S6000 Beltpack Instruction Manual

TRANTEC SYSTEMS

Introduction

Thank you for purchasing your Trantec S6000 Beltpack.

If you require additional copies of these instructions, they can be obtained from the Trantec web site, www.trantec.co.uk, along with other information about the Trantec range.

- **Background Information**

The S6000 Beltpack is a microprocessor controlled UHF transmitter, which can operate on up to 64 different frequencies. The exact selection of channels available will depend on how your system has been configured. The ability to quickly change operating frequency will be immediately useful when configuring for a multi-user site or where the presence of other radio microphone users may cause problems when using a fixed channel system.

- **General Radio Microphone Operating Guidelines**

Always try to locate the receiver as close as possible to the transmitter, as this minimises the chance of any RF drop-out. Although this scenario is unlikely with a diversity system, large transmitting ranges will increase the likelihood of problems occurring. Always try to ensure a line of sight signal path between the transmitter and receiver - obstacles such as walls can significantly reduce the radio signal strength. Obviously the transmitter and receiver must be on the same channel. If you are using more than one system simultaneously, choose a set of intermodulation free frequencies - please refer to the channel listings at the end of these instructions. They will assist you in finding a suitable set of frequencies.

Note that although your system may be capable of operating on channels other than the licence exempt ones, in many countries (including the UK) it is illegal to do this without first obtaining a licence. It is wise to avoid placing the receiver near to computer or mobile telephone equipment, as this can create unwanted radio interference. Always operate any radio microphone system with its antennae fully extended. Always test a radio microphone system in the location where it is to be used by doing a “walk test”. This involves testing the system as the transmitter is walked around the area in which it is to be used. This will normally show up any problem areas, allowing you to try a new receiver location. By adjusting the location of the receiver, or even just the alignment of its antennae, it should be possible to obtain trouble-free operation over the desired area, provided that it does not exceed the transmitter’s range, which is typically around 100 m.

- **Guarantee**

All Trantec products are guaranteed for a period of one year from date of purchase against defects in materials and workmanship. In the event of a claim under guarantee the system should be returned to your dealer in its original packaging and with proof of purchase. Defects caused by modification, misuse or accident are not covered by the guarantee.

Due to our continual policy of research and development we reserve the right to alter specifications without prior notice.

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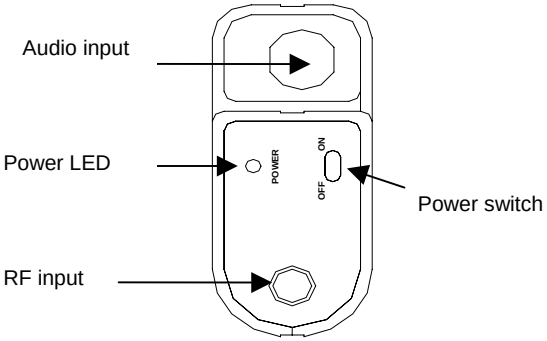
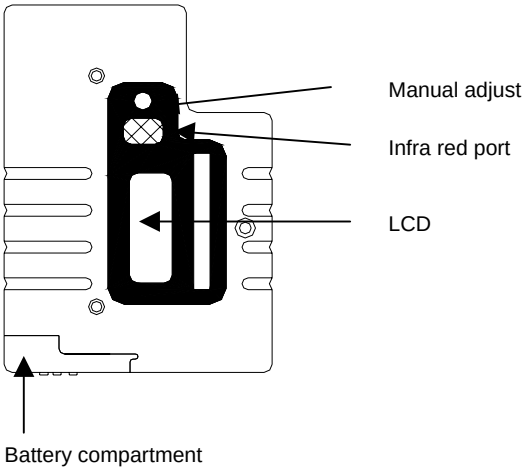
This symbol indicates that this piece of electrical/electronic equipment must be disposed of separately from normal waste at the end of its operational life. Please dispose of this product by taking it to your local recycling or collection point.

S6000L Transmitter Set-up





Screw the external antenna into the antenna connector on the top of the beltpack. Under no circumstances should the length of the wire antenna be shortened, coiled up or wrapped with the audio lead as this will reduce the performance of the radio system.

Insert the Lemo connector for the lapel microphone into the audio connector, lining up the red idents on plug and socket. Do not twist this connector. Keep the audio lead and the antenna separated at all times.

Open the battery compartment of the beltpack and insert a 1.5 v “AA” alkaline battery. This should be inserted negative end first, and positive end toward the battery compartment door.

Switch on the beltpack using the switch on the top. The LED will light and the LCD will display the current gain setting followed by the currently loaded frequency.

- **Changing the Transmitting Frequency**

Next to the LCD there is a screwdriver adjust. This is actually a dual function digital switch. When the beltpack is initially turned on the LCD first shows the current gain setting then the currently loaded frequency. For approximately 10 seconds the decimal point will flash. During this period the user can adjust the frequency, using a screwdriver. *The transmitter must be turned off and on again before the frequency change is activated.* The operating frequency is stored permanently in non-volatile memory so it will remain the same even if the battery is replaced.

The frequencies loaded into the transmitter can be modified using a PALM compatible PDA. This is explained in detail in the S6000 Palm Software Instruction Manual. Frequencies may also be loaded into the transmitter via infra red from the receiver. This is explained in your receiver manual.

The exact selection of channels available will depend on how the transmitter has been programmed in the factory. It can contain up to 64 unique frequencies, but your transmitter will not necessarily contain this many.

- **Changing the Gain**

After the decimal point has stopped flashing the screwdriver adjust can now be used to configure the gain. The LCD displays between 0 and 9, with 0 being the minimum gain and 9 the maximum. As with the frequency, the gain is stored permanently in non-volatile memory so it will remain the same even if the battery is replaced.

- **Optimising the Gain of your System**

In order to achieve the best possible audio performance from your radio system, it is worth spending a few minutes setting the optimum gain level.

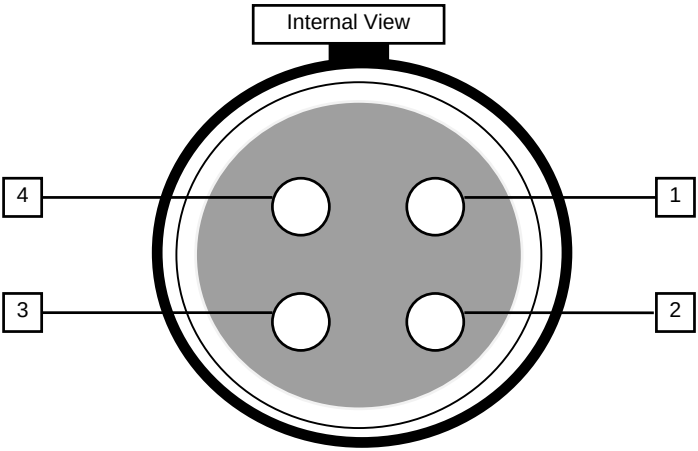
Adjust the gain of your transmitter, as described in the appropriate section. The optimum setting for this will be found by first adjusting the transmitter gain so that the maximum audio signal expected just lights the receiver AF bar display to the +3 dB level. If this level is surpassed then distortion is likely to occur. The optimum setting will vary according to who is using the microphone and how close the microphone is placed to the mouth, and the type of microphone being used.

Once the transmitter gain is optimised, it is necessary to match the receiver's output level to your mixing desk or PA system.

- **Battery monitoring**

The battery voltage is displayed on the LCD of the transmitter and is shown in three segments, the first goes out when 60% of the battery life has expired, the second goes out at 80%. The battery level is sent over the RF link so the actual battery voltage can be monitored from the receiver.

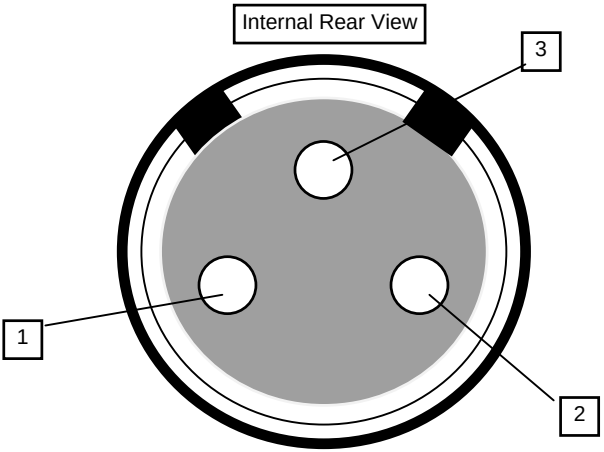
S6000LTX Transmitter 4 Pin Lemo Connector Details



Pin Connections: Pin 1 Ground, Pin 2 +8.2 Vdc Bias, Pin 3 Audio/+8.2 Vdc Bias, Pin 4 Audio

Sennheiser MKE2, MKE2-5	**Trantec TS22, 212**	**Countryman E6, B6**
Pin 1 Screen + Blue	Pin 1 Screen	Pin 1 Screen
Pin 2 Not connected	Pin 2 Not connected	Pin 2 Not connected
Pin 3 Red	Pin 3 Red	Pin 3 White
Pin 4 Not Connected	Pin 4 Not Connected	Pin 4 Not Connected
Sennheiser MKE2-5 Lo Gain Mode	**Sony ECM77**	**Countryman B3**
Pin 1 Screen	Pin 1 Screen plus Clear	Pin 1 Screen + Black
Pin 2 Red	Pin 2 Not Connected	Pin 2 Not connected
Pin 3 Not Connected	Pin 3 Red	Pin 3 Red
Pin 4 Blue	Pin 4 Not Connected	Pin 4 Not Connected
Sanken COS-11PT	**Beyer MCE50**	**Beyer MCE5**
Pin 1 Screen	Pin 1 Screen	Pin 1 Screen
Pin 2 Black	Pin 2 Not Connected	Pin 2 Red
Pin 3 Not Connected	Pin 3 White	Pin 3 Not Connected
Pin 4 White	Pin 4 Not Connected	Pin 4 Blue

S6000LTX Transmitter 3 Pin Lemo Connector Details



Pin Connections: Pin 1 +8.2 Vdc Bias, Pin 2 Audio/+8.2 Vdc Bias, Pin 3 Ground

Sennheiser MKE2, MKE2-5

Pin 1 Not connected
Pin 2 Red
Pin 3 Screen + Blue

Trantec TS22, 212

Pin 1 Not connected
Pin 2 Red
Pin 3 Screen

Countryman E6, B6

Pin 1 Not connected
Pin 2 White
Pin 3 Screen

Beyer MCE50

Pin 1 Not Connected
Pin 2 White
Pin 3 Screen

Sony ECM77

Pin 1 Not Connected
Pin 2 Red
Pin 3 Screen + Clear

Countryman B3

Pin 1 Not Connected
Pin 2 Red
Pin 3 Screen + Black

Trantec TS55

Pin 1 Not Connected
Pin 2 Red
Pin 3 White + Screen

Frequency Guide (UK/Europe)

Channel 69 (854 MHz – 862 MHz) is the only channel available throughout the entire UK. Other frequencies in the UHF band are available regionally. More information can be obtained through JFMG (Joint Frequency Management Group).

The following set of channel 69 frequencies, recommended by JFMG, is stored in your system on delivery. Other frequency sets can be provided for special orders. This set has been calculated to be intermodulation free, so it should be possible to operate them all simultaneously, although other radio sources may cause interference that prevents this. A licence is required to operate UHF radio microphones in the UK. This is also the case in most other countries - consult the relevant authorities in any country before using the system there.

Number (1-16)	Channel
1	854.900
2	855.275
3	855.900
4	856.175
5	856.575
6	857.625
7	857.950
8	858.200
9	858.650
10	858.975
11	859.500
12	860.400
13	860.900
14	861.200
15	861.550
16	861.750

If you have any enquiries regarding licensing in the UK then please contact:

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WC1E 7DP

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Fax: +44 (0) 20 7299 8661
Web: **www.jfmg.co.uk**
Out of hours: +44 (0) 7050 177335

Technical Specifications

Frequency Range: 662-734, 734-806, 798-865MHz
(Other frequency bands available on request)
Frequency Arrangement: 40 Frequencies on a 25 kHz grid
Output Power: 2 Power settings 10 dBm / 13 dBm @ 50 Ohm
Nominal Deviation: 25 kHz
RF Harmonic & Spurious Radiation: < -54 dBm
Frequency Stability: < 10 kHz
Power Consumption: 150 mA, 1.5 V “AA” Alkaline Battery (at max RF power)
Battery End Point: 1.0 V
Operating Time: 15 hours (Typical)
AF Frequency Response: 50 Hz – 20 kHz
Audio Input: 3 or 4 pin Lemo socket
AF Gain: 10 Step Gain (Input level 0 dB to -22 dB)
Dimensions: 50 x 68 x 20 mm
Weight: 68 g
Regulatory information: Fully meets requirements of ETS300-422/455
Compliant with R&TTE and FCC regulations

Accessories

4 pin Lemo connector (audio) - **CON/FGG304**

3 pin Lemo connector (audio) – **CON/FVB3**

Headworn Mics – **HM-22, HM-66**

Lavalier Mics – **LM-55, LM-212**

Transmitter antenna - **ANT/6000-LTX**

Leather pouch/ belt clip for transmitter - **ACC/6K-POUCH**