User Installation Manual
for

PRO 7444IP MDVR

Mobile Digital Video Recorder

Notice

The information in this manual was current when published. The manufacturer reserves the right to revise and improve its products. All specifications are therefore subject to change without any notice.

The purpose of this manual is to kindly aid the user for the operation for our PRO 7444IP. The user should have a basic understanding of computer operation and basic knowledge of how to connect peripherals and make some settings.

Guarantee & Warnings

1) **Electrical Apparatus Safety**
   All installation and operation should comply with local electrical safety norms.
2) **Transportation**
   In the process of transportation, storage and installation, please avoid heavy stress, violent vibration, impact and water splashing.
3) **Installation**
   Install the equipment in accordance with the requirements, handle carefully. Do not heavily press the equipment before the PRO 7444IP installation is finished.
4) **Requirements on Engineers & Technicians**
   All the work of checking and maintenance should be done by qualified technicians and engineers. We do not undertake any responsibility caused by unauthorized modifications.
5) **Requirements on Environment**
   The equipment should be installed and stored in a cool and dry place, away from direct sunlight, flammable or explosive substances, etc. Keep gaps not less than 3cm around the device to facilitate ventilation for cooling.
6) **Accessories**
   Insulate circuit ground and metal shell for all the peripherals.
   Before installation, please open the package and ensure that all parts are included.
   If there are any problems, please contact us as soon as possible.

1. Product characteristics

1.1. Overview

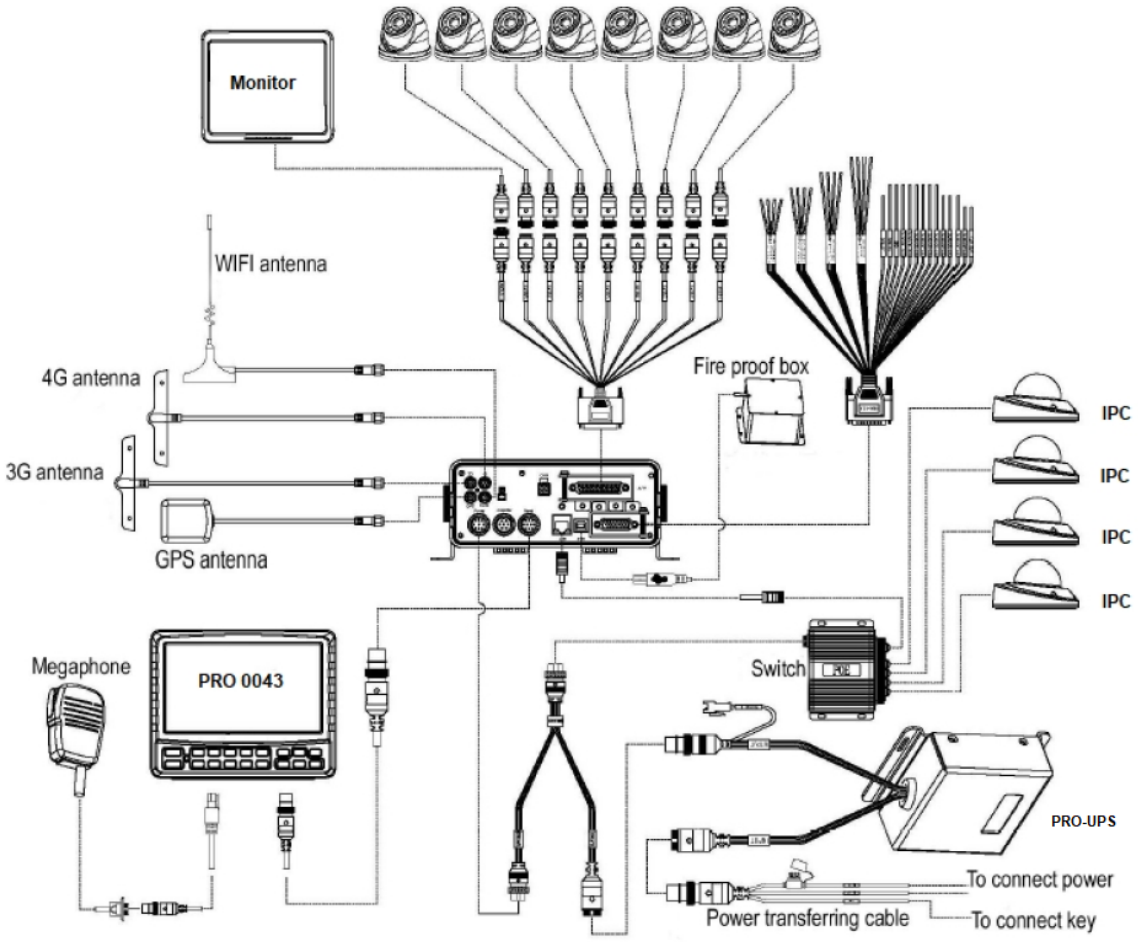
PRO 7444IP V4.0 is developed from the brand new platform, which is an advanced and function-extensive Mobile Video Recorder specially designed for network high definition, analog audio & video input and excellent extension. It uses high-speed processor and embedded operating system, patented file system 4.0 to ensure the safety and integration of important data, combining with H. 264 video compression / decompression technology, network technology and GPS locating technology. It can realize AHD 1080P and 720P high definition, IP 1080P and 720P high definition, WD1, WHD1, WCIF, D1, HD1, CIF video recording and vehicle driving information recording, as well as wireless data upload. With center software it also achieves alarm linkage central monitoring, remote management and playback analysis. It is powerful with modular design, flexible installation, easy maintenance and high reliability.

1.2. Specifications

Function Overview		Preview, Recording, Playback, Network, Locating
System	OS	Linux 3.0.8
	Control Mode	Touch Monitor, Network (3G/4G/WIFI), Mouse
Video	Input	8 channels AHD (1080P)+4 channel IPC (1080P)
	Output	2 channels
	Total Resource	PAL: 8*720P@25FPS (AHD) +4*1080P@30FPS (IPC) Or 8*1080P@12FPS (AHD) +4*1080P@30FPS (IPC) NTSC: 8*720P@30FPS (AHD)+4*1080P@30FPS (IPC) Or 8*1080P@15FPS (AHD)+4*1080P@30FPS (IPC)
	Video Signal Standard	Electrical level: 1Vpp Impedance: 75Ω NTSC/PAL Optional
Audio	Input	12 channels
	Output	2 channels
	Audio Signal Standard	Electrical level: 2Vpp Input impedance: 4.7kΩ
Display	Display Split	1/4/9 Image display
	OSD	GPS information, alarm, temperature, acceleration, voltage, device information, software version, MCU version, network status
	Operation Interface	Semi-transparent GUI
Recording	Video/Audio Compression	Video: H.264
		Audio: ADPCM, G.711A, G.711U
	Image Resolution	PAL: 1080P, 720P, WD1(928X576), WHD1(928X288), WCIF(464X288), D1(704X576), HD1(704x288), CIF(352x288); NTSC: 1080P, 720P, WD1(928X480), WHD1(928X240),

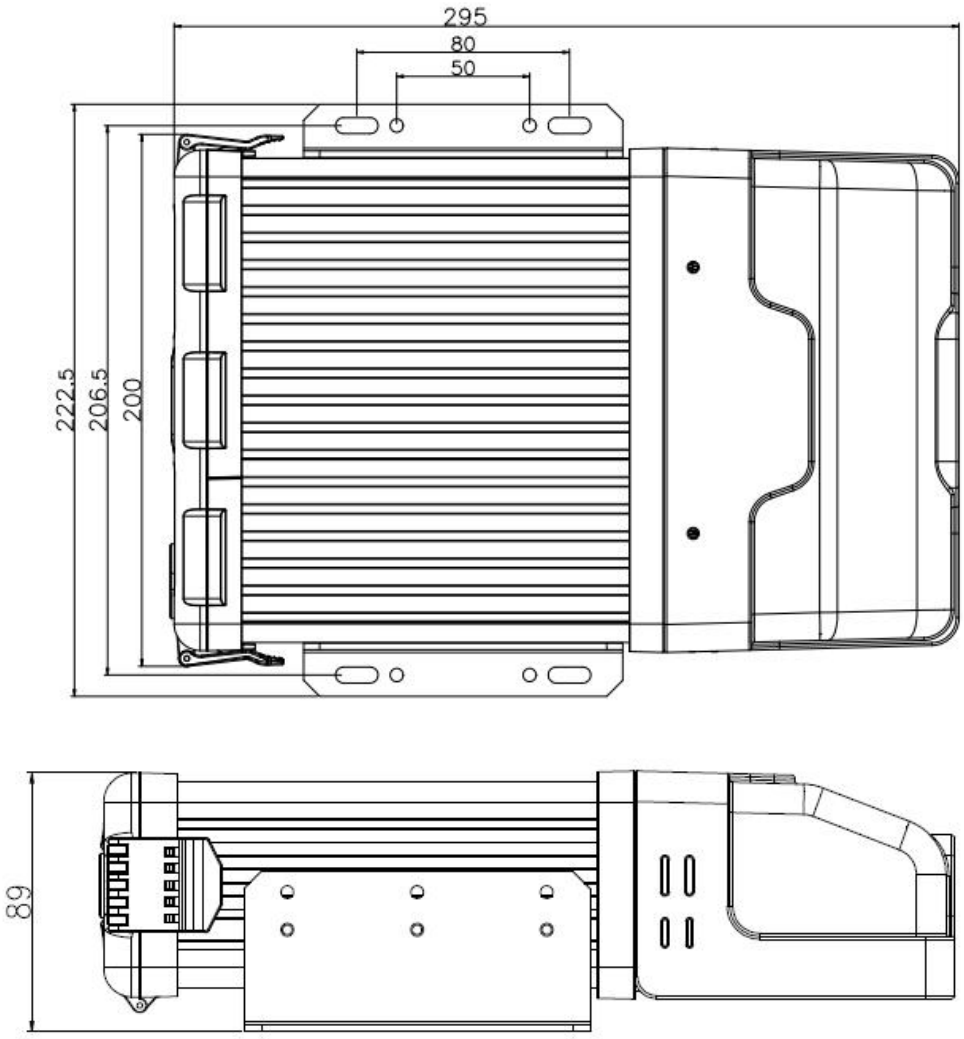
		WCIF(464X240), D1(704x480), HD1(704x240), CIF(352x240); Digital: 720P(1280X720)
	Image Quality	8 Levels adjustable
	Recording Mode	Manual/schedule/Alarm(sensor trigger, speed, acceleration, video loss, temperature)
	Pre-recording	0-60minutes
	Post-recording	0-30 minutes
	Mirror Recording	Yes
Playback	Playback Channel	4 channels by local playback
	Search Mode	Date/time, channel, event
Network	3G/4G	EVDO/WCDMA/TDD-LTE/FDD-LTE
	WIFI	802.11b/g/n
	Ethernet	RJ45 x 1 (10/100 M/1000M)
	IPC Ethernet	6-pin M12 (4x10/100M, power supply)
Locating	GPS	Location tracking, speed detection and time sync
Storage	Hard disk	Supports 2.5" hard disk up to 2TB
Interface	USB	USB2.0 x 2
	SD	SD slot x 1
	SIM	SIM slot x 2
	RS232	RS232 X 2
	RS485	RS485 X 2
	Sensor	8 inputs, 2 outputs
	Serial	G-sensor (Internal)
	Speed	1 channel pulse speed detection
	Interface	Touch panel PRO 0043 Optional
	Intercommunication	I MIC interface
Power	Input	DC8-36V, ACC
	Output	5V@500mA, 12V@500mA
	Max Power Consumption	105.3W
	Standby Power Consumption	≈0W
Physical Characteristics	Dimension(L x W x H)	295 x 222 x 89 mm (with back cover and shelves)
	Weight	2.6 kg
Environment	Operating Temperature	-40℃- +70℃(With heater) or -10℃- +70℃
	Operating Relative Humidity	8%-90% (No Condense)

1.3. System diagram

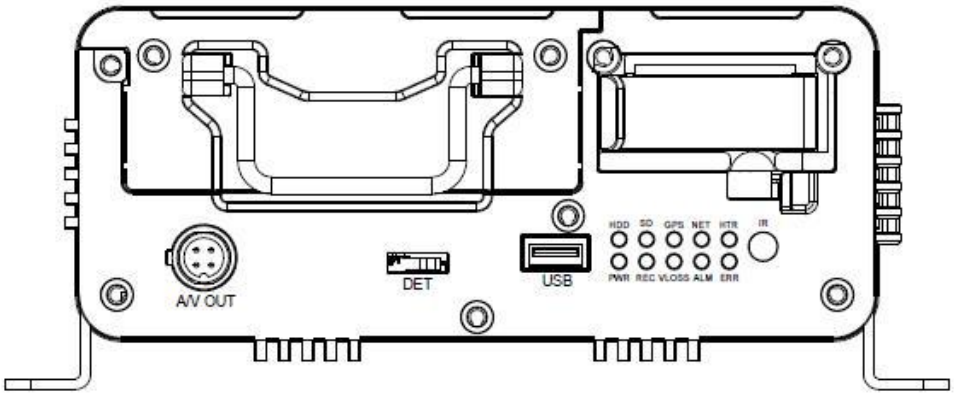


1.4. External interface

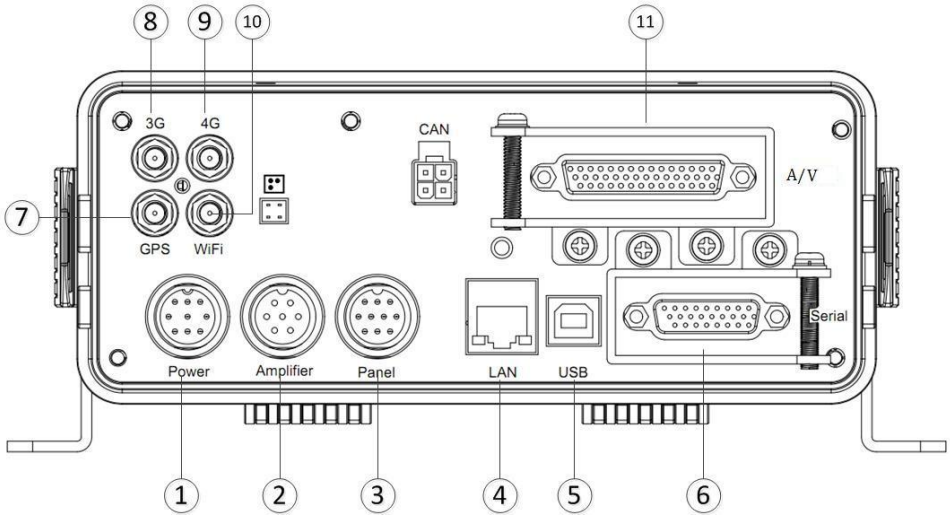
1) Dimension (Unit: mm)



2) Front Panel and Rear Panel

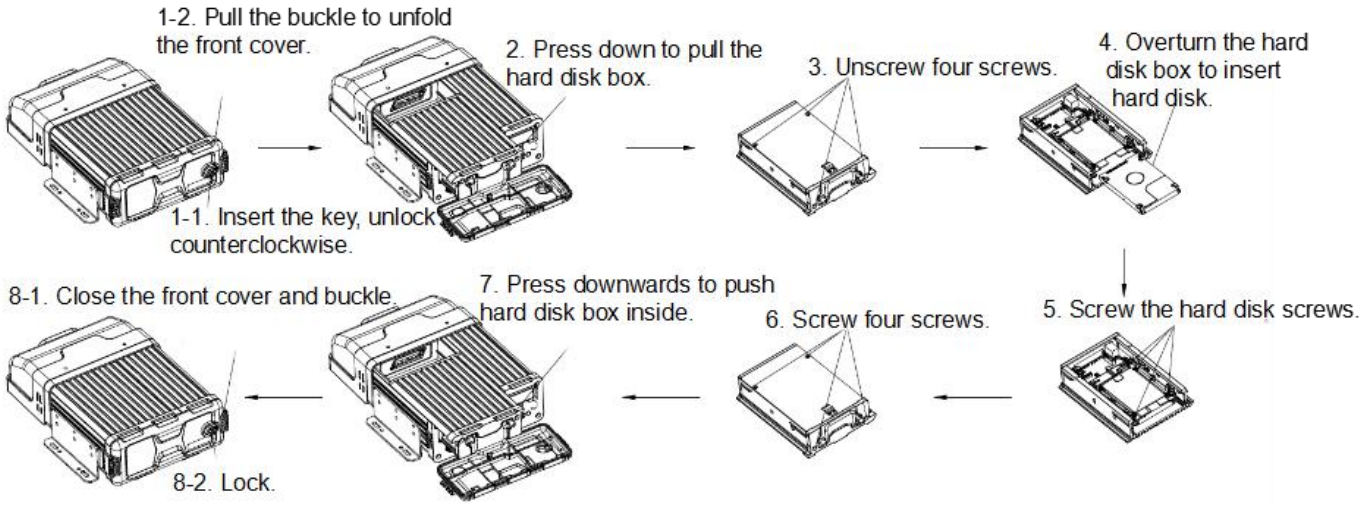


3) Rear Panel

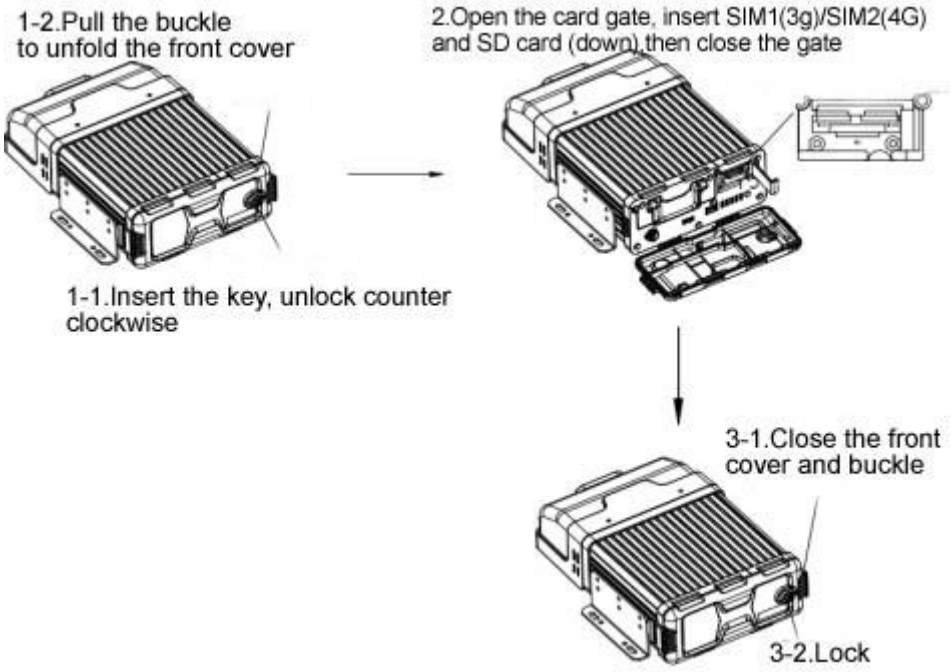


Serial number	Print	Description
1	DC8-36V	Power Input
2	Amplifier	Amplifier interface
3	Panel	Control panel (PRO 0043)
4	LAN	Network interface
5	USB	USB interface
6	Serial	Serial interface
7	GPS	GPS Antenna Interface
8	3G	3G Antenna Interface
9	4G	4G Antenna Interface (Optional)
10	WIFI	WIFI Antenna Interface
11	A/V	A/V input 1~8, A/V output

1.5. Hard disk installation

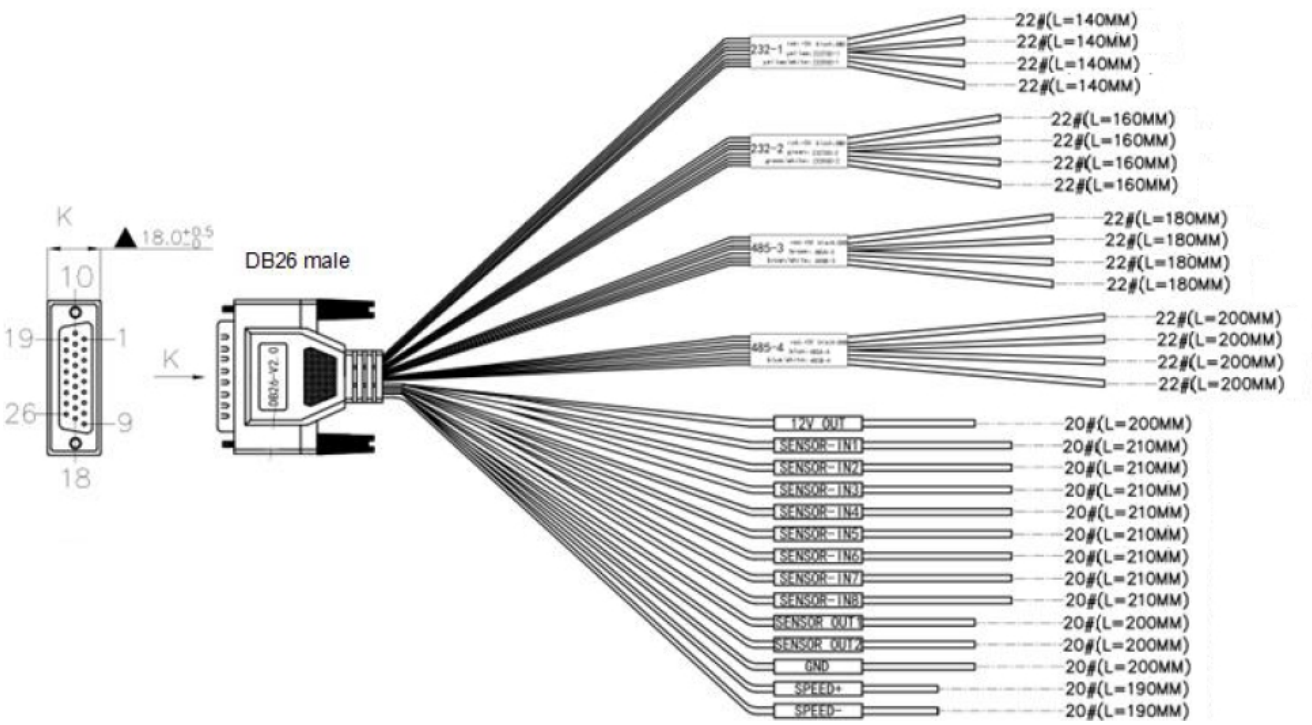


1.6. SIM card installation



1.7. Definition and pictures of external cables

Alarm cable definition

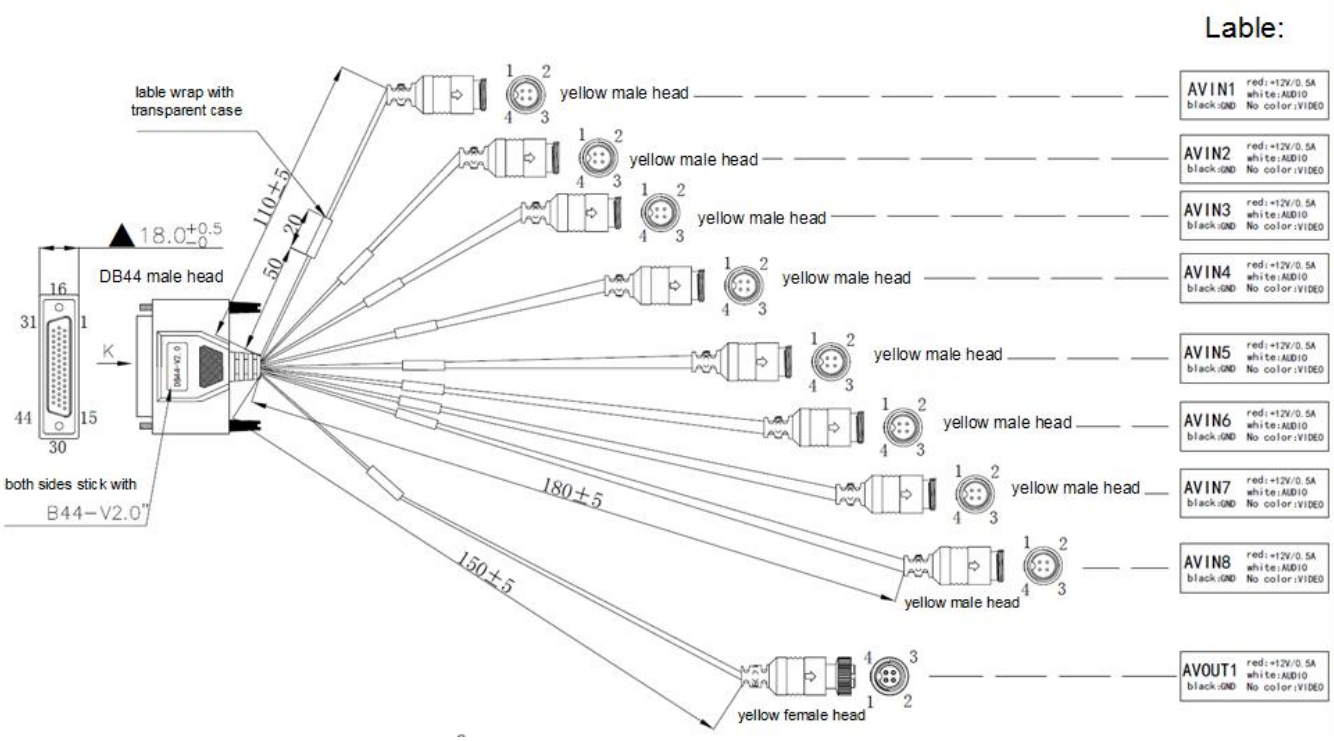


Diagram

DB26

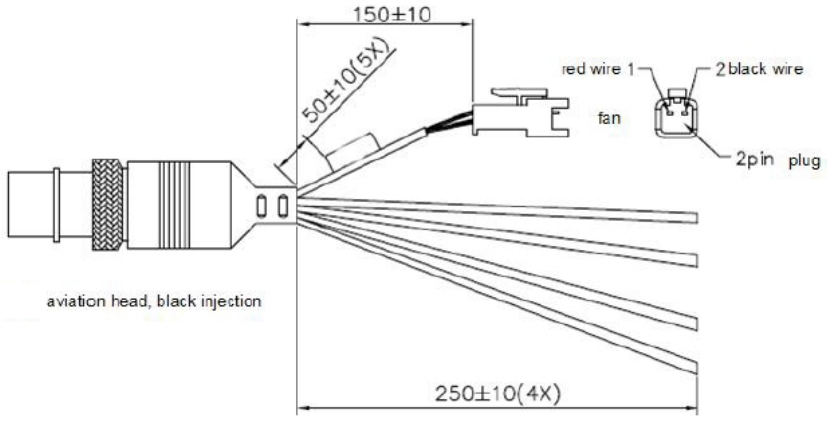
1	232TXD-1	232-1
2	232RXD-1	
19	+5V	
20	GND	
10	232TXD-2	232-2
11	232RXD-2	
19	+5V	
20	GND	
3	485A-3	485-3
4	485B-3	
21	+5V	
22	GND	
12	485A-4	485-4
13	485B-4	
21	+5V	
22	GND	
5	12V OUT	
14	SENSOR-IN1	
23	SENSOR-IN2	
6	SENSOR-IN3	
15	SENSOR-IN4	
7	SENSOR-IN5	
16	SENSOR-IN6	
25	SENSOR-IN7	
8	SENSOR-IN8	
24	SENSOR OUT1	
26	SENSOR OUT2	
9	GND	
17	SPEED+	
18	SPEED-	

Video cable definition



AV IN1	(black:GND)	red:+12V/0.5A,white:AUDIO,no color:VIDEO
AV IN2	(black:GND)	red:+12V/0.5A,white:AUDIO,no color:VIDEO
AV IN3	(black:GND)	red:+12V/0.5A,white:AUDIO,no color:VIDEO
AV IN4	(black:GND)	red:+12V/0.5A,white:AUDIO,no color:VIDEO
AV IN5	(black:GND)	red:+12V/0.5A,white:AUDIO,no color:VIDEO
AV IN6	(black:GND)	red:+12V/0.5A,white:AUDIO,no color:VIDEO
AV IN7	(black:GND)	red:+12V/0.5A,white:AUDIO,no color:VIDEO
AV IN8	(black:GND)	red:+12V/0.5A,white:AUDIO,no color:VIDEO
AV OUT1	(black:GND)	red:+12V/0.5A,white:AUDIO,no color:VIDEO

Amplifier cable definition



2. Frequently asked questions

1) The system can't start?

Usually this problem results from the incorrect power connection. Please follow below steps to check the power connection:

1. Check the input power, whether the power wire is connected correctly, whether the ground wire is connected back to the battery, and whether the fuse on the power wire is in good condition.
2. Check whether the ACC signal wire input to the power is with voltage higher than 7 V.
3. Check whether the device key is closed.

2) The PRO 7444IP restarts uninterruptedly?

Please follow below steps to check it:

1. Check whether the voltage of PRO 7444IP is insufficient. If the voltage is less than the start-up voltage of the device, the device would always restart.
2. The problem in hard disk/SD card may cause the failure to start. Take off the storage part and check whether it is broken down.

3) The device can't record?

Usually this problem results from the storage disk or camera. Please follow below steps to check it:

1. Check whether the storage disk is installed, whether it is in good contact, and whether the disk can be read normally in computer.
2. Check whether the storage disk is formatted. The storage disk should be formatted before normally storing record files.
3. Check whether there is video signal input into the device from camera, and whether there is video/image on the screen.

4) There is no voice in record file?

Please follow below steps to check it:

1. Check whether there is an external pickup, or whether the camera features with the function of audio collection.
2. Access to Video Channel Settings, check if Audio is set on.
3. There must be video input into the channel for recording and it must record normally.

5) The GPS works abnormally?

Please follow below steps to check it:

1. Check whether the GPS antenna is installed correctly. There is a silk print logo on the GPS antenna holder behind the host device.
2. Check whether the antenna receiver is sheltered. It should not be covered by any stuff, which may cause it not to receive signals.
3. Environmental influence such as tree shades, being inside tunnel, driving near tall building or elevated roads, thunderstorms or other weather influence, etc. can also cause signal loss or receiving wrong signals.

6) The device can't shutdown in ignition switch mode?

Please follow below steps to check it:

1. Check if the ACC line connection mode is correct; and check whether there is voltage on ACC yellow line when the key is turned off.
2. If the device has been set with schedule recording, it can't shutdown if it is still during recording time of the task table.

7) How to install the WIFI antenna?

The antenna must be installed on unobstructed place of the roof, and be fixed with glue.

8) The device cannot be shut down when in ignition ON/OFF mode.

Check if the ACC signal wiring is correct and if there is voltage for ACC signal line after the key is turned off .

If you have set timing recording, and at the current time it is still in task recording, the device may be impossible to be shut down.

9) GPS anomaly.

Check if the GPS antenna is properly installed. There is silkscreen GPS identification on the GPS antenna pedestal on the back of the PRO 7444IP device. Check if the antenna connector is blocked and make sure the antenna connector not be covered by other things.

Trees block, being inside the tunnel, driving near tall buildings or viaduct, thunderstorms and other environmental effects may also cause to receive no GPS signal or error signal.

10) No voice in video files.

See if there is an external microphone, or if the camera cannot capture audio;

Enter into the video channel settings, then check if the audio is open;

Ensure video input and normal recording, on which the audio recording channels must be based.

11) The device doesn't record.

Make sure the storage part is installed and of fine contact, the data can be read on PC, and the storage device is not formatted.

Check if there are video signal input to the main device, and whether there are video images in the channel pictures.

12) Why has the PRO 7444IP device always been in a state of restart?

Check whether the PRO 7444IP device voltage is insufficient. If the device voltage does not reach the start voltage, the device will restart.

Hard disk or SD card may cause the PRO 7444IP device unable to start. You need to remove the storage device and then boot up to verify whether it is caused by the storage device.

13) Why the PRO 7444IP device cannot start?

Check the device input power to see if the power wiring is correct, if there is ground wire connected back to the battery, and if the fuse of the power wire is n good condition;

Check whether there is voltage(more than 7V) on power input ACC signal wire;

Check whether the hard disk key is turned off.

14) What is the log in user name and password for new device?

The default user name and password are both “admin”. The device password can be set as empty.

15) In the ON/OFF of basic settings, the low voltage protection is 8V, why?

After testing, when the battery is lower than 8V, the voltage will lower down quickly. Therefore the lowest voltage is set to be 8V. When it is lower than 8V, the MDVR device will recognize it as external power-off and then enter into shutdown state.