



*WIRELESS
MICROPHONE
SYSTEM*

**UP-82DR
UP-81H/UP-881H/UP-83H/UP-883H/
UP-86H/UP-886H/UP-87CH/UP-887CH
UP-88CH/UP-888CH
UP-8P/UP-88P/UP-8G/UP-88G**



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NF02762-1.0

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IMPORTANT!

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

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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 |

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.

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 | <u>823.725</u> | <u>823.925</u> | <u>824.125</u> | <u>824.325</u> |
| 12 | <u>824.525</u> | <u>824.725</u> | <u>824.925</u> | <u>825.125</u> | <u>825.325</u> | <u>825.525</u> | <u>825.725</u> | <u>825.925</u> | <u>826.125</u> | <u>826.325</u> | <u>826.525</u> | <u>826.725</u> |

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

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 |

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 |

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1. INTRODUCTION

Thanks for purchasing the SHOW wireless microphone system. The UP-82DR/ UP-P/G series/ UP-H 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-82DR, 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-82DR/H/P/G series consists of

- UP-82DR, PLL UHF Diversity Receiver
- UP-H series , Handheld transmitter
- UP-P/G series, Body Pack transmitter

UP-82DR, PLL UHF Diversity Receiver



UP-H series, Handheld transmitter



To well satisfy the different applications , there 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-H series Handheld Transmitter | |
|----------------------------------|------------------|
| Model No. | Capsule |
| UP-81H/UP-881H | Dynamic(S-100) |
| UP-83H/UP-883H | Dynamic(S-600) |
| UP-86H/UP-886H | Dynamic(S-500) |
| UP-87CH/UP-887CH | Condenser(C-100) |
| UP-88CH/UP-888CH | Condenser(C-200) |

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 |

F4: 638.000-662.000(638-664)MHz

| | Group1 | Group2 | Group3 | Group4 | Group5 | Group6 |
|----|---------|---------|---------|---------|---------|---------|
| 1 | 638.125 | 638.325 | 638.525 | 638.725 | 638.925 | 639.125 |
| 2 | 639.325 | 639.525 | 639.725 | 639.925 | 640.125 | 640.325 |
| 3 | 640.525 | 640.725 | 640.925 | 641.125 | 641.325 | 641.525 |
| 4 | 641.725 | 641.925 | 642.125 | 642.325 | 642.525 | 642.725 |
| 5 | 642.925 | 643.125 | 643.325 | 643.525 | 643.725 | 643.925 |
| 6 | 644.125 | 644.325 | 644.525 | 644.725 | 644.925 | 645.125 |
| 7 | 645.325 | 645.525 | 645.725 | 645.925 | 646.125 | 646.325 |
| 8 | 646.525 | 646.725 | 646.925 | 647.125 | 647.325 | 647.525 |
| 9 | 647.725 | 647.925 | 648.125 | 648.325 | 648.525 | 648.725 |
| 10 | 648.925 | 649.125 | 649.325 | 649.525 | 649.725 | 649.925 |
| 11 | 650.125 | 650.325 | 650.525 | 650.725 | 650.925 | 651.125 |
| 12 | 651.325 | 651.525 | 651.725 | 651.925 | 652.125 | 652.325 |

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 |

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 |

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

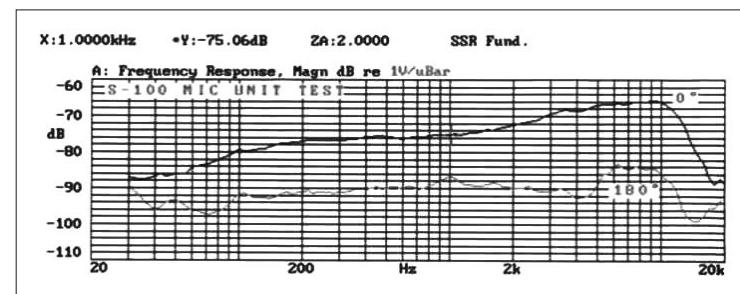
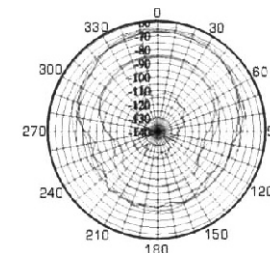
Type: Dynamic Mic.

Frequency response: 50Hz~15kHz(±3dB)

Impedance: 270Ω ±20% at 1kHz

Sensitivity: ±0.005%

Direction: Omni-directional



S-600

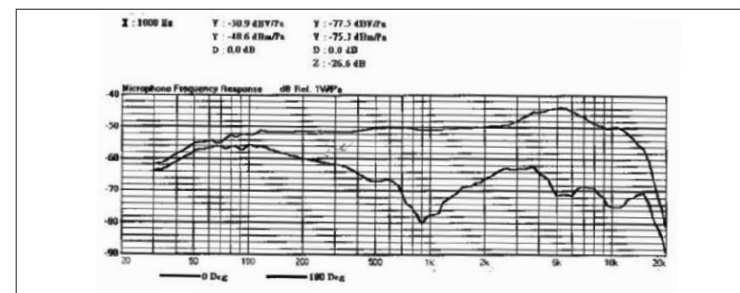
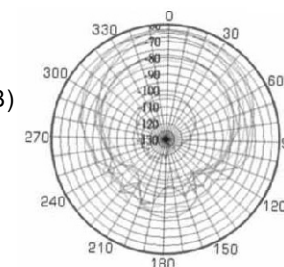
Type: Dynamic Mic.

Frequency response: 50Hz~16kHz(±3dB)

Impedance: 300Ω ±20% at 1kHz

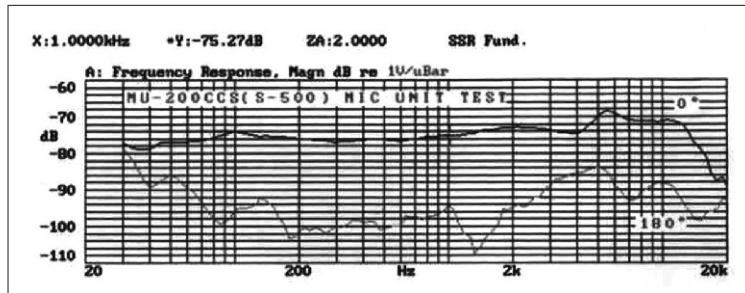
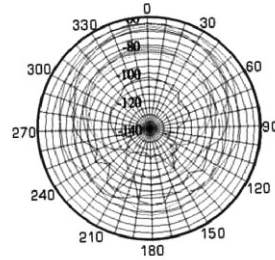
Sensitivity: -71dB ±3dB

Direction: Omni-directional



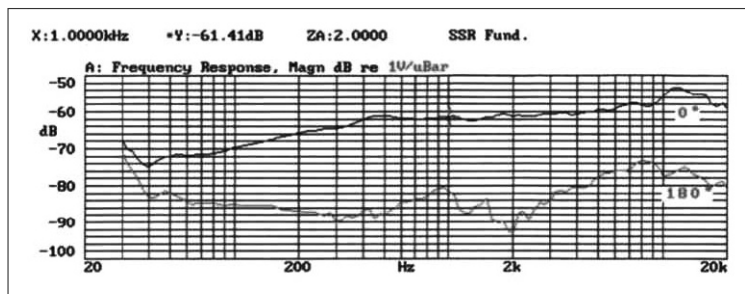
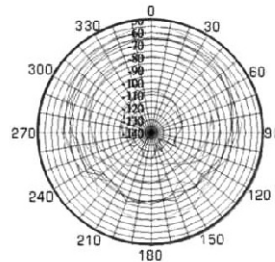
S-500

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



| | | |
|------------------------|--|-------------------------------------|
| MODEL | UP-81H,UP-881H,UP-83H,UP-883H,UP-86H, UP-886H,UP-87CH,UP-887CH,UP-88CH, UP-888CH | UP-88P,UP-8P, UP-88G,UP-8G |
| SPECIFICATION | | |
| Oscillation mode | PLL UHF SYNTHESIZED | |
| Carrier frequency band | UHF 470-900 MHz Dependent on applicable country regulations | |
| Frequency response | 50 Hz-15KHz (±3dB) | |
| Frequency stability | ±0.005% (-10°C ~ 50°C) | |
| T.H.D. | 1KHz<0.8% | |
| Modulation mode | FM (F3E) | |
| RF output power | 5-50mW(adjustable 3 bands) | |
| Dynamic | > 100dB | |
| Tone frequency | 30-33 KHz | |
| Current drain | 100mA | |
| Max. Deviation | ±35KHz | |
| Battery | "AA" type × 2 | |
| Optional | Nickel hydrogen battery +charger | |
| Mic. Capsule(optional) | Condenser or Dynamic Capsule | Condenser or Dynamic Capsule |
| Dimensions | 277x Φ36.5mm (10.9"×Φ1.44") | 97mm× 68mm× 22mm(3.82"×2.68"×0.87") |
| Weight | 0.243Kg | 0.09Kg |

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-82DR 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:

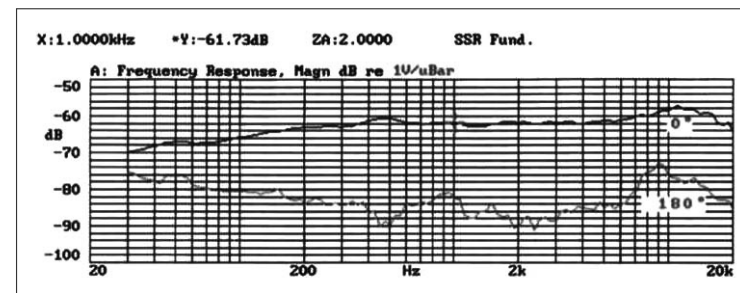
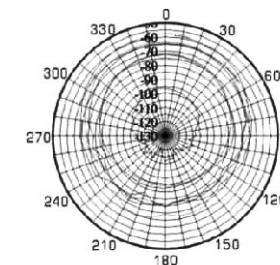
- | | |
|--------------------------------|--------------------------------|
| F1:470.000-494.000(470-496)MHz | F2:518.000-542.000(518-544)MHz |
| F3:572.000-596.000(572-598)MHz | F4:638.000-662.000(638-664)MHz |
| F5:702.000-726.000(702-731)MHz | F6:740.000-764.000(740-769)MHz |
| F7:798.000-822.000(798-827)MHz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

5. TECHNICAL SPECIFICATIONS

| | |
|---------------------|---|
| MODEL | UP-82DR |
| 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 (± 3 dB) |
| Frequency stability | $\pm 0.005\%$ (-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 550mV ; ± 20 KHz deviation |
| Balance output | 1V , 20KHz deviation |
| Power supply | DC 15V/1000mA (AC 115V/230V 50/60Hz adaptor) |
| Dimensions | 430(W) \times 210(D) \times 44(H)mm (8.3" \times 6.5" \times 1.9") |
| Weight | 2.086Kg |

C-200

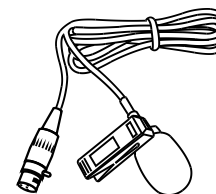
Type: Condenser Mic.
 Frequency response: 100Hz~15kHz(± 3 dB)
 Impedance: $700\ \Omega \pm 30\%$ at 1kHz
 Sensitivity: $-44\text{dB} \pm 3\text{dB}$
 Direction: Uni-directional



UP-P/G series, Body Pack transmitter



For the UP- P/G 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.



LM-10, Clip microphone
 Preset Impedance: 680 ohm
 Freq. Response: 50-12 kHz;
 Sensitivity: $-65\text{ dB} \pm 3\text{ dB}$ at 1kHz
 Directional: $\Phi 12 \times 180\text{ mm}$ ($\Phi 0.47'' \times 7.1''$)
 Weight: 22g(0.049lb)



HM-38, Condenser microphone
 Preset impedance: 600ohm;
 Freq. response: 80-12KHz;
 Sensitivity: $-68\text{dB} \pm 3\text{dB}$ at 1KHz;
 Directional: Uni-directional;
 Weight: 52g (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-82DR, 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-H/P/G series 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;

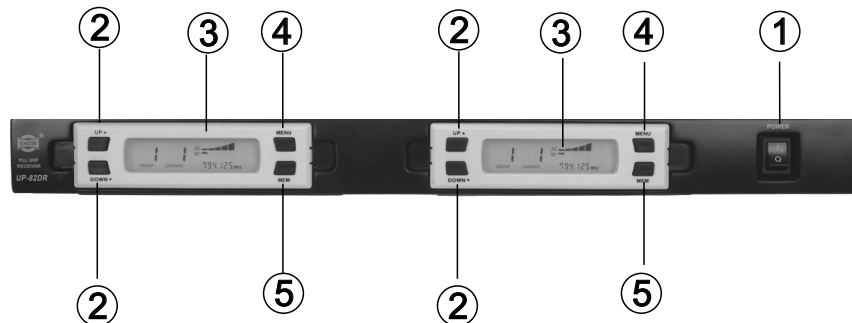
-Common features,

- 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-82DR, PLL UHF Diversity Receiver

THE FRONT PANEL



① Power Switch

It switches on/off UP-82DR main power.

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 user's manual of UP-82DR for details!

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.



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 to disable mute.

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.

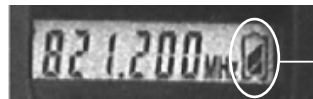


Fig 13

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.

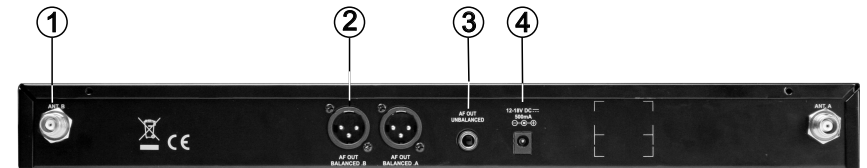
④ Menu key

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.

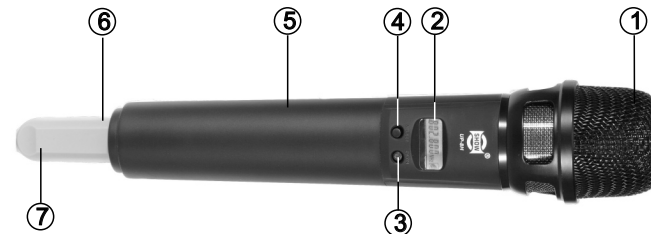
③ Audio Output Jack

This is a professional unbalanced output jack.

④ DC Input

It is used to connect an attached adapter.

3.2 UP-H series , 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.

Note: 1. Please make sure batteries inside are rechargeable.

2. Use the charger supplied by our company.
3. When batteries are charged, microphone stops power transmission.
4. When batteries are fully charged, LED flashes.



⑦ Antenna

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

- 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

- 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.

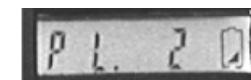


Fig 9

- 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.

| 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 |

Table



Fig 5

4.2 For the UP-H/P/G 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.

3.3 UP-P/G series, Body Pack Transmitter



① LCD Display

Generally, the LCD displays the current operation status.

② CH/ON Key

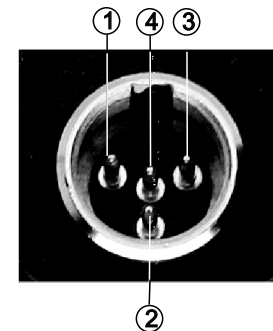
Keep pressing this key for a few seconds, the unit will be powered on or off. After it is switched on, touch this key slightly to select the parameter which you want to edit, such as the preset channel, preset group, PL (RF power level) and Lock/unlock. In this mode, if there is no further operation 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-82DR, 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.

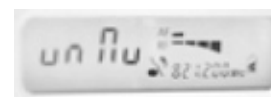


Fig 2 mute function off



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.