

MIPRO

MRM-70/20 UHF Diversity Receiver Module

*Integrate the Most Essence Wireless
Microphone System Into Your Products!*



MRM-70 UHF PLL "ACT" DIVERSITY RECEIVER MODULE

1. Introduction:

MRM-70 is the latest design of receiver module installs in all models of MIPRO MA-series. It is preferable to install in PA amplifier system, mixer, active speaker, signal processor, and home-karaoke equipment. It provides these products extra function of multi-channel wireless microphone system and makes more selling features to create preferable profit.

It is the world's trend that the wireless microphone systems in current market adopt UHF and PLL design to increase anti-interference at multi-channel applications. But many manufacturers can not break through the technical difficulty to solve the interference of random noise and the signal drop-out. Furthermore, it hardly gets the reliability of the products quality and the after-sale service. MRM-70 receiver module accumulates MIPRO's design essence and is the most advanced ACT PLL systems for professionals. Features of MRM-70 are listed below:

1. Adopts UHF PLL-synthesized diversity receiving design and presets 16 non-interference frequencies in each 24 MHz frequency band. Just one-press on the "Scan" button will auto scan interference-free channels and locks at one working channel that is free from interferences and skips in-use frequencies.
2. Features world's first "ACT" button on the receiver that just one-press on the button will automatically locks the transmitter into the same working channel and will never had errors or mechanical breakdowns.
3. No matter if the module is power on/off, parameter will not change after the set-up is completed.
4. Dedicated LED display panel is clearer and more definite in displaying channel, RF and AF signal strength. Noise indicator clearly displays if a receiver is under the state of interference.
5. "Receiving sensitivity knob" can adjust the receiver's sensitivity to avoid noise interference.
6. Adopt CPU-controlled dual antenna-diversity receiving, and the best "PiloTone & NoiseLock dual squelch controls". It not only has long receiving range, but also eliminates signal dropouts and avoids random-noise interferences from PCs, karaoke machines and DVD players.
7. To ensure using a wireless microphone as easy as using a wired microphone, system output is accurately adjusted to match capsule sensitivity with tolerance within $\pm 1.5\text{dB}$.
8. It adopts the easiest assembly and disassembly modular design for easy after-service. It is the easiest and most convenient for operation and installation with most stable performance and minimal cost. Moreover, it can be an extra accessory for DIY.

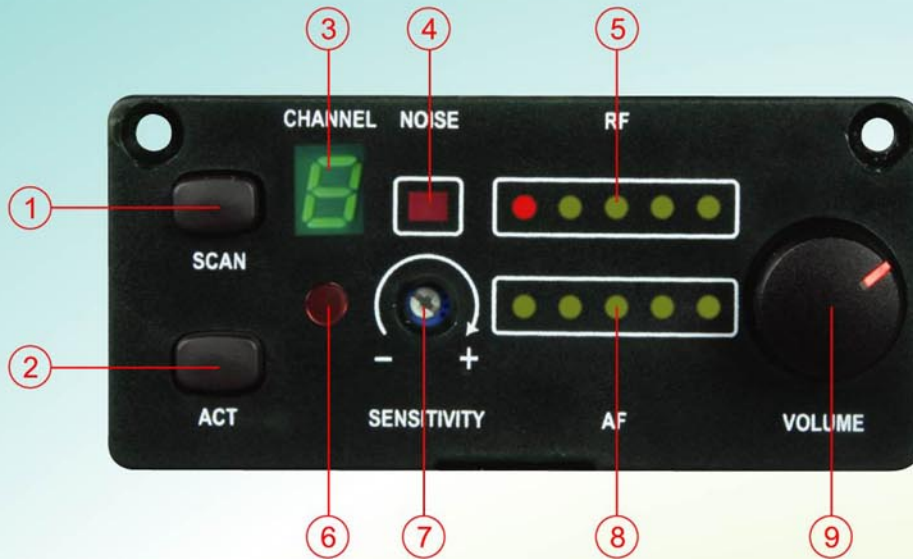
When installing MRM-70 into above products, we only need to follow mechanism dimension chart (see fig. 4) to reserve assembling space on the front or back panel of the products, and pre-set connector and connecting wire in the products. When assembling, we only need to insert the module into the products (see fig. 3), and use 2 screws to fix it to the module panel.

MRM-70 receiving module can match with ACT-707HE wireless microphone or ACT-707TE body pack transmitter, providing the best choice for interference-free of multi-channel usage, and also presenting the best sound effect of professionals.

If you are interested in integrating MRM-70 into your new products and require a detailed technical data, MIPRO's experienced R & D engineers are pleased to assist you to complete products' design perfectly.



2. Controls & Functions:



- (1) SCAN Button: Scan whole frequency band, select receiving channel and lock at one non-interference channel automatically.
- (2) ACT Button: Set-up working frequency of wireless transmitter to synchronize receiver's automatically.
- (3) Channel Indicator: Digital display of receiving channel.
- (4) Noise Indicator: When indicator lights up, indicating the receiver is interfered.
- (5) RF Signal Indicator: Display receiving signal strength.
- (6) ACT Window: The "Automatic Channel Target" function window.
- (7) Receiving Sensitivity Knob: Adjust receiver sensitivity to prevent from noise interference.
- (8) AF Signal Indicator: Indicate microphone output level.
- (9) Power Switch and Volume Adjustor: To turn on receiver's power and control the volume of the microphone.

3. Assembly Illustration:

Install the receiver module into the amplifier system and a wireless microphone system is ready to use.

Amplifier with receiver module installed.

Amplifier application



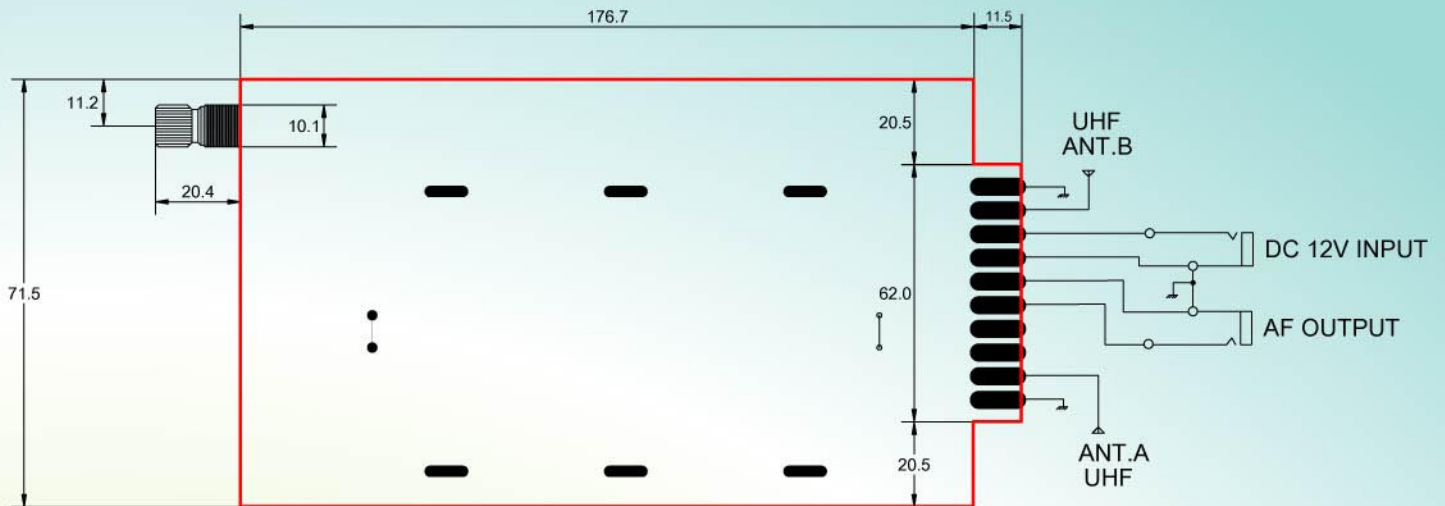
Install the receiver module into the mixer system and a wireless microphone system is ready to use.

Mixer with receiver module installed.

Mixer application



4. Dimensions and Wiring Drawing (in mm) :



5. Specifications:

Items	Specifications
Frequency Range	620~960 MHz
Oscillation Mode	PLL Synthesized
Bandwidth	24MHz
Preset Channels	16 Non-interference channels
Frequency Set-up	One-press on "SCAN" button, it will automatically scan all preset channels and lock at a non-interfered open channel. Just one-press on "ACT" button, it will automatically lock the transmitter into the same working frequency, avoiding possible errors or mechanical breakdowns.
Receiving Mode	CPU-controlled diversity receiving.
Squelch Control	Innovative " Pilotone & NoiseLock" dual-squelch circuit.
Display Status	Dedicated LED display panel is clearer and more definite in displaying channel, RF and AF signal strength. Noise indicator clearly display if a receiver is under the state of interference.
Receiving Sensitivity	6dBµV, at S/N >80dB
Max. Deviation Range	±68KHz.
Spurious Emissions	<82dB.
Frequency Response	60Hz~15KHz±3dB (Overall system).
Max. S/N Ratio	>100 dBA.
T.H.D.	<0.5% @ 1KHz (Dev.=40KHz).
AF Output	610mV rms.
Power Supply	DC 12~15V.
Current Consumption	<190 mA.
Working Temperature	-10°~60°C.
Dimensions	See Fig. 4
Weights (g)	126
Matching Transmitter	ACT-707HE Handheld Wireless Microphone and ACT-707TE Body Pack Transmitter.

MRM-20 UHF Dual-Channel Diversity Receiver Module

1. Introduction:

MRM-20 is a receiver module mainly for the most easiest and convenient installation in public address amplifier system, mixer, active speaker, signal processor, and home-karaoke equipment. It provides these products extra function of multi-channel wireless microphone system and makes more selling features to create preferable profit.

There are many brands of wireless microphones in the current market, but they can not break through the technical difficulty to solve the interference of loud random noise and the affliction of signal drop-out. Furthermore, the unreliable quality of the products and after-sale service result many manufacturers afraid of installing the receiver modules into their own products. MRM-20 receiver module is the same design of MR-823D, which is the latest development by MIPRO. It features UHF band and CPU controlled diversity receiving to solve the problems of noise-interference and signal drop-out. It can randomly adjust receiving sensitivity for interference-free reception. In the mechanism, it adopts the easiest assembly and disassembly modular design for easy after-sale maintenance. It is not only very easy to install the module into above products, also to use and have the most stable performance at the cheapest price. Moreover, it can be a DIY accessory for consumers.

When installing MRM-20 into above products, one only needs to follow mechanism dimension chart (see fig. 4) to reserve assembling space on the front or back panel of the products, and pre-set connector and connecting wire in the products. When assembling, just insert the module into the products (see figure 3), and use 2 screws to fix it to the module panel. The module panel can be designed by manufacturers or MIPRO (see fig. 2).

MRM-20 receiver module can match with 2 MH-801 wireless microphones or MT-801 body pack transmitters. It's as convenient as using a wired microphone. Free from adjusting frequency and volume of the module. One can control everything form main frame, and present the best sound effect of professionals.

If you are interested in integrating MRM-20 into your new products and require a detailed technical data, MIPRO's experienced R & D engineers are pleased to assist you to complete your products' design perfectly.



2. Controls & Functions:



- (1) Antenna A Connector: To install antenna A.
- (2)(3) Adjustors for Receiving Sensitivity:
To adjust squelch level of receiver so there is no noise output from receiver when there is no microphone signals.
- (4) Antenna B Connector: To install antenna B.

3. Assembly Illustration:

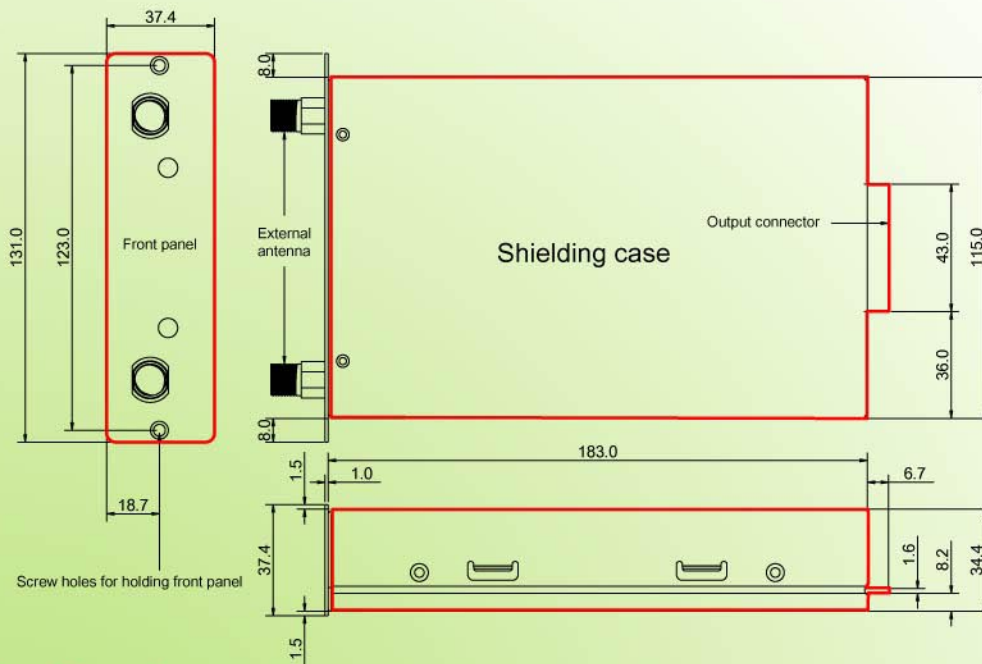
Install the receiver module into the Karaoke machine and a wireless microphone system is ready to use.



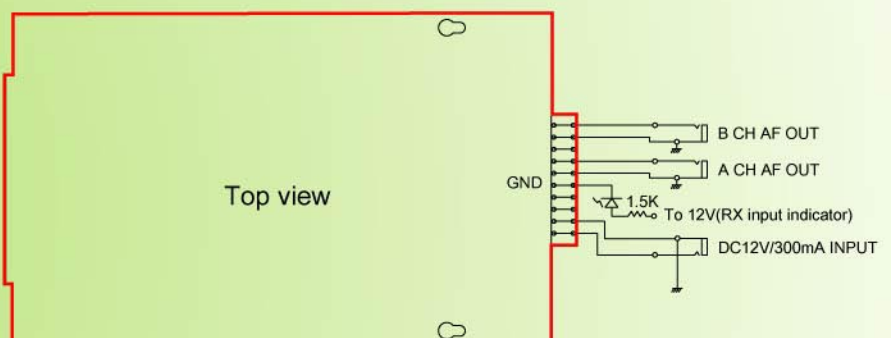
Karaoke machine with receiver module installed.



4. Dimensions (in mm):



5. Wiring Drawing:



6. Specifications:

Items	Specifications
Frequency Range	760~860 MHz
Oscillation Mode	Quartz Controlled Fixed Frequency
Receiving Mode	CPU-controlled Dual-Channel Diversity Receiving
Sensitivity	S/N>70dB @ 10dBmV input
Max. Deviation Range	±68KHz
Stability	±0.005%(-10~50°C)
Spurious Emission	<82dB
Squelch Control	Innovative "PiloTone & NoiseLock" dual-squelch circuit
Frequency Response	60Hz~15KHz±3dB (Overall system).
S/N Ratio	>100dBA
T.H.D.	<0.5% (Dev.=40KHz)
AF Output	610mV rms
Power Supply	DC 12~15V
Current Consumption	<190mA
Working Temperature	-10°~60°C
Dimensions	See Fig. 4
Matching Transmitters	MH-801 Handheld Wireless Microphone / MT-801 Body Pack Transmitter

7. Matching transmitters:



Specifications:

Model Numbers	ACT-707HE	ACT-707TE	MH-801	MT-801
Carrier Frequency Range	UHF 620~960MHz		UHF 760~950MHz	
Max. Deviation Range	±68KHz , with compandor and level limiting.			
Oscillation Mode	PLL Synthesized		Quartz-controlled fixed frequency	
RF Output Power	10mW(or according to regulations)			
Spurious Emission	<-55dBc		<-45dBc	
Max. SPL	148 dB SPL	x	146 dB SPL	x
Maximum Input Level	x	0dBV	x	0dBV
Microphone Capsule	MU-77	MU-53/55	MU-72	MU-53/55
Dimensions (m/m)	50Φ×235(L)	105(L)×63(H)×21(D)	49Φ×235(L)	105(L)×63(H)×21(D)
Weight (g)	240	85	210	90
Battery	Standard 9V or Rechargeable battery			
Frequency Adjustment	ACT function provides rapid automatic channel setting.		X	
Note	Varied specifications on carrier frequency range, maximum deviation, RF output power and spurious emission to comply regulation of different countries.			



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