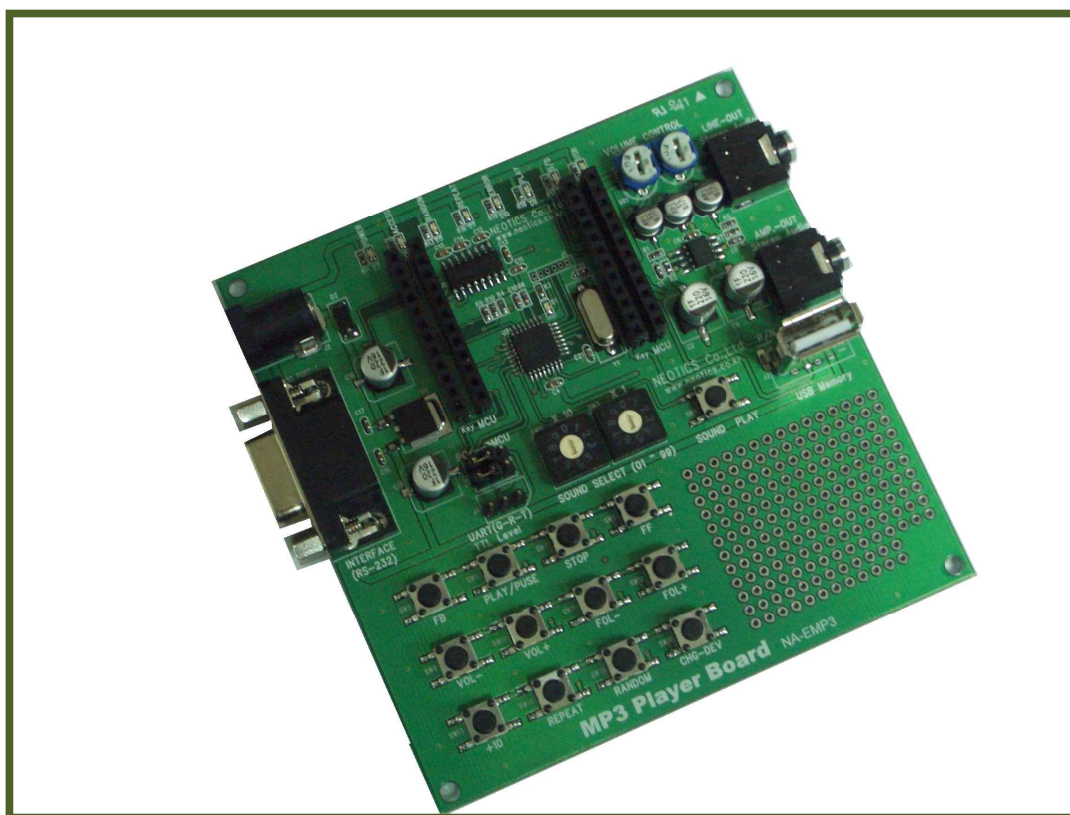


MP3 Player Unit

NA-EMP3 Ver 7.

Related Products : NA-MP3M (MP3 Player Module)



1. MP3 Player Module Evaluation Unit.

- . This is a Evaluation Unit for NA-MP3M Player Module to show users how to use the MP3 and to have the users understand its operation.
(You can control NA-MP3M Player module by PC or an external micro controller (MCU) by selecting a jumper switch on NA-EMP3 unit)
- . Built-In RS-232C transceiver IC Makes it possible for a user to control the NA-MP3M Player Module PC or MCU without Level (RS-232 , TTL) converter
- . S/D Card Socket & USB memory connector is installed for easy and direct connection.
- . 8 LED shows the operation status.
- . Built-In Function key Switch (Play, Stop, Vol(+)...) and Audio Amplifier(Stereo)

2. Applications.

- . Industrial Sound(Voice)Information Goods.
- . High Quality Elevator Voice System
- . Automatic Information Center & Voice Service System.

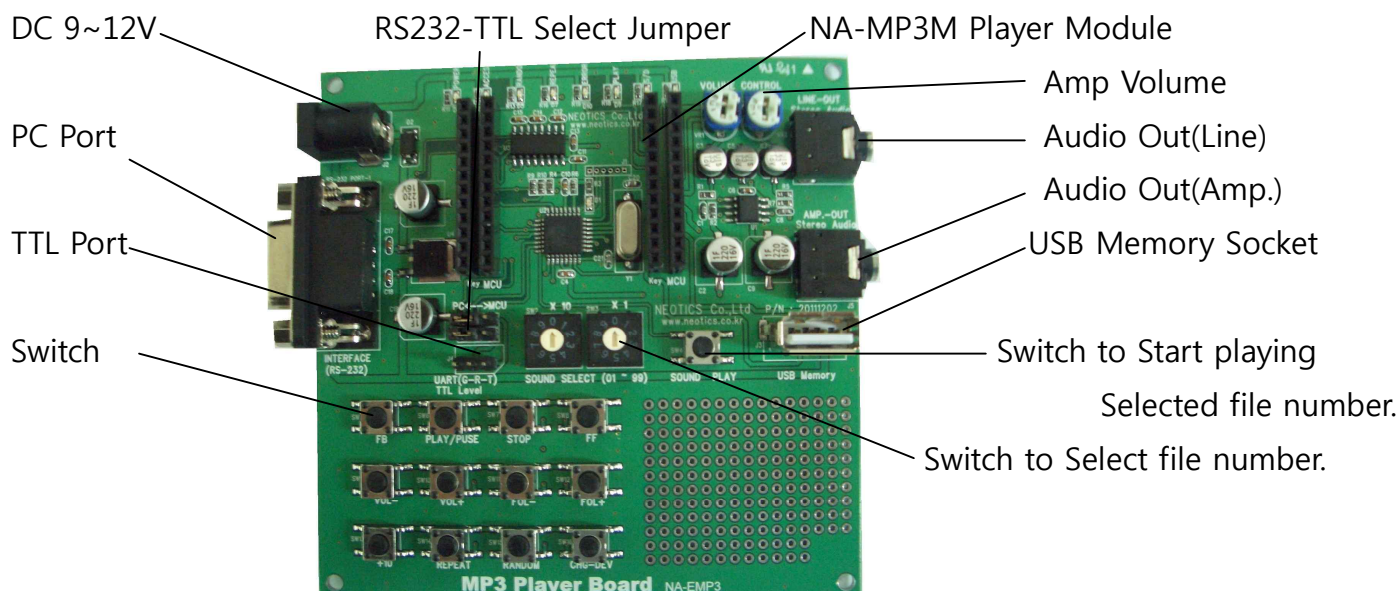
3. Features.

- . It is Possible Switch Control Operating(Mode-1) And PC(MCU) Control Operating.(Mode-2,3)
- . Built-In USB memory Socket, RS-232 Converter, MCU, Status Display LED.
- . You Can Direct Select Play SOUND(Voice) from S/D Card or USB Memory.
- . It Is Possible Connect Speaker System, Include Audio-Amplifier in Unit.

4. Specification.

Items	Specification		
Input Voltage / Operating Voltage / Current	DC 9~12V / DC 5V / 80~150mA		
Audio Amplifier Output	MAX 300mW		
External Memory	S/D Memory or USB Memory		
External Connection Control	Computer(PC) : RS-232C, MCU : TTL		
Maximum Number of Playable Files	MAX 100-ea (NA-EMP3 Unit Only)		
	***** NA-MP3M Normal Control *****		
	Root Folder	Sub Folder	
	FAT16	512-ea	65534-ea
	FAT32	65536-ea	65534-ea
RS-232C(UART) Set	9600-8-1-N		

5. MP3 Player Module Evaluation Unit Information.



DC 9~12V	: Input Power DC 9~12V..
PC Port	: RS-232 (9-Pin DSUB) for Computer (PC).
TTL Port	: TTL Level (UART) for Micro Controller (MCU) Interface.
Switch	: FB : Play previous MP3-File. : Play/Pause : Play / Pause MP3-File. : STOP : Stop MP3-File. : FF : Play next MP3-File. : VOL(-) : Volume down. : VOL(+) : Volume up. : FOL(-) : Play MP3 Files in the previous folder. : FOL(+) : Play MP3 files in the next folder. : +10 : Play the next 10th MP3 files. : REPEAT : Repeat play. : RANDOM : Random play. : CHG-DEV : Change to play from S/D Memory or USB Memory.
RS232C-TTL Select Jumper	: PC Control (RS-232C) or MCU(TTL) Control Select Jumper.
NA-MP3M Player Module	: MP3 Player Module.
Amp Volume	: Audio Amplifier Volume.
Audio Out(Line)	: Audio Output.(Line-out Level)
Audio Out(Amp.)	: Audio Output.(Amplifier Output.)

USB Memory Socket : USB Memory Connector Socket.

Switch to Start playing Selected file number : Playing Start Selected MP3 File.

Switch to Select file number : It is Possible to select mp3 file with Switch (00~99).

6. MP3 Player Module Evaluation Unit Control Command Table.

Command	Working
0001~0099	Play MP3 File Name Caution : MP3 file name in S/D Card or USB Memory have to be by number ...***1 (ex, 0000.mp3, 0001.mp3, 0002.mp3 ... 0099.mp3).
PUSE	Pause MP3-File
STOP	Stop MP3-File.
NEXT	Play next MP3-File.
BACK	Play previous MP3-File.
VOL+	Volume up.
VOL-	Volume down.
CHGD	Change to play from S/D Memory or USB Memory.
REPT	Repeat play.(It can set when the module was played.)

@ Command do not care of case-sensitive.

@ RS-232C for PC and UART for MCU use same command.

@ Interface Protocol set with 9600-8-1-N for PC and MCU.

***1. MP3 Player module(NA-MP3M) can use normal mp3 file name.

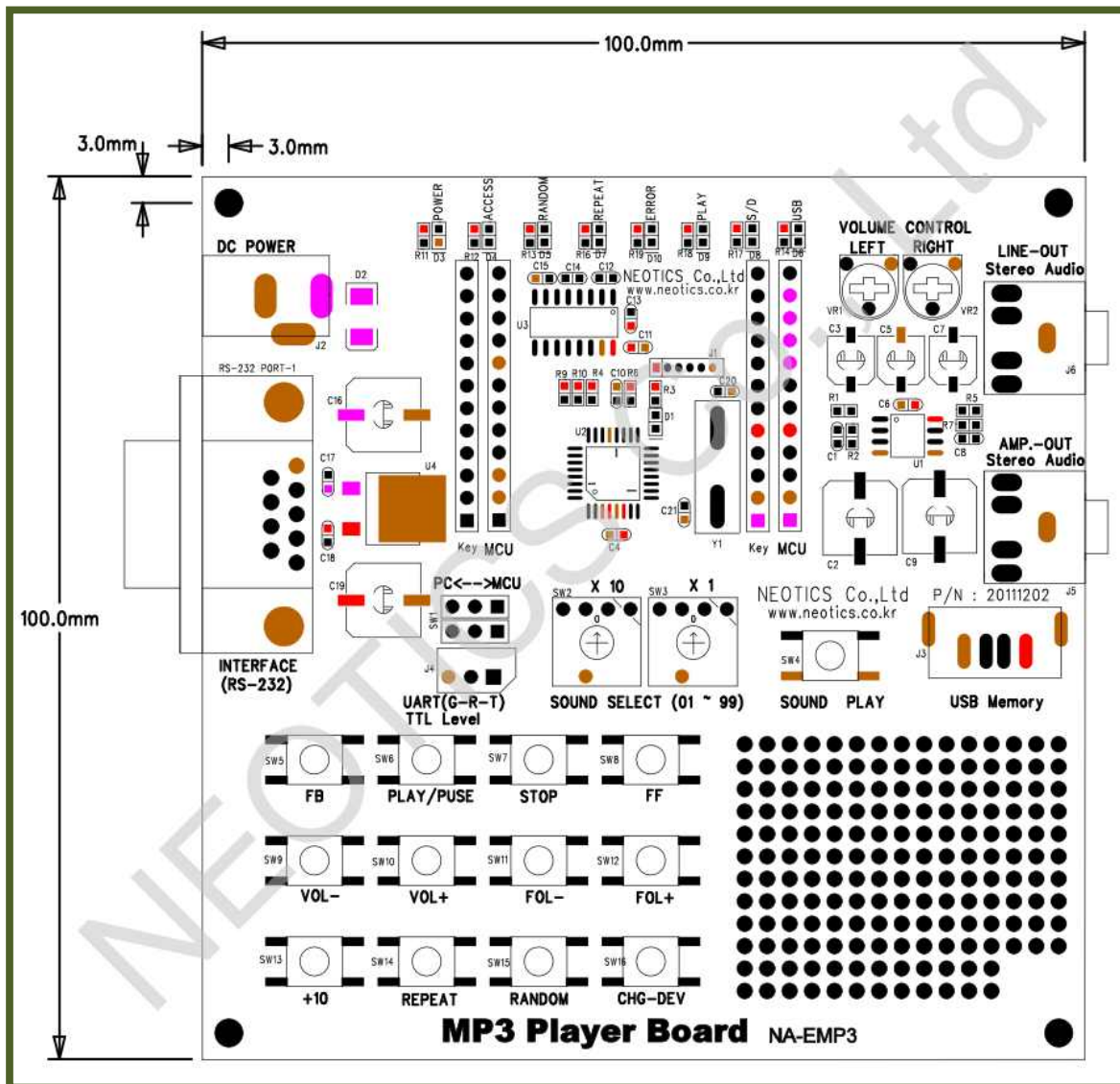
But NA-EMP3 can use by number mp3 file name to test sample program.

(NA-EMP3 can play maximum 100-ea mp3 file in case Mode-3.)

(It can possible to play above 100-ea mp3 file by changed program.)

. Mode-3 Sample S/W(Program) is Installed in NA-EMP3 Unit.

7. MP3 Player Module Evaluation Unit Size.



***** Caution*****

1. Check the features first to connect with other equipment.
2. This circuit is strictly tested.
3. The developer, manufacturer or dealer is not responsible for any malfunctioning/damage caused by connection with other equipment.
4. Appropriate permit /approval is required for some products utilizing this module, depending on functions and usages.

- For more information and inquiry, please refer to the sites below.