

NSM5SD

Player System

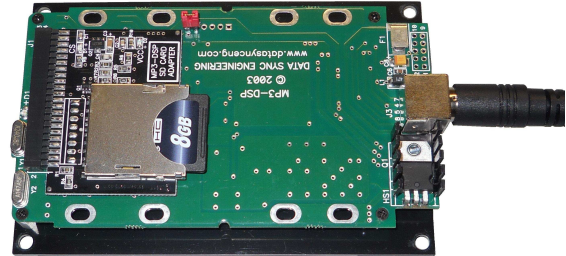
The all new SD Card Player
For the NSM ES V, ES V.1 Technology Jukebox
Complete Kit, nothing else to buy !



MBC III

Replaces the entire CD mechanism

- ◆ 100% solid state, no moveable parts, no maintenance
- ◆ Jukebox operates exactly the same as before, only faster
- ◆ SD Card contains only music, no programs to "boot-up"
- ◆ Works with all FAT32 formatted SD Cards 4GB to 128GB*
- ◆ Supports all MP3 bit rates (we recommend 192Kbps)
- ◆ You can have up to 9,900 selections (100 CD / 99 Tracks)
- ◆ Song to song gap about 2sec, "100 CD Initialize" in 20sec
- ◆ Works with NSM series ES5.1 or upgraded ES5 models

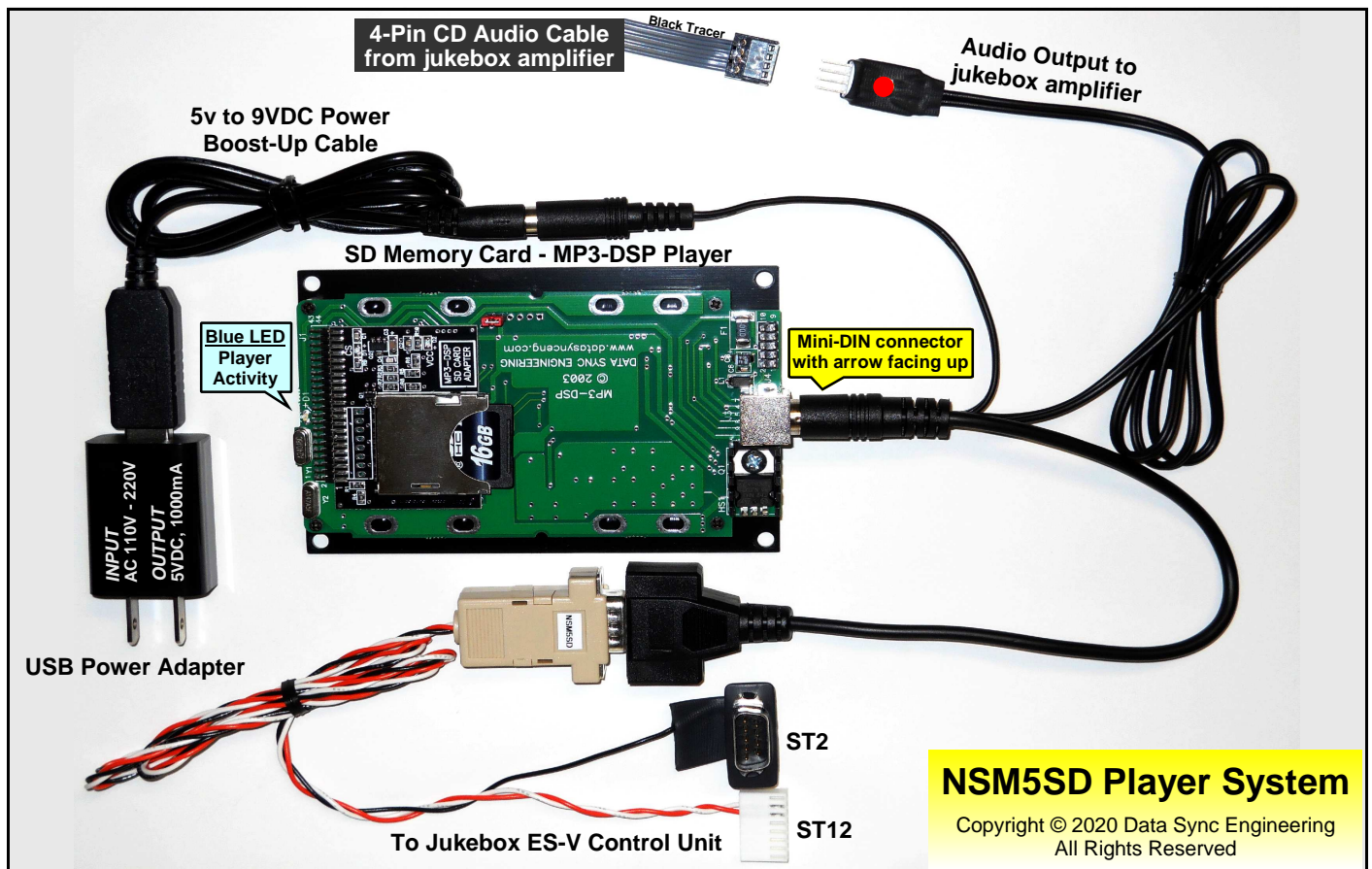


**USB 2.0
SD Reader**



16GB SD Memory Card
Up to 32 Tracks on 100 CD's
using MP3 bitrate @192Kbps

*The SD Memory Card Formatter can be Downloaded here
https://www.sdcard.org/downloads/formatter_4/
To format media above 32GB as FAT32, you can run "guiformat.exe"
which is available here www.ridgecrop.demon.co.uk/guiformat.htm



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GENERAL DESCRIPTION

The NSM5SD is a micro-computer based SD Card player that replaces the entire CD Player unit in your NSM CD jukebox.

The SD Card player works with any jukebox that uses the NSM CONTROL-UNIT ES-V computer board. The NSM5CD player plugs into the 9-pin D-Sub DB9F "ST2", 8-pin "ST12" communication and the audio signal to the 4-pin ribbon cable.

The NSM5SD tricks the jukebox into thinking it is still hooked up to a CD player and allows the jukebox to select songs from the SD Memory Card, same as if it were playing CD's.

The NSM5SD is 100% Solid State, will not skip and will never need to be cleaned or lubricated. The delay between CD changes are also eliminated which provides nearly continuous song play. The player works with any SD memory card 4GB and up. Uses the FAT32 formatted filesystem which is compatible with Windows, Mac, Linux and other systems.

At the minimum, a basic 100 CD jukebox, with each CD having an average of 16 tracks (1,600 songs), will require an 8GB SD card using the CD quality MP3 bit rate of 192Kbps.

INSTALLATION

Any NSM ES V-CD (ES5) jukebox with EPROM version "0104" or higher (Date 1996+)

This is the NSM ES-V CONTROL UNIT board
Easily identified by the three large chips at IC1, IC3 and IC2

The 9-Pin DSUB connector plugs into "ST2"



ES5 to ES5.1
upgrade EPROM
plugs into IC4
(Notch faces down)

To install ...
Using a small screwdriver,
carefully pry up each end of
the EPROM chip out of the
socket. Gently insert and
press in new chip, making
sure not to bend any pins.

The 8-Pin data
connector plugs
into "ST12"

Do Not change the EPROM if displayed version is 0104 or higher !

ES V-CD (ES5) to ES V.1-CD (ES5.1) EPROM Upgrade to Version "0104"

At power-up, the left side 4-digits of the display shows the current EPROM program version for 2-sec (eg. "0104")

NSM models that require the EPROM upgrade

| | |
|----------------------|-----------|
| • Firebird II | 1992-1994 |
| • Nostalgia | 1993-1994 |
| • Nostalgia Gold | 1994-1996 |
| • Nostalgia Gold II | 1995-1999 |
| • Old Fashion Wizard | 1992-1994 |
| • Performer Classic | 1992-1993 |
| • Performer Grand II | 1992-1993 |
| • Performer Wall | 1992-1994 |
| • Solid Gold | 1994 |
| • Wizard | 1992-1994 |

NSM models that do not require the EPROM upgrade

| | |
|------------------------|-----------|
| • Country 2000 | 1997-2000 |
| • Digital Thunder | 1995-1997 |
| • Digital Thunder Wall | 1995-1997 |
| • Emerald Ice | 1995-1997 |
| • Heritage | 1995-2000 |
| • Juke 2000 | 1997-2000 |
| • Performer Grand 2000 | 1995-1997 |
| • Performer Wall 2000 | 1995-1997 |
| • Sapphire | 1998-2000 |
| • Sapphire Midnight | 1998-2000 |

ABOUT THE SONG FOLDERS AND FILES

Folders and the MP3 Files within the folders represent each CD disc selection. The first two letters of the folder name and the MP3 file names must begin with two numeric digits to identify their CD and Track number positions.

For 100 CD's, you would create 100 folders. Each folder name starts with a two digit number from 01 to 99 and 00 for CD# 100. If you want, you can include your own text such as the album name "40 Tom Petty - Greatest Hits".

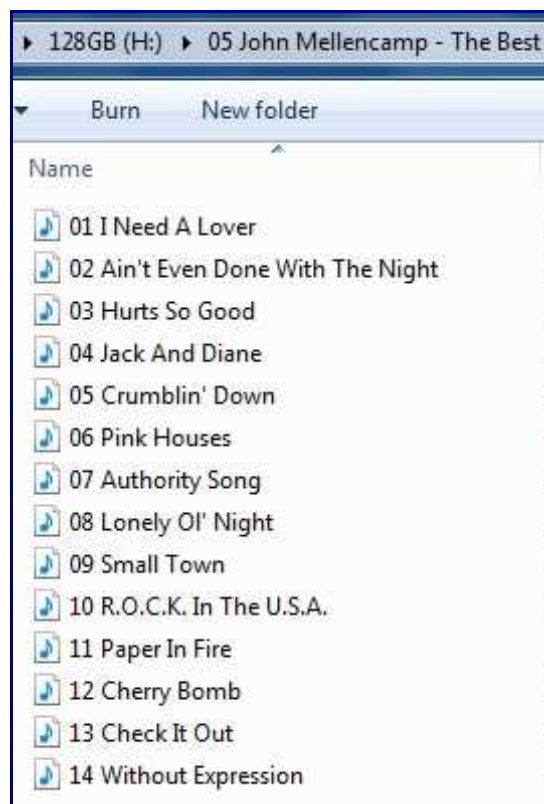
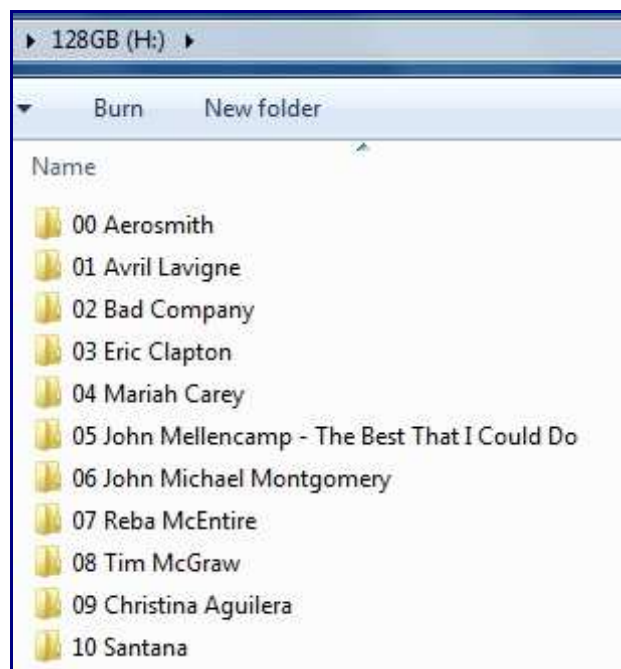
The NSM supports up to 99 tracks on each CD. Each MP3 song name starts with a two digit number from 01 to 99 (CD's do not have track 00). Track numbering must be sequential just like CD's. Missing or duplicate track numbers are not allowed and may cause an "Er 61". If you want, you can include your own song name text such as "13 Runnin' Down a Dream".

With this method, you can envision how a song is selected. For example, if you enter the selection "4013", the NSMSD first searches folder names until it finds the first two character match to "40" then it searches the MP3 files within that folder until it finds the first two character match to "13". Afterwards, the selection will begin playing.

To create the MP3 song files from your CD you would use a program to "Rip" the CD tracks to MP3. **Windows Media Player** can be used but make sure, in the Options menu, that the Format is set for MP3 (not WMA). There are many other rippers, such as one by www.poikosoft.com, that will automatically insert the track numbers and song names.

Another consideration is the bit rate. The bit rate is similar to the resolution of a photo, lower resolution will produce a fuzzy image. For music, bit rates below 128Kbps may start to sound grainy. You can't tell much of a difference using the maximum bit rate of 320Kbps other than very large file sizes. Many agree that the bit rate of 192Kbps is very close to CD quality (as we recommend). Besides, jukeboxes are well tuned and can make anything sound great.

EXAMPLE FOLDERS AND THE FILES WITHIN A FOLDER



These are the actual images of a working jukebox SD card (from Windows Explorer)

The image above is a part of the 100 folders

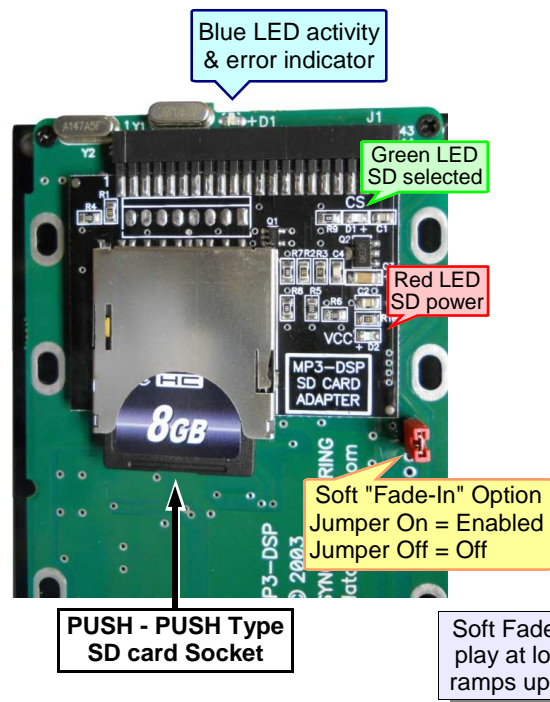
The image to the right is the contents of folder "05"

DISCLAIMER - PLEASE READ

The NSM5SD kit was developed for jukebox owners for non public performance use. We do not supply jukebox licenses. It is the jukebox owners responsibility to obtain all applicable licenses for public performance of copyright music.

Designated trademarks and brands are the property of their respective owners.

GENERAL REFERENCE INFORMATION



When power is applied to the Digital Player, the blue LED turns on for about 3-sec, turns off, then begins rapid blinking during file indexing. When done, the LED remains off until a selection.

| FAULTS - SD CARD MP3 PLAYER (Blue LED) | |
|--|----------------------------------|
| Blinks | Error Description |
| 1 | Failed Hardware Test Diagnostics |
| 2 | FAT32 Filesystem Was Not Found |
| 3 | No Folders Found |
| 4 | No MP3 Files Found |
| If players blue LED rapidly flashing dim and green LED always on No SD Memory Card in Socket or Defective SD Card | |
| If players blue LED repeating long flash & green LED short flicker Wrong Memory Card Type or Defective SD Card | |

| SD MEMORY CARD CAPACITIES | | |
|---------------------------|----------------|---------------|
| SD SIZE | SONGS @192Kbps | Tracks per CD |
| 8GB | 1,600 | 16 |
| 16GB | 3,200 | 32 |
| 32GB | 6,400 | 64 |
| 64GB | 12,800 | 99 |

NSM ES V.1-CD Jukebox CD Initialization

If this is a new installation or song files have been changed, the jukebox will need to be initialized.

Here are the steps to start the jukebox initialization ...

- 1) Open the cabinet lid (door)
- 2) Pull out the service switch (display shows e.g. "P010")
- 3) Press "C" (display shows "P")
- 4) Enter "160" (display shows "P160")
- 5) Press "H" then press "0" (right side of display cycles through all CD numbers/tracks then stops)
- 6) Push in service switch (operation complete)

Changing the track limit setting

Factory default sets the maximum track limit to 24. If you want to change it to 99 tracks, do the following ...

Perform steps 1, 2 and 3 from above

Enter "042", Press "H" (shows current setting), Enter "0099", Press "H" (new setting is entered)

Push in service switch

Follow steps above to re-initialize the jukebox

Changing the Credit Play and Free Play Setting

Open the cabinet lid (door)

Pull out the service switch (display shows e.g. "P010")

Press "C" (display shows "P")

Enter "094", Press "H" (shows current setting),

Enter one of the numeric settings below then Press "H" (new setting is entered). Push in service switch

| | | |
|--------------|-----------------------------------|---|
| "0" | No Free Credits, Credit Play Only | |
| "1" to "199" | Limited Free Credit entries | (via remote control) |
| "200" | Unlimited Free Credit entries | (via remote control) |
| "201" | Toggle Free Play & Credit Play | (via remote control), Credit Play at power up |
| "202" | Toggle Free Play & Credit Play | (via remote control), Free Play at power up |

NOTE: "Free Play" operation may be effected by the "Time Window" settings at P091, P092 and P093.