



# **MDS Microphone Discussion System** Instruction manual



## MDS Microphone Discussion System



## Safety First!

- Please check the carton box for any kind of damage on reception of the goods. In case of a damaged carton, please contact your dealer before opening the carton.
- !!!!! Danger !!!!! Exposure to high sound levels may cause a permanent hearing loss. Individuals vary considerably to sound pressure level induced hearing loss but nearly everyone will lose some hearing if exposed to high sound pressure levels for a sufficient amount of time. Therefore it is recommended that all persons exposed to equipment capable of producing high sound pressure levels be protected by hearing protection while installing or operating this unit.
- Read all documentation before operating your equipment.
- Keep all documentation for future reference.
- Save the carton and packing material even if the equipment has arrived in good condition.
- Should you ever need to ship the unit, use only the original factory packing.
- Do not spill water or other liquids into or on the unit.
- Make sure power outlets conform to the power requirements listed on the back of the unit.
- Do not use the unit if the electrical power cord is frayed or broken.
- Always operate the unit with the AC ground wire connected to the electrical system ground.

- Set level controls on amplifiers all the way down during power-up to prevent speaker damage if there are high signal levels at the inputs.
- Power down & disconnect units from mains voltage before making connections.
- Do not use the unit near stoves, heat registers, radiators, or other heat producing devices.
- Do not operate equipment on a surface or in an environment which may distort the normal flow of air around the unit. If the unit is used in an extremely dusty or smoky environment, the unit should be periodically “blown free” of dust.
- In case of mal-function this device should be serviced by qualified service personnel only.

## Features

The Apart MDS microphone discussion system is a highly flexible small to medium size tabletop discussion system using a unique circuit loop design: easy to set up, using standard CAT5 cables for linking up to 20 units in a daisy chain. The system accepts one chairman unit, and up to 19 delegate units. The MDS.INT connection interface is located at the end of the microphone chain. The power supply unit can be connected anywhere in the chain, preferably in the middle of the system when more than 10 units are connected. The chairman and power supply unit can be located anywhere in the system. The microphones are equipped with easily identifiable leds on the base unit and on the flexible gooseneck microphone.

The delegate unit MDS.DEL is equipped with a talk button. When the microphone is active, the led indicator above the talk button and the colored led ring on the microphone is lit. Press the talk button to activate the microphone, press again to deactivate.

The chairman unit is equipped with a talk and mute button. When the mute button is pressed, only the chairman unit will be active. All delegate microphones will be muted and deactivated. The led on the chairman unit will blink when the mute function is active. It will light up steady when the talk button is pressed (equivalent to the delegate unit).

The interconnection cable is a CAT 5 standard straight cable, according to EIA-568-B. Maximum cable length is determined by the number of units in use. In a system with 20 units, the recommended maximum length between each unit is 5 meters. The CAT5 cables are inserted at the rear of the MDS units. Every unit has an IN and OUT connector, however, both connectors are equivalent. It doesn't matter where you connect the CAT5 cable.

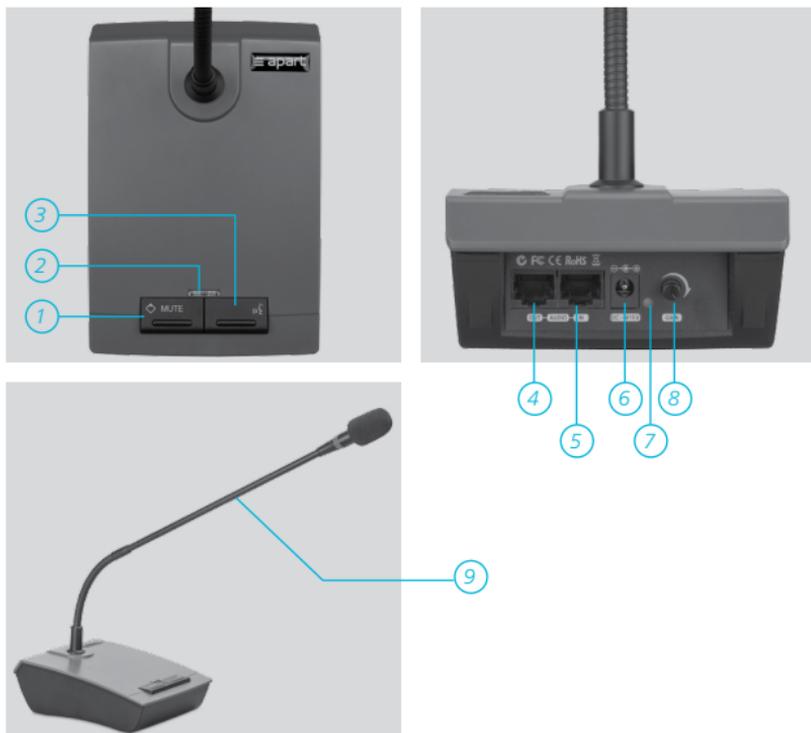
Example: for a system with 9 delegate microphones and 1 chairman unit, you need:

- 1 x MDS.INT connection interface with power supply
- 1 x MDS.CHAIR chairman unit
- 9 x MDS.DEL delegate units
- 10 x standard straight CAT5 cables (not supplied with the MDS units)

#### NOTES:

- It is not necessary to have a chairman unit in a system. Only one chairman unit can be used in a system.
- Do not speak loudly into the microphone from a short distance. The ideal distance to the microphone is 15 to 50 cm.
- Only use the power supply supplied with the MDS.INT unit.
- Do not connect the CAT5 cables from the MDS system to a computer network, router or network switch.
- To prevent feedback noise, turn down the gain levels of all units before operating the system.
- Maximum system cable length: 100 m (10 x 10 m - 20 x 5 m)

## Parts and functions of the MDS.CHAIR unit

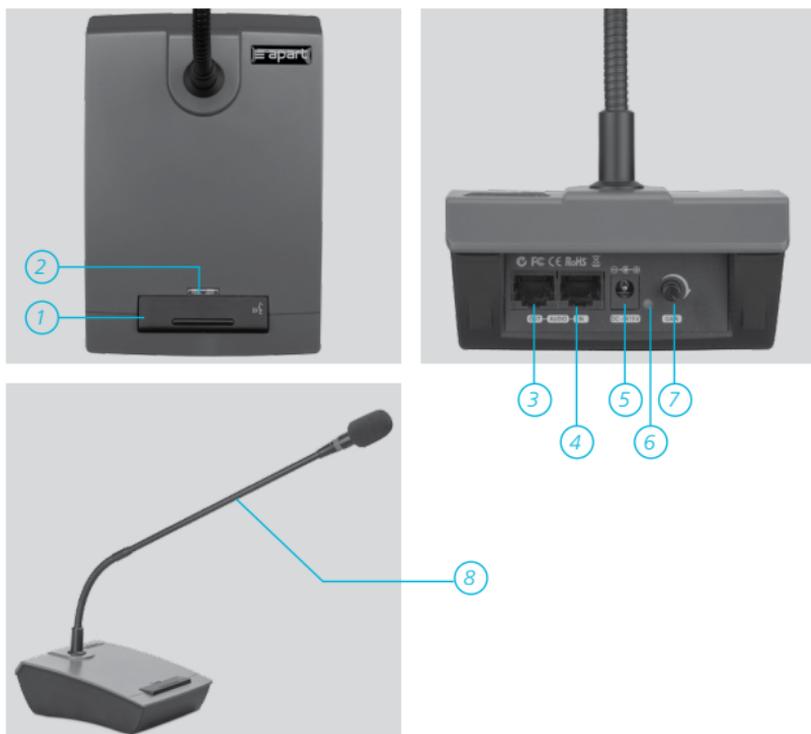


1. **Chairman mute button:** press this button to mute all delegate units. The led on the base unit (2) and on the gooseneck microphone (9) will blink. Press again to exit mute.
2. **Led indicator:** lights up steady when the talk button (3) is pressed.

3. **Talk button:** push to talk. The led indicator on the base unit and the gooseneck microphone will light up steady. Press again to stop.
4. **RJ45 out connector:** connect the CAT5 cable here. Connector 4 and 5 have the same function.
5. **RJ45 in connector:** connect the CAT5 cable here. Connector 4 and 5 have the same function.
6. **Power supply connector:** connect the power supply supplied with the MDS.INT unit here. Only one supply connection is required for the entire system.
7. **Power led:** green led lights up when the unit is powered.
8. **Gain adjustment:** adjust the gain (level) from the unit to match with the level of other units in the system.
9. **Led indicator:** lights up steady when the talk button is pressed. Blinks when the mute button is pressed.

*NOTE: When the mute button on the chairman unit is pressed, all delegate units will be muted and deactivated. The chairman unit remains active until the mute button is pressed again.*

## Parts and functions of the MDS.DEL unit



1. **Talk button:** push to talk. The led indicator (2) on the base unit and the gooseneck microphone (8) will light up. Press again to stop.
2. **Led indicator:** lights up steady when the talk button (1) is pressed.

3. **RJ45 out connector:** connect the CAT5 cable here. Connector 3 and 4 have the same function.
4. **RJ45 in connector:** connect the CAT5 cable here. Connector 3 and 4 have the same function.
5. **Power supply connector:** connect the power supply supplied with the MDS.INT unit here. Only one supply connection is required for the entire system.
6. **Power led:** green led lights up when the unit is powered.
7. **Gain adjustment:** adjust the gain (level) from the unit to match with the level of other units in the system.
8. **Led indicator:** lights up steady when the talk button is pressed.

*NOTE: Except under chairman priority mode, the delegate unit(s) will shut off after approximately 5 minutes idle (no sound).*

## Parts and functions of the MDS.INT unit



1. **Audio in RJ45 connector:** connect the CAT5 cable from the last unit in the chain here.
2. **Power led:** lights up when the system is powered.
3. **Audio out:** 6.3 mm unbalanced jack connector: connect the audio cable here. The nominal output level is 100 mV/1 k-ohm output impedance. This line level signal will normally be connected to an amplifier or a pre-amp/mixer.

## Accessories supplied with MDS.INT

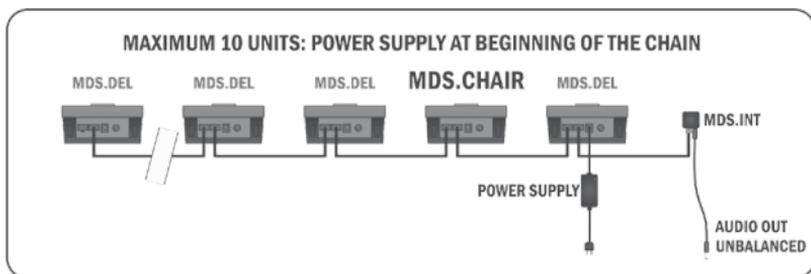
System power supply and 6.3 mm unbalanced jack cable:



*NOTE: the power supply can power up to 20 units in a daisy chain. Output voltage is 15VDC/4.3A. The power supply has no power on/off switch.*

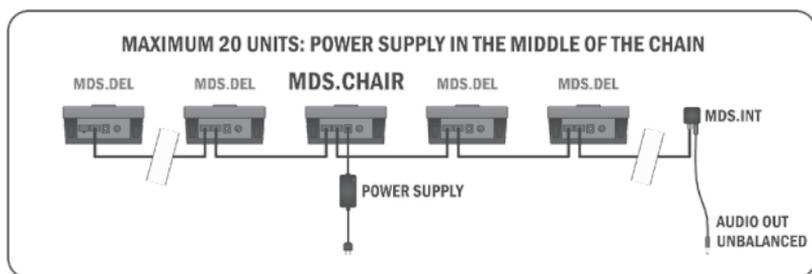
## Connection examples

Small size microphone discussion system with 1 chairman unit and up to 9 delegate units: the power supply can be located at the end of the chain, where the MDS.INT is located. The chairman unit can be located anywhere in the chain.



*NOTE: maximum 1 chairman unit (MDS.CHAIR) is allowed per system. The unbalanced audio output signal will normally be connected to an amplifier or a pre-amp/mixer.*

Medium size microphone discussion system with 1 chairman unit and up to 19 delegate units: the power supply should be located near the middle of the chain. The MDS.INT unit will be located at the end. The chairman unit can be located anywhere in the chain.



*NOTE: maximum 1 chairman unit (MDS.CHAIR) is allowed per system. The unbalanced audio output signal will normally be connected to an amplifier or a pre-amp/mixer.*

## Specifications

MDS.CHAIR – MDS.DEL microphone units	
Microphone type	Unidirectional condenser type
Frequency response	80 Hz – 16 kHz
System interconnection	RJ45 – CAT5 cables, straight, according to EIA-568-B
Maximum SPL MDS.CHAIR/DEL	100 dB for 1% THD
Dimensions H x W x D	54 (494 with mic) x 110 x 165 mm
Net weight	730 g
Packing dimensions	120 x 195 x 455 mm
Gross weight	950 g
Accessories supplied	manual, microphone foam cap
MDS.INT interface unit	
Nominal output level	100 mV
Output Impedance	< 1 kohm
THD	<0.5%
Signal to noise ratio	>60 dB
System signal output MDS.INT	Unbalanced jack connector 6.3 mm
Power supply in	100 – 240 VAC/47-53Hz/1.4A max
Power supply out	15 VDC/4.3A switching mode power supply
Dimensions MDS.INT (h x w x d)	24 x 49 x 49 mm
Net weight MDS.INT	36 g
Dimensions power supply (h x w x d)	38 x 53 x 115 mm (excl. cables)

Net weight power supply	300 g
Packing dimensions	52 x 115 x 224 mm
Gross weight	600 g
Accessories supplied	power supply & cable, 1.5 m 6.3 mm jack cable (unbalanced)





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