



WIRELESS MICROPHONE SYSTEM

UP-81DR/8H/8P SERIES



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www.show-pa.com

IMPORTANT!

**Please read this manual carefully before operating
this unit for the first time.**

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SAFETY RELATED SYMBOLS



The symbol is used to indicate that some hazardous live terminals are involved within this apparatus, even under the normal operating conditions.



The symbol is used in the service documentation to indicate that specific component shall be only replaced by the component specified in that documentation for safety reasons.



Protective grounding terminal.



Alternating current /voltage.



Hazardous live terminal .

ON: Denotes the apparatus turns on.

OFF: Denotes the apparatus turns off, because of using the single pole switch, be sure to unplug the AC power to prevent any electric shock before you proceed your service.

WARNING: Describes precautions that should be observed to prevent the danger of injury or death to the user.



Disposing of this product should not be placed in municipal waste and should be separate collection.

CAUTION: Describes precautions that should be observed to prevent danger of the apparatus.

WARNING

• Power Supply

Ensure the source voltage matches the voltage of the power supply before turning ON the apparatus.

Unplug this apparatus during lightning storms or when unused for long periods of time.

• External Connection

The external wiring connected to the output hazardous live terminals requires installation by an instructed person, or the use of ready-made leads or cords.

• Do not Remove any Cover

There are maybe some areas with high voltages inside, to reduce the risk of electric shock, do not remove any cover if the power supply is connected.

The cover should be removed by the qualified personnel only.

No user serviceable parts inside.

• Fuse

To prevent a fire, make sure to use fuses with specified standard (current, voltage, type). Do not use a different fuse or short circuit the fuse holder.

Before replacing the fuse, turn OFF the apparatus and disconnected the power source.

• Protective Grounding

Make sure to connect the protective grounding to prevent any electric shock before turning ON the apparatus.

Never cut off the internal or external protective grounding wire or disconnect the wiring of protective grounding terminal.

• Operating Conditions

This apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on this apparatus.

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

Do not use this apparatus near water. Install in accordance with the manufacturer's

instructions. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat. Do not block any ventilation openings. No naked flame sources, such as lighted candles, should be placed on the apparatus.

IMPORTANT SAFETY INSTRUCTIONS

- Read these instructions.
- Follow all instructions.
- Keep these instructions.
- Heed all warnings.
- Only use attachments/accessories specified by the manufacturer.

• Power Cord and Plug

Do not defeat the safety purpose of the polarized or grounding type plug.

A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

• Cleaning

When the apparatus needs a cleaning, you can blow off dust from the apparatus with a blower or clean with rag etc.

Don't use solvents such as benzol, alcohol, or other fluids with very strong volatility and flammability for cleaning the apparatus body. Clean only with dry cloth.

• Servicing

Refer all servicing to qualified personnel. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so .

Servicing is required when the apparatus has been damaged in any way ,such as power supply cord or plug is damaged , liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

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.

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

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.

Remark:

1. The values with underlines should be scanned manually by adjusting UP/DOWN key.
2. The following channels can be used simultaneously without any interference.

Group 1-1: 798.125	Group 2-1: 798.325
Group 2-2: 800.725	Group 2-5: 807.925
Group 3-4: 805.725	Group 5-1: 798.925
Group 5-8: 815.725	Group 7-1: 799.325
Group 8-6: 811.525	Group 12-2: 802.725

F8: 850.000-874.000(850-879)MHz

	Group1	Group2	Group3	Group4	Group5	Group6	Group7	Group8	Group9	Group10	Group11	Group12
1	850.125	850.325	850.525	850.725	850.925	851.125	851.325	851.525	851.725	851.925	852.125	852.325
2	852.525	852.725	852.925	853.125	853.325	853.525	853.725	853.925	854.125	854.325	854.525	854.725
3	854.925	855.125	855.325	855.525	855.725	855.925	856.125	856.325	856.525	856.725	856.925	857.125
4	857.325	857.525	857.725	857.925	858.125	858.325	858.525	858.725	858.925	859.125	859.325	859.525
5	859.725	859.925	860.125	860.325	860.525	860.725	860.925	861.125	861.325	861.525	861.725	861.925
6	862.125	862.325	862.525	862.725	862.925	863.125	863.325	863.525	863.725	863.925	864.125	864.325
7	864.525	864.725	864.925	865.125	865.325	865.525	865.725	865.925	866.125	866.325	866.525	866.725
8	866.925	867.125	867.325	867.525	867.725	867.925	868.125	868.325	868.525	868.725	868.925	869.125
9	869.325	869.525	869.725	869.925	870.125	870.325	870.525	870.725	870.925	871.125	871.325	871.525
10	871.725	871.925	872.125	872.325	872.525	872.725	872.925	873.125	873.325	873.525	873.725	873.925
11	874.125	874.325	874.525	874.725	874.925	875.125	875.325	875.525	875.725	875.925	876.125	876.325
12	876.525	876.725	876.925	877.125	877.325	877.525	877.725	877.925	878.125	878.325	878.525	878.725

F6: 740.000-764.000(740-769)MHz

	Group1	Group2	Group3	Group4	Group5	Group6	Group7	Group8	Group9	Group10	Group11	Group12
1	740.125	740.325	740.525	740.725	740.925	741.125	741.325	741.525	741.725	741.925	742.125	742.325
2	742.525	742.725	742.925	743.125	743.325	743.525	743.725	743.925	744.125	744.325	744.525	744.725
3	744.925	745.125	745.325	745.525	745.725	745.925	746.125	746.325	746.525	746.725	746.925	747.125
4	747.325	747.525	747.725	747.925	748.125	748.325	748.525	748.725	748.925	749.125	749.325	749.525
5	749.725	749.925	750.125	750.325	750.525	750.725	750.925	751.125	751.325	751.525	751.725	751.925
6	752.125	752.325	752.525	752.725	752.925	753.125	753.325	753.525	753.725	753.925	754.125	754.325
7	754.525	754.725	754.925	755.125	755.325	755.525	755.725	755.925	756.125	756.325	756.525	756.725
8	756.925	757.125	757.325	757.525	757.725	757.925	758.125	758.325	758.525	758.725	758.925	759.125
9	759.325	759.525	759.725	759.925	760.125	760.325	760.525	760.725	760.925	761.125	761.325	761.525
10	761.725	761.925	762.125	762.325	762.525	762.725	762.925	763.125	763.325	763.525	763.725	763.925
11	764.125	764.325	764.525	764.725	764.925	765.125	765.325	765.525	765.725	765.925	766.125	766.325
12	766.525	766.725	766.925	767.125	767.325	767.525	767.725	767.925	768.125	768.325	768.525	768.725

F7: 798.000-822.000(798-827)MHz

	Group1	Group2	Group3	Group4	Group5	Group6	Group7	Group8	Group9	Group10	Group11	Group12
1	798.125	798.325	798.525	798.725	798.925	799.125	799.325	799.525	799.725	799.925	800.125	800.325
2	800.525	800.725	800.925	801.125	801.325	801.525	801.725	801.925	802.125	802.325	802.525	802.725
3	802.925	803.125	803.325	803.525	803.725	803.925	804.125	804.325	804.525	804.725	804.925	805.125
4	805.325	805.525	805.725	805.925	806.125	806.325	806.525	806.725	806.925	807.125	807.325	807.525
5	807.725	807.925	808.125	808.325	808.525	808.725	808.925	809.125	809.325	809.525	809.725	809.925
6	810.125	810.325	810.525	810.725	810.925	811.125	811.325	811.525	811.725	811.925	812.125	812.325
7	812.525	812.725	812.925	813.125	813.325	813.525	813.725	813.925	814.125	814.325	814.525	814.725
8	814.925	815.125	815.325	815.525	815.725	815.925	816.125	816.325	816.525	816.725	816.925	817.125
9	817.325	817.525	817.725	817.925	818.125	818.325	818.525	818.725	818.925	819.125	819.325	819.525
10	819.725	819.925	820.125	820.325	820.525	820.725	820.925	821.125	821.325	821.525	821.725	821.925
11	822.125	822.325	822.525	822.725	822.925	823.125	823.325	823.525	823.725	823.925	824.125	824.325
12	824.525	824.725	824.925	825.125	825.325	825.525	825.725	825.925	826.125	826.325	826.525	826.725

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1. INTRODUCTION

Thanks for purchasing the SHOW wireless microphone system. The UP-81DR/8H/8P series is the delicately designed UHF, PLL synthesized system, with two antennas built inside the receiver for smart switching diversity control, the higher level RF signals may be fed into the system for greater reliability and coverage, therefore, the risks of breakdown and interference are to be effectively reduced.

By the Auto Scan function provided by the UP-81DR, PLL UHF Diversity Receiver, the operating frequency of the transmitter may be automatically searched out and locked by the system. Or, you can manually adjust the channel of the transmitter to match the receiver in case you know about the operating frequency of it.

Generally, the UP-81DR/8H/8P series consists of

- UP-81DR, PLL UHF Diversity Receiver
- UP-8H, Handheld transmitter
- UP-8P series, Body Pack transmitter

UP-81DR, PLL UHF Diversity Receiver



UP-8H, Handheld transmitter



To well satisfy the different applications, there are 5 models in total are included in this product range, please make sure that the proper microphone has been selected for your typical sound reinforcement system before installation.

UP-8H series Handheld Transmitter	
Model No.	Capsule
UP-81H	Dynamic(S-100)
UP-83H	Dynamic(S-600)
UP-86H	Dynamic(S-500)
UP-87CH	Condenser(C-100)
UP-88CH	Condenser(C-200)

F4: 638.000-662.000(638-664)MHz

	Group1	Group2	Group3	Group4	Group5	Group6	Group7	Group8	Group9	Group10		
1	638.125	638.325	638.525	638.725	638.925	639.125	639.325	639.525	639.725	639.925		
2	640.125	640.325	640.525	640.725	640.925	641.125	641.325	641.525	641.725	641.925		
3	642.125	642.325	642.525	642.725	642.925	643.125	643.325	643.525	643.725	643.925		
4	644.125	644.325	644.525	644.725	644.925	645.125	645.325	645.525	645.725	645.925		
5	646.125	646.325	646.525	646.725	646.925	647.125	647.325	647.525	647.725	647.925		
6	650.125	650.325	650.525	650.725	650.925	651.125	651.325	651.525	651.725	651.925		
7	648.125	648.325	648.525	648.725	648.925	649.125	649.325	649.525	649.725	649.925		
8	652.125	652.325	652.525	652.725	652.925	653.125	653.325	653.525	653.725	653.925		
9	654.125	654.325	654.525	654.725	654.925	655.125	655.325	655.525	655.725	655.925		
10	656.125	656.325	656.525	656.725	656.925	657.125	657.325	657.525	657.725	657.925		
11	658.125	658.325	658.525	658.725	658.925	659.125	659.325	659.525	659.725	659.925		
12	660.125	660.325	660.525	660.725	660.925	661.125	661.325	661.525	661.725	661.925		

F5: 702.000-726.000(702-731)MHz

	Group1	Group2	Group3	Group4	Group5	Group6	Group7	Group8	Group9	Group10	Group11	Group12
1	702.125	702.325	702.525	702.725	702.925	703.125	703.325	703.525	703.725	703.925	704.125	704.325
2	704.525	704.725	704.925	705.125	705.325	705.525	705.725	705.925	706.125	706.325	706.525	706.725
3	706.925	707.125	707.325	707.525	707.725	707.925	708.125	708.325	708.525	708.725	708.925	709.125
4	709.325	709.525	709.725	709.925	710.125	710.325	710.525	710.725	710.925	711.125	711.325	711.525
5	711.725	711.925	712.125	712.325	712.525	712.725	712.925	713.125	713.325	713.525	713.725	713.925
6	714.125	714.325	714.525	714.725	714.925	715.125	715.325	715.525	715.725	715.925	716.125	716.325
7	716.525	716.725	716.925	717.125	717.325	717.525	717.725	717.925	718.125	718.325	718.525	718.725
8	718.925	719.125	719.325	719.525	719.725	719.925	720.125	720.325	720.525	720.725	720.925	721.125
9	721.325	721.525	721.725	721.925	722.125	722.325	722.525	722.725	722.925	723.125	723.325	723.525
10	723.725	723.925	724.125	724.325	724.525	724.725	724.925	725.125	725.325	725.525	725.725	725.925
11	726.125	726.325	726.525	726.725	726.925	727.125	727.325	727.525	727.725	727.925	728.125	728.325
12	728.525	728.725	728.925	729.125	729.325	729.525	729.725	729.925	730.125	730.325	730.525	730.725

F2: 518.000-542.000(518-544)MHz

	Group1	Group2	Group3	Group4	Group5	Group6
1	518.125	518.325	518.525	518.725	518.925	519.125
2	519.325	519.525	519.725	519.925	520.125	520.325
3	520.525	520.725	520.925	521.125	521.325	521.525
4	521.725	521.925	522.125	522.325	522.525	522.725
5	522.925	523.125	523.325	523.525	523.725	523.925
6	524.125	524.325	524.525	524.725	524.925	525.125
7	525.325	525.525	525.725	525.925	526.125	526.325
8	526.525	526.725	526.925	527.125	527.325	527.525
9	527.725	527.925	528.125	528.325	528.525	528.725
10	528.925	529.125	529.325	529.525	529.725	529.925
11	530.125	530.325	530.525	530.725	530.925	531.125
12	531.325	531.525	531.725	531.925	532.125	532.325

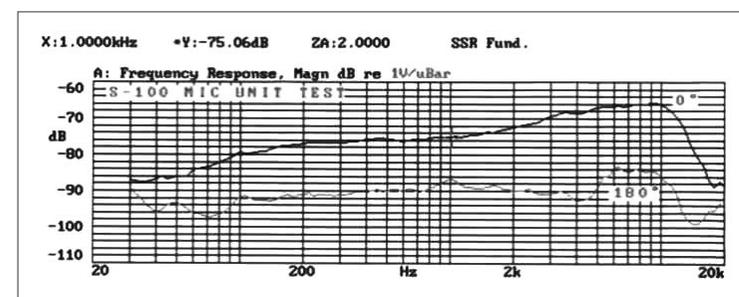
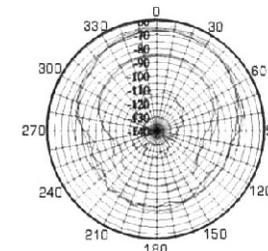
F3: 572.000-596.000(572-598)MHz

	Group1	Group2	Group3	Group4	Group5	Group6
1	572.125	572.325	572.525	572.725	572.925	573.125
2	573.325	573.525	573.725	573.925	574.125	574.325
3	574.525	574.725	574.925	575.125	575.325	575.525
4	575.725	575.925	576.125	576.325	576.525	576.725
5	576.925	577.125	577.325	577.525	577.725	577.925
6	578.125	578.325	578.525	578.725	578.925	579.125
7	579.325	579.525	579.725	579.925	580.125	580.325
8	580.525	580.725	580.925	581.125	581.325	581.525
9	581.725	581.925	582.125	582.325	582.525	582.725
10	582.925	583.125	583.325	583.525	583.725	583.925
11	584.125	584.325	584.525	584.725	584.925	585.125
12	585.325	585.525	585.725	585.925	586.125	586.325

Generally, each model is equipped with the typical type of capsule for specific sound characteristic, and the RF design keeps the same, please refer to the following specification of the capsules for more information on the microphone selection to your system.

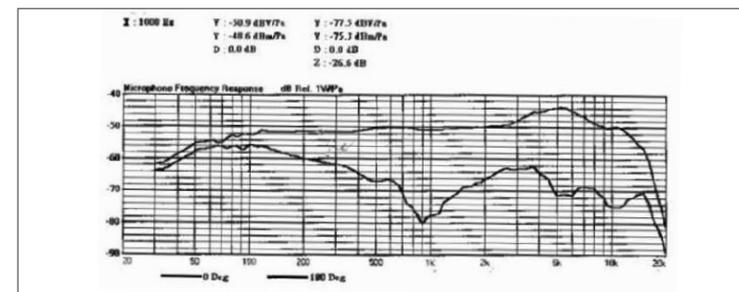
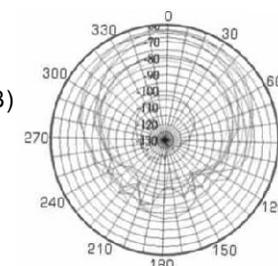
S-100

Type: Dynamic Mic.
 Frequency response: 50Hz~15kHz(±3dB)
 Impedance: 270Ω ±20% at 1kHz
 Sensitivity: ±0.005%
 Direction: Omni-directional



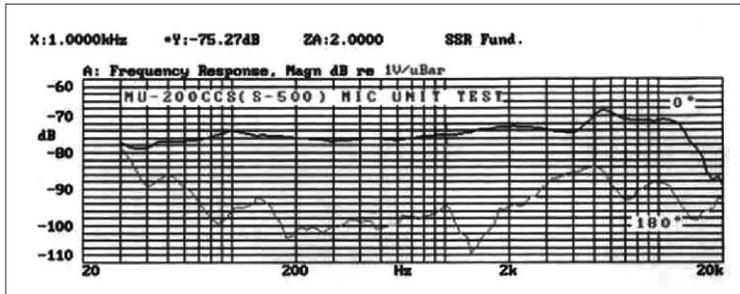
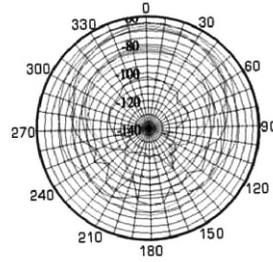
S-600

Type: Dynamic Mic.
 Frequency response: 50Hz~16kHz(±3dB)
 Impedance: 300Ω ±20% at 1kHz
 Sensitivity: -71dB ±3dB
 Direction: Omni-directional



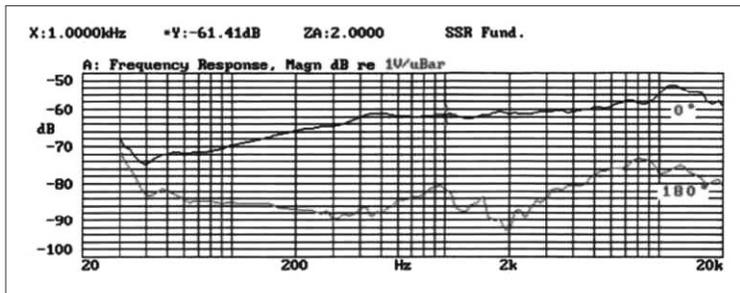
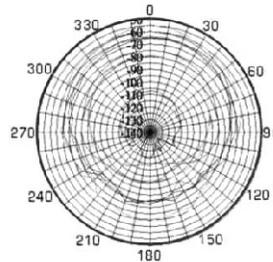
S-500

Type: Dynamic Mic.
 Frequency response: 90Hz~12kHz(±3dB)
 Impedance: 680Ω ±20% at 1kHz
 Sensitivity: -52dB ±3dB
 Direction: Uni-directional



C-100

Type: Condenser Mic.
 Frequency response: 50Hz~15kHz(±3dB)
 Impedance: 270Ω ±20% at 1kHz
 Sensitivity: -71dB ±3dB
 Direction: Omni-directional



6. ANNEX

6.1 Frequency Band Selection

Most countries closely regulate the radio frequencies used in the transmission of wireless information. These regulations state which devices can use which frequencies, and help to limit the amount of RF (radio frequency) interference in all wireless communications. To be flexible enough to operate worldwide, UP-81DR Wireless receivers are available in a number of models, each with a unique frequency range. Each frequency range, or band, spans up to 24MHz of the wireless broadcast spectrum. Available bands are:

- F1:470.000-494.000(470-496)MHz
- F2:518.000-542.000(518-544)MHz
- F3:572.000-596.000(572-598)MHz
- F4:638.000-662.000(638-664)MHz
- F5:702.000-726.000(702-731)MHz
- F6:740.000-764.000(740-769)MHz
- F7:798.000-822.000(798-827)MHz
- F8:850.000-874.000(850-879)MHz

6.2 Frequency Ranges

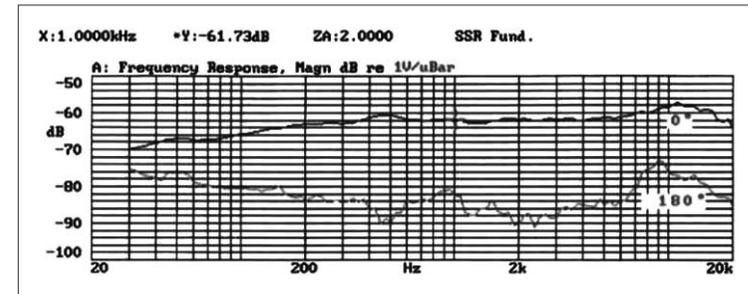
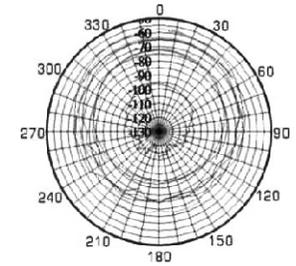
F1: 470.000-494.000(470-496)MHz

	Group1	Group2	Group3	Group4	Group5	Group6
1	470.125	470.325	470.525	470.725	470.925	471.125
2	471.325	471.525	471.725	471.925	472.125	472.325
3	472.525	472.725	472.925	473.125	473.325	473.525
4	473.725	473.925	474.125	474.325	474.525	474.725
5	474.925	475.125	475.325	475.525	475.725	475.925
6	476.125	476.325	476.525	476.725	476.925	477.125
7	477.325	477.525	477.725	477.925	478.125	478.325
8	478.525	478.725	478.925	479.125	479.325	479.525
9	479.725	479.925	480.125	480.325	480.525	480.725
10	480.925	481.125	481.325	481.525	481.725	481.925
11	482.125	482.325	482.525	482.725	482.925	483.125
12	483.325	483.525	483.725	483.925	484.125	484.325

MODEL	UP-8H	UP-8P
SPECIFICATION		
Oscillation mode	PLL UHF SYNTHESIZED	
Carrier frequency band	UHF 470-900 MHz Dependent on applicable country regulations	
Frequency response	50 Hz-15KHz (± 3 dB)	
Frequency stability	$\pm 0.005\%$ ($-10^{\circ}\text{C} \sim 50^{\circ}\text{C}$)	
T.H.D.	1KHz $<0.8\%$	
Modulation mode	FM (F3E)	
RF output power	5-50mW(adjustable 3 bands)	
Dynamic	>100 dB	
Tone frequency	30-33 KHz	
Current drain	100mA	
Max. Deviation	± 35 KHz	
Battery	"AA" type $\times 2$	
Optional	Nickel hydrogen battery +charger	
Mic. Capsule(optional)	Condenser or Dynamic Capsule	Condenser or Dynamic Capsule
Dimensions	277 \times Φ 36.5mm (10.9" \times Φ 1.44")	97mm \times 68mm \times 22mm(3.82" \times 2.68" \times 0.87")
Weight	0.246Kg	0.009Kg

C-200

Type: Condenser Mic.
 Frequency response: 100Hz~15kHz(± 3 dB)
 Impedance: 700 Ω $\pm 30\%$ at 1kHz
 Sensitivity: -44dB ± 3 dB
 Direction: Uni-directional



UP-8P series, Body Pack transmitter



For the UP-8P series, there are several types of clip microphone are included in this product range, please make sure that the proper microphone has been selected for your typical sound reinforcement system before installation.



HM-38, Condenser microphone
 Preset impedance: 600ohm;
 Freq. response: 80-12KHz;
 Sensitivity: -68dB \pm 3dB at 1KHz;
 Directional: Uni-directional;
 Weight: 52g (0.12lb)



HM-58, Condenser microphone
 Preset impedance: 700ohm;
 Freq. response: 200-8KHz;
 Sensitivity: -65dB at 1KHz;
 Directional: Uni-directional;
 Weight: 54g (0.12lb)

Last but not the least, the operating frequency of this wireless system may be varied from 470MHz to 900MHz, please refer to your national EMC regulations to pick out the authorized frequency band (F1 ~ F8, detail please see Annex hereafter) for your end application.

2. FEATURES

-UP-81DR, PLL UHF Diversity Receiver,

- Friendly interface of front panel LCD status display;
- Auto Scan function for easy and convenient operation;
- Switching diversity control to receive the RF signal;
- Three output level versions;
- Squelch control;

-UP-8H/8P transmitters,

- Soft touch painting for comfortable use;
- Rechargeable battery design;
- Three RF output power versions;
- Mute function;
- Lock function to avoid the misaction during the live applications;

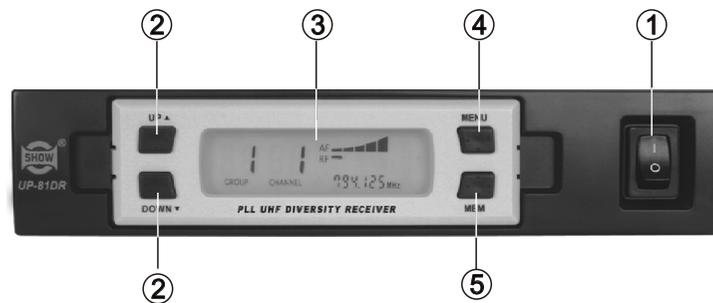
-Common features,

- PLL synthesized design;
- Consistent operating frequencies to comply with the EMC regulations;
- Up to 12x12, total 144 channel frequency presets;
- Manufactured under ISO9000:2000, ISO/TS16949:2002 quality management system;

3. CONTROL ELEMENTS

3.1 UP-81DR, PLL UHF Diversity Receiver

THE FRONT PANEL



① Power Switch

It switches on/off UP-81DR main power.

2) Manually Selecting Frequency

Turn on the receiver. After touch the MENU key, the 'Group' indicated on the LCD display flashes, and use the UP/DOWN key to select the right group, after it is done, press 'Mem' to store the settings. To edit the preset channel or other parameters, please press again the MENU key, and so on.

- Adjust from the transmitter,

- 1) Check the preset frequency (preset group, and preset channel) displayed on the receiver in Mhz.
- 2) Switch on the transmitter.
- 3) Touch the CH/ON key slightly to select the parameters to be edited.
- 4) Use the Select key to set the proper channel / group.

5. TECHNICAL SPECIFICATIONS

MODEL	UP-81DR
Channel	Multi-channels, up to 144 frequency presets for each frequency bands
Frequency band	UHF 470-900 MHz Dependent on applicable country regulations
Receiver type	PLL UHF SYNTHESIZED
Frequency response	50 Hz-15KHz (±3dB)
Frequency stability	±0.005% (-10°C-50°C)
T.H.D.	1KHZ < 0.8%
Modulation mode	FM (F3E)
S/N Ratio	> 90dB
Dynamic	> 100dB
RF sensitivity	-100 dBm/30dB SINAD
Audio output	Unbalanced 6.3mm phone jack 750mV ; ±35KHz deviation
Balance output	1V , 35KHz deviation
Power supply	DC 12-18V/ 500mA
Dimensions	210(W)×165 (D)×50(H)mm (8.3" × 6.5" × 1.9)
Weight	1.046Kg

Note: when the transmitter is muted, the microphone couldn't send out any AF signal, that means, no sound has been sent out from the microphone.



Fig 12

4.2.3 Battery Replacing And Charging

Please be advised to use only UM3 size AA 1.5V, one pair batteries for power supply.

If the rechargeable batteries are used,

- Please keep the batteries inside, and use the charger (optional accessory, provided by the manufacturer) to recover the batteries.
- During the charging process, the "Remaining battery life display" flashes.
- Normally, the battery should be recharged within 6-hour.

Caution: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.



Remaining battery life display

Fig 13

4.3 Operating frequency matches between the receiver and the transmitter

To make the operating frequency matched between the transmitter and the receiver, there are two options,

- Controlled from the receiver,

1) Auto Scan

Turn on the receiver, press the MEM key for a few seconds to enter into the auto scan mode. You can see "SCAN" flashes on the top left of the LCD, it means the auto scan function has been activated. Under the auto scan mode, the scan function automatically searches the receiver's entire frequency band from start to stop. During the search, these presets of GROUP, CHANNEL and frequency keep flashing as they are scanned. As soon as the stop frequency is reached, the scan will be stopped automatically, the value of frequency is keeping flashing channel preset, press the MEM key, you can save the information.

Remark: some frequencies should be scanned manually by adjusting UP/DOWN Key, please refer to use's manual of UP-81DR for details!

② UP/DOWN key

In the menu mode, you can choose the right value via these two keys.

③ Display

The LCD shows RF/AF signal, remaining battery life of the transmitter, group value, channel value and the selected frequency.

④ Menu key

Via this key, you can choose the right function you want.

⑤ MEM key

It is equipped with two functions, memo function, and auto scan function.

THE REAR PANEL



① Antenna Input Socket

Allow you to connect plug-in antennas, remote antennas, or even a complex antenna network.

② XLR Audio Output

This is a professional balanced XLR output connector.

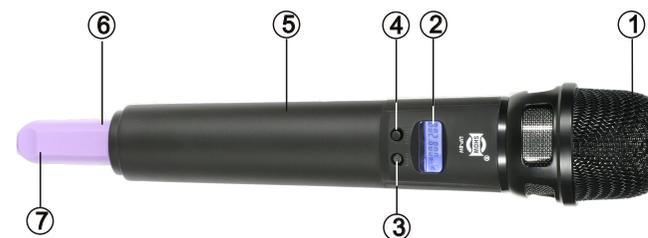
③ Audio Output Jack

This is a professional unbalanced output jack.

④ DC Input

It is used to connect an attached adapter.

3.2 UP-8H, Handheld Transmitter



① Massive Front Grill

Extremely rugged spring steel mesh grill to protect the capsule underneath in tough stage or live performance.

② LCD Display

Generally, the LCD displays the current operation status.

③ CH/ON Key

Keep pressing this key for a few seconds, the unit will be powered on or off. After it is switched on, touch this key slightly to select the parameter which you want to edit, such as the preset channel, preset group, PL (RF power level), and Lock/unlock; In this mode, if there is no further operation in the next few seconds, it will return to the main menu, and the LCD displays again the current preset frequency in MHz, as well as the battery status.

④ SELECT Key

Use this key to edit the parameters in operation mode. Keep pressing this key for a few seconds, the unit will enter into the mute mode, repeat for unmute.

⑤ Battery Compartment

The unit may be powered from a dry or rechargeable battery.

⑥ Charge Jack

Connect the optional recharger(see fig) with this mini jack for battery recharging. Please make sure that it is the rechargeable batteries inside before plug the recharger with the mini charge jack.



⑦ Antenna

The antenna is integrated into the transmitter body; to get effective RF transmission, never cover the antenna with hand, etc.

3.3 UP-8P series, Body Pack Transmitter



- RF Output Power Select

Three different RF output power versions are available of UP-8H,

- PL 0, the output power is 5dBm;
- PL 1, the output power is 10dBm;
- PL 2, the output power is 15dBm;

But, It's a different from UP-8P,

- PL 0, the output power is 3dBm;
- PL 1, the output power is 5dBm;
- PL 2, the output power is 12dBm;

Please follow the below procedure to select the proper RF output power,

- Touch the CH/ON key slightly to select the edited parameter of PL (refer to Fig 9), then use the SELECT key to specify the proper RF output Power version;
- Several seconds later after that, the system stores the settings automatically, and LCD display comes back to the main menu which shows the current operation status.

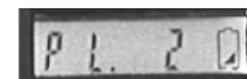


Fig 9

- LOCK Function

Since the CH/ON and SELECT keys may be easily activated by simple touch, to avoid any mis-action during the live application, the Lock/Unlock is provided by this system for touch-proof under the Locked situation.

In case the system is locked, you can still use the CH/ON key to select the edited parameters, but, except for the Lock/Unlock, others can't be edited.

To enter into the Lock mode, please follow the below procedure,

- Touch the CH/ON key slightly to select the edited parameter of Lock/Unlock (refer to Fig 10 & 11), then use the SELECT key to specify Lock or Unlock;
- Several seconds later after that, the system stores the settings automatically, and LCD display comes back to the main menu which shows the current operation status.



Fig 10: LOCK



Fig 11: UNLOCK

4.2.2 Mute Mode Operation

Keep pressing the SELECT key for a few seconds, the unit will enter into the mute mode (see the fig 12), repeat for unmute.

4.2 For the UP-8H/8P series transmitters

4.2.1 Edit The Parameter

Press and hold the CH/ON key for a few seconds, then the transmitter is powered on. Now, the LCD displays the current operation status:



Fig 6

After the transmitter is switched on, touch the CH/ON key slightly to select the parameter which you want to edit, such as the preset channel, preset group, PL (RF power level), and Lock/unlock.

- Frequency select

It is the multi-channels PLL synthesized system. In practice, to effectively avoid the interference from any lighting equipment, computers, fax machines, etc nearby, it is usually advised to switch to another frequency to get best performance.

The frequency range of this system is UHF, 470MHz ~ 900MHz, and it is divided into 8 frequency bands (F1 ~ F8) according to the country's EMC regulations; For each frequency band, to select the proper frequency preset, please first pickup the right Group, then specify the Channel; For details please refer to the Annex;

For example, in F7 frequency band, if you want to select the frequency preset of 811.125MHz (Group 6, Channel 6), please follow the below procedure,

- Turn on the unit first.
- Touch the CH/ON key slightly to select the edited parameter of Channel (refer to Fig 8), then use the SELECT key to specify the proper channel.
- Touch the CH/ON key slightly again to select the edited parameter of Group (refer to Fig 7), then use the SELECT key to specify the proper Group.
- Several seconds later after that, the system stores the settings automatically, and LCD display comes back to the main menu which shows the current operation status.



Fig 7



Fig 8

① LCD Display

Generally, the LCD displays the current operation status.

② CH/ON Key

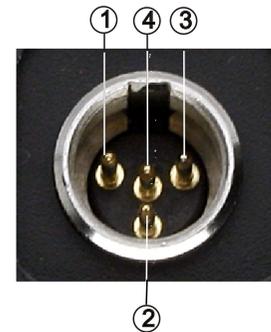
Keep pressing this key for a few seconds, the unit will be powered on or off. After it is switched on, touch this key slightly to select the parameter which you want to edit, such as the preset channel, preset group, PL(RF power level) and Lock/unlock. In this mode, if there is no further operation in the next few seconds, it will return to the main menu, and the LCD displays again the current preset frequency in MHz, as well as the battery status.

③ SELECT Key

Use this key to edit the parameters in operation mode. Keep pressing this key for a few seconds, the unit will enter into the mute mode, repeat for unmute.

④ Mini 4P connector

This connector is used to connect the unit with the clip microphones, for example, HM-38 or HM-58 condenser microphones.



Pin 1, for Guitar, bass and keyboards

Pin 2, GND

Pin 3, Phantom power supply for Condenser microphone

Pin 4, for Dynamic or condenser microphone

⑤ Charge Jack

With the rechargeable batteries put inside, use the charger (optional accessory, provided by the manufacturer) to recharge the batteries. For detail operation, please refer to chapter 4.2.3, Battery replacing and charging.

⑥ Battery Compartment

This unit may be powered from one pair dry or rechargeable batteries, UM3 size AA 1.5V.

⑦ Belt clip

It is the detachable belt clip for easy carry during the live applications.

⑧ Antenna

It is the flexible antenna. To get effective transmission, never cover the antenna with hand, clothes, etc during the operation, and always position the transmitter nearby the receiver.

4. OPERATION

4.1 For the UP-81DR, PLL UHF Diversity Receiver

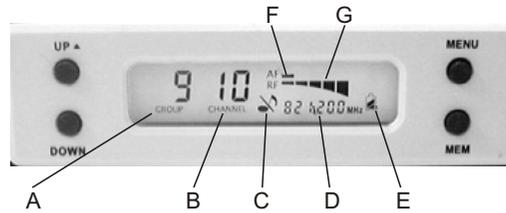


Fig 1

- A:** Frequency group
- B:** Subchannel
- C:** Mute(if the mute function is engaged, the mute label is shown, if not , the label disappears)
- D:** The selected frequency
- E:** Remaining battery life of transmitter
- F:** Audio bar graph indicating the receiver audio level
- G:** RF bar graph indicating the field strength of the received signal.

- Auto Scan

When the receiver is powered on, press and hold the MEN key for one second, the receiver is in auto scanning. The scan function automatically searches the receiver's entire frequency band from start to stop. During the search, the audio output is muted and the display indicates the frequencies in MHz as they are scanned. As soon as the correct frequency is reached, the scan will be stopped automatically, the value of frequency will be flashing, press the MEM key, you can save the information.

Remark: some frequencies should be scanned manually by adjusting UP/DOWN key, please refer to Annex for details!

- Manual Selecting Frequency

Press the MENU button, "GROUP" is flashing, you can choose the right frequency group you need via the UP/ DOWN button, when the frequency group is set, please press MEN button to store the information. Press the MENU button two times, "CHANNEL" is flashing, you can choose the right subchannel you need via the UP/DOWN button, when the subchannel you need is set, please press the MEN button to save it.

- Mute Function

In mute mode, use UP/DOWN key to on/off the mute function.(fig 2: mute function off, fig 3: mute function on), press the MEM button to keep the information.

Note: when the transmitter is muted, no audio signal will be send out from the receiver.



Fig 2 mute function off



Fig 3 mute function on

- Output Level Adjusting

In output level adjusting mode(see fig 4), use the SELECT button to adjust the output level. The output level has 3 choices, 0 indicates the output level is 500mV, 1 indicates the output level is 300mV, 2 indicates the output level is 150mV.

Note: the function is only applied to the level of Balanced output.



Fig 4

- Squelch Control

The job of a squelch circuit is to reduce audible noise. It eliminates noise during pauses in the audio signal by muting the receiver every time the audio level drops below a defined threshold. The squelch control on the receiver sets this threshold. Use the squelch control with care! If the squelch threshold is too high, the squelch will not only cut out noise but mute quiet audio signals as well because the squelch responds to the detected voltage and cannot distinguish between wanted signal and noise. Besides that, a too high squelch threshold also decreases the usable range. In the squelch control mode(fig 5), use the UP/DOWN key to select squelch threshold. In order to achieve easy operation, the squelch threshold is divided into 10 levels, please refer to table.

No.	squelch threshold
1	95.0dB
2	91.7dB
3	88.3dB
4	85.0dB
5	81.7dB
6	78.3dB
7	75.0dB
8	71.7dB
9	68.3dB
10	65.0dB



Fig 5

Table



USER'S MANUAL

WIRELESS MICROPHONE SYSTEM TMW-9162 SERIES



TOPP PRO MUSIC GEAR
www.topppro.com



GARANTIA

Topp Pro garantiza el normal funcionamiento del producto contra cualquier defecto de fabricación y/o vicio de material, por el término de (12) meses, contados a partir de la fecha de compra por parte del usuario, comprometiéndose a reparar o cambiar, a su elección, sin cargo alguno, cualquier pieza o componente que fallare en condiciones normales de uso dentro del período mencionado.

Esta que esta garantía sea válida, el comprador original deberá presentar este certificado debidamente sellado y firmado por la casa vendedora, acompañado por la correspondiente factura de compra donde constara el modelo y número de serie del equipo adquirido.

La garantía no cubre:

- Daños ocasionados por el uso indebido del producto, reparación y/o modificación efectuados por personas no autorizadas por **Topp Pro**.
- Daños ocasionados por la conexión del equipo a otros equipos distintos de los especificados en el manual de uso, o bien por mala conexión a estos últimos.
- Daños ocasionados por tormentas eléctricas, golpes y/o transporte incorrecto.
- Daños ocasionados por excesos o caídas de tensión en la red o por conexión a redes con una tensión distinta a la requerida por la unidad.
- Daños ocasionados por la presencia de arena, ácido de pilas, agua, o cualquier elemento extraño en el interior del equipo.
- Deterioros producidos por el transcurso del tiempo, uso y/o desgaste normal de la unidad.
- Alteración o ausencia del número de serie de fábrica del equipo.

Las reparaciones solamente podrán ser llevadas a cabo el servicio técnico autorizado por **Topp Pro**, que informará acerca del plazo y demás detalles de las reparaciones a efectuarse conforme a esta garantía.

Topp Pro, reparará esta unidad en un plazo no mayor a 30 días contados a partir de la fecha de entrada de la unidad al Servicio Técnico. En aquellos casos en que debido a la particularidad del repuesto, fuera necesaria su importación, el tiempo de reparación y la viabilidad de la misma estarán sujetos a las normas vigentes para la importación de partes, en cuyo caso se informará al usuario acerca del plazo y posibilidad de reparación.

A efectos de su correcto funcionamiento, y de la validez de ésta garantía, este producto deberá ser instalado y utilizado de acuerdo a las instrucciones que se encuentran detalladas en el manual adjunto o en el envase del producto.

Esta unidad podrá presentarse para su reparación, junto a la factura de compra (o cualquier otro comprobante donde conste la fecha de compra), a su distribuidor autorizado **Topp Pro** o a un centro de servicio técnico autorizado por **Topp Pro**.

Exclusión de daños:

LA RESPONSABILIDAD DE TOPP PRO POR CUALQUIER PRODUCTO DEFECTUOSO SE LIMITA A LA REPARACIÓN O AL REEMPLAZO DEL MISMO, A OPCIÓN DE TOPP PRO. SI ELEGIMOS SUBSTITUIR EL PRODUCTO, EL REEMPLAZO PUEDE SER UNA UNIDAD REACONDICIONADA. TOPP PRO NO SERÁ RESPONSABLE POR LOS DAÑOS BASADOS EN LA INCONVENIENCIA, PÉRDIDA DE USO, BENEFICIOS PERDIDOS, AHORROS PERDIDOS, POR EL DAÑO A OTROS EQUIPO O A OTROS ARTÍCULOS EN EL SITIO DE USO, O POR NINGUN OTRO DAÑO SI ES FORTUITO, CONSECUENTE O DE OTRO TIPO, AUNQUE TOPP PRO HAYA SIDO ADVERTIDO DE LA POSIBILIDAD DE TALES DAÑOS.

Algunos estados no permiten la exclusión o la limitación a los daños fortuitos o consecuentes, así que la limitación antedicha puede no aplicarse a usted.

Esta garantía le da derechos legales específicos, usted puede también tener otros derechos que varían de estado a estado.

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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.

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

Don't forget to visit our website at www.toppopro.com for more information about this and other **Topp Pro** products.

1

INTRODUCTION

Thank you for choosing TOPP PRO.

Our Professional Audio Products are designed and tested by a highly qualified engineering team with more than 20 years of experience. Great pride & care is placed in delivering products with excellent performance, specifications and dependable reliability. Also great emphasis is placed in creating and bringing to market products that can fill multiple applications and also offer customers exceptional value.

Our creative and dedicated design & engineering team uses the latest tools in technology and the latest concepts in acoustics design to create products for real-life applications. Every TOPP PRO Audio product is tested and must comply to very strict Standards.

The TMW-9162 is the delicately designed UHF, PLL synthesized system. You can manually adjust the channel of the transmitter to match that of the receiver if you know about the operating frequency of it.

Generally, the TMW-9162 series consists of:

- PLL UHF Non-Diversity Receiver
- Handheld Transmitter
- Body Pack Transmitter

PLL UHF NON-DIVERSITY RECEIVER



HANDHELD TRANSMITTER



BODY PACK TRANSMITTER



TRANSMISOR DE CINTURA	
Oscilación	PLL UHF Sintetizado
Rango de Frecuencia Portadora	UHF 638~827 MHZ
Respuesta de Frecuencia	50 Hz~15 KHz(±3 dB)
Estabilidad de Frecuencia	± 0.005% / 25° C
Total Distorsión THD	>0,8%
Modulación	FM (F3E)
Poder de Salida de RF	10 mw
Dimanica	>100dB
Tono de Frecuencia	32.768 KHz
Drenado de Corriente	< 150 mA
Máxima Desviación	±35 Khz.
Batería	Tipo AA × 2 pcs 6 Horas
Vida de Batería Alcalina	6 horas Aprox.
Capsula del Micrófono	Condensador o Dinámico
4 Bandas para Escoger	1.Tierra
	2. Condensador
	3. Instrumento Eléctrico
	4. Dinámico
Dimensiones	65 x 11 x 31 mm
Peso	0.105 Kg. (Aprox.)

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.

7. ESPECIFICACIONES TECNICAS

RECEPTOR	TMW-9162
Método de Recepción	Doble Canal
Banda de Frecuencia	UHF 638~827MHz
Estabilidad de frecuencia	± 0.005% / 25° C
Modulación	FM (F3E)
Máxima Desviación	300 mV a ±15 Khz.
T.H.D Distorsión	< 1%
Rango Dinámico	> 100 dB
Relación Señal/Ruido S/R	> 90 dB
Respuesta de Frecuencia	50 Hz~50kHz (±3 dB)
Modo de Oscilación	PLL UHF Sintetizado
Sensibilidad RF	(-100 dBm/30 dB)
Squelch	Tono de Tecla (Tono de Frecuencia 32.768 KHz Control Externo (-85 dBm / -100 dBm)
Salidas	1, No balanceada 0-500mV, 10kΩ de Carga 1, XLR- Balanceada 55mV
Fuente de Poder	DC 12 V~18 V/0.5 A
Dimensiones	183(W) × 430(L) × 44(H)
Peso	2.10 Kg. (Aprox.)

	TMW-9162
Tipo de Micrófono	Dinámico
Oscilación	PLL UHF Sintetizado
Modulación	FM (F3E)
Rango de Frecuencia Portadora	UHF 638~827 MHz
Estabilidad de Frecuencia	± 0.005% / 25° C
Máxima Desviación	±35 Khz.
Tono de Frecuencia	32.768 KHz
Pre-énfasis	50µS
Emisiones Falsas	45dBc
Poder de Salida de RF	10 mw
Respuesta de Frecuencia	50 Hz~15 KHz(±3 dB)
Batería	Tipo AA × 2 pcs 6 Horas
Drenado de Corriente	< 150 mA
Vida de Batería Alcalina	6 horas Aprox.
Dimensiones	230 mm
Peso	0.16 Kg. (Aprox.)

INTRODUCTION

1

For the TMW-9162 series, there are several types of clip microphones included in this product range, please make sure that the proper microphone has been selected for your typical sound reinforcement system before installation.



HM-38, Condenser Microphone

Preset impedance: 600 ohm;
Freq. response: 80-12 kHz;
Sensitivity: -68 dB+/-3 dB at 1 kHz;
Directional: Uni-directional;
Weight: 52 g (0.12lb)



HM-58, Condenser Microphone

Preset impedance: 700 ohm;
Freq. response: 200-8 kHz;
Sensitivity: -65 dB at 1 kHz;
Directional: Uni-directional;
Weight: 54 g (0.12lb)

Last but not the least, the operating frequency of this system may be varied from 798 MHz to 827 MHz, please refer to your national EMC regulations to pick out the authorized frequency band (0 ~ F) for your end application.

FEATURES

2

PLL UHF NON-DIVERSITY RECEIVER

- Pressing the flip switch to switch channel for desired Radio Frequency
- LED indication RF
- Two receiving modules
- AF level displays
- Two independent balanced outputs
- Two independent squelch controls
- Two independent volume controls

TRANSMITTER

- Soft touch painting for comfortable use
- Channel frequency adjusted manually

COMMON FEATURES

- PLL synthesized design
- Consistent operating frequencies to comply with the EMC regulations
- 16 channels frequency presets
- Manufactured under ISO9000:2000, ISO/TS16949:2002 Quality Management System