

# DIGITAL AUDIO PLAYER MODULE

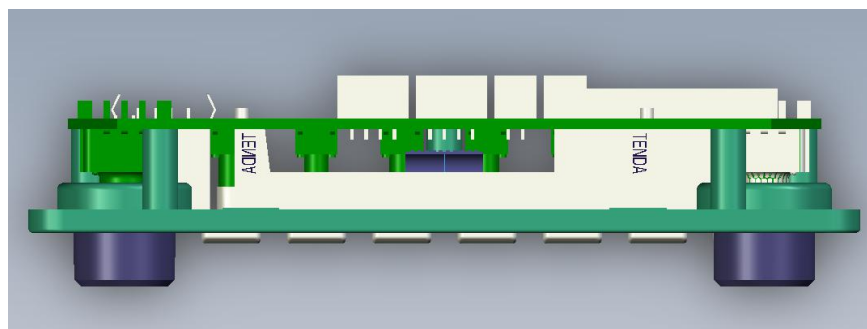
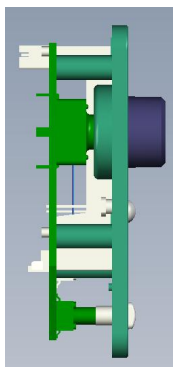
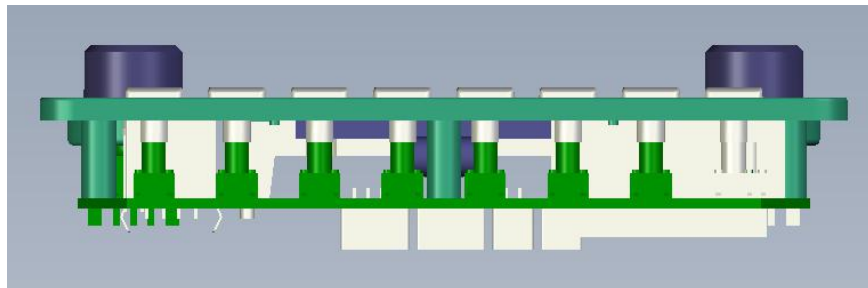
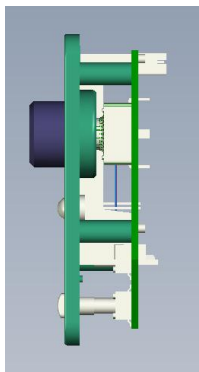
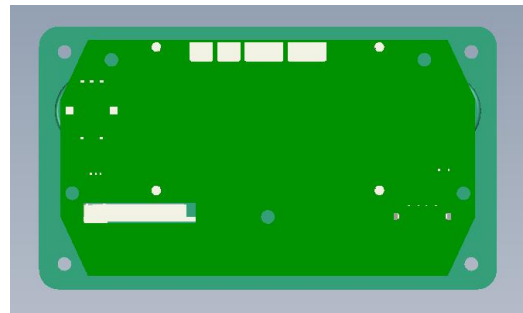
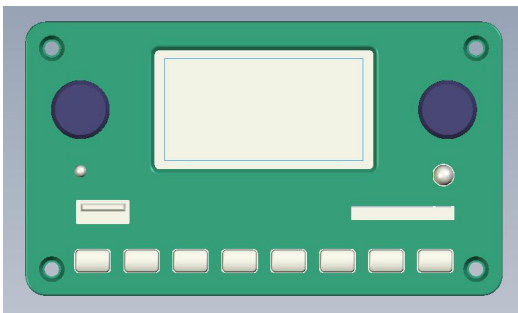
MODEL : FN-DM157

USB /SD /BLUETOOTH/ FM /AUX/RECORD/LCD/REMOTE/FOLDER

## DATASHEET

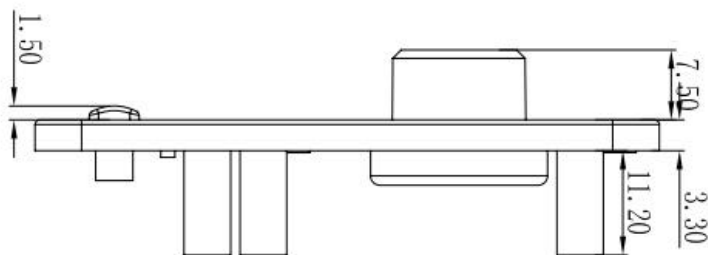
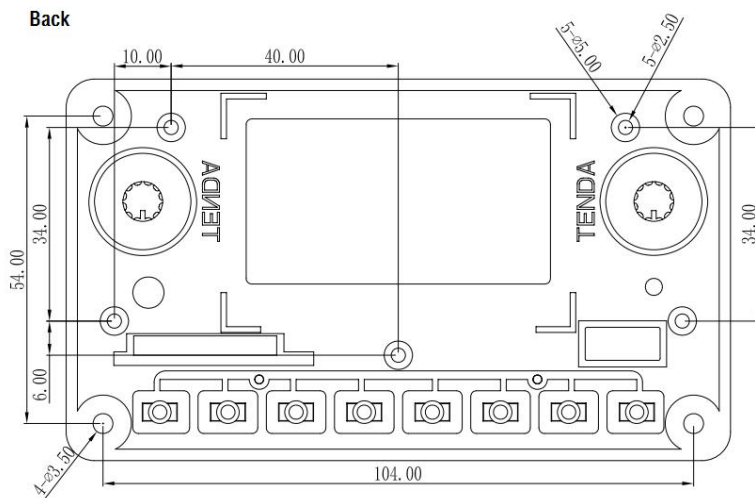
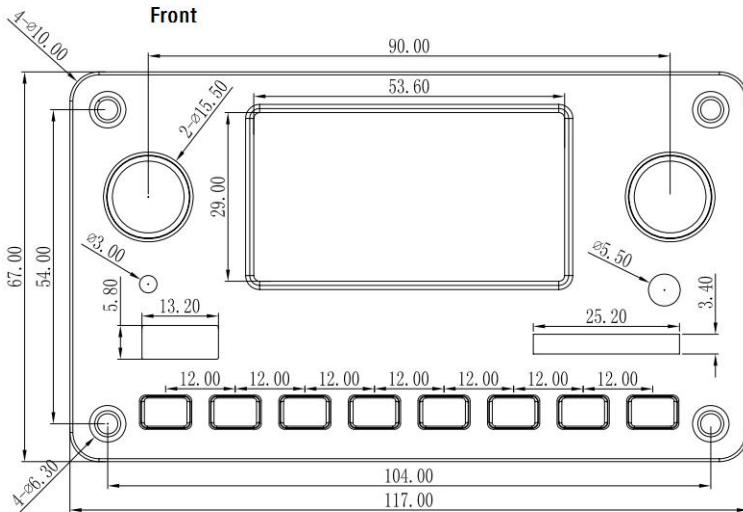
### 1. PRODUCT PICTURES





## 2. PANEL SIZE

Unit :mm



### 3. MAIN FEATURES

- High quality playback & record
- Support USB /SD /BLUETOOTH/ FM /AUX
- BLUETOOTH /FM /AUX are removable functions
- With FOLDER function show folder list and song list.
- LCD displays folder name / song name
- Song Pre-select function . For example, now playing song ABC, use the knob tune to song XYZ. During tuning, LCD also will show the song name synchronously, easy for user select the song he/she wants, then after song ABC finished, then it will play song XYZ .
- Support MP3/WMA/WAV/FLAC formats files
- Support record from AUX or FM to USB /SD device
- MP3 & WAV format record, default MP3 record firmware
- Default record file specification :128Kbps, stereo, 44.1KHz
- USB/SD Mode Support Play/Pause, Next, Previous, stop, repeat , mute, direct-select song, EQ, volume control
- Bluetooth Mode, support Play/pause, next, previous, volume, EQ, mute
- Support FAT16, FAT32 file system
- Support USB/SD upto 32GB, 64Gb &128Gb not tested
- Support 32 - 320kbps mp3 files
- Power off Memory song/volume functions
- Operating voltage DC 12V (5V can be customized)

- Operating current <200mA
- Audio Output level >500mV
- Re-Programmable MCU, Firmware Auto-Upgrade by USB /SD

Note: Once we have new functions, we can send the firmware to customer if they want the newest features on their old player .

## 4. KEYBOAR FUNCTIONS



LEFT KNOB : Left/Right tuning for volume down and up, short press for mute, Long press for power on/off .



RIGHT KNOB: Left / Right tuning for selecting the main manual options ,press to confirm.

During FM playback , left/right tuning for FM frequency trimming .

Afer user press FOLDER button, LCD show folder list or song list , can use the knob to select the file, and press to confirm .



MODE: During playback press MODE, it will stop to play and show the main manual.

During select the source from main manual or select the folder or song , press the MODE button to confirm. During recording, press MODE, it will stop and save the recording ,and show the main manual.



NEXT : During usb/sd/bluetooth playback ,short press to go next song, long press for fast forward . During FM playback, short press for next channel .

During select main manual or options, short press for next option .



PLAY/PAUSE : During usb/sd/bluetooth playback, short press for play/pause song. During FM playback, short press for auto search FM channels and auto save. During searching

channels, long press PLAY/PAUSE button to stop searching.

During recording , short press PLAY/PAUSE button start to play the recording file.



PREVIOUS : During usb/sd/bluetooth playback ,short press to go previous song, long press for fast backward . During FM playback, short press for previous channel. During select main manual or options ,short press for previous option.



STOP : During usb /sd playback , press to stop playing .During recording ,press the STOP button, it will stop record and show this file name on the LCD, press the MODE button, it will stop record and show the main manual. (Functions in gray color not ready ).




CYCLE : Normal >Folder >Repeat folder>Random>Repeat all >Repeat one>Intro  
Note: Under Intro mode, each song only play some seconds, the go next song ...



FOLDER : Press the FOLDER button, LCD will show the folder & song list in the usb/sd, use the next /previous button or turning the knob to select the song, then press the knob /PLAY/MODE to play.



RECORD : Press record button when module in usb /sd source , it will start record the signal from AUX input , and the  will flash ,the recorded file will store in usb/sd . Default record source is AUX. During recording, short press again the REC button, it will pause the record , press again start recording again. If long press the REC button or press PLAY button during recording , it will play the recording file immediately . If user select the source AUX (LINE IN) , and press the REC button ,also will record the signal from AUX. If user want to record FM, need to switch to FM source first, then press REC button. Not support record from Bluetooth.

## 5. REMOTE CONTROL FUNCTIONS



RECORD : Same function as the panel REC button .



FOLDER : Same function as the panel FOLDER button.



MUTE : Mute the audio output



MODE : Same function as the MODE button on the panel



CYCLE : Same function as the CYCLE button on the panel



EQ : Normal >Pop>Rock>Jazz>Classic



PREVIOUS : Same function as the PREVIOUS button on the panel



NEXT : Same function as the NEXT button on the panel



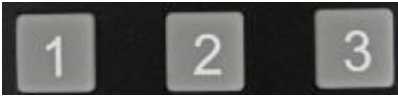
PLAY/PAUSE : Same function as the NEXT button on the panel



VOL- : Volume down



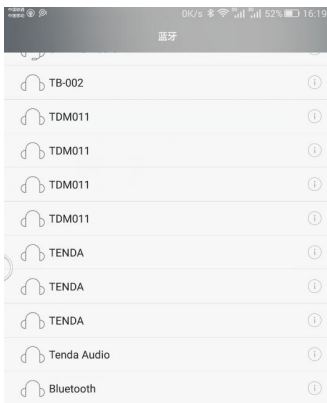
VOL+ : Volume up



NUMBERS : During usb/sd playback , select the songs . During FM playback , select the saved channels or input frequency .

## 6. BLUETOOTH OPERATION

Press MODE button shows the main manual ,and select the source BT MODE, search the device on the smart phone, you can find out the device “ Bluetooth” , press for connecting it . Then can play the smart phone music via bluetooth connection . Remote / panel can control smart phone player to Play/pause, Vol-, Vol+, next, previous.The bluetooth device name ,we can customized for different client , show their company name /Brand name. See following picture for example

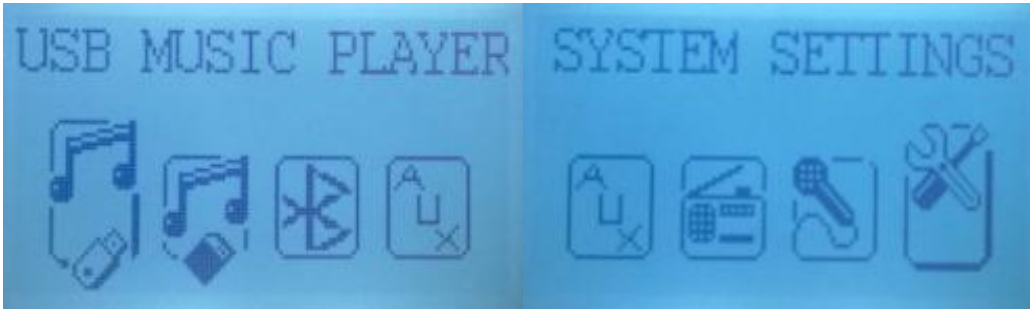


## 7. LCD DISPLAY

### Main Manual

There are eight options in main manual .





Source USB

Source SD



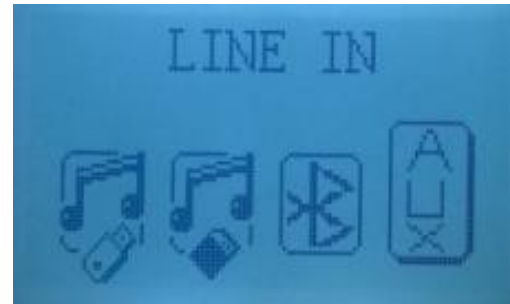
Source BLUETOOTH



Source AUX



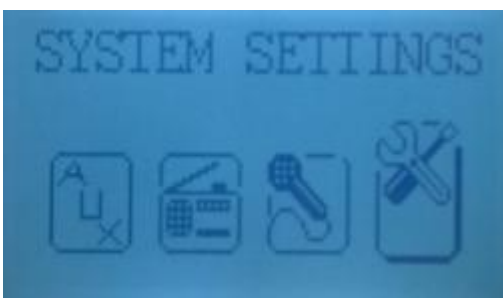
Source FM



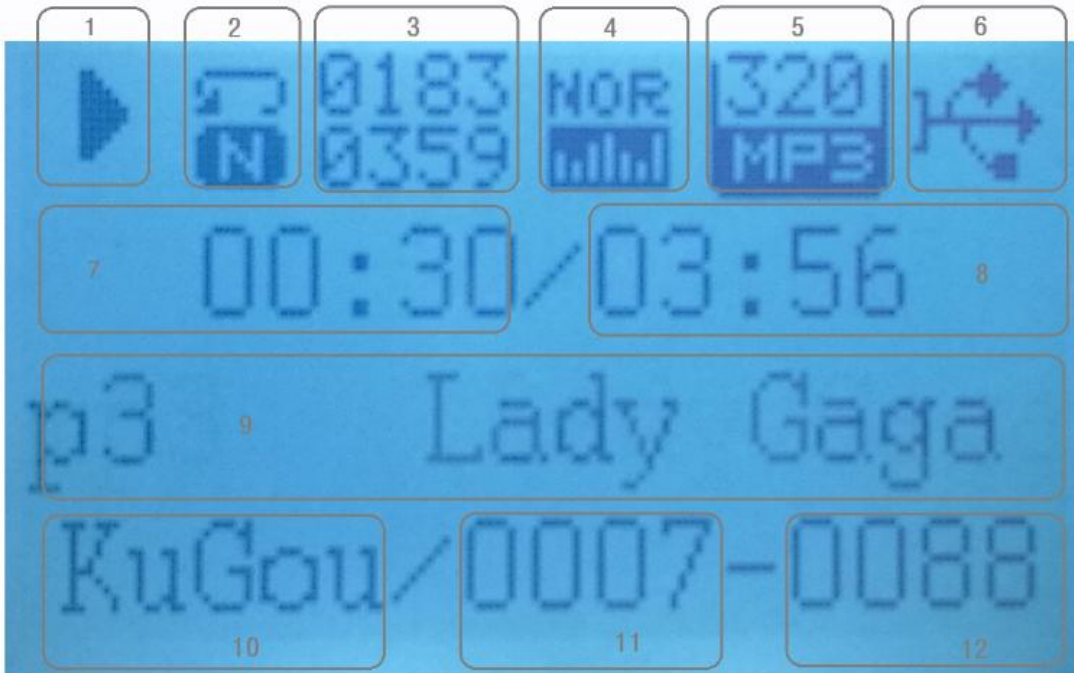
On-Board Microphone Record



System settings



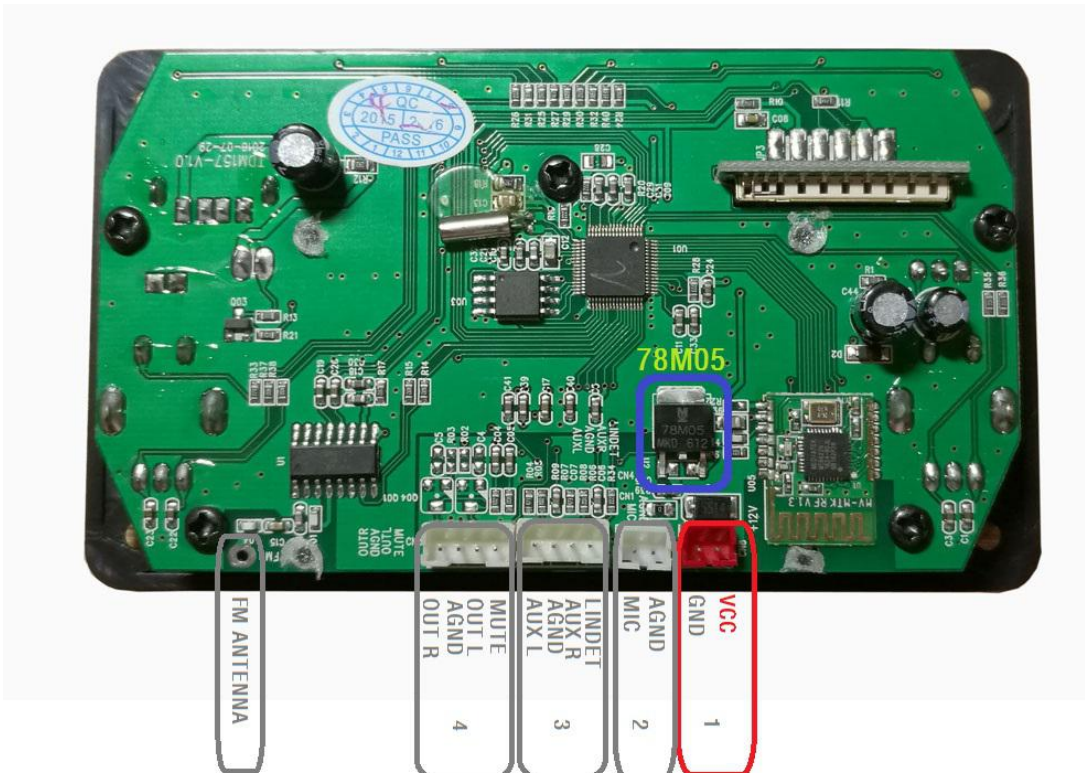
## USB PLAYBACK DISPLAY CONTENT



- 1: PLAY /PAUSE status
- 2 : CYCLE mode (N =Normal)
- 3: 0183 is current song number, 0359 is the total songs in USB
- 4: EQ (NOR =Normal )
- 5 : File specification 320Kbps
- 6 : Play USB
- 7: Current song Elapsed time
- 8 : Current song total time
- 9: Runing file name
- 10 : Current folder name
- 11 : Song number in current folder
- 12 : total songs in Kugou folder

## 8.CONNECTIONS

For Power input voltage, If there is a 78M05 chip on the module, it will work at DC12V, If module without this chip, It will work at DC 5V.



1: Power input , DC12V (With 78M05) / DC 5V (Without 78M05)

2: For connecting On-Board Microphone.

Little customers will use this application, mostly record from AUX.

3: AUX input (LINE IN), AUXR = AUX Right , AGND =Audio GND , AUXL =AUX Left , LINDET pin for detect the AUX input , normally it is high level ,when give this pin to low level, it will automatically switch to source AUX (LINE IN). Application : some customer may connect the 3.5mm jack to the AUX connector, when the user input the 3.5mm pin from other audio source, it will switch to LINE IN automatically, and audio come out from module audio output connector .

4: Audio output, OUTL = Out Left, AGND = Audio GND , OUTR =OUT Right, MUTE pin can use to control the amplifier if necessary, during playback it is low level, during mute ,it is high level.