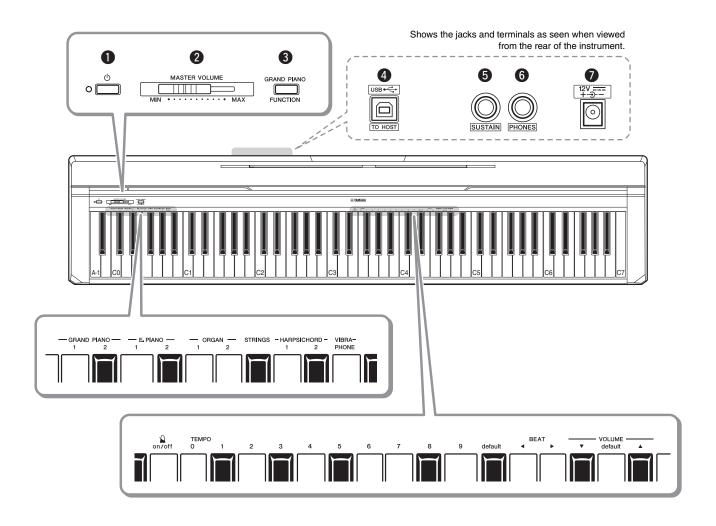


DIGITAL PIANO

P - 45

Owner's Manual

Panel Controls and Terminals



- **1** [♠] (Standby/On) switchpage 10 For turning the power on or setting to standby.
- **②** [MASTER VOLUME] slider.....page 11 For adjusting the volume of the entire sound.
- **3** [GRAND PIANO/FUNCTION] button.....page 12 For instantly calling up the Grand Piano 1 Voice.

FUNCTION

You can set various parameters by pressing a note on the keyboard while holding this button.

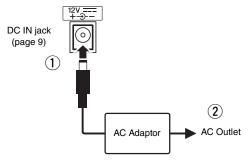
- **4** [USB TO HOST] terminalpage 18 For connecting to an iPhone, iPad, or computer.
- **6** [SUSTAIN] jackpage 11 For connecting the included footswitch, an optional footswitch or foot pedal.
- **6** [PHONES] jackpage 11 For connecting a set of standard stereo headphones.
- **7** DC IN jackpage 10 For connecting the power adaptor.



Setting Up

Power Requirements

Connect the AC adaptor plugs in the following order.



* The shape of the plug and outlet differs depending on locale.

N WARNING

 Use the specified adaptor (page 20) only. Using the wrong adaptor can result in damage to the instrument

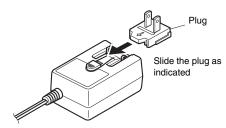
⚠ CAUTION

. When setting up the product, make sure that the AC outlet you are using is easily accessible. If some trouble or malfunction occurs, immediately turn off the power switch and disconnect the plug from the outlet.

• To disconnect the power adaptor, press the [(1)] (Standby/On) switch and carry out the above procedure in reverse order.

For the Power Adaptor with a Removable Plug

Do not remove the plug from the power adaptor. If the plug is removed accidentally, slide the plug into place without touching the metallic parts, and then push the plug in completely until it clicks.



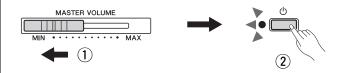
* The shape of the plug differs depending on locale.

N WARNING

- Make sure to keep the plug attached to the AC adaptor. Using the plug alone can cause electric shock or fire.
- Never touch the metallic section when attaching the plug. To avoid electric shock, short circuit or damage, also be careful that there is no dust between the AC adaptor and plug.

Turning the Power On/Off

- 1) Set the volume to the minimum.
- (2) Press the [(1)] (Standby/On) button to turn on the power.



When the power is supplied to the instrument, the power lamp located on the left of the power switch is turned on. While playing the keyboard, adjust the volume level by using the [MASTER VOL-UME] slider. To turn off the power, press the [()] (Standby/On) switch again for a second.

⚠ CAUTION

• Even when the power switch is turned off, electricity is still flowing to the product at the minimum level. When you are not using the product for a long time, make sure to unplug the power cord from the wall AC outlet.

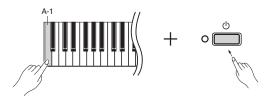
Auto Power Off Function

To prevent unnecessary power consumption, this function automatically turns the power off if no buttons or keys are operated for approximately 30 minutes. If desired, you can disable or enable this function.

To disable the Auto Power Off function:

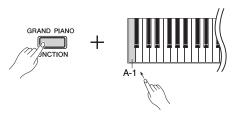
When the instrument is turned off:

While holding down the lowest key (A-1), press the [(b)] (Standby/On) switch to turn on the power so that the power indicator flashes three times, after which the Auto Power Off function is disabled.



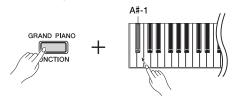
When the instrument is turned on:

While holding down [GRAND PIANO/FUNCTION], press the lowest key (A-1).



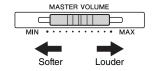
To enable the Auto Power Off function:

While holding down [GRAND PIANO/FUNCTION], press the A#-1 key.



Setting the Volume

When you start playing, use the [MASTER VOL-UME] slider to adjust the volume of the entire keyboard sound.



Setting the Operation Confirmation Sounds

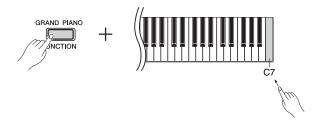
Because of the simple, piano-like design of this instrument, there are a minimum of panel controls, and most settings are made using the keys of the keyboard. When you turn a function on or off, or change a setting, the instrument produces a sound to confirm the change. There are three types of sounds used: an ascending sound for on, a descending sound for off, and clicks for other settings. For the list of functions assigned to the buttons and keys, see "Quick Operation Guide" on page 22.

Setting the Operation Confirmation Sounds On or Off

You can enable or disable the Operation Confirmation Sounds as desired.

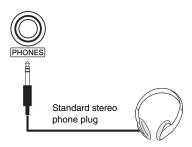
While holding down [GRAND PIANO/FUNCTION], press the C7 key. Every time you press the C7 key, the setting is switched on or off.

Default setting: on



Using Headphones

Any pair of stereo headphones with a 1/4" stereo phone plug can be plugged in here for convenient monitoring. The speakers are automatically shut off when a plug is inserted into this jack.



<u>A</u> CAUTION

 To protect your hearing, avoid listening with the headphones at a high volume level for long periods of time.

Using a Footswitch

The [SUSTAIN] jack is for connecting the included footswitch, which works in the same way as a damper pedal on an acoustic piano. Also an optional FC3A foot pedal or FC4A or FC5 footswitch can be connected to this jack. The FC3A lets you use the Half Pedal function.



Half Pedal function

If you are playing the piano with sustain and want a clearer, less muddled sound (especially in the bass register), let up on your foot from the pedal to half position or higher.

NOTE

- Do not press the footswitch when turning the power on. Doing this changes the recognized polarity of the footswitch, resulting in reversed footswitch operation
- Make sure that power is OFF when connecting or disconnecting the footswitch or pedal.

Selecting & Playing Voices

Selecting a Voice

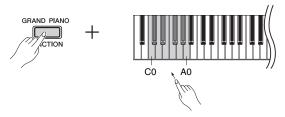
To select the Grand Piano Voice:

Simply press [GRAND PIANO/FUNCTION] to instantly call up the Grand Piano 1 Voice — no matter what other Voice is called up or other settings are made.



To select another Voice:

While holding [GRAND PIANO/FUNCTION], press one of the C0 - A0 keys.



Voice List

Key	Voice Name	Description
CO	GRAND PIANO 1	Recorded samples from a full concert grand piano. Perfect for classical compositions as well as any other style that requires acoustic piano.
C#0	GRAND PIANO 2	Bright piano sound. Clear tone helps the sound to "cut through" when playing in an ensemble.
D0	E. PIANO 1	Vintage electric piano sound of hammer- struck metallic "tines." Soft tone when played lightly, and an aggressive tone when played hard.
D#0	E. PIANO 2	An electronic piano sound created by FM synthesis. Good for standard popular music.
E0	PIPE ORGAN 1	A typical pipe organ sound (8 feet + 4 feet + 2 feet). Good for sacred music from the Baroque period.
F0	PIPE ORGAN 2	This is the organ's full coupler sound, often associated with Bach's "Toccata and Fugue."
F#0	STRINGS	Spacious and large-scale string ensemble. Try combining this Voice with piano in DUAL.
G0	HARPSI- CHORD 1	The definitive instrument for baroque music. Authentic harpsichord sound, with plucked strings, no touch response.
G#0	HARPSI- CHORD 2	Mixes the same Voice an octave higher for a more brilliant, dynamic tone.
A0	VIBRA- PHONE	Played with relatively soft mallets.

After selecting the desired Voice, play the keyboard.

NOTE |

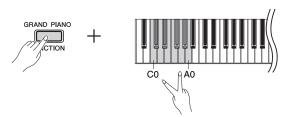
- To familiarize yourself with the characteristics of the Voices, listen to the Demo Songs for each Voice (page 16).
- You can shift the Octave as described in the next column (see "Voice 1").

Layering Two Voices (Dual)

You can play Voices simultaneously across the entire range of the keyboard.

1 Engage Dual.

While holding down [GRAND PIANO/FUNC-TION], simultaneously press any two desired keys from C0 –A0.

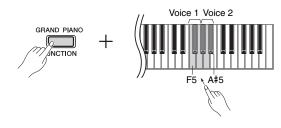


The Voice assigned to the left side key is Voice 1, while the Voice assigned to the right side key is Voice 2.

2 To exit from Dual, simply press [GRAND PIANO/FUNCTION].

To shift the Octave for each Voice:

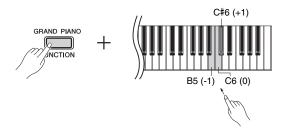
While holding down [GRAND PIANO/FUNCTION], press one of the F5 – A#5 keys.



	F5	-1		G#5	-1
Voice 1	F#5	0	Voice 2	A5	0
	G5	+1		A#5	+1

To adjust the Balance between two Voices:

While holding down [GRAND PIANO/FUNCTION], press the B5 key to decrease by one, C#6 to increase by one, or C6 to set to 0 (equal balance). The setting range is from -6 to +6. Settings above "0" increase the volume of Voice1, and vice versa.

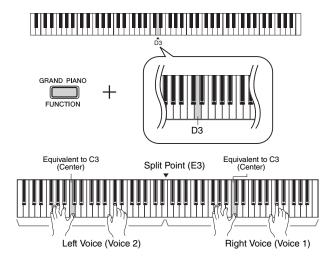


Playing Duo

This function allows two different players to play the instrument, one on the left and the other on the right, over the same octave range.

While holding down [GRAND PIANO/ FUNCTION], press the D3 key to engage Duo.

The keyboard is divided into the two sections with the E3 key as the Split Point.



NOTE |

- The Split Point cannot be changed from E3.
- If the keyboard is in Dual, engaging Duo will exit from Dual. The Voice 1 is used as the Voice of the entire keyboard.
- Changing the Voice will exit from Duo.

2 One person can play the left section of the keyboard while the other plays the right.

Sounds played with the left voice are played from the left speaker, and sounds played with the right voice are played from the right speaker.

3 To exit from Duo, press the D3 key while holding [GRAND PIANO/FUNCTION] again.

To shift the Octave for each Voice:

Same as in Dual (page 12).

Pedal function in Duo

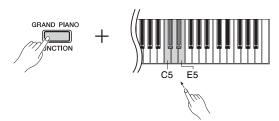
The Footswitch connected to the [SUSTAIN] jack affects both Right and Left sections.

Adding Variations to the Sound — Reverb

This instrument features several Reverb Types that add extra depth and expression to the sound to create a realistic acoustic ambience. Although the appropriate Reverb Type is called up automatically when you select each of the Voices, you can change the Reverb Type as desired.

To select a Reverb Type:

While holding down [GRAND PIANO/FUNCTION], press one of the C5 – E5 keys.



Reverb Type List

Key	Reverb Type	Description
C5	Room	Adds a continuous reverb effect to the sound, similar to the acoustic reverberation you would hear in a room.
C#5	Hall1	For a bigger reverb sound. This effect simulates the natural reverberation of a small-size concert hall.
D5	Hall2	For a truly spacious reverb sound. This effect simulates the natural reverberation of a large concert hall.
D#5	Stage	Simulates the reverb of a stage environment.
E5	Off	No effect is applied.

NOTE I

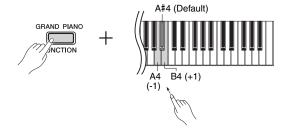
 In Dual, the Reverb Type for Voice 1 is called up by default. If "OFF" is assigned to Voice 1, the Reverb Type for the Voice 2 is called up.

To adjust Reverb Depth:

While holding down [GRAND PIANO/FUNCTION], press the A4 key to decrease by one, B4 to increase by one, or A#4 to reset to the default value (most suitable value for the current Voice). The higher the value, the deeper the effect.

Default setting: the setting best suited for the current Voice

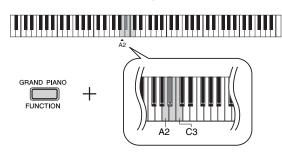
Setting range: 0 (no effect) – 10 (maximum depth)



Setting the Touch Sensitivity

You can specify the Touch Sensitivity (how the sound responds to your playing strength).

While holding down [GRAND PIANO/FUNCTION], press one of the A2 – C3 keys.



Touch Sensitivity

Key	Touch Sensitivity	Description
A2	Fixed	The volume level does not change at all regardless of whether you play the keyboard soft or hard.
A#2	Soft	The volume level does not change much when you play the keyboard soft or hard.
B2	Medium	This is the standard piano touch response (default setting).
C3	Hard	The volume level changes very widely from pianissimo to fortissimo to facilitate dynamic and dramatic expression. You have to hit the keys hard to produce a loud sound.

NOTE |

The Touch Sensitivity settings may have little or no effect with the PIPE ORGAN
and HARPSICHORD Voices, since these instruments are not normally responsive to keyboard dynamics.

Transposing the Pitch in Semitones

You can shift the pitch of the entire keyboard up or down in semitone in order to facilitate playing in difficult key signatures, or to easily match the pitch of the keyboard to the range of a singer or other instruments. For example, if "+5" is selected, playing key C produces pitch F, letting you play a song of F major as though it were in C major.

Setting range: -6 - 0 - +6

To transpose the pitch down:

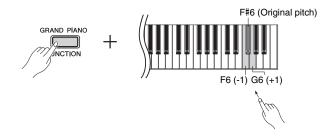
While holding down [GRAND PIANO/FUNCTION], press the F6 key to decrease by 1 semitone.

To transpose the pitch up:

While holding down [GRAND PIANO/FUNCTION], press the G6 key to increase by 1 semitone.

To restore the original pitch:

While holding down [GRAND PIANO/FUNCTION], press the F#6 key.



Fine-tuning the Pitch

You can fine tune the pitch of the entire instrument in approximately 0.2 Hz increments. This lets you match the keyboard pitch finely to that of other instruments or CD music.

Setting range: 414.8 – 440.0 – 466.8 Hz

To lower the pitch:

While holding down [GRAND PIANO/FUNCTION], press the G#6 key repeatedly to lower the pitch in approximately 0.2 Hz increments.

To raise the pitch:

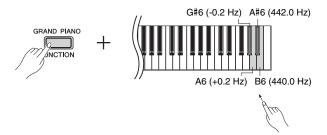
While holding down [GRAND PIANO/FUNCTION], press the A6 key repeatedly to raise the pitch in approximately 0.2 Hz increments.

To set the pitch to A3 = 442.0 Hz:

While holding down [GRAND PIANO/FUNCTION], press the A#6 key.

To reset the pitch to the default (A3 = 440.0 Hz):

While holding down [GRAND PIANO/FUNCTION], press the B6 key.



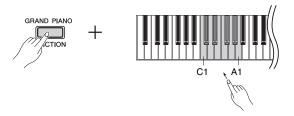
Playing Back Songs

Listening to the Voice Demo Songs

Demo Songs are provided for each of the Voices such as Piano and Organ.

While holding down [GRAND PIANO/FUNCTION], press one of the C1 – A1 keys to start playback.

This operation starts playback of the Demo Song of the Voice assigned to the pressed key. Starting with the selected Song, playback will continue in sequence.



NOTE I

The keyboard Voice is automatically set to correspond to that of the current Demo Song. If you select another Voice during playback, the Demo Song will automatically change to that corresponding to the selected new Voice

Demo Song List

Key	Voice Name	Title	Composer
C1	GRAND PIANO 1	Original	Original
C#1	GRAND PIANO 2	Original	Original
D1	E. PIANO 1	Original	Original
D#1	E. PIANO 2	Original	Original
E1	PIPE ORGAN 1	Original	Original
F1	PIPE ORGAN 2	Original	Original
F#1	STRINGS	Original	Original
G1	HARPSICHORD 1	Gavotte	J.S. Bach
G#1	HARPSICHORD 2	Invention No. 1	J.S. Bach
A1	VIBRAPHONE	Original	Original

The demonstration pieces listed above are short rearranged excerpts of the original compositions. All other songs are original (© 2014 Yamaha Corporation).

Press [GRAND PIANO/FUNCTION] again to stop playback.



To adjust the playback tempo:

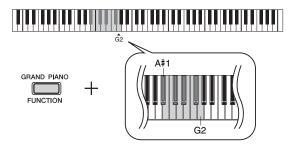
The operation is same as that of the Metronome Tempo (page 17).

Listening to the Piano Songs (**Preset Songs**)

In addition to the Demo Songs, Preset Songs are provided for your listening pleasure.

While holding down [GRAND PIANO/FUNCTION], press one of the A#1 – G2 keys to start playback.

Starting with the selected Song, playback will continue in sequence.



Preset Song List

Key	No.	Title	Composer
A#1	1	Menuett G dur BWV.Anh.114	J.S. Bach
B1	2	Turkish March	W.A. Mozart
C2	3	Für Elise	L.v. Beethoven
C#2	4	Valse op.64-1 "Petit chien"	F.F. Chopin
D2	5	Träumerei	R. Schumann
D#2	6	Dolly's Dreaming and Awakening	T. Oesten
E2	7	Arabesque	J.F. Burgmüller
F2	8	Humoresque	A. Dvořák
F#2	9	The Entertainer	S. Joplin
G2	10	La Fille aux Cheveux de Lin	C.A. Debussy

Press [GRAND PIANO/FUNCTION] again to stop playback.



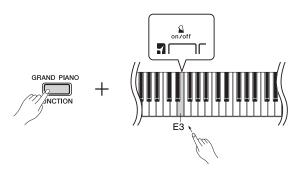
To adjust the playback tempo:

The operation is same as that of Metronome Tempo (page 17).

Using the Metronome

The metronome is convenient for practicing with an accurate tempo.

While holding down [GRAND PIANO/ FUNCTION], press the E3 key to start the Metronome.



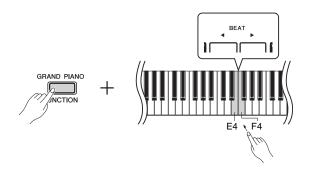
2 Execute the same operation again to stop the Metronome.

NOTE |

 Pressing only [GRAND PIANO/FUNCTION] also stops the Metronome, but it also resets to the Grand Piano Voice.

Selecting a Beat

While holding down [GRAND PIANO/FUNCTION], press the E4 key to decrease the value, or the F4 key to increase the value. The default value is "no beat." When a value other than "no beat" is selected, the first beat is accented with a bell sound.

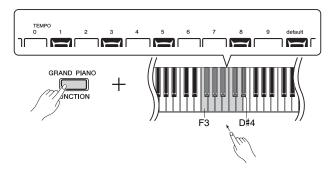


Adjusting the Tempo

While holding down [GRAND PIANO/FUNCTION], press the F3 – D4 keys (to which numbers 0 – 9 are assigned individually) to specify the three-digit value as a Tempo of the Metronome and Song. To specify "95," for example, press the F3 (0), D4 (9) and A#3 (5) keys in order while holding down [GRAND PIANO/FUNCTION].

Default setting (Metronome): 120

Setting range: 32 - 280



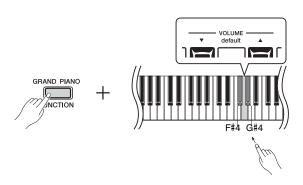
To restore the default value:

While holding down [GRAND PIANO/FUNCTION], press the D#4 key.

Adjusting the Volume of the Metronome

While holding down [GRAND PIANO/FUNCTION], press the F#4 key to decrease the volume of the Metronome, the G#4 key to increase the volume, or the G4 to restore the default volume (10).

Setting range: 1 - 20



Connecting Other Equipment

CAUTION

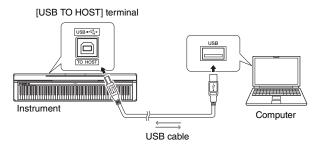
Before connecting the instrument to other electronic components, turn off the power to all the components. Before turning the
power on or off to all components, set all volume levels to minimum (0). Otherwise, electrical shock or damage to the components may result.

Connecting an iPad or iPhone

With an iPad or iPhone connected to your digital piano, you can use a wide range of apps to expand the functionality of your instrument in exciting new ways. For details on how to connect the devices, refer to the "iPhone/iPad Connection Manual," which you can download for free from the Yamaha web site.

Connecting to a computer

By connecting a computer to the [USB TO HOST] terminal, you can take advantage of various music software with your computer and the instrument. For details on using a computer with this instrument, refer to the "Computer-related Operations" on the website.



NOTE |

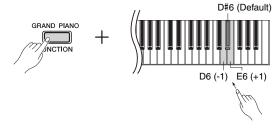
 Use an AB type USB cable. When connecting a USB cable, make sure that the length is less than 3 meters.

MIDI Settings

Setting the MIDI Transmit Channels

In any MIDI control setup, the MIDI channels of the transmitting and receiving devices must be matched for proper data transfer. You can specify the channel on which this instrument transmits MIDI data. To do this, while holding down [GRAND PIANO/FUNC-TION], press one of the D6 – E6 keys. The D6 key decreases the value by 1, the E6 key increases the value by 1, and the D#6 key restores the default value (channel 1).

Setting range: 1 – 16 Default value: 1



NOTE |

- In Dual, the keyboard performance via Voice 1 is transmitted on the specified MIDI Transmit Channel and the keyboard performance via Voice 2 is transmitted on the next channel number in sequence (specified channel + 1).
- No MIDI messages are output during playback of the Demo Song or Preset Song.

Other MIDI Settings

The MIDI settings other than the Transmit Channel are set as listed below, and cannot be changed.

■ MIDI Receive Channels:	
All channels (1 – 10	6)
■ Local Control:)n
■ Program Change Transmit/Receive:Ye	. s
■ Control Change Transmit/Receive: Ye	25