYNTH mode to select parameter.	Press [+],[-],the dial, the dial or the number key to change the parameter. Press [NEXT] or [BACK] button to change to another parameter. Press the [NEXT] and [BACK] simultaneously to exit the SYNTH menu.
FUNCTION	Press the [FUNCTION] button to enter function mode.	Press [+],[-] button to select in current menu level. Press [NEXT] to turn into current option; Press [BACK] to back the higher level menu; Press the [NEXT] and [BACK] will simultaneously exit the menu.
LOAD	Press the [LOAD] button to load the files from SMC.	Press [+],[-] button to select in current menu level. Press [NEXT] to turn into current option; Press [BACK] to back the higher level menu; Press the [NEXT] and [BACK] will simultaneously exit the SMC menu.
	To load MIDI format files.	Press [+],[-] button to select a MIDI file; Press [START/STOP] to play the MIDI file you select; Press [BACK] to back to last step.
	To load RECORD or MEMORY files.	Press [+],[-] button to select in current menu level. Press [NEXT] to turn into current option; Press [BACK] to back the higher level menu; Press the [NEXT] and [BACK] will simultaneously exit the SMC menu.
UTILITY	Press the [UTILITY] button to enter UTILITY mode.	Press [+],[-] button to select in current menu level. Press [NEXT] to turn into current option; Press [BACK] to back the higher level menu; Press the [NEXT] and [BACK] will simultaneously exit the SMC menu.
	Delete the file.	Press [+],[-] or use dial to select the file. Press [NEXT]/[+] to confirm deleting or formatting the file.
	Format the SMC.	Press [NEXT] to confirm the operation, press [BACK] to exit the operation.
SAVE	Press the [SAVE] button to save the files to SMC.	Press keyboard to select letter and move the cursor, press [NEXT] to confirm the input, press [BACK] to last step.
	Input file name.	Press [+],[-] or use the dial to select user song 1 or 2.
RECORD	Press the [RECORD] button to enter real time record.	Press [+],[-] or use the dial to select user song 1 or 2.

	Press the [RECORD] button to prepare for recording.	Press [MELODY 1-4],[ACCOMP] to select tracks to record; Play the keyboard to start recording and press [REC] again to quit recording.
PLAY	Press the [PLAY] button first.	Press [+],[-] or use the dial to select user song 1 or 2.

Specifications

Keyboard	88 hammer action keys
Voice	350 Voices
Style	130 Styles
Demo Song	3 Demo songs
Album Song	100 Album songs
Display	Multi-functional LCD display with blue backlight
Switch and Buttons	POWER SWITCH, MASTER VOLUME , BRILLIANCE , ACCOMP VOLUME+/-,TEMPO+/-, HELP, SMC LOAD,A.B.C. NEXT,BACK,UTILITY,SAVE,VOICE,LOWER VOICE,STYLE, ALBUM,DEMO,DSP,DUAL,FUNCTION,O.T.S.,FREEZE, SUSTAIN,TRANSPOSE,HARMONY,SYNTH,TOUCH,BANK STORE,M1-M6
Accompaniment Control	START/STOP, INTRO, FILL-IN A, FILL-IN B,ENDING, SYNC START, SYNC STOP
Sequencer	ACCOMP, MELODY1/2/3/4, RECORD,PLAY
Panel Memory	48 Memory Storage
Pedals	SUSTAIN,VOLUME
Connectors	DC 12V, PHONE1/2, AUX.IN,AUX.OUT L/MONO, AUX.OUT R, MIDI IN/OUT,2 PEDALS
Speaker	4ohm 15w x 2
Dimension	1360(L)x345(W)x138(H)mm
Weight	23.5kg

Appendix 1- Voice list

Piano
001 Piano 1
002 Piano Soft
003 Piano Tender
004 String & Piano 1
005 String & Piano 2
006 Piano MEL
007 Bright Piano
008 Stereo Piano
009 Honky Tonk
010 Dual Piano
011 AD EP 1
012 4P Piano1
013 Coffer Piano
014 Last Year EP
015 EP Cup
016 EP Air
017 Image EP
018 Snow EP
019 Electric Piano
020 EP wr
021 H&H E P
022 Digital Piano
023 El Piano
024 U Style EP
025 Digital EP
026 Wind EP
027 Silence EP
028 Oh! Sweet EP
029 KMS E P
030 Mr. Smith
031 Fire EP

071 Percussive Organ 5
072 Rock Organ
073 Pipe Organ 2
074 Sweet Organ 2
075 Church Organ 1
076 Church Organ 2
077 Church Organ 3
078 Reed Organ
079 Accordion 1
080 Accordion 2
081 Accordion 3
082 Harmonica 1
083 Harmonica 2
084 Harmonica 3
085 Accordion 4
086 Accordion 5
087 Accordion 6
088 Accordion 7
Guitar
089 Nylon Guitar 1
090 Nylon Guitar 2
091 Guitar PAD
092 Steel Guitar 1
093 Steel Guitar 2
094 Ukulele
095 Jazz Guitar
096 Bright Clean Gtr1
097 Clean Guitar
098 Bright Clean Gtr2
099 Muted Guitar 1
100 Muted Guitar 2

Ensemble
142 Strings Ensemble1
143 Strings Ensemble2
144 Sound Track 1
145 Sound Track 2
146 String For Melody
147 Sound Track 3
148 String Oct Down
149 Slow Strings
150 Hero String
151 Synth String 1
152 Synth String 2
153 Synth String 3
154 Synth String 4
155 Synth String 5
156 Synth String 6
157 Synth String 7
158 Synth String 8
159 Aahs
160 Ooh Voices
161 Voices
162 Choir
163 Poem Dream
164 Ohhhh h
165 Electric Voice
166 Dooooo
167 Dream Voice
168 humm mm
169 Vintage Vox 1
170 Vintage Vox 2
171 Sky Vox 1

213 Tenor Sax 4
214 Tenor Sax 5
215 Tenor Sax 6
216 Sax & Brass
217 Baritone Sax 1
218 Baritone Sax 2
219 Oboe
220 English Horn
221 Wood Winds 1
222 Wood Winds 2
223 Bassoon
224 Clarinet 1
225 Clarinet 2
226 Clarinet 3
227 Clarinet 4
228 Wood Winds 3
Pipe
229 Piccolo
230 Flute 1
231 Flute 2
232 Flute 3
233 China Flute
234 Recorder 1
235 Recorder 2
236 Pan Flute
237 Kawala
238 Bottle Blown
239 Shakuhachi 1
240 Shakuhachi 2
241 Shakuhachi 3
242 Hichiriki

281 Wood Block
282 Taiko Drum
283 Tom Drum
284 Melodic Tom
285 Reverse Cymbal
Sound effects
286 Guitar Fret Noise
287 Breath Noise
288 Seashore
289 Bird Tweet
290 Telephone Ring
291 Helicopter
292 Applause
293 Gunshot
Chinese instrument
294 Pi Pa
295 Yue Qin
296 Da Ruan
297 Zhong Ruan
298 Liu Qin
299 Gu Qin
300 Gu Zheng
301 Yang Qin
302 Du Xian Qin
303 Re Wa Pu
304 San Xian
305 Er Hu
306 Gao Hu
307 Zhong Hu
308 Ban Hu
309 Xi Pi

Appendix 2- Style list

8 Beat	
001	8 Beat 1
002	8 Beat 2
003	8 Beat 3
004	8 Beat 4
005	8 Beat 5
006	8 Beat 6
007	8 Beat Rock
008	8 Beat Pop
16Beat	
009	16 Beat 1
010	16 Beat 2
011	16 Beat 3
012	Hip Hop
013	16 Beat Funk
014	Funk Pop
015	Fusion

039	Techno
Swing & Jazz	
040	Big Band Ballad
041	Jazz Ballad
042	Big Band Boogie
043	Boogie
044	Swing1
045	Swing2
046	Dixieland
047	Jazz Trio
R&B	
048	R&B 1
049	R&B 2
050	Soul
051	Soul Shuffle
Country	
052	Country

077	Mambo 2
078	Bounce
079	Foxtrot
080	Quick Step
081	Jive
Traditional	
082	March 1
083	March 2
084	German March
085	6/8 March
086	Polka1
087	Polka2
088	Polka Pop 1
089	Polka Pop2
Waltz	
090	Waltz 1
091	Waltz 2

116	Dai Minority
117	Weiwuer Minority
118	Tibat Minority
119	Korea Minority
120	Mongolia
121	Dongbei Yangge
122	Dongbei Errenzhuan
123	Shan Dong
124	He Nan
125	An Hui
126	Shan Xi
127	Shan Bei
128	Yun Nan
129	Shang Hai
130	Tai Wan

Appendix 3- Chord list

Chord Name [Abbreviation]	Normal Voicing	Chord(C)	Display
Major[M]	1-3-5	C	C
Major sixth [6]	1-(3)-5-6	C6	C6
Major seventh [M7]	1-3-(5)-7	CM7	CM7
Major seventh add sharp eleventh [M7(#11)]	1-(2)-3-#4-(5)-7	CM7(#11)	CM7(#11)
Major add ninth [M9]	1-2-3-5	CM(9)	CM(9)
Major seventh ninth [M7(9)]	1-2-3-(5)-7	CM7(9)	CM7(9)
Sixth ninth [6(9)]	1-2-3-(5)-6	C6(9)	C6(9)
Augmented [aug]	1-3-#5	Caug	Caug
Minor [m]	1-b3-5	Cm	Cm
Minor sixth [m6]	1-b3-5-6	Cm6	Cm6
Minor seventh [m7]	1-b3-(5)-b7	Cm7	Cm7
Minor seventh flatted fifth [m7b5]	1-b3-b5-b7	Cm7b5	Cm7b5
Minor add ninth [m(9)]	1-2-b3-5	Cm(9)	Cm(9)
Minor seventh ninth [m7(9)]	1-2-b3-(5)-b7	Cm7(9)	Cm7(9)
Minor seventh add eleventh [m7(11)]	1-(2)-b3-4-5-(b7)	Cm7(11)	Cm7(11)
Minor seventh [mM7]	1-b3-(5)-7	CmM7	CmM7
Minor major seventh ninth [mM7(9)]	1-2-b3-(5)-7	CmM7(9)	CmM7(9)
Diminished [dim]	1-b3-b5	Cdim	Cdim
Diminished seventh [dim7]	1-b3-b5-6	Cdim7	Cdim7
Seventh [7]	1-3-(5)-b7	C7	C7
Seventh suspended fourth [7sus4]	1-4-5-b7	C7sus4	C7sus4
Seventh flatted fifth [7b5]	1-3-b5-b7	C7b5	C7b5
Seventh ninth [7(9)]	1-2-3-(5)-b7	C7 (9)	C7(9)
Seventh add sharp eleventh [7(#11)]	1-2-3-#4-(5)-b7 or 1-(2)-3-#4-5-b7	C7(#11)	C7(#11)
Seventh add thirteenth [7(13)]	1-b2-3-(5)-b7 or 2-3-5-6-b7	C7 1(13)	C7(13)
Seventh flatted ninth [7(b9)]	1-b2-3-(5)-b7	C7(b9)	C7(b9)
Seventh add flatted thirteen [7(b13)]	1-3-5-b6-b7	C7(b13)	C7(b13)
Seventh sharp ninth [7(#9)]	1-#2-3-(5)-b7	C7(#9)	C7(#9)
Major seventh augmented [M7aug]	1-(3)-#5-7	CM7aug	CM7aug
Seventh augmented [7 aug]	1-3-#5-b7	C7aug	C7aug
Suspended fourth [sus4]	1-4-5	Csus4	Csus4
One plus two plus five [1+2+5]	1-2-5	C1+2+5	C

Appendix 4- Demo list

NO   Name

01	World
02	Jazz
03	Trance

Appendix 5- Album list

001	Blessing
002	The Moon Represents My Heart
003	May I Hug You?
004	Whether I Should Go Away Quietly
005	Beautly And The Beast
006	Londonderry Air
007	Serenade
008	Swan Lake
009	Joy To The World
010	Pizzicato Polka
011	It Will Be Better Tomorrow
012	Canon
013	Pianosonatan Op8 IN Cm IN Pathetique
014	Ghost
015	Will You Still Love Me Tomorrow
016	I Only Mind You
017	Foolish Child
018	I Have Nothing
019	Friend
020	Tokyo Love Story
021	Horse Race
022	Mov.2 Adagio Non Troppo Piano Sonata No.9 In D
023	The Opposite Girl Reads Over
024	Song Without Words
025	O'Sole Mio
026	The Song Of Naples
027	Carmen
028	My Old Kentucky Home
029	Dance Music Of Samba
030	Uungarische Tanz
031	Jeanie With Blond Hair
032	Song On The Seashore
033	Examine One Gram Of Dance Musics In The Storehouse
034	Lambada

035	The Pleasant One Draws One Dose Of Thai Nurse's Dance Musics
036	The Long And Arduous Journey Is Always A Feeling
037	Goodbye My Friend
038	Russian Dance Music
039	Military March
040	Barrel Polka Of Beer
041	Musical Moments
042	Forest Polka
043	Annen Polka
044	Wave Waltz Of The Danube
045	Mandarin Duck's Tea
046	The Entertainer
047	The Heart Is Too Soft
048	Emperor's Waltz
049	Brahms Waltz
050	The Sleeping Beauty
051	Living By Night
052	Our Time
053	La Traviata
054	My Heart Will Go On
055	Half A Moon Climbs Up
056	Blue Love
057	Green Sleeves
058	The Ludlows
059	Waterloo Bridge
060	Only You
061	Aura Lee
062	Oriental Cherry
063	Memory
064	Who Can Tell Me
065	Successor Of The Dragon
066	Happy Express
067	Funky Disco
068	Health Song
069	Stand At Ease And Stand At Attention And Stand Well
070	Machine Cat

071	Tulip
072	Mary Had A Little Lamb
073	Morning Of Miaolin
074	The Countryside Of Moscow EVening
075	I've Been Working On The Railroad
076	Small City Story
077	PickTtea leaves And Attack Butterflies
078	Grandfather's Clock
079	Jingles Bells
080	Dance Of The Crown
081	Yankee Doodle
082	Row The Boat
083	Curfew
084	Cocacola
085	Like Rotating
086	New Mandarin Duck's Butterfly's Dream
087	Twinkle Twinkle Little Star
088	Kuckuckswalzer
089	Raising Your Cover
090	A Girl From Altai
091	The Guest In The Distant Place Invites You To Stay
092	There's A Nice Place
093	A La Mu Han
094	A Li Long
095	Pastoral Song
096	Weave The Basket Of Flowers
097	Fengyang Flower - drum
098	Nanniwan
099	Water Drops Down In The River
100	Sell The Stuffed Dumplings

Appendix 6- MIDI implementation chart

Function		Transmitted	Recognized	Remarks
Basic Default		1ch	ALL	
Channel Changed		1-16ch	1-16ch	
Mode	Default	×	3	
	Messages	×	3	
	Altered	**********	×	
Note		0—127	0—127	
Number : True voice		**********	0—127	
Velocity : Note on		○ 9nH,V=1-127	○ 9nH,V=1-127	
	Note off	× （9nH,V=0）	× (9nH,V=0；8nH,V=0-127)	
After key's		×	×	
Touch Ch's		×	×	
Pitch Bend		○	○	
Control 0		○	○	Bank Select
Change 1		○	○	Modulation
5		×	○	Portamento Time
6		○	○	Data Entry
7		○	○	Volume
10		×	○	Pan
11		×	○	Expression
64		○	○	Sustain Pedal
65		×	○	Portamento ON/OFF
66		×	○	Sostenuto Pedal
67		○	○	Soft Pedal
80		○	○	Reverb Program
81		○	○	Chorus Program
91		○	○	Reverb Level
93		○	○	Chorus Level
120		×	○	All Sound Off
121		×	○	Reset All Controllers
123		○	○	All Notes Off
Program		○	○	
Change : true		**********	0－127	
System Exclusive		×	○	
System : SongPosition		×	×	
Common : Song Select		×	×	
: Tune		×	×	
System :Clock		×	×	
Real Time :Commands		× *1	× *1	
Aux :LOCAL ON/OFF		×	×	
:All Notes Off		○	○	
Messages :Active sense		×	○	
:Reset		×	○	

Notes:	*1
	When the accompaniment is started, an FAH message is transmitted. When accompaniment is stopped, an FCH message is transmitted. When an FAH message is received, accompaniment is started. When an FCH message is received, accompaniment is stopped.