QRS®

SINCE 1900

DISCOVER THE LEGEND
DISCOVER THE FUN

QRS PNO^3

User Guide

File System Version .57x

Adds support for the latest PNO3 controller PNO3WB, and QRS-Connect with Wi_Fi, Bluetooth MDI and Audio Card Integration

Manual Revision:Nov 1, 2022

Latest Revision Available With The Latest OS Update On Your System

QRS PNOmation3 User Manual

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QRS PNOmation3 User Manual

Misc Notes

Serial Number:				
Dealer Name:				
Dealer Number:				
Technician Name:				
Technician Number:				
Tuner Name:				
Tuner Number:				
QRS Technician Contact Info:				
QRS Sales Rep Contact Info:				

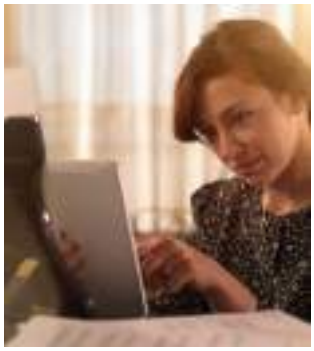
Congratulations On Choosing QRS's PNOmation[3]

These Steps will help you get started with the most popular features that QRS's PNOmation[3] offers.

We welcome your feedback, on any features, music or ideas to improve the PNOmation[3]. Just drop us an email at qrssupport@qrsinc.com.

Start Here

Setup Wi-Fi Stand Alone and Network Client
Step 1 & 2



Download the QRSFinder App Activating Your Trial
Step 3

Playing Your Piano
Step 4

Step 1: Setup Wi-Fi

1

Open Settings On Device

2

Open Wi-Fi

3

Select "QRSPNO_xxxx"
Enter Password "qrsmusic"

4

Select Safari or Web Browser of Choice

5

Enter IP Address
10.3.2.1

QRSPNO Start Up Screen
Touch anywhere outside of the images to bring you to the Home Menu Screen

Stand Alone mode allows you to access the player system without a connection to the Internet.

Step 2: Put PNO3 On Your Home's Wi-Fi

1

Make Sure You Are In Stand Alone Mode then select "System Setup"

2

Select "Network Settings"

3

Select "Wireless Network"

4

Select "Connect to Client Wi-Fi"

5

Select Client Network to Join

6

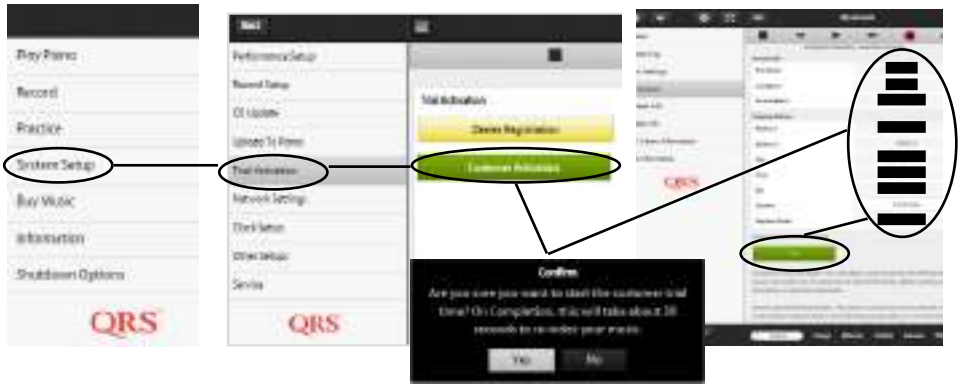
Enter The password for the network you are joining

Step 3: The QRS Finder App & Unlock Your Trial

1

Go to the play/App store for your device, and search for QRSFinder and download it.

Once downloaded select the App - it will do a search of your network and open up the PNO3 Built in App.
(Note your device is a window to whats happening on your piano, and is viewed over your network not the Internet. If your network is large you may need to select retry initially for the App to first locate the piano.)



2

Unlock Your Trial

Step 4: Play Your Piano

Black Font Songs	Original Artist's Audio	Sync Along Series
Blue Font Songs	Piano with Audio Accompaniment,	Concert Series
Red Font Songs	Solo Piano Only	Nostalgic/Performance

Reference the user manual for advanced setups such as key adjusts, pedal adjustments, & volume mapping necessary for upgrade kits.

Transport buttons - Stop, Back, Play, Forward, Record, Volume
Touch the name of the song to begin its playback
Touch the menu icon to add it to a playlist or create a new one

Selecting "Genres" will break out each type by music style.

Selecting "Radio"
Choose your style, type or event

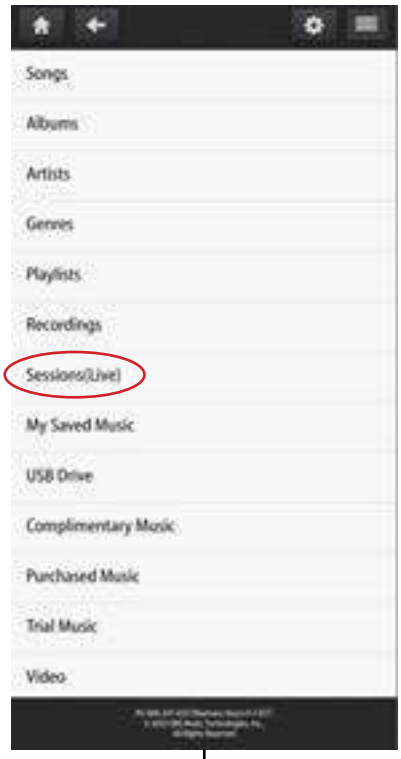
Step 5: Setting Up Your QRS-Connect Account

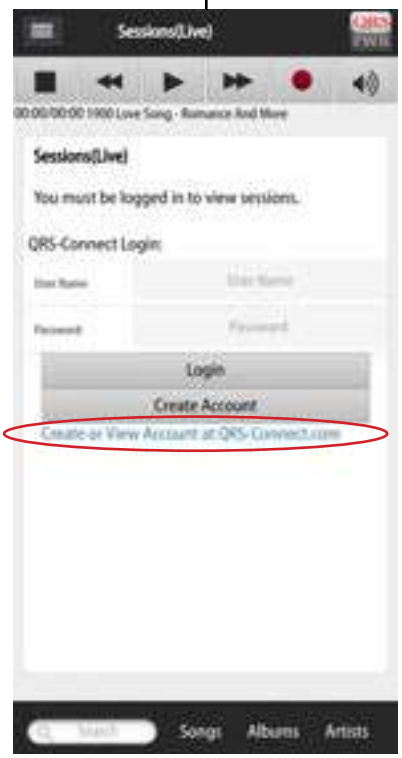
QRS-Connect.Com is your personal & private music maker platform. It affords you the following features:

1. Allows your PNOmation to play from remote performances
2. Allows you to follow your favorite artists
3. Request titles to be created for your player
4. If you have a sensor strip or play or sing along with your piano, it can be auto captured, saved, archived and if you choose apply analytic tools.
5. Learn to play, find teachers...
6. Single sign on will allow you to sign into QRSmusic.com as well as QRS-Connect

Create a username and a password, and press Create Account, this will automatically create your QRS-Connect.com cloud account.

SIGNING UP FOR YOUR SESSIONS LIVE - QRS-CONNECT ACCOUNT





- Allows Live Performances to appear as a selection in your App
- Allows for lessons and connections to artists in your App
- Username is a name alias to use within the QRS-Connect Platform
- Password should be 10 Characters - Upper Case - Lower Case - Numbers - and Special Character.
- QRS uses Single Sign On for all of QRS Music. Using your email and password created above to log in from QRSMusic.com will give you access to your account data - purchases, cases, credits..
- QRS will be implementing a tip jar for quickly compensating a live artist.
- By going to QRS-Connect.Com you can set up performances, request tracks we do not have in our library, jump into learning...

Introduction To PNOmation³

QRS is revolutionizing the player-piano industry with the introduction of its latest player technology, PNOmation³. PNOmation³ is the most advanced and best selling player-piano system available on the market today. Just take a glance at some of its great features, and you will see why new and current customers are installing and upgrading to the latest in player technology:

BETTER AESTHETICS [HEARD, NOT SEEN]
PNOmation³ is an invisible player. With PNOmation³, there is only a Pin Light Port Extender (PLx) which can be mounted out of sight for no visible front-end controller or under the piano keyboard where you have the choice of turning on or off any lights. Enjoy the benefits of a player without altering the appearance of your piano.

BETTER USER EXPERIENCE [USER FRIENDLY / PLEASANT USER EXPERIENCE]
PNOmation³ offers the industry's best user experience. PNOmation³ not only functions as a stand-alone player system, but also as a node on your home network. With PNOmation³'s web-enabled user interface, the possibilities are endless: create playlists and control your player piano with an iTouch, iPod, iPhone, or any web-enabled phone; or use a PC or Mac on your home network. PNOmation³ is also designed to support QRS's new single-song purchase capability. The first system to eliminate the need for CDs or with the inconvenience of having to buy an entire album to get the one song you really want. Our use of Wi-Fi to communicate vs Bluetooth or a reliance of an App allows more functionality from control from anywhere in home vs next to the piano to live performances. PNOmation³'s player radio feature play songs from the industry's largest library of music software so you can sit back, relax, and enjoy.

BETTER PERFORMANCE [IMPROVED PERFORMANCE]
PNOmation³ features enhanced playback abilities with superior execution of dynamics. The softest pianissimos and loudest fortissimos offer extremes of expression and produce more convincing musical performances. PNOmation3 also dramatically improves the control over the sustain pedal solenoid which allows for quieter sustain pedal operation and more accurate performance.

BETTER DESIGN [IMPROVED DESIGN]
PNOmation³ incorporates PNOscan, the player industry's leading MIDI recording tool. Also included are tools for the user to refine the performance of the system.

BETTER NOW, BETTER LATER [NEVER LEFT BEHIND]
PNOmation3 is a simple and easy upgrade. It only takes four screws to swap the PNOmation³ processor into your existing player system, and it has been designed from the ground up to integrate with your existing system while offering the latest, cutting-edge technology. PNOmation³ is also prepared for the future, as it is high-bandwidth ready for next-generation MIDI standards.

PNOmation³ Major Components

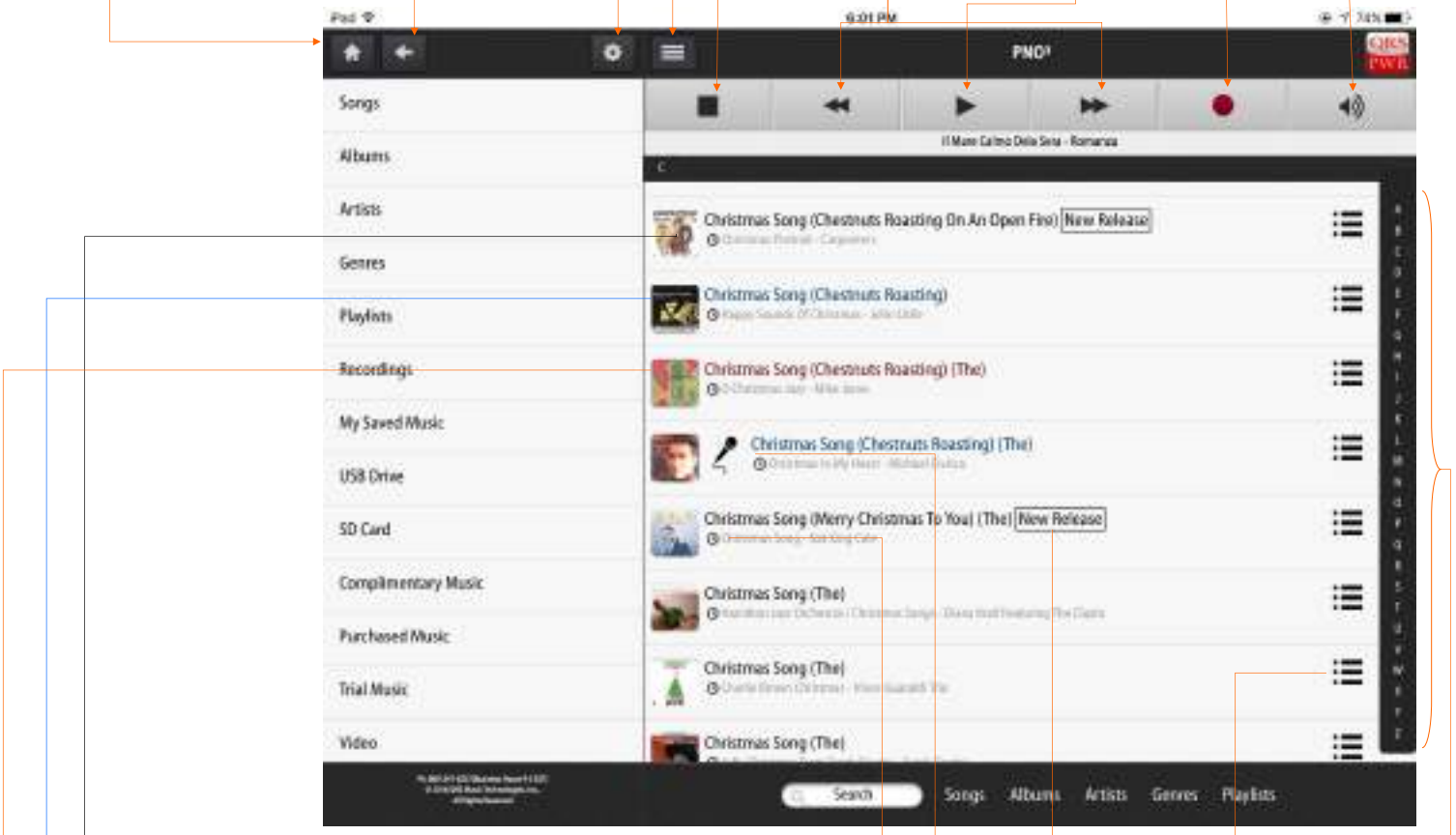
QRS Part Number	Description	Quantity	Image
80308S (uses external WiFi & BT Adapters)	PNO³ s Processor/ Controller	1	
80308sWB	PNO³ s Processor/ Controller with Wi-Fi card and Bluetooth Built In. Standard with kit	1	
70050A	Solenoid Rail Assembly Grand Piano	1 x 80	
84122	Smart PNO3 Note Driver Boards	5	
75210	Power Supply Rev 2	1	
70130S	Pedal Solenoid	1	
79211	Wi-Fi Extender Netgear	Not required with 80308sWB	
76140 or 76142	QRS Q35 or Q36 PNO Speaker with Bracket	1	
83124 or newest	PNO3 PLx (Pin Light Port Extender)	1	
73398	PNOmation IR Remote Control	No longer valid on new systems	
75399	New PNOmation IR Remote Control	1	
8012405	DB37 Adapter Board sold with Upgrade Kits	1	

Understanding The Playback Screen

Touch/Click on a song name to play that song.

To scroll through the list: Use finger or PC Mouse [Click & Hold left button then drag mouse up/down].

Jump to Home Screen | Go back one screen | Jump to System Setup | Displays Menu | Stops Playback | Back & Forward Track | Play/Pause Playback | Record Menu | Volume Controls



Black Songs	Piano with Audio Accompaniment - Original Artist's Audio	Sync Along Series
Blue Songs	Piano with Audio Accompaniment - QRS Produced	Concert Series
Red Songs	Piano Only - QRS Produced	Nostalgic/ Performance

	Music trial or subscription time is active.
	Indicates Complimentary song.
New Release	Newly released song within last year
	Sing-Along Song. Select Microphone icon to display lyrics.

Playlist Popup | Jump To Letter

Add Song To Playlist

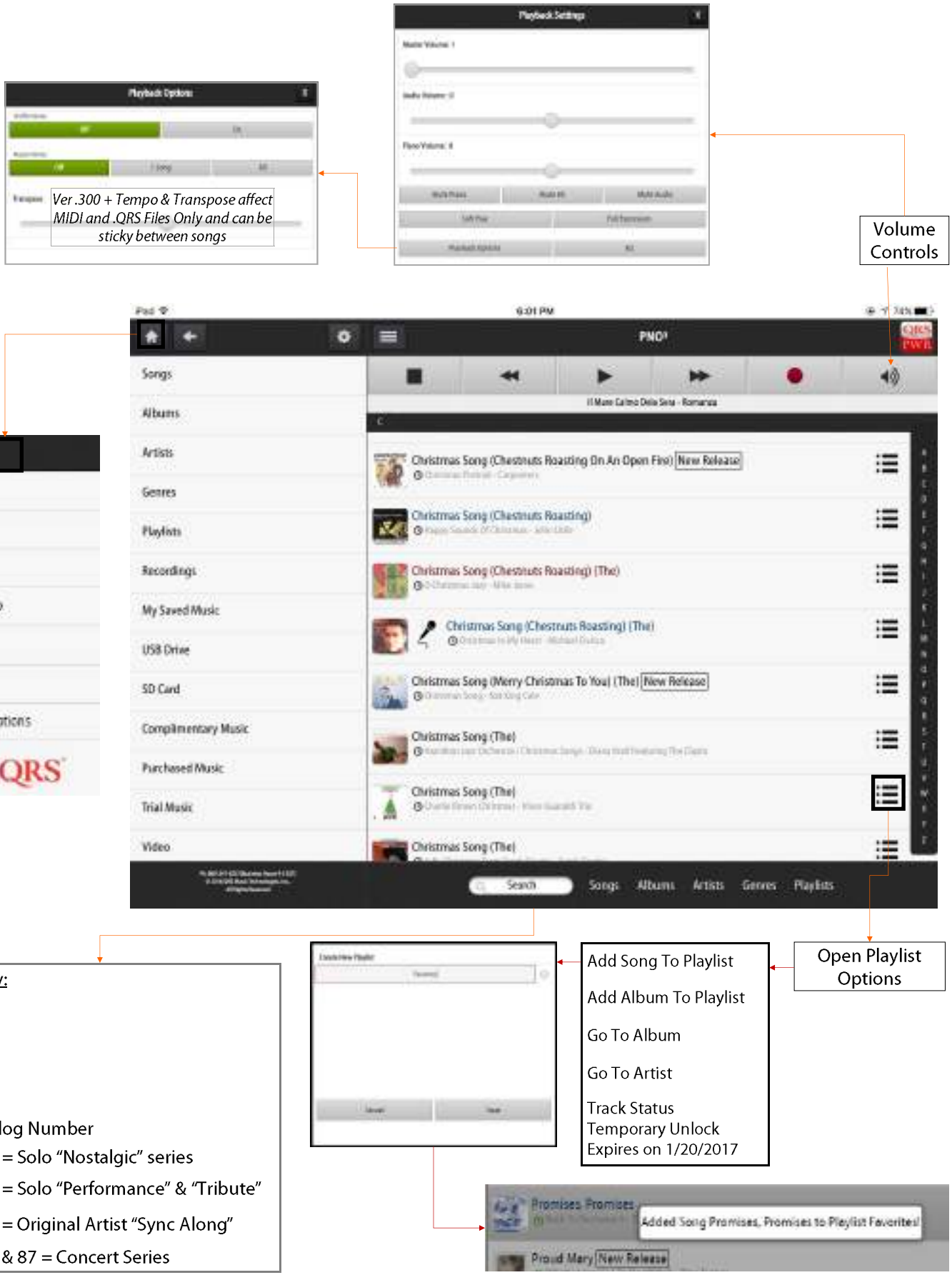
Add Album To Playlist

Go To Album

Go To Artist

Track Status
Temporary Unlock
Expires on 1/20/2017

Controlling Volumes & Creating Playlists

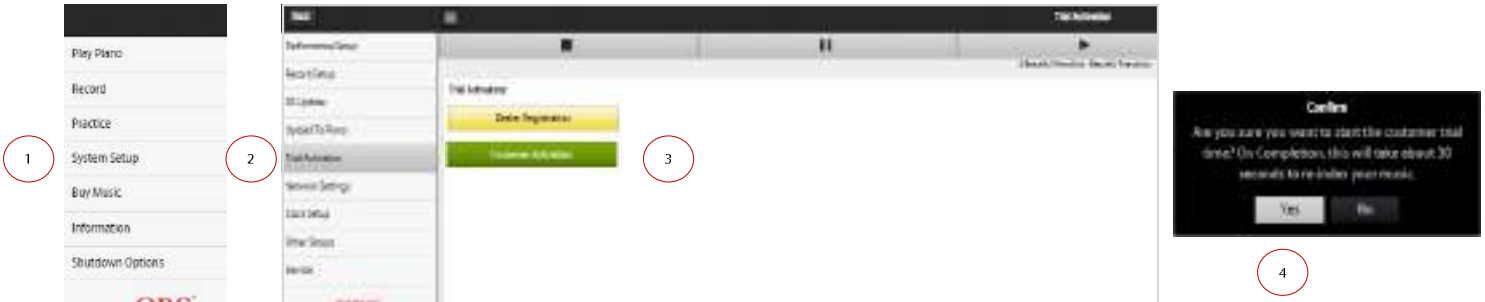


Trial Activation / My Account

With the purchase of a QRS PNO³ system, or one of the QRS PNO³ Upgrade Kits, you will receive trial access to the QRS Music Library for a predetermined length of time. The trial period begins after you complete the Trial Activation Form.

When the trial period expires you will have access to over 318 complimentary songs, chosen by QRS.
See the Complimentary Song list in the back of this manual.
To purchase additional music after the trial period, see the Purchasing Music section of this manual.

To activate the trial;
1) Select "System Setup"
2) Then "Trial Activation"
3) Select the "Customer Activation" button.
4) Press "Yes" to confirm that you want to start your trial.
5) Enter your account information - (*This is the information that will be used for warranty and ordering)*
6) Select "Register and Activate"



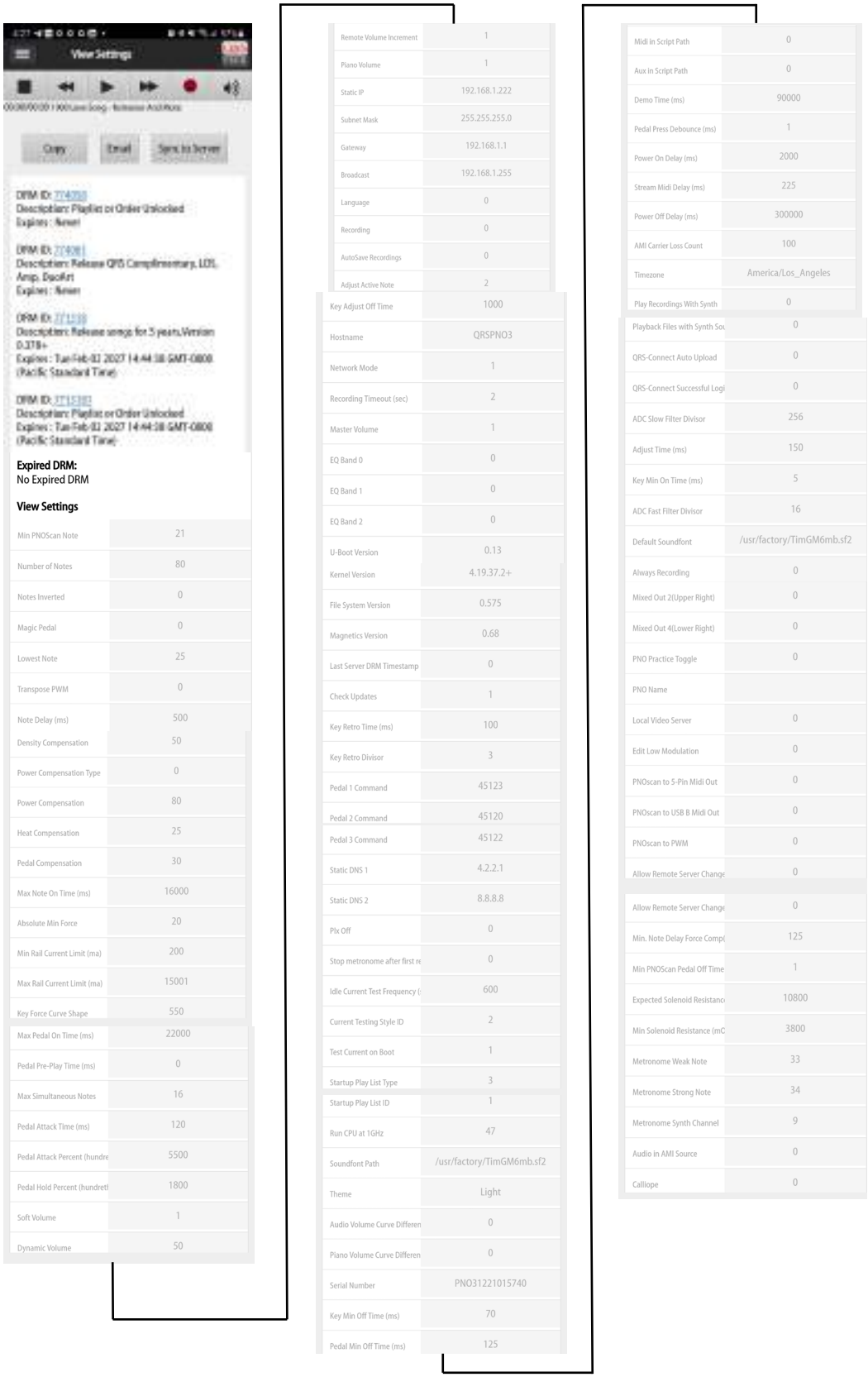
You can go to Information / My Account to update this information.

INFORMATION PAGES
SYSTEM - VIEW SETTINGS - ACCOUNT

Enter dealer/tech contact information if dealer has not already done. Enter or modify your information if different than registration.
Checks for updates, Backups, Restore All, and Upload from Local are their for tech support convenience, they are located more intuitively elsewhere.

Information Pages
System - View Settings

If you call our tech support line, we will more than likely ask you to Sync this information to your systems settings cloud back up. By selecting Sync to Server (there is no confirmation) this data is sent. If you select Email it will create an email on your default email platform (used if you are in Stand Alone mode. If you do not have either or are just on the phone we may ask for reference to one of these settings.



Verify Trial, Access Plan and Purchased Music Status

To view the status of the music on the system, go to; System Setup / Service / View Settings.

Permanent Unlock represents Complimentary and Purchased Music.
Temporary represents a Dealer or Customer trial or a purchased QRS Access Plan

Complimentary Music

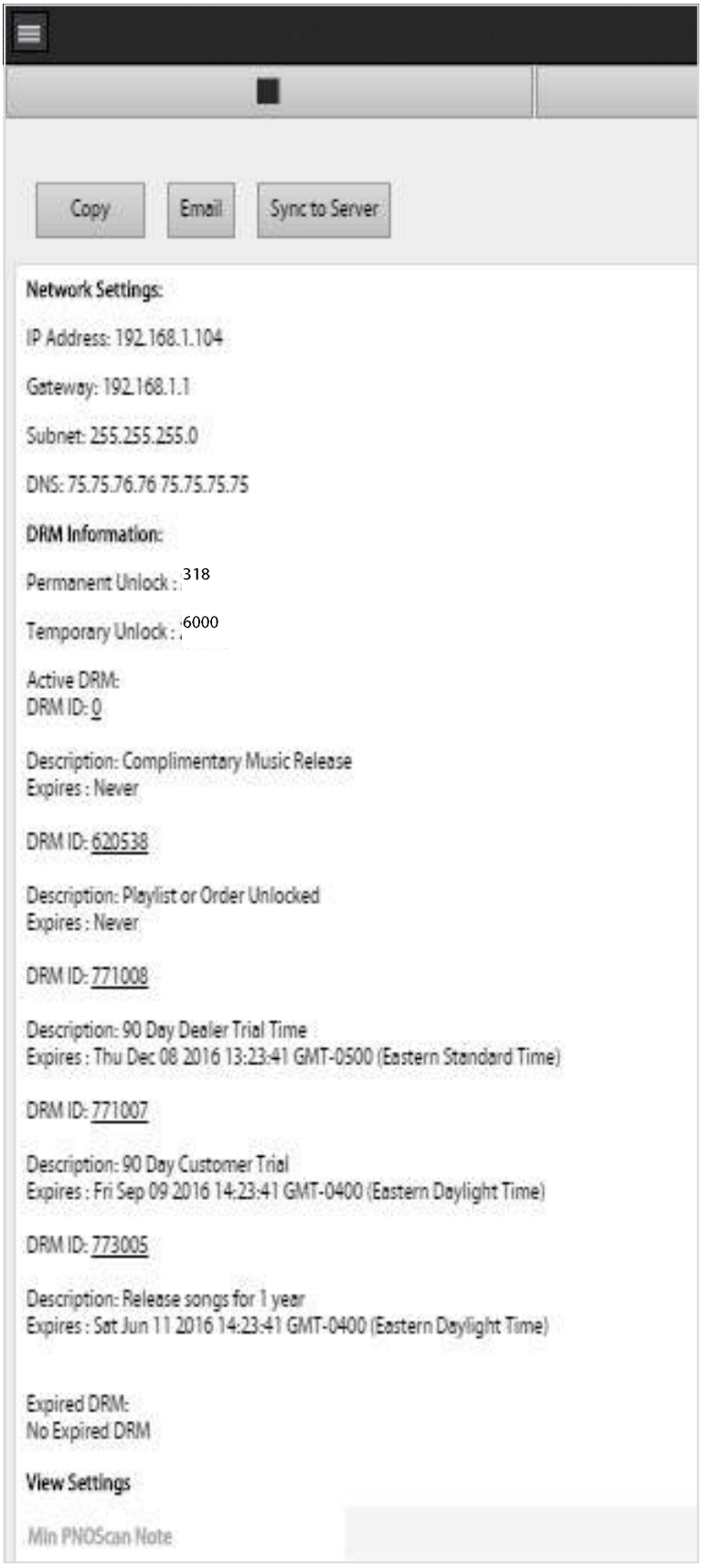
Purchased music: Playlist and Orders.
QRS catalog number 620538 has been purchased

Dealer Trial

Customer Trial

Special Trial

Expired Trial or QRS Access Plans. Available QRS Access Plans are for Two, Four or Ten year periods



1. The name that appears in the finder App, default is the system serial #

2. The number of notes your system plays. Default is 80 notes

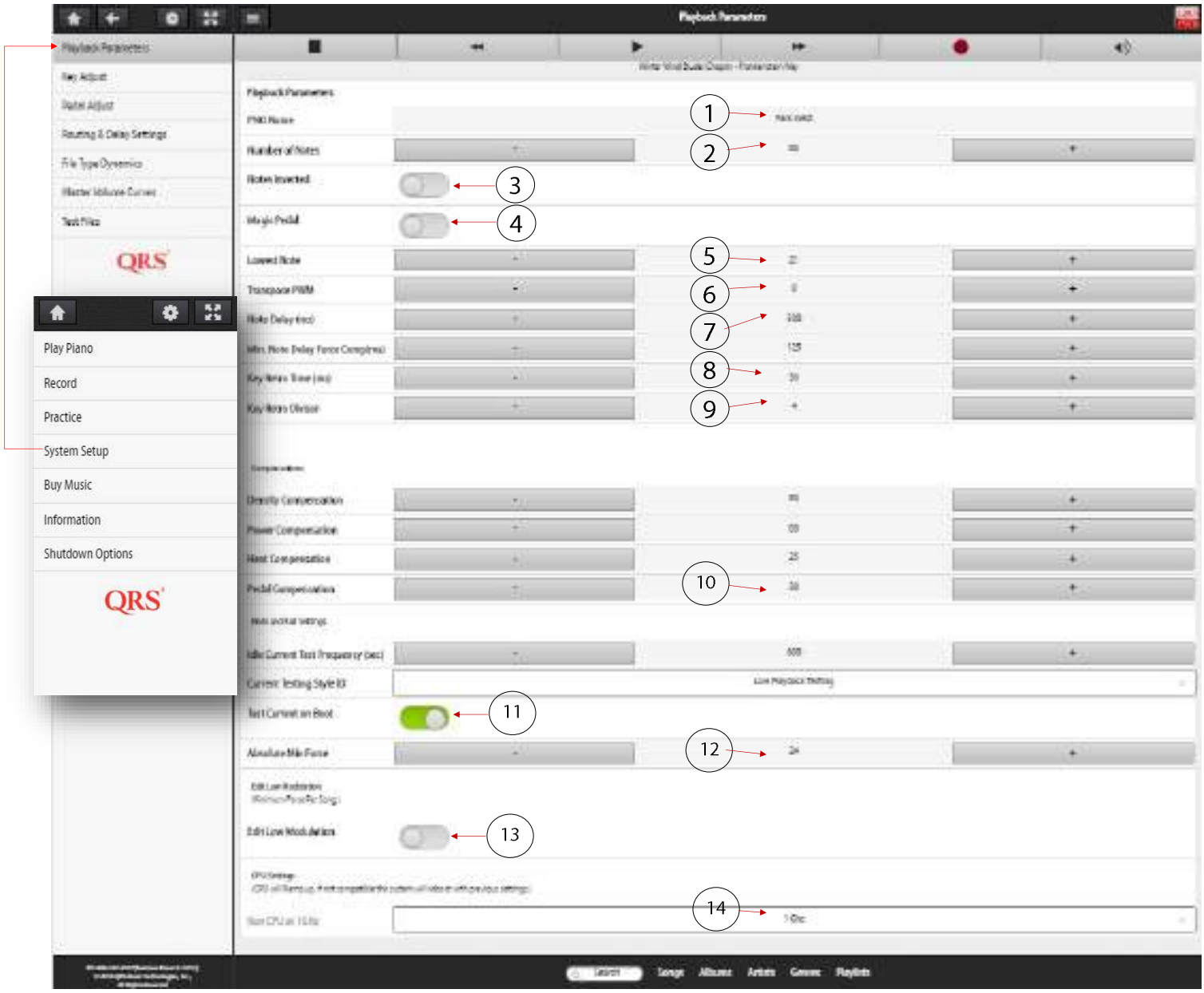
3. Notes should start playing from bass end to treble if not flip this switch.

4. Magic Pedal is used when you have no sustain pedal actuator or temporarily unplugged it. Holds notes for sustain event.

5. On an 88 note piano lowest MIDI note number is 21, on an 80 note playback system lowest note will be 25 (default)

6. If you want your piano to play in a different key, this is where you can transpose. Default is zero (0)

7. Time the note plays from the time it is told to play from the controller. This Syncs with background music



8. Retro Key Timing adjusts the amount of time taken for your key to be juiced prior to drop for a soft landing and help in repeats

9. Retro Divisor adjusts the performance algorithm. Default is 4. values 1- 5, 1 being most force not recommended

10. Misc. Compensation We recommend this not be touched. Defaults are 50, 80, 25, 30, 600

11. The system will take a bit longer to boot up while it does a safety check.

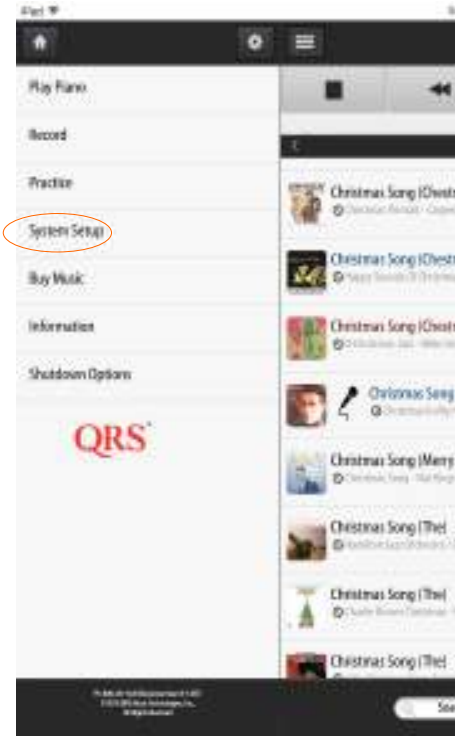
12. Absolute Min Force raises the min amount of force to all keys from where it was set under key setup. Default is 20

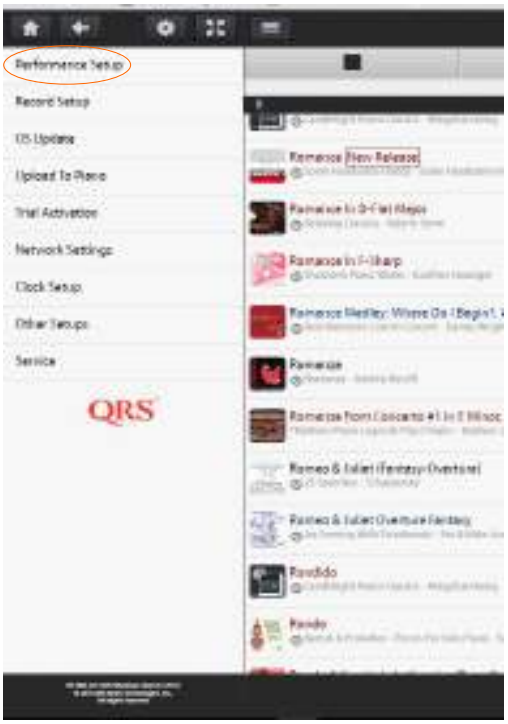
13. If there is a particular song not performing as well as you think it should, this adjust may help. Stored for each song you adjust it for.

14. The speed of the processor. Default is 1Ghz. Earlier system (serial # <330) only support lower)

Performance Setup

Set How Quiet Each Note Can Play





Stop Test

Start Test

Play Each Note right to left

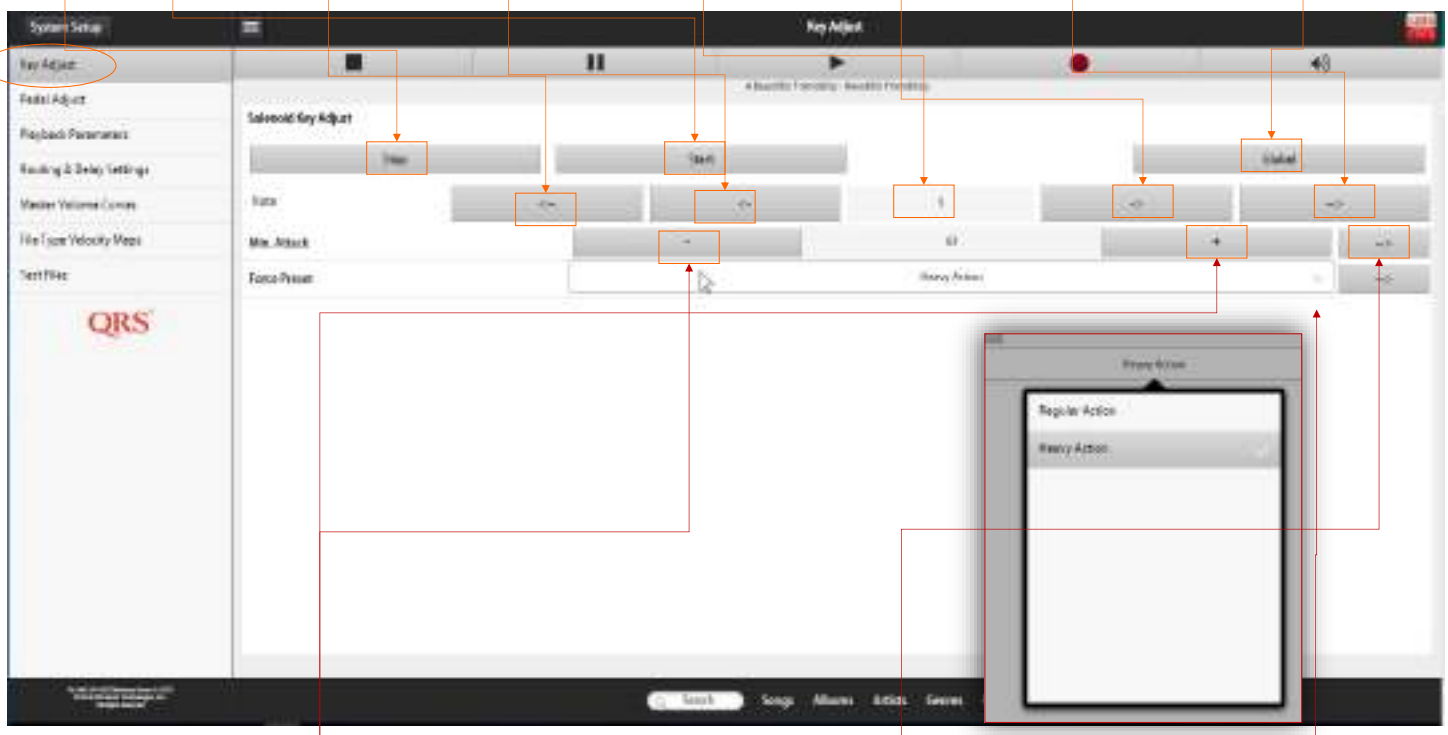
Go Back One Note

Enter A Specific Note # to change

Go Forward One Note

Play Each note left to right

Change All Notes Min Attack increment



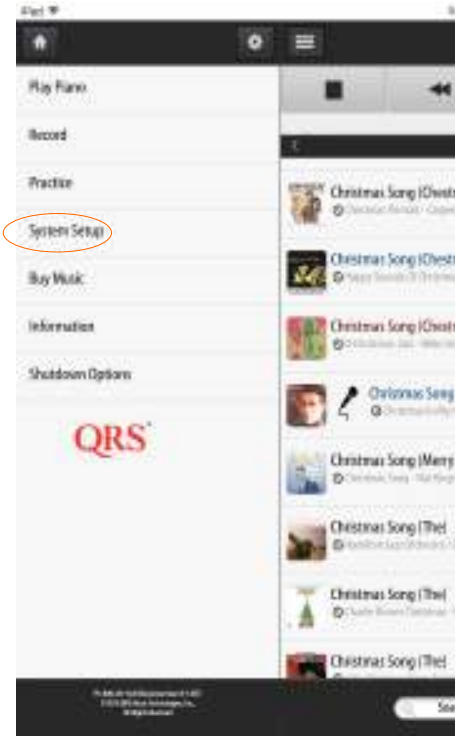
Increment Min Attack Force to how quiet you want that note to play a when Master volume = 1

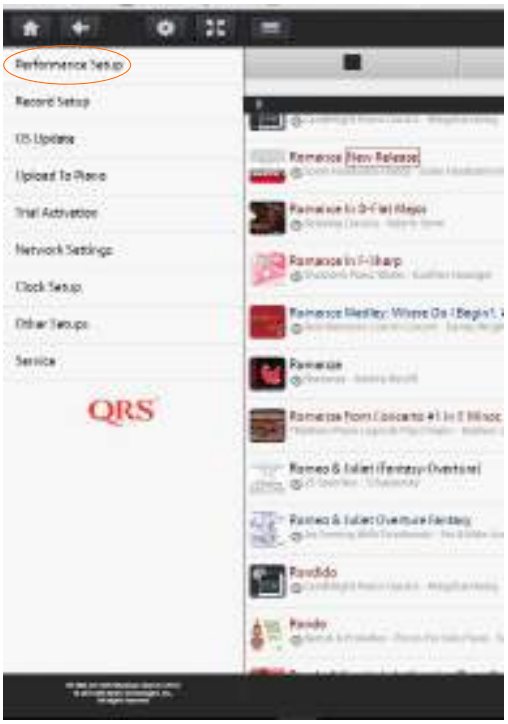
Sets all notes to the right of the note you are adjusting to the value you are adjusting

If the action or key on the action feels heavy

Performance Setup

Set Your Pedals Dynamics





Start Test

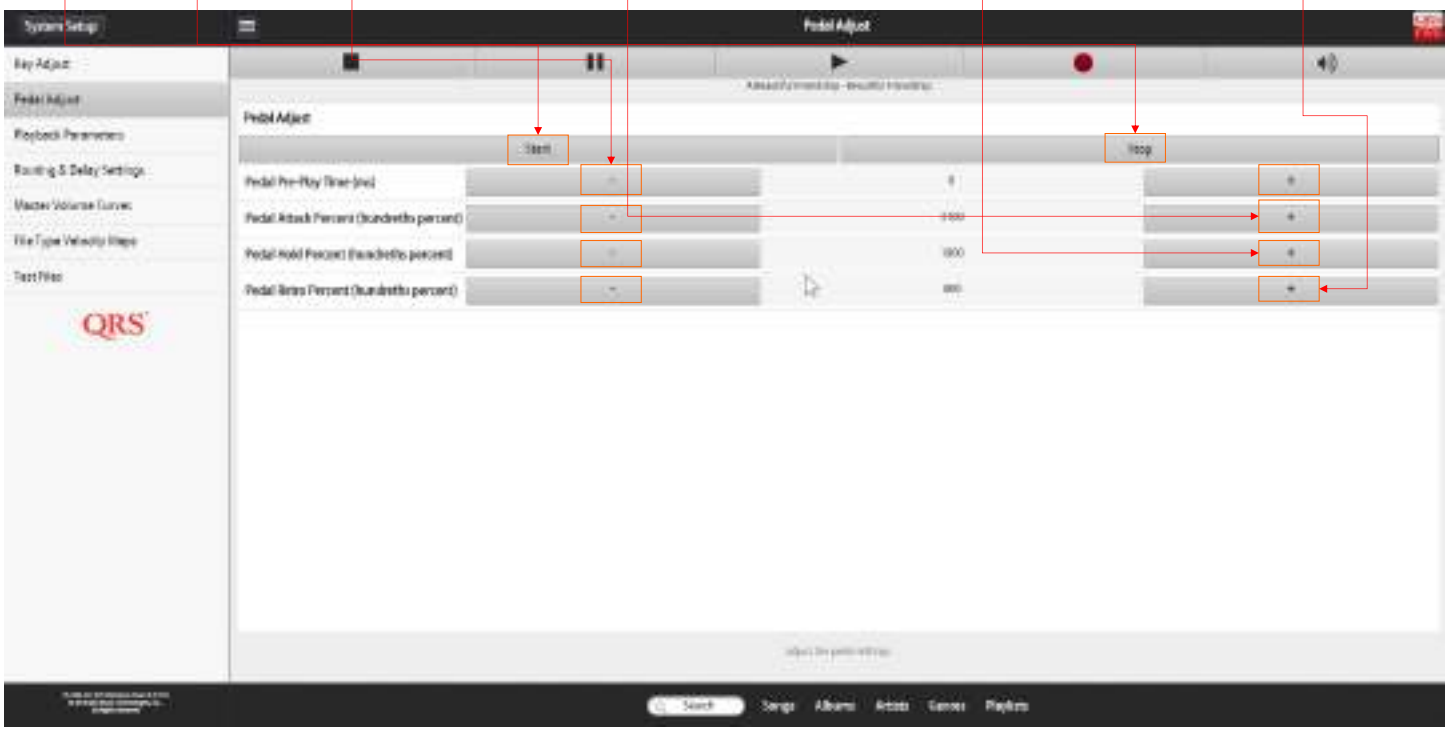
Stop Test

Preplay Time Default 0

Pedal Attack What it takes to move the pedal

Pedal Hold - What it takes to hold the pedal down

Pedal Retro - controlled release



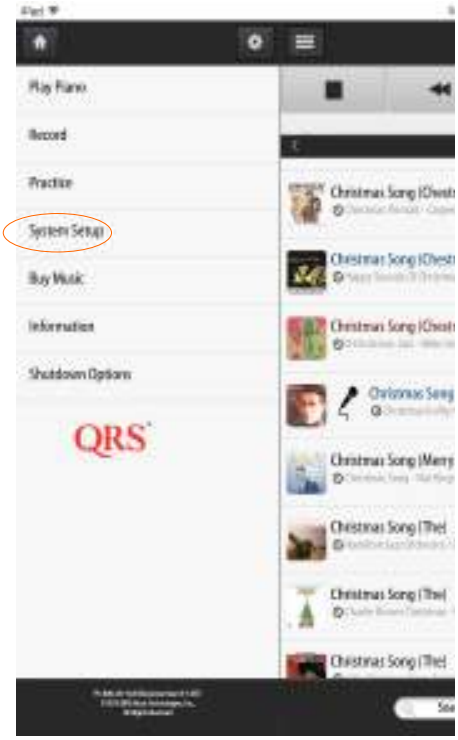
Increment Attack so the dampers raise above the strings without noise.

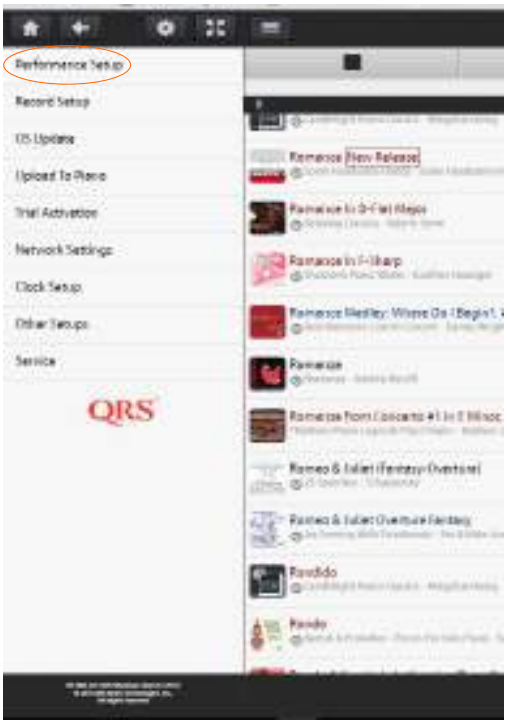
Adjust Hold only enough so dampers stay raised - it should be close to default

Retro can be as high as the hold but should be used only to quiet the drop

Performance Setup

Set Pianos Dynamics





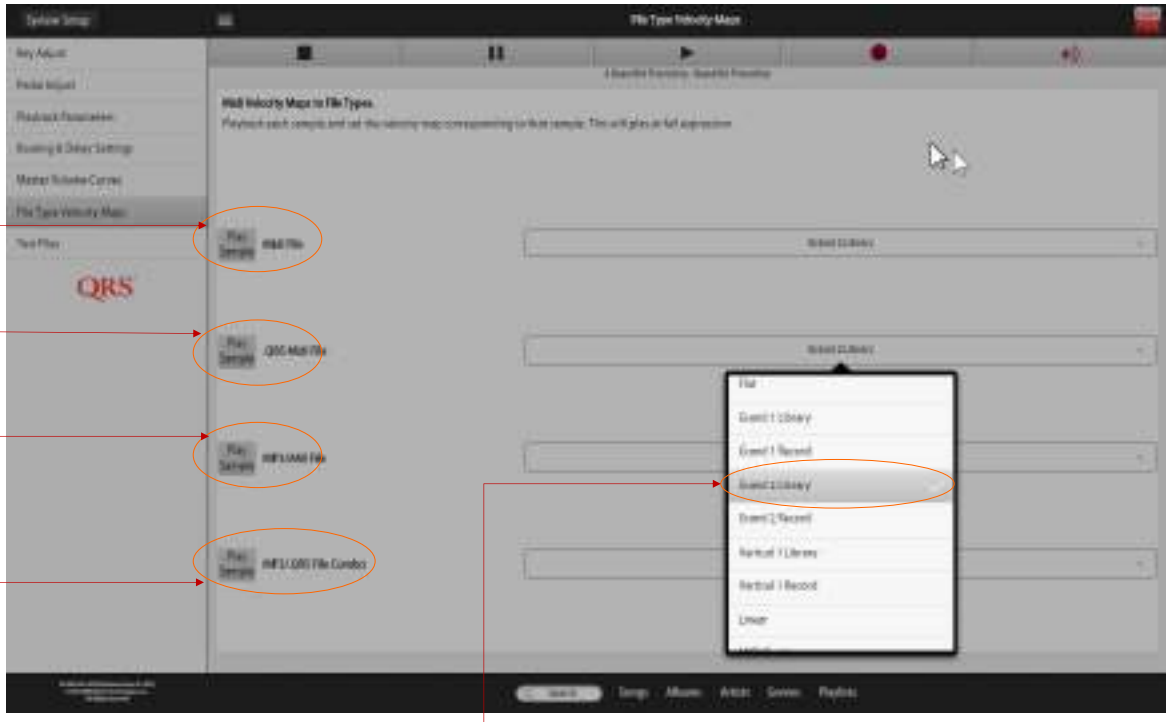
PNO3 can be installed on any type of piano with virtually any type of action, each with its own characteristics. PNO3 has the unique ability to give you control of the dynamics of playback to maximize how a performance is heard on your instrument. By playing the sample and adjusting the dropdowns you can fine tune the playback to your liking and your instrument.

.MID File represents a random music file type not edited by QRS

.QRS is a secured QRS edited piano file

MP3/AMI represents a QRS edited piano file with background music, typical use is with Video

MP3/.QRS sets dynamic for SyncAlong & Concert Content



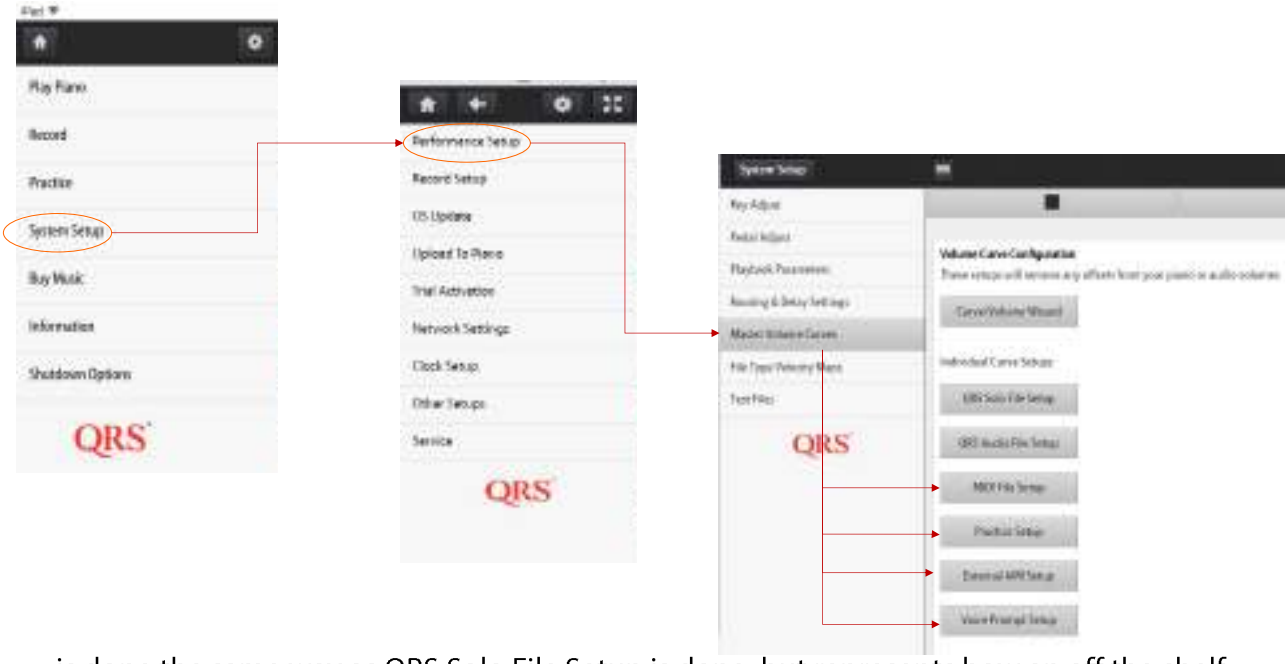
Grand Record: Allows you to assign a playback curve to what was recorded

Grand Library: Allows you to assign a playback curve that sounds good to you on your piano

Linear-velocities in file (no mapping) go out, Flat is no dynamic

Performance Setup

Master Volume Curves: What your systems different outputs sound like as you move your master volume slider



MIDI File Setup—is done the same way as QRS Solo File Setup is done, but represents how an off the shelf MIDI file will be treated relative to Master Volume setting.

Practice Setup—is how the Synth Piano or other General MIDI sound will sound relative to the Master Volumes setting. Setup is done similar to the three step process.

External AMI—is how the Piano and background will sound from an external input similar to SyncAlong DVD and performance Videos.

Voice Prompts—This is where you can set the voice prompt volume you hear when updating the system, boot up or "Shift Info" on the remote

1

2

3

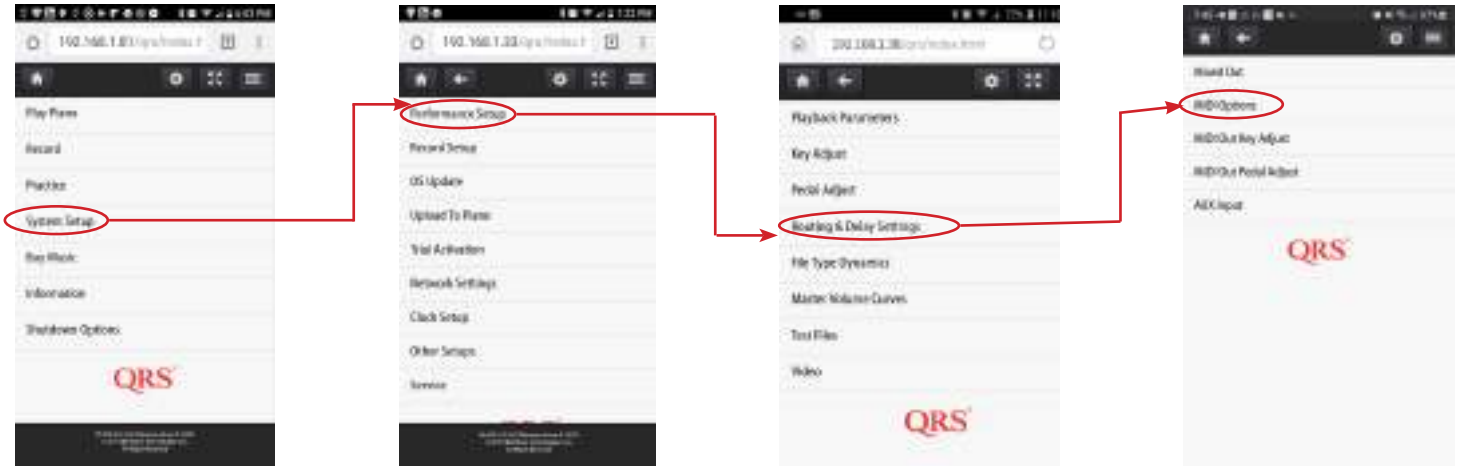
1

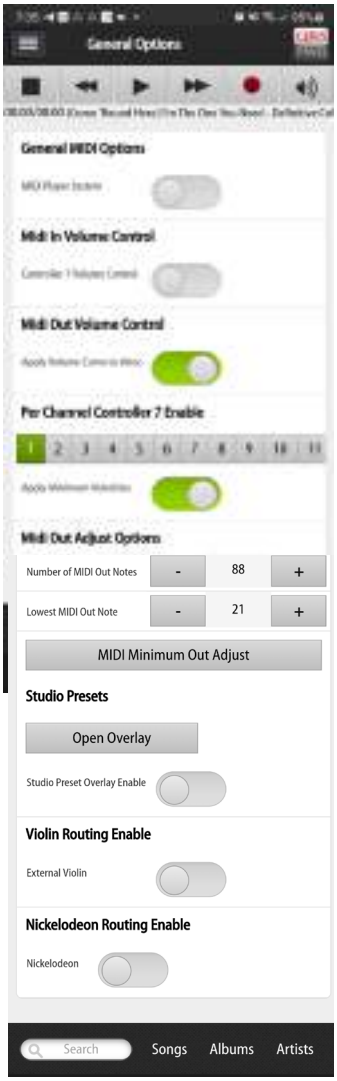
2

3

ROUTING AND DELAYS - MIDI OPTIONS

SETUP OF GENERAL MIDI OPTIONS





Turn on if you are controlling an external MIDI Player system, as with our upgrade kits.

Turn on if your player responds to standard MIDI Controller 7 Volume messages. (most do)

Different systems respond differently to volume changes. Under setup master volume curves you can change

External Systems can sometimes have other instruments or sounds connected on other channels. If you want controller 7 volume messages to control those as well as the pianos select which channels.

Turn on if you have set a minimum velocity from key adjust you would like to send to the system.

Number of notes in your player system, usually 80 or 88 or somewhere in between. Run a test file up and down the keyboard to determine.
Lowest MIDI note is the MIDI standard designation number for that note. #21 is first note on bass end of 88 note keyboard.

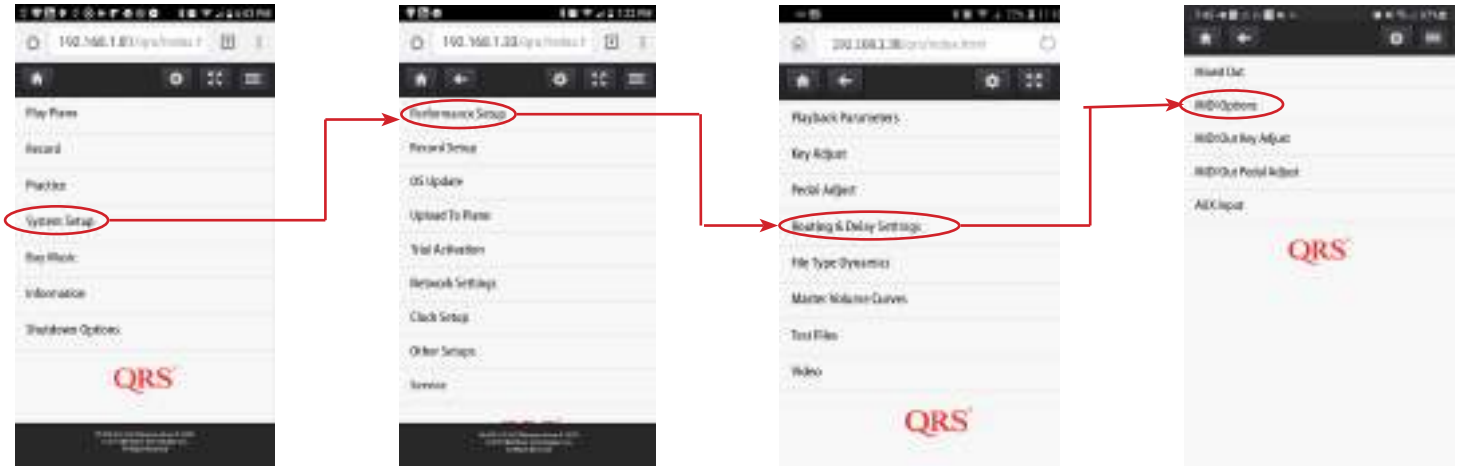
Open Overlay was a preset we created for Music Producers working with DAW. It allows them to quickly switch between operational modes, like record MIDI to DAW, then out of DAW to MIDI in...

QRS had developed a player violin. The routing was to enable the violin to play in sync on its own channel.

The QRS/Story & Clark Nickelodeon has 12 instruments and speaker built in. When this is turned on it enables all the relevant channels to work correctly

ROUTING AND DELAYS - MIDI OPTIONS

SETUP OF PIANO OUT



QRS-Connect to the Piano on if third party is using a QRS-Connector or live sessions is needed.

Internet Playback Delays are used when watching third party live video streams that play the piano via "QRS-Connect.com" The sliders are adjusted based on your subjective feel for hearing and seeing the artist playing. It varies depending on video stream approach and Internet speeds.

To control your piano from a USB output from like a computer this should be on.

To control your piano from a legacy 5 pin MIDI input this should be on.

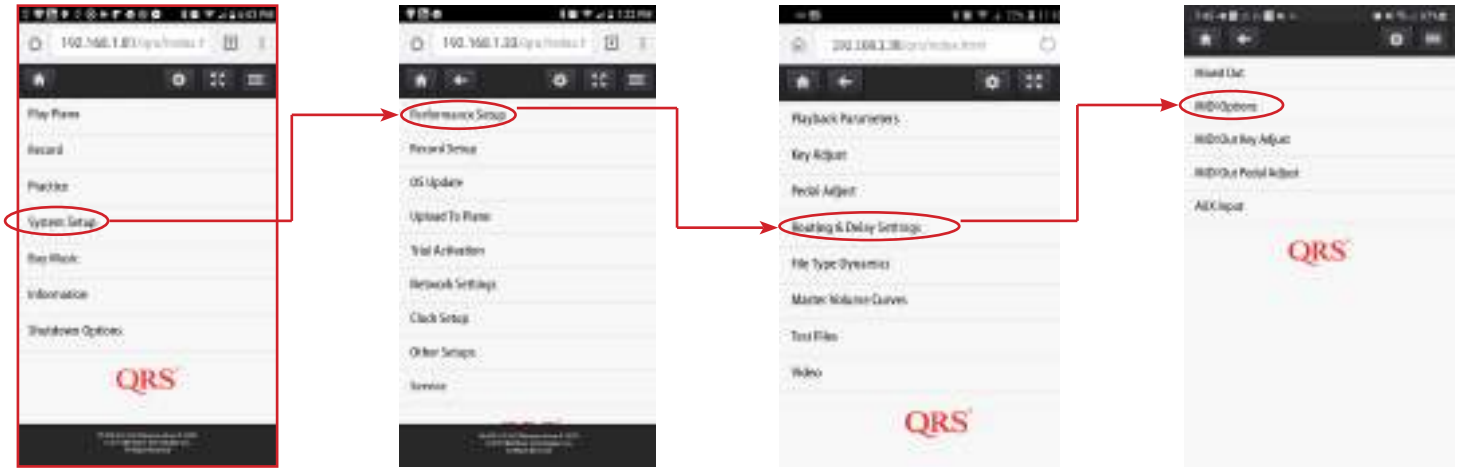
To play your piano remotely with a teacher without double strikes this should be on.

To play your piano from a Bluetooth MIDI signal. This should be on and your device paired under system setup, other setups, Bluetooth.

To Play your piano from either of the USB A ports this should be on

Routing and Delays - MIDI Options

Legacy 5 Pin MIDI Out



Play PNOscan equipped piano to a 5 Pin MIDI output on the QRS PNOmaiton Processor to control legacy MIDI controlled devices.

Similar to MIDI Thru except you will have capability to delay and map.

5 Pin MIDI out and delay MIDI out used for third party upgrades to PNOmation

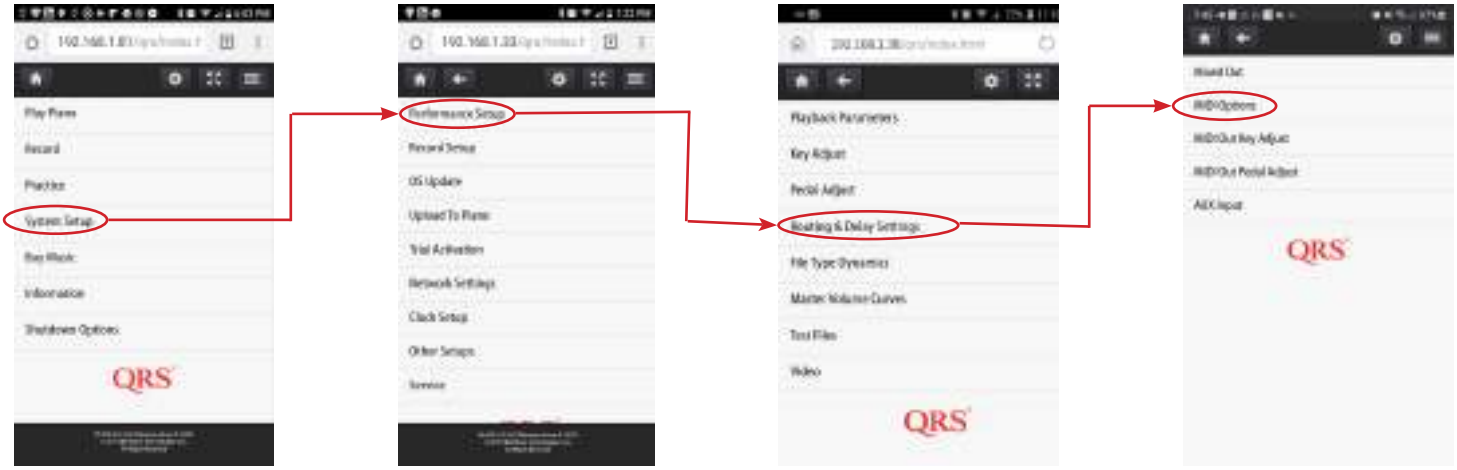
Legacy 5 Pin MIDI in to USB A or USB B out

Send an all notes off MIDI control for each of the channels listed and highlighted. Makes sure notes do not hang on, on third party player systems.

If you are playing from QRS-Connect.com and would like your 5-Pin MIDI In on your third party player or device.

Routing and Delays - MIDI Options

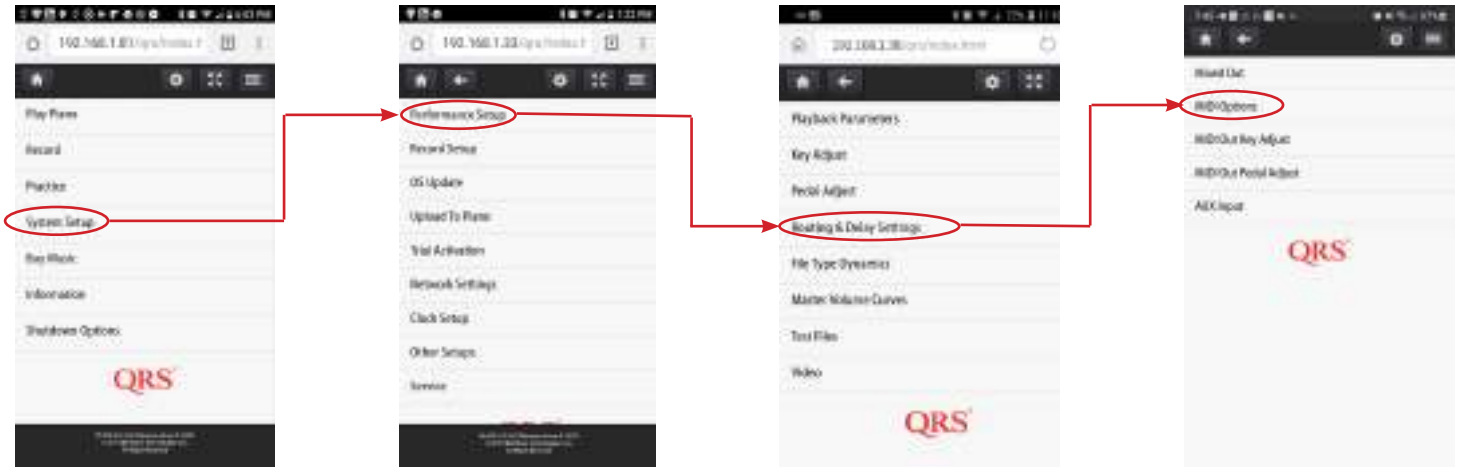
MIDI and USB Ports



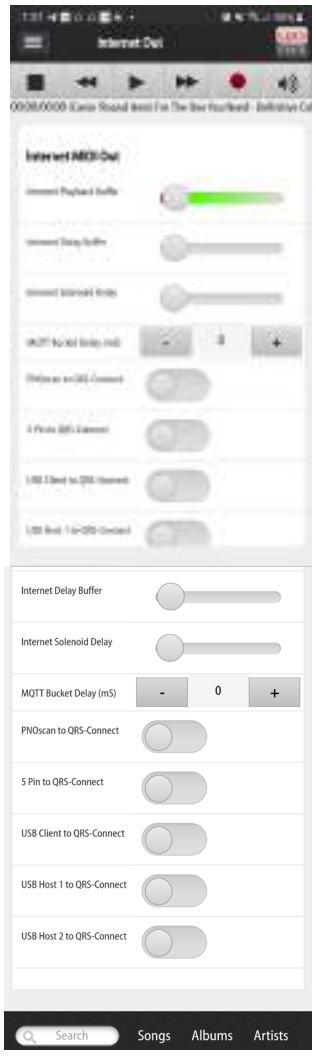
Used primarily to define the routing from the USB host. The delay defines how long in ms the control signal will be held.

Routing and Delays - MIDI Options

Internet MIDI and Bluetooth MIDI Setups



Used primarily to define the routing for the MIDI out streamed over the Internet. The delay defines how long in ms the control signal will be held.



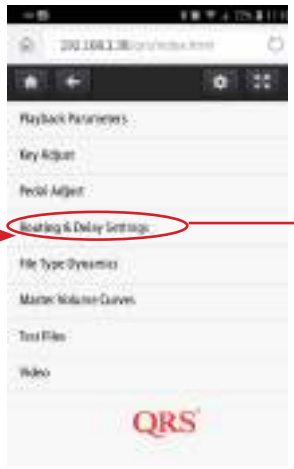
Same sliders are repeated here as on the Sessions live page. Allows for setting default delays for your most used aspects of Online video playback.

The balance of the switches are routing to an Internet performance setup. Where you are playing another persons piano remotely connected via QRS-Connect.com

Here is where you setup your system to work with Bluetooth MIDI. Allows wireless transmission and playback of system via Bluetooth.

ROUTING AND DELAYS - MIDI OPTIONS

MIDI PORT SETTINGS, AUX INPUT SETTINGS, MIDI OUT KEY AND PEDAL ADJUST

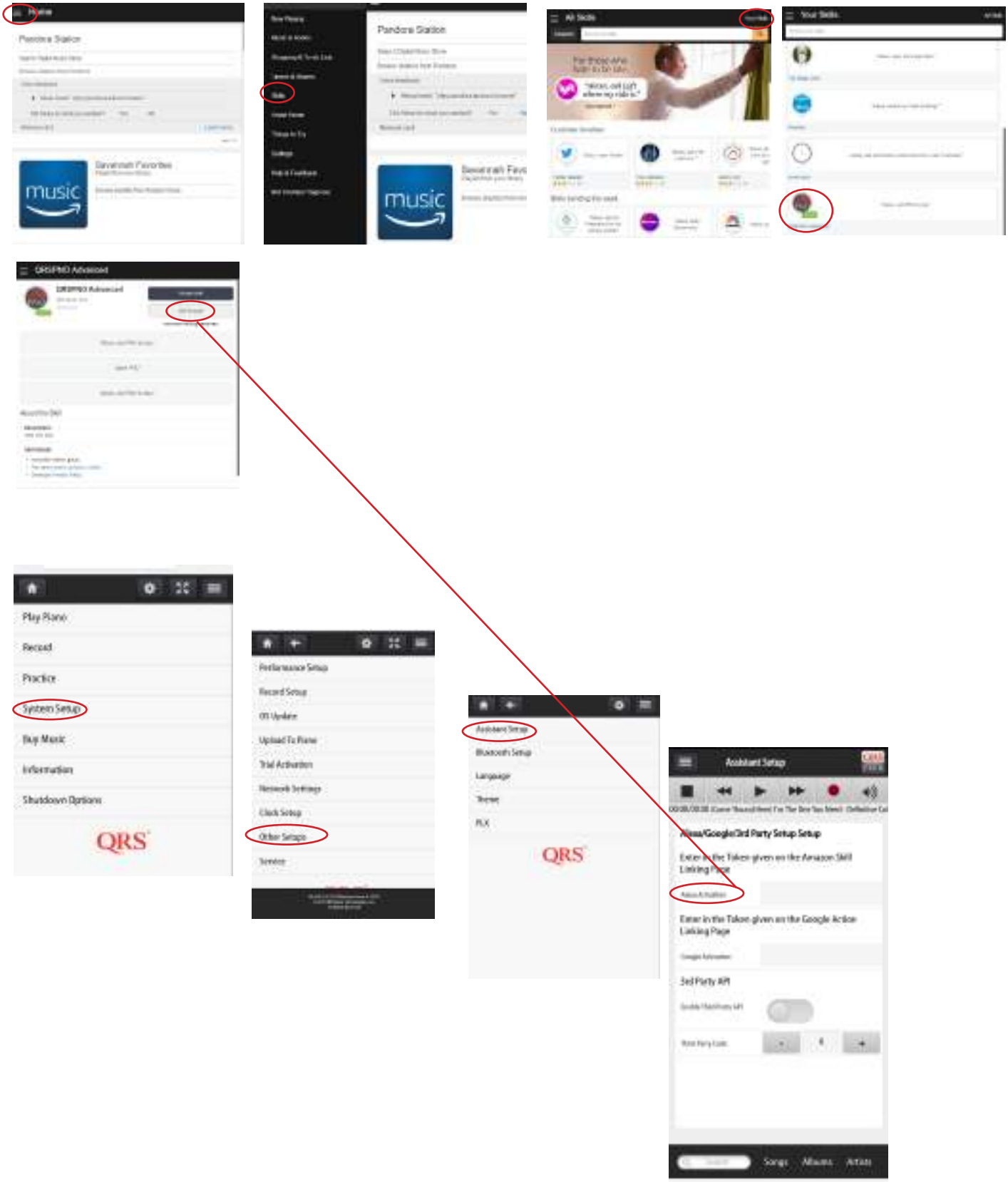


The balance of the switches are routing to an Internet performance setup. Where you are playing another persons piano remotely connected via QRS-Connect.com

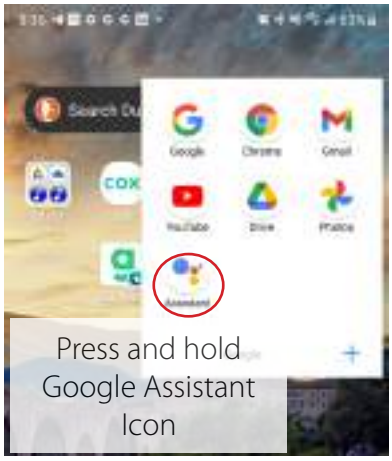
Used primarily to define the routing for the MIDI out streamed over the Internet. The delay defines how long in ms the control signal will be held.

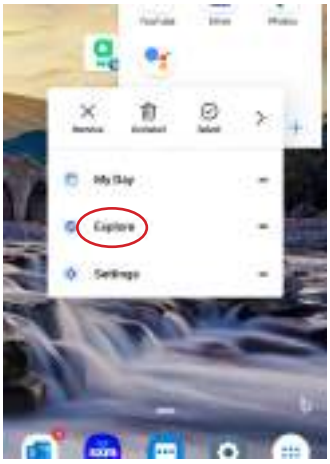
Same sliders are repeated here as on the Sessions live page. Allows for setting default delays for your most used aspects of online video playback.

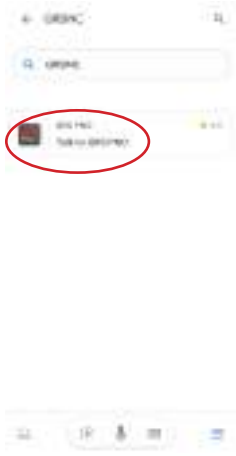
Setting Up your PNOmation System to work with your Amazon Alexa

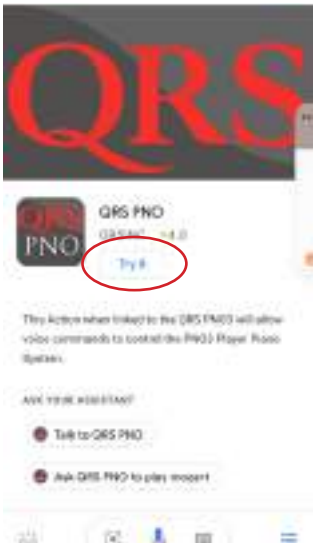


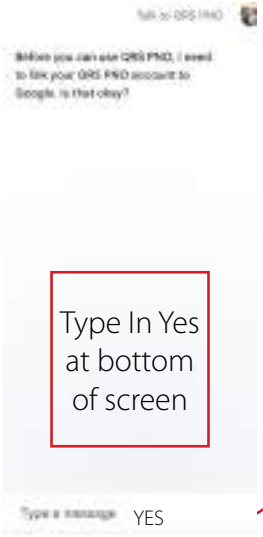
Setting Up your PNOmation System to work with your Google Home



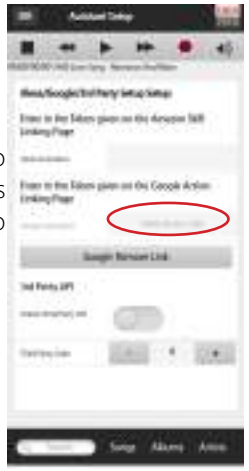




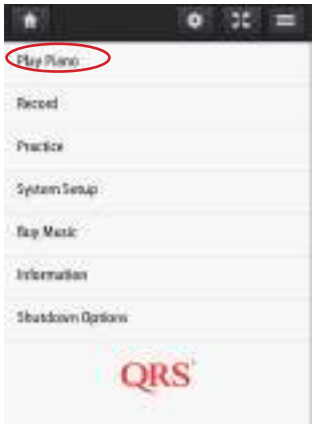


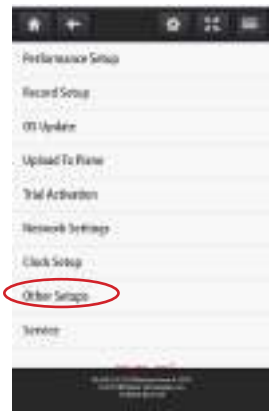


System Setup
Other Setups
Assistant Setup



Copy/Write activation code. Then open QRSPNO App and enter it

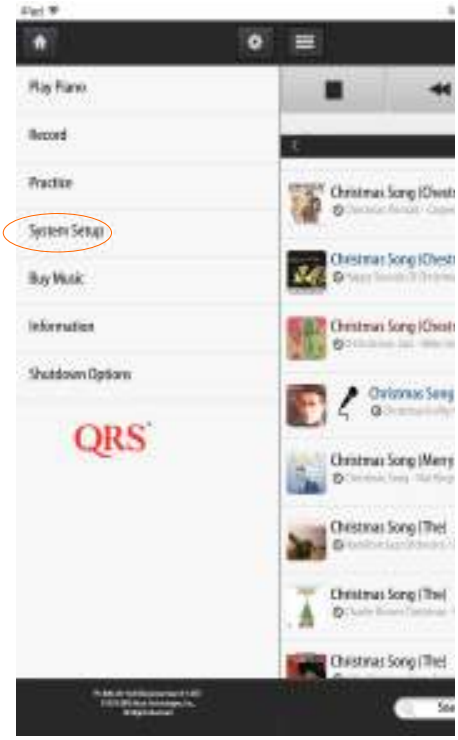


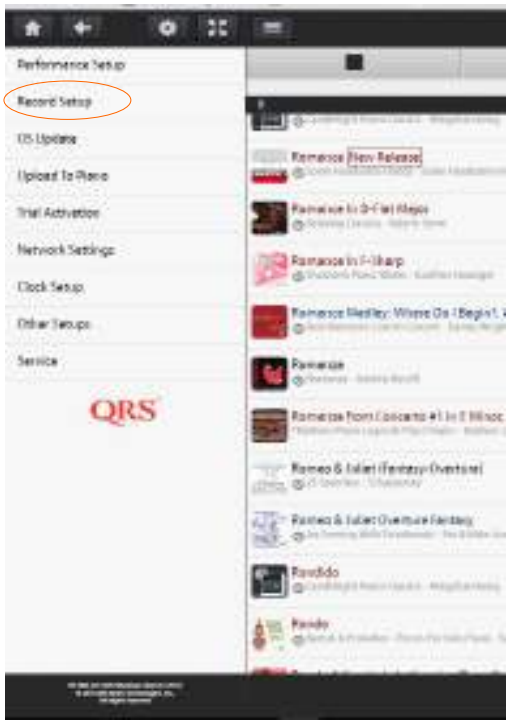


3rd Party API was created for independent developers, it allows them limited capability to control the PNOmation system with their own App.

Record Setup

Set Record Parameters





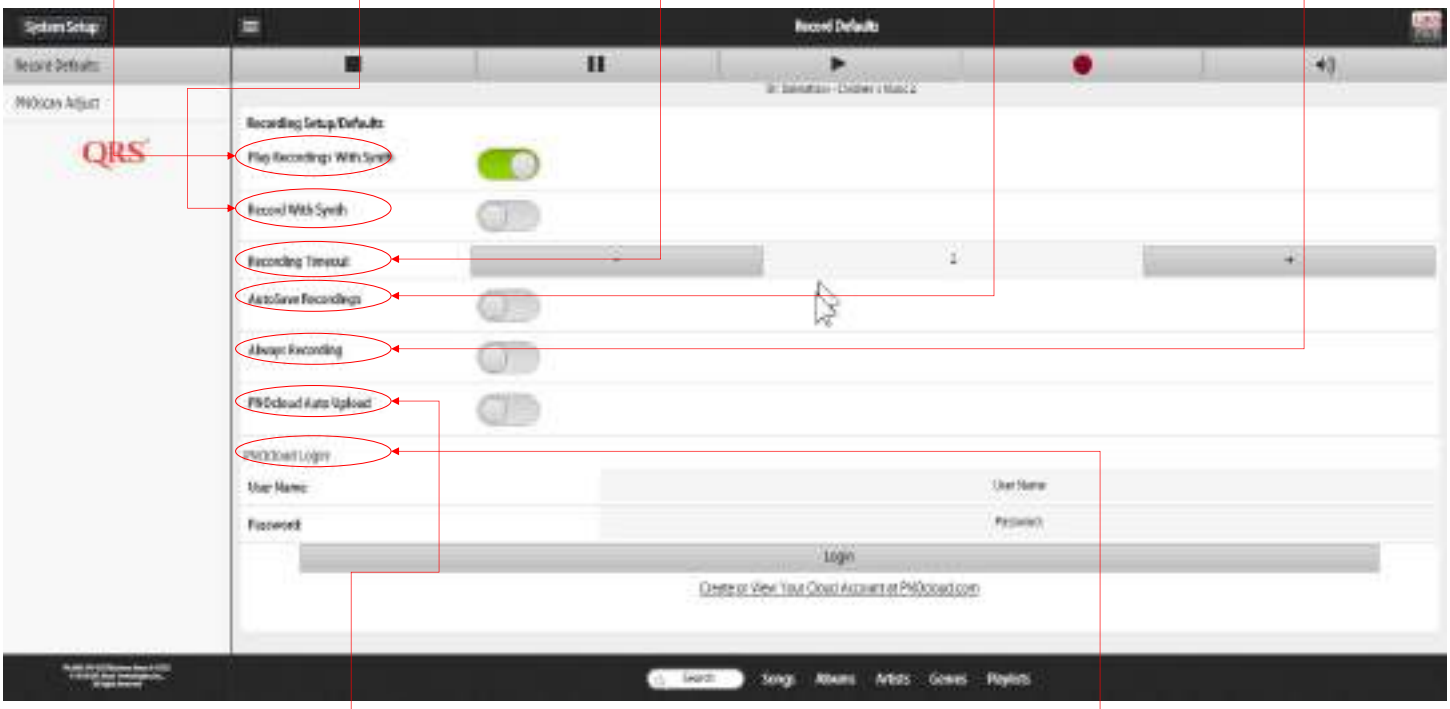
Plays back your recording with background synth sound out of the piano's speaker.

Listen to and record the synth instrument heard out of pianos speakers while recording.

When auto record and auto save is turned on there is no need to start record or stop, recording. Time out is how long the system waits before it saves your recording.

AutoSave Recordings will automatically save recordings without selecting save from dropdown menu after recording

Always Recording will automatically record your performance without having to start or stop record, log in...

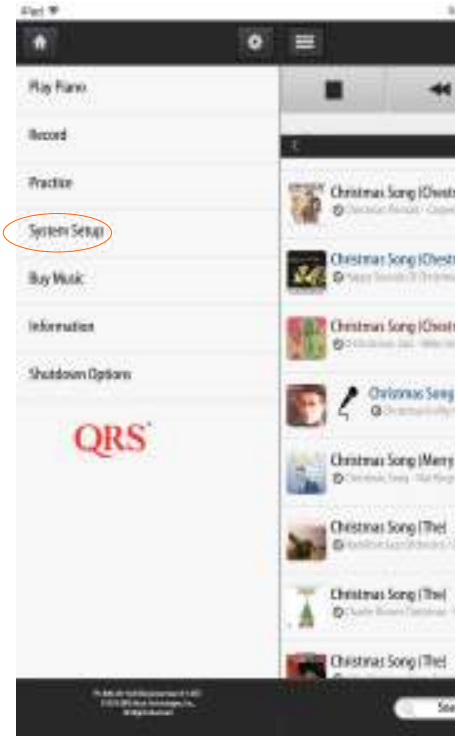


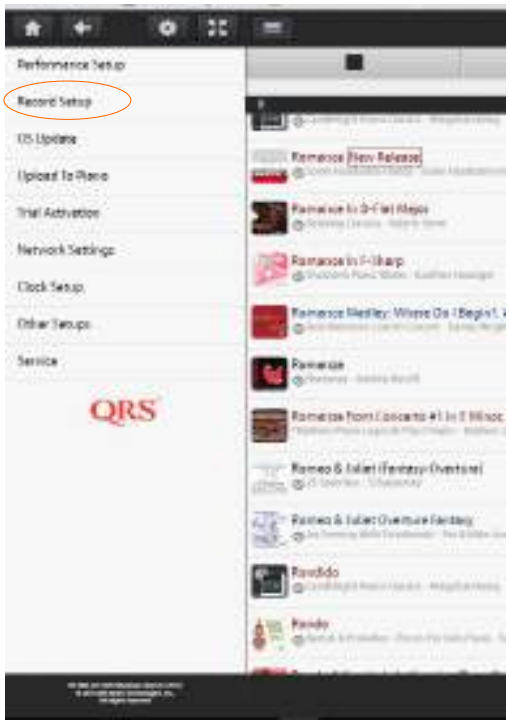
PNOcloud will save your performance to the cloud in your free PNOcloud account.

PNOcloud Login: This is where you set up your PNOcloud account, setting its username and password

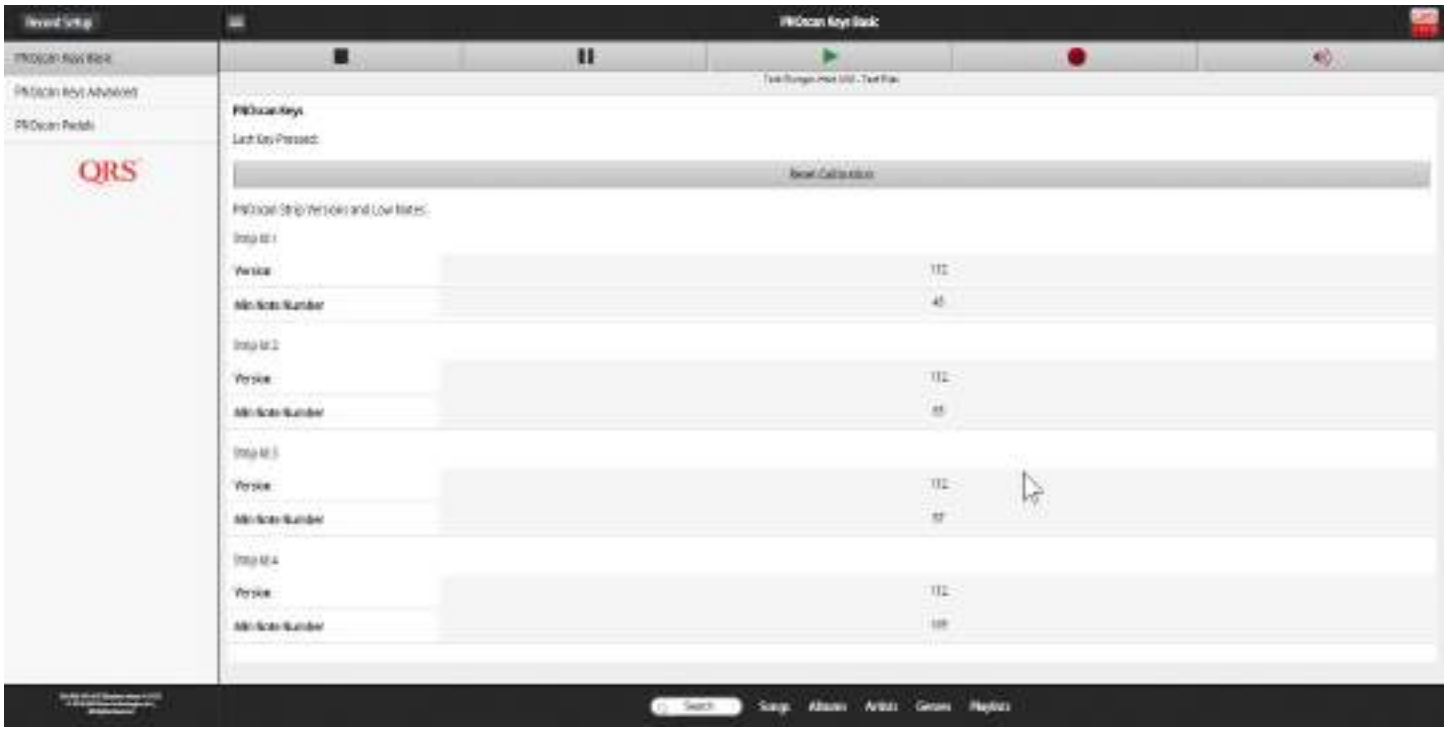
Record Setup/PNOscan Adjust

Set Record Parameters





The PNOscan Optical Recording Strip comes standard with four x 22 sensor strips. This gives you a total of 88 notes which fits the typical piano allowing for alignment adjustments. Each sensor has its own MIDI address and number. The MIDI number is associated with the General MIDI note assignment specification that ranges from 0-127.
The optical sensor reads the movement of the key over 1000 times per second and creates a profile of its movement. It then creates an associated MIDI note on/off plus velocity over that profile. The measurement window is set here.

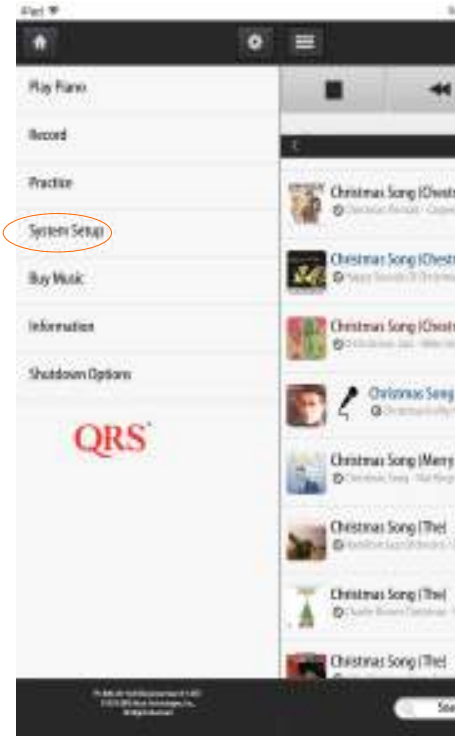


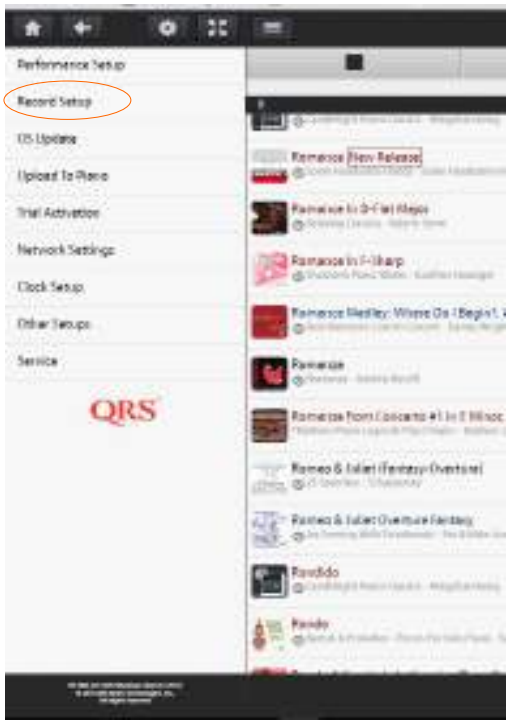
1. Select Reset Calibration

2. Play every note on your keyboard one at a time. Then you are done

Record Setup/ PNOscan Adjust

Set Record Parameters



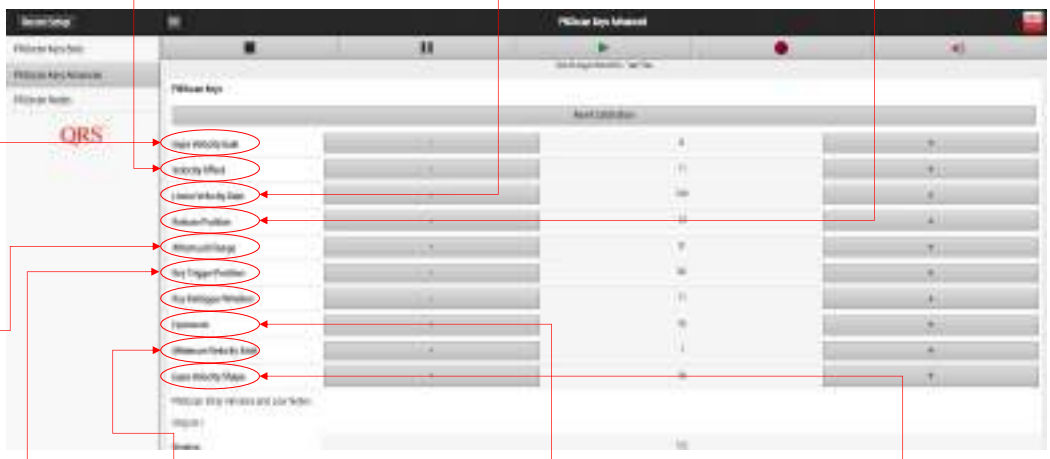


Velocity Offset:

Expo Velocity Gain: Do not touch

Linear Velocity Gain: Represents how the optical sensor profile is mapped to MIDI.

Release Position allows you to set the retrigger position, when the off/on occurs.



Aftertouch range talks to how far you can push the key down past the profile.

Key Retrigger Window represents the size of your profile sensing window, wider more accurate velocity, smaller more accurate trills.

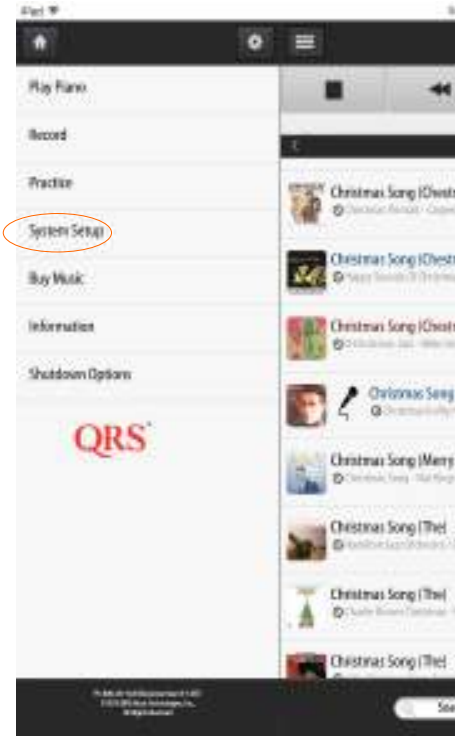
Min Velocity Transmitted: will always send a note on and velocity of 1 regardless of how slow the key is depressed.

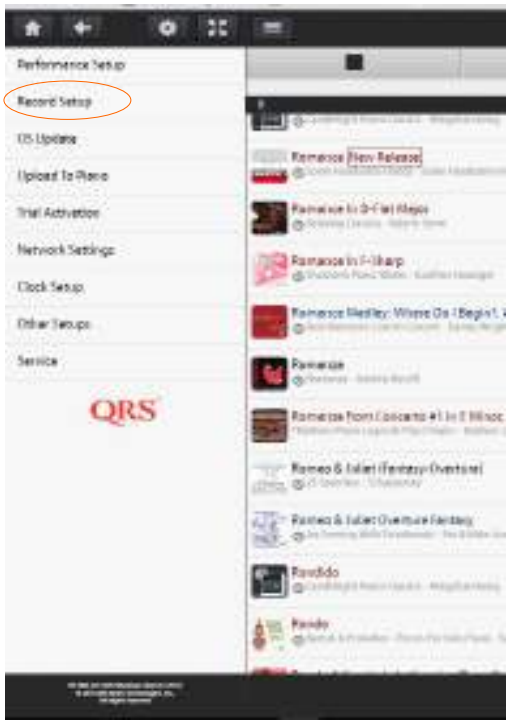
Hysteresis - filters out any anomalies in response time in the sensors: we recommend not to touch it.

Expo Velocity Shape works with Expo Velocity Gain—we recommend leaving it alone.

Record Setup

Set Record Parameters

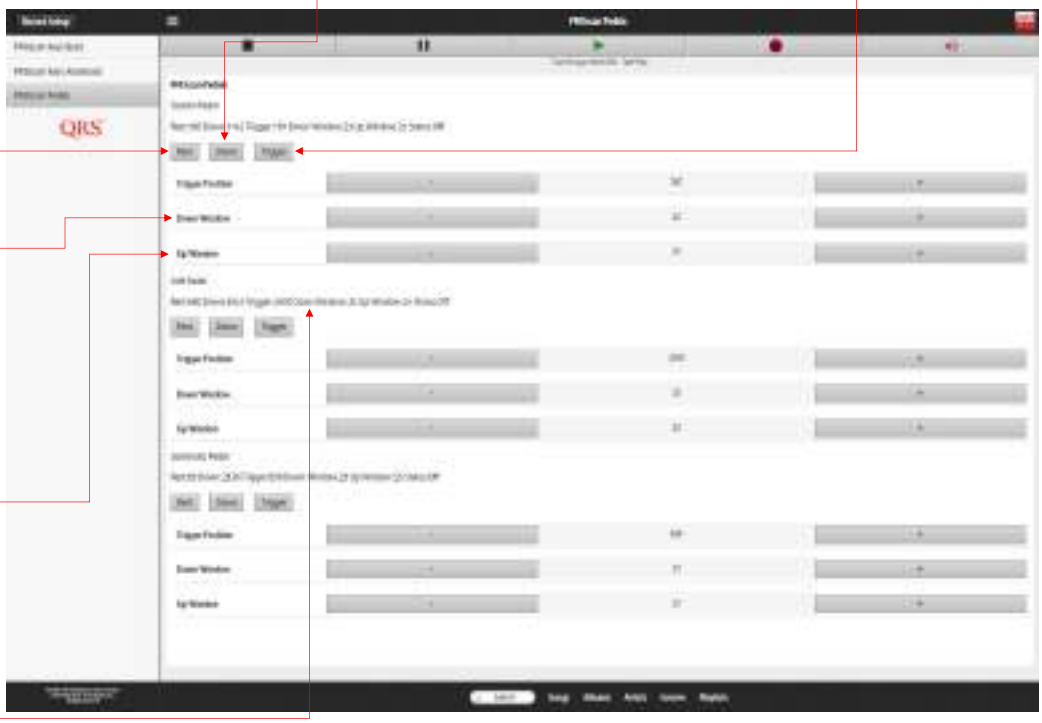




Rest: When your foot is not on the pedal - Select Rest

Down: Press the pedal down, then Select Down.

Trigger: Press the pedal down until the dampers, damper or soft shift begins to move.

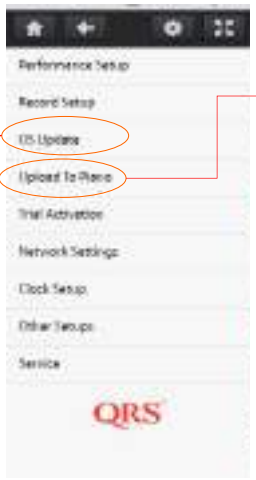


Down Window: How wide the profile window is from the time the trigger in activated.

Up Window: How wide the profile window is from the time the pedal is released.

Summary of the parameters that are set.

Operating System (OS) & Media Updates



Check For System Updates
Allows you to check for system updates manually.

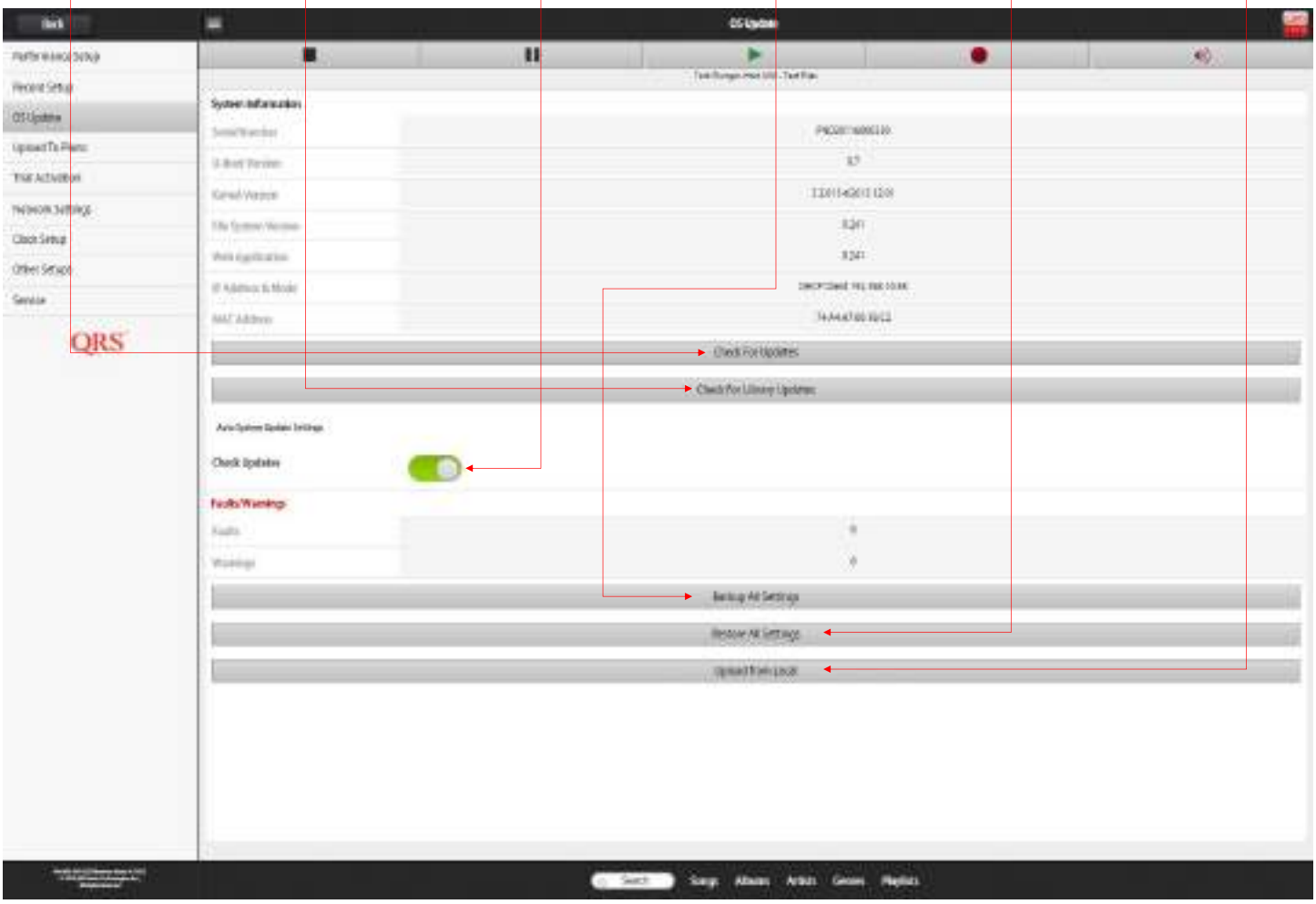
Check For Library Updates
Allows you to check for music content updates manually.

Check Updates
Allows for the system to update automatically. Requires an internet connection.

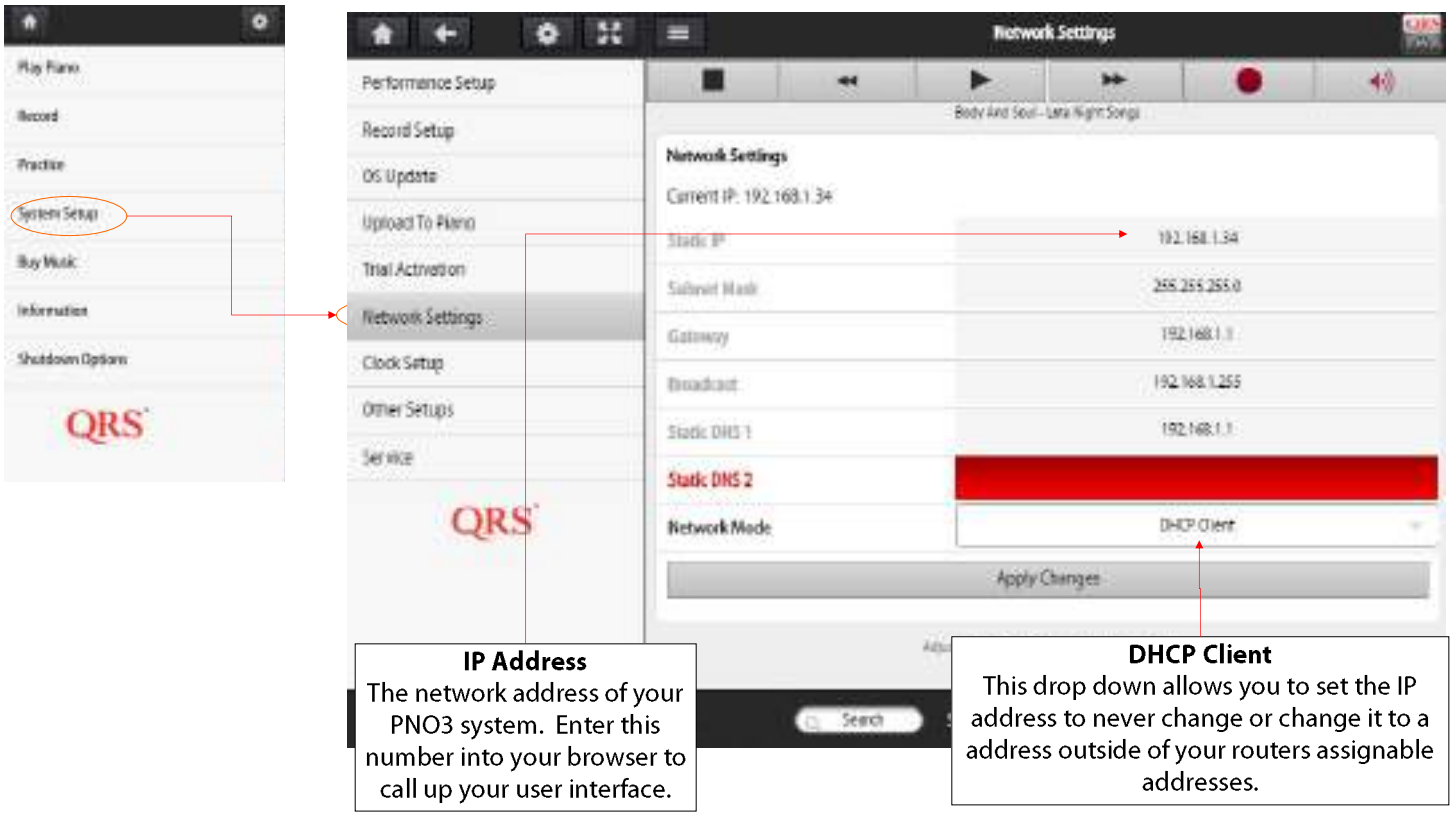
Backup All Settings
Sends your current settings to the PNO3s cloud as a backup for system restores.

Restore All Settings
Restores your settings to the previous days settings.

Upload From Local
Brings you to a manual upload page where you can upload an OS update or your own content..



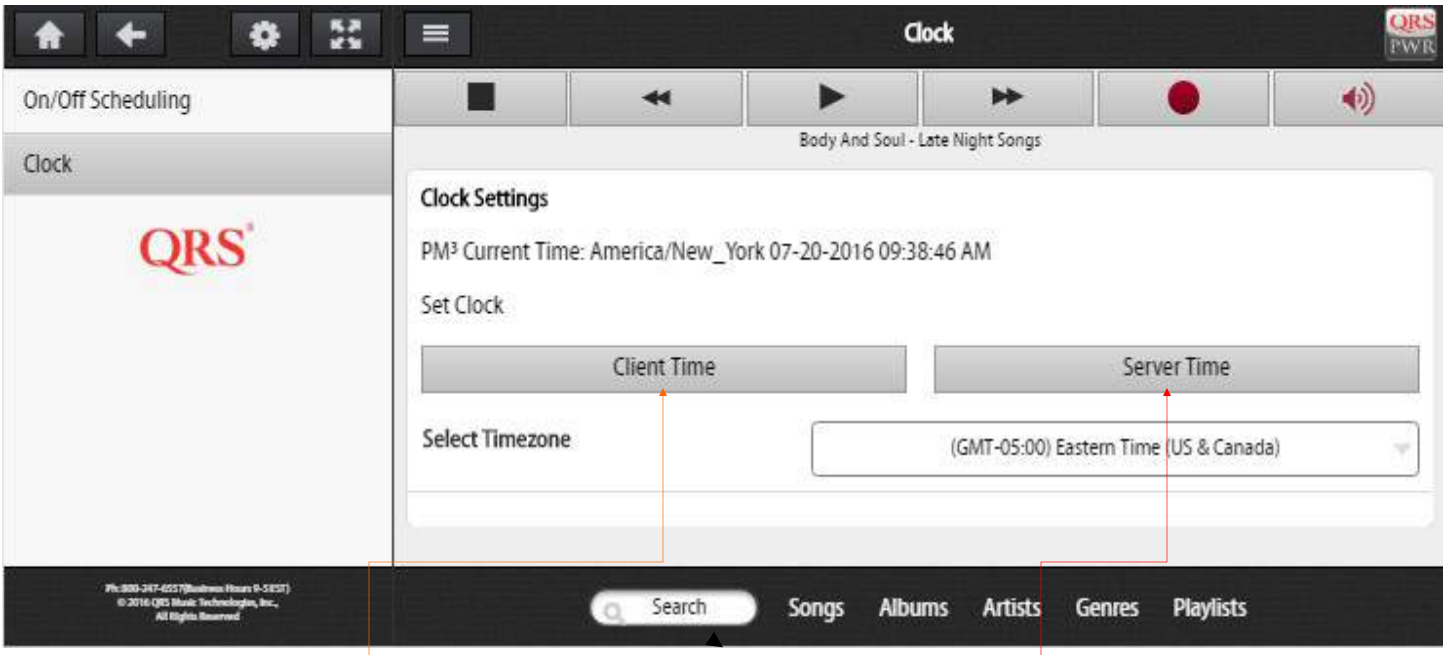
Network Settings



IP Address
The network address of your PNO3 system. Enter this number into your browser to call up your user interface.

DHCP Client
This drop down allows you to set the IP address to never change or change it to a address outside of your routers assignable addresses.

Clock Settings



Set the time that is used as a reference for your schedules, logs, backups and auto updates.

Pulls time from your device

Pulls time from the internet if you are in network mode

Scheduling Events

- Scheduling Events enables the PNO3 player system to turn on and play a selected playlist on a schedule.
- An almost unlimited number of schedules and events can be programed.
- The most recent event will prevail if there is a conflict.

Event Enabled
Turns on the event schedule

Event Name
Name your event schedule

Day Of Week
Select the day(s) you would like event to

Hour(24) of day
Hour of day to turn on

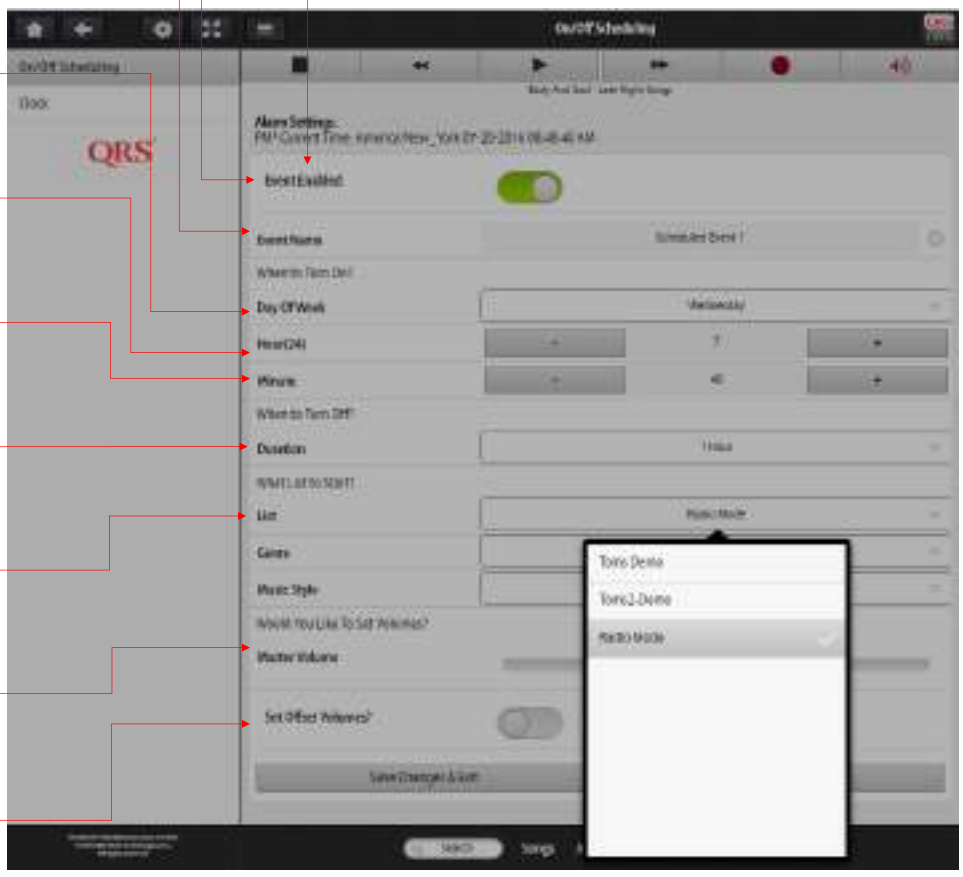
Minute
Part of hour of day to turn on

Duration
How long does event stay on

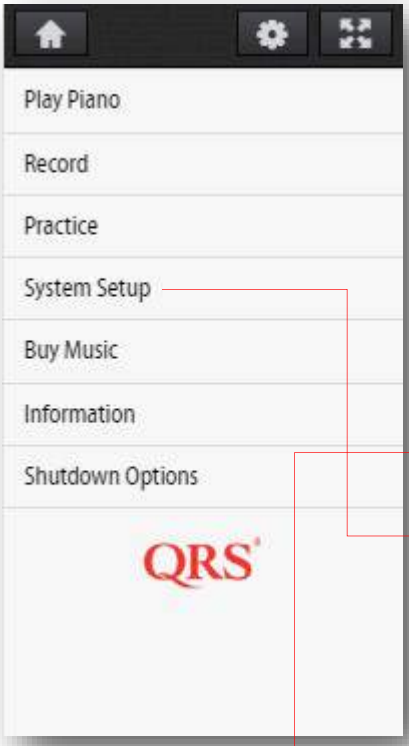
List/Genre/Music Style
Pick from a playlist or set the radio up

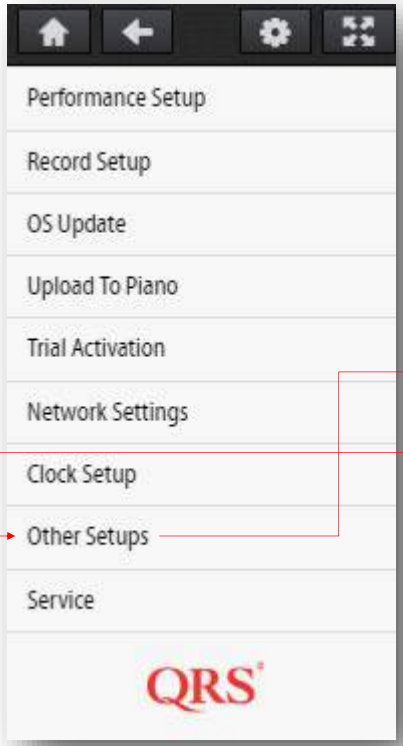
Master Volume
What volume will event playback at

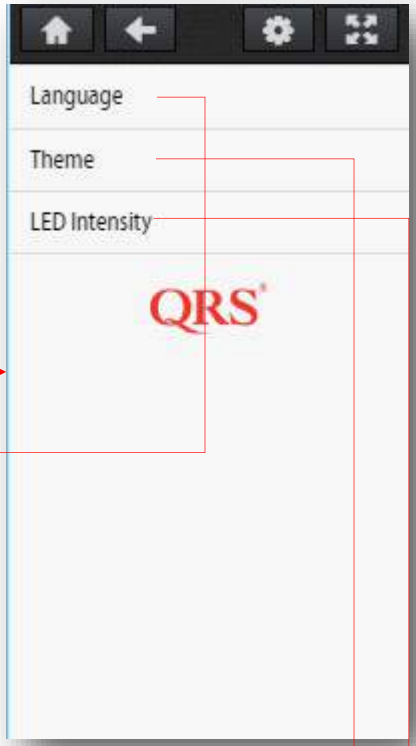
Offset Volumes
Enables you to adjust audio vs piano for the event



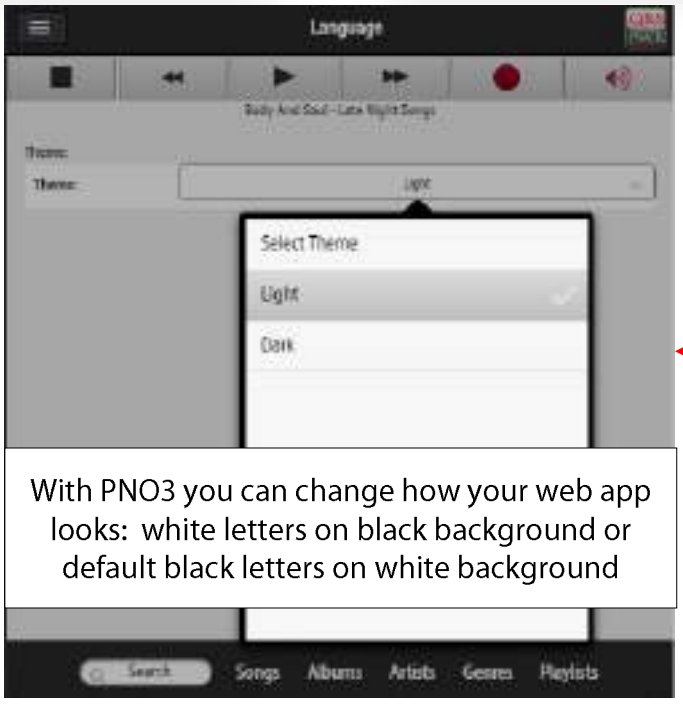
Other Setups - Language - Theme - LED Intensity







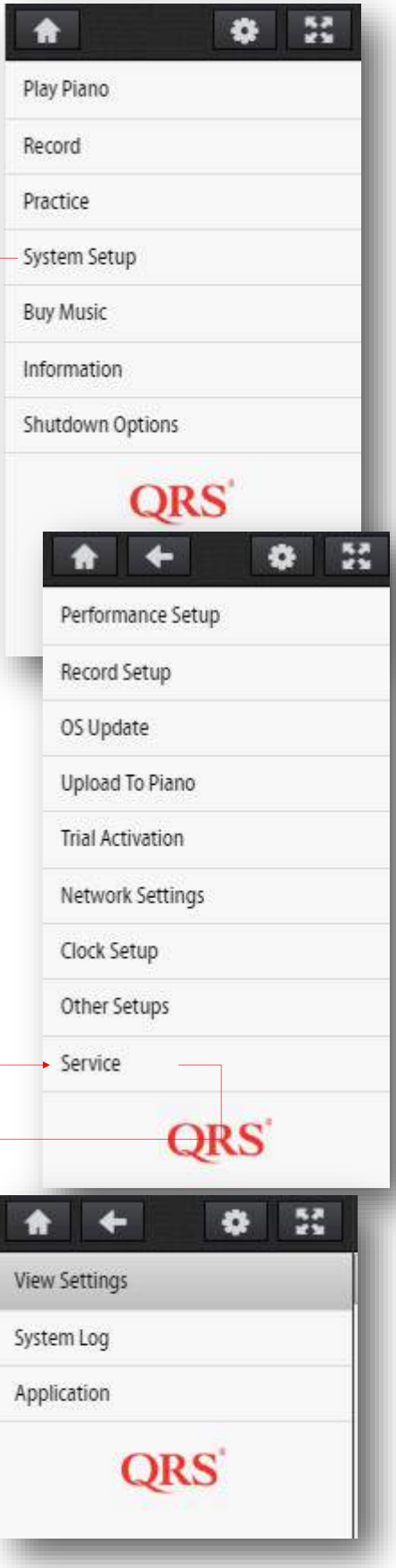
PNO3 offers several languages for voice prompts and Menu Language



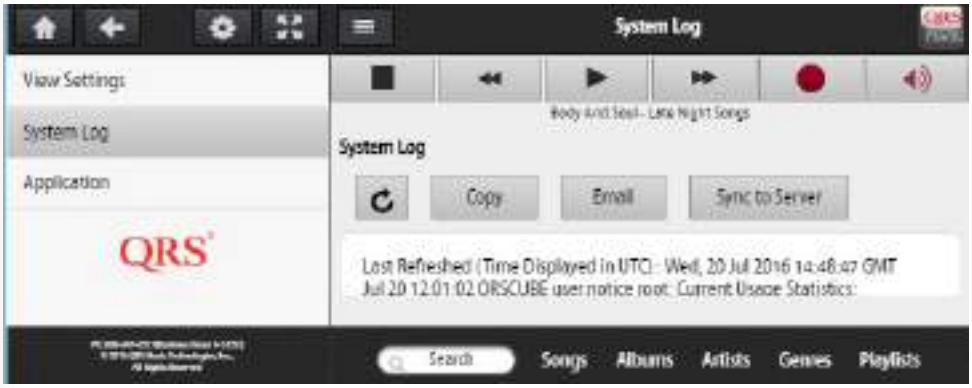
With PNO3 you can change how your web app looks: white letters on black background or default black letters on white background

The LEDs on the Pin Light Port Extender can be turned off here.

The Service Menu - Used for tech support



View Settings will display all of the systems parameters in one place. When calling tech support we will review this page first. Sending Email and Sync will allow you to send a copy of it to the cloud for us to view.



View System Log will display activity of the system . When calling tech support we will review the logs for anomalies. Sending Email and Sync will allow you to send a copy of the log to the cloud for us to view.

Application is a list of tools that tech support may ask you to use should the need arise.

All Access Plan Explained

What an "All Access" plan delivers:

- Purchase either 2 years, 4 years or 10 years of access to the entire digital audio music library.
- You get to keep all of the released complimentary music to date.
- You receive 75 or 150 of your most frequently played tracks at the end of the period. Instead of spending a lot of time sampling thousands of QRS tracks , by simply playing what you like, in the end it allows you to keep your most frequently played tracks.
- The player piano hardware technology remains in warranty during the "Access Plan" period.
- Hardware discounts on future technology upgrades and releases.
- Music listed here is as of September 2022.

Access Plans	1 Year (Trial Period)	2 Year (772992)	4 Year (772994)	10 Year (771020)
Access to all currently available qrs content - for duration of current All Access Plan	✓	✓	✓	✓
Keep all currently available complimentary content plus new complimentary content released during the duration of current Access Plan	✓	✓	✓	✓
The PNOmation system remains in warranty during the duration of current All Access Plan	✓	✓	✓	✓
Hardware discounts on upgrades and new products during the duration of the current All Access Plan	✓	✓	✓	✓
QRS-Connect Music Maker Platform - Free Live Streams and access to Custom Content	✓	✓	✓	✓
Preferred customer tech support		✓	✓	✓
Number of frequently played tracks left after All Access plan ends	0	75	150	150
Price (2021-2022)	Included	$1,495.00	$2,495.00	$6,495.00

The Math:

From time to time QRS adds music to the complementary music library. New customers and "All Access" plan customers receive these files free. At the time of it's initial release PNOmation³ had 319 complimentary tracks, they were chosen to give a flavor of the library's different albums and styles. Purchased separately they would have cost over $1,000.00.

In 2017 just under 1001 more complimentary tracks were added to the library. A representation of various international cultural styles plus some bonus popular covers. The value, if tracks were purchased individually, would be close to $3,000.00. Tracks purchased one at a time range from $.50 per track up to $4.95 per track for the Sync-Along. A total of $4,000.00 dollars worth of content is given free to new PNOmation customers and those in an "All Access" plans.

In 2019 - 2020 we added the AMPICO & DuoArt Archives over 1,600 complimentary tracks from some of the best content libraries featuring the greatest pianists of their time. Currently delivering over 3,000 plus tracks. Listed seperately depending on Access Plan status.

New in 2022 is free access to the QRS-Connect.Com music maker platform where we deliver live and custom content so you are never more than a request away from receiving a track not currently in our library.

Potential upgrade savings: Although there are no guarantees in the latest instance, an upgrade from PNOmation II to PNOmation³ costs $1,600.00, if you are in an All Access plan it would cost $850.00, a $750.00 savings.

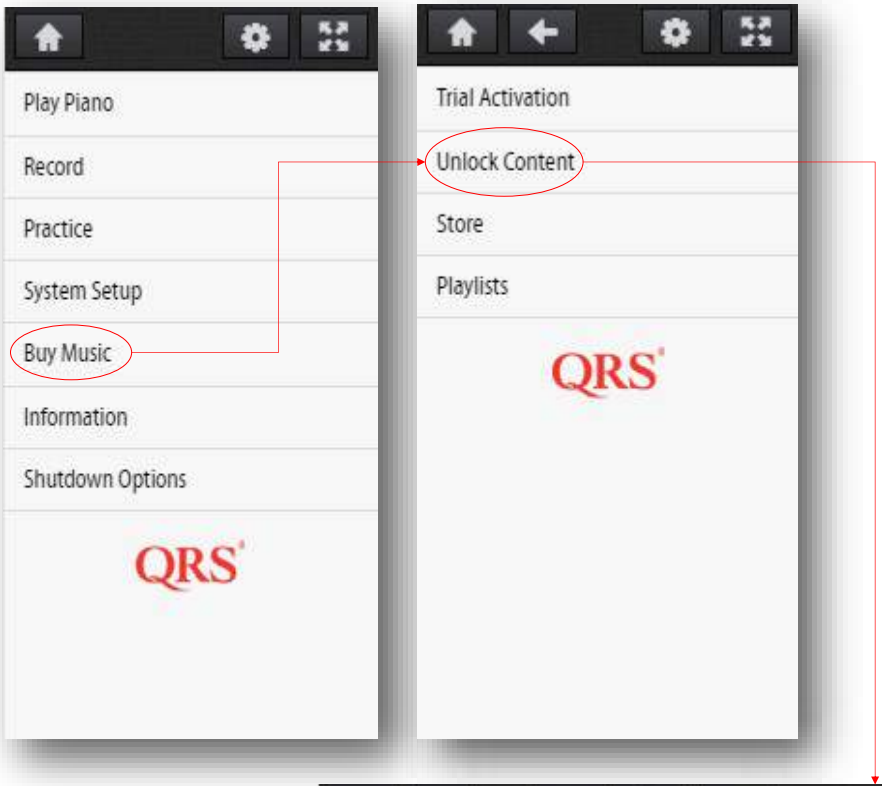
Potential Warranty Savings: If a power supply were to go out the current hardware only replacement cost is $985.00, in the All Access Plan its free.

Purchase Music Access Plan

There are two ways to purchase music or access to the music:

Individually purchasing each song or album. This is done by creating a playlist or cart of content you would like to purchase. Selecting purchase will notify QRS of your purchase, if we have a credit card on file we will unlock your content remotely. If you do not have a card on file we will call you to set up your account. This will require your system to be on the internet. Or we will email you a release key.

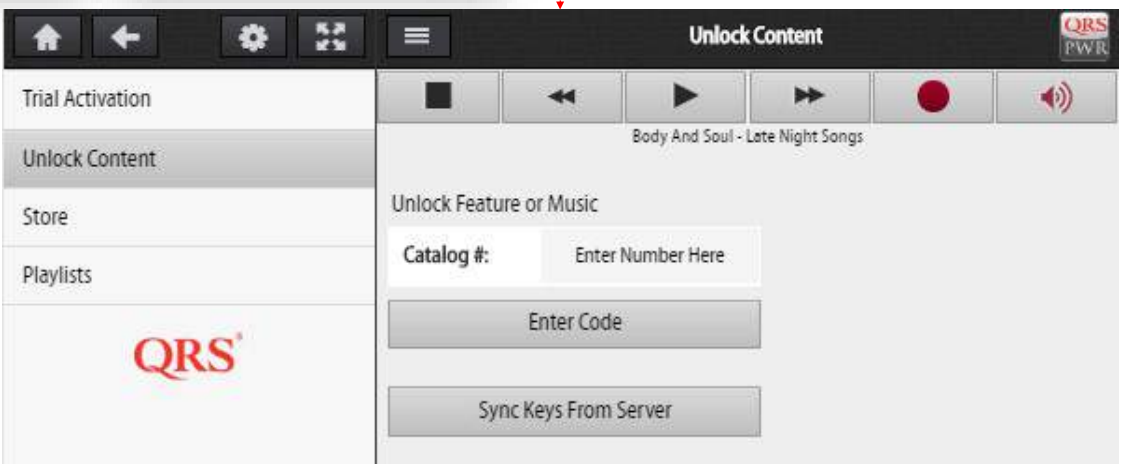
QRS All Access Plan. All Access Plans can be in 2 Year or 4 Year increments. Where at the end of the time period the system will unlock permanently the most frequently played tracks. 75 for the 2 Year and 150 for the 4 Year. Complimentary tracks are added on a regular basis as well. The system must be online to participate. Call 800-247-6557 to order.



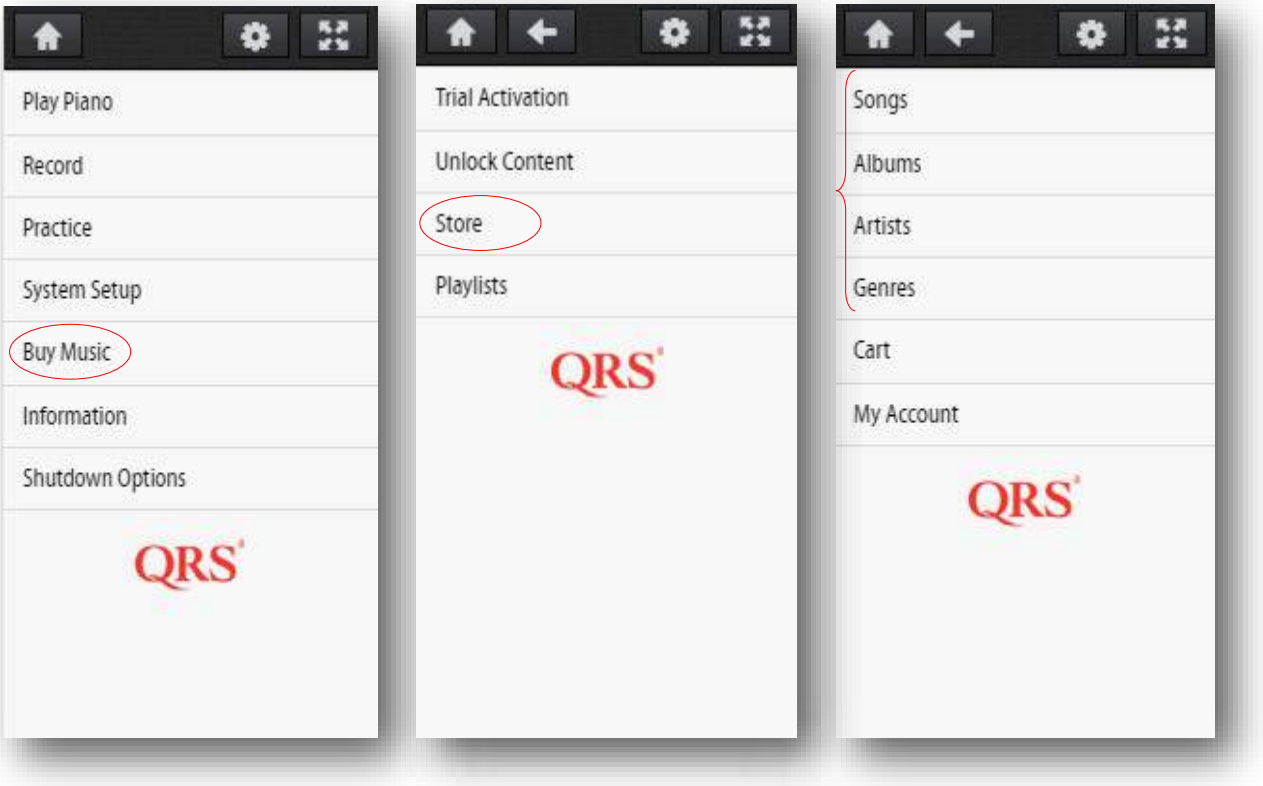
After Entering a Key or Cart any List that has not had a valid key will appear below. Lists Awaiting Unlock. You can then tap the Catalog/Feature/or Cart for more info on what is in that list. Then there is a enter unlock button when pressed it fills in that field for Catalog with feature/catalog/or cart id and asks for Release Key.

FYI - Entering the wrong key 5 times will lock the list out for a period of 5 Minutes.

Each All Access Plan or special release has a Catalog #. When you call to order, we will release your content remotely or we can do the release over the phone with an unlock code specific to your serial number.



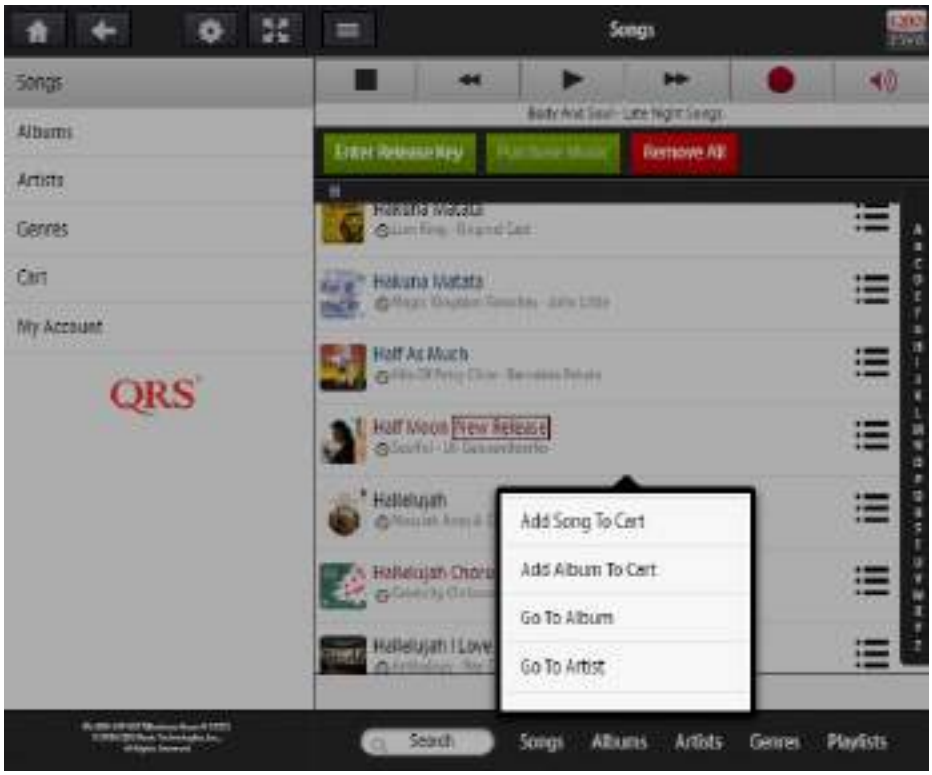
Purchase Music - Individually



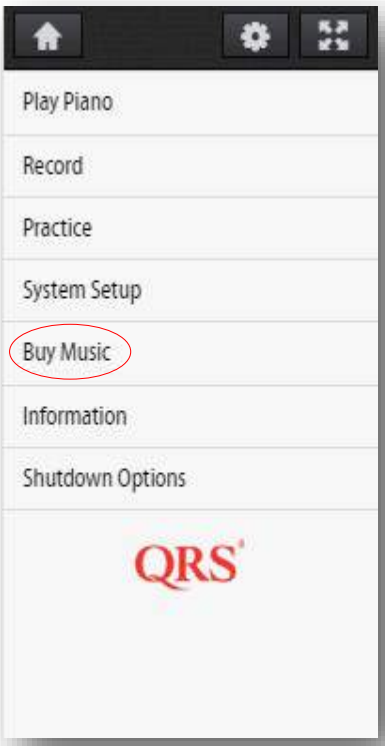
Create a cart of tracks you would like to purchase. This is done by selecting the Menu icon to the right of the track or album and selecting "Add Song/Album To Cart"

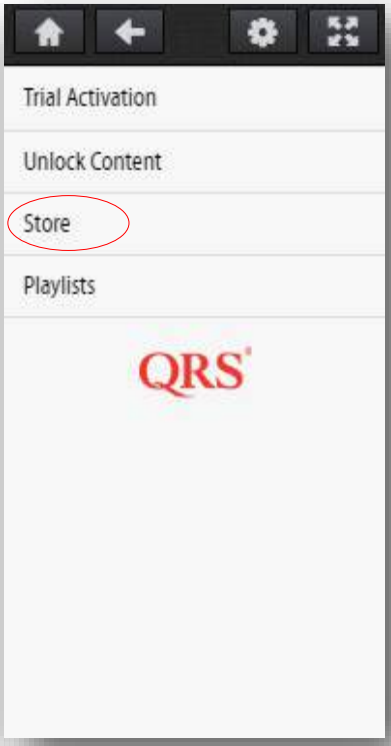
Select the "-" sign to remove a track from the cart.

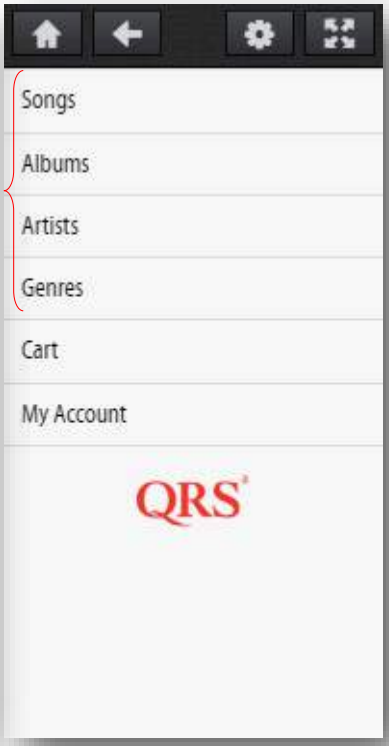
Selecting Artist or Genre will require layer to further selections to get to the album or track.



Purchase Music - Individually







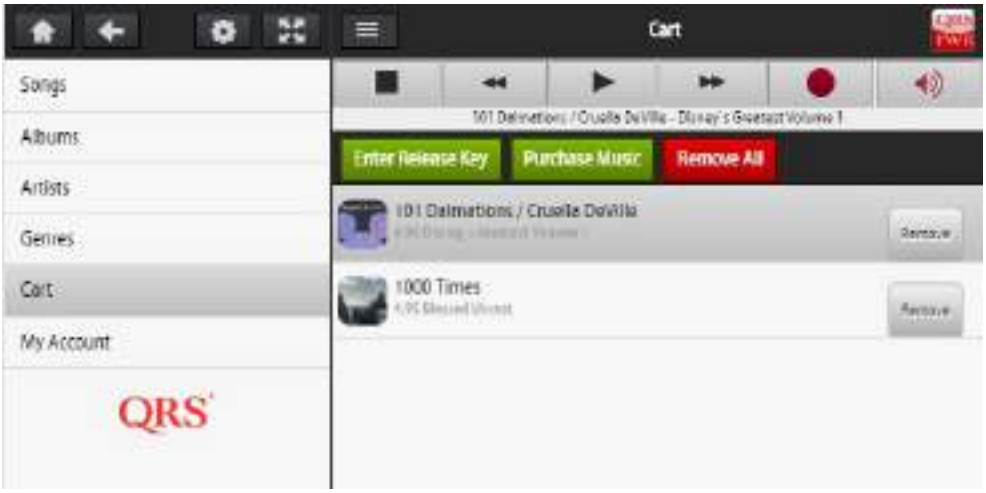
When selections are complete, select "Cart" from the "Buy Music" "Store" Menu

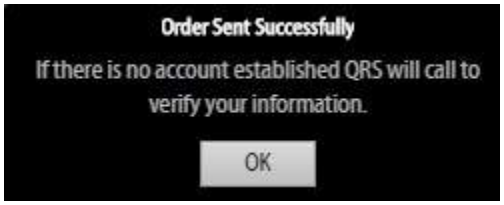
Select "Purchase Music"

Select "Place Order"

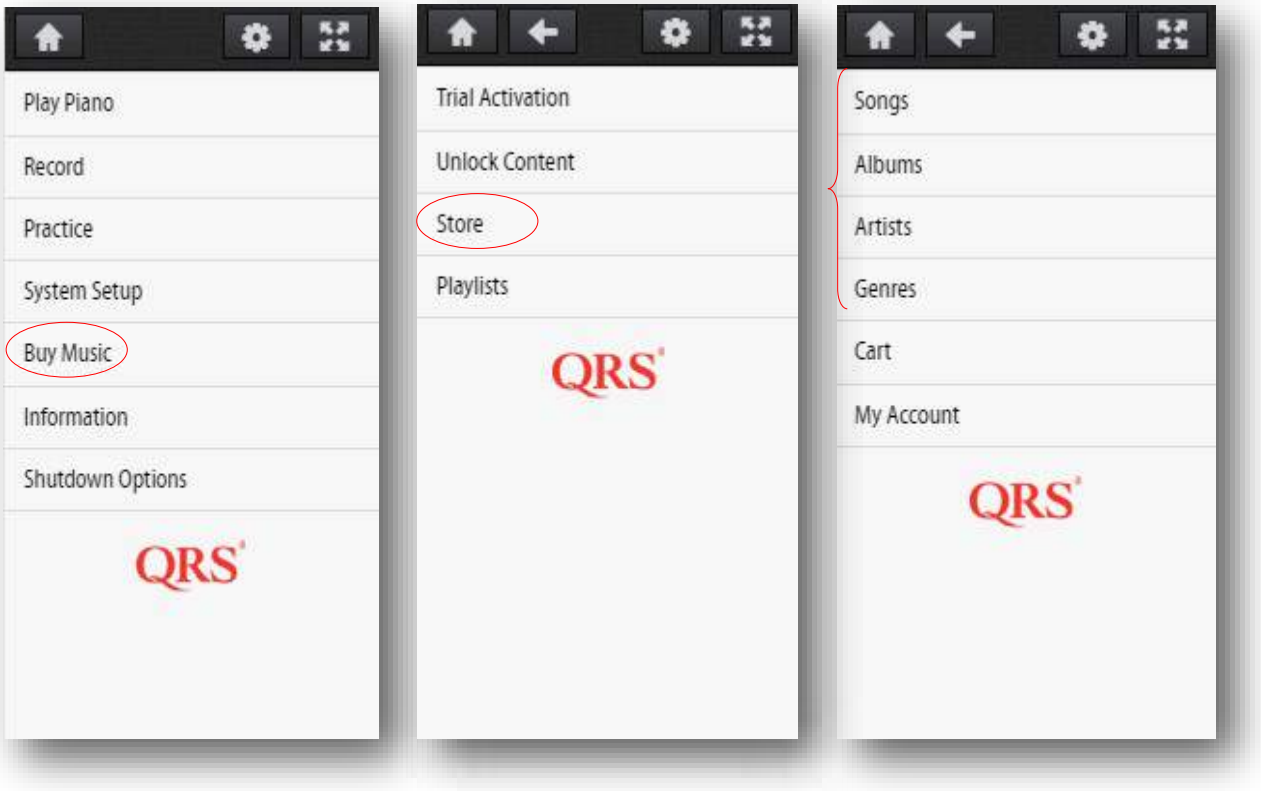
Confirm you would like to go forward with the order by selecting "Yes"

Select "OK"





Purchase Music - Individually



Notes:

If you're controlling PNO³ with a device that has an **Email account** then Press the "Place Order" button. This will place the order in your Outbox.
If PNO3 is in Network Mode the Email will be sent to QRS immediately.
If PNO3 is in Stand Alone Mode the Email will be sent to QRS the next time your device is connected to your home network and the Internet.

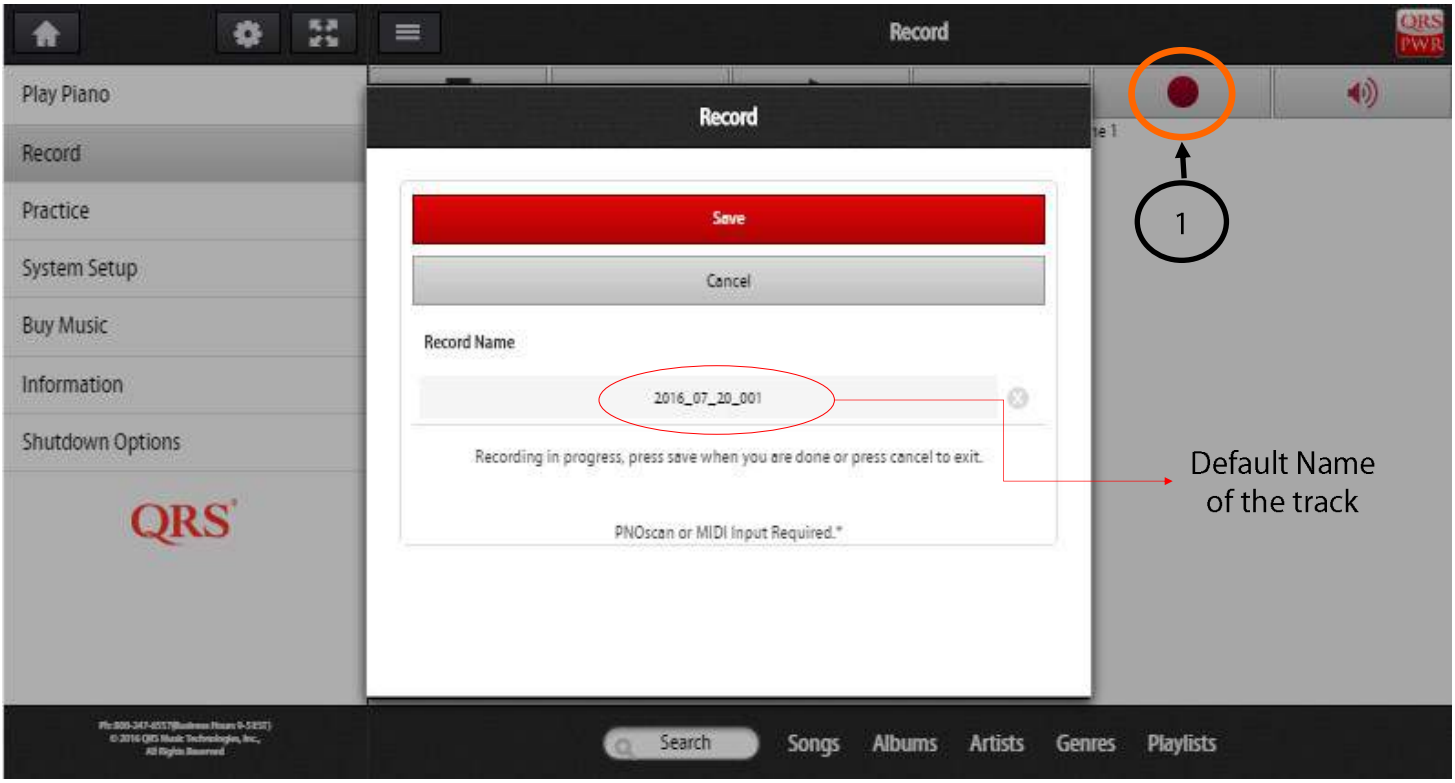
The Cart ID that is generated in the above page is what is used to unlock. So changing your cart after order won't effect the unlock

Notice the QRS Catalog - Track Numbers

662110-99 [662100 = the album # and 99 indicates All Tracks]

662111-25 [Only Track #25 for album 662111]

Recording A Track

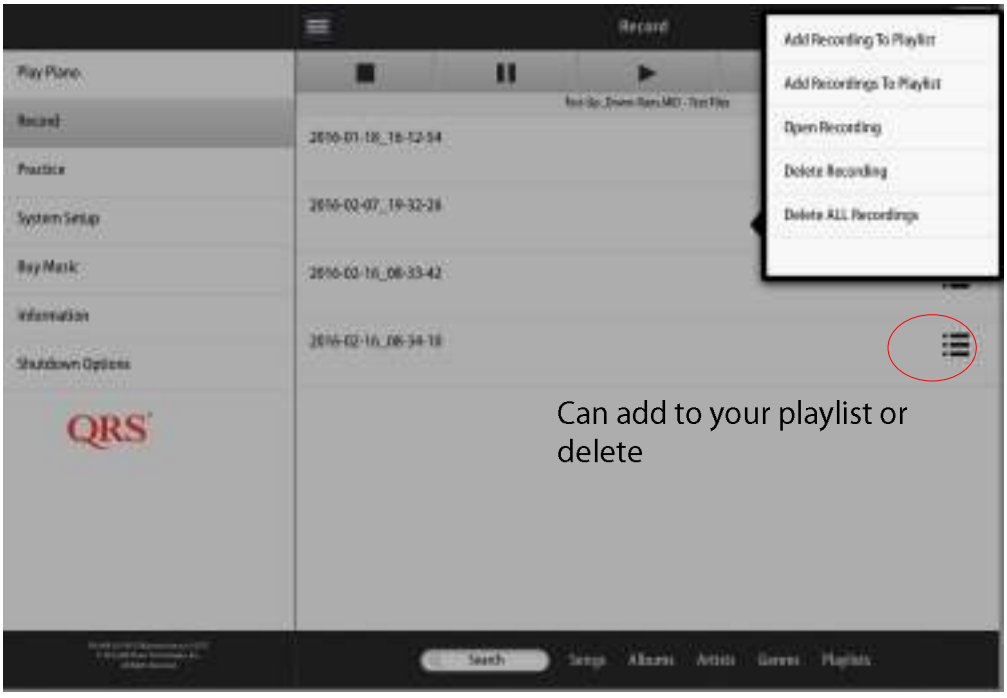


1. Select Record from the main transport menu
2. Play the piano
3. When done performing select “Save”

Assumes Auto Record and Auto Save is not turned on

What to do with your recorded track.

1. Select the Menu Icon to the right of the recorded track
2. Select from the list - Add to Playlist, Play the track, Delete the track, or delete all tracks.

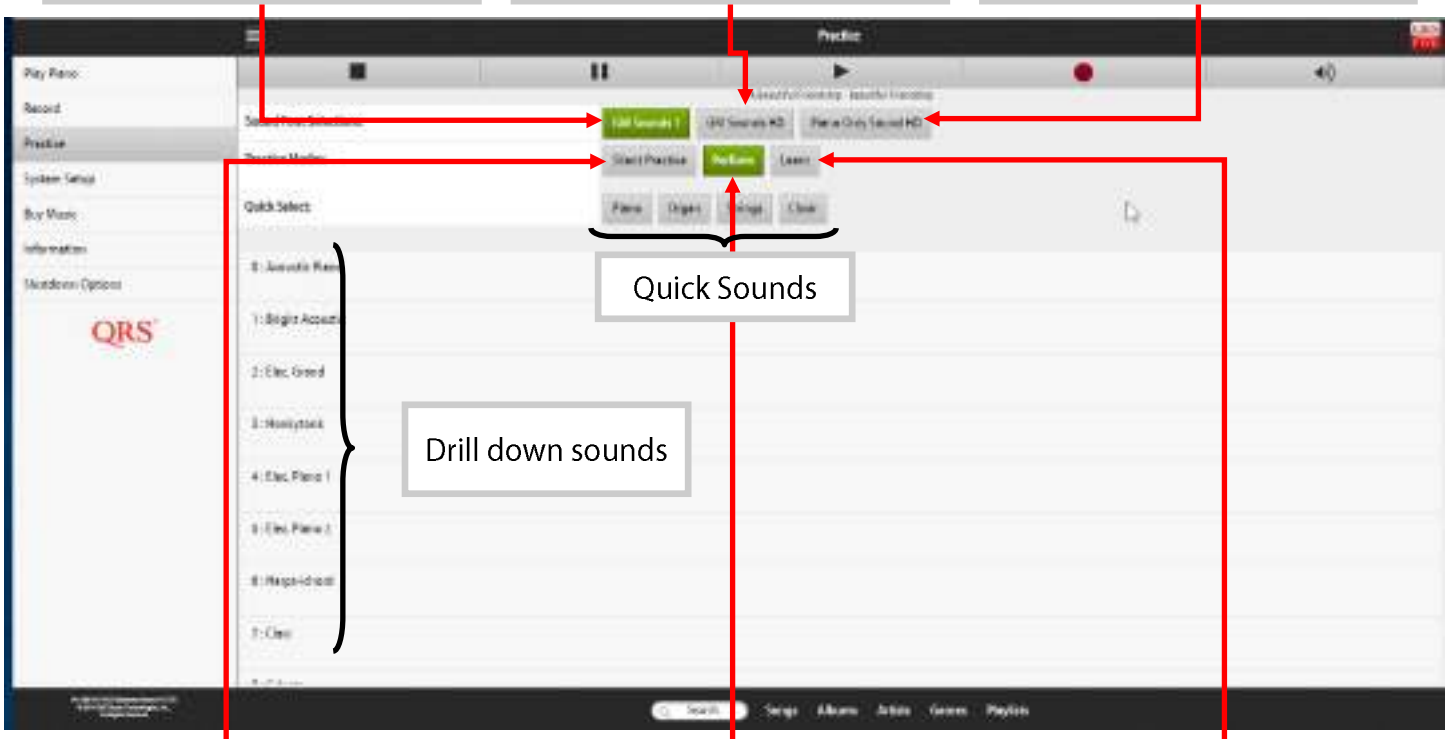


Practice & Perform

Standard General MIDI Sound Font - good balance with all sounds

General MIDI HD Sound Font - More memory devoted to Piano sound

Piano Only Sound HD
All the memory is devoted to a high end piano sound sample



Selecting **Silent Practice** will mute the audio going to your speakers and route a piano sound to your headphone outputs.

1. Select Silent Practice
2. Engage the Key Stop Rail
3. Plug in your headphones
4. Play the piano

Requires a sensor strip like PNOscan

Selecting **Perform** will route a live performance using a sensor strip similar or QRS's PNOscan. This will route the MIDI note events from PNOscan to the sound set built into the system and out to the speaker. Selecting a sound can convert your piano to the selected sound source instrument.

1. Select Perform
2. Engage or not engage (your choice) the Key Stop Rail
3. Select a Sound
4. Play the Piano

Selecting **Learn** will launch your free year of Piano Marvel Lessons. Requires an iPad or Web Browser and an internet connection on your piano. Any sounds will come from the device you connect, internal PNO3 sounds will be muted

1. Select Learn - If you have set up your free account now is the time. If you have done so the PIanoMarvel site will log you in.
2. Connect your PC,Mac, or iPad to the USB output on the Pin Light Port Extender (PLx)
3. Take your lesson—Enjoy

Pin Light Port Extender (PLx) LED Light Status and Start Up

Start Up	Start Up Sequence	On Power Up—Lights cycle from Left To Right each Light Winks and Cycle through each of its potential colors
	Voice Prompts (light 6 blinks amper)	1. Welcome to Pianomation 2. Operating Software Version Announced 3. Announces Your System Is Ready 4. Announces if a Network Cable is Detected 5. IP Address Announced
	Start Up Sequence Complete	Lights will indicate their status (ref other pages —)
	To Hear Status Again Plus your systems serial number	Using the IR Remote pointed at the IR receiver (button on PLx): Select Shift (let go) then 3 (let go) or Hold PLx button down for 4 to 6 seconds
Operating System Updating	Green	PNOscan optical record sensor strip is connected
	Lights Gradually Light Up from Right to Left	All lights gradually light up based on update completion percentage, all lit at completion, then reboot
	Voice Prompts	1. Update 2. Please do not remove media or disturb power until update is complete 3. Update in Progress (depends on size of update) 4. Update Complete 5. (system now reboots and you will lose connection) 6. Voice Prompts will follow the start up prompts
Button Push	Button Push	Starts and stops playback of the default playlist you have set
	Button Push 4 to 6 sec	Voice Prompt Information
	Botton Push > 16 sec	Reboots piano first 3 lights turn amber and last light is red

Pin Light Port Extender (PLx) LED Light Status and Start Up

Light #1 Power/Status	Green Solid	Power to the solenoid rail is on, the High Power light on the power supply is on, system is ready to be played.
	Green Blink	MIDI Control Data is being sent to the piano as a PWM signal. The Piano should be playing
	Amber Solid	The piano is in Stand By Mode, power to the solenoid rail is off, the High Power light on the power supply is off, the piano is awaiting a signal to wake up before playing.
	Amber Blink	N/A
	Red Solid	There is a Key Solenoid or Pedal Solenoid Over-Current status which will shut the high power to the system down.
	Red Blink	N/A
Light #2 System Activity	Green Solid	The Pin Light Port Extender (PLx) has initialized, the controller under the piano has successfully initialized, and the low power light is on the power supply.
	Green Blink	N/A
	Amber Solid	N/A
	Amber Blink	The light will wink at you if the system is receiving an IR control signal
	Red Solid	There is a power issue/failure on the solenoid rail
	Red Blink	N/A
Light #3 Network Status	Green Solid	The system is in Stand-Alone Mode, which means it is acting as a router (hands out IP addresses) and belongs to its own network (QRSPNOxxx)
	Green Blink	The system is setup to be in Stand-Alone Mode but there is no network device or cable connected.
	Amber Solid	The system is in Network Mode but there is no network device or cable connected
	Amber Blink	The system is in Network Mode but there is no network device or cable connected
	Red Solid	No Network Connected
	Red Blink	Trying to find a network

Pin Light Port Extender (PLx) LED Light Status and Start Up

Light #4 Operating Mode/ Source	Green Solid	Internal Memory is Source of Content
	Green Blink	1. Blink (per second?): External SD Card as Source 2. Blinks: Recorded Files are the Source 3. Blinks: When an External USB Stick is the Source
	Amber Sold	External Source is Bluetooth
	Amber Blink	1 Blink (per second?): MIDI IN Network 2 Blinks: External: MIDI IN USB Client or 5 Pin MIDI In 3 Blinks: External: Analog MIDI In from Audio Port
	Red Solid	Error Selecting Playlist or Source - stays red until you change source or clear the error.
	Red Blink	Winks with one of the above color dependent
MIDI Activity & Record Strip Status	Green Solid	PNOscan record sensor strip is installed and detected
	Green Blink	MIDI activity is coming in off of the PNOscan strip
	Amber Solid	5 Pin or USB MIDI Record system is installed
	Amber Blink	MIDI activity is coming in off of the record system
	Red Solid	N/A
	Red Blink	N/A
System and Voice Prompt Status	Green Solid	Analog MIDI is being decoded
	Green Blink	The system is updating
	Amber Solid	N/A
	Amber Blink	The Voice Prompts are active
		N/A
		N/A

PNOmation 10 Button IR Remote Control

Master Volume Down

Master Volume Up

Play Pause

Next Track

Wi-Fi - Network Mode

Wi-Fi - Standalone Mode

Voice Prompt On-Info-Off

Check For OS Updates

Reboot

Que Up Play List 9 (also the coin op list)

IR Reciever

The 10 Button Remote control was released in 2019. Visit QRSmusic.com/support to view older remotes

1		Turns Master Volume Down - Assuming the balance between the piano and speaker system are set up correctly, both will move up and down with Master Volume. Knob on PLx also acts as Master Volume
2		Master Volume Up - Assuming the balance between the piano and speaker system are set up correctly, both will move up and down with Master Volume. Knob on PLx also acts as Master Volume
3		Play/Pause - Use to mute or stop playback of the piano.
4		Next Track - goes to the next track in the currently playing play list
5	Net	Wi-Fi Network Mode - Used primarily for older systems to quickly set up a network mode when using an external network connection
6	SA	Wi-Fi SA - Stand Alone network mode - used primarily on systems that do not have a network condition and broadcast their own WiFi network.
7		Voice Prompt On-Info-Off - will disable voice prompts, select twice and it will announce with a voice prompt your IP address, serial number and software version. - Again and it will turn Voice Prompts off
8		Check For OS - Will reach out to our servers to see if your Operationg system is current. This may take a minute or so to detect then download.
9		Reboot - Reboots the whole operating system as if you unplugged and re-plugged power
10		Que Up Play list #9. (Also the Coin-Op List) Idea is to create your list for the night or event or just your favorite. Save as list 9 and this button quickley ques it up to play.

PNOmation Processor

2022 - 2023 Comes with only one antenna

Button LED 1		
Mode	**Precedence**	**Meaning**
Flashes on each event		Flashes with MIDI Data
Solid --- relieable AMI	if Display AMI On LED is enabled	Flashes with AMI notes
Button LED 1 - Button Presses		
Operation	**Function**	**Requirement**
Press	Information(Audio IP address, Serial #, Version)	
Pressed for >2sec	Volume Increase	If Playing
Pressed for < 2sec	Go to Previous Track	
Hold for 8 seconds	Standby (Low Power)	
Hold 1 and 3 on Power Up	Factory Reset	On Boot Up
Proc Light 3 then Light 1 then you can let go		

Button LED 2		
Mode	**Precedence**	**Meaning**
Solid		During Playback
1 Flash Per Sec		Indexing Music
Button LED 2 - Button Presses		
Operation	**Function**	**Requirement**
Pressed for < 2 seconds	Play/Stop	Track playing for pause
Pressed for < 2 seconds	High Power Turn On	If in Standby
Hold for 8 seconds	Reboot	

2022 - 2023 Comes with only one antenna

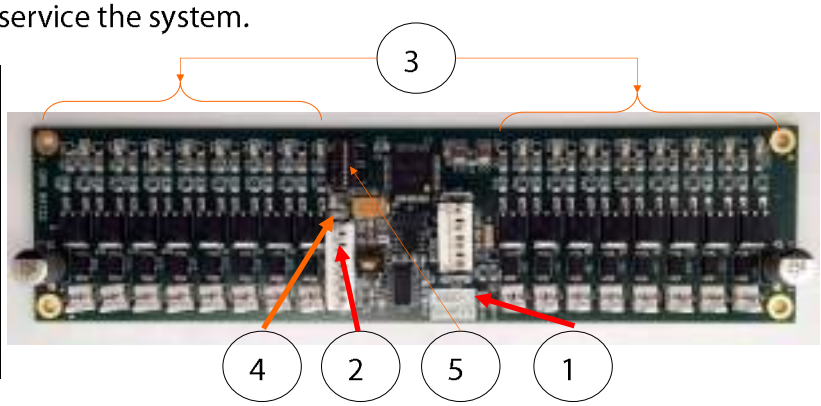
LED 3		
Mode	**Precedence**	**Meaning**
2 Flash Per Sec		Network Static IP with Connection
1 Flash Per Sec		Network Client with Connection
Solid		Standalone Server with Connection
Off		No Network Connection
Button 3		
Operation	Function	Requirement
Press	Announce IP Prompt	
Pressed for > 2 seconds (release)	Change network mode	
Hold for 8 seconds	Power off unit	
Press when off (to Start up)	Reboot	
Pressed for > 2 seconds	Volume Decrease	If Playing
Pressed for < 2 seconds	Go to Next Track	If Playing
Hold 1 and 3 on Power Up	Factory Reset	On Boot Up
Proc Light 3 then Light 1 then you can let go		

All LEDs		
Mode	**Precedence**	**Meaning**
Blink 70/30		Major Error (failed software patch?)
"Rapid" Flash (3 flashes a second on all)		Updating software
Rapid Flash (3 flashes a second Scrolling through each		Boot Up (Not Ready Yet)

QRS PNOmation Solenoid Driver Board (cat #: 84122)

The information below is provided for your convenience and varies depending on the version of driver board you have. The Solenoid driver boards are located under a cover and typically not seen. We recommend a certified QRS technician service the system.

Dip 5	1	2	3	4	5	6	7	8
Board 1	1	0	0	0	0	0	0	0
Board 2	0	1	0	0	0	0	0	0
Board 3	1	1	0	0	0	0	0	0
Board 4	0	0	1	0	0	0	0	0
Board 5	1	0	1	0	0	0	0	0



Smart Solenoid Driver Board LED Status (req ver .311) units shipped from QRS after 8/1/2016

1. Power Led	Solid Amber	The High Power Light on the power supply is on, PLx power light is green, Solenoids are ready to go
2. Logic LED	Solid Green No light 1 Blink Green	Control data line is connected and all is good Driver Board is bad or cable is out A solenoid is bypassed—run test
3. Solenoid Activity LED	Blinks either amber or green	When control signal is received
4. Programming Boot Up LED	No Lights – Something Wrong with Driver Board or No bootloader (must be programmed) Fast Blinking – Test Mode, Dip switch 0 position. Slow Blinking – Has bootloader but needs programmed Fast Blink number of times then stops to indicate board position	

QRS PNOmation Power Supply (cat #:75210)

The power supply is typically located under the piano on a grand, inside on an upright

Fuse: 7Amp - 250V

Power Toggle: Turns On and Off the power to the system—same result as pulling the plug.

Hi and Low Power Lights - Low means that the processor is receiving power, Hi means that there is power going to the solenoid driver boards and the PLx power light is solid green.

Some Recommended Apps

QRS Finder:
Locates and opens your QRSPNO App when it's on your network. Also enables Apple Watch Control.

Garage Band:
Used for Bluetooth MIDI setup. Also terrific for producing, creating, collaborating and sharing.

PianoMarvel:
The very best app for learning, teaching and practicing piano. When installed on your system will automatically launch from the learn button.

SuperScore:
Sheet music that follows you while you play Powerful.

Notion:
A terrific program to transcribe your performances into music notation.

Symphonix Evolution:
A nice program to transcribe your performances into music notation, record tracks and share.

Amazon Alexa:
When QRS Music's Skill Set is set up, all you have to do is "Ask PNO to Play"

Amazon Reverb:
When QRS Music's Skill Set is set up, all you have to do is "talk into your phone"

Amazon Echo or Dot: enables you to control the QRS PNO skill set

Enables watch control of your PNOmation 3 system

Setting Up Your Piano Marvel Account Requires an iPad, Mac or PC

1

Select “Practice” form the home screen.

Then Select “Learn”

If the PNO system is connected to an iPad or computer with internet access you will be rerouted to the App or Web Browser with a sign up screen.

2

Select “Create free account now”

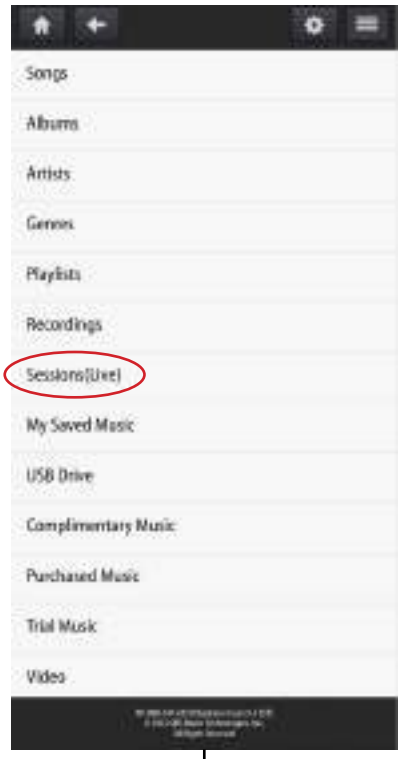
3

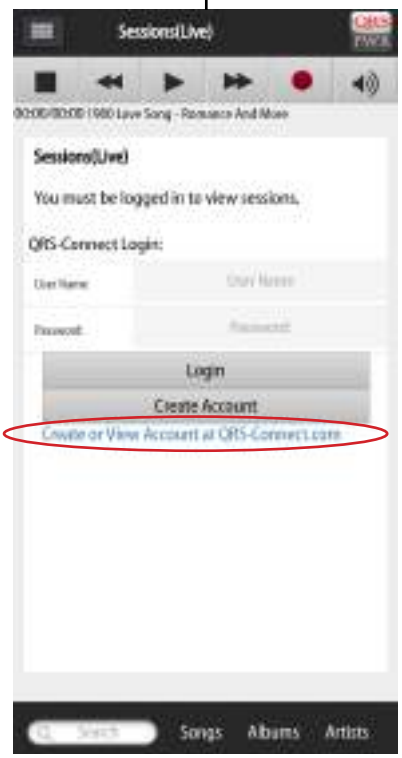
Fill out information requested. If you have a PNOscan account a gift card with a release code was included in your package. Insert that code for you 1 year of free lessons.

4

Enjoy

SIGNING UP FOR YOUR SESSIONS LIVE - QRS-CONNECT ACCOUNT





- Allows Live Performances to appear as a selection in your App
- Allows for lessons and connections to artists in your App
- Username is a name alias to use within the QRS-Connect Platform
- Password should be 10 Characters - Upper Case - Lower Case - Numbers - and Special Character.
- QRS uses Single Sign On for all of QRS Music. Using your email and password created above to log in from QRSMusic.com will give you access to your account data - purchases, cases, credits..
- QRS will be implementing a tip jar for quickly compensating a live artist.
- By going to QRS-Connect.Com you can set up performances, request tracks we do not have in our library, jump into learning...

Connect to PNO3 System In Stand Alone Mode

What you will need:

- A Wi-Fi Enabled Device = iPod / iPad / iPhone / Android Phone / Android Tablet / Desktop or Laptop Computer
- A Web Browser on your device = Apple Safari / Android Browser / Google Chrome
- If your using a tablet or smart phone you can download the optional QRSFinder App

How do you know you are in "Stand Alone Mode" any of the below

- The third PLx LED is green or,
- Using your IR remote and selecting "Shift" then "3" and the Voice Prompts will tell you or
- The third light on the Processor is a steady green or
- On your device you go to your devices "Settings" - "Wi-Fi" and you see QRSPNO####_2GEXT

Logging In:

- On your device go to "Settings" then "Wi-Fi"
- Select the network named "QRSPNO####"
- Then Either:
- Use the QRSFinder App or
- Enter 10.3.2.1 in your browsers address bar.

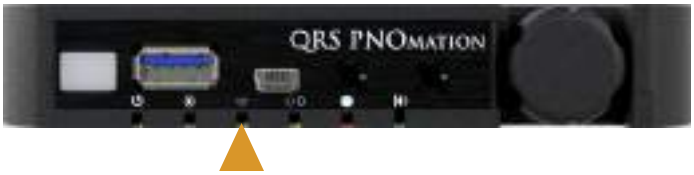
QRSFinder by QRS Music in the App Store and Play Store. Searches your network for PNOmation

PNOmation Intro screen slide show - Touch anywhere to see the menu structure

Connect to PNO3 System In Network Mode

What you will need:

- A Wi-Fi Enabled Device = iPod / iPad / iPhone / Android Phone / Android Tablet / Desktop or Laptop Computer
- A Web Browser on your device = Apple Safari / Android Browser / Google Chrome
- If your using a tablet or smart phone you can download the optional QRSFinder App



How do you know you are in "Network Mode" any of the below

- The third PLx LED is Amber or,
- Using your IR remote and select speak icon and the Voice Prompts will tell you your mode and the IP Address assigned to your PNOmation. The 6th light on the Processor is a Blinking amber while voice prompt is talking.
- Or on your device, go to your devices "Settings" - "Wi-Fi" and you see "yournetworkname"

Logging In:

- On your device go to "Settings" then "Wi-Fi"
- Select your home's network
- Then Either:
- Use the QRSFinder App or
- Enter the IP Address announced by the voice prompts into your web browser.

QRSFinder by QRS Music in the App Store and Play Store. Searches your network for PNOmation

Rebooting the piano will announce the IP address, if you missed it - touch the button on the PLx and it will announce it again. Push it again and your piano willl play the last known playlist.

PNOmation Intro screen slide show - Touch anywhere to see the menu structure

QRS
QRS
PNO