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**File Name:** Specification

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项目名称: RN56H8  
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## 变更履历表

版本	发布日期	变更内容	备注
V0.0	2018.01.06	全部	首次发布

## 一、 范围Scope

1. 本产品规格书适用于华阳通用公司车用音响系统  
(产品型号: **RN56H8**; 产品代号: **RN56H8**)。  
This specification is only suitable for FORYOU CAR-Audio system  
(Model: **RN56H8**, Product Code: **RN56H8**).
2. 本产品规格书规格书尽可能包含客户关注的技术指标, 但不涉及具体的技术实现手段, 出于改善性能或其它因素引起的内部电路的更改不再另行通知。  
This specification almost includes all the technology parameters which the client pays attention to. But it does not include idiographic realization method of technology. We will not notify again for the improvement of capability or the internal circuit correction which is caused by other factors.
3. 考虑到包装及丝印随各个客户变化, 本规格书不包含彩盒, 卡通箱及包装方式的描述。  
This specification does not include the description about gift box; carton box and packaging method since the packaging and silk-screen always change according to request of the clients.
4. 客户收到本规格书后, 应在正式交货期前1个月及时提供反馈意见, 否则认为客户默认本规格书所有项目。  
After the client receives this specification, the client should feedback the advices to us in one month before the formal delivery date. Otherwise it means that the client has defaulted all the items of this specification.
5. 本产品规格书规定了该车用音响系统的技术要求、试验方法、标志、标签、包装、存储及运输要求。本规格书适用于设计定型与出货检验, 在生产检验、定型检验和质量一致性检验时, 作为质量鉴定检验的依据。  
The specification prescribes product performance, technical parameters, testing method, and the items for label, package, storage and transportation. It can be used as the referenced standard for quality verification including production verification, final model verification and quality conformity verification.
6. 下列标准包含的条文, 通过在本产品规格书中引用而构成为本产品规格书中的条文。  
The entire referenced standard listed below will become a part of this specification.

本规格书的引用标准 Referenced standard:

1. GB/T 26775-2011	车载音视频系统通用技术条件 General technical specification for audio video system on board
2. GB/T 18655-2010	车辆、船和内燃机 无线电骚扰特性 用于保护车载接收机的限值和测量方法 Vehicles, boats and internal combustion engines Radio disturbance characteristics-Limits and methods of measurement for the protection of on-board receivers
3. GB/T 19392-2013	车载卫星导航设备通用规范 General specification for in-vehicle satellite navigation

	equipment
4. GB8898-2011	音频、视频及类似电子设备安全要求 Audio, video and similar electronic apparatus-safety requirements
5. GB2846-2011	调幅广播收音机测量方法 Methods of measurement on radio receivers for AM broadcast transmissions
6. GB6163-2011	调频广播接收机测量方法 Methods of measurement on radio receivers for FM broadcast transmissions

## 二、 基本信息描述

### 1. 效果图



### 2. 外形尺寸: **277.29×149.55×93.39 mm**

Outline Dimension: **277.29×149.55×93.39 mm**

### 3. 主要功能 **Main Function**

RADIO

USB PLAY (音乐、视频、图片)

NAVIGATION

BT hand-free & A2DP

WIFI

SD

车机互联  
手机充电  
倒车视频  
音效设置、声场设置

## 三、基本功能描述 **Basic Function Description**

### 1. 收音功能（全制式） **Radio Function (All Radio Systems Compatible)**

- 1) 手动及自动搜索电台  
Manual & Auto search station
- 2) 扫描存储电台  
Scan and store station
- 3) 电台预置：包含FM波段，AM波段；  
preset stations: FM bands, AM bands
- 4) 调入预设电台  
Preset stations loading supported

### 2. **USB 播放功能 USB Function**

- 1) 最大支持TF卡容量：32GB  
Maximal SD/TF card capability supported: 32GB
- 2) 最大支持目录层数/文件夹数量/曲目数量 32/500/5000  
Maximal catalog /folder/chapter supported: 32/500/5000
- 3) 支持的音频文件类型：.mp3/.wma/.wav/.flac/.mp2
- 4) 支持的视频文件类型：  
.wmv/.asf/.vob/.mov/.mpeg/.mp4/.DAT/.3GP/.MKV/.RM/.RMVB/.avi
- 5) 支持的图片文件类型：.jpeg/.png/.bmp

### 3. **导航功能 NAV function**

- 1) 支持GPS导航/北斗导航  
Support GPS/BeiDou Navigation
- 2) 内建EMMC导航地图  
Support EMMC for map data
- 3) 路线引导的语音/引导功能  
Voice indication guiding function
- 4) 地址检索功能  
Address search function

- 5) 图标, 标记点显示功能  
Road mark / landmark display function
- 6) 惯导功能  
Gryo function

#### 4. 蓝牙功能 **Bluetooth function**

- 1) 可与蓝牙手机配对连接, 实现电话免提功能  
The unit can be paired with mobile phone; connection to achieve hands free phone function
- 2) 支持电话本同步功能  
Support phone Book synchronization
- 3) A2DP功能  
Support A2DP function
- 4) 外置BT MIC (顶灯模式)  
Support BT MIC input.

#### 5. **WIFI 功能 WIFI Function**

- 1) 支持WIFI无线网络

#### 6. **SD 功能**

#### 7. 车机互联功能

#### 8. 手机充电功能

通过USB接口支持最大2.1A充电功能

#### 9. 触摸屏控制功能 **Touch Screen Control Function**

电容触摸屏  
Capacitance Touch Screen

#### 10. 功放输出 (2 X 18W) **Power Amplifier Outputs (2 X 18W)**

#### 11. 音频 **AUDIO**

- 1) 6段EQ; 预设5种模式  
6EQ Bands: Preset 5 EQ selection:  
POP/Rock/Classis/Jazz/Flat/User
- 2) Loudness可选

## 12. 其他功能 Others

- 1) 方向盘键控  
SWC interface
- 2) 输入视频信号制式自动识别 (NTSC/PAL/SECAM)  
Identifying color system of input video signal automatically (NTSC/PAL/SECAM)
- 3) 倒车摄像头视频输入  
Camera video input
- 4) 车辆状态检测 (ACC/倒车/停车)  
Auto detection for car status (ACC/Reverse/Parking)
- 5) 天线供电输出  
Antenna POWER output
- 6) 时钟显示  
Clock display
- 7) 按键BEEP音

## 四、规格描述 General Technology Specification

1. 安装角度：前后方向35°，左右方向0°  
Installation angle: Forth and back: 35°, Left and right: 0°.
2. 工作电压范围：9V~16V；最大工作电流：10A  
Range of operation voltage: 9V~ 16V, Max operation current: 10A
3. 工作温度范围：-30°C~+80°C  
Range of operational temperature: -30°C~+80°C
4. 存储温度范围：-40°C~+85°C  
Range of storage temperature: -40°C~+85°C
5. 工作湿度范围：10%~95%RH  
Range of operation humidity: 10%~95%RH
6. 大气压力：86kbar~106kbar  
Atmosphere pressure: 86kbar~106kbar
7. 抗振性能：  
在下列的振动状态下，播放时不应出现断音、跳跃；图象不应出现抖动、闪烁等现象：上下振动(Z)=1.0G；前后振动(Y)=1.0G；左右振动(X)=1.0G；振动扫描频率为：10~200Hz，扫描时间为5分钟；安装方式：水平安装；试验温度：25°C±5 °C；测试碟：TDV-540 第20

首。

Requirement: audible mutes, video intermission or track jumps are not allowed in the given below: vibration-level: Z-direction (bottom-top)=1.0G; Y-direction (front to rear)=1.0G; X-direction (left to right)=1.0G; Vibration frequency=10~200Hz; Sweep time=5mins; Installation=Horizontal; Test temperature=25±5℃; Test disc: TDV-540 track 20.

## 8. 显示屏物理特性 Physical character of the display

1) 显示屏类型: 9英寸TFT

Display screen: 9" TFT

2) 有效面积: 196.608 (宽) × 114.15 (高)

Active area: 196.608(W) × 114.15(H)

3) 像素: 1024(H) X 600(V)

Pixels: 1024(H) X 600(V)

4) 响应时间: 上升+下降=20ms

Response time: Tr+Tf=20ms

5) 视角范围: 水平140°, 垂直120°

Viewing angle range: 140degree (Horizontal.), 120degree (Vertical).

6) 灯寿命: 10000 小时 (25 °C时)。

Lamp life time: 10000 hours (at 25 °C)

7) 屏坏点数要求如下:

The requirement of spoil spot on the TFT monitor will be as follows:

亮点: R、G、B任何一种亮点不能多于6点; 相邻坏点不能多于2个; 两个亮点之间的距离不能小于5mm。

Brightened spot: Each brightened spot of R.G. B cannot exceed 6; Spoil spot cannot exceed 2; Distance between 2 light spots should not shorter than 5mm.

暗点: 单个颜色暗点数不能多于6点; 不允许有相邻两个暗点; 两个暗点之间的距离不能小于2mm。

Dark spot: Dark spot of one single color should less than 6; 2 spoil spot are not allowed; Distance between 2 dark spoil spots shouldn't less than 2 mm.

有缺陷的点的总数不能多于10个。

Total number of spoil spots should be less than 10.

偏光片缺陷 Defective polarizer

刮痕:  $0.05\text{mm} \leq W \leq 0.2\text{mm}$ ,  $1\text{mm} \leq L \leq 5\text{mm}$ 的数目不能多于4个。

凹痕:  $0.15\text{mm} \leq D \leq 0.5\text{mm}$ 的数目不能多于4个。



# ADAYO 华阳通用

其中W为宽度，L为长度，D为直径。

注：关于屏的交货前检查标准最终以屏的生产厂家正式发行的产品规格书为标准。

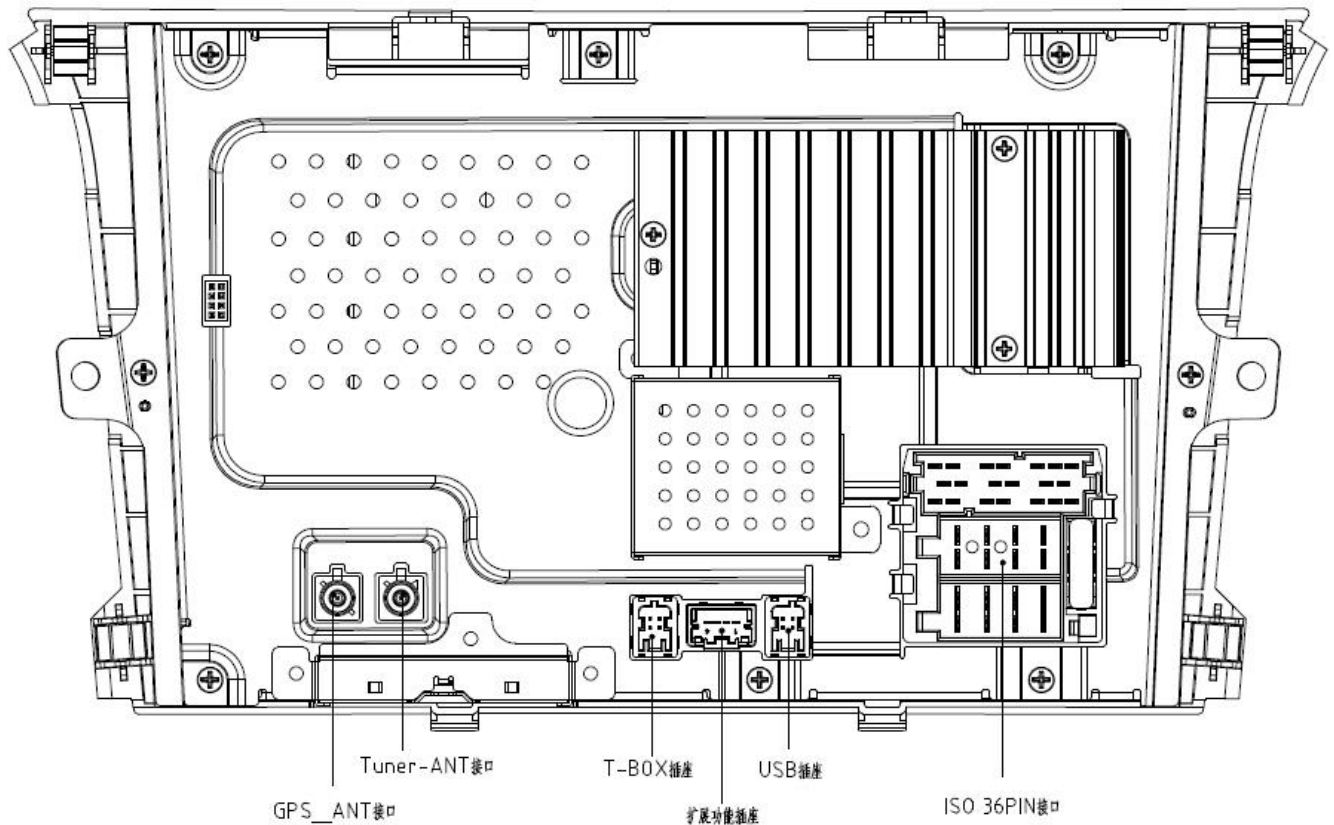
The number of such scrape trace that accords with following size should be less than 4:  
 $0.05\text{mm} \leq W \leq 0.2\text{mm}$ ,  $1\text{mm} \leq L \leq 5\text{mm}$ .

The number of such dent that accords with following size should less than 4:  $0.15\text{mm} \leq D \leq 0.5\text{mm}$ .

Here, W=width, L=length, D=diameter.

Note: The final check standard of TFT LCD will be the product specification issued officially by the LCD supplier.

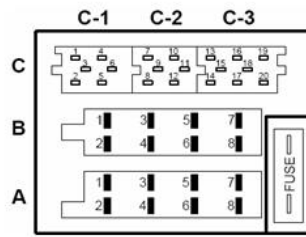
## 五、 接插件定义 Connector PIN definition



接线示意图

## 1. 36PIN插座定义

① AM139电源ISO 36PIN接口  
板端型号: 200-36023-0  
厂家: 奥华



线端型号: A:AMP 928525  
B:AMP 928524  
C-1:AMP 493576  
C-2:AMP 493486  
C-3:AMP 493487

厂家: 泰科

编号	定义	备注	编号	定义	备注
A-1	CAN_H	CAN高	C1-1	CAMERA_VGND	倒车视频信号地
A-2	CAN_L	CAN低	C1-2	CAMERA_CVBS	倒车视频信号
A-3	NC		C1-3	NC	
A-4	ACC	ACC点火信号	C1-4	SWC_GND	方向盘按键地线
A-5	NC		C1-5	SWC1	方向盘按键信号1
A-6	NC		C1-6	SWC2	方向盘按键信号2
A-7	BATT	12V常电供电正极	C2-7	TBOX_AUDIO-	TBOX音频信号正输出到音响
A-8	GND	电源地	C2-8	TBOX_AUDIO+	TBOX音频信号正输出到音响
B-1	NC		C2-9	GND(TBOX)	TBOX音频信号地线
B-2	NC		C2-10	TBOX_MIC1+	音响麦克风正输出到T-BOX
B-3	FR+	右前声道+	C2-11	TBOX_MIC1-	音响麦克风正输出到T-BOX
B-4	FR-	右前声道-	C2-12	NC	
B-5	FL+	左前声道+	C3-13	MIC1_GND	外置麦克风1地
B-6	FL-	左前声道-	C3-14	MIC1+	外置麦克风1正输入
B-7	NC		C3-15	MIC2_GND	外置麦克风2地
B-8	NC		C3-16	MIC2+	外置麦克风2正输入
			C3-17	NC	
			C3-18	MIC_POWER	外置麦克风电源3V3
			C3-19	NC	
			C3-20	NC	

## 2. 收音插座定义

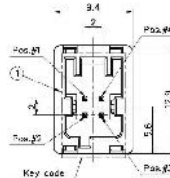
② AM139 Tuner-ANT接口  
板端型号: FAKRA-B型  
厂家: 中聚泰



序号	定义	备注
1	Antenna In/Antenna Power	天线馈电12V/200MA
2	GND	

## 3. USB插座定义

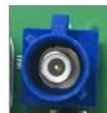
③ AM139 USB接口  
板端型号: CR041-F04G4BE-A  
厂家: WXIN



序号	定义	备注
1	5V	USB 5V/2.1A电源
2	DATA-	USB信号负
3	DATA+	USB信号正
4	GND	USB地

## 4. GPS插座定义

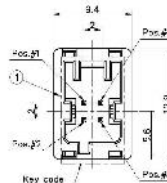
④ AM139 GPS\_ANT接口  
板端型号: FAKRA-C型  
厂家: 中聚泰



序号	定义	备注
1	GPS_ANT	供电5V/40MA
2	GND	

## 5. T-BOX接口定义

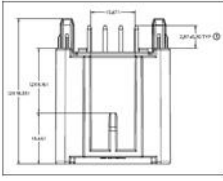
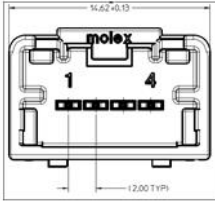
⑤ AM139 T-BOX接口  
板端型号: CR021-F04G4AY-B  
厂家: WXIN



序号	定义	备注
1	NC	PCB预留5V/500MA
2	DATA-	USB信号负
3	DATA+	USB信号正
4	GND	USB地

上图仅供脚位参考

## 6. AUX接口

<p>AM139 AUX接口 板端型号: 34792-8040 厂家: MOLEX</p> 	<p>线端型号: 34791-0040 厂家: MOLEX</p> 	<table border="1"> <thead> <tr> <th>序号</th> <th>定义</th> <th>备注</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>AUX_L</td> <td></td> </tr> <tr> <td>2</td> <td>AUX_R</td> <td></td> </tr> <tr> <td>3</td> <td>NC</td> <td></td> </tr> <tr> <td>4</td> <td>AUX_GND</td> <td></td> </tr> </tbody> </table>	序号	定义	备注	1	AUX_L		2	AUX_R		3	NC		4	AUX_GND	
序号	定义	备注															
1	AUX_L																
2	AUX_R																
3	NC																
4	AUX_GND																

## 六、性能指标 Specification

### 1. 测试环境要求: Environment requirement

温度: 25℃ ±5℃; Temperature: 25℃ ±5℃

湿度: 45%~75%RH; Humidity: 45%~75%RH;

系统供电电压: 14.4V DC 最大电流10A (车用电瓶为准);

Power supply: 14.4V DC, Max. Current 10A (car-used battery)

标准输出功率: Standard output power: 1W(4Ω);

调谐信号源 Tuning signal source:

AM: 1KHz 30%Mod.

FM: 1KHz ±22.5KHz Dev.

### 2. 指标要求

另见文件《RN56H8前后装通用PERFORMANCE DATA WI.PV.002-02.D版 20180106.xlsx》

## 七、整机可靠性要求

### 1. 环境试验 Environment test

试验项目 Item	试验要求 Specification
温升测试 Temperature rising test	<p>整机在常温条件下通电, 读0dB/1KHZ信号碟, 同时插入USB盘, 设置为有效功率的1/8。在试验过程中, 各关键元件的温度不能超过其规格书要求工作范围(机芯光头温度必须有10%余量)。</p> <p>Under room temperature, power on, play the standard test disc, and at the same time play the USB device, set the output power of the amplifier to 1/8 of it. The temperature of all key parts should not overrun the specifications (the temperature of the pickup of the loader must have a margin of 10% to the specification).</p>
高温运行试验 High temperature running test	<p>整机在+80℃环境下应能连续播放24h, 在此过程中整机功能、性能需正常。</p> <p>Under +80℃ high temperature running 24 hours, the function &amp; performance should be OK at whole testing.</p>
低温运行试验 Low temperature running test	<p>整机在-30℃环境下应能连续播放24h, 在此过程中整机功能、性能需正常。</p> <p>Under -30℃ high temperature running 24 hours, the function &amp; performance should be OK at whole testing.</p>

高温高湿工作试验 High temperature & high humidity running test	整机在 +45℃/90%RH环境下连续工作4小时（4Ω负载，1W标准功率输出），在此过程中整机功能、性能应正常。 Under +45℃/90%RH environment condition running 4 hours (4Ω load, amplifier output=1W), the function & performance should be OK at whole testing.
高温高湿保存试验 High temperature high humidity storage test	整机在 +60℃、90%RH环境下放置96h，然后取出在常温常湿下放置24h后测试，整机性能应正常。 Under +60℃/90%RH environment condition stored 96 hours, the function & performance should be OK after staying at room temperature/humidity for 24 hours.
高低温冲击试验 High and low temperature shock test	整机在 -20℃环境下放置1h，在室温放置5min，再放到+70℃环境下放置1h；如此不停的循环20次，常温恢复24h后测试，整机性能应正常。 测试项目：播放测试：SD、DVD标准碟，MP3碟、VCD碟播放各10秒。 Under -20℃ low temperature stored 1 hour, then stay in room temperature 5 min, then put in +70℃ stored 1 hour, continuous 20 cycles, the function & performance should be OK after staying at room temperature for 24 hours.

## 2. 力学试验 Drop/shock test

试验项目 Item	试验要求 Specification	判定标准 Criterion
整箱跌落试验 Package drop test	跌落高度：80cm；跌落地面条件：水泥地面；跌落面：6个面为一个循环 Drop height: 80cm; Drop condition: Cement floor; Side of dropping: 6 sides of unit package	试验后功能良好 Function should be OK after test
	跌落高度：60cm；跌落地面条件：水泥地面；跌落面：3棱1角，从推测认为最弱的部位落下 Drop height: 60cm; Drop condition: Cement floor; Side of dropping: 3 edges and 1 angle	试验后功能良好 Function should be OK after test

## 3. 寿命试验 Life test

试验项目 Item	试验要求 Specification
连续播放试验 Continuous playing test	室温下连续工作1000H后，整机应能正常播放。 All functions should be OK after running for 1000 hours continuously at room temperature.

## 4. 振动耐久性试验 Vibration durability test

项目 Item	规格 Specification

振动耐久性实验 Vibration durability test	振动频率在10~200Hz（保持加速度2.5G）扫描周期为15分钟，被测机在下列时间振动后应能维持正常功能：垂直方向（Z）：2H, 前后方向（Y）：1H, 左右方向（X）：1H。 Vibration frequency 10~200Hz, Acceleration 2.5G, scan cycle 15min, Direction Z: 2hours, Direction Y: 1hour, Direction X: 1hour.
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## 八、 整机安全性要求

1. 符合E-MARK认证标准要求。

E-MARK safety certification organization requirement

2. 安全性 Safety

安全性符合ECE R21标准。

Safety requirements are supposed to fully conform to the Regulations of ECE R21 standard.

## 九、 标志、标签、包装、储存和运输

Mark, label, package, transportation and storage requirement

1. 车载音响系统标志：经检验合格的车载音响整机上应标志整机的系列号。

Qualified Car Audio must be marked with Series No.

2. 包装箱标志：车载音响包装箱上的标志内容包括：

Carton marks: Carton marks including the following contents:

- a) 车载音响整机型号、名称、商标和数量；

Model, Description, Trade Mark and Quantity;

- b) 主机包装箱体的外形尺寸为：

L\*\*×W\*\*×H\*\*

- c) 防雨、防潮、易碎等图形标志；

Graphical marks: Rainproof, wet-proof, crispness and so on.

- d) 生产厂家或公司名称和地址。

Name and address of manufacturer

3. 包装Package

- a) 检验合格的车载音响应具有一般性防潮内包装；

Qualified DVD System must be packed with general wet-proof inner package.

- b) 车载音响的外包装箱应有一般性防潮措施：

Carton packing must be general wet-provable;

- c) 存储环境应清洁、干燥、无有害介质。

Packing place should be clean, dry, and harmful medium-less.

4. 运输Transportation

- a) 包装成箱的车载音响可以用任何交通工具运输，但装运箱、航舱等应保持清洁无污染；

Car DVD Audio system packed in carton can be transported by all type of vehicle, but container and room of carrier should be clean and spot-less.

- b) 严禁与有害化学品、潮湿物混装；

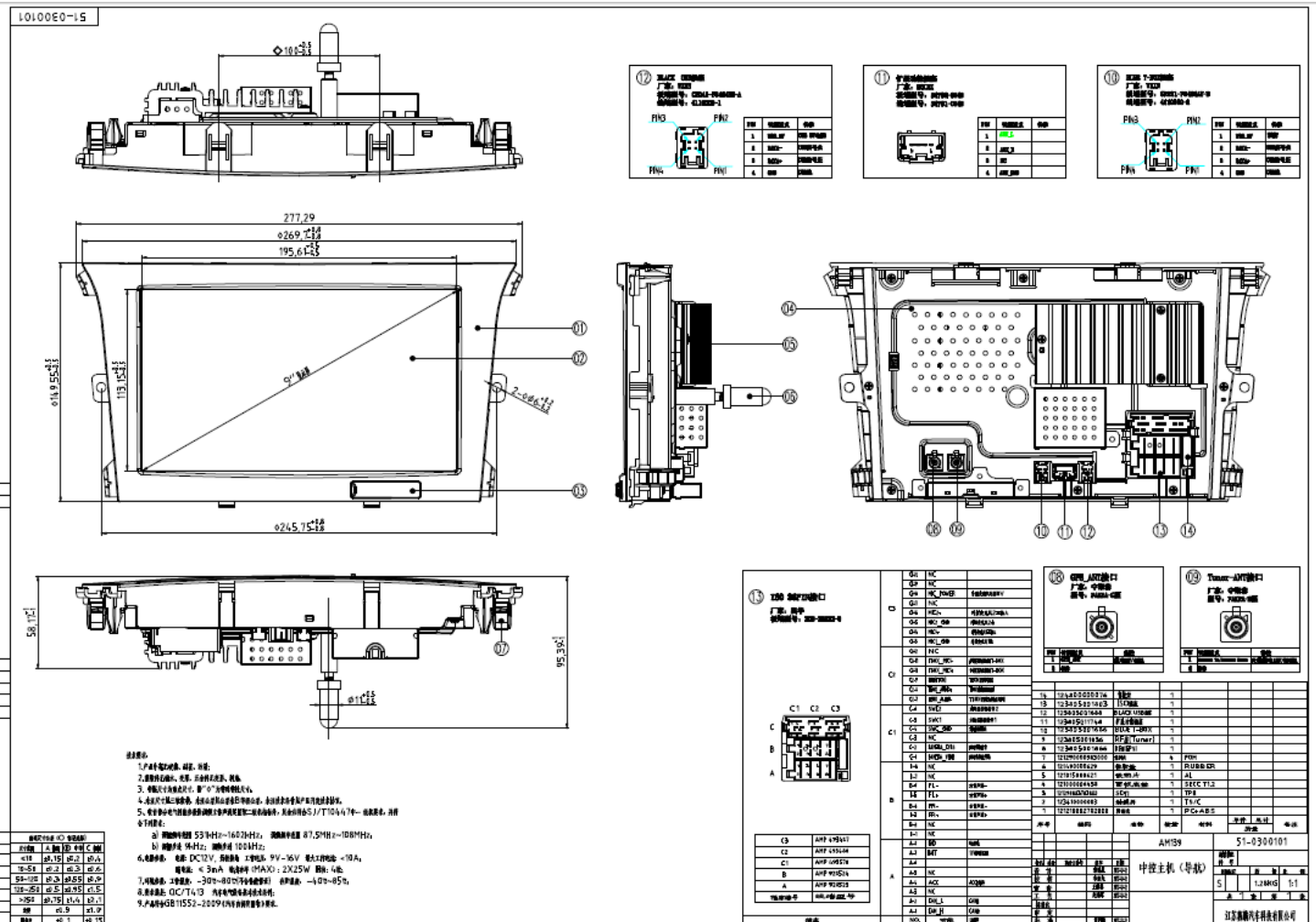
Mixture with harmful chemical and wet cargo is seriously forbidden.

- c) 运输中应避免直接与雨、雪的侵袭。

Directly expose to rain and snow during transporting should be avoided.

## 十、附图表

整机结构示意图:Complete set sketch map



## 十一、注意事项Caution

1. 储存:机器应避免储存在高温,潮湿,多尘的环境。

Storage: high temperature, high wet and dust-full place should be avoided.

FCC Compliance Statement: This device complies with Part 15 of the FCC rules. Operation is subjected 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 your authority to operate the equipment.

The distance between user and products should be no less than 20cm

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

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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.