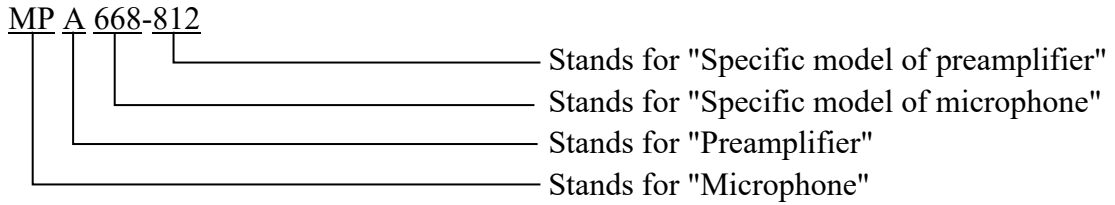


Instruction manual for free-field measurement microphone kit

MegaSig Measurement & Control Technology Co.,Ltd

1、 Product introduction

- 1) Type and designation: MPA668-812 Free-field measurement microphone kit
- 2) The model code of the free-field measurement transmission kit is as follows:



- 3) Explosion-proof marks: Ex ic IIB T4 Gc
- 4) Execution standard: GB/T 3836.1-2021 、 GB/T 3836.4-2021 、 IEC 60079-0:2017、 IEC 60079-11:2011
- 5) Feature: The free-field measurement microphone kit is an explosion-proof certified special microphone kit, In line with the dangerous area 2 zone and explosive environment IIA, IIB class T1-T4 temperature group use requirements, can ensure the use of safety in dangerous gas environment; It is composed of microphone MP 668 and preamplifier MA 812 (Figure 1.1). The microphone and preamplifier are connected with threads.

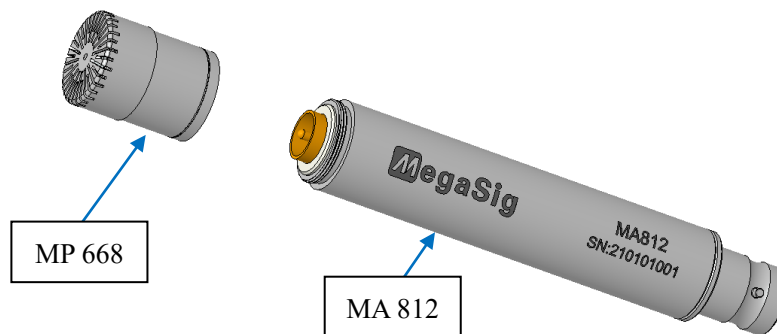


Figure 1.1

Among them, MP 668 is a 1/2 inch pre-polarized free field measurement microphone (Figure. 1.2), which is used to measure the true sound pressure without distortion before the sound field is inserted. The MP 668 body is made of stainless steel, giving it good toughness and long shelf life.

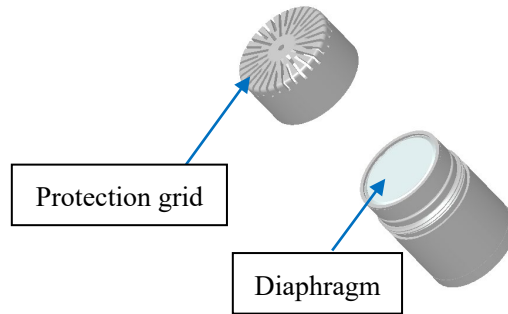


Figure 1.2

Please be careful when using: Microphone diaphragm is extremely fragile, do not touch the microphone diaphragm with hands, do not easily remove the guard bar, so as not to cause damage to the microphone.

The MA 812 preamplifier (Figure 1.3) is a preamplifier powered by a constant current source, It has high input impedance, low background noise and wide frequency response range. The output interface adopts BNC joint, and the main part is made of stainless steel to make it have good toughness and long time storage.

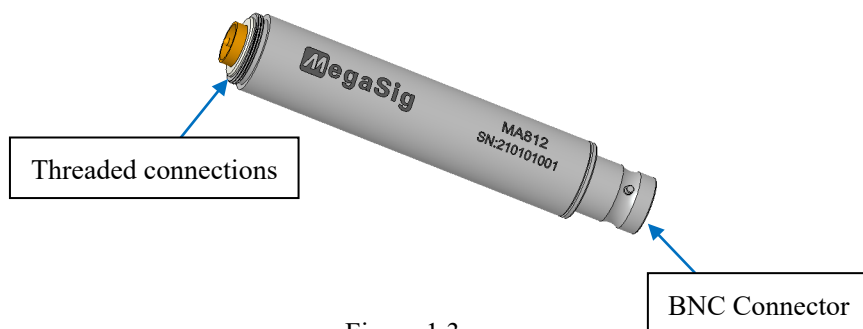


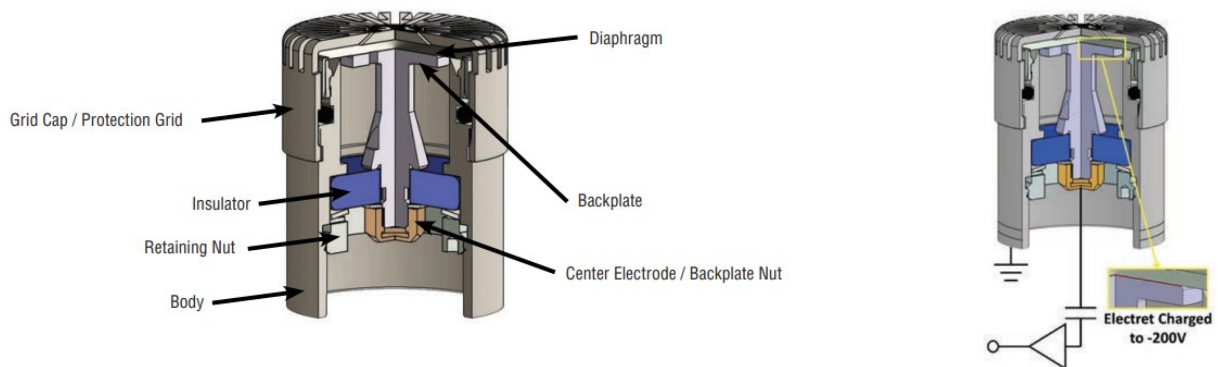
Figure 1.3

2、 Specifications

Field	Free-field	
Frequency range (dB)	6.3Hz-20kHz±2dB	12.5Hz-10kHz±1dB
Dynamic range (dB)	17dB-146dB(1000Hz THD<3%)	
Sensitivity mV/Pa(dBV/Pa)	44.5mV(-27dB)±2dB	
Polarization voltage	0V(Prepolarized)	
Power supply	4mA	
Typical capacitance	16.0pF	
Connector	BNC	
Temperature range	-20°C~60°C	
Humidity range non condensing	10%-90%	
Overall length	85mm	
Diameters	13.2mm	
Diameters (No Protection grid)	12.7mm	
Cooperate with thread	11.7mm-60UNS	

3、 The product principle

Internal structure drawing of microphone:



5、 Precautions for Use

- 1) Do not hot swap
- 2) Operate the microphone carefully and keep the diaphragm away from dust and other objects
- 3) Do not touch microphone diaphragm with your hands
- 4) It is recommended not to remove the microphone protection fence at will

Version	Document number	Date	Design	Verify	Approve
V1.1	MGS-MP668-01	2022.08.09	Tianyang Jiang	Kanghui Zhao	Xushun Chen