

Hamilton™
E L E C T R O N I C S

PA-85

**WIRELESS PA AMPLIFIER SYSTEM
OPERATION MANUAL**

SPECIFICATIONS

AMPLIFIER

Power supply:	AC120V/60Hz built-in 3x6V 7A rechargeable batteries
Frequency response:	35-20000Hz
SPL:	94dB(1W/M)
T.H.D.:	<1%
Input wired mic:	-58dBV600
Record output:	0dBV 1K
Speaker:	2x 8" full range speaker
Output power:	RMS 85W, PEAK 170W
Input jack:	2x1/4" wired mic jack, 1 RCA audio Line In jack
Output jack:	1 RCA (VIDEO+L/R AUDIO) jack

RECEIVER

Carrier frequency range:	UHF690~865 MHz
RF sensitivity:	<-101dB
Image rejection:	> 60dB
S/N ration:	>65dB
Operation range:	150 ft

TRANSMITTER

Carrier frequency range:	UHF 690~865MHz
RF power output:	<10mW
Modulation level:	15K
Operation temperature:	-18°C ~ 60°C
Power supply:	9V
Battery Life:	10 Hours

IMPORTANT SAFEGUARDS

IMPORTANT

To protect rechargeable battery life, this unit is shipped without installing battery fuse. Before using this unit please install fuse (included in accessories pack). Charge the battery fully before first use. Charge battery each month if you are not going to use this unit for a long period of time. Avoid total discharging of the battery.

WARNING:

- * To prevent fire or shock hazard, do not expose the unit to rain or moisture.
- * To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

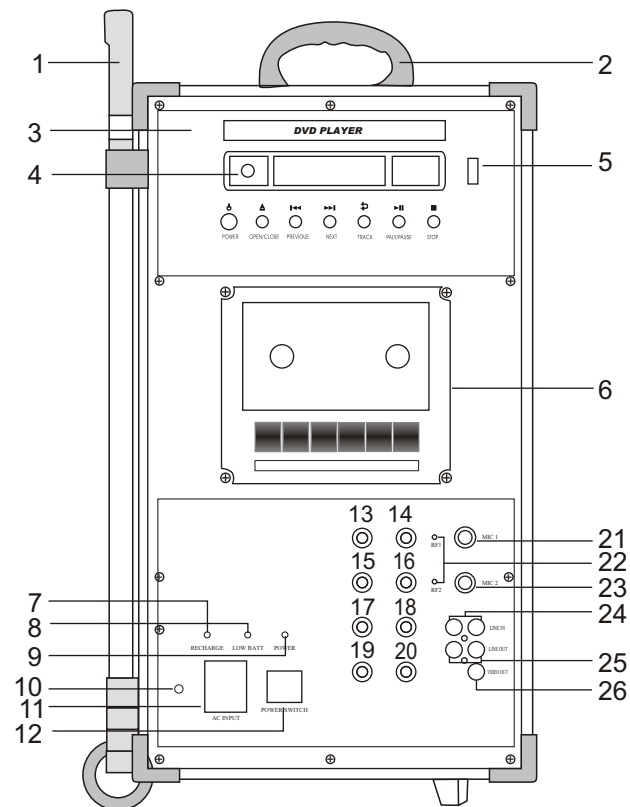
PRECAUTIONS:

- * Be sure to use the correct power supply.
- * Hold the plug of the cable when connecting or disconnecting the cable from wall socket.
- * Turn volume control of the amplifier to minimum before power on. Then adjust volume to suitable level as desired to avoid damage to your ear, the amplifier or speaker.
- * Please pull out AC plug from the wall socket and turn off the unit if you are not going to use the unit for a long period of time.
- * To extend the usage time, keep the interval between turn on and turn off of the unit no less than 10 seconds.
- * Do not use the system where it may be subjected to:
 - direct sunlight or near the heat radiators or other heat sources
 - excessive dust or poor ventilation
 - excessive humidity or rain
 - mechanical or other vibrations

PARTS DESCRIPTION

AMPLIFIER

Rear Panel



- | | |
|--|---|
| 1. Retractable trolley | 14. MIC 1 and Wireless MIC 1 volume control |
| 2. Handle | 15. Tone control |
| 3. DVD player | 16. MIC 2 and Wireless MIC 2 volume control |
| 4. Remote sensor | 17. Talk over switch |
| 5. USB PORT | 18. LINE IN volume control |
| 6. Cassette player & recorder | 19. MASTER volume control |
| 7. Charge LED indicator | 20. DVD/TAPE volume control |
| 8. Low battery LED indicator | 21. MIC 1 input |
| 9. Amplifier power LED indicator | 22. Wireless MIC RF indicator |
| 10. Battery fuse: | 23. MIC 2 input |
| NOTE: Please install battery fuse before first use. | 24. RCA LINE IN |
| 11. AC input jack | 25. RCA LINE OUT |
| 12. Amplifier power switch | 26. RCA Video output |
| 13. Echo control | |

4. USING TAPE CASSETTE PLAYER & RECORDER

- 1) Insert the tape into cassette holder after press STOP/EJECT button. And then press PLAY button to enjoy the tape.
- 2) Adjust volume controls of the amplifier and CD/TAPE to the suitable level.
- 3) Treble and bass control adjustment depends on your request.

5. USING WIRED MICROPHONE

- 1) Plug wired microphone to MIC in jack.
- 2) Turn the volume control of each MIC to the desired position.
- 3) Adjust tone and echo control as per your request.

6. USING WIRELESS MICROPHONE

- 1) This unit is with built-in two UHF wireless microphone system.
- 2) Insert attached 9V battery into transmitter battery compartment. Turn on transmitter power switch. RF indicator on the rear panel of amplifier will light to show receiving signal from transmitter.
- 3) Adjust MIC volume to suitable level.
- 4) Adjust TONE and ECHO control to the suitable level.

7. TALK OVER FUNCTION

The volume of background music will turn down when you speak to microphone during playing music. Music will come up again when you stop speaking to microphone. The music cutting down level can be adjusted. Turn TALK OVER to left, the music will not be reduced when you talk to microphone. Turn TALK OVER to middle, the music will be reduced about 50%. Turn TALK OVER to right, the music will be cut off.

8. CONNECT EXTERNAL AUDIO/VIDEO DEVICES

This unit is equipped with one RCA audio(R+L) input jack. External audio sources can be input to this unit. This unit has also one group RCA audio (R+L)video output jack. The stereo signal comes from the AUDIO L/R or VIDEO can be transmitted to other audio/video devices.

C. Charge the built in rechargeable battery.

- 1) Using supplied AC cord to connect the unit to suitable power source with the correct voltage as marked. Charge LED indicator will flash.

NOTE: Either DVD power and main AMP power is on or off, the battery will be charged once you plug AC power.

- 2) Charge indicator will turn from red to green when battery is fully charged.
- 3) Charging time should be about 10 hours.
- 4) If the unit is not going to be used for a long period of time, please charge the battery once per month to protect rechargeable battery.

2. USING DVD PLAYER

- 1) Turn on the power switch of amplifier and power LED indicator will light.
- 2) Turn on the power of DVD PLAYER, LCD display will light.
- 3) Open the door of DVD player by pressing OPEN/CLOSE button and insert a disc. Press OPEN/CLOSE again to close the door.
- 4) Using supplied RCA cable to connect the VIDEO output jack and TV, video will be transferred from DVD PLAYER to TV screen.
- 5) Adjust main volume controls of the amplifier to the desired level.
- 6) Adjust tone control to the desired level.
- 7) Press the previous button for previous song.
- 8) Press the next button for next song.
- 9) Press play/pause button for play or pause.
- 10) Press stop button for stopping.
- 11) Press track button to select track when singing karaoke.

3. USING USB

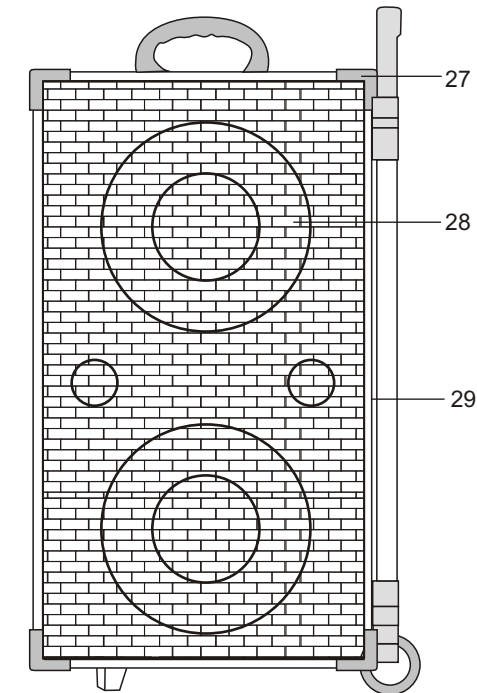
- 1) Insert flash DISC into USB port.
- 2) Press the previous button for previous song.
- 3) Press the next button for next song.
- 4) Press play/pause button for play or pause.
- 5) Press stop button for stopping.

NOTE: To play flash disc, please make sure that no DVD disc is inside DVD player. If both DVD disc and flash disc are inserted, DVD will be played.

PARTS DESCRIPTION

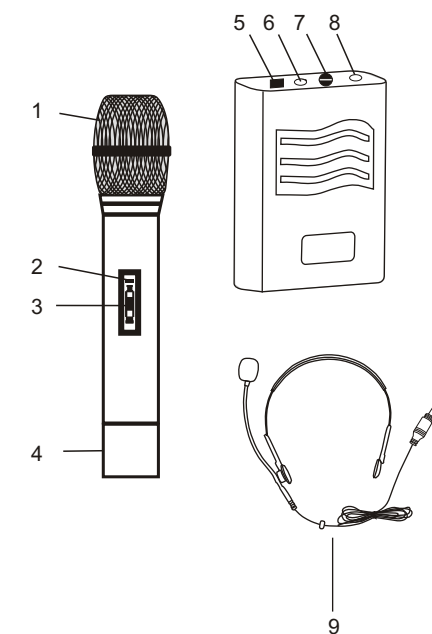
Front

27. Metal corner
28. Full range speaker
29. Battery compartment



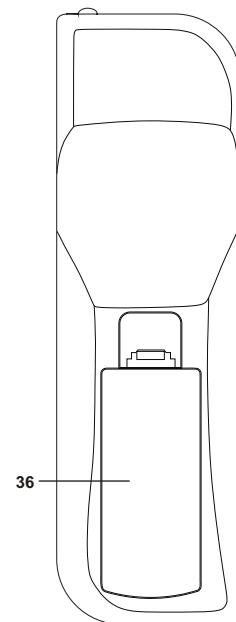
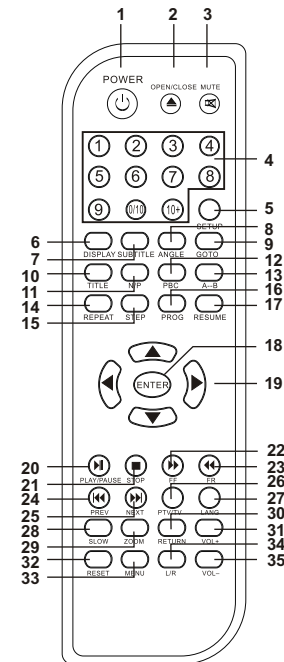
TRANSMITTER

1. Mesh(capsule inside)
2. Power LED indicator
3. Power switch
4. Battery compartment
5. Power switch
6. Power LED indicator
7. Attenuation switch
8. MIC IN jack
9. Headset MIC



REMOTE CONTROL

1. **POWER:** Turn on/off DVD.
2. **OPEN/CLOSE:** To open and close DVD tray.
3. **MUTE:** To mute DVD sound.
4. **Number Key:**
 - 1~0/10: To input number less than and equal to 10
 - 10+: Press 10+ and then 1~9 to input number more than 10
5. **SETUP:** Press this button to set up system
6. **DISPLAY:** press to display track no, playing time, time left etc.
7. **SUBTITLE:** to change caption language. Valid only when playing file has different languages options.
8. **ANGLE:** To change the angel of movie. Valid only when movie has angle options.
9. **GOTO:** Timing play. Press to start playing from the selected time.
10. **TITLE:** press to enter sub menu.
11. **N/P:** TV system change.
12. **PBC:** Turn on/off VCD disc menu. Valid with VCD disc only.
13. **A-B:** to repeat selected part. Press to choose the starting point A. Press again to select the end point B.
14. **REPEAT:** press to choose repeat mode: repeat one, repeat all.
15. **STEP:** play step by step
16. **PROG:** To program playing order of your favourite songs.
17. **RESUME:** After you stop playing, press to continue playing from the last ending point.
18. **ENTER:** press to confirm the function you choose
19. **Direction buttons:** ◀ go to left ▶ go to right ▲ go to top ▼ Go to bottom
20. **PLAY/PAUSE:** press to PLAY or PAUSE
21. **STOP:** Press to pre stop. Press again to stop..
22. **FF:** fast forward
23. **FR:** fast reward
24. **PREV:** go to previous track
25. **NEXT:** go to next track
26. **PTV/TV:** choose to play DVD or USB
27. **LANG:** language button. Press to choose DVD audio output
28. **SLOW:** slow playing
29. **ZOOM:** press to zoom in video.
30. **RETURN:** return to last interface
31. **VOL+:** increase volume
32. **RESET:** press to go to default setup.
33. **MENU:** press to display disc menu
34. **L/R:** sound track change
35. **VOL-:** decrease volume
36. **Battery compartment:** open to install 2pcs AAA batteries.



FEATURES

1. Multi-functional portable wireless amplifier system is perfect for Karaoke, conference, training, auditorium, hotel, church, & teaching etc.
2. Retractable trolley, handle and wheels. Easy for transportation.
3. Built-in 3pcs 6V*7A rechargeable batteries which can work continuously for about 3 hours. Suitable for both indoor and outdoor activities.
4. Two pieces 8" full range speakers provide 170W peak power.
5. Built-in DVD player, USB port and cassette player & recorder.
6. With two wired MIC IN jacks and two built-in UHF wireless microphone system. Suitable for many people using simultaneously. The volume of each microphone can be adjusted individually.
7. With one group RCA audio(R+L) line in jack to input music from other audio sources. With one RCA audio(R+L) and video output jacks to output video to TV and audio to amplifier. Volume can be adjusted by LINE IN volume.
8. With talk over function.
9. With Master volume, DVD volume, LINE IN and MIC IN volume controls. With Tone and Echo controls suitable for karaoke.

OPERATION

1. POWER SUPPLY

A. Using AC power

Using supplied AC cord to connect the unit to suitable power source with the correct voltage as marked.

NOTE: When AC power is connected, DVD and amplifier use AC power, not battery power.

B. Using built-in rechargeable battery

- 1) It is not necessary to connect the AC power, the rechargeable battery will supply power to the unit.
- 2) If the low battery LED indicator on the back of the unit lights, it indicates the battery power is low and need to be charged.