

# **Pianocorder Wireless Kit**

## **Installation Guide and User Manual**

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Last updated 09/04/2008

# Introduction

The Pianocorder Wireless Kit enables you to modernize your 1970s Marantz Pianocorder Reproducing System by replacing the original cassette deck with a 900 MHz wireless link, permitting you to control the player system from your personal computer using a customized version of WINAMP.

Installation of this kit is designed to be quick and easy, requiring no permanent modifications to the Pianocorder system and no soldering. The cassette deck can easily be reinstalled at any time.

Using the Pianocorder Control Plug-in for WINAMP together with the Pianocorder Wireless Kit, you can play MIDI files, Yamaha ESEQ files, .KAR karaoke files and .PC files (files of native Pianocorder music captured from original Superscope/Marantz cassettes). WINAMP's sophisticated playlist management makes it easy to queue up hours of music to your Pianocorder, mixing any of the above file types seamlessly in addition to any of the other file types WINAMP supports, such as MP3 and WAV audio files.

The plug-in's conversion algorithms will provide excellent playback on the Pianocorder of most MIDI files, particularly files derived from live piano performances or reproducing piano rolls. The conversion algorithms have been refined over several years to provide optimal results. Free software updates will be available to you as further improvements are made.

The Pianocorder plug-in also features a thermal protection feature to help prevent damage to note and pedal solenoids from occurring as the result of malformed music files or extended playback durations.

In addition, the plug-in allows you to adjust the tempo, volume and transposition of the music while the piano is playing and provides a scrolling piano roll display and emulation of the Superscan Display Console (the LED sign sold as an accessory to the Pianocorder for displaying lyrics).

Finally, by integrating Pianocorder support into the popular WINAMP media player, the Pianocorder plug-in provides you with a flexible user interface and all the benefits of WINAMP's development community, including a large assortment of user interface customizations ("skins") and third-party extensions (visit <http://www.winamp.com> for details.)

# System Requirements

To use the wireless kit and Pianocorder Control Plug-in for WINAMP, you will need a desktop or laptop computer running Windows 98SE, Windows ME, Windows 2000, Windows XP or Windows Vista.

In addition to one of the above versions of Windows, your computer must be equipped with:

- 128 MB of memory
- 500 MHz processor or faster
- One available USB port

# Contents of the Kit

In the wireless kit box, you will find the following components:

- (1) Transmitter unit
- (1) Receiver unit (with grey cable and 12-pin connector)
- (1) Remote control
- (1) AC adapter for transmitter unit
- (1) Power supply dongle (plastic plug with black and white wire loops)
- (1) USB cable
- (1) Audio cable (mini headphone plug to stereo RCA plugs)
- (8) Cable ties
- (1) Industrial-strength Velcro pad set
- (1) User manual

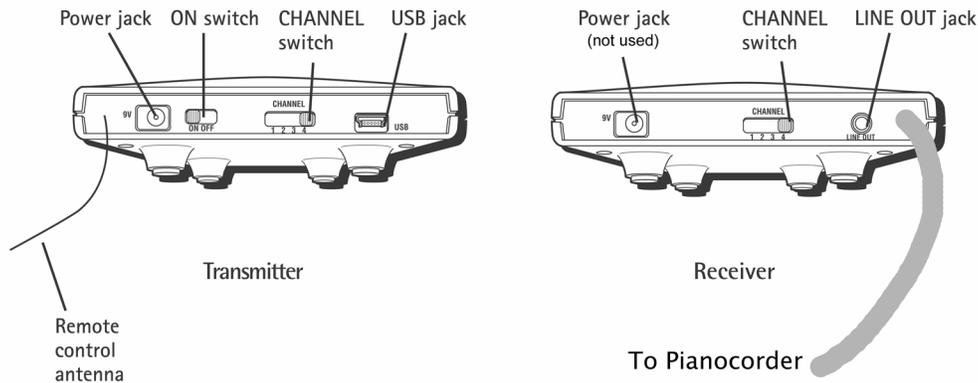
Please save the packaging in case you need to return the kit for any reason.



**WARNING:** Do not allow the rubber feet of the transmitter to make direct contact with finished surfaces of fine wooden furniture (including your piano). Rubber feet such as these can permanently mar the finish as the result of a chemical process known as “plasticizer migration”. If you need to place the transmitter on a finished wooden surface, peel off the existing rubber pads and replace them with felt pads, available from any housewares store.

# The Wireless Transmitter and Receiver

The wireless transmitter and receiver are based on a modified version of RCA's RD900W Lyra Wireless system, a product originally designed for transmitting digital music files from a personal computer to a home stereo system. A number of unique features (such as the wireless remote) make this particular system an ideal choice for controlling the Pianocorder.



Notice that the transmitter and receiver modules each have a four-position channel switch on the back. The switches on both modules must be set to the same channel number. Later in this manual, a procedure is provided for selecting the optimal channel.

Also notice that the back of the receiver module includes a power jack for an external AC adapter. This jack is not used. Instead, the receiver draws power directly from the Pianocorder.

The receiver module also provides a **LINE OUT** jack, making it possible to monitor the Pianocorder control signal and to play a MIDI or acoustic accompaniment track in synchronization with the piano.

The wireless transmitter and receiver are each equipped with a flip-up antenna. The transmitter antenna usually works best in a vertical orientation (as in the leftmost picture below). The receiver antenna often works fine in its closed position (aligned with the case).

If you experience reception problems, you should experiment with various antenna orientations for both the transmitter and receiver.



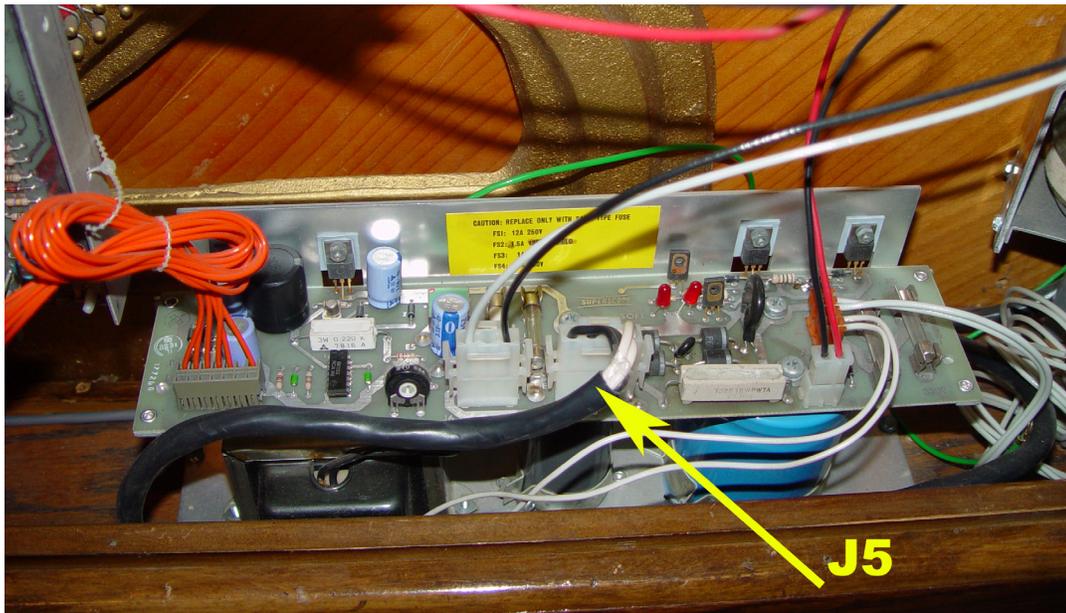
The top of the receiver contains a Pianissimo dial (left), a Fortissimo dial (right), and a red LED indicator that will glow whenever the Pianocorder is experiencing a “loss of sync” condition (i.e. the Pianocorder is not receiving a valid control stream over the wireless link).

# Installation

Please follow the steps in the following sections to set up your Pianocorder Wireless Kit.

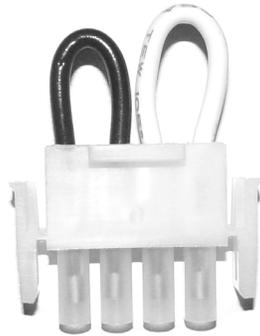
## Removing the Pianocorder Cassette Deck

1. **Unplug the Pianocorder, then wait 60 seconds before proceeding further.** The Pianocorder circuitry exposes dangerous voltages that present an electrical shock hazard. To ensure your safety, **the Pianocorder must be completely unplugged from the wall outlet** while you work on it (not merely switched off).
2. With the Pianocorder unplugged, turn the power switch of the Pianocorder (near the cassette deck) to the **on** position. Check that the **POWER** indicator on the front of the cassette deck does **not** light up. (If it does, go back to step 1 and ensure the Pianocorder truly is unplugged.)
3. Remove the lower cover of the piano (upright pianos) or remove any protective covers over the Pianocorder circuitry (grand pianos).
4. Locate the Pianocorder power supply:



Unplug the white connector labeled **J5**; the one with **four** wires protruding from the top. To unplug the connector, squeeze the two “ears” of the top half of the connector, releasing the bottom latches, and gently pull upwards on the plug with a slight side-to-side rocking motion. Be sure to pull only on the plug, not the wires. If the plug will not release, use a small flat blade screwdriver to gently pry the latches away from the socket as you pull upwards on the plug.

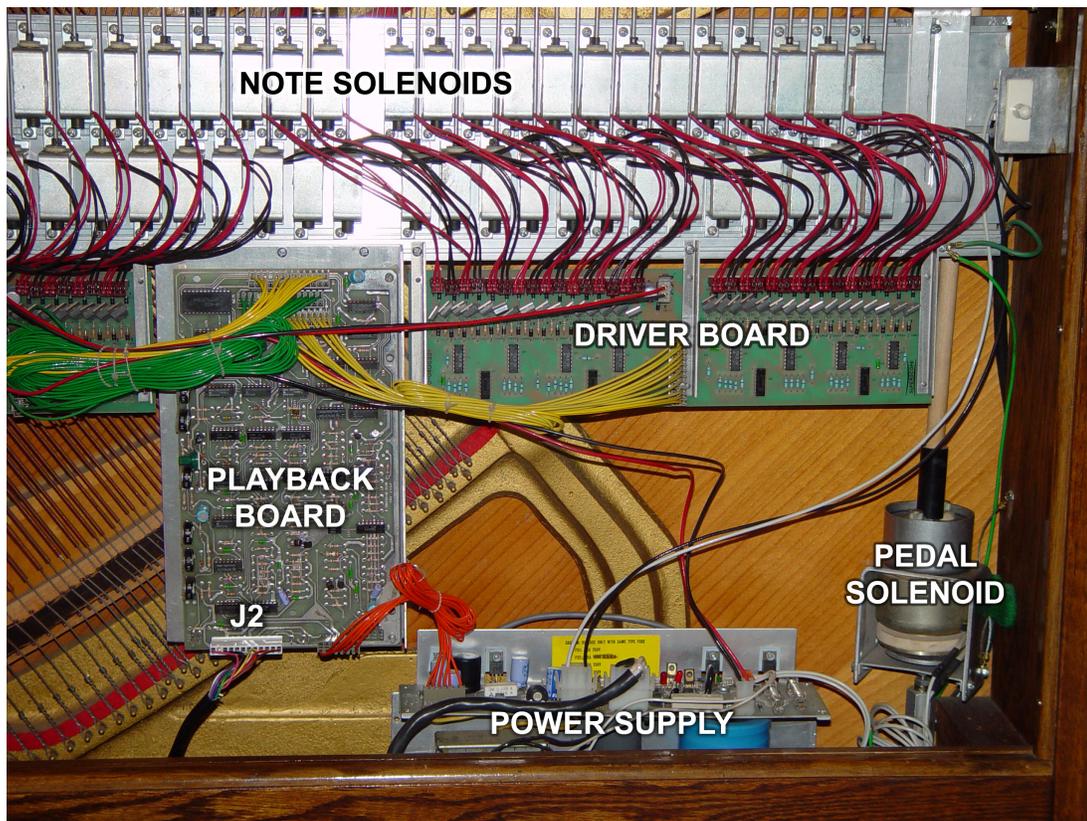
5. In your kit, locate the power supply dongle:



6. Notice that the two end pins have a flat side. Align the flat side with the corresponding flat side within the socket **J5** of the power supply, and carefully push the dongle into the socket until it is fully seated and the “ears” pop into place as shown:



7. Locate the Pianocorder playback board, referring to the photo on the following page. It is the largest circuit board in the system, measuring approximately 5-3/4 x 10 inches. (If your Pianocorder is equipped with the recording feature, you will see a smaller circuit board “piggybacked” on top of the playback board.)



8. Locate the 12-pin connector labeled **J2** at the bottom edge of the playback board (see photo). It usually has multi-colored wires. Carefully unplug this connector by rocking the plastic housing *very slightly* side to side while applying a gentle force straight away from the board. This plug is often rather difficult to remove. While pulling on the plug, be careful not to pull on its wires, and use the fingers of your other hand to support the circuit board and prevent it from flexing or pulling off its mounts. **Do not use any sharp objects to pry the connector free, as they could damage the circuit board.** When the connector is finally off, inspect the pins protruding from the board. If any are bent, gently straighten them using needle nose pliers.

If you have a Superscan Display Console attached to your Pianocorder, you will find the 12-pin cable plugged into a small adapter board which is, in turn, plugged into the playback board. Leave the small circuit board in place and disconnect only the 12-pin connector. Use extra caution when unplugging the connector so as not to damage either of the circuit boards.

9. Isolate the two thick, black cables attached to the two plugs you disconnected, and carefully extract them from the piano so that they hang freely from the cassette deck outside the piano. If you must remove any cable ties shared with other wiring, take care not to damage the wiring while cutting them, and replace them later using some of the cable ties included in the kit.
10. Swing the cassette deck into a position that exposes the four screws holding the mounting bracket to the underside of the keybed. Remove the screws and separate the cassette deck from the piano. Place the screws in a small envelope, and store the folded envelope inside the cassette compartment of the cassette deck for safekeeping.

## Installing the Wireless Receiver

Locate the wireless receiver module (the unit with the grey cable and 12-pin connector) and consider where you would like to place it. If aesthetic considerations permit it, you may wish to install the receiver outside of the piano, as doing so will permit you to easily see when the Pianocorder is turned on and permit easy adjustment of the receiver's Pianissimo and Fortissimo dials. Mounting the receiver externally will also extend the wireless range slightly. The receiver does not need to be in any particular orientation to function properly.

If you would prefer the cleaner look of having no visible electronics external to the piano, you may mount the receiver inside the piano instead. Access to the Pianissimo and Fortissimo controls is not a concern, since these dials usually will not require further adjustment once the system is calibrated (the Pianocorder's volume is adjustable remotely from within the control software). However, keep in mind that if the receiver is completely hidden, it will not be easy to tell whether or not the Pianocorder is turned on.

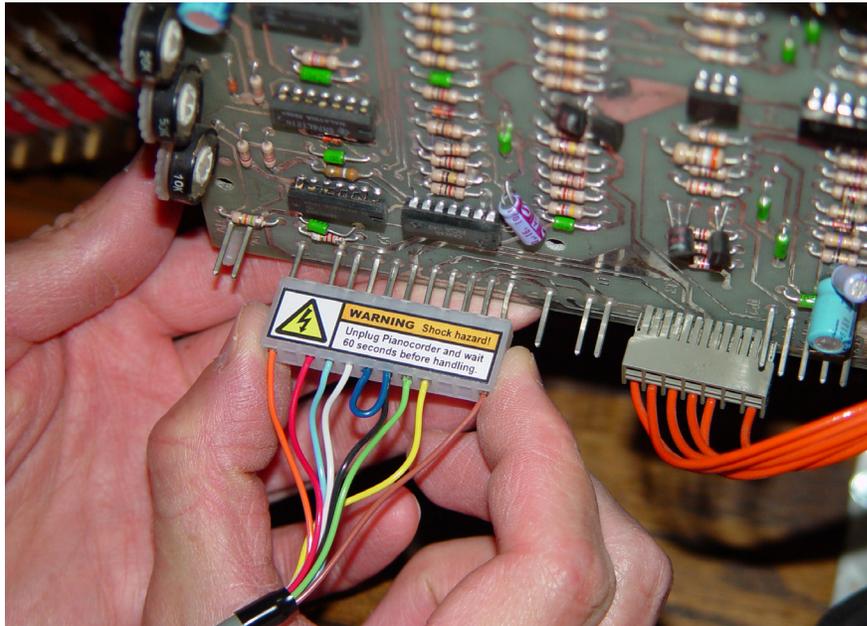
Please follow these guidelines if you choose to mount the receiver internally:

- **On a grand piano**, the receiver should be mounted to the side or bottom of one of the beams beneath the soundboard, such that neither the case nor the grey cable makes contact with the soundboard.
- **On an upright piano**, it is usually best to mount the receiver against the inside of the right side of the piano case, or in some cases, on the harp near the bottom of the case. Be sure to choose a location that will not interfere with your piano technician's access to the action and tuning pins.
- **In an external Vorsetzer Pianocorder system**, you should mount the receiver such that it is accessible through the swing-out door where the cassette deck was located.
- Industrial-strength Velcro pads are provided for convenience in mounting and ease of removal. If you do not wish to use Velcro, please consider placing the receiver on top of the piano or mount the receiver to a suitable surface within the piano using non-metallic straps around its shorter dimension. **Do not drill holes into the receiver case or attempt to open the receiver. Damage or electric shock could result.**

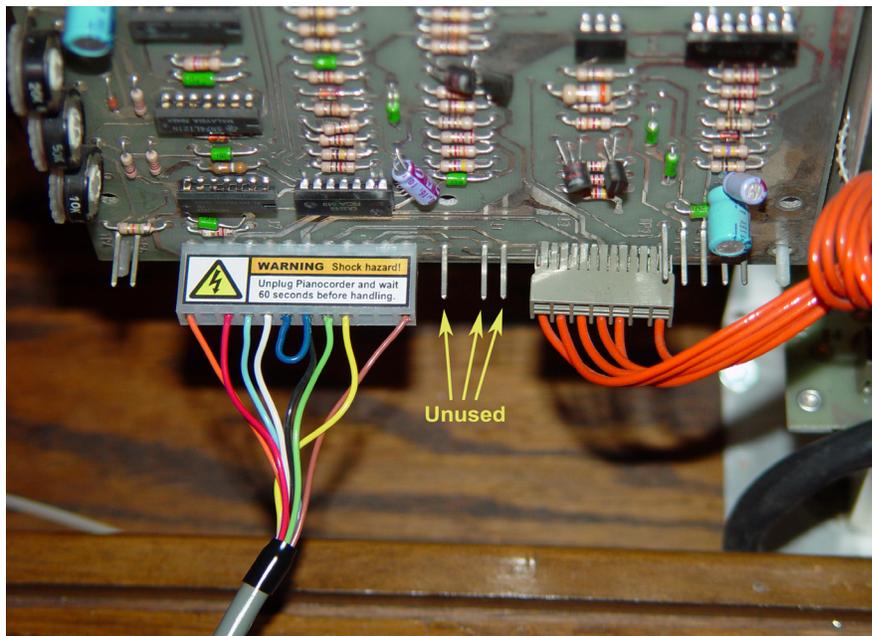
## Receiver Installation Steps

1. Place the receiver in the approximate location you have chosen and route the grey cable and 12-pin connector to the playback board. **Do not mount the receiver permanently yet.**
2. Examine the holes of the 12-pin connector and notice that it is keyed (one hole has a plug in it). Align the plugged hole with the missing pin of connector **J2** of the playback board, as shown in the photo on the following page. The **orange** wire should be closest to the edge of the board, and the **brown** wire should be closest to the middle of the board.

Applying force only to the plastic plug (not the wires), push the connector into place until it is fully seated. Use the fingers of your other hand to support the playback board directly behind the pins to prevent the board from flexing.



When the connector is in place, it should look like this:



**WARNING:** Make absolutely certain that the connector is installed as shown in the above photo. If the connector is offset by a pin or more, the wireless receiver and Pianocorder circuitry could be damaged or destroyed.

3. Place the receiver a safe distance from all other Pianocorder circuitry, then plug the Pianocorder into a wall outlet and turn it on by pulling outwards on the safety interlock switch plunger until it clicks into position:



The wireless receiver's **POWER** indicator will illuminate, showing that the Pianocorder and receiver are both powered up. Keep in mind that dangerous voltages are now present on all of the Pianocorder circuitry.



**WARNING:** Electric shock hazard! Never touch any components except the receiver while the Pianocorder is powered on. Be certain to unplug the Pianocorder if you must leave it opened up and unattended, especially if you have small children or pets.

4. Locate the channel selection switch on the back of the receiver.
5. Set the switch to each of its four positions. In each position, wait at least **fifteen seconds** for the receiver to stabilize, then observe the signal strength meter. If any of the four signal strength lights come on, this indicates that there is already some nearby 900 MHz equipment using this channel, so you should select a different channel. Leave the switch set at a channel on which all of the signal strength lights are OFF. (A single flickering light is OK.)
  - It is a good idea to make sure any 900 MHz cordless phones or baby monitors in your home are powered up and **in use** during this procedure.
  - According to RCA, channel 4 is the one least likely to clash with existing 900 MHz equipment.
6. Set the transmitter's channel switch to the same channel you selected on the receiver.

7. Set the Pianissimo and Fortissimo dials on top of the wireless receiver as shown below.



These are default settings that should produce a reasonable range of expression on most Pianocorder systems. A procedure to optimize the Pianissimo and Fortissimo settings is provided later in this manual.

8. Push the Pianocorder's safety interlock switch plunger inwards until the system turns off (the receiver lights will go out). **Unplug the Pianocorder from the wall outlet and wait 60 seconds before proceeding.**
9. If installing the receiver internally, mount it in place using the supplied Velcro pads. Apply the loop side to the back of the receiver, running front to back, and the hook side to the piano.
10. Coil any unused length of the grey cable into round loops about 6" in diameter, and use two of the supplied cable ties to secure them. Do not make any sharp bends or kinks in the grey cable.
11. Use the remaining cable ties to arrange the grey cable neatly within the piano. Be sure to keep the cable several inches from any moving parts, such as the pedal trapwork and solenoids. **Do not permit the receiver or cable to contact the strings or soundboard.**
12. Replace any protective covers you removed, and be sure they fully engage the Pianocorder's safety interlock switch.

## Removing the Recording Components (Optional)

The Pianocorder Wireless Kit does not support the recording feature of the Pianocorder, which is rarely used and was never a strongpoint of the system. Therefore, you might consider removing the recording-related components from the piano as part of installing the wireless kit. (However, if you choose to leave the recording system in place, it will not interfere with the wireless kit in any way.)

The recording feature may or may not be installed in your piano. If it is present, you will find a smaller circuit board (the “record board”) piggybacked to the top of the playback board. To remove the recording feature, carefully remove the record board from the playback board, and remove from the piano all components connected to this smaller board (one or two pedal switches plus an array of wire spring switches beneath the keyboard). To access the wire spring switches, it is necessary to remove the action from the piano. If you are not familiar with how to do this, leave the switches in place and seek assistance from your piano technician the next time you have your piano serviced.

The recording components contain lead, so please dispose of them as hazardous waste and wash your hands after handling them.

## Sample Installation

The photo below shows the wireless receiver installed in a Tadashi upright. In this piano, there was tight clearance on the right side of the case due to the placement of the playback board, and the left side of the case was occupied by the pedal solenoids and trapwork. Therefore, the easiest solution was to velcro the receiver to a flat surface of the harp frame.

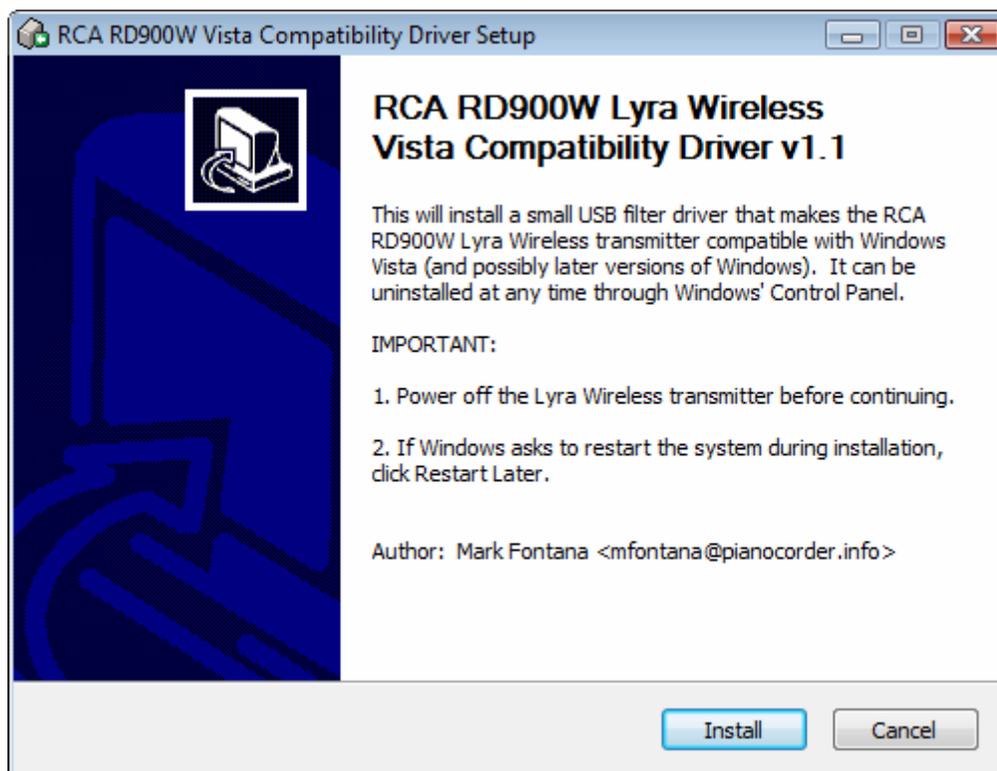


# Installing the Windows Vista Compatibility Driver

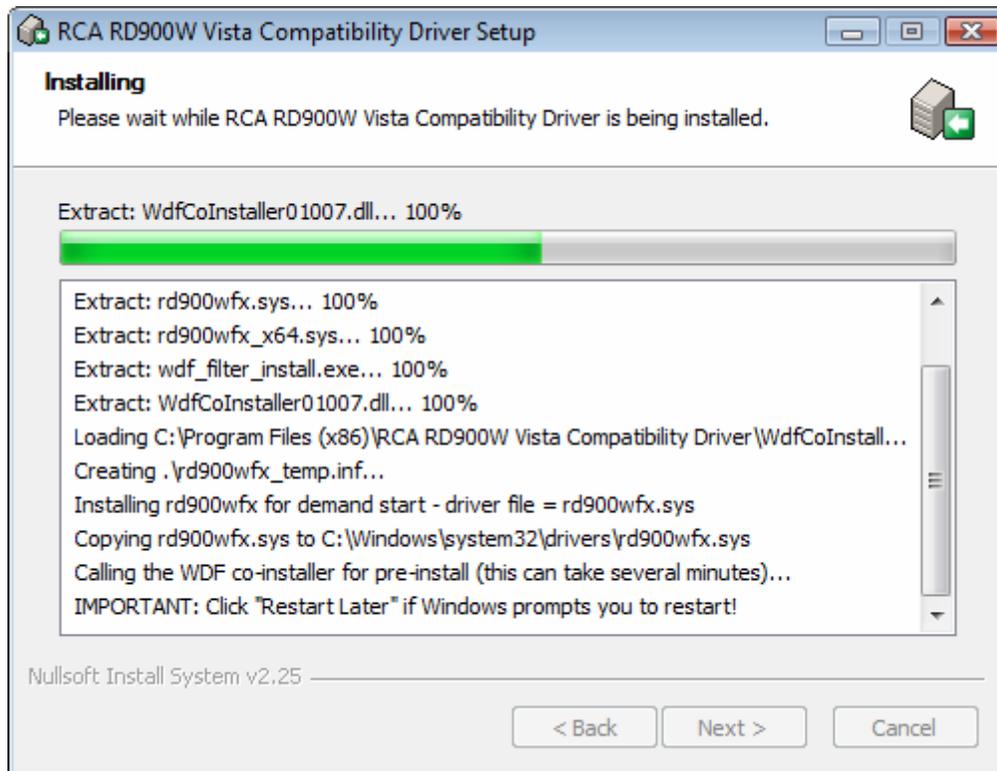
If you are running Windows Vista or a later version of Windows, you must perform the following procedure before connecting the wireless transmitter to your computer. This will eliminate a known incompatibility between the transmitter hardware and newer versions of Windows. (If you are using an earlier version of Windows, such as Windows 98, ME, 2000 or XP, skip ahead to the next section.)

To install the fix:

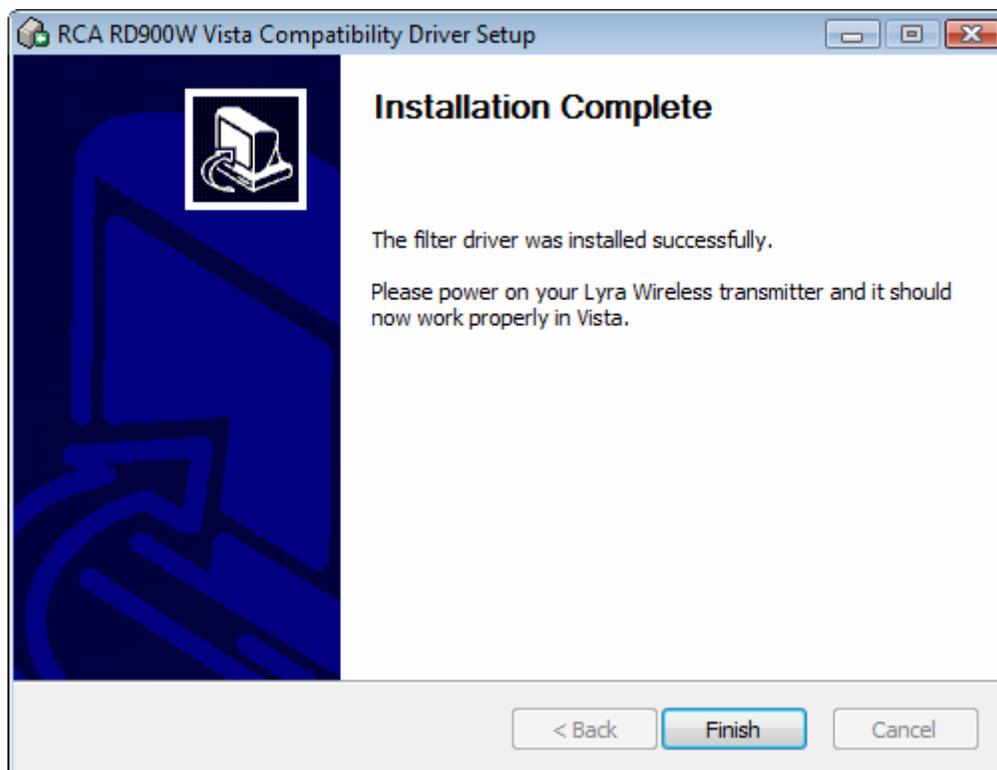
1. Go to [http://www.pianocorder.info/wireless\\_kit/](http://www.pianocorder.info/wireless_kit/)
2. Under the **Download** section, download the file **Windows Vista Compatibility Driver**, which will save to your hard drive as **rd900w\_vista\_fix\_v1.1\_setup.exe**. (The exact version number may differ.)
3. Double-click on **rd900w\_vista\_fix\_v1.1\_setup.exe**
4. The setup wizard will begin:



Click **Install**. The installation will begin. It may take several minutes to complete. Do not disturb your computer while the installation is in progress.

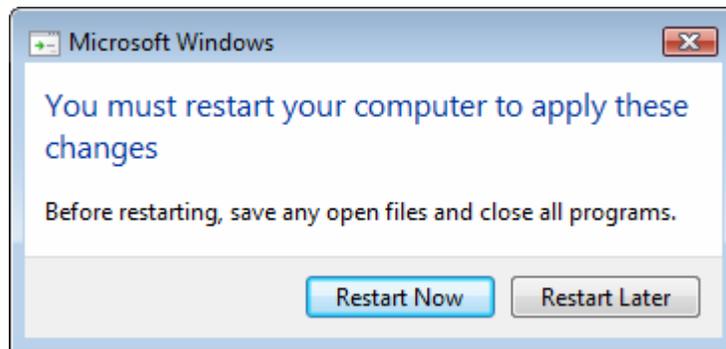


When the installation has completed, the following message will appear:

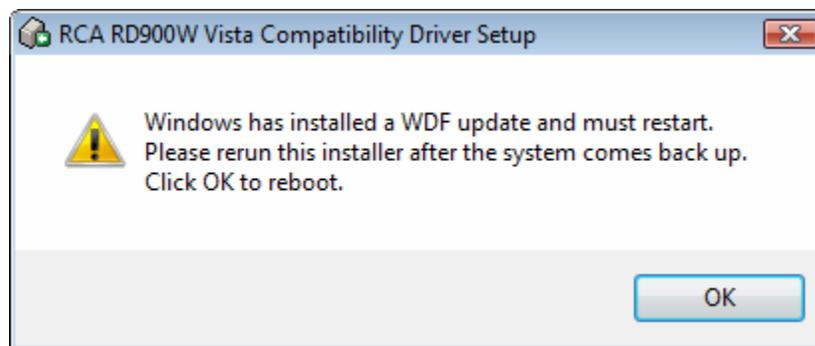


Click **Finish** to exit the installer.

**IMPORTANT:** Depending on which Windows updates are already present on your Vista system, you might not immediately see the **Installation Complete** message as above. Windows may instead prompt you to reboot with a message that looks like this:



If this happens, click **Restart Later**. The following message will appear:



Click **OK** to reboot. You will need to re-run **rd900w\_vista\_fix\_v1.1\_setup.exe** after rebooting.

# Installing the Wireless Transmitter

1. Bring the wireless transmitter to the computer you plan to use to control the piano. Go to the Windows desktop and exit out of any open applications.
2. Locate the white USB cable included in your kit and plug the small end into the socket on the back of the transmitter.
3. Make sure the power switch on the back of the transmitter is in the OFF position.
4. Locate the AC adapter included in your kit and plug it into the jack on the back of the transmitter. Then plug the AC adapter into a wall outlet.
5. Plug the other end of the USB cable into an available USB port on your computer.
6. Turn the transmitter's power switch ON.
7. Windows will pop up some notifications as it automatically identifies and configures itself to use the transmitter. Do not disturb this process. You will see Windows pop up **Found New Hardware** messages identifying a "USB Composite Device", a "USB Audio Device" (or "Lyra Wireless 2.0.00" under Windows XP and Vista) and a "Human Input Device".

In some cases, Windows will display an interactive **Found New Hardware Wizard** window at this stage, asking you to specify driver locations. When prompted, instruct Windows to locate the driver files automatically.

8. After Windows has finished installing support for the transmitter, you must reboot your computer before continuing if you are running Windows 98 or Windows ME. It is not necessary to reboot if you are running Windows 2000, XP, or Vista.

## Checking the Signal Strength

Now that the transmitter is connected to the computer and turned on, turn on the Pianocorder. The wireless receiver's **POWER** indicator should come on. Check the receiver's signal strength meter. Ideally, all four lights will be on, indicating the strongest possible signal level. If fewer than three lights are on, try some of the following tips to improve reception:

- Move the transmitter closer to the receiver (maximum recommended range: 100 feet)
- Raise the transmitter as high as possible above the floor
- Adjust the antenna orientations of both the transmitter and receiver
- Adjust the physical orientation of the transmitter and receiver modules
- Switch both the transmitter and receiver to a different channel

**Note:** The transmitter module transmits a radio signal continuously when turned on, even when the Pianocorder is not being played. However, the transmitter consumes only a small amount of power, and for convenience, it is recommended that you leave the transmitter's power switch in the **ON** position at all times. Continuously occupying the radio frequency will also help prevent your neighbors from installing similar equipment on the same frequency.

## Installing the WINAMP Control Software

Please carefully follow the steps below to set up the Pianocorder Control Plug-in for WINAMP.

### 1. Download the Software

In order to ensure that the latest software is always available to you, the control software is not distributed on physical media with the Pianocorder Wireless Kit. Instead, the software is provided as a small download over the Internet.

If you haven't already, download **WINAMP 3.0D**, the **Pianocorder Control Plug-in for WINAMP**, and the **Utility Files** package from the web site where you obtained this manual:

[http://www.pianocorder.info/winamp\\_plugin/](http://www.pianocorder.info/winamp_plugin/)

Go to the **Download** section of the page and retrieve each of the files to a known location on your computer (such as the Desktop) by right-clicking on the link for each file and selecting "Save Target As..." or "Save Link As".

You will need these files on hand to complete the instructions on the following pages.

## 2. Install WINAMP 3.0D

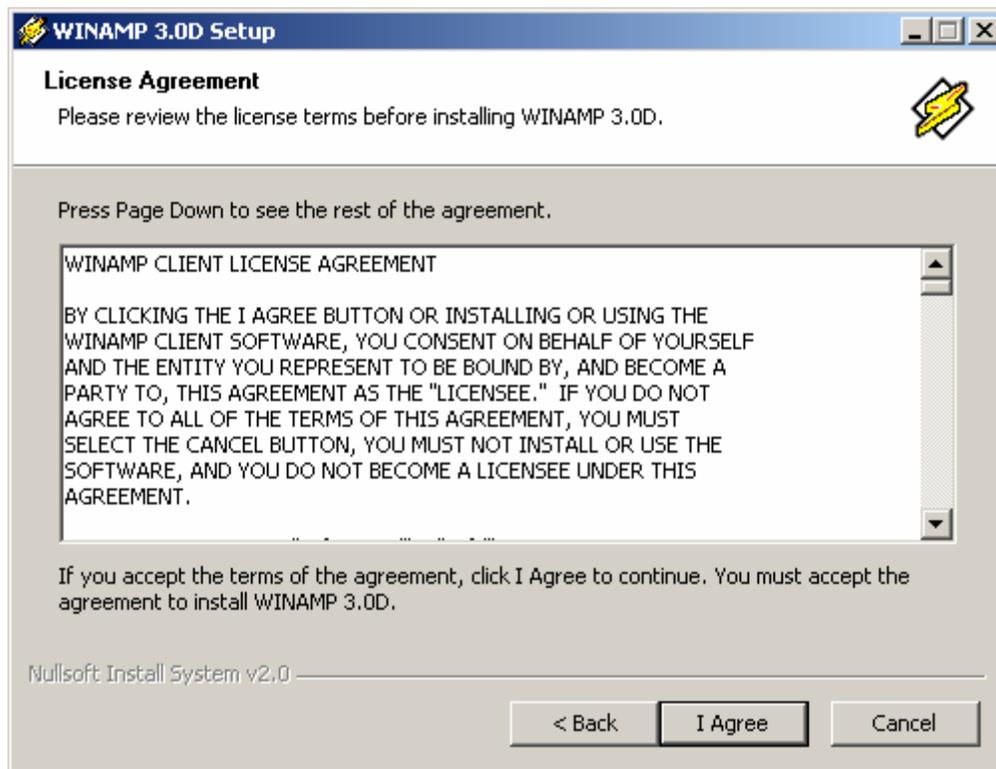
The next step in setting up your computer for Pianocorder control is to install WINAMP 3. **You must use the version of WINAMP distributed with the Pianocorder plug-in.** It is a slightly-customized version of WINAMP 3.0D. (Note that WINAMP 3 is no longer the current version distributed at <http://www.winamp.com>)

Even if you already have version 3.0D of WINAMP installed, you must uninstall your existing version and install the distribution of WINAMP supplied with the Pianocorder plug-in, as this distribution comes pre-configured for use with the Pianocorder. (To uninstall a previous installation, use the *Add/Remove Programs* tool in Windows' Control Panel.)

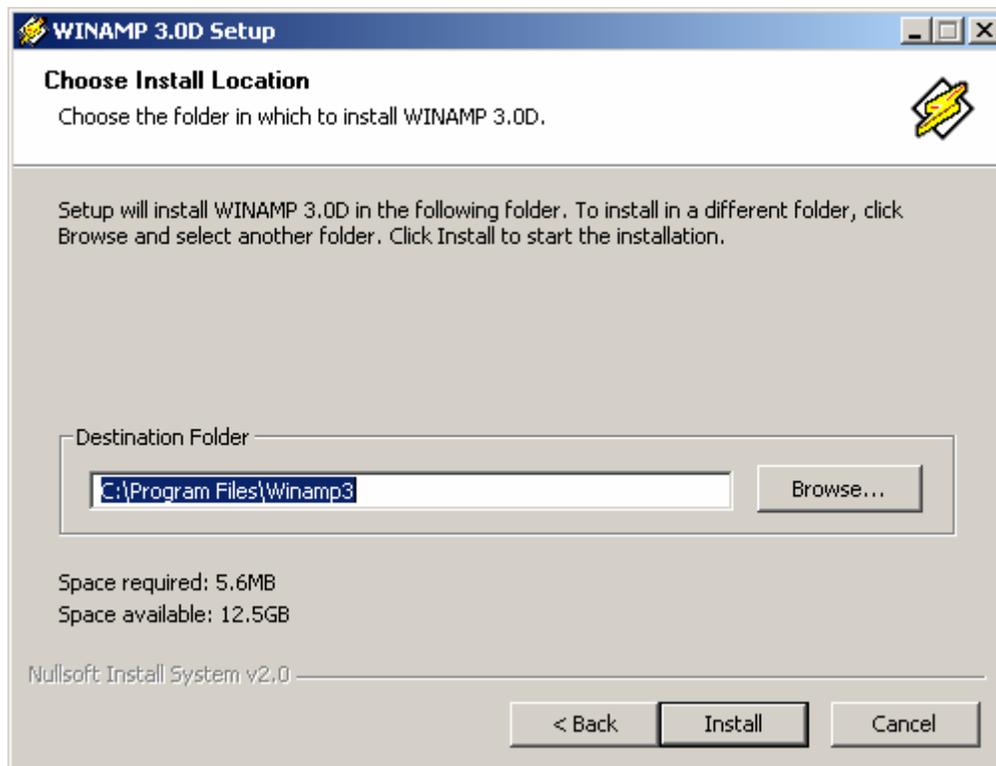
To install WINAMP, close all open applications and then double-click on **winamp\_3.0D\_setup.exe**. Follow the prompts as shown below to complete the installation.



Click **Next** to continue.



Click **I Agree** to accept the license agreement.



Click **Install** to accept the default installation location.



Click **Finish**.



**Important:** Do not start WINAMP at this point. You must finish installing the Pianocorder control plug-in first. Otherwise, WINAMP will not be configured correctly.

### 3. Install the Pianocorder Control Plug-in

Locate the folder to which you downloaded the Pianocorder plug-in, and then double-click on **wa3\_pianocorder\_v1.23\_setup.exe**. (The exact version number in the filename may differ.)

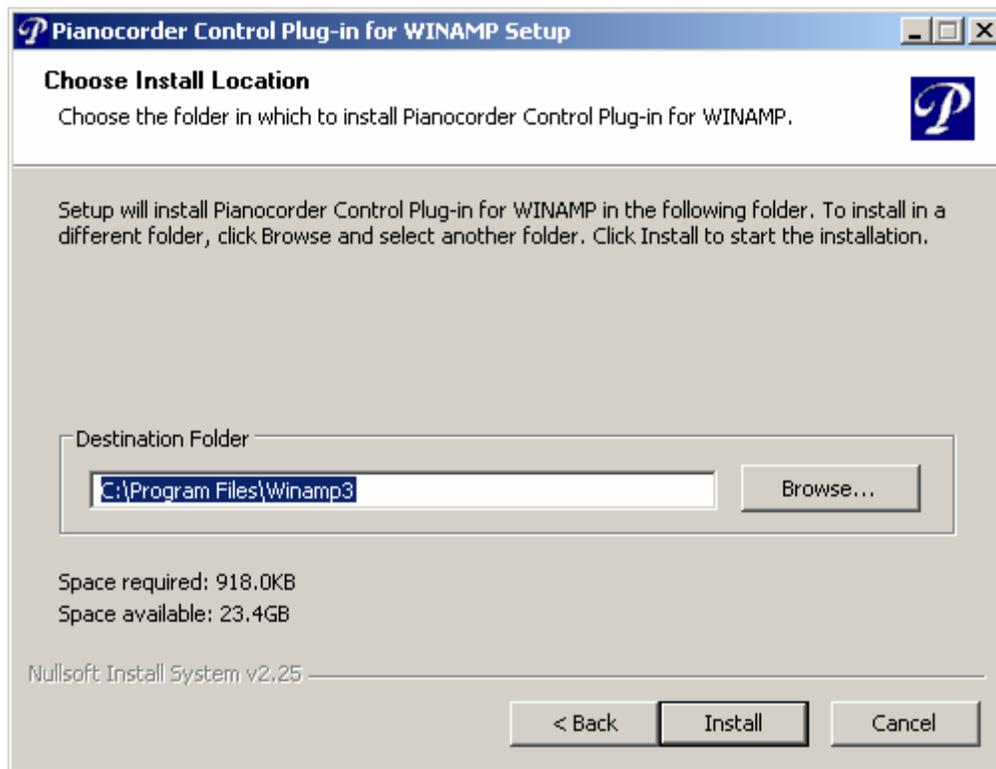
Follow the prompts as shown on the following pages to complete the installation.



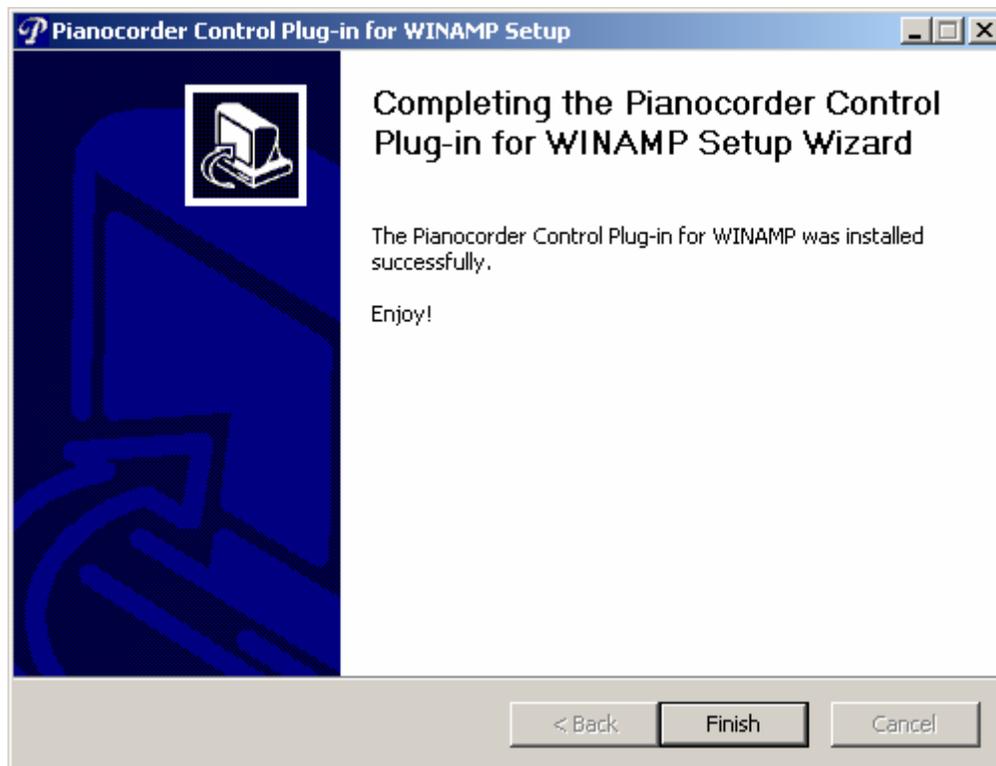
Click **Next** to continue.



Read the license agreement and click **I Agree** to continue.



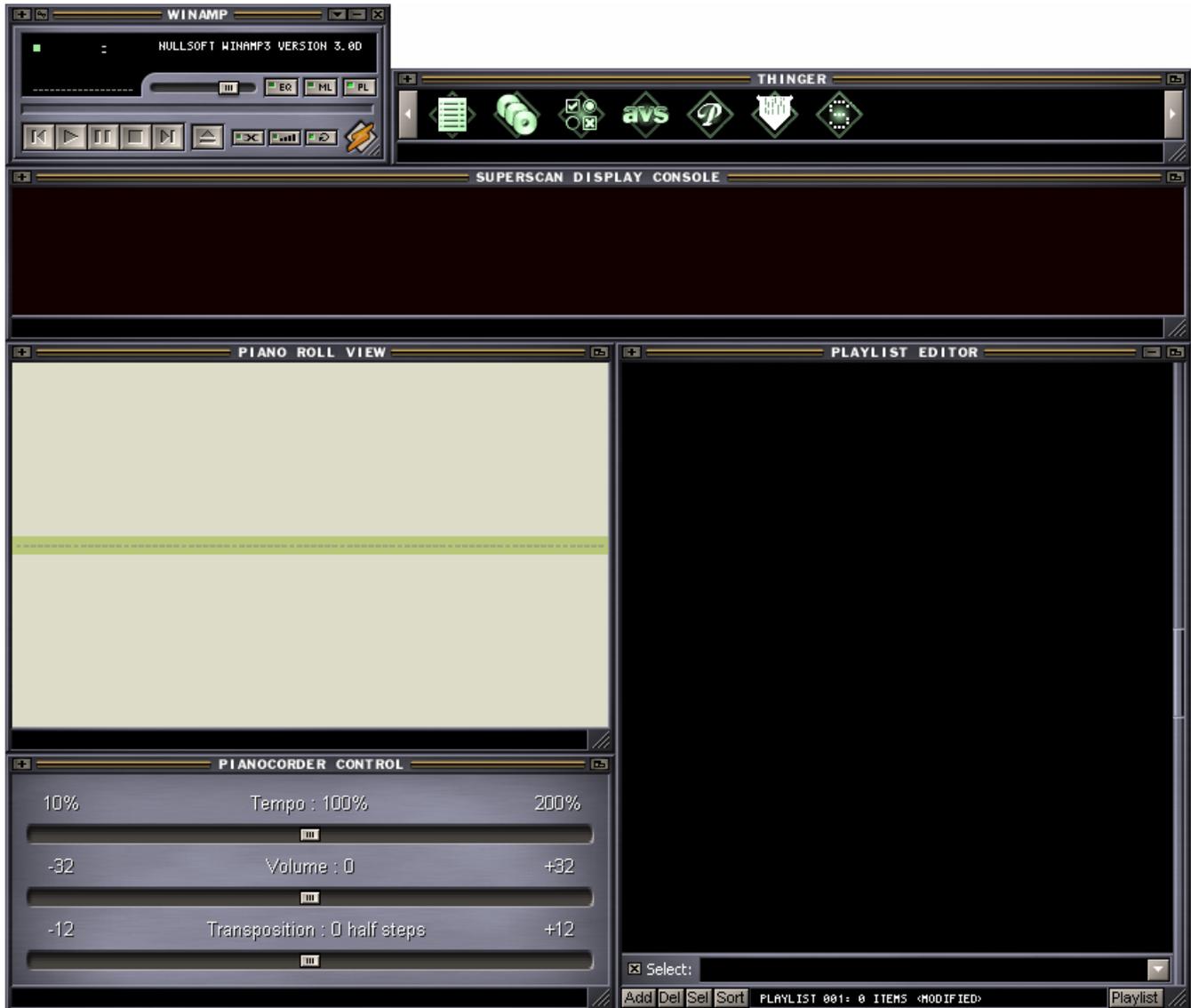
The installer will automatically locate the location where you installed WINAMP. It should not be necessary to change the location in this step. Click **Install**.



Click **Finish**.

# Introduction to the WINAMP 3.0 User Interface

Open WINAMP by clicking on the  icon in your taskbar or the entry for WINAMP 3 in the Windows Start menu. WINAMP's default layout will appear.



This display actually consists of six separate windows that are attached together in a group. The window in the top left (labeled **WINAMP**) is the main window. You can move all six windows around your desktop as a group by dragging the main window's titlebar (or by holding down **ALT** and dragging any sub-window's titlebar).

The six windows can be repositioned and resized independently to form whatever screen layout you prefer. You can move the windows individually by dragging their titlebars. You can also resize them using the **///** resizing handle in the lower right corner of each window.

Three of these six windows are custom windows added to WINAMP by the Pianocorder plug-in.

The **Pianocorder Control** window contains sliders for adjusting the tempo, volume, and transposition of songs during playback (a brief delay before changes take effect is normal). The final settings of the tempo and transposition controls will be saved for each individual song and automatically restored when the same song is played again. These settings are stored only within WINAMP; the original music files are not modified. (Note: After setting the slider positions for particular songs, do not relocate the song files on disk or else WINAMP will no longer associate them with your preferred settings).



The **Superscan Display Console** window emulates the expensive scrolling LED matrix message sign sold as an accessory to the Pianocorder for displaying lyrics encoded into some tapes (those in the Sing-along Series, Nickelodeon Series, Special Occasion Series, and a few of the holiday tapes).



The Superscan Display Console supports a variety of text effects, as well as simple graphics and animation. You'll find that resizing the Superscan Display Console window to the full width of your screen enhances the impact of these effects and makes the display more legible from a distance.

The Pianocorder plug-in software is able to utilize the Superscan display in a variety of ways:

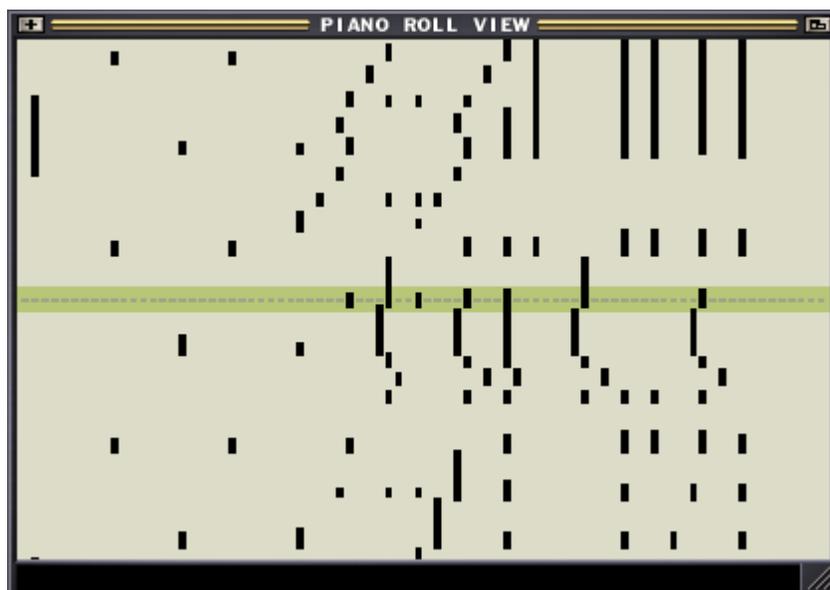
1. When playing songs from original Pianocorder tapes with embedded lyric data, the Superscan will display the lyrics exactly as encoded on the tapes.
2. When playing MIDI files or KAR (karaoke MIDI) files containing embedded lyrics, the Superscan will display the lyrics encoded into the files.
3. When playing MIDI files or songs from Pianocorder tapes in which no lyrics are present, the plug-in will dynamically generate text and graphics to display on the Superscan, announcing the song title, elapsed time, etc.

An actual Superscan Display Console is nearly 3 feet wide, 7 inches high and weighs about 40 pounds. It is designed to be placed on top of the piano for sing-alongs in public settings.

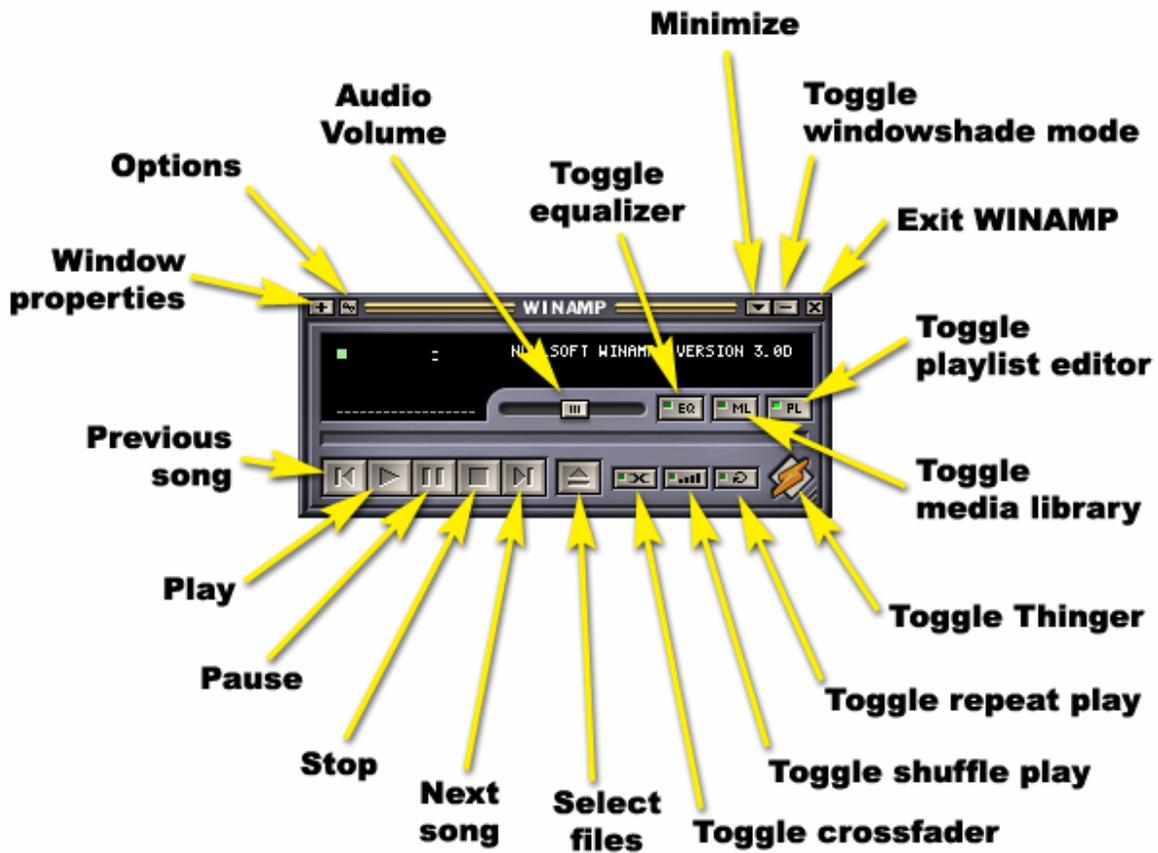


If you connect a real Superscan Display Console to your piano, it will be fully supported by the WINAMP Pianocorder control plug-in. Text and graphics will display on the physical sign exactly as in the emulated window onscreen.

The **Piano Roll View** window simulates the scrolling paper roll of an old-fashioned pneumatic player piano. The “holes” in the “paper” are an exact representation of the digital control data being sent to the Pianocorder. The synchronization between the piano and this display can be adjusted using a procedure described later in this manual.



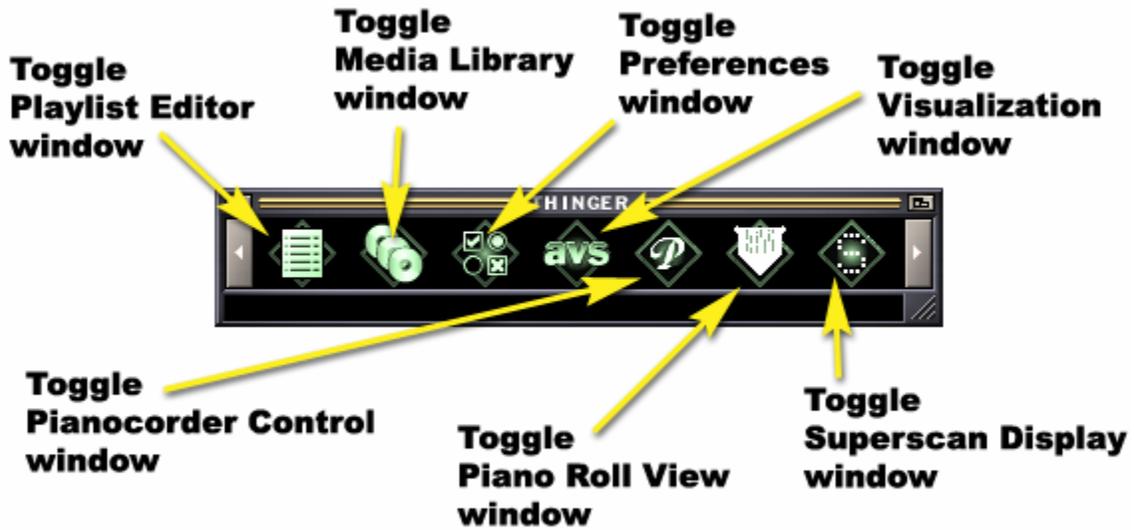
The following illustration shows the functions provided by WINAMP's main control window.



#### Important tips regarding WINAMP's main window:

- The WINAMP crossfader should never be enabled when controlling the Pianocorder. It will cause WINAMP to generate multiple overlapping control signals that will cause the Pianocorder to lose sync and stop playing.
- The WINAMP equalizer should be left **disabled** when controlling the Pianocorder.
- The shuffle play option in WINAMP operates a bit strangely. When enabled, it will cause the entire playlist to be reshuffled at each break between songs. To shuffle the playlist once (but maintain a consecutive playback order afterwards), leave shuffle play disabled and click on the **Sort** button at the bottom of the **Playlist Editor** window. Select **Randomize order** in the menu that pops up.

The following illustration describes WINAMP's **Thinger** window. Though this window is strangely named, you can think of this as simply a set of icons that control whether various WINAMP windows are displayed on your desktop. Clicking on an icon toggles whether that window is visible or hidden.



It's easy to remember which icon controls the **Pianocorder Control** window, since the "script P" matches the font of the original Pianocorder Reproducing System logo. The **Piano Roll View** window's icon looks like a paper piano roll, and the **Superscan Display** window's icon shows a dot-matrix letter "S".

If you ever close the Thinger window accidentally, you can re-open it by clicking on the orange lightning bolt in the lower right corner of WINAMP's main window.



The following illustration highlights the features of WINAMP's **Playlist Editor** window.



### Important tips regarding WINAMP's Playlist Editor window:

- There are three ways to add files to the playlist:
  1. Click the **Add** button in the lower left corner to add individual files or entire directories.
  2. Drag one or more files from a Windows folder into the playlist editor window.
  3. Click on the  button in WINAMP's main window.
- Typing part of a title into the search window will cause all matching songs in the playlist to become highlighted, but they will remain scattered around the playlist in their existing positions. To see a list containing *only* the matching songs, drag the **sidecar** divider open (by moving it to the left) and select **Playlist Selection** from the pulldown menu at the top of the sidecar. You can then double-click on items in the sidecar display to play them immediately.

# Keyboard Shortcuts

You can use the following keyboard shortcuts in WINAMP. Keep in mind that some shortcuts only work when a particular window is selected. (To select a window, click anywhere within the window.)

## With any WINAMP window selected:

<b>X</b>	Play / Restart / Unpause
<b>V</b>	Stop
<b>C</b>	Pause / Unpause
<b>B</b>	Next song
<b>Z</b>	Previous song
<b>Left arrow</b>	Rewind 5 seconds
<b>Right arrow</b>	Fast-forward 5 seconds
<b>Up Arrow</b>	Increase WINAMP audio volume
<b>Down Arrow</b>	Decrease WINAMP audio volume
<b>L</b>	Open/play file
<b>Ctrl-L</b>	Open/play location
<b>Shift-L</b>	Open/play Folder
<b>Ctrl-P</b>	Open the Preferences window
<b>Ctrl-F4</b>	Close the current window
<b>Alt-F4</b>	Close all windows (exit WINAMP)
<b>Ctrl-A</b>	Toggle always-on-top mode for all windows
<b>Ctrl-D</b>	Toggle double-size mode for the current window
<b>Alt-resize</b>	Scale window (when dragging window's /// resize handle)
<b>Shift-move</b>	Undock and move window (when dragging window's titlebar)
<b>Ctrl-Alt-move</b>	Move all open WINAMP windows together
<b>R</b>	Toggle Repeat Play mode
<b>S</b>	Toggle Shuffle Play mode
<b>F</b>	Toggle the crossfader feature
<b>Alt-3</b>	Open the current file info window
<b>Ctrl +</b>	Increase text size in the Playlist Editor
<b>Ctrl -</b>	Decrease text size in the Playlist Editor

## With the Playlist Editor window selected:

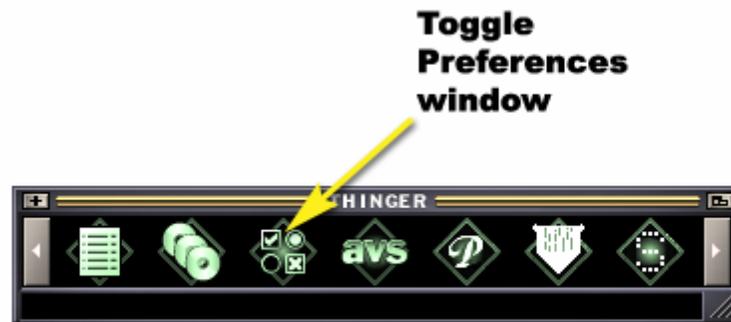
<b>Up Arrow</b>	Move cursor up
<b>Down Arrow</b>	Move cursor down
<b>PgUp</b>	Scroll up in the playlist
<b>PgDn</b>	Scroll down in the playlist
<b>Home</b>	Jump to start of playlist
<b>End</b>	Jump to end of playlist
<b>Spacebar</b>	Jump to current song
<b>Enter</b>	Play selected file
<b>Delete</b>	Remove selected file(s) from the playlist
<b>Ctrl-N</b>	Create new playlist
<b>Ctrl-A</b>	Select all songs

## With the Pianocorder Control window selected:

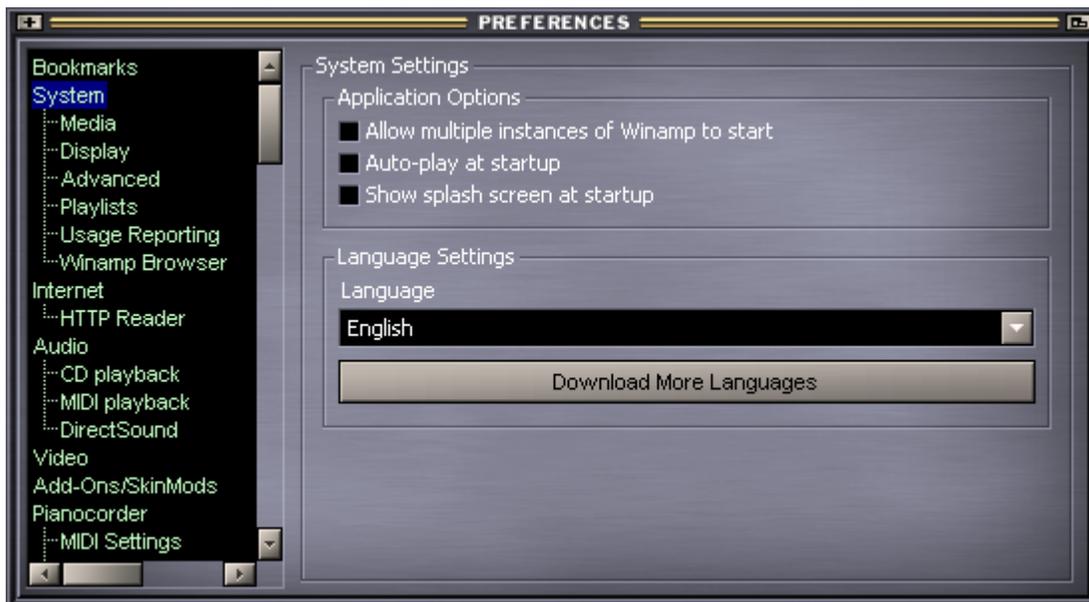
<b>N</b>	Decrease tempo
<b>M</b>	Increase tempo
<b>,</b>	Decrease piano volume
<b>.</b>	Increase piano volume
<b>&lt;</b>	Transpose down
<b>&gt;</b>	Transpose up
<b>~</b>	Reset tempo, volume and transposition to default settings
<b>F1-F4</b>	Move currently-playing file to folders 1-4 (configured in Pianocorder->QuickMove section of WINAMP Preferences)

## Accessing the Pianocorder Control Plug-in Settings

The Pianocorder plug-in adds several panels of configuration settings to WINAMP's **Preferences** window. To access these settings, click the Preferences icon in the Thinger to open the Preferences window (or press the keyboard shortcut **Ctrl-P** while WINAMP's main window is selected).

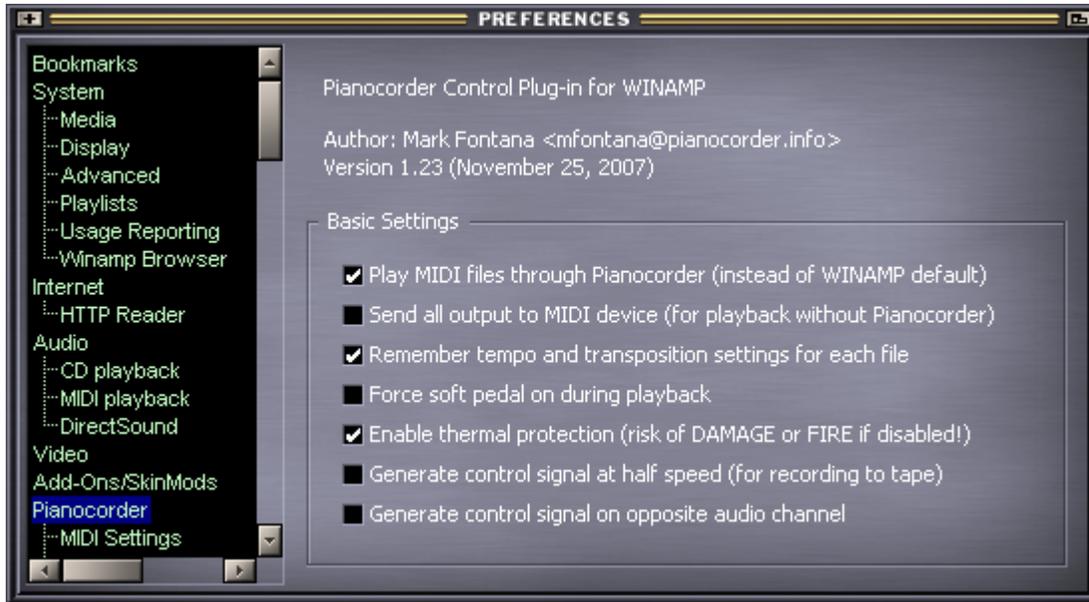


WINAMP's Preferences window will appear.



Notice the hierarchy of configuration topics along the left side of the window. All of these are standard WINAMP configuration areas except for the **Pianocorder** heading near the bottom. Select the **Pianocorder** preferences topic by clicking on it. If it is not visible, use the scrollbar to locate it further down in the list.

The Pianocorder plug-in's main configuration panel will appear.



These are the basic configuration settings for the Pianocorder plug-in:

- **Play MIDI files through Pianocorder** – This option controls whether the Pianocorder plug-in should handle MIDI files, overriding WINAMP's built-in ability to play MIDI files. When you want MIDI files to play on the Pianocorder through the plug-in (the usual case), this box should be checked. If you'd rather have WINAMP itself play the MIDI files (usually resulting in the music playing through your computer's speakers), you can uncheck this box.
- **Send all output to MIDI device** – When checked, this option will send all of the plug-in's output to your MIDI output device (typically the computer speakers) instead of to the Pianocorder. This is useful, for example, when you want to listen to the Pianocorder music library or MIDI files on your computer instead of on the actual piano. Normally, this option should **not** be checked.
- **Remember tempo and transposition settings for each file** – This option controls whether WINAMP will store your tempo and transposition slider settings for each individual music file and restore them if the same music file is ever played again. By default, this box is **checked**. If unchecked, WINAMP will apply the current slider settings to all files (without saving them). This allows you to adjust these playback settings independently of what is playing (just as a volume control on a stereo system does). Note that the **Volume** slider *always* functions this way.
- **Force soft pedal on during playback** – This option works just like the physical **Soft Pedal** switch found on the original Pianocorder cassette deck; enabling it forces the soft pedal to be depressed continuously to achieve softer playback. This feature is disabled by default because it can cause the soft pedal solenoid to become very hot, and it also interferes with the Pianocorder's ability to play most expressively. Use it with caution. In most cases, the **Volume** slider in the **Pianocorder Control Window** is a better way to achieve soft playback.

- **Enable thermal protection** – This option controls whether Pianocorder playback will automatically stop after an hour of continuous playing. Enabling this protection will prevent the note and pedal solenoids from potentially overheating or causing excessive wear to the piano if playback continues unattended. If you disable this setting, please be aware that WINAMP will play **indefinitely** if configured to automatically repeat the playlist. In the event that the piano is left playing unattended for an extended period of time, there is the risk of mechanical damage, excessive wear, and even fire. Therefore, leaving this safety feature enabled is recommended.
- **Generate control signal at half speed** – By checking this box, you can instruct the plug-in to produce the Pianocorder control signal at half speed. This will allow you to record it to cassette tape using a normal audio cassette deck. Tapes recorded in this fashion will play back properly on the Pianocorder since the Pianocorder’s cassette player runs at double speed.

Unless you are recording the signal to tape, this box should **not** be checked.

- **Generate control signal on opposite audio channel** – Normally, the Pianocorder control signal is generated on the RIGHT stereo audio channel. When checked, the control signal will be generated on the LEFT audio channel instead. This option is provided for certain users of the plug-in who use non-standard methods of connecting their computers to the Pianocorder or whose sound hardware or cabling internally swaps the audio channels.

Normally, this box should **not** be checked.

You can access additional plug-in configuration options by clicking on the sub-headings below **Pianocorder (MIDI Settings, MIDI Devices, Sync Settings, etc.)** Those options will be discussed later in this document. Until you have the piano playing properly, leave the configuration options at their default values.

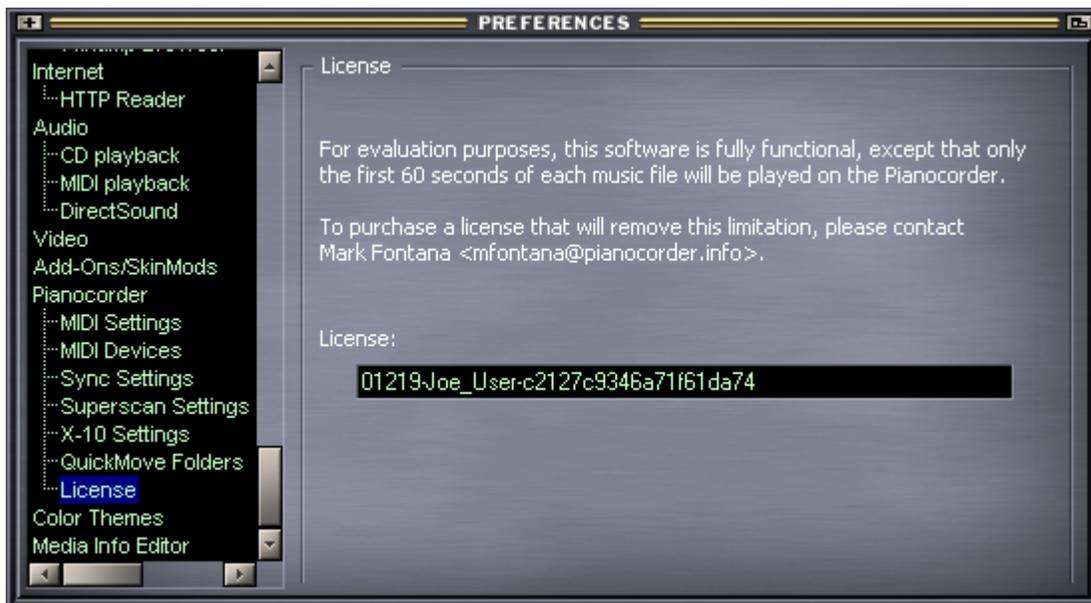
# Installing Your Software License

Without a license, the Pianocorder Control Plug-in for WINAMP is fully functional for evaluation purposes with the following limitation: **only the first 60 seconds of each music file can be played on the Pianocorder until a license is installed.**

If you have purchased the plug-in separately or bundled with a Pianocorder Wireless Kit, you will receive your software license by email.

To install the license:

1. Start WINAMP
2. Open the **Preferences** window and select **Pianocorder->License**
3. In your email program, select all of the text of the license with no spaces on either side
4. Press **Ctrl-C** to copy the license to Windows' clipboard
5. Click inside the License text box in the right-hand side of the WINAMP Preferences window
6. Press **Ctrl-V** to paste the license into the License window
7. Press **ENTER** to ensure WINAMP stores the license permanently

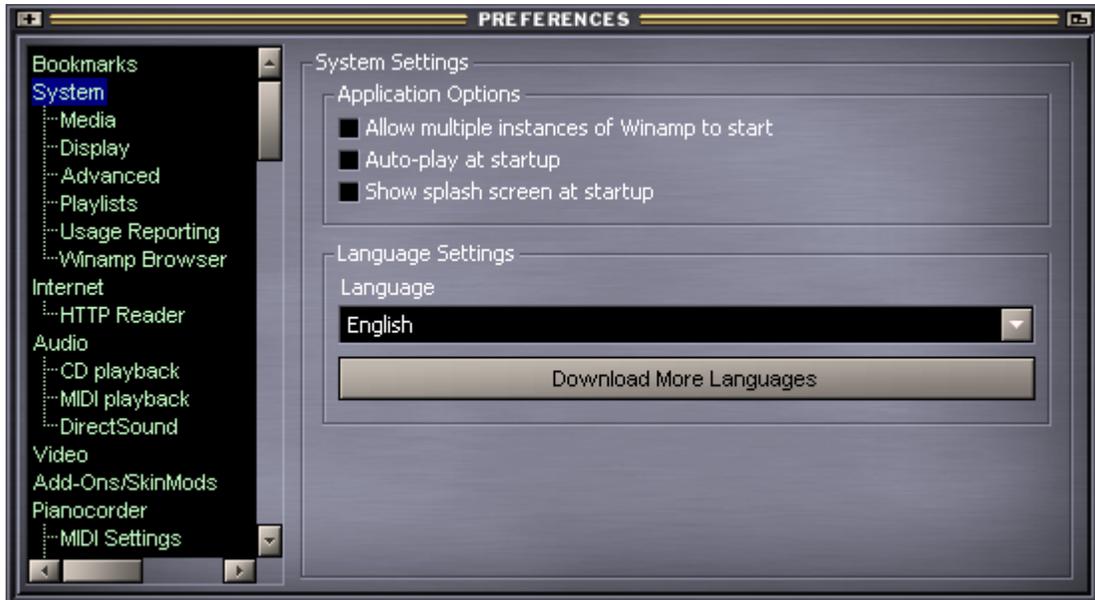


If you are unable to cut and paste the license text as described above, you can type it in by hand. Be careful to type the license text exactly as it appears in the email, including the underscore between your first and last name.

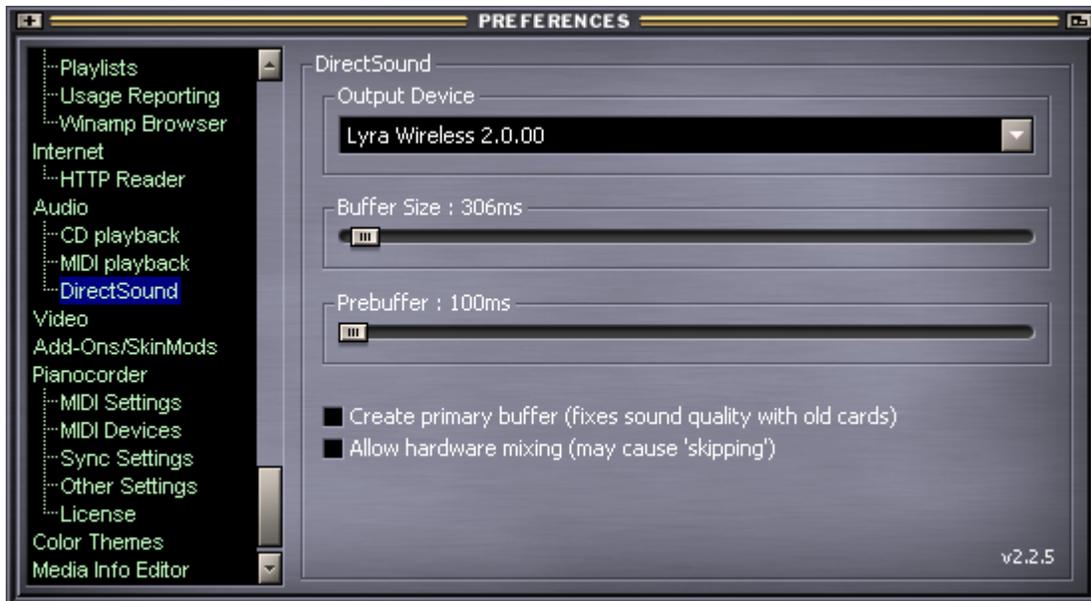
Be sure to save a copy of the license for future reference (in case you need to reinstall the software at a later date or on a different computer).

# Configuring WINAMP to Use the Wireless Transmitter

1. Open WINAMP and open its Preferences window (press Ctrl-P).



2. Select the **Audio -> DirectSound** preferences topic in the left pane.



3. Adjust the settings as shown above. (Under Windows XP or Vista, the wireless transmitter will show up as **Lyra Wireless 2.0.00**; earlier versions of Windows will display **USB Audio Device**.)

# Setting the Windows Volume and Balance Controls

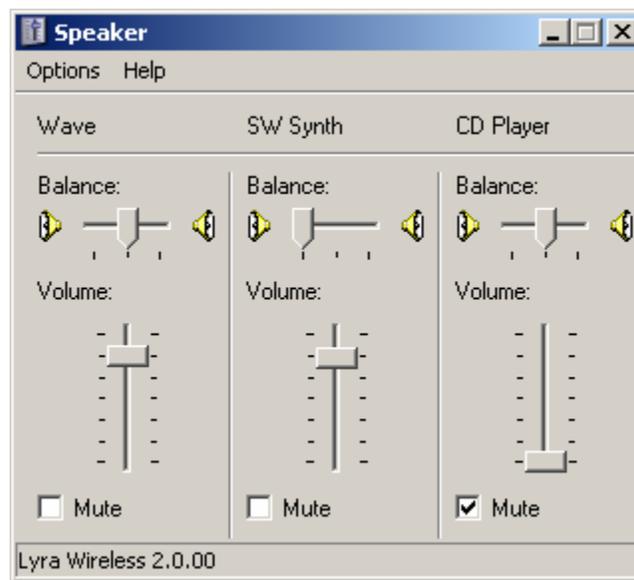
If using Windows 98, ME, 2000 or XP, follow the steps below to set the Windows volume and balance controls to the proper settings for use with the Pianocorder Wireless Kit.

1. Find the speaker icon in the taskbar, in the lower right corner of your desktop:



(If the speaker icon is not present, go to the Windows Control Panel, open the **Sounds and Multimedia** window, and make sure the **Show volume control on the taskbar** checkbox is checked, then press **Apply** and **OK**.)

2. Double-click on the speaker icon in the taskbar, and a window will pop up allowing you to adjust the stereo balance and volume settings of the transmitter.



Set the balance and volume sliders as shown above.

- Make sure the **Wave** volume slider is set at approximately 75%.
- Make sure the **SW Synth** balance slider is moved **all the way to the left** and the volume slider is set at approximately 75%.
- Make sure the **CD Player** is **muted** and the volume slider is all the way down.  
Note: The CD Player section may not be present on your system.

3. Close the window.

4. Right-click on the speaker icon and select **Adjust Audio Properties** (or equivalently, go into the **Sounds and Audio Devices** section of Windows' Control Panel). Select the **Audio** tab of the window that pops up.



Notice that under Sound Playback, the default device has been changed to **Lyra Wireless 2.0.00** (Windows versions earlier than XP will display **USB Audio Device** here).

Upon installation of the wireless transmitter, Windows automatically configured the transmitter as the default sound playback device.

If this computer will be used primarily for Pianocorder playback, and you do not plan to use the computer's main soundcard for other multimedia applications, you can leave these settings as they are. Otherwise, under **Sound Playback**, change the default device back to the name of your main soundcard.

Press the **Apply** and **OK** buttons at the bottom, then close the window.

# Getting Your Pianocorder Locked On to the Control Signal

You are now ready to try playing the Pianocorder via the wireless link. Please follow the steps below.

1. Open WINAMP.
2. Make sure the Pianocorder is turned on (the wireless receiver's **POWER** indicator is lit)
3. Make sure the wireless transmitter is turned on (its **POWER** indicator is lit)
4. In Windows, go to a folder containing some MIDI files. For this initial testing, choose files that have a piano part as the only instrument. It is strongly recommended that you use files from the **Piano Test Files** subdirectory of the **Utility Files** package, available in the **Download** section of the Pianocorder plug-in web page.
5. Select a few files and drag them into the left panel of WINAMP's **Playlist Editor** window.
6. Set WINAMP's volume slider (located in the main window) to approximately 75%.



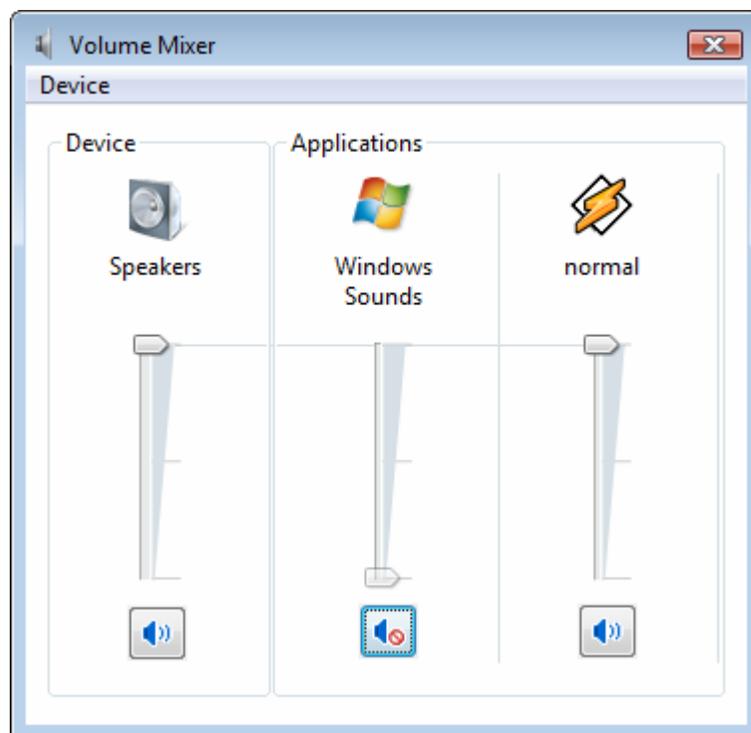
7. Double-click on a song title in WINAMP's playlist to start it playing. (You can also control playback using the  buttons.)

The Pianocorder will probably begin playing now, but it may not play perfectly yet. You might hear notes dropping out or being restruck, or the Pianocorder might not even play at all. This is normal.



**Important:** Even if the Pianocorder seems to be playing properly, be sure to continue with the remaining steps of this procedure.

8. If you are using Windows Vista, open Windows' volume control panel and ensure that the sliders are set as shown below:

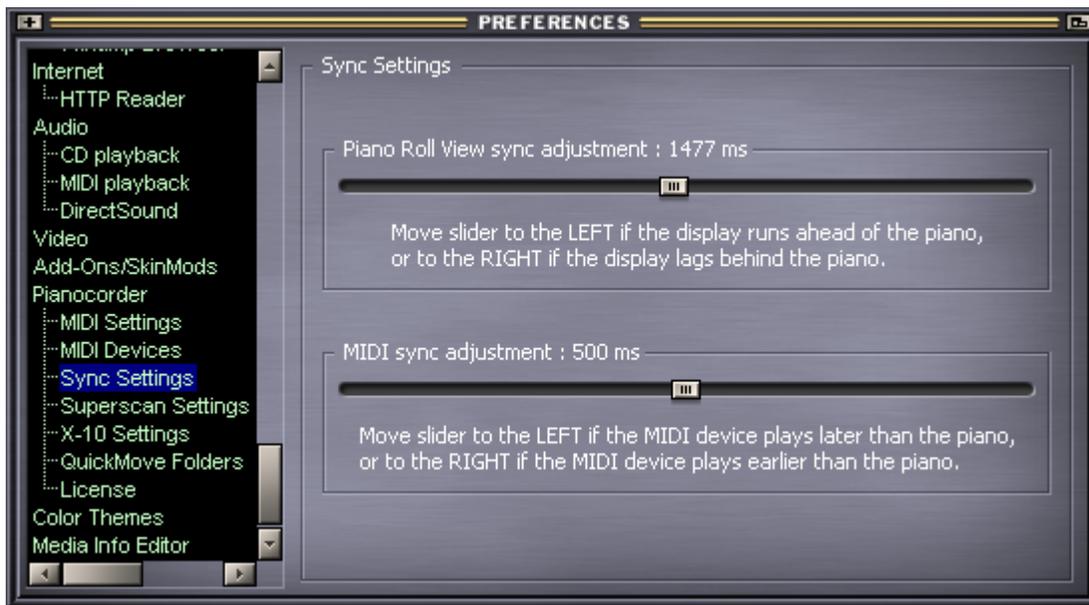


9. In WINAMP's main window, if the volume slider moved away from 75% after playback started, move the slider back to 75% (while WINAMP is still playing) and press the **STOP** button. This step ensures that the Pianocorder plug-in will always restore the WINAMP volume to 75% when controlling the Pianocorder (it saves the most recent WINAMP volume slider setting observed during previous Pianocorder playback).
10. Double-click on a file in the playlist to start WINAMP playing again. This time, the Pianocorder should play perfectly, if it was not already doing so in step 7. If you still hear notes dropping out, try setting WINAMP's main volume slider to various positions between 50% and 100%. If this does not fix the problem, please request technical assistance by email.

## Adjusting the Piano Roll Synchronization

If you have the **Piano Roll View** window open, when playing files, you should see the “holes” for each note scrolling downwards. The holes are supposed to reach the “tracker bar” in the center of the roll display exactly when you hear the corresponding notes strike on the piano. With the default WINAMP configuration after installation, the synchronization should already be fairly close. However, due to mechanical issues and the wide variety of computer sound hardware available, it may be necessary to tweak the synchronization. Follow the steps below to adjust the control window synchronization.

1. Locate the file **MIDI Utility Files/piano\_midi\_syncctest.mid**, included in the **Utility Files** package available in the **Download** section of the Pianocorder plug-in web site.
2. Open WINAMP’s Preferences window, if it is not already open, and select **Pianocorder->Sync Settings**.



3. Play the sync test MIDI file in WINAMP and use the **Piano Roll View sync adjustment** slider to adjust the synchronization between the piano roll display and the piano. When correctly adjusted, the notes on the moving piano roll should strike on your piano right as they pass over the tracker bar holes in the middle of the window. **Please note that you must stop and restart playback every time you change the slider position.**

Once you find the correct slider position for your system, WINAMP will automatically remember this setting for future sessions.

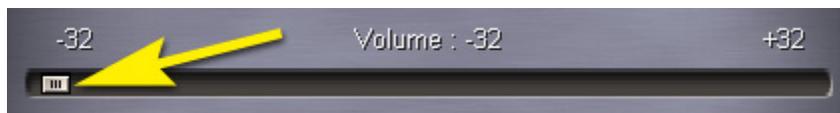
# Optimizing the Expression Controls

Please follow this procedure to achieve the best expression performance from your Pianocorder.

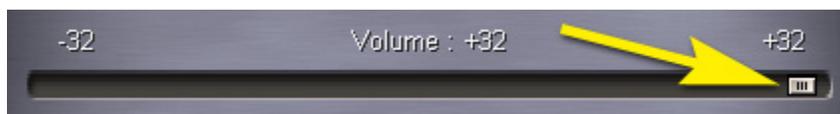
1. Open WINAMP's **Pianocorder Control** window by clicking on the “script-P” icon in WINAMP's **Thinger** window.



2. Set the volume slider in the **Pianocorder Control** window to **-32**, causing WINAMP to play every note with the softest Pianocorder expression level.



3. On the wireless receiver, turn the **Pianissimo** and **Fortissimo** dials all the way to the left.
4. Play the MIDI file **dreamy.mid** from the “Piano Test Files” folder of the **Utility Files** package available on the Pianocorder plug-in web site. The Pianocorder will play very softly.
5. If the Pianocorder seems to be dropping notes, slowly increase the **Pianissimo** dial on the wireless receiver until notes are no longer dropping out. Leave the **Fortissimo** dial turned all the way to the left.
6. Set the volume slider in the **Pianocorder Control** window to **+32**, causing WINAMP to play every note with the loudest Pianocorder expression level.



7. With **dreamy.mid** still playing, turn the **Fortissimo** dial on the wireless receiver to the **right** until the Pianocorder is playing as loudly as you would **ever** want it to play (in any situation and for any style of music).
8. Set the volume slider in the **Pianocorder Control** window to back to **0**, causing WINAMP to play the music file with its original expression levels.

Your Pianocorder is now configured for optimal reproduction of subtle expression and the widest dynamic range in which soft notes play reliably.

From this point on, leave the **Pianissimo** and **Fortissimo** dials as they are. When you want to adjust the volume of the Pianocorder, use the volume slider in the **Pianocorder Control** window exclusively.

# Using the Remote Control

The wireless kit includes a remote control that uses RF (radio frequency) technology to let you control your Pianocorder from anywhere in the house, even through walls. Since this remote uses radio signals instead of infrared light, it is not necessary to aim the remote in a particular direction when controlling the Pianocorder.

The remote's signals are received by the wireless transmitter unit on your computer (not the receiver within the piano), and the effective range is approximately 30 feet. Tweaking the orientation of the small, black antenna wire on the back of the transmitter may help increase the range.

To activate the Pianocorder functionality of the remote, press the teal-colored **Lyra Wireless** button in the top left corner of the remote. This instructs the remote to transmit future button presses to the Pianocorder wireless system. The button assignments for Pianocorder functionality are shown on the following page.

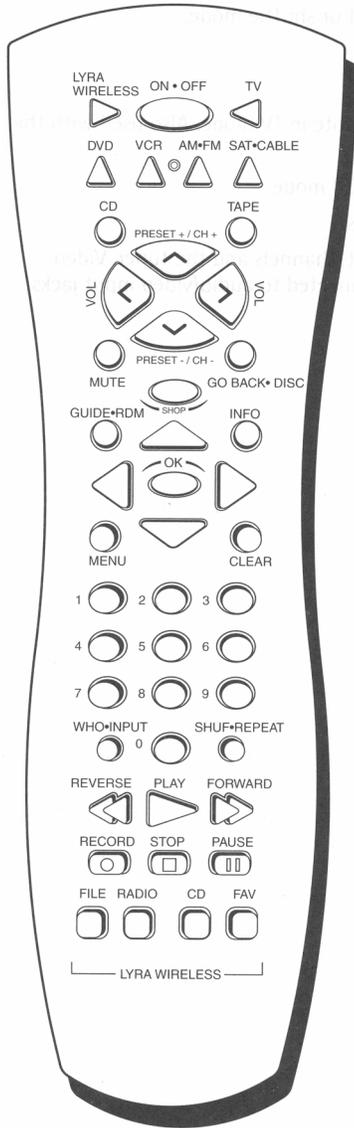
## Important tips:

- When you install batteries into the wireless remote, be careful to match the positive and negative polarity symbols with the corresponding diagram on the remote.
- No WINAMP configuration changes are required to use the remote; it will be detected and supported automatically if the wireless transmitter is powered on when you open WINAMP.
- If WINAMP ever stops responding to your button presses on the remote, make sure the remote is in Pianocorder mode by pressing the **Lyra Wireless** button.
- You will find that holding down a button such as **Vol+** results in the remote control incrementing the setting in WINAMP at a very slow rate. Unfortunately, this is a hardware limitation that cannot be corrected in the WINAMP software. To rapidly increment or decrement settings, you should press the desired button *repeatedly* instead of holding it down. For convenience, you can use the number keys (0-9) to set the granularity of subsequent increment/decrement button presses (i.e. pressing **5** will result in subsequent volume up/down button presses changing the setting by 5 units at a time).

In addition to controlling the Pianocorder, the remote control has the ability to function as a “universal remote” to control your home audio and video equipment. This optional feature can help you reduce the clutter of multiple remote controls in your living room. The remote comes preprogrammed with codes to support many brands of home audio/video equipment (but it does not have any “learning” capability).

When using the remote to control equipment other than the Pianocorder, it is necessary to aim the remote at the device you want to control, just as you would with a normal remote. The remote is equipped with an IR (infrared) emitter for this purpose.

The six pages appended to this document provide instructions on how to configure the remote to control your other equipment.



## Remote Button Functions

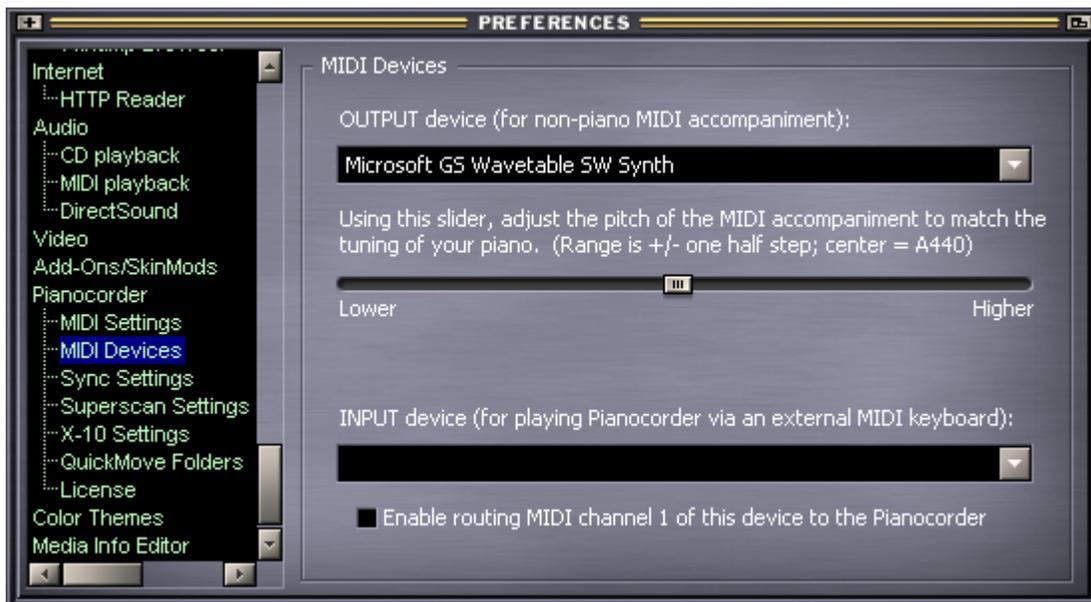
<b>Lyra Wireless</b>	Set remote to Pianocorder functionality mode
<b>On/Off</b>	Close WINAMP (and turn off piano, if using X-10)
<b>Preset -</b>	Transpose down
<b>Preset +</b>	Transpose up
<b>Vol -</b>	Decrease volume
<b>Vol +</b>	Increase volume
<b>Go Back</b>	Toggle automatic playlist repeating
<b>Shuf/Repeat</b>	Toggle automatic playlist shuffling
<b>Clear</b>	Reset tempo, volume and transposition sliders to their centered positions
<b>Info</b>	Make Superscan Display Console immediately display song and elapsed time information
<b>Shop</b>	Make Superscan Display Console immediately display custom message set in Preferences
<b>White Arrow buttons</b>	
<b>Up</b>	Previous song
<b>Down</b>	Next song
<b>Left</b>	Reduce tempo
<b>Right</b>	Increase tempo
<b>OK</b>	Toggle play/pause
<b>0 - 9</b>	Set the granularity of subsequent increment/decrement keys 1 = increment/decrement by one unit 2 = increment/decrement by two units ... 0 = increment/decrement by ten units
<b>Reverse</b>	Skip backward in the current song
<b>Forward</b>	Skip forward in the current song
<b>Play</b>	Start playback
<b>Stop</b>	Stop playback
<b>Pause</b>	Pause playback
<b>File</b>	QuickMove currently-playing file to folder 1
<b>Radio</b>	QuickMove currently-playing file to folder 2
<b>CD</b>	QuickMove currently-playing file to folder 3
<b>Fav</b>	QuickMove currently-playing file to folder 4

## Setting Up Piano/MIDI Ensemble Playback

When playing MIDI files that combine piano parts and non-piano parts, the Pianocorder plug-in will automatically send piano parts to the Pianocorder and play the remaining instruments via a MIDI device in synchronization with the piano.

The first step is to tell the Pianocorder plug-in which MIDI device to use for accompaniment output.

Go to the WINAMP preferences window and look under **Pianocorder** -> **MIDI devices**:



Under **OUTPUT device**, select the output device to which the MIDI accompaniment should be sent. If you have no external MIDI device connected to your computer, choose “**Microsoft GS Wavetable SW Synth**”.

If your computer is connected to an external XG/GS/GM MIDI device such as a Roland Sound Canvas or Yamaha MU50, playback should already work properly as long as you set the output MIDI device appropriately on the WINAMP preferences screen above. Skip to the next section: **Adjusting the MIDI Sync**.

If you have no external MIDI device, then you can still enjoy piano/MIDI ensemble playback using the Microsoft GS Wavetable SW Synth that is built into Windows.

# Transmitting MIDI Accompaniment

Your Pianocorder Wireless Kit is capable of transmitting both the Pianocorder control signal and MIDI accompaniment over the same radio link by utilizing both stereo audio channels of the transmitter. This permits your computer to transmit the accompaniment to remote speakers located near the piano, creating an ensemble effect.

**Due to significant changes Microsoft made to the audio system of Windows Vista, this feature currently works only on earlier versions of Windows (98, ME, 2000, XP).**

To use this feature, you will need to place one of the following near the piano:

- A set of amplified multimedia speakers (the type used with personal computers)
- A portable stereo or stereo receiver equipped with RCA phono plug inputs



**Important:** To make troubleshooting easier, please ensure that your Pianocorder is playing piano-only music files completely reliably via the wireless link before attempting to set up this feature.

## Using Multimedia Speakers

Insert the mini headphone plug of the speakers into the green **LINE OUT** jack on the back of the wireless receiver. Connected this way, the right speaker will play the MIDI accompaniment, while the left speaker will play the Pianocorder control signal.

Since it is undesirable to hear the Pianocorder control signal during playback, you will need to ensure that the left channel is not audible. Typically, multimedia speakers incorporate the amplifier into the right speaker and then the left speaker plugs into the back of the right speaker. Thus, the easiest way to eliminate the Pianocorder control signal is to simply not use the left speaker.

If you wish to use both speakers, you will need to purchase a channel-separating Y-splitter such as Radio Shack Cat No. 274-375:



Plug the splitter into the wireless receiver's **LINE OUT** jack, then plug the speakers' headphone plug into one of the two jacks on the splitter. If this results in the Pianocorder control signal being heard instead of the MIDI accompaniment, plug the speakers into the other jack on the splitter.

## Using a Stereo with RCA Inputs

Locate the audio cable included with your wireless kit and insert the mini headphone plug into the green **LINE OUT** jack on the back of the wireless receiver. Notice that the other end of the audio cable is equipped with two RCA phono plugs. The red plug provides the Pianocorder control signal, and the black plug provides the MIDI accompaniment.

In order to supply the monaural MIDI accompaniment signal to both the left and right channels of your stereo, you will need to purchase from Radio Shack a “Y-Cable with 2 Phono Plugs to 1 Phono Jack”, Cat. No. 42-2535:



Plug the **black** plug from the wireless kit audio cable into the jack of the Y-cable. Connect the two plugs of the Y-cable to an available input on your stereo equipment.

Leave the red plug from the wireless kit audio cable unconnected.

## Configuring Windows to Transmit the MIDI Accompaniment

When playing music files containing non-piano parts in WINAMP, the MIDI accompaniment audio will be generated by the Microsoft GS Wavetable Software Synthesizer that is built into Windows. In order to transmit the output of this synthesizer via the wireless link, it is necessary to set the wireless transmitter as Windows' preferred sound playback device (otherwise, the synthesizer output will be sent to your computer's main soundcard instead). Follow the steps below to make this change.

1. Locate the speaker icon in the taskbar, in the lower right corner of your desktop:



2. Right-click on the speaker icon and select **Adjust Audio Properties** (or equivalently, go into the **Sounds** section of Windows' Control Panel).
3. Select the **Audio** tab of the window that pops up:



4. Under **Sound Playback**, change the default device to **Lyra Wireless 2.x.x** (or in Windows versions earlier than XP, **USB Audio Device**). Then click **Apply**, click **OK**, and close the window.

## Adjusting the MIDI Sync

Depending on your MIDI device and piano, it may be necessary to adjust the synchronization between the Pianocorder and the MIDI output.

To do this, locate the file **MIDI Utility Files/piano\_midi\_synctest.mid**, available in the **Utility Files** package available on the Pianocorder plug-in web site.

Open WINAMP's **Preferences** window (press **Ctrl-P**) if it is not already open, and select **Pianocorder->Sync Settings**.

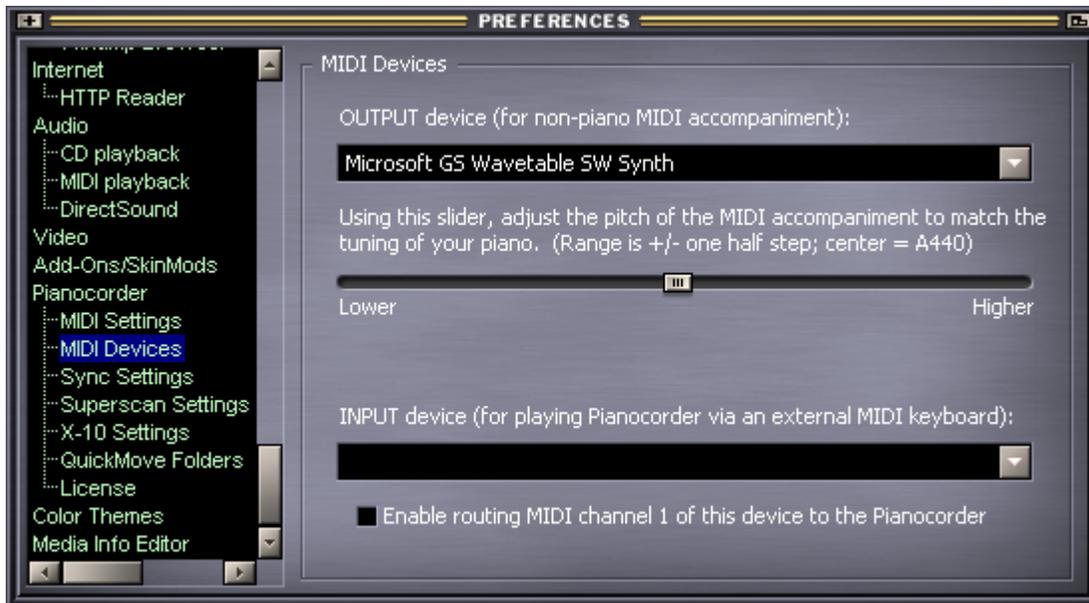


Play the sync test MIDI file in WINAMP and use the **MIDI sync adjustment** slider to adjust the synchronization between the MIDI output and the piano. **Please note that you must stop and restart playback every time you change the slider position.**

## Adjusting the MIDI Pitch

The Pianocorder plug-in provides a control allowing you to adjust the pitch of the MIDI accompaniment to exactly match the tuning of your piano. (This adjustment applies only to electronic MIDI instruments capable of adjusting their pitch.)

Open WINAMP's **Preferences** window (press **Ctrl-P**) if it is not already open, and select **Pianocorder->MIDI Devices**



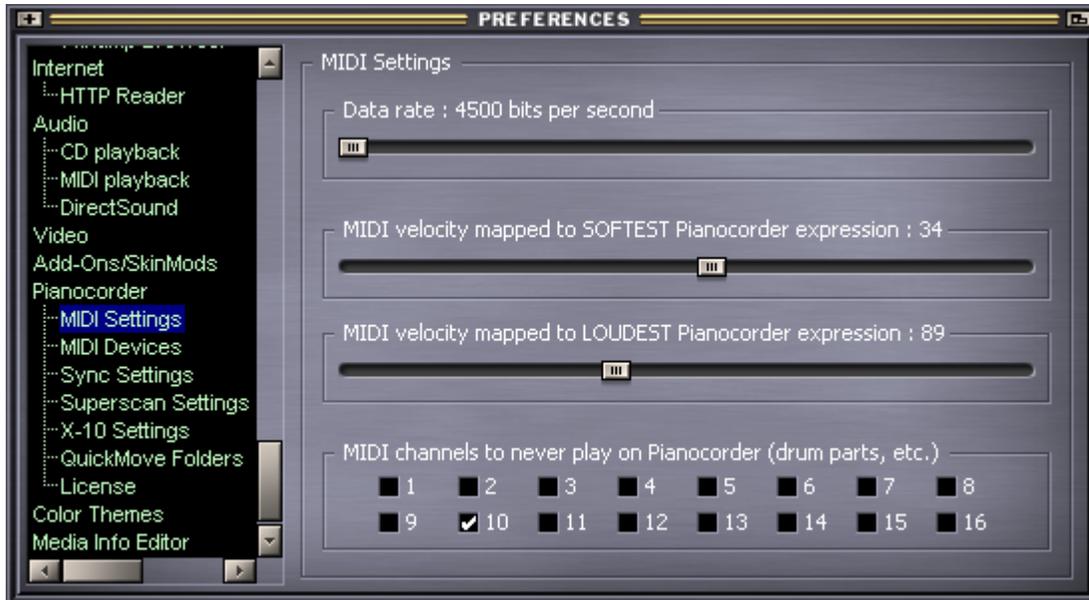
Locate the file **MIDI Utility Files/piano\_midi\_pitchtest.mid**, available in the **Utility Files** package available in the **Download** section of the Pianocorder plug-in web site.

Play the pitch test MIDI file in WINAMP and use the **MIDI pitch adjustment** slider below the **OUTPUT device** selection to adjust the pitch of the MIDI accompaniment relative to the piano.

**Changes to this slider will take effect immediately during playback, so you should leave WINAMP playing while making this adjustment.**

# Advanced MIDI Configuration Options

Click on **Pianocorder->MIDI Settings** in WINAMP's Preferences window and you will see the following:



**Data rate slider** – this setting allows you to control how often the Pianocorder is updated when playing MIDI or ESEQ files. The Pianocorder plug-in sends a continuous stream of “frames” to the piano; each frame occupies 128 bits. 4500 bits per second is the normal data rate used on commercial Pianocorder cassettes. If you compute  $4500/128$ , you will find that the Pianocorder is updated approximately 35 times per second. By increasing the data rate using this slider, it is possible to increase the update rate to about 42 frames per second. This is analogous to “overclocking” a CPU and allows you to achieve slightly better temporal resolution when playing MIDI files. However, the higher the data rate, the more likely it becomes that the Pianocorder will lose sync with the signal.

The plug-in uses a data rate of 4500 bits per second by default, but most Pianocorder systems will sync to rates of up to 5200-5300 bps without difficulty. Setting this slider to around 5100 bps is recommended and will usually work quite reliably.

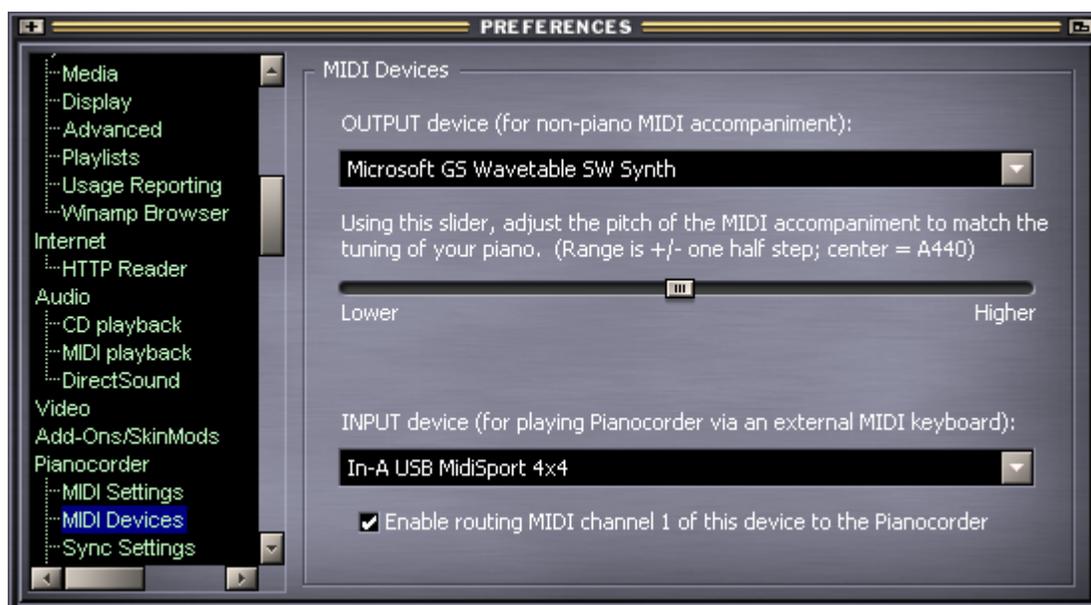
If you find that your Pianocorder will not sync at 5100 bps, it may be necessary to adjust the “3/4 bit” and “range” controls on the playback logic board. An experienced Pianocorder technician should be consulted to make these adjustments.

**MIDI velocity sliders** – The Pianocorder system supports 32 intensity levels, as opposed to the 127 MIDI velocity levels supported by MIDI. However, the full MIDI velocity range is typically not used when encoding piano music to MIDI format. Rather, the MIDI velocity corresponding to the softest the piano can play is usually in the low 30s, and the velocity corresponding to the loudest the piano can play is usually in the mid 90s. The Pianocorder plug-in provides two sliders to tweak the expression conversion, indicating which MIDI velocities should be mapped to the softest and loudest Pianocorder intensity levels. The default values for these sliders usually work very well, so it is unlikely that you will have to change these settings, but the flexibility is available if needed.

**MIDI channels to never play on Pianocorder** – Multitimbral MIDI files (files that play drums and other instruments in addition to a piano part) typically designate one or more MIDI channels as “drum parts”. For these channels, keyboard notes are mapped to a variety of drum sounds instead of pitches. It is important that drum parts not be played on the Pianocorder (since garbage notes would be heard). This setting provides a way to permanently prevent certain MIDI channels from ever being sent to the piano. In most MIDI files, channel 10 is used for the drum part, and so by default the Pianocorder plug-in mutes only channel 10. It is usually not necessary to change this setting.

## Routing MIDI Input to the Pianocorder

For diagnostic purposes, the WINAMP plug-in is able to route MIDI signals received by a MIDI IN port of your computer to the Pianocorder. This is useful for testing individual note or pedal solenoids by playing an external MIDI keyboard. This feature is disabled by default. To enable it, open WINAMP’s Preferences window and look under **Pianocorder->MIDI Devices**:



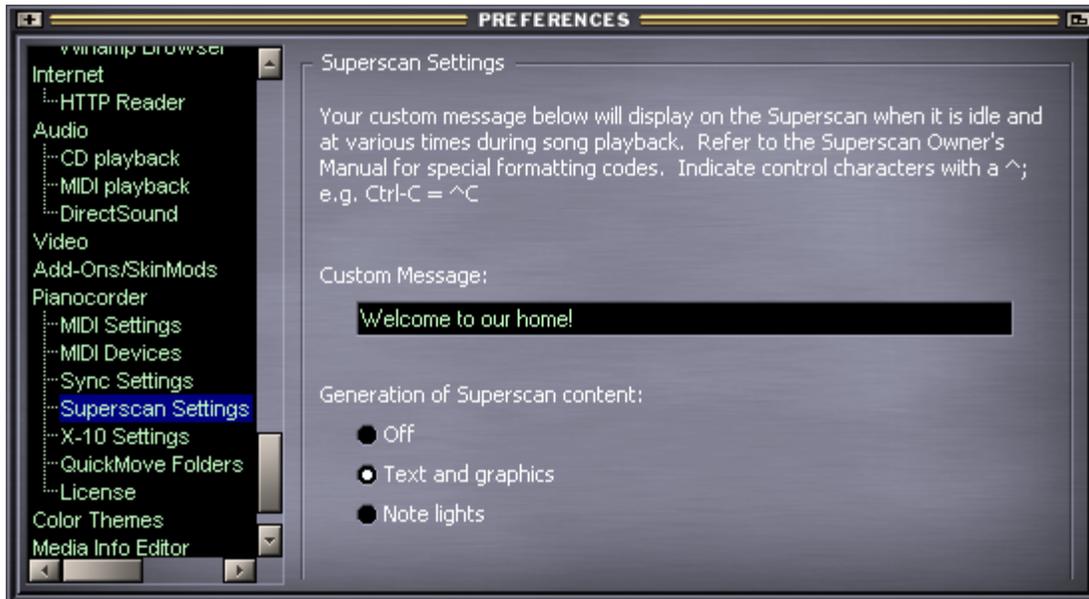
Under **INPUT device**, select the MIDI IN port of your computer to which the external MIDI source is connected. Then check the **Enable** box underneath.

With this feature enabled, note and pedal events received on MIDI channel 1 from the external device will be routed to the piano while WINAMP is playing a file via the Pianocorder. (MIDI IN events cannot be routed while WINAMP playback is paused or stopped.) **Due to mechanical limitations and soundcard buffering, there will be a delay of approximately 500 ms between the time when MIDI notes are received and the time at which they are heard on the Pianocorder.**

The note and pedal information received from MIDI IN is mixed with the music WINAMP is playing from the current music file. To use the MIDI IN feature without the distraction of notes played by the music file, a special MIDI file **silence.mid** is included in the **Utility Files** package available on the Pianocorder plug-in web site. This MIDI file will provide a long period of silence, enabling the MIDI IN feature to be used in isolation.

# Configuring the Superscan Display Console Settings

The Pianocorder plug-in allows you to change several options that control how it generates text and graphics to display on the Superscan Display Console (both in the onscreen Superscan window and on a physical Superscan display attached to your piano, if you have one). The options are found under **Pianocorder->Superscan Settings** in WINAMP's **Preferences** window.



**Custom Message** – This field allows you to specify a special message or greeting to display on the Superscan. This message will be activated by certain Pianocorder cassettes containing Superscan data, and it will also be inserted occasionally when playing MIDI files. If you are familiar with Superscan programming, you can apply special formatting codes to add special effects. For example, to make the text blink, put a **^W** (“wink” command) on both sides of it: **^WHello there!^W**

*Important: Be sure to press ENTER after editing text in this field so that WINAMP saves the changes.*

**Generation of Superscan content** – This setting controls how the Pianocorder plug-in generates Superscan content when playing music files that do not already have Superscan data present.

- **Off**  
Display nothing.
- **Text and graphics**  
Generate random text and graphics announcing the song title, showing the elapsed time, etc.
- **Note lights**  
Use columns of LEDs to display the notes currently playing on the piano, roughly in sync with the music. This features works best when playing slower, simpler pieces.

*The first time you begin playback with the **Note Lights** feature active, the plug-in will download custom graphics data to the Superscan display. This process takes approximately 25 seconds.*

## Controlling Power to the Pianocorder

With the power supply dangle in place, the Pianocorder will receive power continuously whenever it is plugged in. Though it draws only about 15 Watts when idle, it is recommended that you set up a new means of shutting the Pianocorder off when it is not in use. Some possible options include:

- Plugging the Pianocorder into a switched wall outlet
- Plugging the Pianocorder into a power strip



- Using a remote-controlled wall outlet, such as the LaCrosse Technology RS-204U. This is basically a small box that plugs into the wall. You would plug the Pianocorder into this box, then use a small remote control to turn the Pianocorder on and off. You can find a variety of similar products at your local hardware store or at home centers like Menards or Home Depot.



- Using X-10 home automation technology. This allows the WINAMP Pianocorder plug-in to automatically turn the Pianocorder on and off as needed. You would plug the Pianocorder into a three-prong X-10 appliance module, then control the module using an X-10 “Firecracker” kit (available at <http://www.x10.com/>). The Firecracker kit includes a computer interface that will enable WINAMP to remotely turn your Pianocorder on and off automatically. (See the Pianocorder plug-in user manual for details on how to set up this feature and a list of recommended X-10 equipment.) The Firecracker kit also comes with a small wireless remote in case you ever need to control power to the Pianocorder manually.

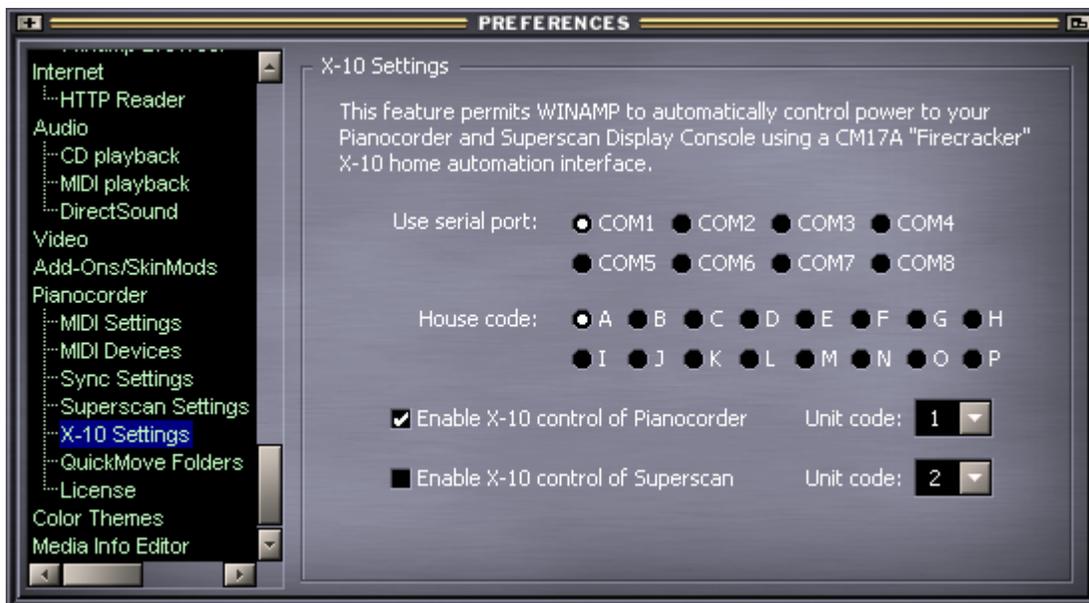
Regardless of the power control method selected, unplugging the Pianocorder during electrical storms and power outages is strongly recommended to eliminate the risk of damage to the wireless receiver and Pianocorder circuitry.

# Configuring X-10 Control

The Pianocorder plug-in has the ability to remotely control the power to your Pianocorder system using X-10 home automation technology, available for purchase at <http://www.x10.com>, <http://www.smarthome.com> and other sites. When this feature is enabled, WINAMP will automatically turn on power to your Pianocorder before the first song plays. The Pianocorder will automatically be turned off when WINAMP exits. To use this feature, you will need the following four items:

1. CM17A “Firecracker” Computer Interface
2. TM751 RF Transceiver Module
3. 3-prong grounded X-10 Appliance Module (see recommendation at the bottom of this page)
4. One 9-pin serial port on your computer

The X-10 settings are found in WINAMP’s Preferences under the **Pianocorder->X10 Settings** topic:



To enable this feature, check **Enable X-10 control of Pianocorder**, select the serial port to which the CM17A interface is connected, and configure the house and unit codes of the Pianocorder’s X-10 module. If you have a Superscan Display Console, you can optionally assign it its own unit code, and the plug-in will automatically switch the Superscan on when you play the first song with lyrics.

Be sure to use a grounded X-10 appliance module rated at 500 W or higher. Though the Pianocorder consumes only an average of 250 W (2 Amps) while in operation, it can draw up to 8 Amps momentarily when striking large chords or at initial power-up. For this reason, a specialized heavy-duty X-10 module is recommended:

ACT Solutions Model RP-124  
[http://www.pianocorder.info/pdf/RP124\\_spec.pdf](http://www.pianocorder.info/pdf/RP124_spec.pdf)

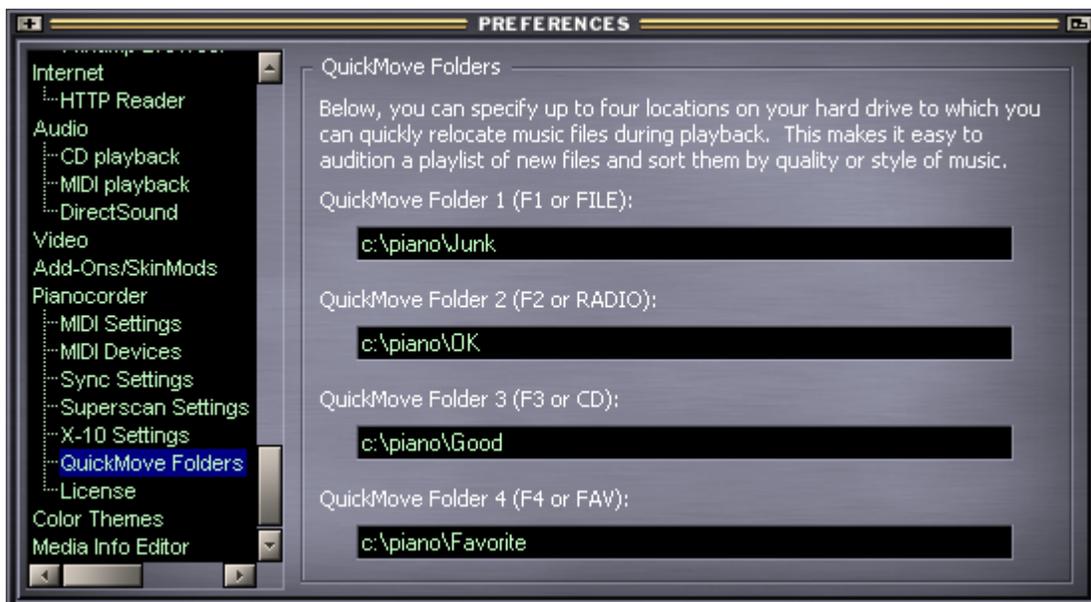
This unit is available for purchase from Smart Products, Inc. (201) 594-0550 (tomlspe@optonline.net).

## Using QuickMove Folders

The Pianocorder plug-in includes a feature for easily sorting the music files in the playlist into four different Windows folders. This is very useful, for example, when playing a large batch of MIDI files that you have downloaded from the Internet. Such files vary widely in quality, and when playing them for the first time, you often know immediately whether the file is worth keeping or not.

Using the QuickMove feature of the Pianocorder plug-in, all it takes is a single keypress to move the currently-playing file to one of four folders on your hard drive, then automatically jump to the next file in the playlist.

Before using this feature for the first time, you must set up the four destination folders in the **Pianocorder->QuickMove Folders** panel of WINAMP's **Preferences** window:



You can specify any folder on your hard drive; just cut and paste the full path to the folder from the top of Windows Explorer.

To use the QuickMove feature, load the songs you want to audition into WINAMP's playlist and start playing files as usual. Then click within the **Pianocorder Control** window to select it. To move the currently-playing file to one of the QuickMove folders and skip to the next song, press the corresponding key (F1, F2, F3 or F4).

*Note: The keys FILE, RADIO, CD and FAV referenced in the Preferences window refer to buttons on the remote control.*

## **Playing Pianocorder Tapes**

The Pianocorder plug-in is capable of playing original Superscope/Marantz Pianocorder material that has been digitally captured from original Pianocorder cassettes into computer files. These files have the extension “.pc”. Contact the author at the email address on the first page of this document to request the corresponding digital files for your Pianocorder cassettes. Nearly every tape produced for the Pianocorder is already available in this format, so it will not usually be necessary to send your tapes for conversion.

## **Playing Homemade Pianocorder Tapes**

If you have made cassette tapes using the recording feature of your Pianocorder system and would like to convert these recordings to data files that can be used with the WINAMP plug-in, a conversion service is available for USD \$10.00 per cassette tape.

# Troubleshooting

## **The receiver's power indicator is not lit.**

The receiver is powered by the Pianocorder, so this indicates that the Pianocorder is not turned on. Make sure the power supply dongle has been installed, the Pianocorder is plugged in, and the safety interlock switch is fully engaged (either pushed in or pulled outwards).

## **The receiver's power indicator is lit, but there is zero signal strength.**

Check that the transmitter is plugged into a wall outlet, turned on, connected to the computer's USB port, and set to the same channel number as the receiver.

## **WINAMP looks like it is playing OK, but the Pianocorder is silent.**

If you can hear the Pianocorder control signal coming out of your PC speakers, the problem is that you did not configure WINAMP to use the wireless transmitter for output. See the section of this manual entitled **Configuring WINAMP to Use the Wireless Transmitter**.

Otherwise, check that all of the following conditions are satisfied:

- Pianocorder is plugged in
- Safety interlock switch is pushed in all the way (or pulled outwards if piano is open for testing)
- Wireless receiver's **POWER** indicator is lit
- Wireless transmitter is connected to its AC adapter, and the adapter is plugged into a wall outlet
- Wireless transmitter is connected to the computer's USB port
- Wireless transmitter and receiver are set to the same channel number
- Wireless receiver's signal strength meter is reading 3 or 4 bars (if only one or two are lit, try adjusting the antennae on the receiver and transmitter and consider moving the transmitter closer to the receiver)
- Windows and WINAMP volume sliders are set to 75%
- WINAMP MIDI data rate (set in Pianocorder preferences) is set to 4500 (increase it only after you get the piano working reliably)
- The music file you are playing is known to have a piano part (to be sure, use one of the sample files from the Pianocorder plug-in website)

**Tip:** You can monitor the Pianocorder control signal by plugging a set of amplified multimedia speakers into the green **LINE OUT** jack on the back of the wireless receiver. If you hear static or interference, try switching both the receiver and transmitter to a different channel number.

## **The remote control does not work.**

The wireless transmitter must be plugged into your computer's USB port and powered on *before* you start WINAMP. Make sure that you are running version 1.21 or later of the Pianocorder plug-in and that WINAMP's **Pianocorder Control** window is open. Also, make sure you push the teal **Lyra Wireless** button at the top left of the remote to switch the remote into Pianocorder functionality mode before trying to use it. If this does not fix the problem, make sure the red LED on the remote (located below the on/off button) glows when you press buttons. If it does not, replace the batteries.

### **The piano stutters, repeats notes when it shouldn't, drops out, etc.**

This happens when the Pianocorder is not getting a clean control signal. The most likely cause is that the audio volume levels in WINAMP or Windows are set too low. Follow the steps earlier in this manual in the section entitled **Getting Your Pianocorder Locked On To The Control Signal**.

### **The piano roll or Superscan windows stop updating or do not scroll smoothly.**

These two features are particularly demanding of your computer, and performance can vary, especially on older computers. Resizing the windows to be smaller may help. These displays may also be erratic for a short while after you add a large number of new files to the playlist, because WINAMP will consume a lot of processing resources looking up the titles for all of the new files.

### **The playlist keeps mixing itself up every time I change songs.**

You have somehow enabled WINAMP's playlist shuffling feature. To turn this feature off, click on the  icon in WINAMP's main window. The tiny little green light in the top left corner of the icon should be OFF.

### **After an hour or so, playback stops and a message pops up saying I need to let my Pianocorder cool down.**

This is a built-in safety feature to protect the Pianocorder from overheating or damaging your piano if left playing unattended. It can be disabled by unchecking the **Enable thermal protection** option in the Pianocorder section of WINAMP's **Preferences** window.

### **The piano has trouble locking on to the control signal when I start playing a MIDI file or when changing songs.**

The MIDI data rate is probably set too high. Go into WINAMP's **Preferences** window under **Pianocorder->MIDI Settings** and lower the value of the data rate slider. Playback must be stopped and restarted for the new slider setting to take effect. If problems persist, your Pianocorder's playback logic board may require adjustment. Contact the author or your Pianocorder technician for assistance.

### **I hear problems in the Pianocorder playback if I do other things with my computer while WINAMP is playing the piano.**

If you have the Lyra Wireless configured as your primary sound playback device, make sure you have disabled all of the Windows system sounds (the clicks, dings, etc.) since they will interfere with the Pianocorder control signal. It is also possible that you have too many applications open, leaving too little processor or memory available for WINAMP to run effectively. Finally, consider closing the **Piano Roll View** and **Superscan Display Console** windows; disabling these will greatly reduce the level of CPU resources required by WINAMP during playback.

**Some (or all) of the songs in my WINAMP playlist no longer play. The cursor just rapidly skips over them and moves down to the next song.**

It is important to keep in mind that a WINAMP playlist is a list of links to files on disk – the music itself is not stored within the playlist. This is analogous to how links work when you browse websites on the Internet. Just as web links become invalid if a website owner moves or deletes their web pages, if you move your music files on disk to another location, their corresponding entries in a WINAMP playlist become invalid. If WINAMP cannot find the corresponding file for a playlist entry, it just skips over it. To correct this situation, delete the invalid entries from your playlist, find the files in question on your hard drive, then re-add the files to the playlist from their new location.

One way that WINAMP users run into this invalid playlist situation is by manually moving their music files around after creating a playlist. Another scenario involves Windows itself: if you click on MIDI files listed on a web page, your web browser downloads a temporary copy of the file, stores it in a temporary area on your hard drive, and then adds it to the WINAMP playlist from that temporary location. Initially, that playlist entry works correctly. But after a period of time (typically a few days or weeks), your web browser will automatically delete such temporary files, causing their playlist entries to become invalid. To prevent this situation, if you find files you like on a web page, remember to save permanent copies of them in a known, non-temporary folder of your hard drive. To do this, right-click on each music file link within the web page and select “Save Target As...”

## **Technical Support**

For general Pianocorder questions (not related to the wireless kit), visit the Pianocorder Forum at <http://www.voy.com/33099/>.

For wireless kit assistance, send email to Mark Fontana <[mfontana@pianocorder.info](mailto:mfontana@pianocorder.info)>.

## **FCC and Industry Canada Information (provided by RCA)**

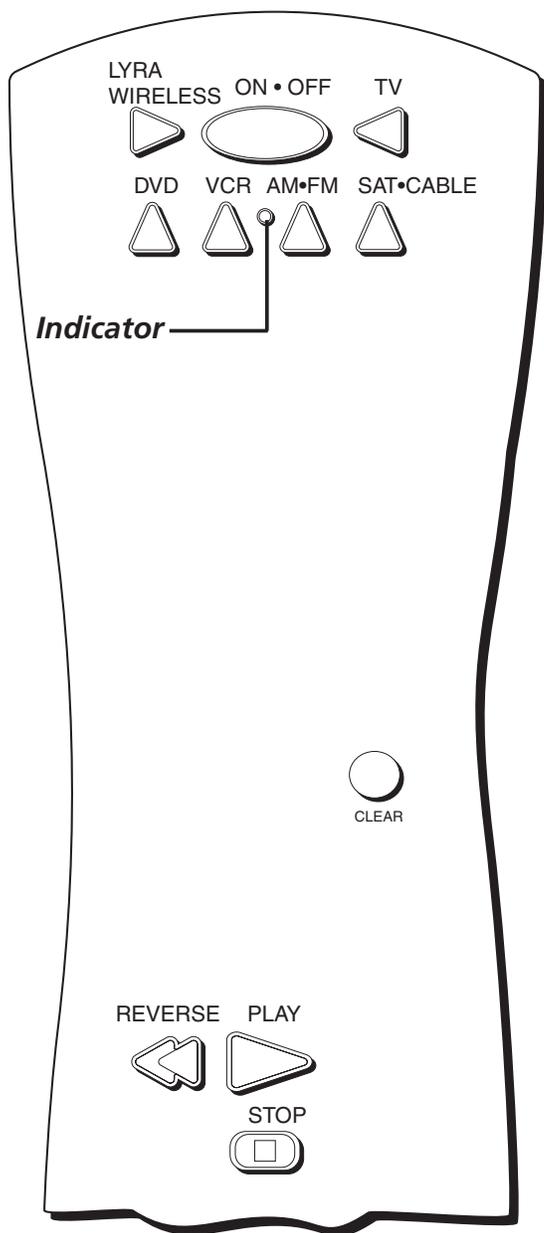
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect this equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult your service provider or an experienced radio/TV technician for help.

FCC regulations state that unauthorized changes or modifications to this equipment (such as adding a larger antenna to the transmitter) may void the user's authority to operate it.

This Class B digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations.



You'll use these buttons when you program the remote.

*Important: The remote may not be compatible with all models of all brands of components. It also may not operate all functions of the remote that came with your component.*

## Tip

To stop the automatic code search without programming any components, press and hold CLEAR until the indicator on the remote turns off.

## Programming the Remote to Operate Other Components

The universal remote can be programmed to operate most brands of remote controllable components. The remote is already programmed to operate most RCA, GE, and Proscan components.

### Find Out If You Need to Program the Remote

To determine whether the universal remote needs to be programmed for your component, turn the component ON. For example, to program the remote for a TV, turn on the TV. Point the remote at the TV, and press the TV button. Then press ON•OFF or CH + (channel up) or CH - (channel down) to see if the TV responds to the remote commands. If the component does not respond, the remote needs to be programmed.

### Programming the Remote

There are two ways to program the remote control:

- automatic code search
- direct entry

#### Using Automatic Code Search

The following instructions can be used to program the remote to operate each of your components. If you want to stop the automatic code search without programming any of your components, press CLEAR until the indicator on the remote turns off.

1. Turn on the component you want to operate (TV, Cable Box, etc.)
2. Press and hold the component button you want to program (TV, etc.). While holding the component button, press and hold ON•OFF until the indicator on the remote turns on, then release both buttons.
3. Point the remote at the component. Press and release PLAY, then wait 5 seconds or until the indicator on the remote stops flashing.

At this point the remote is searching for the correct code to program. If, after 5 seconds, the component you want to operate does not turn off, press PLAY again to tell the remote to search the next set of codes.

Continue pressing PLAY until the component turns off or you have searched through all of the codes. There are 20 total sets of codes. If the component does not turn off after pressing PLAY 20 times, then the remote can't be programmed to operate that component.

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## Important

*You must continue pressing the component button while you enter the code.*

*Let's say you have a Zenith TV. To program the universal remote to operate the VCR, you would:*

*Press and hold the TV button while you enter the first code listed for Zenith in the TV Codes column.*

*Release the TV button. Press ON•OFF to see if the TV responds. If it doesn't, follow the same steps, but enter the second code for Zenith TVs instead of the first.*

---

## Note

*Some of the remote's buttons might operate differently for other components, especially when you're using another component's menu system.*

---

If the component you want to control *does* turn off:

1. Press and release REVERSE, then wait 2 seconds. Repeat this step until the device turns back ON.
2. To finish, press and hold STOP until the indicator on the remote turns off.

## Using Direct Entry

1. Turn on the component to be programmed.
2. Look up the brand and code number(s) for the component on the code list in this section.
3. Point the remote at the component.
4. Press and hold the component button you want to program on the remote.
5. Enter the 4-digit code from the remote control code list on the following pages. If the indicator flashes, you have either entered an invalid code or the button isn't programmable.
6. Release the component button, and then press ON•OFF to see if the component responds to the command. If it doesn't, try pressing the component button and then ON•OFF again.
  - If you get no response, repeat these steps using the next code listed for your brand, until the component responds to the remote commands.
  - If you try all the codes for your component brand and none work, try the automatic code search method. If automatic code search doesn't find the code, the remote is not compatible with your component.

## How to Use the Remote After You've Programmed It

Because this universal remote can control several different components (TV, DVD, VCR, satellite receiver, etc.) it uses operational modes triggered by the component buttons. For example, if you want the remote to control the TV, you would press the TV button to put the remote into TV mode before you could control the TV.

1. Press the appropriate component button (DVD, TV, VCR, SAT•CABLE, AUX) to set the remote to control the component.
2. Press ON•OFF to turn the component ON or OFF.
3. Use the remote buttons that apply to that component.

*Notes:*

- *The remote may not be compatible with all brands and models of components. It also may not operate all functions of the remote that came with your component.*
- *If you keep pressing buttons and nothing happens, the remote is probably in the wrong mode. You must press the component button that matches the component you want to operate (i.e., if you want to operate the VCR, press VCR on the remote control to put the remote in VCR mode.)*

# Code List

## TV Codes

Abex .....	1172	Hitachi .....	1004, 1006, 1012, 1013, 1014, 1059, 1060, 1061, 1135, 1136, 1137, 1138, 1139, 1140, 1141, 1142, 1143, 1144, 1145, 1146, 1148, 1150, 1179, 1198, 1199
Admiral .....	1001, 1173, 1211	IMA .....	1038
Adventura .....	1174	Infinity .....	1062
Aiko .....	1016	Janeil .....	1174
Akai .....	1002	JBL .....	1062
Alleron .....	1046	JCB .....	1002
Amtron .....	1038	JC Penney ....	1000, 1004, 1005, 1006, 1008, 1022, 1052, 1054, 1058, 1063, 1064, 1072, 1087, 1105, 1128, 1171, 1172, 1181, 1201
Anam National .....	1003, 1038, 1192, 1193, 1194	Jensen .....	1004, 1006
AOC .....	1004, 1005, 1006, 1007, 1175, 1176, 1195	JVC .....	1012, 1013, 1014, 1054, 1060, ..... 1065, 1066, 1067, 1157, 1158, 1159, 1182
Audiovox .....	1038	Kawasho .....	1002, 1004, 1006
Belcor .....	1004	Kenwood .....	1004, 1006, 1019
Bell & Howell .....	1001, 1083, 1162	Kloss Novabeam .....	1068, 1069, 1174, 1183
Bradford .....	1038	KTV .....	1038, 1070, 1171, 1177
Brokwood .....	1004	Loewe .....	1062
Candle .....	1004, 1006, 1008, 1174	Logik .....	1083
Celebrity .....	1002	Luxman .....	1004, 1006
Centurion .....	1009	LXI .....	1000, 1006, 1049, 1062, 1071, 1072, 1073, 1162, 1181, 1207
Citizen .....	1004, 1006, 1008, 1016, 1038, 1105, 1171, 1174, 1177	Magnavox .....	1004, 1006, 1008, 1019, 1062, 1068, 1069, 1075, 1076, 1077, 1088, 1130, 1131, 1132, 1133, 1134, 1183, 1219, 1235
Colortyme .....	1004, 1006, 1010	Majestic .....	1083
Concerto .....	1004, 1006	Marants .....	1062
Contec/Cony .....	1012, 1013, 1014, 1038	Marantz .....	1004, 1006, 1062, 1078
Craig .....	1038	Megatron .....	1006, 1059
Crown .....	1038, 1171	Memorex .....	1001, 1006, 1082, 1083, 1162
Curtis-Mathes .....	1000, 1004, 1006, 1015, 1105, 1162, 1171, 1212	MGA .....	1004, 1005, 1006, 1019, 1022, 1051, 1079, 1080, 1082
CXC .....	1038	Midland .....	1054, 1151, 1171, 1172, 1181
Daewoo .....	1004, 1005, 1006, 1016, 1017, 1018, 1127, 1171, 1196	Minutz .....	1052
Daytron .....	1004, 1006, 1171	Mitsubishi .....	1004, 1005, 1006, 1019, 1022, 1051, 1079, 1080, 1081, 1082, 1125
Dimensia .....	1000	Montgomery Ward .....	1083
Dumont .....	1004, 1151	Motorola .....	1003, 1173
Dynatech .....	1178	MTC .....	1004, 1005, 1006, 1105
Electronband .....	1002	Multitech .....	1038
Electrohome .....	1003, 1004, 1006, 1019, 1020, 1022	Multivision .....	1084
Emerson .....	1004, 1006, 1012, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1030, 1031, 1032, 1033, 1034, 1035, 1036, 1037, 1038, 1039, 1041, 1042, 1043, 1044, 1046, 1047, 1123, 1124, 1162, 1171, 1177, 1179, 1191, 1208	NAD .....	1006, 1071, 1072, 1185
Envision .....	1004, 1006	NEC .....	1003, 1004, 1005, 1006, 1200
Fisher .....	1048, 1049, 1051, 1162, 1180	Nikko .....	1006, 1016
Fujitso .....	1046	NTC .....	1016
Funai .....	1038, 1046	Onwa .....	1038
Futuretec .....	1038	Optimus .....	1185
GE .....	1000, 1003, 1004, 1006, 1022, 1052, 1054, 1055, 1087, 1164, 1165, 1166, 1167, 1168, 1181, 1213	Optonica .....	1095, 1173
Gibraltar .....	1004, 1151	Orion .....	1035, 1191
Goldstar .....	1004, 1005, 1006, 1012, 1019, 1056, 1057, 1058, 1155, 1156, 1171, 1172	Panasonic .....	1003, 1054, 1062, 1170, 1214
Grundy .....	1038, 1046, 1171	Philco .....	1003, 1004, 1005, 1006, 1008, 1012, 1019, 1062, 1068, 1069, 1075, 1077, 1183
Hallmark .....	1004, 1006	Philips .....	1003, 1004, 1008, 1012, 1019, 1062, 1068, 1069, 1075, 1076, 1086, 1087, 1088, 1089
Harvard .....	1038	Pilot .....	1004, 1171

Pioneer ..... 1004, 1006, 1090, 1091, 1092, 1179, 1185  
Portland ..... 1004, 1005, 1006, 1016, 1171  
Price Club ..... 1105  
Prism ..... 1054  
ProScan ..... 1000, 1181  
Proton ..... 1004, 1006, 1012, 1093  
Pulsar ..... 1004, 1151  
Quasar ..... 1003, 1054, 1070, 1094  
Radio Shack/Realistic ..... 1000, 1004, 1006, 1012, 1038,  
1049, 1095, 1162, 1171, 1172  
RCA ..... 1000, 1003, 1004, 1005, 1006, 1007,  
1019, 1096, 1098, 1099, 1100, 1101,  
1102, 1103, 1129, 1179, 1181, 1187,  
1188, 1190, 1202, 1203, 1215, 1233  
Runco ..... 1151  
Sampo ..... 1004, 1006, 1171, 1172  
Samsung ..... 1004, 1005, 1006, 1012, 1015, 1019,  
1104, 1105, 1106, 1171, 1172, 1204  
Samsux ..... 1171  
Sansui ..... 1191  
Sanyo ..... 1004, 1048, 1049,  
1080, 1107, 1108, 1162, 1169, 1180  
Scotch ..... 1006  
Scott ..... 1004, 1006, 1012, 1024, 1035, 1038, 1046  
Sears ..... 1000, 1004, 1006, 1013, 1014, 1019, 1046,  
1048, 1049, 1051, 1066, 1071, 1072, 1109,  
1110, 1162, 1180, 1181, 1189  
Sharp ..... 1004, 1006, 1012, 1029, 1095, 1111, 1112,  
1113, 1122, 1171, 1173  
Shogun ..... 1004  
Signature ..... 1001, 1083, 1115  
Simpson ..... 1008  
Sony ..... 1002, 1205, 1216, 1218  
Soundesign ..... 1004, 1006, 1008, 1038, 1046  
Squareview ..... 1189  
SSS ..... 1004, 1038  
Starlite ..... 1038  
Supre-Macy ..... 1174  
Supreme ..... 1002  
Sylvania ..... 1004, 1006, 1008, 1019, 1062, 1068, 1069,  
1075, 1076, 1077, 1088, 1116, 1161, 1183  
Symphonic ..... 1033, 1038, 1189  
Tandy ..... 1173  
Tatung ..... 1003  
Technics ..... 1054  
Techwood ..... 1004, 1006, 1054  
Teknika 1004, 1005, 1006, 1008, 1012, 1013, 1014, 1016,  
1038, 1046, 1076, 1082, 1083, 1105,  
1170, 1171  
Telecaption ..... 1117  
TMK ..... 1004, 1006  
Toshiba ..... 1049, 1071, 1072, 1105, 1109, 1117,  
1118, 1160, 1162  
Totevision ..... 1171  
Universal ..... 1052, 1087  
Victor ..... 1066, 1182  
Vidtech ..... 1004, 1005, 1006  
Viking ..... 1174  
Wards ..... 1000, 1001, 1004, 1005, 1006, 1019, 1024,  
1033, 1046, 1052, 1062, 1068, 1069, 1075,  
1076, 1083, 1087, 1088, 1095, 1119, 1120  
Yamaha ..... 1004, 1005, 1006, 1019  
Zenith ..... 1004, 1083, 1151, 1152, 1153, 1154,  
1210, 1217

## VCR Codes

Admiral ..... 2132  
Adventura ..... 2026  
Aiko ..... 2027  
Aiwa ..... 2026  
Akai ..... 2003, 2004, 2005, 2007, 2008,  
..... 2111, 2112, 2113  
American High ..... 2021  
Asha ..... 2013  
Audio Dynamics ..... 2009, 2010  
Audiovox ..... 2014  
Bell & Howell ..... 2011  
Beaumarck ..... 2013  
Broksonic ..... 2012, 2025  
Calix ..... 2014  
Candle ..... 2013, 2014, 2015, 2016,  
..... 2017, 2018, 2019  
Canon ..... 2021, 2022, 2114  
Capehart ..... 2020, 2110  
Carver ..... 2062  
CCE ..... 2027, 2061  
Citizen ..... 2013, 2014,  
..... 2015, 2016, 2017, 2018, 2019, 2027  
Colortyme ..... 2009  
Colt ..... 2061  
Craig ..... 2013, 2014, 2023, 2061  
Curtis-Mathes ..... 2000, 2009, 2013,  
..... 2016, 2018, 2021, 2022, 2024, 2115, 2131  
Cybernex ..... 2013  
Daewoo ..... 2015, 2017, 2019, 2025, 2026,  
..... 2027, 2028, 2110  
Daytron ..... 2110  
DBX ..... 2009, 2010  
Dimensia ..... 2000, 2131  
Dynatech ..... 2026  
Electrohome ..... 2014, 2029  
Electroponic ..... 2014  
Emerson ..... 2012, 2014, 2015, 2021, 2024, 2025,  
..... 2026, 2029, 2030, 2031, 2032, 2033, 2034, 2035,  
..... 2036, 2037, 2038, 2039, 2040, 2041,  
..... 2042, 2044, 2045, 2046, 2047, 2065,  
..... 2113, 2116, 2117, 2130  
Fisher ..... 2011, 2023, 2048,  
..... 2049, 2050, 2051, 2052, 2118  
Fuji ..... 2021, 2119  
Funai ..... 2026  
Garrard ..... 2026  
GE ..... 2000, 2001, 2013,  
..... 2021, 2022, 2053, 2115, 2120, 2131  
Goldstar ..... 2009, 2014, 2018, 2054, 2131  
Gradiente ..... 2026  
Harley Davidson ..... 2026  
Harman Kardon ..... 2009  
Harwood ..... 2061  
Headquarter ..... 2011  
Hitachi ..... 2055, 2056,  
..... 2057, 2107, 2111, 2120, 2122  
Hi-Q ..... 2023  
Instant Replay ..... 2021  
JCL ..... 2021  
JC Penney ..... 2009, 2010, 2011, 2013,  
..... 2014, 2021, 2022, 2055, 2056,  
..... 2058, 2059, 2060, 2107, 2118

Jensen ..... 2055, 2056, 2111  
 JVC ..... 2009, 2010, 2011, 2018, 2111, 2123  
 Kenwood ..... 2009, 2010, 2011,  
 ..... 2016, 2018, 2111, 2123  
 KLH ..... 2061  
 Kodak ..... 2014, 2021  
 Lloyd ..... 2026  
 Logik ..... 2061  
 LXI ..... 2014  
 Magnavox ..... 2021, 2022, 2062,  
 ..... 2063, 2104, 2105, 2108, 2124  
 Magnin ..... 2013  
 Marantz ..... 2009, 2010, 2011,  
 ..... 2016, 2018, 2021, 2062, 2064  
 Marta ..... 2014  
 Masushita ..... 2021  
 Mei ..... 2021  
 Memorex ..... 2011, 2013,  
 ..... 2014, 2021, 2023, 2026, 2104, 2132  
 MGA ..... 2029, 2065, 2113  
 MGN Technology ..... 2013  
 Midland ..... 2053  
 Minolta ..... 2055, 2056, 2107  
 Mitsubishi ..... 2029, 2055, 2056, 2065, 2066, 2067, 2068,  
 .... 2068, 2070, 2071, 2072, 2073, 2074, 2106, 2113, 2123  
 Montgomery Ward ..... 2075, 2132  
 Motorola ..... 2021, 2132  
 MTC ..... 2013, 2126  
 Multitech ..... 2013, 2016, 2026, 2053, 2061  
 NEC ..... 2009, 2010, 2011, 2016, 2018,  
 ..... 2064, 2076, 2078, 2079, 2111, 2123  
 Nikko ..... 2014  
 Noblex ..... 2013  
 Olympus ..... 2021  
 Optimus ..... 2014, 2132  
 Optonica ..... 2096  
 Panasonic ..... 2021, 2022, 2109, 2125, 2126, 2127  
 Pentax ..... 2016, 2055, 2056, 2107, 2120  
 Pentax Research ..... 2018  
 Philco ..... 2021, 2022, 2062, 2063  
 Philips ..... 2021, 2062, 2096, 2124  
 Pilot ..... 2014  
 Pioneer ..... 2010, 2055, 2080, 2081, 2123  
 Portland ..... 2016, 2017, 2019, 2110  
 PROSCAN ..... 2000, 2001, 2131  
 Protec ..... 2061  
 Pulsar ..... 2104  
 Quarter ..... 2011  
 Quartz ..... 2011  
 Quasar ..... 2021, 2022, 2125  
 RCA ..... 2000, 2001, 2003, 2013, 2021, 2055, 2056,  
 ..... 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089,  
 ..... 2090, 2091, 2107, 2115, 2120, 2125, 2131, 2133  
 Radioshack/Realistic ..... 2011, 2013, 2014, 2021,  
 ..... 2022, 2023, 2026, 2029, 2049, 2050, 2096, 2132  
 Radix ..... 2014  
 Randex ..... 2014  
 Ricoh ..... 2128  
 Runco ..... 2104  
 Samsung ..... 2005, 2013, 2015, 2033, 2053, 2112  
 Sanky ..... 2104, 2132  
 Sansui ..... 2010, 2092, 2111, 2123  
 Sanyo ..... 2011, 2013, 2023  
 Scott ..... 2012, 2015, 2025, 2032  
 ..... 2038, 2065, 2093, 2116

Sears ..... 2011, 2014, 2021, 2023, 2048,  
 ..... 2049, 2050, 2051, 2055, 2056, 2107, 2118  
 Sharp ..... 2017, 2029, 2094, 2095, 2096, 2097, 2131  
 Shintom ..... 2004, 2056, 2061, 2098  
 Shogun ..... 2013  
 Signature ..... 2131  
 Singer ..... 2021, 2061, 2128  
 Sony ..... 2004, 2098, 2099, 2119  
 STS ..... 2021, 2107  
 Sylvania ..... 2021, 2022,  
 ..... 2026, 2062, 2063, 2065, 2124  
 Symphonic ..... 2026  
 Tandy ..... 2011  
 Tashiko ..... 2014  
 Tatung ..... 2111  
 TEAC ..... 2026, 2085, 2111  
 Technics ..... 2021, 2109  
 Teknika ..... 2014, 2021, 2026, 2100, 2129  
 TMK ..... 2013, 2024, 2047  
 Toshiba ..... 2015, 2049, 2051,  
 ..... 2055, 2065, 2093, 2116  
 Totevision ..... 2013, 2014  
 Unitech ..... 2013  
 Vector Research ..... 2009, 2010, 2015, 2016  
 Victor ..... 2010  
 Video Concepts ..... 2009, 2010, 2015, 2016, 2113  
 Videosonic ..... 2013  
 Wards ..... 2013, 2014, 2015, 2021,  
 ..... 2023, 2026, 2029, 2055, 2056, 2061,  
 ..... 2096, 2101, 2102, 2103, 2107, 2116, 2132  
 XR-1000 ..... 2021, 2026, 2061  
 Yamaha ..... 2009, 2010, 2011, 2018, 2111  
 Zenith ..... 2004, 2098, 2104, 2119, 2128

## Cable Box Codes

ABC ..... 5002, 5003, 5004, 5005, 5006, 5007, 5053  
 Antronix ..... 5008, 5009  
 Archer ..... 5008, 5009, 5010, 5011  
 Cabletenna ..... 5008  
 Cableview ..... 5008  
 Century ..... 5011  
 Citizen ..... 5011  
 Colour Voice ..... 5012, 5013  
 Comtronics ..... 5014, 5015  
 Contec ..... 5016  
 Eastern ..... 5017  
 Garrard ..... 5011  
 GC Electronics ..... 5009  
 Gemini ..... 5018, 5019, 5049  
 General Instrument ..... 5003  
 Hamlin ..... 5020, 5021, 5022, 5035, 5045  
 Hitachi ..... 5003  
 Hytex ..... 5002  
 Jasco ..... 5011  
 Jerrold ..... 5003, 5005, 5007, 5018, 5023, 5024, 5046,  
 ..... 5053  
 Magnavox ..... 5025  
 Memorex ..... 5026  
 Movie Time ..... 5002, 5027, 5028  
 NSC ..... 5002, 5027, 5028  
 Oak ..... 5002, 5016, 5029  
 Panasonic ..... 5048, 5052  
 Paragon ..... 5026

Philips	. 5011, 5012, 5013, 5019, 5025, 5030, 5031, 5032
Pioneer	..... 5033, 5034
Pulsar	..... 5026
RCA	..... 5047, 5049, 5052
Realistic	..... 5009, 5049
Regal	..... 5022, 5035
Regency	..... 5017
Rembrandt	..... 5003
Runco	..... 5026
Samsung	..... 5014, 5034
Scientific Atlanta	..... 5006, 5036, 5037, 5038
Signal	..... 5014, 5018
Signature	..... 5003
SL Marx	..... 5014
Sprucer	..... 5052
Starcom	..... 5007, 5018, 5053
Stargate	..... 5014, 5018
Starquest	..... 5018
Tandy	..... 5040
Televue	..... 5014
Tocom	..... 5004, 5023, 5041
Toshiba	..... 5026
Tusa	..... 5018
TV86	..... 5027
Unika	..... 5008, 5009, 5011
United Artists	..... 5002
United Cable	..... 5053
Universal	..... 5008, 5009, 5010, 5011
Videoway	..... 5044
Viewstar	..... 5015, 5025, 5027, 5040
Zenith	..... 5026, 5050, 5051

### Satellite Receiver Codes

Alphastar	..... 5079
Chapparral	..... 5056, 5057
Dishnet	..... 5078
Drake	..... 5058, 5059
Echostar	..... 5089
GE	..... 5000, 5001
General Instruments	..... 5060, 5061, 5062
Hitachi	..... 5083, 5084
Hughes	..... 5077, 5090
JVC	..... 5082
Panasonic	..... 5075
Philips	..... 5085
Primestar	..... 5076
PROSCAN	..... 5000, 5001
RCA	..... 5000, 5001, 5071, 5080, 5081
Realistic	..... 5063
Sony	..... 5072
STS1	..... 5064
STS2	..... 5065
STS3	..... 5066
STS4	..... 5067
Toshiba	..... 5068, 5073
Uniden	..... 5086

### Audio Codes

#### RCA and Dimensia

AM/FM	..... 4003, 4270
AUX	..... 4004

Phono	..... 4005
Tape	..... 4006
CD	..... 4007, 4190, 4211

#### Receivers

Aiwa	..... 4261, 4262, 4263, 4264, 4265, 4266, 4267, 4277
Denon	..... 4283
Harman Kardon	..... 4276
JVC	..... 4268
JVL	..... 4276
Kenwood	..... 4269
Onkyo	..... 4278
Optimus	..... 4284
Panasonic	..... 4279, 4280
Pioneer	..... 4275
RCA	..... 4270
Sherwood	..... 4282
Sony	..... 4271, 4272, 4281
Technics	..... 4279, 4280
Wards	..... 4275
Yamaha	..... 4274, 4275

#### CD Players

ADC	..... 4200, 4201, 4220
Aiwa	..... 4175, 4203
Akai	..... 4205
Denon	..... 4208
Dynatech	..... 4177
Emerson	..... 4178
Fisher	..... 4179, 4212, 4213
GE	..... 4216
Hitachi	..... 4180
JVC	..... 4181, 4221
Kenwood	..... 4183, 4222, 4224
Luxman	..... 4225
Marantz	..... 4185, 4226
Mitsubishi	..... 4229, 4230
MCS	..... 4228
Nakamichi	..... 4232, 4233
NEC	..... 4184
Onkyo	..... 4186, 4234, 4235
Optimus	..... 4237, 4238, 4239
Panasonic	..... 4188
Pioneer	..... 4189, 4240
RCA	..... 4190, 4211
Sanyo	..... 4250
Sears	..... 4207
Sherwood	..... 4243
Sony	..... 4195, 4209, 4244
Teac	..... 4245, 4246, 4247
Technics	..... 4197
Toshiba	..... 4231
Yamaha	..... 4198, 4199, 4268