



WILLIAMS®

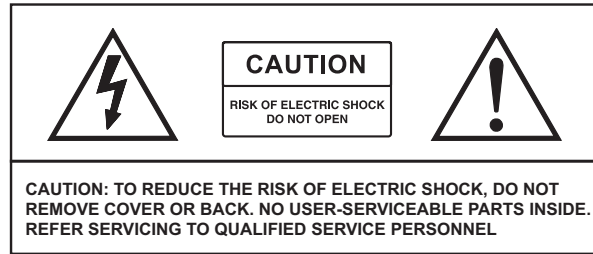


LEGATO

DIGITAL PIANO
OWNER'S MANUAL



LEGATO DIGITAL PIANO



IMPORTANT SAFETY INSTRUCTIONS

Do not use near water.

Clean only with a soft, dry cloth.

Do not block any ventilation openings.

Do not place near any heat sources such as radiators, heat registers, stoves, or any other apparatus (including amplifiers) that produces heat.

Protect the power cord from being walked on or pinched.

Only use the included attachments/accessories.

Unplug this apparatus during lightning storms or when unused for a long period of time.

Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

FCC STATEMENTS

- 1) Caution: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- 2) NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
 - Reorient or relocate the receiving antenna.
 - Increase the separation between the equipment and receiver.
 - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
 - Consult the dealer or an experienced radio/TV technician for help.





INTRODUCTION

Congratulations! You have just purchased a state-of-the-art digital piano that provides remarkable acoustic sound and feel. We recommend that you read through this owner's manual carefully, so you can get the most enjoyment from your new piano.

Features:

- 88 semi weighted, velocity-sensitive keys
- 5 piano & keyboard sounds
- Metronome feature with variable tempo to facilitate practice or recording
- Demo songs corresponding to each voice
- USB MIDI connections
- Stereo/mono line out jacks
- Music rest
- Battery operation (6 x D-cell 1.5V batteries are not included)

Optional Accessories (Not Included):

ESS1 Essentials Pack:

- Headphones
- AC adapter
- Sustain pedal

BEFORE YOU GET STARTED

Shipment

Your piano was carefully packed at the factory, and the packaging was designed to protect the unit from rough handling. Nevertheless, we recommend that you carefully examine the packaging and its contents for any signs of physical damage that may have occurred during transit.

- If the unit is damaged, notify us immediately at **1-888-241-1582**.
- Always use the original packing carton to prevent damage during storage or transport.
- Make sure that no children are left unsupervised with the piano or its packaging.
- Please ensure proper disposal of all packing materials.

INITIAL OPERATION / QUICK START

- Set the piano on a secure, flat surface at a comfortable height for playing.
- Insert batteries in the compartment on the bottom of the keyboard or insert the optional AC adapter into the back panel. Then plug in the power cord into a 110V supply.
- Plug the optional sustain pedal into the Sustain jack on the back panel of the piano.
- Insert the supplied music rest into the two holes on the top panel.
- Turn on the power switch on the left side of the front panel. The LED on the button will light.
- NOTE: Set the volume control at minimum level when you connect the unit to power.
- Press the Voice Select button for the desired voice.
- Adjust the volume control.



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TAKING CARE OF YOUR DIGITAL PIANO

This Williams Legato digital piano will supply you with years of musical enjoyment if you follow the suggestions listed below.

PRODUCT SERVICING

This product should be serviced by qualified service personnel when:

- The power supply cord or the plug has been damaged.
- Liquid has been spilled into the unit or it has been exposed to rain.
- The instrument does not appear to operate normally or exhibits a marked change in performance.
- The instrument has been dropped or the cabinet has been damaged.
- Please contact support@williams pianos.com or call 888-241-1582 for parts and service information.

HANDLING AND TRANSPORT

- Never apply excessive force to the controls, connectors or other parts of the instrument.
- Always unplug cables by gripping the plug firmly, not by pulling on the cable.
- Disconnect all cables before moving the instrument.
- Physical shocks caused by dropping, bumping, or placing heavy objects on the instrument can result in superficial or operational damage.
- Carefully check the volume control before playing. Excessive volume can cause permanent hearing loss.

CLEANING

- Clean the cabinet and panel with a soft, dry cloth. Do not use paint thinner or petrochemical based polishes.
- To maintain the luster of the keys and buttons, wipe with a clean, lightly dampened cloth, and then polish with a soft, dry cloth.

LOCATION

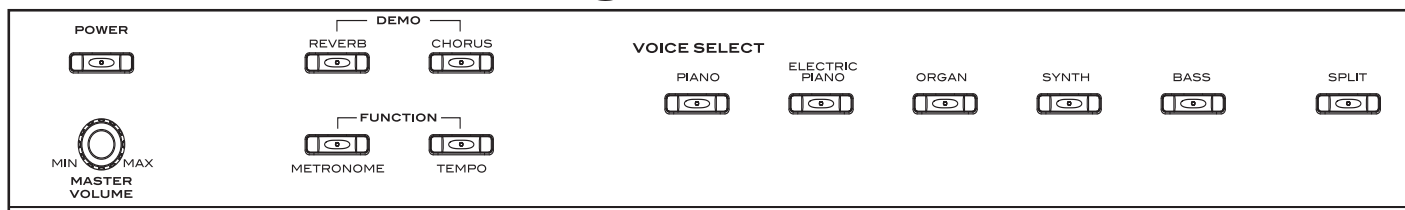
- To avoid deformation, discoloration, or more serious damage, do not expose the instrument to the following conditions: Direct sunlight, high temperatures, excessive humidity, excessive dust, strong vibration.
- Leave enough space around the piano for proper ventilation.
- This instrument contains digital circuitry and may cause or be susceptible to interference if placed too close to radio, television receivers, or mobile phones. If interference occurs, move the instrument further away from the affected equipment.
- Avoid placing vinyl objects on top of the instrument, vinyl can stick to and discolor the surface.

POWER

- Turn the power off when the instrument is not in use.
- To avoid damage to the instrument and other devices to which it is connected, turn the power switches of all related devices off prior to connection or disconnection of MIDI cables.
- Turn the power off if the main cable is damaged, or the instrument has been exposed to liquid.
- Do not switch the unit on and off in quick succession, as this places an undue load on the electronic components.
- Unplug the DC power adapter during an electrical storm.
- Avoid plugging the DC power adapter into the same AC outlet as appliances with high power consumption, such as electric heaters or ovens.

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TOP PANEL



Power On/Off

Press the [POWER] button in the upper left corner of the front panel. The LED light in the button will stay on when the piano is on.

Volume Knob

Controls the overall output volume of the piano.

Function Button Group

Reverb Button, Chorus Button, Metronome Button, Tempo Button

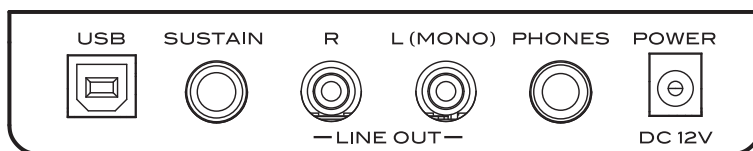
Voice Select Buttons

Piano, Electric Piano, Organ, Synth, Bass

Split

Delivers the keyboard into two two zones with different voices

BACK PANEL



USB Input

For computer connection, the USB connection supports Class Compliant MIDI Drivers to use with MIDI Sequencer applications.

Sustain Input

The sustain pedal will function in a similar method as an acoustic piano sustain pedal. Using this pedal will allow the piano key sounds to decay slowly. An optional piano-style pedal may be used. The jack will auto-detect the polarity of the sustain pedal.

Outputs

Stereo/ Mono Line Out RCA Jacks. The output jacks supply a line-level signal for external amplification. Use both jacks for stereo or just the Left jack for mono.

Headphone

The headphone socket disconnects the speakers when headphones are connected.

Power Input

Connection for the Optional DC power adapter.

BOTTOM PANEL

Battery Compartment

The product can either be powered via a power supply or battery. If batteries are inserted while the unit is powered from a power supply, no power will be drawn from the batteries.

6 x D-cell 1.5V batteries



DEMO SONGS

There are 5 demo songs in the Legato piano. Each demo song will demonstrate a different voice as indicated in the chart below.

Demo Song	Voice
1	Piano
2	Electric Piano
3	Organ
4	Synth
5	Bass and Piano

The demo songs may be selected by pressing the REVERB and CHORUS buttons together simultaneously for 5 seconds. The demo starts with the Piano. During playback, another voice may be chosen by pressing a different voice select button.

OPERATIONS

Function Mode allows you to change parameters for Voices, Voice Volume Level, Layer Mode, Layer Volume Level, Split Mode, Split Volume, Split Point and Tuning.

To enter Function Mode, press the Metronome and Tempo buttons together.

Parameter values are entered using the keyboard, which is scaled so that the keys in the lower octaves provide low values and the keys in the upper octaves provide high values. C7=127 Press and hold data entry functions should activate after 1.5 seconds.

See Appendix on pg. 14-15.

Voices

The Legato piano has 5 built-in voices. Each voice may be selected one at a time. They can be layered to produce two voices at once, or assigned to the left or right hands in the split mode.

Voices include: Piano, Electric Piano, Organ, Synth and Bass.

To select a voice, press the Voice Select button that relates to the sound listed above the button.

The button will light and the LED will indicate the selection.

Changing the Voice Volume Level

1. Press the Metronome and Tempo Buttons together to enter the Function mode.
2. Pressing C#0 activates the voice volume menu.
3. The volume can be changed in 88 note steps from 0-127
4. Press the Metronome and Tempo Buttons together again to exit the Function mode.

Layer Mode

In Layer mode two voices may be played simultaneously.

1. To layer two sounds, press the corresponding voices simultaneously. Both LEDs will light up while layered.
2. To turn Layer Mode off, select a single voice button and the other Voice will be turned off.

To Change the Layer Volume Level

1. Press the Metronome and Tempo Buttons together to enter the Function mode.
2. Pressing D#0 activates the layer volume menu. The volume can be changed in 88 note steps from 0-127 where C7=127 and A-1=0.
3. Pressing a key will play C3 of the currently selected layered sound at the volume corresponding to the key value.
4. Press the Metronome and Tempo Buttons together again to exit the Function mode.

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Split Mode

Split Mode allows the keyboard to be divided into two sections so that different voices may be played with the left and right hands. The volume may be independently adjusted for each voice, the Split Point (the highest note played with the left hand) may be adjusted and the Split Voice may be changed as desired.

To Enter Split Mode

Press the [SPLIT] button.

The Split (left hand) voice will be Upright Bass and the Split Point will be B2.

To Change the Split Volume

1. Press the Metronome and Tempo Buttons together to enter the Function mode.
2. Pressing D#2 activates the Split Volume menu. See Appendix on pg. 14.
3. The volume can be changed in 88 note steps from 0-127 where C7=127 and A-1=0.
4. Press the Metronome and Tempo Buttons together again to exit the Function mode.

To Change the Split (Left Hand) Voice

Press and hold the [SPLIT] button while depressing the desired Voice Select button.

Change the Main (Right Hand) Voice

1. Exit Split Mode by pressing the [SPLIT] button.
2. Select the new voice and then press [SPLIT] again to re-enter Split mode.

To Change the Split Point

1. Press the Metronome and Tempo Buttons together to enter the Function mode.
2. Pressing C#2 activates the Split Point menu.
3. The split point can be changed in 88 note steps from 0-87 where C7=87 and A-1=0.
4. Press the Metronome and Tempo Buttons together again to exit the Function mode.

Turn Off Split Mode

Press the SPLIT button. The LED will turn off as well as the currently selected voice

MICRO TUNING

To Change the Voice Tuning

1. Press the Metronome and Tempo Buttons together to enter the Function mode.
2. Press the A#-1 key to activate the tuning menu. The keyboard will now play middle C piano 1 voice (C3) on every note across the keyboard. Playing C3=C3. Pressing any key downwards to A#-1 will play C3 but change the tuning setting proportionately to tune down by a whole semi tone. (See Appendix Pg 15)
3. Pressing any key from C3 and up will play the C3 note but at tuning settings to tune the keyboard up by a whole semi tone.
4. Press the Metronome and Tempo Buttons together again to exit the Function mode.



MENUS & BUTTONS

There are 4 function buttons on the Legato that control various functions. These are Reverb, Chorus, Metronome and Tempo.

Reverb and Chorus Buttons

The Reverb and Chorus effects may be applied to each voice individually and will be retained even when the power is turned off.

To apply either effect, press either button. The button will light and the effect will be heard when the piano is played.

To turn off the effect, press the button of the desired effect again and the LED light will go off.

To modify the depth of the effects

1. Press and hold the effect button
2. While this function is active the LED should blink. You can then release the button and press a key on the keyboard corresponding to the setting you want for the reverb depth. It's possible to change the setting by pressing multiple keys after each other until the right setting is found.
3. Set the reverb depth by pressing a key on the keyboard to select the value. See the Appendix for the value ranges.
4. The keyboard should still play the sound originally selected so the user can hear the new setting with the sound selected.
5. To exit, press the Reverb button again. Reverb should be activated upon exit and the LED button light.

Reverb and Chorus settings are set per Instrument and retained over power cycling.

Metronome Button

1. Press the METRONOME button to activate the metronome function. You can hear the click in headphones or speakers. When on, the button LED is lit.
2. To set the level of the metronome click, press and hold the button. The LED will blink once the menu is active.
3. You can then select the level by pressing a key on the keyboard.
4. Press the Metronome button again to exit to the previous state.

Tempo Button

This affects the speed of the metronome.

1. To change the tempo, press and hold the button for 3 seconds to change the setting. The LED will blink to current tempo speed. If the Metronome is off, no sound will be heard.
2. Press a key on the keyboard to select a tempo. The LED will blink to the new value. It is possible to make multiple changes and see the LED tempo change as the keys are pressed.
3. To exit, press the tempo button. The LED will stop blinking and go off. See Appendix.

Tempo defaults to 120 but settings are retained over power cycling. 120BPM = C3 or Middle C.

Advanced Functions/Edit mode for Metronome and Tempo See Appendix pg 15.

Changing the Time Signature

Pressing the Metronome and Tempo buttons allows the user to change the time signature for the metronome. When this menu is selected the metronome starts playing at the current tempo setting. Pressing G#0 toggles through the time signature options starting with the current setting. Default is 4/4 and the following options are available to toggle through: 2/4, 3/4, 4/4, 5/4, 6/8, 9/8, 12/8.

ADVANCED FUNCTIONS

Advanced Function Mode

To enter Advanced Function Mode, press Metronome and Tempo buttons simultaneously. The keyboard does not play a sound at this point but is used for menu selection as per the information below.

To accept a menu setting press the Metronome and Tempo buttons simultaneously again. This will exit the Edit menu and then you will have to re-enter the Edit menu to make changes to other settings.

Factory Reset

Performing a Factory Reset will clear all battery backed memory and restore all functions to factory defaults.

1. Turn the Power Off.
2. Hold down the [REVERB] and [CHORUS] buttons while powering on the piano (The LED Display will light ALL segments and all LEDs on the device will light).
3. Release the [REVERB] and [CHORUS] buttons.

Velocity Curves

You can change the way the keyboard responds to your playing by adjusting the Velocity curve settings

1. Press the Metronome and Tempo Buttons together to enter the Function mode.
2. Press F#1, G#1 and A#1 to select between Low, Normal and High velocity curves. When selecting F#1 low, Piano 1 C3 will play at velocity value 30. When G#1 Normal is selected, Piano 1 C3 will play at velocity value 70. When A#1 High is selected, Piano 1 C3 will play at velocity value 127 and the piano will exit Function Mode automatically.

Velocity Curve Table

F#1	Low Velocity
G#1	Normal Velocity
A#1	High Velocity

MIDI

The Musical Instrument Digital Interface (MIDI) is an industry-standard protocol that enables electronic musical instruments such as keyboards, computers, drum machines, etc. to communicate, control and synchronize with each other. MIDI transmissions consist of electronic codes that communicate notes to be played, the instrument, pitch or intensity that notes are to be played with, and the controlling codes such as volume, vibrato, cues and clock signals. The Legato has several functions that facilitate its use as a MIDI device or controller.

MIDI Channels

The Legato has 16 channels numbered from 1-16. Each of the channels is responsible for a voice. When the instrument receives MIDI information from an external device, the active channel is determined by the control message.

The transmission channels are fixed as follows:

Channel 1 Master voice (keyboard)

Channel 2 Split voice (keyboard)

Channel 3 Layer voice (keyboard)

Local On/Off

Turning the Local On/Off function to “Off” will disconnect the keyboard from the internal sound engine of the piano. The Legato may then be used as a MIDI controller to control other MIDI devices or virtual instrument software running on a computer, without playing the sounds on the piano. Additionally, it may be desirable to turn local playing off for other requirements such as when using MIDI sequencing software on your computer.



Local On/Off (cont'd)

1. Press the Metronome and Tempo Buttons together to enter the Function mode.
2. Pressing D#1 allows the user to switch local on or off. When D#1 is first pressed the current setting is confirmed by Piano 1 C3 playing once for on and twice for off. Pressing D#1 again will change the setting playing Piano 1 C3 the amount of times equivalent to the new setting.
3. Press the Metronome and Tempo Buttons together again to exit the Function mode.

Multitimbral Mode

The Legato is able to receive MIDI information on up to 16 channels simultaneously. If you plan to use your piano with a multitrack MIDI recording system, you can record up to 16 different parts using the Williams Legato voices, each played back individually on different MIDI channels. To ensure your recorded part is played back with the correct voice, make sure to press the voice button first and play your part second.

NOTE: Because the Legato is receiving playback information via MIDI, the currently selected voice on the piano may not correspond to the voice being played back.

MIDI Channel Modes

1. Press the Metronome and Tempo Buttons together to enter the Function mode.
2. Pressing A#0 allows you to change the MIDI channel. The main piano sound will play Piano 1 C3 the amount of times equivalent to the current value. So if MIDI channel 5 is selected it will play 5 times. You then press A#0 five times to select channel 10. Piano 1 C3 will play the amount of times equivalent to the current setting, after 2 seconds of inactivity. Once 16 is reached, pressing one more time will select 1.
3. Press the Metronome and Tempo Buttons together again to exit the Function mode.

MIDI Panic Reset

1. Press the Metronome and Tempo Buttons together to enter the Function mode.
2. Pressing C#1 allows the user to activate Panic, which send out general MIDI reset messages such as all note off, etc. Once Panic reset has been completed, Piano will automatically exit Edit mode.

Auto Power On/Off

1. Press the Metronome and Tempo Buttons together to enter the Function Mode.
2. Pressing F#2 allows the user to switch auto Power On or Off. When F#2 is first pressed, the current setting is confirmed by Piano 1 C3 playing once for On and twice for Off. Pressing F#2 again will change the setting playing Piano 1 C3 the amount of times equivalent to the new setting.
3. Press the Metronome and Tempo buttons together again to exit the Function Mode.

NOTE: If Default is on, it means the unit will Auto Power Off after 30 minutes if there is no operation, but expect no demo playing.

Memory Autosave

When modifying the settings of the Williams Legato the following settings will be saved after you turn off the keyboard — Reverb, Chorus (for each voice), Tempo, Metronome volume, Time Signature, Main Volume, Layer Volume, Split Volume, MIDI Channel, Velocity Curve, Split point and Auto Power On/Off.

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SPECIFICATIONS

Value

Keyboard	88 weighted, velocity-sensitive keys
Voices	5
Polyphony	32
Voice Control	Layer, Touch, Split, Metro
Demo Songs	5
MIDI Transmit Settings	Local Control
Connectors	USB, Sustain Pedal, RCA-Line Out (L/R), Phones
Speakers	2x10W @ 8Ω, low freq driver 2x10W @ 8Ω, high freq driver
Dimensions	127 cm X 27.6 cm X 90 mm
Weight	8.5 kg
Supplied	Owners Manual, Music Stand

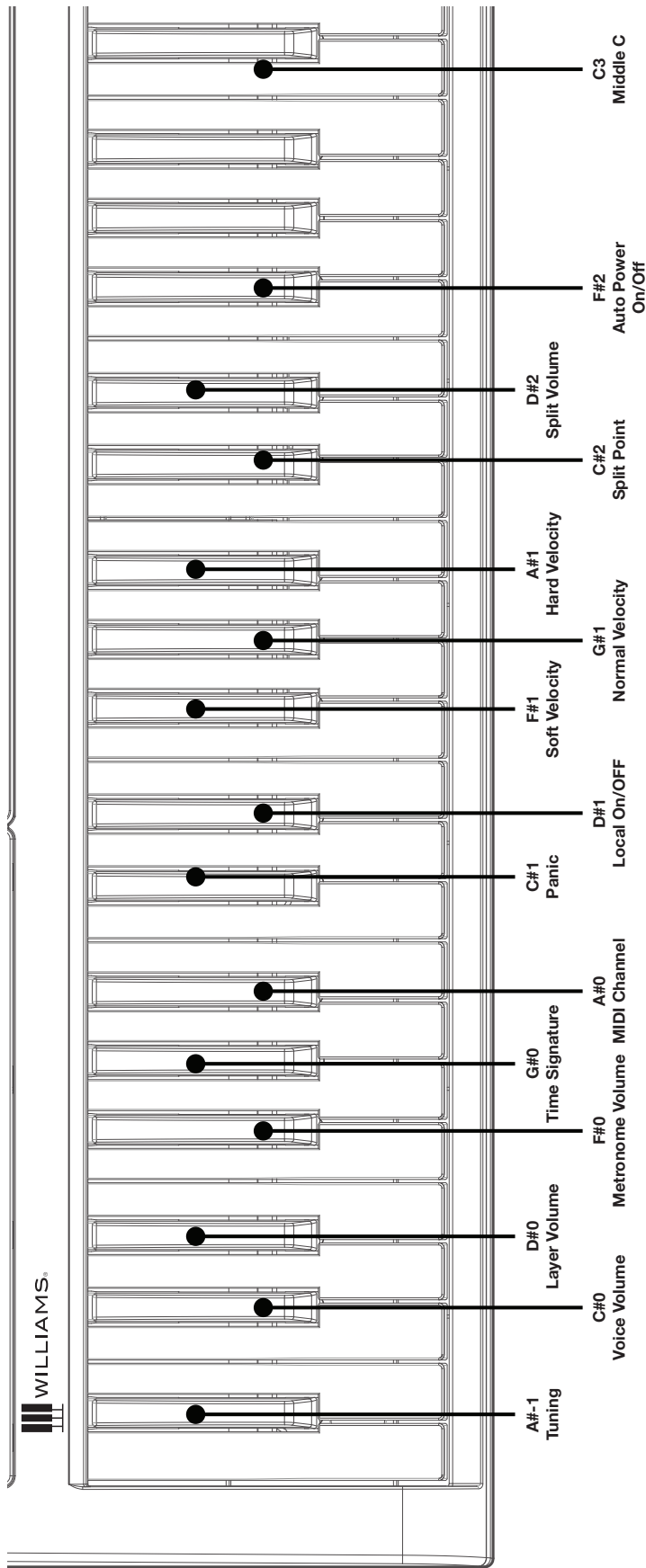


KEYBOARD SHORTCUTS

FUNCTION MODE:

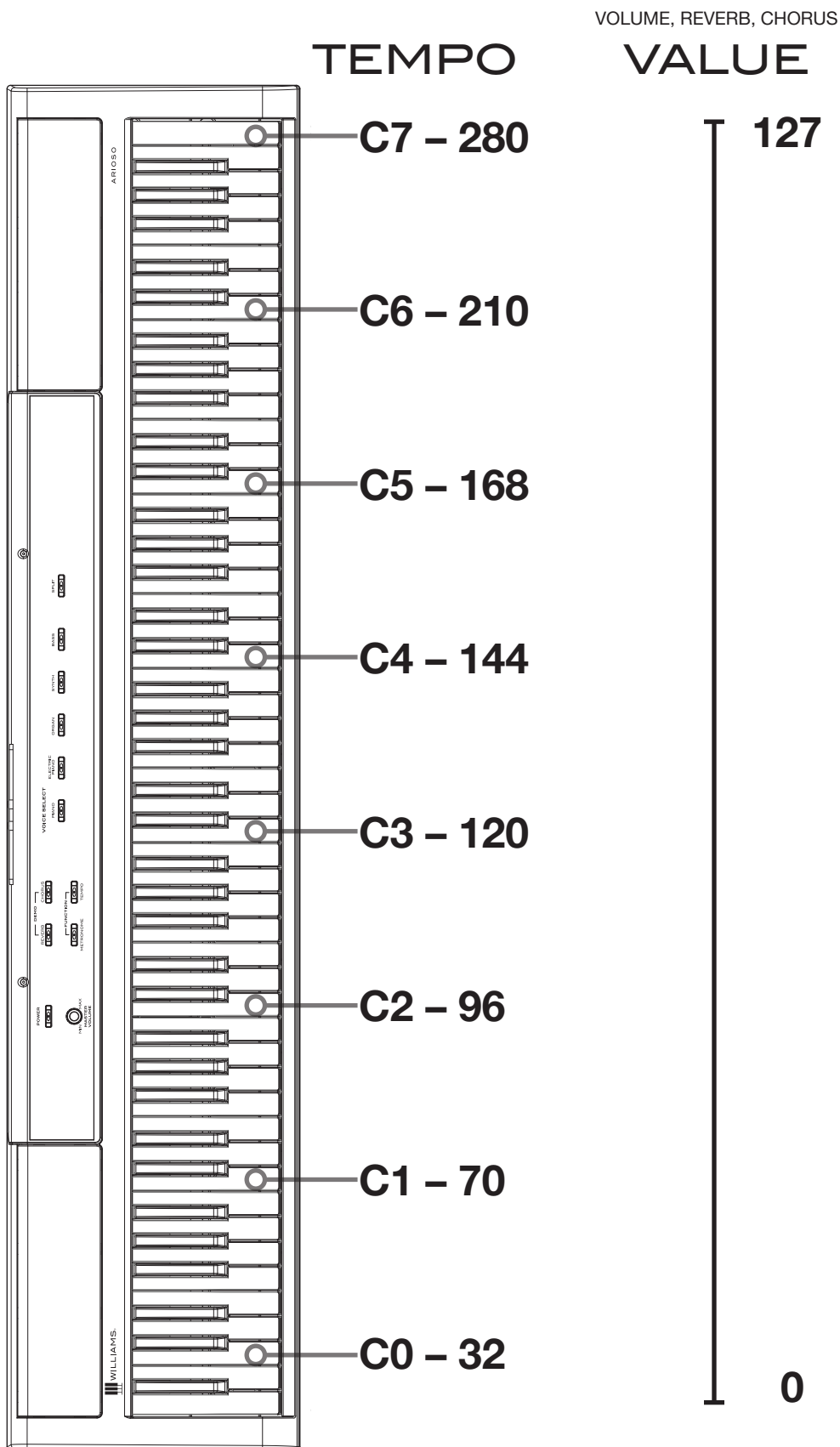
To enter Advance Function Mode, press Metronome and Tempo buttons simultaneously. The keyboard does not play a sound at this point but is used for menu selection as per the information below.

To accept a menu setting, press the Metronome and Tempo buttons simultaneously again. This will exit the Edit menu and then you will have to re-enter the Edit menu to make changes to other settings.



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TEMPO MAP PARAMETER VALUES BY KEY RANGE





WARRANTY

Williams provides the following limited warranty, to the original purchaser: this piano is warranted to be free from electronic and/or structural defects in materials and workmanship for a period of one (1) year from the date of original purchase. If this Williams piano is defective, at its option during the warranty period, subject to the terms of this limited warranty and upon proof of purchase, Williams will either repair or replace the listed piano with a same or similar model of equal age or newer. Any repairs or modifications must be completed by Williams and/or an authorized agent of Williams. The warranty obligations as set forth herein shall be performed free of charge with the exception of all delivery and shipping expenses. This limited warranty will not apply to this product in the case of misuse, abuse, neglect, alterations, normal wear and tear or other circumstance not directly attributed to electronic and/or structural defects in materials or workmanship. Without limiting the foregoing, this limited warranty will also be inapplicable to products that have not been maintained or replaced in accordance with the manufacturer's instruction, or to products from which the serial number has been removed or altered. If covered defects are found, contact your authorized Williams dealer with regard to the alleged defect within ten (10) days of discovery of the problem.

The foregoing repair or replacement obligation for defective products shall be the sole and exclusive remedy of this limited warranty. All warranties including, but not limited to, the express warranty and the implied warranties of merchantability and fitness for a particular purpose are limited to the one (1) year warranty period. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you. There are no express warranties beyond those stated here. In the event that applicable law does not allow the limitation of the duration of the implied warranties to the warranty period, then the duration of the implied warranties shall be limited to as long as is provided by applicable law. No warranties apply after that period. Retailer and manufacturer shall not be liable for damages based upon inconvenience, loss of use of product, loss of time, interrupted operation or commercial loss or any other incidental or consequential damages including but not limited to lost profits, downtime, goodwill, damage to or replacement of equipment and/or property.

1-Year Parts & Labor Warranty

Register online at www.williamspianos.com

