



Multi Room Monitoring via Telephone Lines

(Heimdal / TSE 4004)

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The TSE 4004 Wired Room Monitoring System is a highly professional system designed for remote monitoring where full transmitter control via standard PSTN lines is needed. TSE 4004 is designed to allow the user to install up to 8 transmitters, using a combination of active phone lines or spare wires and mains lines. The individual transmitters can be switched on and off remotely. The modular TSE 4004 system consists of transmitter(s), one receiver module, PSTN modules and of control software for PC.



Transmitters

The TSE 4004 transmitters incorporate the following advanced features: scrambler, AGC and remote control receiver.

The remote controlled functions of the transmitters are power on/off and scrambler on/off.

Two different types of transmitters have been developed for the TSE 4004 system. The TSE 4004 Wired Monitoring transmitter (HWM) is to be used on active phone lines or spare wires. The TSE 4004 Carrier Current transmitter (HCC) is to be used on active mains lines.

Receiver System

The RX module is a small, flat and compact cabinet, which is only 44 mm high. One RX module handles 2 transmitters simultaneously.

The RX module has the following features:

- Target line interface for both PSTN and spare wires (HWM) and mains wires (HCC)
- Dual tuner - each with 4 channels
- High impedant input for LF audio. Enables monitoring of PSTN line without transmitter
- Audio descrambler
- Remote control of transmitters
- Noise masking for HWM transmitters
- Line output for recording
- Output for headphones

It is possible to have both HWM and HCC transmitters operating at the same time, enabling the operator to monitor, for example, one HWM transmitter and one HCC transmitter simultaneously.

The RX module is powered from an external low voltage source. The RX module is delivered with a mains adapter, but can also be powered from a car battery.

PSTN Module – Remote set-up

The PSTN module provides a link from the listening post to the monitoring site. One PSTN module is needed at the monitoring site and one at the listening post. The PSTN module can handle 2 lines simultaneously and transfers both the audio from the transmitter and the remote control commands.

The PSTN module at the monitoring site can also be dialed up from standard telephone equipment, including mobile phones. Access to the system is done by means of the telephone keypad. This feature enables the operator to make a quick control of the TX / RX / PSTN set-up.

The PSTN module is very easy to install – it is connected to the receiver via one single cable, containing all the required signals and power.

Control Software

All facilities in the TSE 4004 system can be software controlled via a PC. The control set-up can be provided by connecting the control PC directly to the receiver module or to the local PSTN module at the listening post.

Applications

- TSE 4004 is ideal for operations requiring:
- Single room monitoring
- Multi-location room monitoring
- Phone lines, spare wires and mains lines
- Local set-up
- Remote set-up
- Undercover “black-box” set-up

Features

- 4 active transmitter channels
- High audio quality
- Small size transmitters
- Audio scrambling
- Remote control of transmitters
- PSTN module for link of intercepted audio to remote listening post
- Current re-injection on phone lines for system security
- Small “black-box” receiver unit
- Control of software via PC
- Easy to install
- Easy to use



Technical Specifications

RX module	Number of channels	4
	Frequency range	110-240 kHz
	Sensitivity	10 dBuV / 20 dB SINAD
	Number of built-in tuners	2
	Modulation	FM
	Remote control transmitter	28 kHz, OOK
	Serial interface to PC / PSTN module	RS-232
	Power source	7-11 VAC or 10-15 VDC
	Dimension (HxWxD)	44x130x164 mm / 1.7x5.1x6.5 inches
Transmitters General data	Number of channels	4
	Frequency range	110-240 kHz
	Type of modulation	FM
	Audio scrambling	Frequency inversion
	Remote controllable	Yes
	Packing	Shrink tube, black
HWM specific data	Transmitted power	50 mVRMS into 100 \square
	Line voltage range	6-80 VDC
	Dimensions (HxWxD)	Approx. 7.5x32x20 mm / 0.3x1.3x0.8 inches
HCC specific data	Transmitted power	500 mVRMS into 2 \square
	Mains voltage range	85-265 VAC
	Dimensions (HxWxD)	Approx. 15x35x23 mm / 0.6x1.4x0.9 inches
PSTN module – Remote set-up	PSTN interface	Global compliant, SW controlled
	Number of PSTN lines	2
	Data mode	FSK / DTMF
	Tape control	VOX controlled, adjustable from PC SW
	Serial interface to PC / RX module	RS-232
	Dimension (HxWxD)	44x130x84 mm / 1.7x5.1x3.3 inches



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