



Single Channel Transmitter

Instructions for use



The Single Channel Transmitter is designed as part of the Audeon low power UHF radio system for use in fitness, conference and exhibition centres. It is compatible with the eight channel systems and uses the same transmission frequencies.

The transmitter can accept one line level stereo audio input and transmits in either the licence free ISM band or in TV channel 69 for which a licence will be required. The range of up to 100 metres is dependant on the location, reflections from metal objects may increase or decrease the range whilst absorbent objects such as walls, furniture and people will reduce the range available.



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Specification

Audio

Signal Input	-10 dBu (0.245 v)
Input impedance	10 k Ohms balanced
Input headroom	+20 dB
Signal to noise ratio	80 dB
Input limiter operates at	+6 dB
Noise reduction	2:1 compression - expansion (DBX)
Audio bandwidth	50 Hz to 15 kHz
Stereo System	Zenith GE with 19 kHz pilot tone
Channel separation	60 dB

Radio

Output level	+10 dBm (10 mW)
Output impedance	50 Ohms
Modulation system	FM
Maximum deviation for 0 dBu audio input	±50 kHz
Maximum RF bandwidth (per channel)	150 kHz
Frequency stability	±1.0 kHz
RF output auto mute time	After 5 minutes of no input signal

Radio Frequencies

ISM licence free band UHF channel 70

Channel 1	863.10 MHz
Channel 2	863.35 MHz
Channel 3	863.60 MHz
Channel 4	863.85 MHz
Channel 5	864.10 MHz
Channel 6	864.35 MHz
Channel 7	864.60 MHz
Channel 8	864.85 MHz



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TV channel 69 (licence required from JFMG in UK)

Channel 9	854.60 MHz
Channel 10	855.90 MHz
Channel 11	856.90 MHz
Channel 12	857.60 MHz
Channel 13	858.70 MHz
Channel 14	859.30 MHz
Channel 15	860.2 MHz
Channel 16	861.00 MHz
Size	210 mm x 60 mm x 250 mm
Weight	980 gm
Power	9v DC to 15v DC 450 mA

Installation Instructions

Carefully unpack the contents and check to ensure that no parts of the system are missing. The pack contains the following parts

- 1 SCT UHF transmitter
- 1 1/4 wave aerial
- 1 9 volt plug top regulated power supply
- 1 Set of instructions

Should any part be missing please contact your supplier for a replacement.

Warning: This equipment must be connected to earth. An EARTH terminal is provided on the rear of the case and should be used if the earth is not connected via the signal leads.

Location of the transmitter

The performance of the radio system is very dependant on the location of the transmitter, a poorly sited transmitter will seriously degrade the performance of the system. The signals travel in a straight line from transmitter to receiver and will be attenuated by any object in the signal path. Choose a location which is above any object which is likely to restrict reception of the radio signal, placing it above head height will reduce the effect of people who are in the way. Try not



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to have any metal objects such as steel cupboards, shelf brackets, TV sets or electric wires near to the transmitter which will cause reflections.

The aerial will need to be connected to the aerial socket located on the rear of the transmitter using the BNC connector. Position the aerial so that it is pointing vertically up to provide the strongest signal. The audio input signal should be connected to either the two phone sockets or the two jack sockets using a suitable screened lead.

The position of the transmitter will also affect the signal strength, the case of the transmitter forms part of the aerial (ground plane) and this will increase the signal strength in the forward direction and attenuate it in the rear facing direction. For the strongest signal the rear of the transmitter which has the aerial connected to it should be on the opposite side to where the signal is to be received.

Internal settings

The transmitter leaves the factory with the transmitter set to stereo and the auto mute set on. To change the transmitter to mono operation move the stereo link to mono. To disable the auto mute facility move the link. You should not need to set or adjust any other internal control.

Power supply

The transmitter is supplied with a suitable 9 volt regulated power supply. Connect the power supply lead to the transmitter, insert the power supply into a suitable mains supply power outlet and switch on. The two green power on LEDs should be illuminated.

Instructions for use

Set the required radio frequency using the 16 position switch located on the rear of the transmitter. Channels 1 to 8 are in the licence free ISM band whilst channels 9 to 16 are in the frequency band allocated to TV channel 69 for which a licence is required (from JFMG in the UK). The switch is marked in HEX so channel one is marked as 0 and channel 16 is marked F.

Switch on the power, the two green power on LEDs should be illuminated.

Adjust the audio signal level so that the peaks of the signal illuminate the 0 dB (yellow) LED. Occasional peaks into the red are acceptable but any signal which is 6 dB above the nominal input will be limited, this limiting is audible and will sound poor.

Select the transmitted channel on a receiver, the required sound should be heard on the headphones.



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Troubleshooting

Power LEDs do not light	Check the power supply is inserted into the mains power outlet. Check that the power lead is connected to the transmitter.
No audio signal	Check the input bargraphs for a signal. Is the input volume control set too low? Are the input signal leads connected. Is the signal source switched on?
Received signal is noisy	Is the aerial connected? Is the aerial vertical. Is there an obstruction between the aerial and the receiver?
The received signal buzzes	Is the transmitter connected to earth? Is it too close to a TV set?
The received signal has a low frequency hum	Is there an earth loop on the system?
The transmitter causes interference on an adjacent TV or Radio	The transmitter may be too close to the TV or radio receiver.
The received signal fades as people walk round the room	Increase the height of the transmitter above the ground

Manufactured in England by
www.m-jay.co.uk

M-Jay Electronics Limited
Albion Mills, Church Street
Morley, Leeds
LS27 8LY

