DFPlayer mini MP3

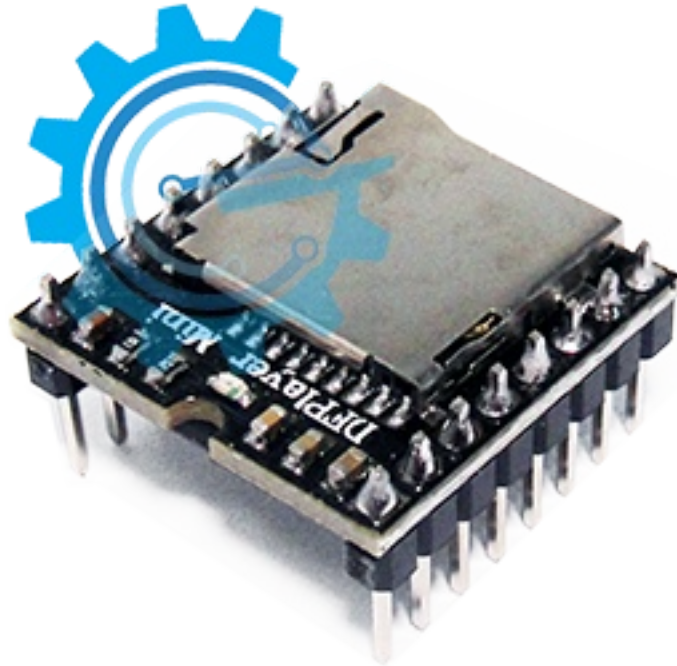Technical Manual Rev 1r0

An Arduino Compatible DFPlayer mini MP3 player with simplified output directly to the speaker. This module can be used as a stand alone just put a battery and speaker, push buttons or with gizDuino MCU with Serial Connections.

FEATURES:

- Gizduino/Arduino Compatible
- Can holds up to 255 songs
- 30 level adjust volume
- 6-level EQ adjust

GENERAL SPECIFICATIONS:

- **Input Supply: 3.2- 5.0VDC**
- **Supports:** *FAT16,FAT32 up to 32 uSD memory card*
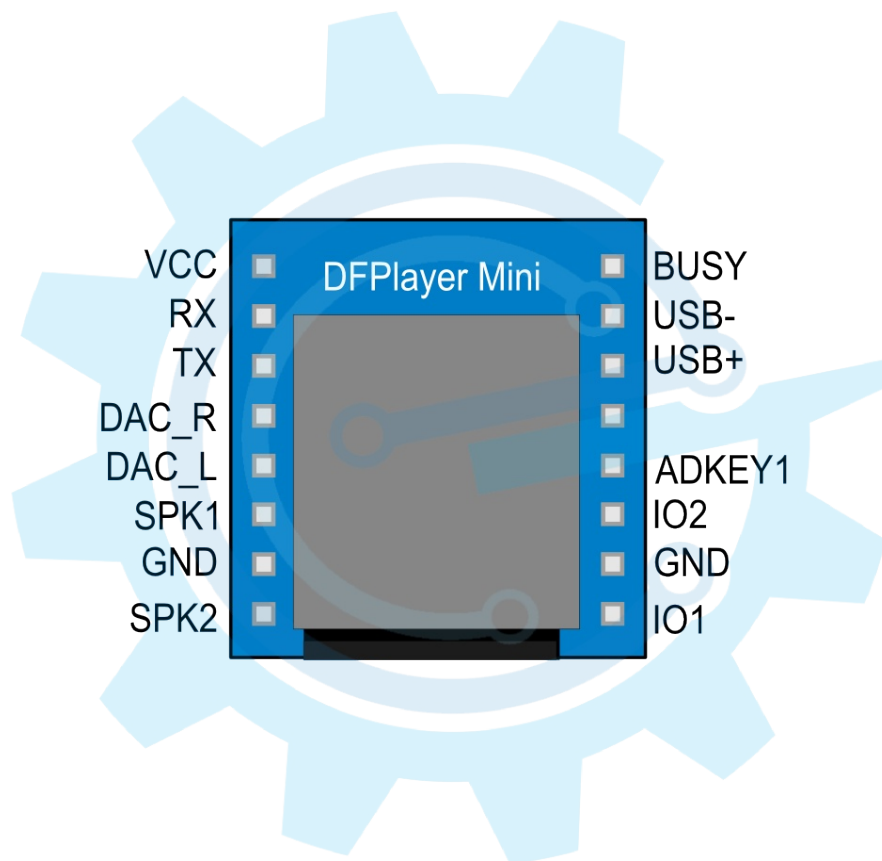- **Mode:** *1I/O control modes, serial mode, and AD Button control mode.*

Figure 1. Major parts presentation of DFplayer mini MP3

Table 1. Pinout descriptions

NAME	DESCRIPTION
VCC	*Input Voltage DC 3.2 - 5.0V*
RX	*UART Serial input*
TX	*UART Serial output*
DAC_R	*Audio output right channel*
DAC_L	*Audio output left channel*
SPK2	*Speaker*
GND	*Ground*
SPK1	*Speaker*
IO1	*Trigger port 1*
GND	*Ground*
IO2	*Trigger port 2*
ADKEY1	*AD port 1*
ADKEY2	*AD port 2*
USB+	*USB+ DP*
USB-	*USB- DM*
Busy	*Playing Status*

Support for asynchronous serial communication mode
via PC serial sending commands

Instruction Description

Commands	Function Description	Parameters(16 bit)
0x01	Next	
0x02	Previous	
0x03	Special tracking(NUM)	0-2999
0x04	Increase volume	
0x05	Decrease volume	
0x06	Specify volume	0-30
0x07	Specify EQ 0/1/2/3/4/5	Normal/Pop/Rock/Jazz/Classic/Bass
0x08	Specify playback mode(0/1/2/3)	repeat/folder repeat/single repeat/random
0x09	Specify playback source(0/1/2/3/4)	U/TF/AUX/SLEEP/FLASH
0x0A	Enter into standby-low power loss	
0x0B	Normal working	
0x0C	Reset module	
0x0D	Playback	
0x0E	Pause	
0x0F	Specify folder to playback	1-10（need to set by user）
0x10	Volume adjust set	[DH=1:Open volume adjust][DL:set volume gain 0-31]
0x11	Repeat play	[1:start repeat play][0:stop play]
0x12	Specify MP3 tracks folder	0-9999
0x13	Commercials	0-9999
0x14	Support 15 folder	See detailed description below
0x15	Stop playback, play background	
0x16	Stop playback	

Serial Query Command

Commands	Function Description	Parameters(16bit)
0x3C	STAY	
0x3D	STAY	
0x3E	STAY	
0x3F	Send initialization parameters	0-0x0F（each bit represent one device of the low-four bits）
0x40	Returns an error, request retransmission	
0x41	Reply	
0x42	Query the current status	
0x43	Query the current volume	
0x44	Query the current status EQ	
0x45	Query the current palyback mode	This version retains this feature
0x46	Query the current software version	This version retains this feature
0x47	Query the total number of TF card files	
0x48	Query the total number of U-disk files	
0x49	Query the total number of FLASH card files	
0x4A	keep on	
0x4B	Queries the current track of TF card	
0x4C	Queries the current track of U-disk	
0x4D	Queries the current track of Flash	

Add "DFPlayer_Mini_Mp3" library.
To>My Documents>Arduino>libraries

DFPlayer to gizDuino PLUS
VCC   --->   +5V
GND   --->   GND
RX ---> 1k -->TX (D1)
TX ---> 1k -->RX(D0)
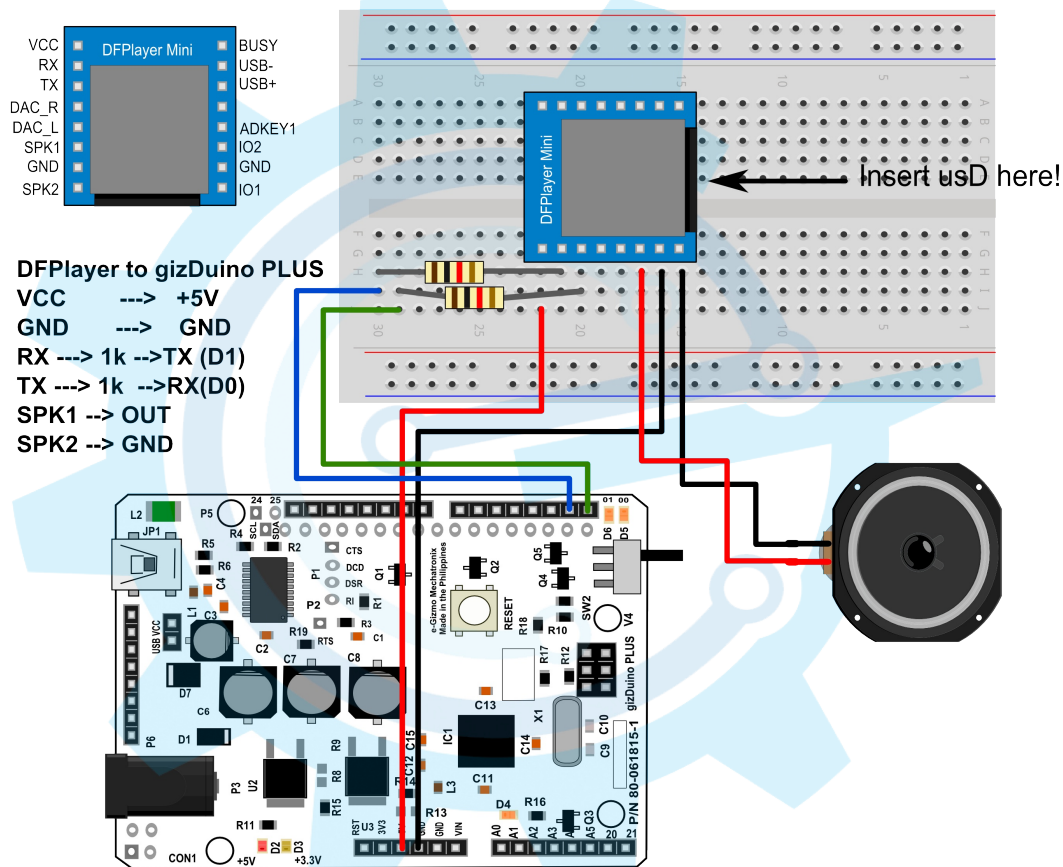**SPK1 --> OUT**
SPK2 --> GND

Insert usD here!

Figure 2. Sample application of DFplayer mini MP3 to gizDuino PLUS version 4 with ATmega644P