

•
•
•
•

PianoDisc[®]

iQ[™] User Guide

Version R-B

November 6, 2007

4111 North Freeway Blvd.

Sacramento, CA 95834

www.pianodisc.com

Copyright © 2006-2007

PianoDisc and Burgett Inc.

All Rights Reserved

iQ[™] is protected by copyright law and international treaties.

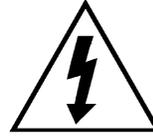
PianoDisc and Burgett, Inc. reserve the right to change product design and specifications at any time without prior notice.

Important: Read This First!

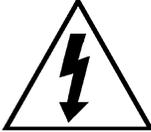
Care and Safety Information



This symbol is intended to alert the user to the presence of important operation and maintenance (servicing) instructions in the literature accompanying the product.



This symbol is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

	<p>CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN</p>	
<p>CAUTION: To reduce the risk of electrical shock, do not remove cover or back. No user-serviceable parts inside. Refer servicing to qualified service personnel.</p>		



IMPORTANT NOTICE: Complete safety of operation is assured by PianoDisc when the system is properly installed and operated in its normal fashion. Do not attempt or commission others to modify any portion of the PianoDisc system unless specifically authorized by PianoDisc.

Important Safety Instructions

WARNING: When using electrical appliances, these basic precautions should always be followed:

1. Read and understand all instructions before using the product.
2. Do not open the cover under any circumstances.
3. Power is supplied through a three-prong, grounded AC connector. Connect only to a three-prong, grounded outlet.
4. Keep the power cord away from other objects. Make sure that the cord is not twisted, placed in any lane of traffic, or trapped under the piano.
5. Locate your PianoDisc unit away from direct sunlight, water or moisture, or hot or cold air currents.
6. If the PianoDisc unit is to remain unused for an extended period of time, the power supply should be disconnected.
7. If repair is necessary, refer only to authorized service personnel.
8. This product, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, consult your physician.
9. The product should be located so that its location or position does not interfere with its proper ventilation.
10. Care should be taken so that objects do not fall onto and liquids are not spilled into the product through the openings.
11. Care should be taken so that objects do not fall onto and liquids are not spilled into the piano through the keys or inside the piano cabinet
12. The product should be unplugged, and serviced by qualified service personnel when:
 - The power supply cord or plug has been damaged.
 - Objects have fallen or liquid has been spilled into the product or piano.
 - The product or piano has been exposed to rain.
 - The product does not appear to operate normally or exhibits a marked change in performance.
 - The product has been dropped or the enclosure is damaged.



Certification Warnings

FCC Part 15 Regulatory Statement

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 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 the 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.

Caution: Changes or modifications to this product, which are not expressly approved by the manufacturer, may void the user's right or authority to operate this product.

Industry Canada and U.S. Regulatory Statement

Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept interference including interference that may cause undesired operation to the device.

China. This equipment meets the requirements of the Compulsory Product Certification System (symbolized by the CCC mark) for China's established safety approval process as listed under the Audio and Video apparatus category of electronic equipment. The CCC product safety mark became effective August 1, 2003 and is required for all products imported into the People's Republic of China for commercial and/or private use with appropriate exemptions.

European Community. Complies with European Directive IEC 65, 5th ed.

•
•
•
•

Save These Instructions!

General Operating Notes

- Even when not in use, your piano and control box continue to consume a small amount of power. Disconnecting your piano from the power source completely shuts down the unit.
- If your piano or iQ control box fails to operate in a manner consistent with the instructions in this manual, please disconnect it from your power source and contact an authorized PianoDisc dealer or a certified PianoDisc technician in your area.

Technical Assistance

Contact an authorized PianoDisc dealer or a certified PianoDisc technician in your area for technical support and/or system maintenance.



•
•
•
•

TABLE OF CONTENTS

About iQ	Operational Safety	10
	Control Box	10
	Power	10
	iQ at a Glance	11
	Available Features	11
	Installation	12
	PianoDisc music and iQ	12
	PianoSync Creator	13
Getting Started	Using iQ	15
	Adjusting volume and play order	15
	Using iPods & iQ to play PianoDisc music	15
	Using iTunes & iQ to play PianoDisc music	16
	Playing PianoDisc Music Videos	17
	Recording your piano performance	17
	Ways to get and play PianoDisc music	19
	Using auto music format detection	20
	iQ Control Box	21
	LED Lights	21
	Select Wheel	21
	Reset Button	21
	iQ Controls	22
Status	22	
Sync	22	
Level	22	
Learn	22	
Reset	22	

PORTS	Ports	26
	Record Output	26
	To Piano	26
	Line Input	26
	Line Output	26
SPECS	Physical Dimensions	27
	Voltage & Power	27
	CD Input	27
	Audio Out	27
	Record Out	27
DIAGRAMS	iQ and your Standalone Multimedia Player	29
	iQ and your iPod/MP3 Player	30
	iQ and iTunes	31
	iQ and your Whole House Audio System	32
TIPS	What is Audio Compression?	33

CHAPTER 1: ABOUT iQ



The **iQ** system is a small, sleek and simple-to-use reproducing piano system that is designed to integrate with popular and emerging media players and music software.

Connect **iQ** to your choice of media player to play downloaded PianoDisc music files or PianoCDs:

- Multimedia players
- iPod/MP3 players
- Desktop or laptop computers with iTunes and/or music recording software installed (e.g. Audacity).
- Whole House audio systems

After you connect iQ to your media player you can:

- Play PianoCDs and downloaded PianoDisc music files.
- Play PianoDisc piano performances synchronized with commercial audio CDs on your piano.
- Control both the piano and audio accompaniment volume from your media player.

Review all safety information. Please review all care and safety information included in this User Guide. This includes information provided as part of compliance with FCC and safety standards.

In this chapter. The remainder of this chapter gives you an overview of the **iQ** system, how it works, and the many ways you can enjoy this product.

Operational Safety

Before using your piano with the iQ system, read all the safety instructions at the beginning of the User Guide and always check the following:

Control Box Make sure the system's control box is properly connected.

Power Make sure the correct power source is available.

- In the United States, your piano uses a standard 120-volt AC household electrical outlet as a power source.
- In other countries, the piano is usually equipped with a power supply and cord that are compatible with the prevailing voltage standards of that geographic area.

If you have questions concerning compatibility with local electrical standards, please consult your PianoDisc retailer before connecting your piano to a power source.

Make sure the system is properly plugged in to the correct power source.

- For systems installed on Vertical (upright) pianos, the electrical cord is usually found extending from a small hole in the back of the piano. Make sure the cord is securely plugged into the outlet before moving the piano against the wall. Do not crush the cord or plug under or against the piano.
- For systems installed on Grand pianos, the electrical cord extends from the power supply. The power supply is usually mounted on a support beam under the piano. Plug the electrical cord securely in to a power source and avoid placing the cord where it become tripping hazard.
- If speakers and/or other peripherals are installed, purchase a surge protector to distribute power to each device. Mount the surge protector underneath the piano and attach it to the side of the beam. Plug it in to the wall, then plug the speakers, peripherals and power supply into the surge protector.

iQ at a Glance

Set it and forget it. Your certified PianoDisc Technician sets up and configures iQ on your piano. You — play your PianoDisc music from your media player or audio system. All the work is done for you.

Available Features

The iQ system offers:

One-time Calibration Setup. Certified PianoDisc Technicians install and calibrate your system. No additional setup is required. (Note: If you change your playback device, the system should be calibrated again. Call your dealer for assistance.)

One-Step Control. Directly from your media player or media player software (iTunes) you control piano and audio accompaniment volume as well as adjust music playback (e.g. fast forward, rewind, stop, play, etc.).

PianoSync Creator. With this on-the-fly music creation software you can synchronize PianoDisc piano performances with a recording artist's commercial audio CD. (PianoSync Creator software sold separately.)

MusiConnect. PianoDisc software that makes it easy for you to purchase, download and burn PianoDisc music to CD — giving you on-demand access to your favorite piano music. Download the software for free at www.pianodisc.com.

Record. The iQ does not record internally. Rather, it uses an external recording device. Combine the recording ability of your audio software or iPod/MP3 player* with a piano that has both a TFT record kit and iQ system installed — and you can record yourself playing the piano. Simply put: iQ captures the piano data from your performance, and sends it to your audio recording software or iPod/MP3 player*.

NOTE: *The TFT Record kit, audio recording software and iPod/MP3 record adapters (if applicable) are accessories. The accessories are not included with iQ systems. You can purchase the TFT Record kit and installation services from your PianoDisc dealer. Audio recording software, iPod/MP3 players* and their record adapters, are available at your local electronics store. See page 17 for more information.*

**Some MP3 players have internal record capabilities. Most, like the iPod, require a separate record adapter to record.*

About iQ

Installation

There are three easy ways to install **iQ** on your piano and seamlessly integrate it into your home audio system:

Standalone. This install option includes an **iQ** system and a multi-media player. Both are discretely installed and connected underneath your piano for playback of purchased PianoCDs and PianoCDs burned from iTunes or MusiConnect.

Media Players. Install an **iQ** system and connect it to your iPod/MP3 player, multi-media player or computer to play PianoDisc music and/or *record your own piano performances.

Audio Source. Install **iQ** as an audio source within your *Whole House or Home Theater* audio system to hear live piano music throughout your home.

PianoDisc music and iQ

The **iQ** system only plays the piano with PianoDisc music. PianoDisc music files are acoustic and data tracks that are stored in a variety of audio formats, including MP3. Get PianoDisc music from the online music store on disc or download music files directly to your computer.

Music on disc. If you have PianoDisc music on a CD, DVD or digital memory card (SD/MMC) you can play the disc in several ways:

- Playback using a multi-media player connected to **iQ**.
- Playback using a computer (with iTunes installed) connected to **iQ**.

Downloaded music. Downloaded songs are raw files that must be converted to a music file format that **iQ** recognizes for playback. Using PianoDisc's MusiConnect software you can purchase and download music files in an **iQ** compatible format, then export the music to iTunes to auto-create a playlist. You can play downloaded music files in several ways:

- Playback using an iPod/MP3 player connected to **iQ**.
- Playback using a computer (with iTunes installed) connected to **iQ**.

FAQ — What is MusiConnect and how do I use it?

MusiConnect® is PianoDisc software that makes it easy for you to purchase, download and burn PianoDisc music to CD or auto-create a PianoDisc music playlist in iTunes: To use MusiConnect:

- Go to www.pianodisc.com to download and install MusiConnect.
- Launch MusiConnect and do the following:
 - Step 1: Register your serial number.
 - Step 2: Buy PianoDisc music.
 - Step 3: Download the music to your computer.
 - Step 4: Select and process the music for PianoCD creation.
 - Step 5: Burn the PianoCD music to CD or create a playlist in iTunes.

**PianoSync
Creator**

The iQ system can play PianoDisc piano performances synchronized with a recording artist's commercial audio CD on your piano.

Using PianoSync Creator. Browse the online collection of PianoSync Creator CDs and choose the one you want. The CD contains the piano performance and synchronization software. Get the matching audio CD and import it into iTunes. Run the PianoSync Creator CD on your desktop and follow the onscreen directions to complete the process.

You can play the synchronized tracks on your piano by connecting your media player to the iQ system. (PianoSync Creator software sold separately.) To synchronize music you need:

- A computer running Windows XP or Mac OS X 10.4 (or higher), iTunes and equipped with a CD/DVD player and burner.
- A PianoSync Creator disc, matching audio CD (both sold separately) and an iQ system.

For detailed instructions, see the brochure included with the PianoSync Creator software package.

CHAPTER 2: **Getting Started**

iQ is designed to play PianoDisc music stored on CD/DVDs, digital memory cards, iPods/MP3 players, and/or iTunes —on your piano. Simply connect **iQ** to your media player or computer to access and play your PianoDisc music.

Read this chapter to familiarize yourself with:

- Adjusting piano and accompaniment volume
- Playing music on your piano using an **iQ** standalone system
- Playing music on your piano using **iQ** with iPods/MP3 players
- Playing music on your piano using **iQ** with iTunes
- Recording your own piano performance using **iQ** with audio recording software or media player recorder adapter
- Synchronizing music and how to play it on **iQ**
- Using **iQ**'s auto music format detection

Using iQ

Adjusting volume and play order

You can adjust both the piano and accompaniment volume directly from your media player. This patent pending feature is exclusive to iQ.

To adjust piano and accompaniment volume:

1. Play music.
2. Locate the volume control on your media player and adjust up or down.
3. Use your media player's controls to adjust how songs are played.

IMPORTANT: The piano stops playing if the volume setting on your media player is too low. Increase the volume to resume play. If you can't adjust the piano and accompaniment volume over a wide enough volume range, calibrate the *Level* control. See the iQ Controls > Calibrating Levels section for detailed instructions.

Using iPods & iQ to play PianoDisc music

To play PianoDisc music on your piano using iQ with an iPod/MP3 player:

1. Open iTunes and import a PianoDisc CD or select a playlist of PianoDisc music.
2. Connect the iPod/MP3 player to your computer and sync it with iTunes.
3. Disconnect the player from your computer, then connect it to iQ's Line Input port.
4. On your player, select a PianoDisc song. Push Play to start playback on your piano.

Helpful Tip — Loading PianoDisc music onto your iPod

- Open iTunes and connect your iPod to your computer.
- Make sure your PianoDisc music was imported into iTunes using the Lossless import setting.
- Follow the onscreen instructions to either add music to your iPod automatically or manually.
- If you're manually adding music, click the *Music* icon under *Library*.
 - Select the PianoDisc songs and/or playlists you want to load into your iPod.
 - Drag your selection onto the iPod icon.

See the iTunes help system and your iPod's User Guide for detailed instructions.

Getting Started

Using iTunes & iQ to play PianoDisc music

To play PianoDisc music on your piano using iQ with iTunes:

1. Open iTunes and import PianoDisc music and/or music videos.
 - Your music is automatically imported into the iTunes Music library.
 - Your music videos are automatically imported into the iTunes Movies library.
 - To organize your PianoDisc music, you can create playlists based on genre, artist or any way you want.
2. Connect a standard A/V cable to your computer's Line Output port.
3. Connect the other end to iQ's Line Input port.
4. Locate the song you want to play either in the Music library or within one of your playlists.
5. Double click a song to start playback on your piano.

Helpful Tip — Importing PianoDisc music into iTunes

To import PianoDisc music from a CD into iTunes:

- Open iTunes and select Preferences. Set the import preference to Lossless.
- Insert a CD into your computer's disc slot.
- Click Yes, if iTunes prompts you to import the CD or click the Import *button* if iTunes does not prompt you.
- Follow the onscreen instructions to complete the import.
- Enter PianoDisc song titles in the Name column.
- You're ready to load music onto your iPod, burn a CD or play music on your piano directly from iTunes.

To import electronically downloaded PianoDisc music into iTunes:

- Download MusiConnect from the PianoDisc website and install it on your computer.
- Open MusiConnect. Follow the onscreen instructions to buy, download, and process PianoDisc music, and automatically generate a PianoDisc music playlist in iTunes.
- After iTunes automatically launches you're ready to load PianoDisc music onto your iPod, burn a CD or play music on your piano directly from iTunes.

See the MusiConnect Getting Started for detailed instructions.

Playing PianoDisc Music Videos

The **iQ** system can play a MIDI performance from a recording artist's PianoDisc video on your piano — while you view the video on your iPod, computer or TV. PianoDisc videos are available on DVD or pre-loaded on iPods sold with **iQ** systems.

To play PianoDisc music videos, you'll need:

- A video-capable iPod/MP3 player or a DVD player
- PianoDisc **iQ** system

Using a video-capable iPod to play pre-loaded PianoDisc music videos:

1. Connect the iPod to your **iQ** system.
2. Select Videos > Music Videos from the iPod menu screen.
3. Browse through the Music Videos menu to find the one you want.
4. Select the video and press Play.

Using a DVD player to play PianoDisc DVDs:

1. Purchase a PianoVideo DVD from your piano dealer.
2. Make sure your TV and DVD player are connected, then connect the player to your **iQ** system.
3. Press Play.
4. Use your TV or DVD player's Volume, Play, Pause, Rewind or Fast-forward functions to control video playback.

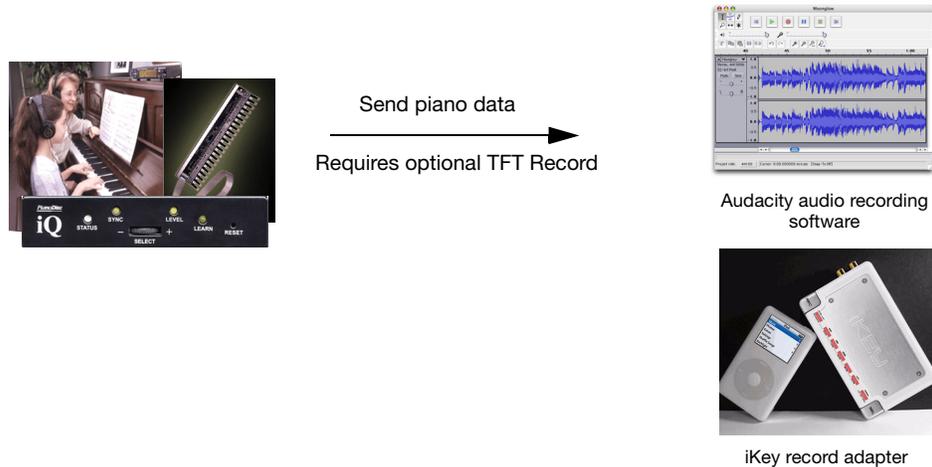
Recording your piano performance

The **iQ** does not record internally. Rather, it uses an external recording device. So if you want to record yourself playing the piano, you'll need a few things first:

- A piano equipped with both a TFT record kit (*optional accessory*) and **iQ** system.
- Computer with audio recording software (*not included with iQ*).
- Audio recording software installed on your computer (*not included with iQ*).
- High-quality record adapter for iPods/MP3 players (*not included with iQ*).

Getting Started

After you combine everything, here's what happens — while you're playing, the piano's TFT record strip captures your key strokes as piano data. **iQ** takes the piano data of your performance and sends it to your audio recording software or iPod/MP3 player (equipped with a record adapter) for high-quality audio recording.



To record to an iPod/MP3 player:

1. Connect **iQ**'s Record output port to your record adapter's input port.
2. Use your record adapter to begin recording.

To record to audio recording software:

1. Connect **iQ**'s Record output port to your laptop or desktop's input port.
2. Use your audio recording software to set up recording and music playback options.
3. Begin your piano performance, then press Stop when you're done.

NOTE: The TFT Record kit, audio recording software and record adapter are accessories. While these accessories are not included with **iQ** systems you can purchase the TFT Record kit and installation services from your PianoDisc dealer.

Free audio recording software, such as Audacity, can be downloaded for Linux, Mac and Windows operating systems (<http://audacity.sourceforge.net/>). iPod/MP3 players and record adapters, such as iKey (<http://www.ikey-audio.com/ikey.htm>), are available at your local electronics store.

Ways to get and play PianoDisc music

There are two easy ways to get PianoDisc music and music videos:

- You can purchase PianoDisc CDs and DVDs.
- You can purchase and download PianoDisc music files directly to your desktop.



Play PianoCDs using multi-media players

1) Purchase PianoDisc CDs from the PianoDisc music store.



2) Insert a CD into the multi-media player within your iQ standalone system.



3) The CD auto-starts playback on your piano.



You can also connect your own standalone CD/DVD player or home audio system to iQ.



Play Downloaded Music and burn CDs using iTunes

1) Use **MusiConnect** to purchase and download PianoDisc music files to your computer.

2) After download, **MusiConnect** processes the music and automatically generates a playlist in **iTunes**. (You can also import PianoCDs into iTunes.)



3) Connect your computer to iQ. Use **iTunes** to select and play the PianoDisc playlist on your piano.

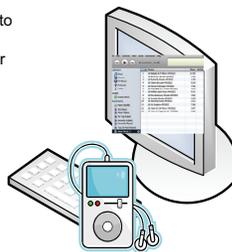
You can also burn the PianoDisc songs to CD to playback on your multi-media player or whole house audio system.



Play Downloaded Music or imported CDs on iPod/MP3 players

1) Purchase PianoDisc CDs from the PianoDisc music store, or use **MusiConnect** to purchase and download PianoDisc music files to your computer.

2) Import PianoCDs into **iTunes** and create a PianoDisc music playlist, OR use **MusiConnect** to process downloaded music files and auto-generate a PianoDisc playlist in **iTunes**.



3) Connect your iPod/MP3 player to your computer.

4) Using iTunes, load PianoDisc songs or entire playlists into your iPod/MP3 player.



5) Connect your iPod/MP3 player to iQ. Use the player to select songs, set play modes, and play songs.



Getting Started

Using auto music format detection

iQ's advanced technology automatically detects if you are playing a commercial audio CD or a PianoDisc CD.

To turn off auto detection:

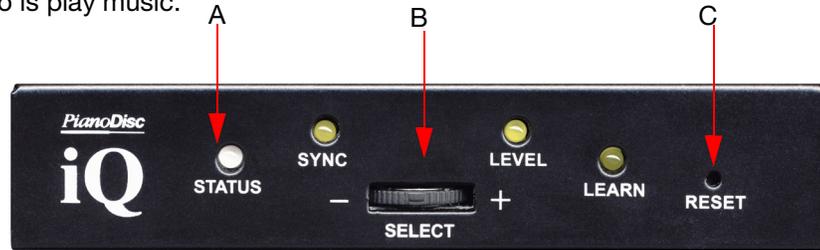
1. Rotate the Select wheel to **-** and release.
 - The *Status* LED turns off and *Learn* LED turns on.
2. Within three (3) seconds push in and hold in the Reset button using a sharp tipped device.
3. While holding the Reset button, push in and release the Select wheel.
 - The *Status* LED turns green.
4. Release the Reset button.
 - The *Learn* LED starts blinking.
5. Rotate the Select wheel to **+** and release.
6. Push in the Select wheel and release.
 - Auto detection is turned off and the setting is saved.

To turn on auto detection:

1. Rotate the Select wheel to **-** and release.
 - The *Status* LED turns off and *Learn* LED turns on.
2. Within three (3) seconds push in and hold in the Reset button using a sharp tipped device.
3. While holding the Reset button, push in and release the Select wheel.
 - The *Status* LED turns green.
4. Release the Reset button.
 - The *Learn* LED starts blinking.
5. Rotate the Select wheel to **-** and release.
6. Push in the Select wheel and release.
 - Auto detection is turned on and the setting is saved.

iQ Control Box

iQ is designed to set it and forget it. Your Certified PianoDisc Technician mounts the iQ control box out-of-sight and configures the system for you. All you have to do is play music.



A. LED Lights

A small light above each Control feature illuminates and/or blinks to indicate that the selected feature is active.

B. Select Wheel

The Select wheel gives you access to iQ controls. Rotate the wheel left or right to navigate to the Sync, Level, Learn and Auto Detection controls. Push the wheel inward to select and adjust the controls.

C. Reset Button

A recessed button used to abort an action and reset the previous values of a control.

TIP: Calibrate the Level each time you connect a different media player to your iQ system. Read the next section to learn how to calibrate the Level.

iQ Controls

Certified PianoDisc Technicians use **iQ** controls to set up and configure your system during installation. In this section, you'll find:

- Descriptions of the **iQ** controls Technicians use to configure the system.
- Step-by-step procedures Technicians use to configure *Sync* and *Level*.

Because no additional set up is required after installation, the steps in this section are optional and are only listed if you are interested in learning how to make system customizations.

TIP: Learning your piano or setting the minimum note velocity for each key is an easy but meticulous process. Pianos not properly learned through **iQ** may experience uneven playback.

If you want to change or customize minimum and maximum note velocity, contact your Dealer or a Certified PianoDisc Technician for assistance.

A. Status

- Amber light - the system is not detecting any PianoDisc data input.
- Green light - the system has detected PianoDisc data and is running.
- Red light - indicates an error during boot-up and/or Level adjustments.

B. Sync

Adjusts the synchronization time between the piano and accompaniment playback.

C. Level

Matches **iQ**'s internal volume levels with your media player's volume level.

D. Learn

Sets the minimum note velocity for each key. You can adjust the minimum MIDI key velocity sent to the solenoid on each key to create optimal playback performance.

E. Reset

Aborts an action and resets to the previous values of a control.

The rest of this section describes how to use iQ controls:

To	Do This
<p>Select the SYNC mode</p> 	<ol style="list-style-type: none"> 1. Rotate the Select wheel to + and release to enter the Sync mode. <ul style="list-style-type: none"> • The <i>Sync</i> LED lights up. 2. Push in the Select wheel and release. <ul style="list-style-type: none"> • The <i>Sync</i> LED starts blinking. <p>iQ is now ready for sync adjustment.</p>
<p>Decrease sync Play piano earlier than the accompaniment.</p>	<ol style="list-style-type: none"> 1. Select the <i>Sync</i> mode. 2. Rotate the Select wheel to the - position. <ul style="list-style-type: none"> • Hold the wheel in this position to decrease synchronization in a slow continuous movement. • Rotate and release the wheel to decrease the sync by five milliseconds. 3. Push in the Select wheel to save your settings and exit the mode.
<p>Increase sync Play piano later with respect to accompaniment</p>	<ol style="list-style-type: none"> 1. Select the Sync mode. 2. Rotate the Select wheel to the + position. <ul style="list-style-type: none"> • Hold the wheel in this position to increase synchronization in a slow continuous movement. • Rotate and release the wheel to increase the sync by five milliseconds. 3. Push in the Select wheel to save your setting and exit the mode. <p>To abort sync and restore to the previous sync value, use a sharp-tipped device and push Reset.</p>
<p>Select the LEVEL mode</p> 	<ol style="list-style-type: none"> 1. Rotate the Select wheel to + twice and release each time to enter the <i>Level</i> mode. <ul style="list-style-type: none"> • The <i>Level</i>/LED lights up. 2. Push in the Select wheel and release. <ul style="list-style-type: none"> • The <i>Level</i>/LED starts blinking. <p>iQ is now ready for Level adjustment.</p>

To	Do This
<p>Match volume levels</p> <p>You can increase or decrease the volume of sound coming from your piano speakers by using your media player's volume control.</p> <p>But first, you must use iQ's <i>Level Adjust</i> to match its internal volume level with your media player's volume level.</p> <p>Matching the volume is necessary for two reasons:</p> <ul style="list-style-type: none"> • To ensure a media player's volume output is high enough for iQ to detect piano data for music playback. • To set a reasonable or desired volume level for music playback. 	<ol style="list-style-type: none"> 1. Make sure you're in the Level mode. <ul style="list-style-type: none"> • Your piano is set to play at mid-volume level. The accompaniment level is muted to prevent possible over-drive on your speakers. 2. Set your media player to a volume level of 50% and piano speakers to 75%. 3. From your media player, select and play music that has accompaniment. 4. Push in and release the Select wheel to calibrate and save the level while the piano is playing. <ul style="list-style-type: none"> • Now iQ is adjusting its internal piano and accompaniment volumes to match your media player's volume levels. • While the system sets and completes the adjustments, the Sync, Level and Learn LEDs are blinking. • The new levels are set when the three LEDs stop blinking and the Status LED is on. 5. Adjust the speaker volume up or down to set the balance of volume between the accompaniment and the piano.
<p>Determine a desired volume level</p>	<ol style="list-style-type: none"> 1. Volume level output varies between media player types and brands. So the recommended player and speaker volume levels should give you a wide enough range — high or low — to find the optimal playback level for your iQ system and media player. 2. Experiment with the volume control on your media player by increasing and decreasing the volume. <ul style="list-style-type: none"> • Repeat step 2 until you find the volume level you want.
<p>Abort calibration and reset to previous values</p>	<p>Use a sharp tipped device and push Reset.</p>

CHAPTER 3: PORTS



This chapter provides information about the ports located on the rear panel of the control box. Ports are used to connect the control box to audio and/or electronic devices and the piano.

Familiarize yourself with information in this chapter before you connect anything to your iQ system. The iQ system has ports available for:

- Record Output
- To Piano
- Line Input
- Line Output

Ports



A. Record Output

Sends piano performance data to your media player or audio recording software.

B. To Piano

Connects **iQ** to your piano.

C. Line Input

Connects **iQ** to your media player or computer.

D. Line Output

Connects **iQ** to your speakers or amplifier.

CHAPTER 4: SPECIFICATIONS

iQ technical specifications are provided to help you accurately and safely use it as a standalone system or in conjunction with your own sound/music system.

Physical Dimensions	108mm / 4.25 inches Width 23mm / 0.91 inches Height 71mm / 2.80 inches Depth .25kg / 0.55 lbs.
Voltage & Power	Power: 200 mA at 10.0V D.C. Max. Input Operating Voltage: 13.0 Volts D.C.
CD Input	Connector Type: Stereo 1/8" Input Impedance: 5.1k Ohms (left & right channels) Max. Input Voltage Level: 1.0V R.M.S. (into 5.1k Ohms) Min. Data Input Amplitude: 50 mV peak-to-peak (into 5.1k Ohms)
Audio Out	Connector Type: RCA Max. Output Voltage Level: 0.85 volts R.M.S (left & right channels into 600 Ohm load)
Record Out	Connector Type: Stereo 1/8" Output Impedance: 200 Ohms

CHAPTER 5: **DIAGRAMS**



Because the **iQ** system is flexible enough to integrate with popular music technology, there are many ways to configure it. You can use it with multimedia players, portable players, iTunes, or integrate it as an audio source in your home audio system.

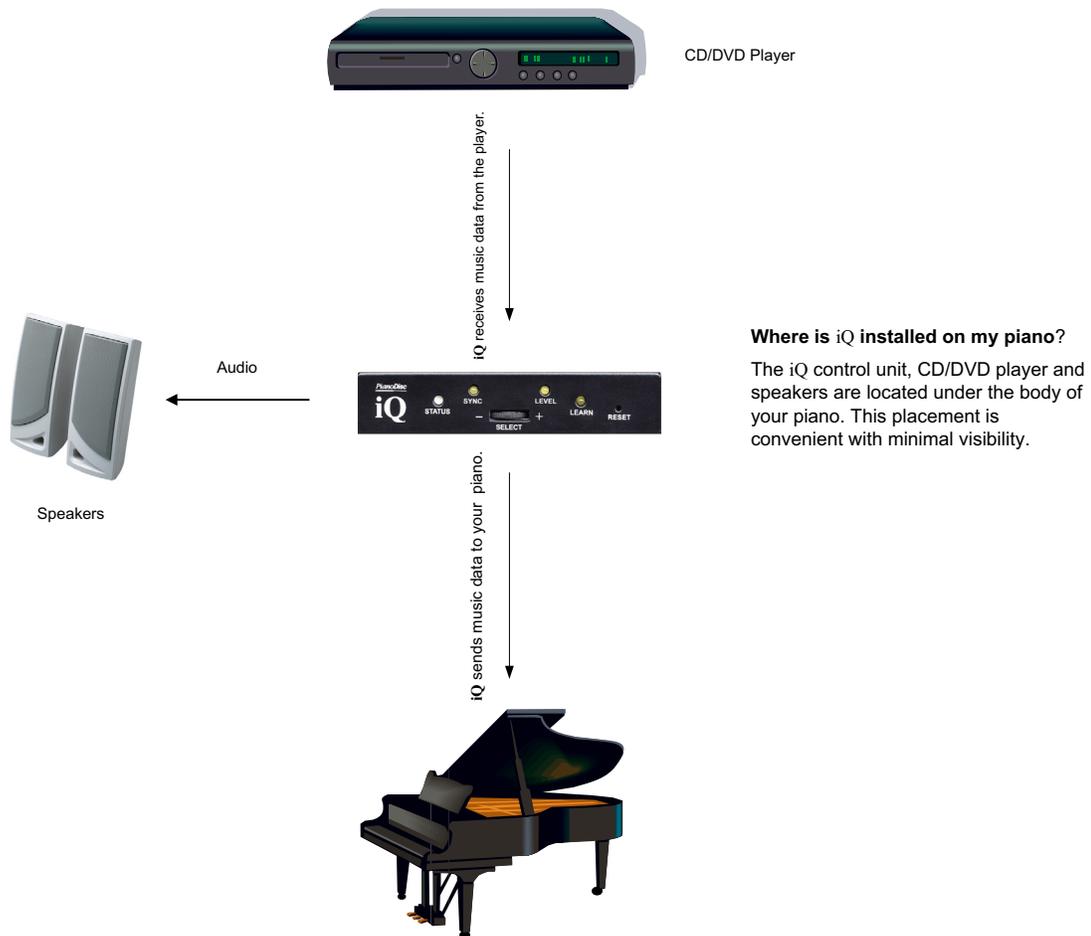
Read the remainder of this section to familiarize yourself with the following system configurations:

- Integrating **iQ** with a standalone multimedia player
- Integrating **iQ** with an iPod/MP3 player
- Integrating **iQ** with a computer
- Integrating **iQ** with a whole-house and home-theater audio systems

iQ and your Standalone Multimedia Player

A standalone iQ system consists of an iQ control box and a multimedia player. With this system configuration you can play CDs, DVDs and digital memory cards, as well as control the piano volume directly from the multimedia player.

The diagram below illustrates the wiring and setup configurations for a standalone iQ system:



iQ and your iPod/MP3 Player

If you manage, organize and listen to your music from an iPod/MP3 player, you can also use it to store, manage and play PianoDisc music. Connect iQ to your iPod/MP3 player to hear PianoDisc music played on your piano. With a TFT MIDI Record option on your piano and a Record Adapter* on your media player, you can also use iQ to record and playback your own piano performances.

The diagram below illustrates the wiring and setup configurations for iQ and your iPod/MP3 player:

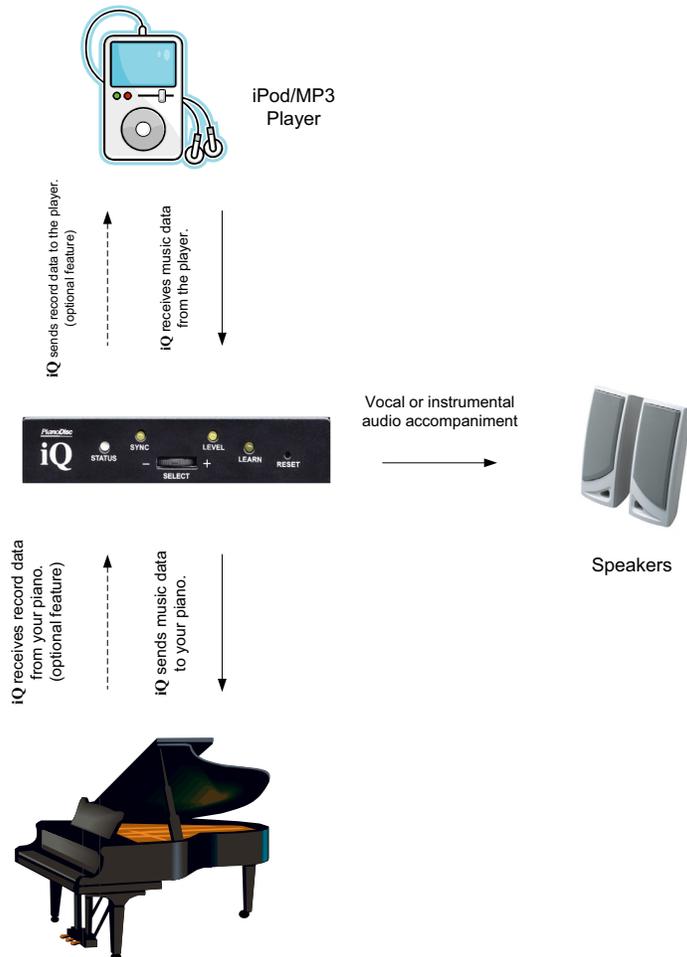
Optional Record Feature

To record your piano performance to an iPod/MP3 player, it must be equipped with a recording adapter, and your piano must be equipped with a TFT Record kit.

Note: To produce a high quality recording, use a recording adapter that is capable of recording with lossless compression, or compressed audio with a bitrate of 192 kps or higher.

Where is iQ installed on my piano?

The iQ control unit and speakers are located under the body of your piano. This placement is convenient with minimal visibility.



iQ and iTunes

Connect your computer to iQ to play PianoDisc music from iTunes or record your own piano performance to your audio editing software.

The diagram below illustrates the wiring and setup configurations:

Optional Record Feature

To record your piano performance to an iPod/MP3 player, it must be equipped with a recording adapter, and your piano must be equipped with a TFT Record kit.

Note: To produce a high quality recording, use a recording adapter that is capable of recording with lossless compression, or compressed audio with a bitrate of 192 kps or higher.

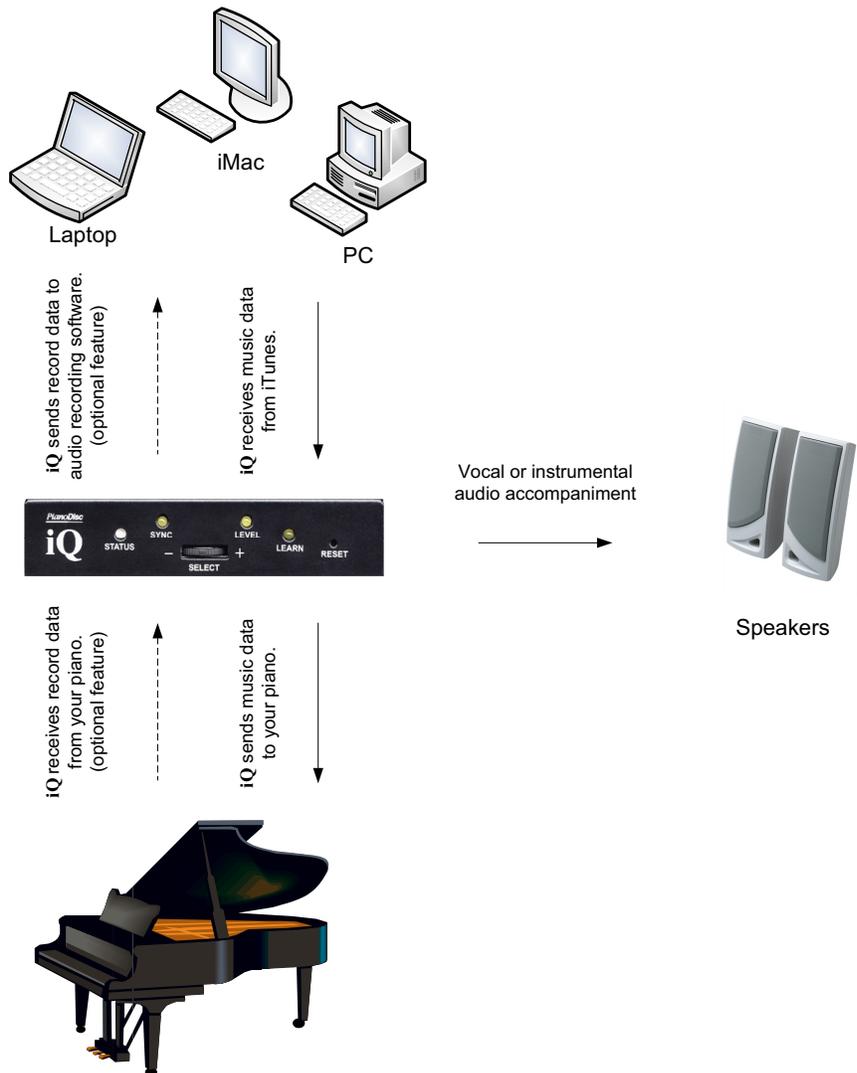
Where is iQ installed on my piano?

The iQ control unit and speakers are located under the body of your piano. This placement is convenient with minimal visibility.

How do I connect my computer to iQ?

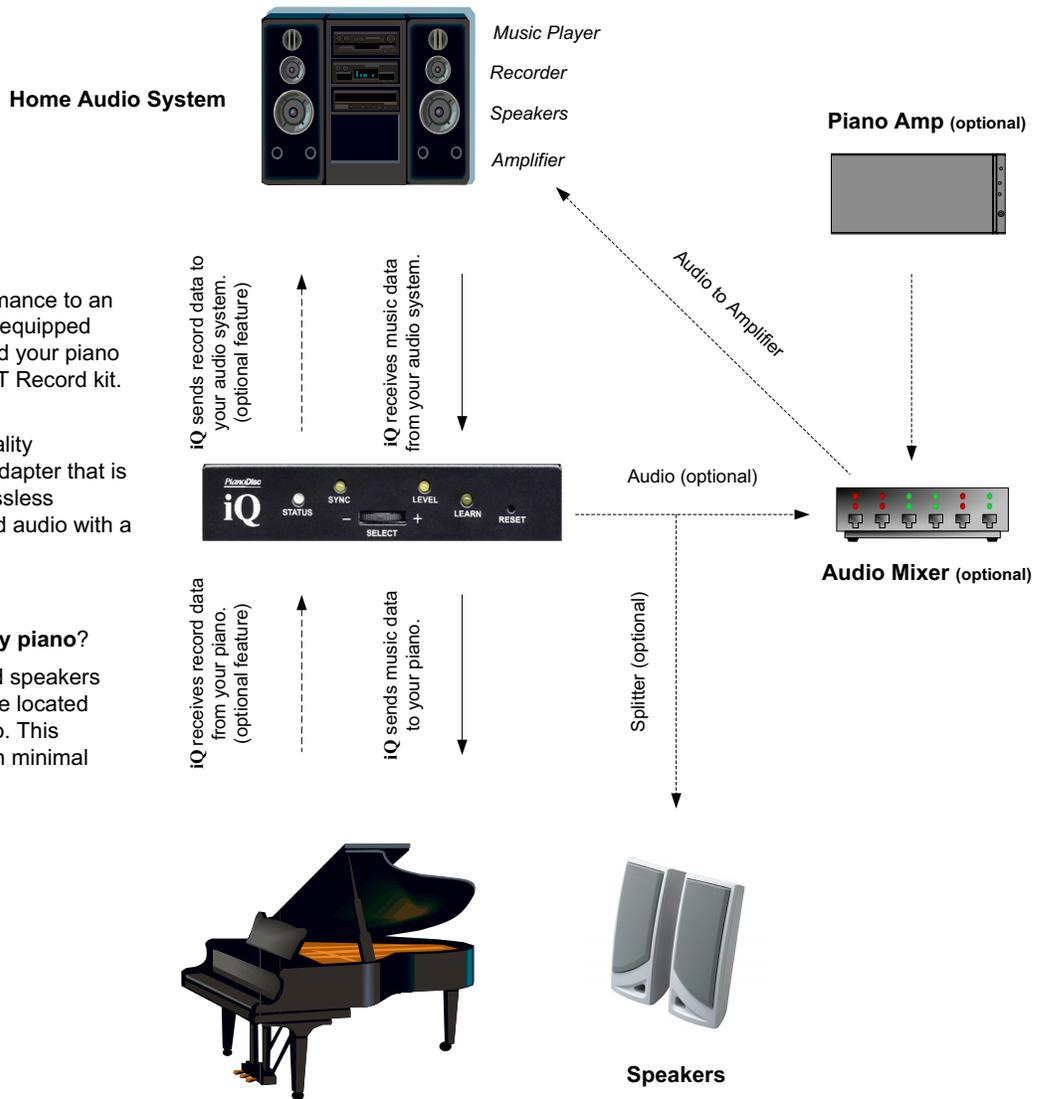
Your iQ system comes with an 1/8 inch audio cable. Connect the **Line Output** port on your computer to iQ's **Line Input** port.

If you want to record your own piano performance, connect iQ's **Record Output** port to the **Line Input** port on your computer.



iQ and your Whole House Audio System

iQ integrates easily into Whole-house and Home-theater audio systems. Whole-house audio systems let you listen to music throughout your entire home, even outside. Connect iQ to your whole-house audio system to hear music played on your piano throughout your home. The diagram below illustrates the wiring and setup configurations for iQ and your Whole House Audio system:



Optional Record Feature

To record your piano performance to an iPod/MP3 player, it must be equipped with a recording adapter, and your piano must be equipped with a TFT Record kit.

Note: To produce a high quality recording, use a recording adapter that is capable of recording with lossless compression, or compressed audio with a bitrate of 192 kps or higher.

Where is iQ installed on my piano?

The iQ control unit, amplified speakers and Piano Amp (optional) are located under the body of your piano. This placement is convenient with minimal visibility.

CHAPTER 6: TIPS

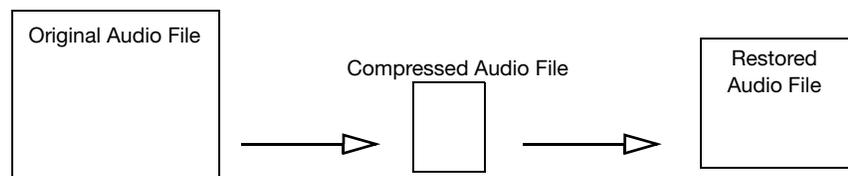
What is Audio Compression?

Why does the iQ system require a media player’s Recorder adapter to record at 192 kps or higher? Recorded music is turned into compressed or encoded digital audio. Compressed or encoded digital audio data takes up less storage space and transmission bandwidth on your media player or PianoDisc system.

Music recorded with lossy audio compression may not provide high quality sound during playback — creating less than optimal performance conditions for your PianoDisc system. *If you are using lossy audio compression to record music, we recommend doing so at 192 kps or higher.*

Music recorded with lossless audio compression provides a high quality sound during playback — creating optimal performance conditions for your PianoDisc systems. *If your record adapter or audio recording software is capable of recording music using lossless audio compression, we recommend using it to maintain perfect audio integrity.*

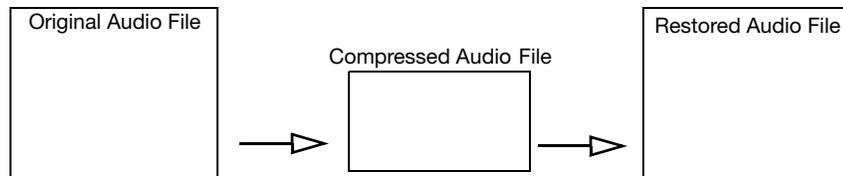
What is Lossy Audio Compression? Most compressed audio files typically use *lossy audio compression*, which reduces audio data to about a fraction of it’s original size and eliminate bits of data that are not restored when the audio data is uncompressed or decoded. MP3, Ogg, and RA are examples of lossy compressed audio files.



TIPS

What is Lossless Audio Compression? PianoDisc recommends using lossless audio compression, when available. Using this method, audio data is only reduced to about half its original size and no bits of audio data are discarded. Essentially, audio data is decompressed or encoded back to its original form, without any loss — providing a higher quality music file and audio output.

PianoDisc recommends using lossless audio compression because our systems require a high quality output.



INDEX

A

auto music format detection 20

I

Installation 12
 installation - as an audio source 12
 installation - standalone CD/DVD player 12
 installation - various music players 12
iQ Control Box 21
iQ Controls 22

L

LED lights 21
Level mode 23
loseless 34
lossy 33

M

multi-media player 29

P

PianoDisc Music 12, 19
PianoSync Creator 11
PianoVideo - playing 17

Playing music	15
on an iPod/MP3 player	15
on iTunes or Windows Media Player	16
Ports	25
Ports - Line Input	26
Ports - Line Output	26
Ports - Record Output	26
Ports - To Piano	26

R

Recording music	17
Reset	21

S

Select Wheel	21
Sync mode	23
system specifications	27

U

Using PianoSync Creator	13
-------------------------------	----

W

Whole House Audio System	32
wiring diagrams	28