

## **Description GSM Hybrid model RS-250**

### **General**

The GSM hybrid serves as the connection link between a GSM mobile phone and equipment used in the studio or OB vans for live reporting for radio or TV. The method of transmission is via the GSM network, which can be set-up in a matter of seconds anywhere in the world. This transmission method offers a digital 4-wire connection. The interfaces of the RS-250 series have been designed in such a way that they can be connected to many GSM mobile phone car kits.

### **RS-250d**

The RS-250d GSM hybrid is ideally suited for the studio or OB-van environment as it has line input and line output with line level. The normal use of a mobile telephone is still possible either using the mobile telephone itself or the car-kit. A switch on the front of the unit enables one to switch over from handsfree kit to line in-/output. If the RS-250 GSM hybrid has been installed beyond the reach of the reporter the functions can be initiated with the (optional) remote switch. This remote switch is customised. Depending on the telephone and the way the mobile telephone has been built in, normal telephone conversations can take place either using the receiver of the car-kit or hands free option of the car-kit. The RS-250 GSM hybrid is built in a 19" rack unit, 1 HE housing and available for a power supply of 12V DC or 230V AC. Other housings or power supplies are available upon request. (An external vehicle antenna can be connected to a plug.)

### **RS-250w**

The RS-250w GSM hybrid is a special designed smaller execution of the RS250d that can be built-in an OB van, particularly if space is a problem. It has line input and line output with studio levels. With an (optional) external remote switch one can switch over between the handsfree kit and the line in-/output.

This GSM hybrid has been built into a small unbreakable housing which has to be powered by an external 12V DC source.

### **RS-250**

The RS-250 GSM hybrid is identical to the RS-250d except that it also has connections for a microphone or headphones as well as LED level indicators.

Equipped with a microphone and headphones the reporter can do his live report to the radio station and at the same time receive the return programme channel or use it as a means of communication.



### **Operation RS-250d and RS-250w**

Connection is made using the mobile phone. By pressing the "UNIT ON" button the audio interface is switched over from the mobile phone to the 4-wire interface of the RS-250 and RS-250d device (not for RS-250w).

Line input is used to transmit recordings. In order to edit or record the received contributions, line output can be used. The internal limiter automatically adjusts the input signal to the required level of the mobile phone. The return signal (line out) can be adjusted using the trimm potentiometer on the front of the unit

### **Operation RS-250**

Connection is made using the mobile phone. By pressing the "UNIT ON" button the audio interface is switched over from the mobile phone to the 4-wire interface of the RS-250.

Line input is used to transmit recordings. The RS-250 can be used optionally for a spontaneous application or for a live report by switching on the microphone input with the switch on the front panel of the unit.

During the transmission of contributions one can listen in to what is being sent, using the headphone outputs. Possible instructions from the other side can be mixed (depending on the potentiometer position) with the signal to which one is listening.

In order to edit or record the received contributions, line output can be used. The same modulation can be heard on the headphone outputs. Instructions for the other side can be fed using the microphone input or the line input.

The internal limiter automatically adjusts the input signal to the required level of the mobile phone. This can be monitored on the "GSM" level indicator. The return signal (line out) can be adjusted using the trimm potentiometer on the front of the unit and can be monitored on the line-out level indicator.

The monitoring unit with both independent headphone outputs has 2 level potentiometers with which the user can adjust and mix the incoming and outgoing signal.

### **Connecting to a GSM mobile phone**

The RS-250 has a connection for the mobile phone as well as an additional car-kit system (hands free unit). If the interface has been de-activated by the switch on the front panel (not on the RS-250w) or the remote control or by switching off the power supply, then it is automatically switched over to the car-kit (hands free unit).

For many of the current mobile phones the manufacturer can supply connection diagrams.

The Nokia 6090 car kit however is used most often because of its high transmission power.

## List of Differences

|   | <b>RS-250</b>       | <b>RS-250d</b>      | <b>RS-250w</b>       |
|---|---------------------|---------------------|----------------------|
| Line input                                | 1x                  | 1x                  | 1x                   |
| Microphone output                         | 1x                  |                     |                      |
| Line output                               | 1x                  | 1x                  | 1x                   |
| Headphones output                         | 2x                  |                     |                      |
| Connection to GSM mobile phone            | x                   | X                   | x                    |
| Connection for car-kit and remote control | x                   | X                   | x                    |
| LED-level indicators                      | x                   |                     |                      |
| Housing                                   | 19" housing<br>1 HE | 19" housing<br>1 HE | Plastic<br>80x150x45 |
|   |                     |                     |                      |

## Technical Data

### General

|               |             |   |
|---------------|-------------|---|
| Connectors:   | inputs:     | 1 XLR-connectors for Line<br>1 XLR-connectors for microphone ( <i>only RS-250</i> ) |
|               | Headphone:  | 2 Cinch connectors 6,3 mm Stereo ( <i>only RS-250</i> )                             |
|               | Output:     | 1 XLR-connectors for Line   |
| Input level:  | Microphone: | -40 up to -60 dBu ( <i>only RS-250</i> )  |
|               | Line:       | +6 dBu  |
| Output level: | Line:       | +6 dBu  |
|               | Headphones: | max. +13 dBu to 300 Ω ( <i>only RS-250</i> )  |
| Inputs:       |             | Transformer symmetric free of ground  |
| Frequency:    |             | 250 to 3500 Hz (limited by telephone filter)  |

*Recommended microphones: All dynamic Microphones with Impedance of 200 Ω*

*Recommended headphones: All Types with Impedance between 60 and 2000 Ω*

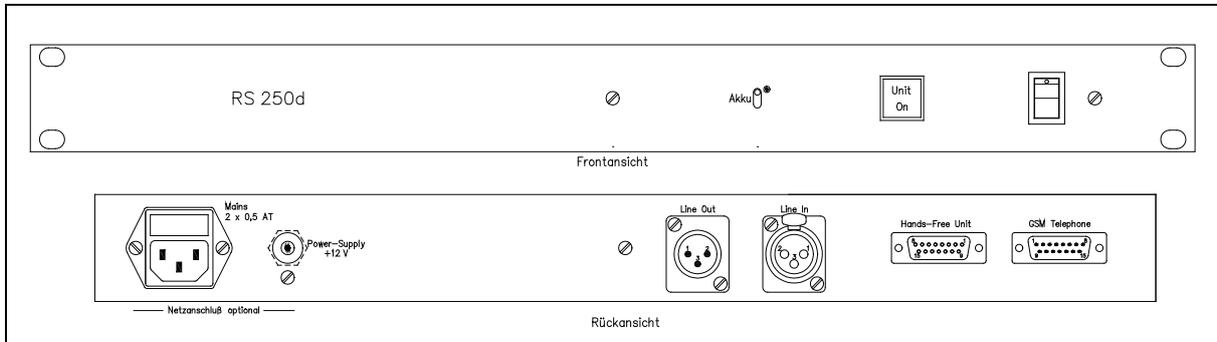
### RS-250, RS-250d

|                    |  |
|--------------------|--|
| Power supply:      | +12 Volt DC (optional 230V AC)                       |
| Power consumption: | ca. 100 mA   |
| Dimensions:        | 19" Housing, 1HE, Depth: 140 mm (without connectors) |
| Weight:            | ca. 1 kg (without telephone)                         |

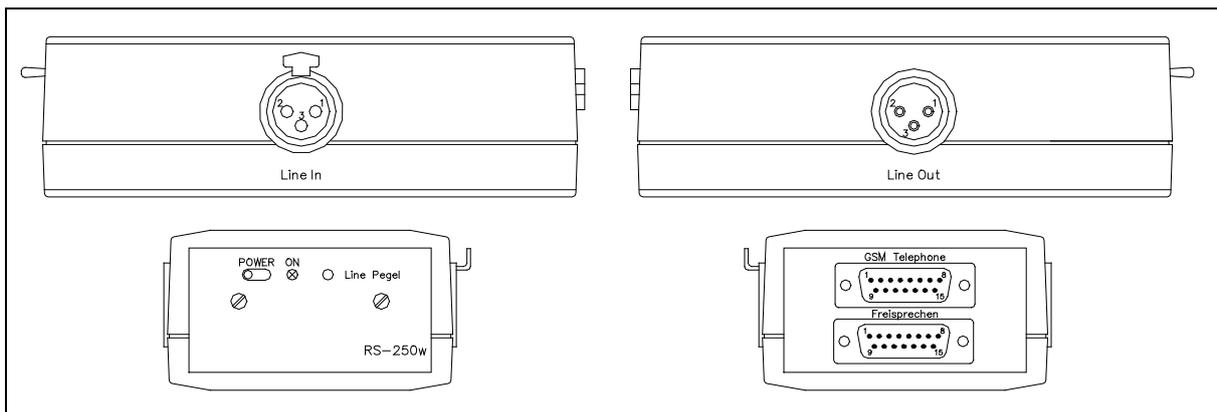
### RS-250w

|                    |   |
|--------------------|---|
| Power supply:      | 10V up to 16VDC                               |
| Power consumption: | ca. 40 mA at 12V                              |
| Dimensions:        | 80x150x45 mm (B x T x H) (without connectors) |
| Weight:            | ca. 1 kg (without telephone)                  |

**RS-250d**



**RS-250w**



**RS-250**

