1.0 **System Requirements**

The Music Machine Software (or MMS) is designed to operate on any standard currently available NT-based PC. Specifically it requires the following minimum components:

- **CPU**: Pentium III/400MHz+
- **Memory**: 64Mb+
- **CD-Rom**: Any CD with Digital Audio Extraction capability
- **Hard Disk**: 20Gb+ (2Gb for system partition, the rest is music storage)
- **Operating System**: Windows NT 4.0, Windows 2000, Windows XP
- **Display**: 800x600 standard, Touch Screen recommended
- **Keyboard**: NOT REQUIRED
- **Mouse**: NOT REQUIRED

Further details:

**CDs:**

We recommend CD’s currently manufactured by Sony, Lite-On, Asus, and Creative as excellent CDs for Music Machine installations. Really, any CD that reliably rips audio can be used. Look at the description of the capabilities. If the words ‘audio extraction’, ‘rip’, or ‘reliable’ appear in its product description, you’re on the right track (no pun intended).

**Music Storage**

The magic number is 10Mb/minute. Uncompressed CD quality audio, such as is stored by the Music Machine Software takes a little over 10 Mb per minute of storage. 1000 minutes requires 10Gb, 2000 requires 20Gb, etc. Simply configure your machine as desired

**Touch Screen**

A touch screen is not required by the system, but is recommended. Any touch screen that emulates mouse clicks should work with the MMS. If you wish to use your MMS with a normal screen and a mouse, simply
remove the ‘null.cur’ file from your ‘mms’ directory. This will cause the normal mouse cursor to remain when the software is started.

2.0 **Partitions - EXTREMELY IMPORTANT - PLEASE READ**

The Music Machine software ASSUMES that you have defined two separate partitions, or have two hard disks in your machine, and that these are drives ‘C:\’ and ‘D:\’. It will assume it is located in the ‘c:\mms’ directory, and it will assume that all music and backup information is to be placed on the ‘d:\’ partition. If you don’t have your machine configured with a ‘c:’ and ‘d:’ drive, the SOFTWARE WILL NOT WORK.

The MMS software itself takes about 25Mb of space.

3.0 **Autorun**

AutoPlay/AutoExecute **MUST BE DISABLED** for the CD drive you intend to use to rip music. If you do NOT disable AutoPlay, the system will attempt to play the CD when you insert it prior to reading it, and the MMS WILL NOT BE ABLE TO ACCESS IT.

4.0 **Installation**

To install your MMS, simply insert the install CD in your CD drive, and execute the ‘setup.exe’ file on the CD. It will create an ‘c:\mms’ folder. To run the MMS, simply execute the ‘mms.exe’ file in that folder. That’s all there is to it.

5.0 **Power Protection**

After many years of experience we have come to realize that it is absolutely essential for you to protect and condition the power that your PC uses if you want reliable music. Dance Studios, and Dance Competitions, as a rule, do horrible things to the power. Once during a studio showcase, we actually had someone (unbeknownst to us) plug a 2000 watt follow spotlight into the same POWER STRIP our Music Machine was on. Everything went swimmingly during the competition till the pro show, when just before things got started, the person on the follow spot decided to turn it off and on about three times. This causes a huge power spike, and nearly destroyed our machine. It **did** cause it to loose music, reboot, and very nearly destroyed the pro show.

GET AND USE PROPER POWER PROTECTION. Before you use your PC in a studio, or take it on the road, spend $100 and get a UPS with ‘Automatic Voltage Regulation’. If the box your UPS came in does not specifically say
it has ‘Automatic Voltage Regulation’, or AVR, then it DOES NOT. We recommend the APC ‘Back UPS Pro’ line.

6.0 Support

The only current support is through the product support forum at


This software is delivered AS-IS, and no warranty of any kind is made relative to its operability, reliability, correctness, or usability. Any damage that is incurred to the user is the sole responsibility of the user, and no other party, person, or corporation can be held liable or responsible for such damage.

7.0 License

By opening the CD envelope and installing this software on your computer you agree to a single-use software license that simply states that you accept a limited license for installation and use on a SINGLE PC, and that you will not copy, reproduce, distribute, or transmit this software for use on any other computer anywhere. Period. We are not giving you the right to go into business copying and selling the Music Machine Software. If you do, we’ll call our lawyers.
1.0 Introduction

1.1 A bit of history

They say that ‘necessity is the mother of invention. Never was this cliché more true than for the ‘Music Machine’. The product was conceived as a direct result of experience in the dance instruction environment. It’s primary benefactors are all those professionals that teach the dance, or any other sport or activity that includes music as an integral part. We believe that the Music Machine (or ‘MM’) is the most significant advance in dance music technology since the invention of the CD.

To reiterate, the MM was created specifically for the professional teacher of dance. It has been used by numerous dance studios to effectively manage the music being played during instruction. It also greatly reduces the overhead costs associated with traditional music systems. It makes the dance instructors’ job simpler and makes them more effective. It has been used by studios and DJs to provide the music at dance competitions at all levels. It is also very effective as a tool at Parties and Dances to provide normal music, and to respond to special requests quickly.

The MM has been developed in conjunction with some of the largest dance studios in the Nation. Hundreds of hours of research have been done to determine the capabilities that are most useful for the dance instructor. It is not surprising, therefore, that once an instructor uses the MM, he or she will never want to go back to CDs again.

1.2 So, what is this ‘Music Machine’?
Basically, the MM is nothing more than a digital Jukebox. Just like the Jukeboxes of the '50s, it can hold numerous songs. Unlike traditional jukeboxes, however, rather than storing 45 RPM LPs, or CDs, the MM uses modern digital technology to store the tracks from CDs inside the machine. The MM does not come with music. One of the major tasks you will have at first is to 'Read In’ music into the MM. Once you store music that is appropriate for what is being taught, it can be accessed quickly and effectively through the use of the 'total touch' system., and will (barring unforeseen events), remain in the system indefinitely.

The single most significant feature of the machine is the ease by which music is selected. When the machine is turned on, after booting, you will see a screen like this:

To play a song using the Music Machine, all you need to do is press a song category (i.e. 'Waltz' or 'Rumba', etc..) with your finger (the monitor, you see, is a 'touch screen’), and you’ll see something like this next screen:

The songs that are displayed are all of the type you picked on the first screen.

Pressing one of the numbered buttons will cause the corresponding song to immediately begin playing. That’s It! In two presses, you’re hearing music. It takes the MM less than a second to play the music. But that’s only the beginning!

### 1.3 A tale of two teachers

Let's say you are teaching a student Samba. Let's also assume that the studio you teach in is fairly large, and there are three or four other teachers working at the same time. You are well familiar with how difficult it is to ‘capture’ the CD player to get music for your student. You have to keep one ear ‘peeled’ on the music system, and one on your student. When the current song ends, you make a mad dash for the music system, reaching it only seconds before two other teachers, and start rifling through the stacks
of CDs on top of the console. Eventually you find the CD that has that great,
slow Samba, and put it in the CD Player. You select the CD, and now try to
find out which track is the good one. Was it 5? 6? 7? ... maybe you aren’t
sure, and you have to move forward and back, playing the CD until you find
the track you want. You get it started, maybe adjust the volume properly,
and then run back to your student who, by this time is getting ready to go
out for lunch.

What’s wrong with all this? Aside from the obvious waste of your time, it
gives a completely wrong impression to the student. What you need in this
situation is a professional ‘DJ’ that takes requests. If you had a DJ, you
could simply work your way over to him, and say ‘I want a slow Samba’, and
spend the time until it comes up with your student. The Music Machine is
like a computer-based DJ.

If a song is playing and you select another song, it is remembered, and
played when the current song ends. Any number of songs can be requested
by instructors. The MM will remember exactly what was requested, and will
play each song in order. Thus, all you need to do is to pick what you want,
the MM will do the rest.

There’s still more!

1.4 Bocelli isn’t the only one with perfect pitch!

One of the most important capabilities of CD players used in dance studios is
their ability to alter the pitch of the played music. Normal CDs permit
roughly ± 12% pitch change. Any system that is to be used in an
instructional environment must have this capability. The MM permits you to
speed up any song up to 100% and slow it down by up to 90%. Total touch
buttons permit you to instantly change the pitch in 1% increments from –20
to +20%. Further, once you have set the pitch for any song, you can tell the
machine to remember the pitch so the next time the song is played, the pitch
will be the same.

Music in studios is rarely NDCA standard, unless it is recorded and noted as
such by the distributor. The MM has a system that permits any song to be
altered to be NDCA strict tempo, and to permanently store the pitch change
required to make it so. This means that although the MM does not require a
song to be ‘correct’ to play it, any song it can play can be made NDCA
correct. This is especially significant to those using the MM in a competitive
environment. Instead of it taking minutes to alter a song to be NDCA, it
takes 20-30 seconds.
1.5 Rounds

If you’re a competing professional, you know how important it is to be able to play ‘rounds’. For each of the competitive columns: Smooth, Rhythm, Standard, and Latin, there is a smaller ‘Round’ button at the bottom of the column. If pressed, each of these will randomly pick a single song from each category in the column, and will put them in the play list.

1.6 Delays

Also note to the right of the ‘Round’ buttons, there is a button with a ‘5’ inside it. This is the ‘delay’ button. Pressing it adds a five-second delay to the music being played. Pressing it multiple times continues to add time in five second intervals. When the next song is selected, the MM will wait for the specified time before playing the song. Selecting a delay before selecting a Round will insert the delay between all of the songs in the round.

1.7 Getting Music In

One of the questions that we are asked regularly is if The Music Machine comes with music. The answer is no. Think of The MM as a very sophisticated cassette tape machine. It can ‘Read In’ any CD you already have. It does this at roughly ten times normal play speed. Thus, if the track on your CD takes 3:32 to play, this will be read by the MM in 21.2 seconds. Our experience dictates that just about any song we have found will read in under 30 seconds. Loading up your music machine is simple, quick, and painless. Be sure that you archive your CDs in a safe place, and that once you read the music into the machine, you don’t also play a CD at another location to avoid Copyright violations. This also guarantees that the RIAA won’t take you to court for illegally distributing copyrighted song material.

Finally, there is lots of space inside the Music Machine. The MM-1000 has storage sufficient for One Thousand Minutes of Audio. That’s roughly 300-350 tracks (songs). The shorter the tracks are, the more can be stored. For example, if you only stored the first 1½ minutes of each song, then you could store 600 songs in the machine. Our experience is that once you read in roughly 150 –200 tracks, you will have enough to support just about any situation.

1.8 The Private Collection

The music that is stored in the ‘normal’ categories present on the main screen of the music machine are, by design, made available to all the users
of the MM. From time to time, however, an instructor or professional may wish to store ‘individual’ songs in the machine. This may be because a particular, unchangeable pitch may be needed, the song may be for a personal solo or performance, or may be a different or unique song, etc. This is the purpose of the ‘Private’ collection.

This area of storage is accessed by pressing the ‘Private’ button in the lower right corner of the music category main screen. After you do this, you will see another screen:

!!!

The names that appear can be changed to match those who will need ‘private’ storage at any given studio. After pressing one of the instructor’s buttons, you will see the standard music selection screen, described in section 1.2, above. The process for recording music in a private slot is equivalent simple. We’ll describe that shortly.

1.9 In Conclusion

Experience at dance studios indicates that once you have The Music Machine up and operational, the clutter of CDs at your music station will vanish. Teaching dance with the MM is fantastic. Instead of taking 3-5 minutes to find your music, it’s playing in two seconds. Once you have used it at a dance, you’ll never want to go back to the ‘old way’. If you use it at a competition, you’ll wonder how you managed without it. The Music Machine is one of those rare products that is in the right place, at the right time!

That’s our introduction. We talked about how easy it is to start a song up, the fact that you can change the pitch, and determine what the pitch should be to be NDCA strict, and that there’s lots of space in the MM to store your music. Now we’ll go through a detailed description of just how you use the MM. We’ll start with reading in music, which is what you’ll need to do in order to use the system, and then discuss all of the features that permit playing. Finally, we’ll discuss configuration issues, and how to shut down and start up the machine.
Enjoy your new music freedom!
2.0 Installing and Powering up for the first time.

2.1 Ergonomics

A word here on ergonomics. The MM is designed to be used by numerous professional dance instructors in a real teaching environment. Teachers will be less productive, and will like the system less if they have to sit down every time they wish to play a song. We recommend that if you are purchasing the MM with the CRT touch screen, that it be mounted at eye-level near your music station. Note that the CRT is of significant size, and will require quite a bit of space behind it.

The LCD touch screen is much smaller, more mobile, and more flexible in terms of where it can be mounted. If your music station has a horizontal, flat surface near the stereo equipment, you may wish to place the LCD monitor on that surface, tilted to about 45°. You should be able to easily see the display when standing in front of the music station.

If your music equipment is mounted in a wall enclosure, many users have found it convenient to mount the LCD panel on the wall next to the equipment at eye height. You be the judge. Just remember that each teacher will touch the panel several hundred times a day.

2.2 5...4...3...2...1... Liftoff!

The system takes about two minutes to boot. Eventually, you should see the main menu screen:

![The Music Machine!](image_url)

2.3 Testing the audio
The next thing you should do is to test the audio connection. We have included one ‘generic’ American Waltz for you to use to perform this testing. It only lasts around a minute or so, but should be sufficient to test levels and audio coming out of the MM. If you press the ‘Waltz’ button in the ‘American’ column, and then press the button labeled ‘1’, the waltz should appear in the ‘Play List’, if you see green numbers changing below the Play List, then the MM is playing the music. At this point you should hear the music on your sound system. If you don’t, you might want to take a CD player, and connect it to the same audio cable that the MM is using, to be sure that you have everything right. Once again, the MM acts just like a fancy CD player.

Let’s now talk about how you get music into the Music Machine!
3.0 Reading In Music

The first thing you are going to want to do when you get your machine is put some music in it! This is done very quickly and effectively.

Actually reading the music is simple. First, select a CD that has a song on it that you want in the system. Press the small ‘eject’ button on the CD drive in the system unit. The CD Tray will eject. Place the CD in the tray and gently press the tray in until it moves of its own accord. The CD is now ready to be ‘read’.

On the main menu, find the ‘record’ button. It is in the center of the nine button array on the right side of the screen:

When you press it, you’ll see the Recorder dialog:

This will be your ‘home’ for the next several hours. It is by using this screen that music is read into the Music Machine.

You’ll note that the dialog is divided into an upper and a lower half. The upper half is basically a CD player. The grey keys with the ‘normal’ icons on them do what you would expect. The lower half provides information regarding the reading of specified songs into the MM.

Each song is recorded on the CD on a particular track. You can press the ‘play’ button (the right pointing triangle) to play the current track. The music will be played directly off the CD (it HAS NOT been ‘read in’ at this point). This is so you can see if the track is the one you want.

If you touch the track number (‘1’ in the diagram, above), a list of all the tracks on the CD will be displayed:
Just press on one of the numbered buttons and the MM will go to the selected track. You can then ‘Play’ it (using the normal CD ‘Play’ key – the right pointing triangle, to see if it is the one you want. You’ll hear it coming out of the normal sound system, played directly from the CD.

When you have positioned the CD so the ‘Current Track’ box (in the upper left) contains the number of the track you want, you can ‘read it in’. This is done by pressing the large button on the bottom half of the screen that is titled ‘Read in the CurrentTrack’. It doesn’t matter if the track is currently playing, the MM will stop it automatically, and start the read process.

After you press the ‘Read In’ button, the MM will present you with the following screen:

What it’s doing is requesting that you identify the music category that is to hold the song you are reading in. We’ll discuss creating your own music categories later, but for now, you should pick the category, International Waltz, American Rumba, etc. Into which your song fits. Let’s, for example, say you’re reading in an International Samba. Pressing this button will display:

There are 15 possible slots on this page into which your music can be stored. If you press the ‘More…’ button in the lower right, you can get another 15, for a total of 30. Simply decide which ‘slot’ you want your song in, and press that key. Let’s say you pressed ‘1’.

You’d then see something like this:
This is the Music Machine’s keyboard. At this point, the system is asking you to supply a title for the song that is about to be read in. Note that the ‘Shift’ keys on the screen are two-state. Push them once, and all of the characters are shifted. Push them again, and the characters go back to lower case. It’s designed for ‘hunt and peck’ typing. Let’s say you enter ‘Hasta Mucho’ as the samba title. Now Press the ‘Enter’ key. The system will start reading in the music at roughly ten times play speed. It looks something like this:

The red bar will move from the left to the right as the music is recorded. Remember that there’s nothing magic about the way the Music Machine reads CDs. If you try to read an old, scratched, dented, bruised, cracked CD, the MM will fail, and will produce a message like this:

One of the main reasons that the Music Machine was created was to avoid the problem of scratched, bent, lost, or stolen CDs. Please use new CDs or CDs in excellent shape. Remember, once a song is read in, it may be played hundreds of times. Reading it in the first time correctly is imperative.

Assuming that the track on your CD reads in fine, you now need to check to be sure the entire track read successfully. You will be tempted to ignore this step, but now is the time to be sure the music is all there as required, not when you’re on the dance floor, trying to teach a student. You should play the song through once before accepting the song. Do you remember how to play songs? Just select the music category on the first screen (International Samba in this case), and you’ll see:

Now you can play your music! Just press the ‘1’, and the song you just read in will play. Be sure to listen to the whole thing before using it to teach.

If there is a problem with your song, you can try reading it in again, or reading it from
another CD. When the MM asks you to specify the Music Category and ‘Slot’, simply choose ‘1’ again, and it will overwrite the old song with the new one. Actually, you can do this at any time, and as songs in the MM become old or tiresome, you can simply read in new ones ‘over’ them. No special action needs to be taken. The ‘Reader’ will erase the old song automatically, and replace it with the new one.

It should take between 20 and 30 seconds to read in any track. If it takes longer than that, or if the red progress bar moves in ‘jerks’ across the screen, you probably have a bad CD and should try another. The ‘iron clad’ test is this: Play the music after it’s read in. If it sounds OK, then it is.
4.0 Playing Options

We talked about playing a song in section 2.0, when we discussed how to play the song we just read in. Playing songs using the MM is a very easy, two-step process: Pick the category, pick the song and presto! It plays.

There are a number of options, however, that are available while the song is playing. Basically the initial screen (the one you see when you first start the program) is divided into two separate regions: A left and a right portion. The left part contains the buttons to select the category of music you want. The right part contains buttons that control how the music is played. Here is what the right half looks like when a samba is playing:

The grey area at the top is the play list. The songs that have been selected are displayed. The song at the top of the list is the one currently playing. The songs ‘waiting’ to play are displayed, in order, below the first.

Directly below the ‘Play List’ is a horizontal grey/blue Progress Bar that indicates how much of the current song has been played. More blue means more song has been played.

Below the Play Progress bar are three sets of numbers: From left to right they represent the current position, the remaining time, and the total play time, in minutes and seconds. They change as the music plays. Note that if you change the pitch of the music, it will effect all these numbers. Decreasing the pitch will make them greater, and making the pitch higher (faster) will make them smaller.

The nine blue buttons in the center are the ‘command center’ for the Music Machine. Once a song is selected, these buttons control how (or if) it is played.

4.1 The top row

The buttons in the first row should seem familiar. Their operation is very much the same as similar buttons on your CD player. The left button (the left-pointing triangle) Restarts the currently playing song from the beginning.
If the song is currently Paused (The middle key on this row), the music will restart at the beginning.

The middle button is ‘Pause’, and works as you would expect. After pressing it, music is paused, and the button blinks. Press again to continue with the current song. This button will ‘blink’ while selected.

Pressing the right button (the ‘stop’ button) stops the current song. The song is removed from the play list, and the next song (if any) is started. If you hold down this button for three seconds, all of the songs in the play list will be removed without playing them. If you don't have the Play List Management option (See Section 5.0), then if you touch in the Play List, selecting a song first, then the selected song will be protected from removal.

4.2 The middle row

In the middle row of buttons, the left-most is the ‘Repeat’ button. After pressing this button, its icon changes to a single note, and the current song will be automatically replayed indefinitely. A ‘+’ appears next to the song in the play list. No change is made to the current play mode by pressing this button. Pressing ‘Repeat’ again will place a ‘+’ next to every song in the list, and will ‘loop’ through the songs, playing each of them in succession. If there is only one song in the list, there will be no difference between single loop and play list loop modes.

The middle button on the second row is the ‘Record’ button, which was discussed in section 1. Pressing it starts a recording session wherein music is read into the Music Machine.

The right button (the little screwdriver) is the ‘Tool Chest’ button. Pressing it will permit you to perform ‘maintenance’ functions such as deleting music, moving music from one category to another, and changing the text displayed when music is selected. We’ll talk about this in a second.

4.3 The bottom row

On the bottom we have the ‘Special’, ‘Memory’, and ‘Metronome’ buttons. ‘Special’ is used to set special MM options (currently the only one implemented is ‘Button Coloring’. The ‘Memory’ button allows you to remember three things for each song: The playback volume, the Pitch, and the Starting and Ending points.
4.4 The ‘Toolkit’ button

All of the buttons in the first row, and the ‘repeat’ button (the first one on the second row) simply control the music. Pressing one of them yields immediate results and no other action is required by the user.

The other buttons in the control area, however, all have secondary menus to permit the user to specify what is to be done. These buttons, left to right, top to bottom are:

1) The Record button
2) The ‘Toolkit’ button
3) The ‘Special’ button
4) The ‘Memory’ button
5) The ‘NDCA button.

The ‘Record’ button was discussed fully in the previous chapter.

The little screwdriver is the ‘toolkit’ button. When pressed, this button allows you to change the titles for buttons, change the titles of songs, add instructors to the ‘Private’ page, delete music, and cut and paste music from one category to another. In short: ‘maintenance functions’. After pressing it, you will see:

This screen looks very much like the original one, which you used to choose which piece of music you wanted to play. This screen’s purpose is to change what you see when you choose songs to play.

The first thing you might want to change is the text for the music categories. Although the first four columns of buttons (Titled ‘American’ and ‘International’ contain buttons for the ‘normal’ categories, they can actually be changed to anything you want. Each studio is different, and each will want to configure their buttons in order to make the most of the Music Machine.
In any case, the fifth and sixth column, labeled ‘Other’ are almost always customized.

The ‘Text’ button in the lower right allows you to change the names displayed in any of the buttons. Pressing it will change the background color to Grey, and put this screen in ‘Edit’ mode. If you then press any of the song category buttons, the keyboard will appear with the selected name. Just re-type, delete, or re-enter what you want displayed in the button. Remember: six to eight characters is all that will fit in a button.

If, instead of changing the button titles, you want to change what is displayed for a particular song, rather than pressing the ‘Text’ button, simply select a song, such as ‘Waltz’:

There are several editing operations that can be performed here. First, by touching in the boxes to the right of the numbered buttons, you can pop up the system keyboard, and use it to change the title of the song.

Secondly, the grey boxes contain the text that is displayed in the play list when a song is chosen. If you touch inside one of the grey boxes, you will be able to change the text that is displayed.

Pressing one of the numbered buttons will highlight it. This permits you to perform the following functions and use the keys in the lower right portion of the screen:

Delete (the rabbit) – completely remove the song from the system.

Cut (the scissors) – move the music to a temporary location

Paste (the pot) – move music in the temporary location to the selected button.

Finally, if you pick the ‘Private’ button, you will see one additional screen:

If you press the ‘Text’ button here, the background will change color, and all of the buttons will appear (there are 20 of them). If you want to add, change, or delete an instructor, just press on the key you want to alter, the MM keyboard will appear, and will permit you to change the button text. Deleting all the text for a button will cause it not to be displayed.
The music pages underneath the instructors’ buttons can be altered from the first ‘maintenance’ screen by simply pressing on the ‘Private’ button, and then picking the instructor whose music you want to change. After that, the green music display screen will appear (as above).

4.5 The ‘Special’ button

We have big plans for the ‘Special’ button in the future. Currently, however, the only option that lies ‘beneath’ the exclamation point is Button Coloring. When the Music Machine is being used in a party, dance, or in a competition (as compared to use in an instructional setting), it is quite often useful to know which songs you have played. This is what you will see when you press this button:

![Music Machine Options](image)

This dialog permits you to control the 'Auto Fade' feature, turn on and off ‘Button Coloring’, and control the pitch change increment.

The left side of the box will not appear if you do not have the 'DJ' option.

Button coloring is used to indicate which songs have been played. If you turn BC on, then whenever a song is played, its button color will be changed from turquoise to red. Note that putting a song in the play list is not enough in and of itself, to turn its button red. The song must actually begin playing. Thus, it is possible that you might ‘pick’ a song, and have it in the play list, and to still have the button turquoise. It will turn red when the song is actually displayed. Remember, if you want to clear all songs in the play list without actually playing them, simply hold down the ‘Stop’ button for three seconds.

In the Button Coloring area there is also a button titled ‘Clear’. If you press the ‘clear’ button, all of the button colors in the Music Machine will be reset to blue. Note also, that there is a ‘Clear Red’ button on each music category screen (at the bottom), when pressed, it will clear all red buttons for that category only. This is useful if you run out of one particular type of song, and want to reset it alone.
The red button with the upward pointing arrow is the 'Pitch Increment' button. In some situations, more precise control is desired over the pitch increment. This is the amount the pitch is increased or decreased every time the pitch-up or pitch-down buttons are pressed (on the main panel). Pressing this button toggles between $\frac{1}{2}\%$ and $\frac{1}{10}\%$ change.

On the right side of this box is the 'Auto Fade' region. Auto Fade is an extremely useful feature, especially for competition DJs. Auto Fade automatically fades a piece of music after a pre-determined time interval.

For example, it should be possible to set the time interval to one minute and thirty seconds, and have every song from that point onward, fade at that point. Thus, several songs can be queued, and they will all fade at the proper moment. The length of the fade can also be specified.

Touching inside either the 'Start At' or 'Duration' boxes will bring up a secondary dialog that will permit you to set the corresponding time. Note that fade durations greater than ten seconds are not recommended. Five seconds is the number we normally use.

To disable AutoFade, simply set the 'Start At' value to all zeros. It is recommended that normally you set the 'Duration' first.

If you have the Cross Fade option, there will also be a button just below 'duration' labeled 'Cross Fade Disabled'. Pressing this will toggle cross fade on and off. When enabled, and when the auto fade position is reached, and if there is a song after the current one being played, a cross-fade will be performed between the current song and the next one.

If cross fade is enabled, but the Auto Fade position is zero, a cross fade of the indicated duration (if one is specified) is performed at the end of each song, presuming there is one following it.
4.6 The ‘Memory’ button

One of the most frustrating situations as a teacher of dance is when you set the pitch (tempo) for a song, play it once, and then have the CD player ‘stolen’. Someone puts on a different song, and (of course) changes the pitch setting. This happens with CDs all the time. It never happens with the Music Machine because the MM can remember your pitch settings (as well as other pertinent information) for each song. After pressing the light bulb you will see:

There are three areas on this screen. To the left is the permanent volume control. Use the up and down arrows to set the volume for the current song. If you are careful about setting the volume for each song when it is read in, then you won’t have to worry about it being too loud, and you can feel confident in just ‘playing it’. The objective here is to make it possible to eliminate need to set the mixer levels for each song.

The second area is the right, top area. If you previously set a pitch for the currently playing song, this will appear here. You can also change the current pitch by using the red up and down arrows.

Finally, the right, lower area contains the start and stop points for the song. Touching either of the times causes another dialog to pop up which allows you to set the time to whatever you want:
The red arrow buttons change the time by increasing or decreasing it. ‘Set’ causes the changed value to be remembered. ‘Clear’ sets it back to its default. When you’re done, press ‘OK’.

Back on the ‘Permanent Track Characteristics’ screen, note the presence of the ‘Stop’ and ‘Play’ buttons at the bottom of the screen. These permit you to ‘test drive’ your start and end points prior to committing them to memory.

After having made any changes to the Volume, Pitch, and Start/End, if you want to save your changes, press the ‘Set’ button. The next time the song is selected, it will use these settings automatically.

After you set the permanent pitch, then, every time the song is played, the pitch will be set to the value you specified. If you get a song at exactly the right speed, and someone plays something else, just select it again, and it’ll come back exactly as before.

4.7 The ‘Metronome’ button

If you are involved in providing music for an NDCA sanctioned competition, or if you frequently have to provide music for local showcases and competitions, you’re going to love the ‘Metronome’ button. Its function is to determine if a song is NDCA strict tempo. After pressing it you’ll see:

The process of measuring the speed of a song is semi-automatic. Computers are not very good at ‘hearing’ the down beat, so you need to help the MM perform the measurement. Here’s how it works:

First, play the song you want to measure. Next, press the ‘Metronome’ button. Wait for the start of a measure in the music. Now press the ‘Start’ button, and then count ten full measures. Note that we said ‘measures’ and not ‘beats’. Your count for a waltz, then would be 1-2-3 2-2-3 3-2-3 4-2-3 etc. up to 10-2-3. Don’t forget to leave in the last two beats of the tenth measure. Press the ‘End’ button on the down beat of the eleventh measure. At this point the rate of the music, in measures per minute will appear in the ‘BPM’ window.
Having the BPM for a piece of music is very useful, but it brings up the question: “Can I change a song so that it’s strict tempo?”...Of course!

The computer knows all of the current NDCA ‘official’ rates (at least they are ‘official’ at the time the machine was sold). The MM knows from the music category the song is stored in, what the ‘strict’ temp values should be. In almost every case there is actually a range of numbers that are valid – some for Bronze, or Open, etc. This target BPM is displayed in the ‘NDCA BPM’ window. The red buttons to the left of this window allow you to change the rate if several are authorized in a range.

Once the NDCA Rate is selected a number will appear in the ‘Rqd Pitch’ window. This number is the pitch change required to cause the music to play at the selected rate. Note that if the pitch change is more than about 10%, it’s probably not going to sound very good (Imagine trying to play a Quickstep to Rumba timing!).

Pressing the ‘Set’ button will actually cause the computed pitch change to be used on the song currently playing. When you’re done, press ‘OK’.

Finally, don’t forget the ‘Memory’ button here. After going through all of the above work, you will undoubtedly want to press the ‘Light Bulb’, and ‘Set’ the pitch permanently for the song.
5.0  Play List Management

If your Music Machine has this option, when you touch inside the Play List on the Main Screen, the entire right side of the screen changes. It looks like this →

The purpose of this screen is to permit you to manage play lists. Play Lists are simply lists of songs that you want to play from time to time. You can create any number of play lists, but remember that if you move songs around, or delete them, you also need to change the play lists to reflect the change.

When you select Play List Management, the Music Machine makes a copy of the current play list, and moves it to the edit list, as shown. Note that this is a copy at this point, not the actual play list. Songs in the actual play list (if any) continue to play during play list editing. Only if you press the Check (OK) button, then the active play list is modified. We'll discuss this in a second.

The main initial capability of this screen is to select and alter the displayed list of songs. You can touch the list to select a song, which is then highlighted. In addition, the blue up and down arrow keys can be used to change the selected item. If you press these, and hold them down, the selection will move automatically in the direction indicated. The yellow keys move the currently selected item up or down one position in the list, changing the order in which it will be played. If you have a song that you want played next, but its 5th in the list, you would select it, and press the move-up key until it was 2nd. Note, again, that the modification of the play list won't happen until this screen is 'OK'd by pressing the Check button.

Pressing the red 'eraser' button will remove the currently selected song from the play list.

If you pick a song using the song category buttons on the left side of the screen in this mode the song will be placed in the edit list, and not in the main play list. Any song can be placed in the play list using this feature.

Pressing the red 'X', or Cancel button aborts all editing operations, and returns to the normal play list display. Pressing the Blue 'Check' button sets the active play list to the list specified in the edit list, and returns to the normal screen.
The green 'Load/Save' button is used to save and/or load play lists. After pressing it, you will see:

The central box contains the currently defined play list save areas. Select one by touching it. The blue 'up' and 'down' arrows move this list up and down one page, if necessary.

The top green button is the 'Save' button. It moves the songs currently in the edit play list into the selected save area.

The second green button ('New') creates a new play list save area, and names it.

The fourth button (the eraser) deletes a play list save area.

The bottom green button ('Load') loads the edit play list from the selected save area.

And, of course, the 'X' button cancels the screen without doing anything.
6.0 Automatic Volume Control

If your Music Machine has this option, your play list has a white/blue vertical bar to the left, as pictured. Also, below this bar there is a small, circular red light.

AVC is a feature that guarantees that the music that you play will never be too loud. The option is controlled through the special button 

When AVC is present, the 'special' screen looks like this:

Note the lower portion of the screen. When AVC is enabled, the background of the button is green. When disabled, the screen looks like this:

The display to the right of the AVC button when it is enabled shows the sound level of the song currently being played. Next to is the current volume setting is displayed. This will change as AVC alters it during AVC operation. Finally, the output volume level is displayed.

The option buttons immediately to the right of the 'Out' volume level permit the user to specify the maximum target volume level. Settings are provided from 80% to 40% of maximum. The lower the setting, the lower the maximum output will be.

The AVC system starts attenuating the output volume level when it is 30% below the maximum level, and linearly decreases the level so as to guarantee that it never exceeds the specified maximum. Also, note that the
music is actually tested **before** it is played, and the volume is set before the music is actually heard. This way the sound is guaranteed to always be within the specified limits. We call this 'Preemptive Automatic Volume Control.'

The default maximum setting is 50. This should provide adequate listening volume for most studio use without unduly attenuating the peak music levels. A higher setting implies less volume control, and lower setting implies more.

The small red light immediately below the volume level display simply indicates when AVC is active. When dark, the music is sufficiently quiet not to require any volume level reduction. When illuminated, AVC has altered the normal volume level to guarantee the output level will never exceed the specified maximum.
A Word About Power

From time to time our new users call to report very strange problems after installing their Music Machine. Music mysteriously vanishes, randomly stops playing, is garbled or distorted when playing, and/or simply isn't loaded properly. These symptoms happen, seemingly, at random intervals, between which the machine seems to work just fine.

We have found that almost always these problems are due to power fluctuations. It turns out that some dance studios are located in buildings that have less than ideal power. Large air conditioning units, expensive lighting systems, and neighbors that aren't careful about how they use their wall outlets are all culprits we've discovered in the past several months.

We all take for granted that when we plug something into the wall, we always get the same thing out. Unfortunately, this is not always the case.

Know that every Music Machine is thoroughly tested at DMS before it is sent to our customers. Barring shipping damage, it should work perfectly the first time you install it. If you seem to be having very strange problems, we recommend using a device called an ‘Uninterruptable Power Supply’, or ‘UPS’. This will probably solve your problems.

There are three levels of power protection: Surge Suppression, Power Outage Protection, and Voltage Correction. You need to obtain a UPS that provides all three. The largest company in this industry is a company called ‘American Power Conversion’, or APC. We recommend their ‘Back Ups Pro’ model 280 to protect your Music Machine. Street prices are somewhat over $100 -- not a great investment to totally protect your Music Machine (Also, as a side-effect, if the power ever does go out, you'll not have to re-boot the machine!) If, after installing this, you still have problems, as always, feel free to give us a call!

Note: APC can be contacted at (800) 800-4272 (www.apcc.com). The Model 280 can be purchased at a reasonable cost from Micro Warehouse (800) 367-7080 (www.warehouse.com).
Using Your CD-RW Burner and Nero Express to Make a CD of Songs in the Music Machine

Note: You must have a keyboard connected to the machine to use this feature.
(Or use the Windows “On Screen Keyboard”)

1. Stop the Music Machine program by touching the words PLAY LIST at the top right of the screen.

2. Double-touch the NERO EXPRESS icon at the bottom left of the screen.

3. The Nero Express panel should be at the far left and lower corner of the screen. If necessary, touch the upper title bar and drag it there.

4. Under "What would you like to burn ?" touch "Music"

5. Touch "Audio CD"

6. Double-touch the "Shortcut to MMViewer" icon at the top of the screen.

7. The "Music Machine Music Viewer" should appear and be at the far right of the screen. If necessary, touch the upper title bar and drag it over to the right so that you can see the white field of Nero Express to the left of the Music Viewer.

8. You now see all the songs stored in the Music Machine. To select a specific song, touch the long gray bar next to the "Clear" button. Now type in the name of any song you want. Just the first word may be all that is needed, but it must be exactly correct and is upper and lower case sensitive.

9. Now hit Enter on the keyboard, and your selected song should appear in the upper window.


11. The WAV file for that song will now appear in the lower black box.

12. Touch and "Drag" the WAV file to the left and drop it into the Nero Express white window.

13. You can now hear your song , just touch it, then touch the "Play" button in Nero Express.
But, you will probably have to touch your "Volume" icon, and touch and slide up your Volume bar.

14. Close the "Nero Preview Player" and open your CD-RW tray and put in a blank CD-RW. Close the tray and wait about 10 seconds.

15. Touch the “Next” button at bottom of Nero Express.

16. Be sure the “Current Recorder” near the top of Nero Express is “E: CD Writer IDE” and not “Image Recorder”. If necessary, touch the pull-down selector and change it.

17. Change the “Writing Speed” to 8x or 4x. (To be sure you CD will play in a standard CD player)

18. Touch the “Burn” Button at bottom of Nero Express.

19. Nero Express will now make your CD. When completed touch OK, then touch “Next” at bottom right of screen. The CD tray should open. Remove your CD, close the tray and touch “Exit”.

20. The message “Save changes to Audio ?” should appear. Touch “No”. You can now close the Music Machine Viewer, and double-touch the MMS icon to re-start the Music Machine program.

Note: After step 10, you can re-touch the gray title bar, backspace out the current title words, and type
In another song title. Now hit enter, and the new song should appear. Double-touch the new Song title. This will add the new song WAV file to the lower black box list. You can build a List of songs, then touch and drag the entire list of WAV files to Nero, then proceed with Step 13.
Addendum to Users Manual Version 2.47 for New Features

1. Instead of 9 Pages of 30 Dance buttons, there are now 30 Pages available, each with 30 Dance Buttons, each with 30 Songs available. (That’s 30x30x30 or 27,000 Songs) Touch the big [ 1 ] button in the bottom row, then touch your desired Page number.

2. You can now "Rapid Forward" or "Rapid Backward" the music that is playing, just like most CD players. Touch the white area ahead of the music progress bar under the Play List box to rapid forward, or touch the blue area to rapid back.

3. The "Round" buttons at the bottom of Page 1 now only select songs from Page 1 as most users have named their Page 2, 3, 4, etc. different than their Page 1 names.

4. In addition to the "Cut & Paste" capability you have had to move songs from one location to another, you now can "Copy & Paste" a song so it will stay where it is but you can “Paste” another copy to a second (or 3rd etc.) location.

5. The status of the "Button Coloring" and "Automatic Volume Control" features on the Music Machine Options panel are now retained in their last state when you turn the computer off and back on.

6. When playing a “Play List” of songs, you can now have the machine “Pause” between each song. While a song is playing, touch the “Repeat” button (to the left of the red “Record” button) three times and it will change to a “Pause” symbol. Now the machine will “Pause” at the end of each song and wait for you to touch the main “Pause” button to continue. To exit this mode, touch the “Repeat” button to return it to normal.

7. You can now burn a CD copy of any song, or compilation of songs, in the Music Machine. (If you have a CD-RW drive installed in your computer) First, connect a keyboard and mouse to your machine. Now touch the words Play List at the top right corner of the screen to close the MM Program. Now go to My Computer and open your “C” Partition and open the MMS Folder. Find the MMViewer icon and Right-Click it. Now use “Send To” then click “Desktop (create shortcut)”. Also, if it’s not on your Desktop, find the MMS icon, Right-Click it and do the same. Now go back to your Desktop and you should have both the MMViewer an MMS icons there. Try to position the MMViewer icon in the top row of your Desktop icons. Now, if you have used the Nero Express program with your CD-RW drive, see the next page to make CD’s of songs in your machine. (Other burner programs should be similar).
RE-INSTALLING THE MUSIC MACHINE SOFTWARE

If you want to re-install the Music Machine program in an existing Music Machine and keep the existing music, you should copy the "Data" folder in the "MMS" folder in the "C" partition. The "Data" folder in the "MMS" folder contains all the information for the buttons in the Music Machine that was typed in when the music tracks were originally loaded, including all the music "Pitch" settings and all the other "Permanent Track Characteristics" for each music file.

Stop the Music Machine by touching the words "Play List" at the top right corner of the screen. Now go to "My Computer" and open the "C" partition. Now open the "MMS" folder and make a copy of the "Data" folder and paste it into the "D" partition where the music files are. There is also a folder called "Backups" there. You can now safely "Un-Install" and "Re-Install" the Music Machine Software.

Now, BEFORE starting the newly installed Music Machine program, open the "D" partition and make a copy of the "Data" folder you put there earlier, and paste it into the now empty "Data" folder in the "MMS" folder in the "C" partition. You can now start the newly installed Music Machine program and you should have access to all your music files.

However, if you cannot access the "Data" folder, or it itself has become corrupted, open the "D" partition and open the "Backups" folder. The program automatically makes a copy of the "Data" folder in the "C" partition about once a week and puts it into the "Backups" folder in the "D" partition. Now find the LATEST DATED file folder in the "Backups" folder and copy it's entire contents and paste it into the empty "Data" folder of the newly re-installed Music Machine program. You can now start the newly installed program and you should have access to all your music files except those that may have been loaded since the last copy of the "Data" folder was made by the Music Machine program.