



# ***MusicaTools<sup>TM</sup>***

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## **User's Guide**

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## Introduction

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The *NetStreams*<sup>®</sup> *MusicaTools* is a multi-purpose configuration tool that allows you to:

- build RS-232 commands,
- test RS-232 data sent to or from a *Musica*<sup>™</sup> ADC,
- upload or download IR commands to/from the *Musica* ADC, and
- make changes to settings in various rooms in a project.

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**NOTE:** *MusicaTools* works for both *Musica* and *Panorama*<sup>™</sup> products. The software can be used in integrating, manipulating, and testing RS-232 commands on a *PAN6400*.

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### Manuals

All *NetStreams* manuals can be downloaded by authorized *NetStreams* dealers from the Dealer section of the *NetStreams* website at [www.netstreams.com](http://www.netstreams.com).

### Hardware Requirements

The minimum hardware requirements to run *MusicaTools* depend on how you are using the application. For further information, see *Connecting a Musica System* on page 2-6.

### Software Requirements

The minimum PC requirements for *MusicaTools* are:

- Windows XP operating system with SP2, and
- 512 MB of RAM.

For more information on requirements, contact *NetStreams* Technical Support at 866-353-3496.



## Installing and Running *MusicaTools*

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### Installing *MusicaTools*

Before you can run *MusicaTools*, you must install and configure the software.

1. Close any open applications.
2. From your PC, open Internet Explorer.
3. Go to <http://www.netstreams.com>.
4. From the Dealer Login area in the lower right-hand corner of the screen, enter your username and password and select **Login**.

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**NOTE:** If you do not have a login ID, contact your regional sales manager or distributor to find out how to get one.

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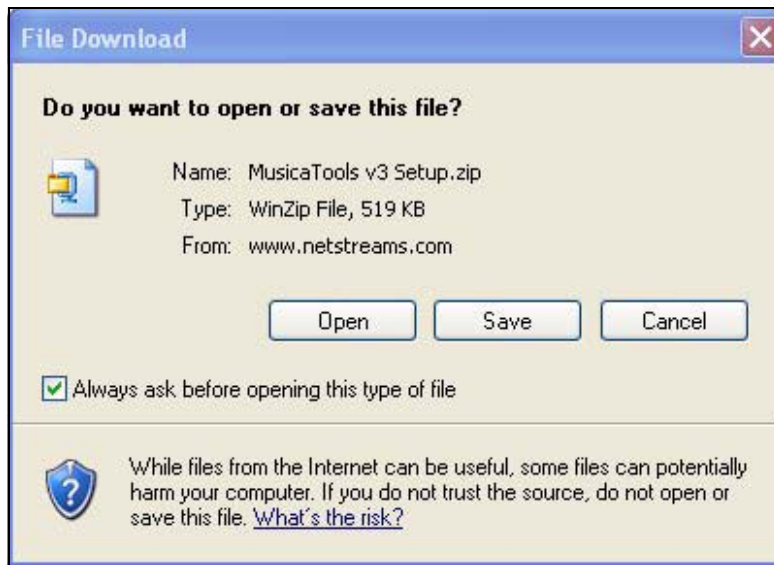
A Dealer information page displays.

5. Select the **Dealer Documents** tab.

A list of documents and applications displays.

6. Scroll to the *Musica Tools* section.
7. Click ***MusicaTools v3.0 Software for MU5066***.

You are asked if you want to run or save the *MusicaTools* program (see Figure 2-1).



**Figure 2-1** Application prompt

**8. Select **Save**.**

You are prompted to save the file to your computer.

**9. Browse to the folder where you'd like to save the file.**

**10. Select **Save As...****

The file saves to the indicated location on your hard drive.

**11. Using Windows Explorer, navigate to the file you just saved on your computer.**

**12. Double-click the file to open it.**

The zipped file opens (see Figure 2-2).

Name	Type	Pack...	Has ...	Size	R...	Date
MusicaTools 3.0.msi	Windows Inst...	461 KB	No	643 KB	29%	6/17/2005 11:13 AM
MusicaTools v3 Setup.Exe	Application	59 KB	No	108 KB	46%	3/19/2003 12:03 AM
MusicaTools v3 Setup.Ini	Configuration...	1 KB	No	1 KB	16%	6/17/2005 11:13 AM

**Figure 2-2** Zip file opens

**13. Using **File>Extract All...** extract all files to a directory of your choice.**

**14. Using Windows Explorer, navigate to the directory.**

**15. Double-click on the **MusicaTools v3 Setup.exe** file.**

You may be prompted that the publisher could not be verified (see Figure 2-3).



**Figure 2-3** Publisher verification

**16. Select **Run**.**

The *MusicaTools* Welcome window displays (see Figure 2-4).



**Figure 2-4** Welcome window

**17. Select **Next**.**

You are asked which directory to install the files in (see Figure 2-5).

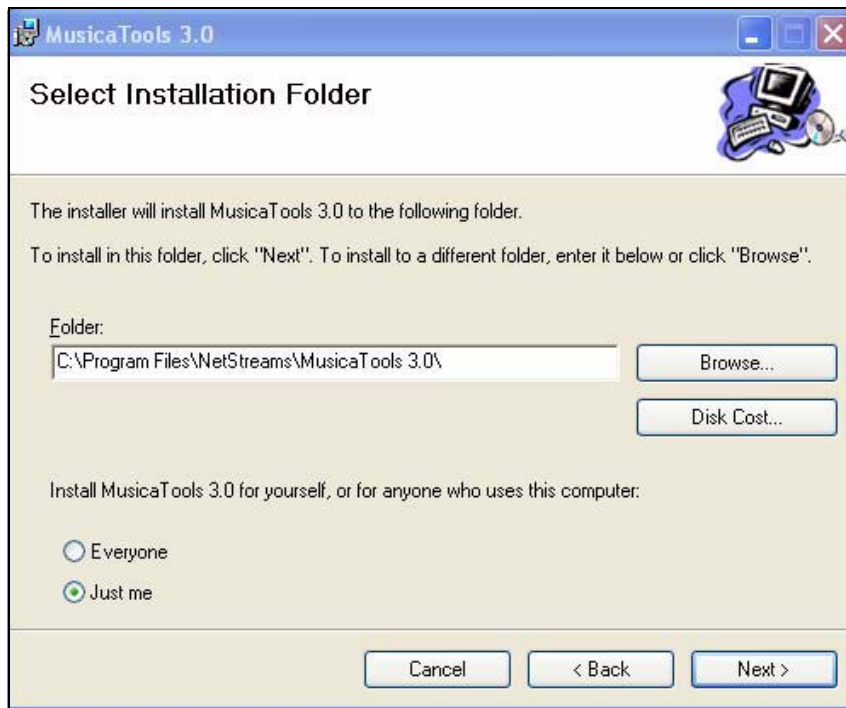


Figure 2-5 Installation folder selection

18. If you are going to be the only person using *MusicaTools*, select **Just Me**. Otherwise, select **Everyone** so that anyone using your computer can have access to the software.
19. Select **Next**.  
You are asked to confirm the installation (see Figure 2-7).

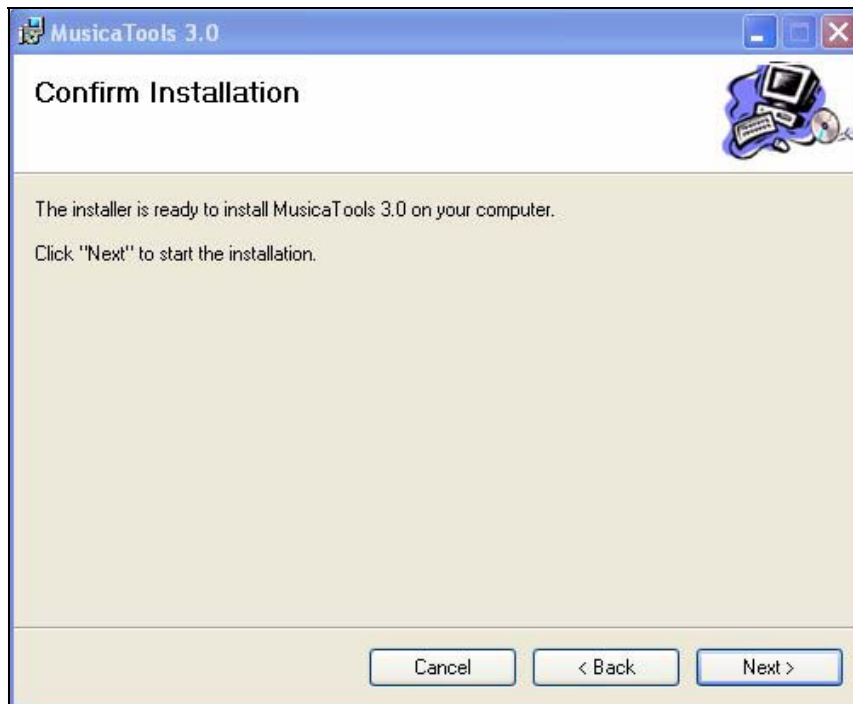
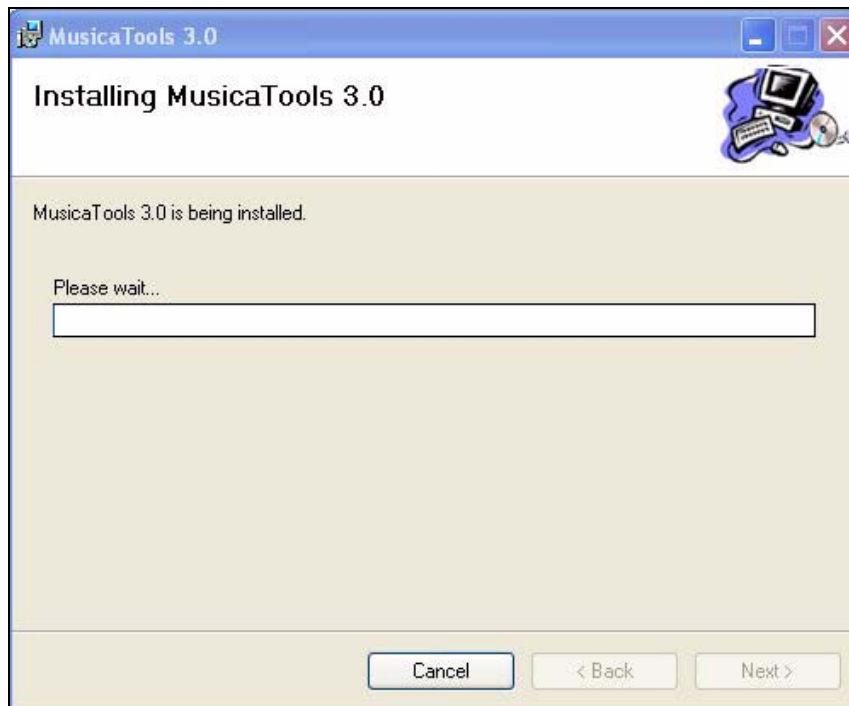


Figure 2-6 Installation confirmation

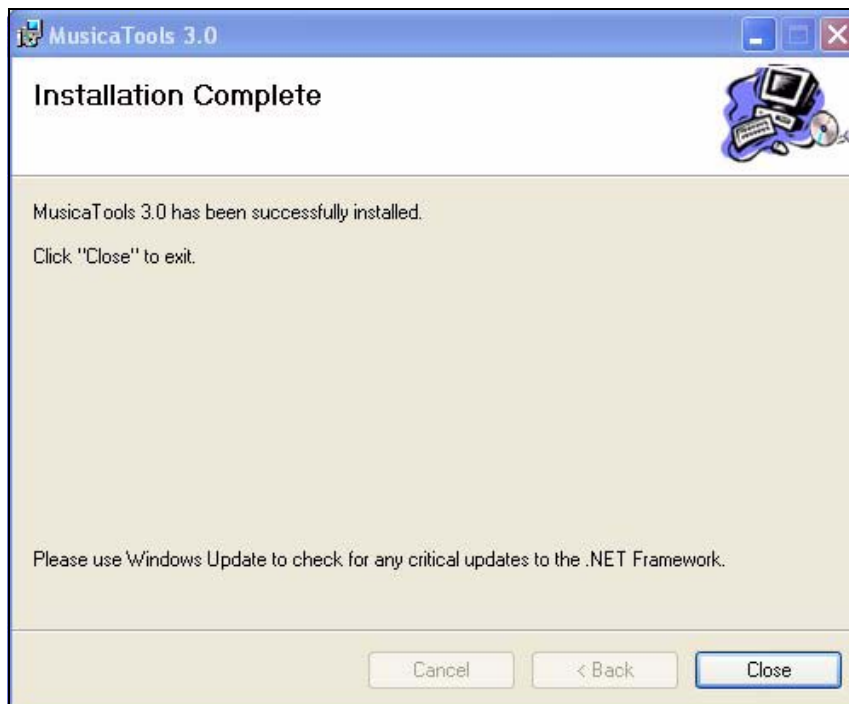
**20. Select Next.**

*MusicaTools* begins installing (see Figure 2-7).



**Figure 2-7** *MusicaTools* installation

You are prompted when installation has completed (see Figure 2-8).



**Figure 2-8** Installation complete prompt

**21. Select Close.**

Installation is complete.

**Connecting a Musica System**

Configuring your system for use with *MusicaTools*, depends on how you plan to use the software. The following are minimum hardware configurations for use with *MusicaTools*.

**Hardware Requirements**

To complete a minimum configuration, refer to Table 2-1.

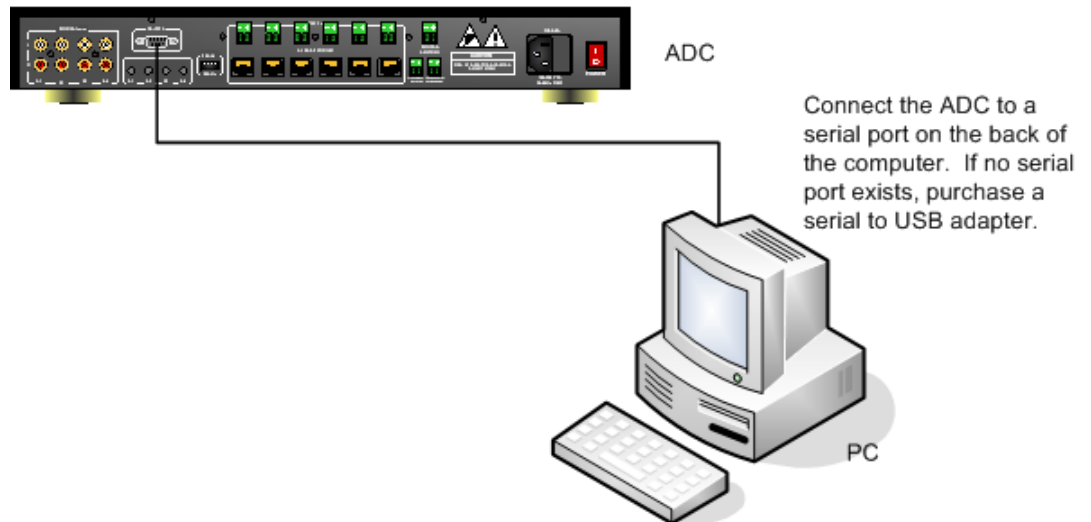
**Table 2-1**  
**Minimum Configuration**

<b>Equipment Required</b>	<b>Uploading/ Downloading IR</b>	<b>Controlling Keypads</b>	<b>Testing RS-232</b>
<i>NetStreams Musica</i> MU5066 Audio Distribution Center® (ADC). Part Number: NS-MU5066ADC.	X	X	X
Computer with serial port (or USB to serial adapter).	X	X	X
<i>NetStreams</i> MU5066 keypad.		X	X
A siamese CAT5e cable (14/4 or 14/4) with speaker wire.		X	X
RS-232 null modem cable.	X	X	X
Power cable for the <i>Musica</i> MU5066ADC.	X	X	X
Audio source.			X

The following sections provide further information on minimum system configurations.

**Uploading or Downloading IR Commands**

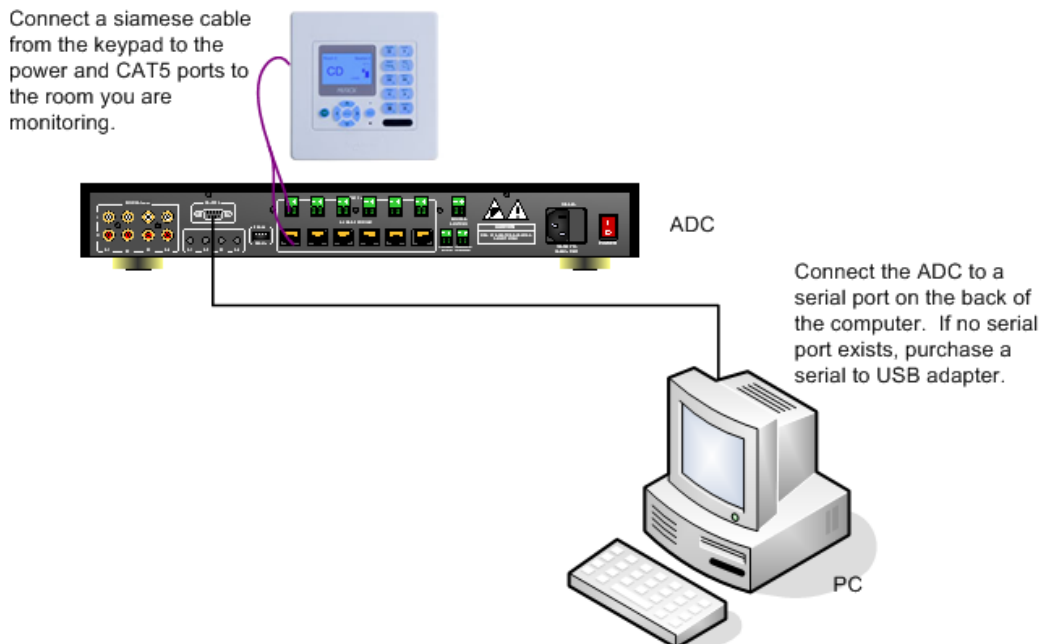
If you are uploading or downloading IR commands, the minimum system configuration is displayed in Figure 2-11.



**Figure 2-9** Minimum upload/download configuration

### **Controlling Keypad Functions**

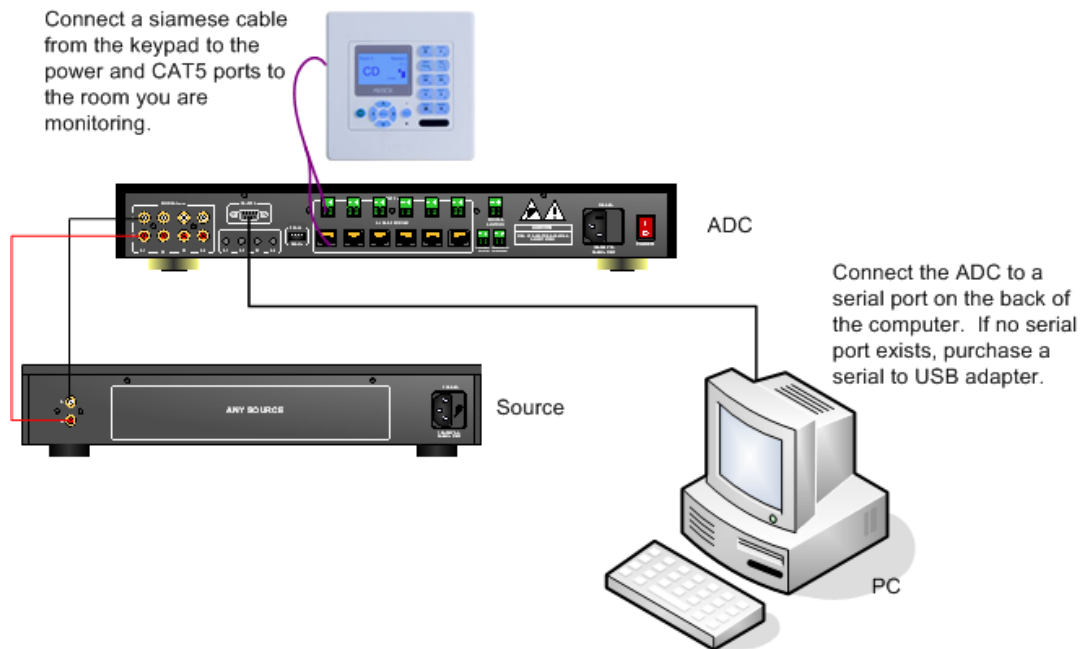
If you are controlling keypads, the minimum system configuration is displayed in Figure 2-11.



**Figure 2-10** Minimum keypad configuration

### **Testing RS-232**

If you are testing RS-232, the minimum system configuration is displayed in Figure 2-12.



**Figure 2-11** Minimum configuration for testing IR

## Running *MusicaTools*

To start *MusicaTools*, complete the following steps:

1. Turn all devices on.
  2. Using Windows Explorer, navigate to **C:>Program Files>NetStreams>MusicaTools 3.0**.
  3. Double-click on **MusicaTools\_v30.exe**.
- The *MusicaTools* interface displays (see Figure 2-12).

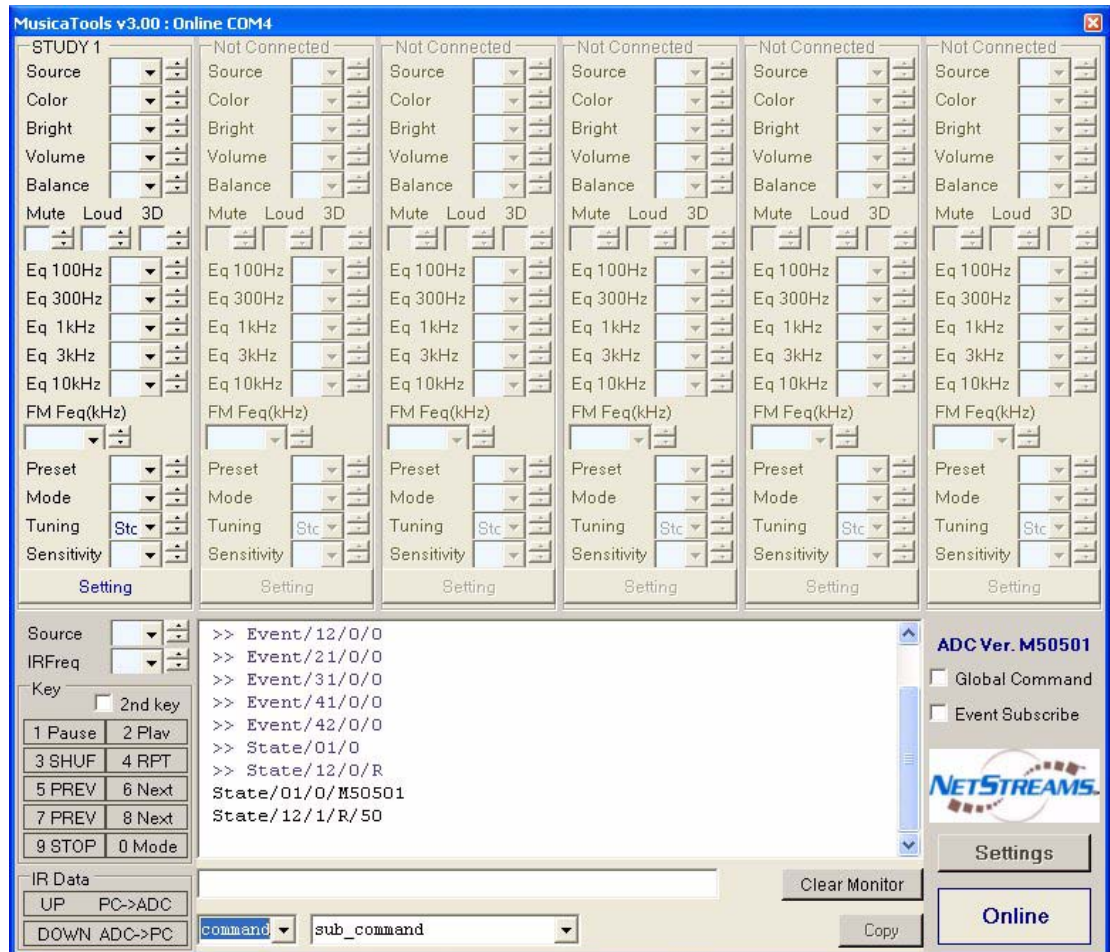


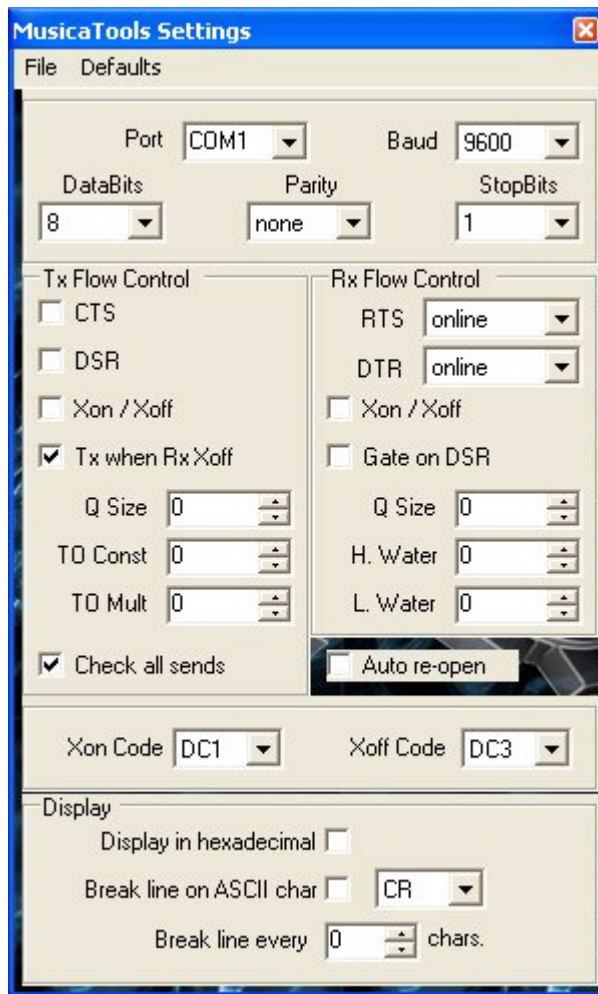
Figure 2-12 MusicaTools interface

4. Refer to *MusicaTools Interface* on page 3-1 for information on using the *MusicaTools* interface.

## Settings

To ensure that *MusicaTools* is running correctly, you must select the correct system settings. To do this, complete the following steps:

1. Select the **Settings** button on the lower right-hand corner of the interface.  
The Settings window displays (see Figure 2-13).



**Figure 2-13** Settings

- The only setting you should change is the COM port setting (Table 2-2 provides further information regarding the Settings window).

---

**IMPORTANT!** Do not change any other settings than the COM port. Changing anything else may impede communication with *Musica*.

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*MusicaTools* connects to the ADC using the settings you provided.

- Close the window.
- Select **Offline** in the lower right-hand corner of the *MusicaTools* interface. Information displays in the monitor window (see Figure 2-14). Offline toggles to read “Online.”



Figure 2-14 Monitor window information

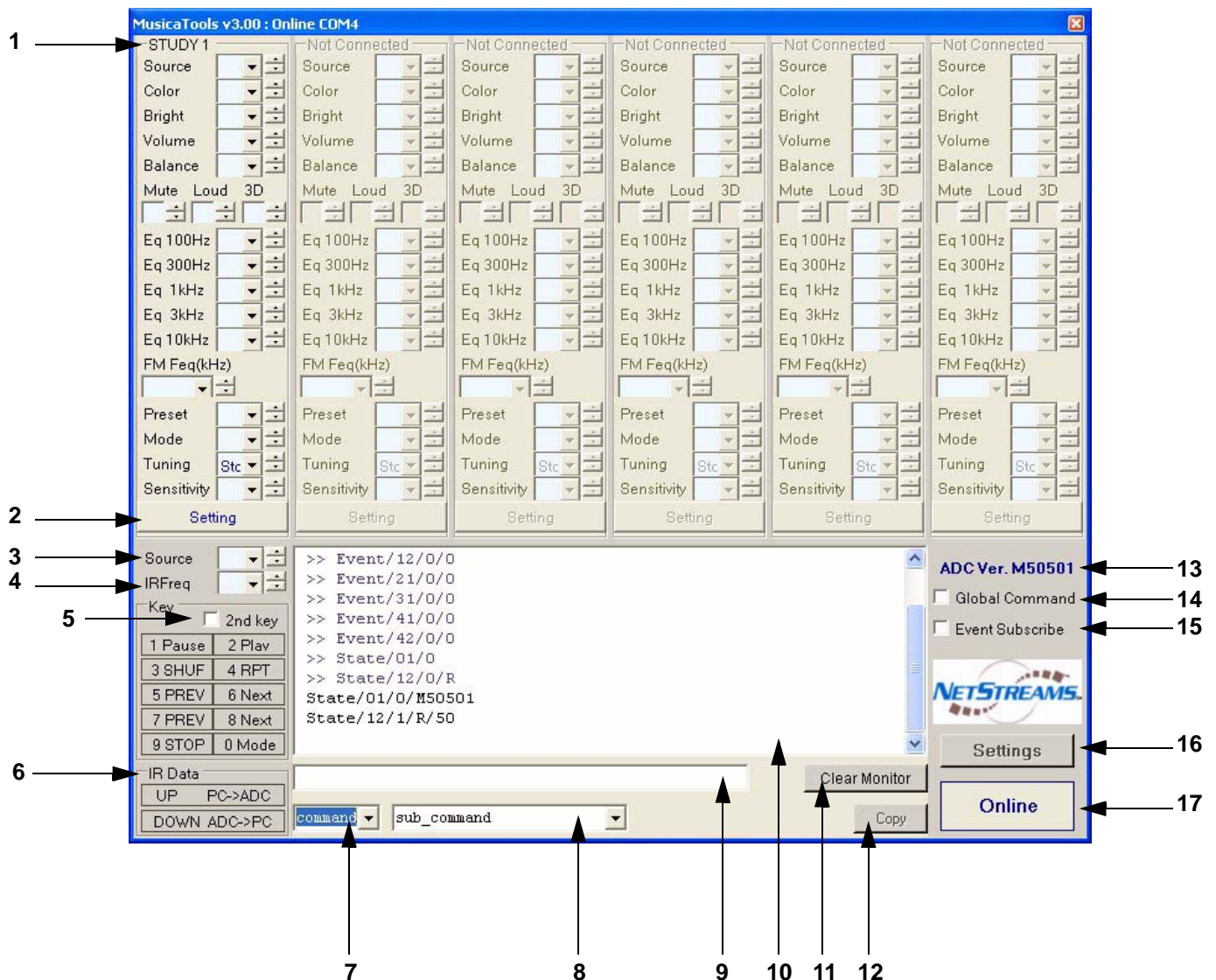
Table 2-2  
Settings

Area	Command/Function	Definition/Setting
	Port	Signifies which COM port to use for connection. To verify your COM port, go to <b>Start&gt;Control Panel&gt;System&gt;Hardware&gt;Device Manager</b> on your PC and expand Ports (COM&LPT).
	Baud	Denotes the Baud rate of the serial port of the ADC. Must always be 9600.
	DataBits	Must always be set to 8.
	Parity	Must always be set to none.
	Stop Bits	Must always be set to 1.
TX Flow Control	CTS	Not Used
	DSR	Not Used
	Xon/Xoff	Not Used
	Tx when Rx Xoff	Not Used
	Q Size	Not Used
	TO Const	Not Used
	TO Mult	Not Used
	Check all Sends	Not Used
Rx Flow Control	RTS	Online
	DTR	Online
	Xon/Xoff	Not Used
	Gate on DSR	Not Used
	Q Size	Not Used
	H. Water	Not Used
	L. Water	Not Used
	Auto re-open	Not Used
Xon Code		DC1
Xoff Code		DC3
Display	Display in hexadecimal	Not Used
	Break line on ASCII char	Not Used
	CR	Not Used
	Break line every ___ chars.	Not Used



**MusicaTools Interface**

Figure 3-1 displays the *MusicaTools* interface.



**Figure 3-1** *MusicaTools* interface

The *MusicaTools* interface consists of the following:

- 1 Rooms - information for up to six rooms connected to the ADC you are monitoring
- 2 toggle switch for settings and status
- 3 source selection - for selecting sources 1 to 4
- 4 IR Freq - 38 kHz or 56 kHz
- 5 keypads
  - press and hold (2nd key) selection
  - ten IR commands and mode selection
- 6 IR Data - allows you to upload or download the IR commands between PC and ADC
- 7 command selection (used as shortcuts to build RS-232 commands):
  - State
  - Chang
  - Nudge
- 8 sub\_command - a list of sub commands for use as programming shortcuts
- 9 manual entry window - field where RS-232 commands are entered
- 10 monitor window - displays a history of previously enter RS-232 commands
- 11 Clear monitor - clears everything in the monitor window
- 12 Copy - copies selected command and sub command into the manual entry window
- 13 Firmware Version. Check the ADC firmware version to ensure you have the most current on your system. Settings is only available when online mode is selected.
- 14 Global command - applies the commands set up in *MusicaTools* for the first programmed keypad to all other keypads.

---

**NOTE:** Global Command works for up to 18 zones.

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- 15 Event subscribe - when checked, any values that change on the ADC are reported in the monitor window.
- 16 Settings - opens the Settings window.
- 17 Offline/Online toggle - connects or disconnects *MusicaTools* from the attached system.

## Uploading/Downloading IR Commands

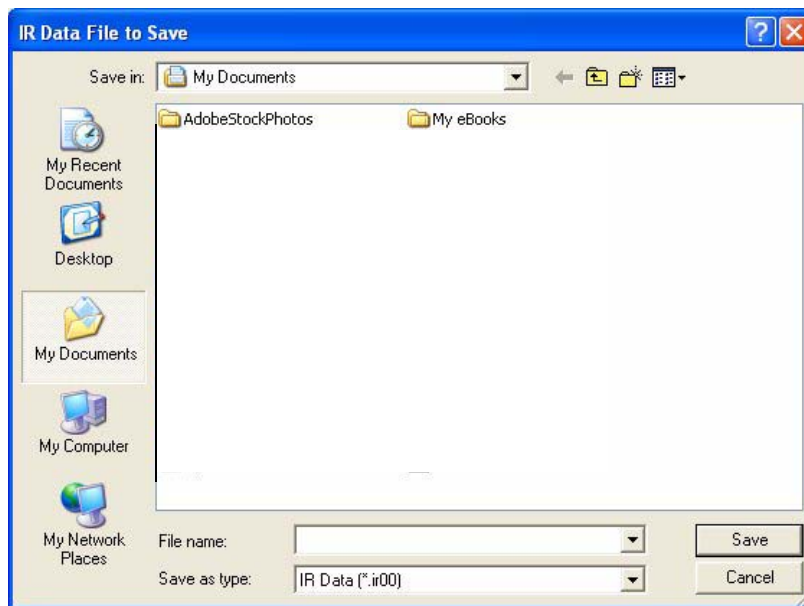
One of the major benefits of *MusicaTools* is the ability to store, retrieve, and reuse IR commands. This chapter provides information on how to upload and download IR commands.

### Save Commands

To download IR commands to a PC, complete the following steps:

1. Select the **DOWN ADC->PC** button in the lower left-hand corner of the *MusicaTools* interface.

You are prompted for a file download destination and file name (see Figure 4-1).



**Figure 4-1** Save to file prompt

2. Browse to the folder where you want to store the IR commands.
3. In the File name field, type the name of the file you want to save (for instance, Sony DVP-CX777ES).
4. Select **Save**.

IR codes scroll in the monitor window as they are downloaded to the file (see Figure 4-2).

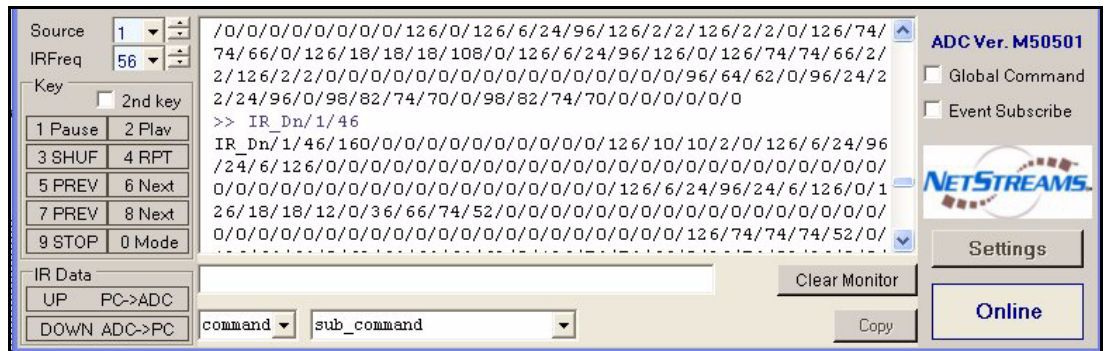


Figure 4-2 Scrolling IR codes

When the scrolling stops, the files have been created (for instance, Sony DVP-CX777ES as seen in Figure 4-3).

**NOTE:** Information is stored in files of various extensions (one file per button press). However, the file you'll be asked to load (when you want to upload) will be the one with the .ir00 extension. This will upload all the files for each button press.

Name	Size	Type	Date Modified
Sony DVP-CX777ES.ir00	1 KB	IR00 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir01	1 KB	IR01 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir02	1 KB	IR02 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir03	1 KB	IR03 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir04	1 KB	IR04 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir05	1 KB	IR05 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir06	1 KB	IR06 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir07	1 KB	IR07 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir08	1 KB	IR08 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir09	1 KB	IR09 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir10	1 KB	IR10 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir11	1 KB	IR11 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir12	1 KB	IR12 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir13	1 KB	IR13 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir14	1 KB	IR14 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir15	1 KB	IR15 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir16	1 KB	IR16 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir17	1 KB	IR17 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir18	1 KB	IR18 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir19	1 KB	IR19 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir20	1 KB	IR20 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir21	1 KB	IR21 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir22	1 KB	IR22 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir23	1 KB	IR23 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir24	1 KB	IR24 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir25	1 KB	IR25 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir26	1 KB	IR26 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir27	1 KB	IR27 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir28	1 KB	IR28 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir29	1 KB	IR29 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir30	1 KB	IR30 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir31	1 KB	IR31 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir32	1 KB	IR32 File	2/23/2006 1:46 PM
Sony DVP-CX777ES.ir33	1 KB	IR33 File	2/23/2006 1:46 PM

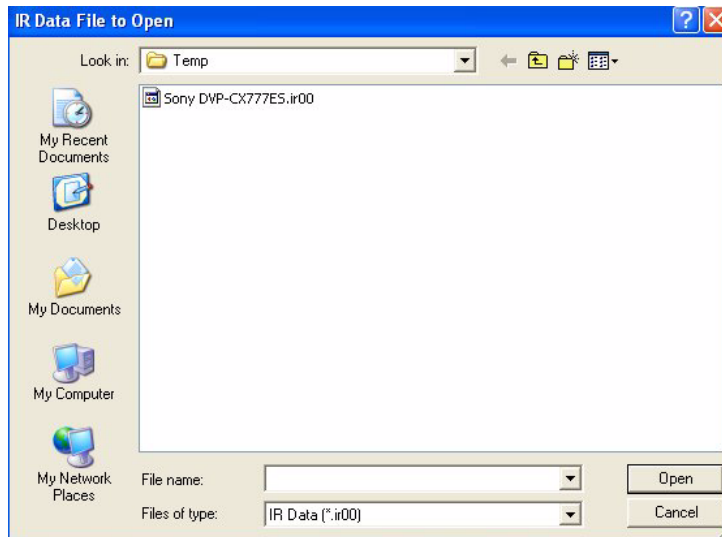
Figure 4-3 Downloaded IR files

## Uploading IR Commands

To upload source IR commands to an ADC, complete the following steps:

1. Connect to a *Musica* system in the minimum configuration for uploading IR commands (see Figure 2-10).
2. From the *MusicaTools* interface, select the **UP PC -> ADC** button in the lower left-hand corner of the screen.

You are prompted to select a file to upload (see Figure 4-4).



**Figure 4-4** Upload file prompt

3. Browse to the correct folder and double-click on the file name.  
IR commands scroll through the monitor window on the *MusicaTools* interface as the file loads into the ADC.
4. When IR commands no longer scroll in the monitor window, all commands are loaded.



## Controlling Keypads

Another benefit of *MusicaTools* is the ability to configure any *Musica* keypad attached to the ADC from a central location. This chapter provides information on how to send commands to a keypad.

---

**NOTE:** Once selections are made, they are applied to the keypad. No exporting feature is needed.

---

The following steps allow you to change keypad settings

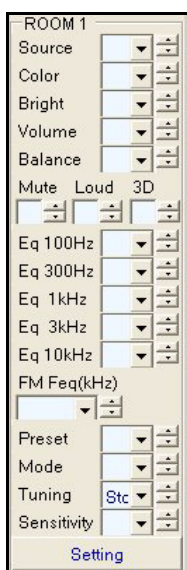
1. If you want to apply keypad settings across all keypads, select **Global Command**. Continue to step 2.

---

**NOTE:** Global Command can copy settings from one keypad to keypads in each of up to 18 zones.

---

2. From the *MusicaTools* interface, locate the room for the keypad you want to program (see Figure 5-1).



**Figure 5-1** Room 1 keypad (screen 1)

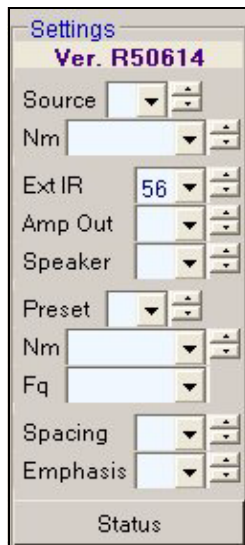
3. Enter information as described in Table 5-1.

**Table 5-1**  
**Keypad Selections (1)**

Selection	Entry
Source	Choose the source for the keypad (off, 1-4, EXT, FM, N).
Color	1 = blue (or amber in some models) background 2 = white (or green in some models) background
Bright	0 through 100. Increases or decreases keypad brightness.
Volume	0 through 35. Increases or decreases volume.
Balance	You can adjust balance by selecting L1 through L7 (to provide more or less sound from the left channel) or by selecting R1 through R7 (to provide more or less sound from the right channel). Selecting 0 balances both channels equally.
Mute	Selections turn sound On or Off.
Loud	Turns loud contour On or Off.
3D	Turns 3D contour On or Off.
Eq 100Hz through Eq 10 kHz	Allows you to adjust the 5-band equalizer by selecting settings of -12 through +12 for each band.
FM Feq (kHz)	If the source is a keypad tuner, you can adjust the frequency that the keypad defaults to.
Preset	Up to eight presets can be configured for the keypad tuner. Select the number you want (1-8) as the preset for these settings.
Mode	MT = Manual Tuning SE = Seek SC = Scan PR = Preset Scan
Tuning	Down, Up, or Stop. Allows you to adjust the keypad to search in ascending or descending order or to stop searching.
Sensitivity	Selects how sensitive a tuner is while scanning or seeking. You can select a Low, Middle, High tolerance for sensitivity.

4. Click the **Setting** button.

More keypad options display (see Figure 5-2).



**Figure 5-2** Room 1 keypad (screen 2)

5. Enter information as described in Table 5-2.

**Table 5-2**  
**Keypad Selections (2)**

Selection	Entry
Source	Choose the source for the keypad (this is the source you are about to name in the next field).
Nm (Name)	Choose from a list of names for the keypad stream (CD, AUX, Tape, Tuner, etc.)
Ext IR	Either 56 or 38 kHz signal (depending on source).
Amp Out	I = Internal Amp (keypad amp only). I + E = Internal amp and an external amp connected by the EIM port. EV = External amp only (variable output). EF = External amp only (fixed output).
Speaker	Choose from 4, 6, or 8 ohm speakers.
Preset	Up to eight presets can be configured for the keypad tuner. Select the number you want (1-8) as the preset for these settings.
Nm (Name)	Preset name. Choose from a list of names for the selected keypad tuner (see the <i>Musica MU5066 Installation and User's Guide</i> for a list of pre-defined preset names).
Fq	Frequency setting (for a selected preset on a tuner).
Spacing	50,100,200 - the frequency spacing (in kHz) between stations on a tuner. 50 and 100 kHz are typically used in Europe and 200 kHz is used in North America.
Emphasis	50 or 75 - the time spacing (in microseconds). Use 50 microseconds for Europe, and 75 microseconds for North America. This helps to improve the signal to noise ratio for FM broadcasting.



## Entering RS-232 Commands

---

You can enter RS-232 commands two ways from *MusicaTools*: manually and through shortcuts.

### Entering Commands Manually

To enter commands manually:

1. Read the *Musica MU5066 RS-232 Integration Manual* for RS-232 codes.
2. Enter the commands in the manual entry window.
3. Click inside the manual entry window and select **Enter**.

Commands are transferred to the monitor window.

### Entering Commands Using Shortcuts

To enter commands using shortcuts:

1. Read the *Musica MU5066 RS-232 Integration Manual* for RS-232 codes.
2. From the pulldown list to the left under the manual entry window, select the command you want to enter:
  - State - version, source, IR frequency
  - Chang - source, IR frequency
  - Nudge - Single adjustments in one direction, source
3. From the pulldown list to the right under the manual entry window, select the sub command you want to enter.
4. Select **Copy**.

Commands are copied to the manual entry window.

5. Click inside the manual entry window and select **Enter**.

Commands are transferred to the monitor window.

6. Edit as necessary.

