

## 2: AM

Frequency range:	522KHz~1620KHz	Practical sensitivity:	MAX 37dB
S/N:	MIN 43dB	Search tuning sensitivity:	36dB ± 10dB

## 3: MP3

Frequency loudness:	20Hz~20KHz	USB Port:	USB 2.0
S/N:	MIN 40dB	USB Port charging:	5V/2A、5V/0.5A

## 4: BT

Output power:	4dBm	Bluetooth version:	5.0
MIC sensitivity:	-52dB	Transmission range:	MIN 10m
Frequency:	2.45GHz		

## 5: OTHER

D.C.Voltage:	12V/24V	Resistance:	4 Ω /8 Ω
Output Power:	MAX 25W*2CH	Operating temperature range:	-30℃~70℃

Note: if and change in technology parameters ,shall take real product as criterion.No inform will be made

## TROUBLESHOOTING

- 1.Please set a reasonable volume in order to avoid traffic accidents.
2. Please keep this machine in your vehicle when the weather is extremely hot or cold.
3. Prevent the machine from being damped by water when washing your vehicle.
4. After long working hours under a great power output state , the chassis will get hot. Though it is not a defect, you are suggested not to touch it.
5. We will provide warranty service in the precondition of non-artificial damage. Unauthorized maintainer is not allowed to dismantle the machine , otherwise the warranty will be void.
6. This manual is for reference only. The product may differ slightly from the description in this manual.

## Car Stereo TN-100 User Manual



(RADIO/USB MP3/AUX in/MIC/CAN/BLUETOOTH PLAYER)

- ★ FEATURE
- ★ CONTROL EXPLAINED
- ★ STANDARD COMPATIBILITY
- ★ PROTOCOL FUNCTION
- ★ OPERATIONS
- ★ TECHNICAL SPECIFICATIONS
- ★ TROUBLESHOOTING

This manual is for reference only.

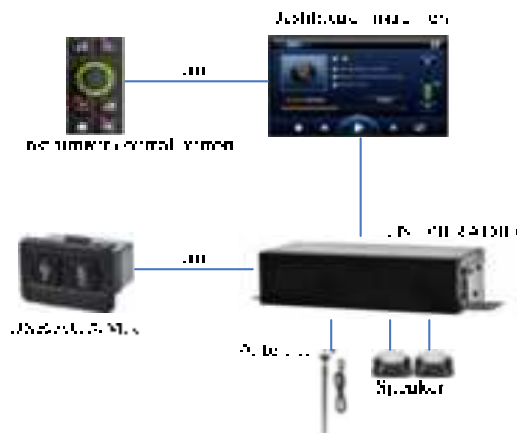
**Warning:** Please read this manual carefully when using it for the first time to familiarize yourself with the operation of the machine, and please keep this manual for future reference.

SHANG HAI ORTEK ELECTRONICS CO., LTD.

## FEATURE

Tn-100 is a CAN communication car audio system. Includes digital tuning radio, USB/AUX/MIC/MP3/WMA/Bluetooth/CAN communication, clock, electronic volume, call display phone number and other functions.

## CONTROL EXPLAINED



Explain:

- 1.The instrument/other equipment sends information to the radio through CAN protocol, and the radio feeds back information to the instrument/other equipment
- 2.The instrument/instrument control knob controls the radio
- 3.USB/AUX/MIC leads from the radio to communicate with the radio through the module. The module is named TN-301 by our company
- 4.The radio plays through loudspeakers and receives FM/AM broadcast signals from an antenna

## STANDARD COMPATIBILITY

- 1.CAN 2.0B
- 2.J19399

## PROTOCOL FUNCTION

- 1.Power on/off
- 2.EQ switch (TRE/BAS/BAL)
- 3.Mode switch (BT/USB/AUX/RADIO)
- 4.AM/FM switch
- 5.Mute on/off
- 6.Loud on/off

- 7.Auto seek and save stations
- 8.Volume +/-
- 9.Previous station/Next station
- 10.Frequency + 1step/Frequency - 1step
- 11.Previous track/Next track,
- 12.Fast forward/Fast backward
- 13.Save as station1/MP3 Pause
- 14.Save as station2/MP3 Tracks preview
- 15.Save as station3/MP3 Tracks repeat
- 16.Save as station4/MP3 Tracks random
- 17.Save as station5/MP3 Previous 10<sup>th</sup> track/hang cel
- 18.Save as station6/MP3 Next 10<sup>th</sup> track/pick / hang cell

## OPERATIONS

1. The radio mode function description

- 1) Select M1, M2, M3, M4, M5 and M6 to listen through the can control
- 2) <BND> is used for switching between radio bands FM1, FM2, FM3, AM1, AM2 and AM3
- 3) <APS> to auto scan all stations and store them to preset function keys.

2. Inter-countries band setting

inter-countries band setting		
Under Power Off mode, input the below commands in sequences:  ‘e’ + ‘c’ + ‘m’ + ‘o’ +	‘0’	China / Europe Band
	‘2’	Middle East Band
	‘4’	America Band
	‘6’	Japan Band
The above operation should be done in sequence and less than 5 seconds between each command.	‘8’	Russia Band

Note: Other funtional parameters CAN protocol

## TROUBLESHOOTING

### 1: FM

Frequency range:	87.5MHz~108MHz	Practical sensitivity:	MAX 12dB
S/N:	MIN 48dB	Search tuning sensitivity:	23dB ± 8dB

## FCC Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
  - Increase the separation between the equipment and receiver.
  - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
  - Consult the dealer or an experienced radio/TV technician for help
- important announcement

## Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.