1 Technical Description Lokal-100/6

1.1 Overview Front

① CD/DVD drive

② level indicator canal A + B

③ canal switch headphone outlet

④ connection for headphones

⑤ selector switch for signal inlet of the measuring boxes A and B

⑥ volume regulator for headphones

⑦ LED display for power supply

⑧ serial connection

⑨ signal reception of the measuring boxes

⑩ reset key

⑪ On/Off switch

⑫ multiple map reader

⑬ optional * additional interfaces (USB, serial, PS2)

** depending on configuration*

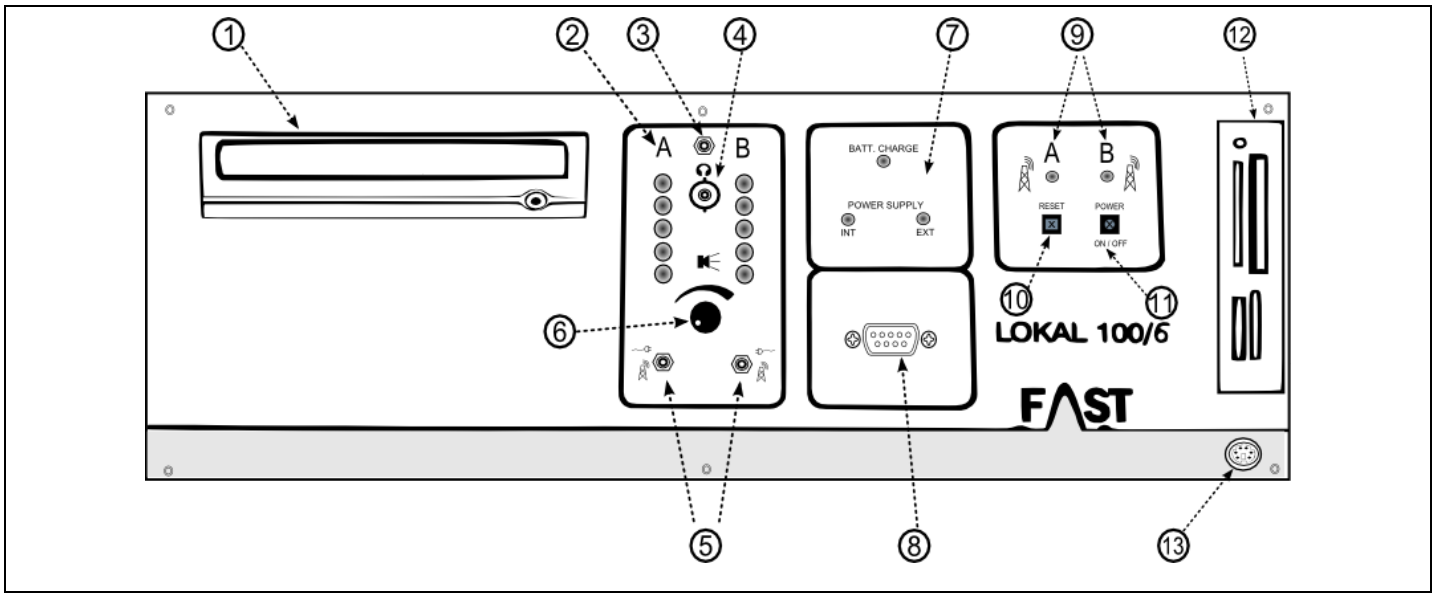

Illustration 1-1: Lokal 100/6, front view

1.2 Overview Rear

① antenna inlet (BNC)

② *optional * cable inlet (BNC)*

③ *optional * F.A.S.T service interface*

④ *optional * parallel port for printer connection*

⑤ *optional * serial interface*

⑥ fuse carrier

⑦ power supply inlet

⑧ optional * serial interfaces

⑨ VGA and PS2 connection

⑩ *optional * DVI and other USB connections*

** depending on configuration*

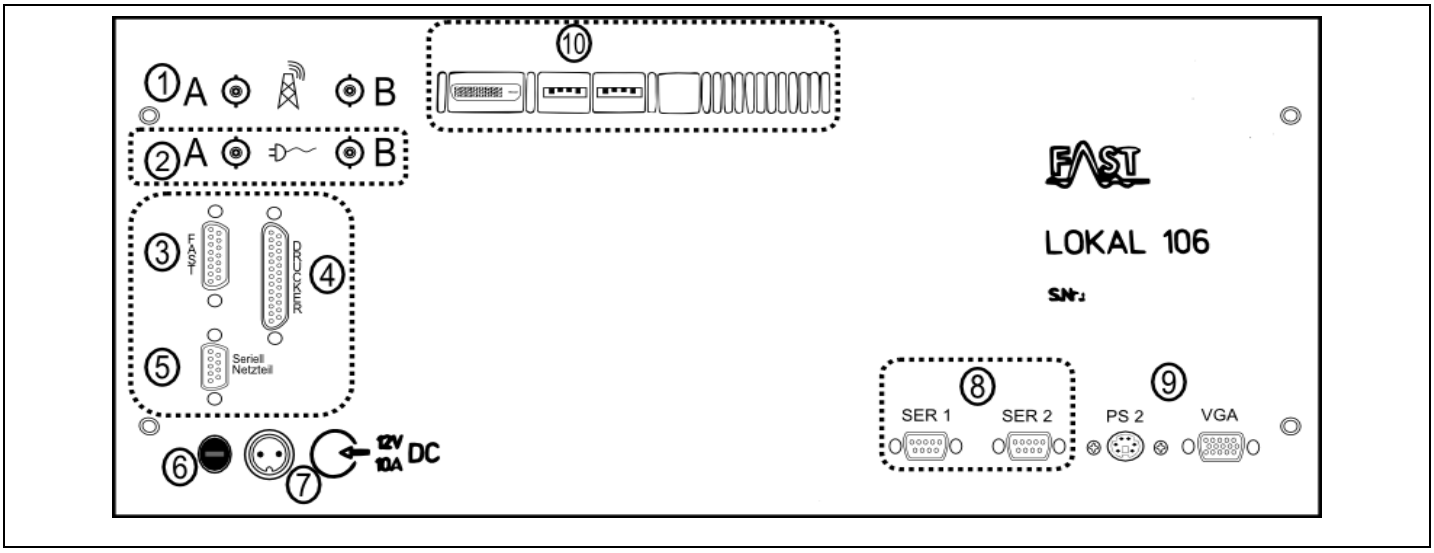

Illustration 1-2: Lokal 100/6, rear view

1.3 Scope of delivery

① 1 unit Lokal 100/6 correlator ② 2 units sensor with cable ③ 1 unit MB-3 charger for accumulators ④ 1 unit headphones with volume control ⑤ 1 unit adapter cable for headphones ⑥ 1 unit standard mouse / keyboard ⑦ 4 units radio antenna	⑧ 2 units MB-3 measuring box ***optional accessories*** ⑨ 1 unit collapsible keyboard with short-travel keys (*article no. 9010*) ⑩ 1 unit printer 12 volts (*article no. 9238*) ⑪ 1 unit antenna with magnet ⑫ 1 unit monitor, 19 inch, LCD TFT (*article no. 9242*)

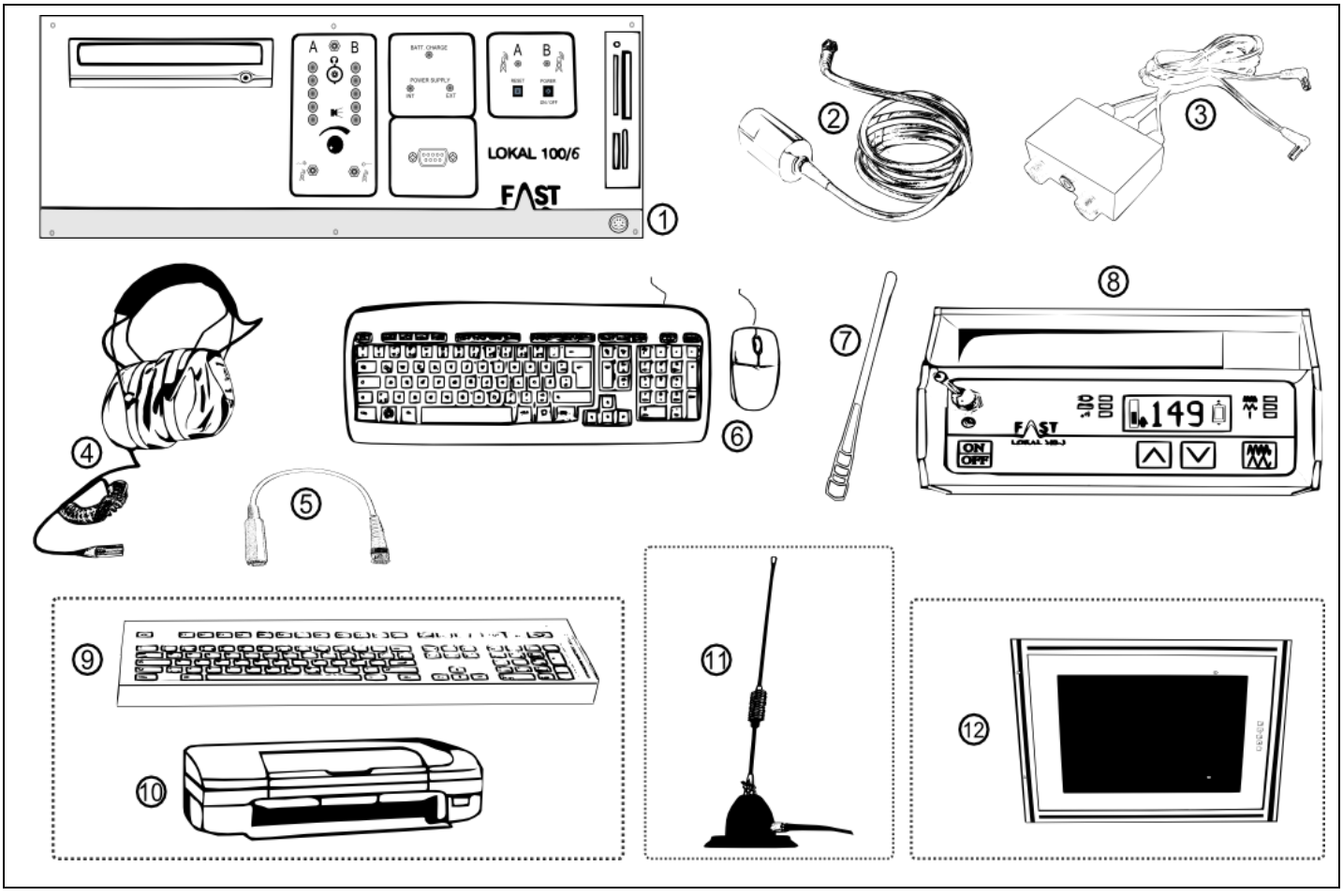

Illustration 1-3: scope of delivery

1.4 Description

The Lokal 100/6 correlator consists of a PC and a F.A.S.T correlator card, which is installed in a 19-inch industrial housing and which is intended for permanent installation, e.g. into a measuring van. By means of the correlator software used by the Lokal 100/6, the correlator card installed in the housing can be used to receive the signals transmitted by the two measuring boxes. For more detailed information on the connections and on the control elements as per Illustration 1-1 and Illustration 1-2, please see below. The connections shown in the illustrations are typical, and especially the interfaces as well as the peripheral connections applied may vary subject to the software and accessories applied.

1.4.1 Front view

The front (Illustration 1-1) of the Lokal 100/6 correlator hosts various control elements, information displays, interfaces, and peripheral devices. The interface for data transfer is a DVD drive (Illustration 1-1, point 1) and an inbuilt memory card reader (Illustration 1-1, point 12) which is capable of reading the card formats currently customary. In addition, a serial interface (Illustration 1-1, point 8) as well as additional optional interfaces (e.g. USB/PS2) for supplementary devices such as a mouse or a keyboard are installed on the front side (Illustration 1-1, point 13).

The control and display elements of the Lokal 100/6 correlator are described below. The Lokal 100/6 is activated by pressing the ON/OFF switch (Illustration 1-1, point 11). As soon as the switch has been pressed, a red LED integrated in the switch will be lit permanently thus indicating normal operation of the device. In case of a malfunction (e.g. a power supply-related problem), the LED starts flickering approximately twice a second. By pressing the RESET key (Illustration 1-1, point 10), the correlator can be reset or rebooted.

The LEDs marked with A and B (Illustration 1-1, point 9) above these keys indicate that the signals transmitted by the two measuring boxes A and B are being received. These LEDs (red) are lit permanently if the measuring boxes are switched on and the correlator receives the signal. If the LEDs are not lit, the correlator does not receive any data from the measuring boxes. This means that all possible sources of a malfunction (e.g. improper connection of the antennas, incorrect setting of the signal inlets, or de-activation of the measuring boxes) have to be checked first.

Above the signal display, to the left, the power supply indicator is located (Illustration 1-1, point 7) consisting of several LEDs. The LED positioned in the upper section indicates that the accumulator (if installed) is being charged. The two LEDs in the lower section indicate whether power is supplied internally or externally. As the Lokal 100/6 correlator is intended for permanent installation only and power is supplied through a power supply unit, the Lokal 100/6 is not equipped with an internal accumulator but has to be supplied with power through the power inlet located on the rear side (Illustration 1-2, point 7).

Therefore, the LEDs intended to indicate internal power supply (INT) and battery charging (BATT. CHARGE) are not activated. Solely the LED indicating external power supply is lit indicating that power is supplied through the power supply unit.

To the left of the voltage indicator, there are further control elements and displays. The correlator is equipped with a level indicator for each measuring box (Illustration 1-1, point 2), with the level indicator consisting of LEDs of various colours. The lowest set of LEDs is yellow, the three LEDs in the middle are green, and the upper LEDs are red. This level indicator shows the noise level of the leakage currently measured for both measuring boxes, left for box A, and right for box B. If the leakage-borne noise is too low, the yellow LEDs will be activated. If the leakage-borne noise is too loud, all LEDs including the red ones will be activated. Activated red LEDs indicate that the corresponding channel is overmodulated. The indicator can be used as a hint for the setting of the amplifier of the correlator software. The amplifier should be set so as to make the sound level of the leakage be indicated in the middle set of the LEDs (green).

Headphones can be connected through the BNC connection (Illustration 1-1, point 4) in order to acoustically indicate the leakage-borne noise acquired by the noise pick-ups of the measuring boxes A and B. With the select key für channel A and B (Illustration 1-1, point 3), the operator can switch between the signals received by the two measuring boxes. If the select key is switched to the middle position, the operator will not hear any noise. The control dial (Illustration 1-1, point 6) is applied to adjust the volume for the headphones connected.

The two switches below the volume control (Illustration 1-1, point 5) are used to select the inlet for the signals transmitted by the pick-ups. If the switches are set to the lowest position (towards the radio symbol), the selected source will be radio transmission and the BNC connections located on the rear side (Illustration 1-1, point 1), where the antennas are connected, will be used as signal inlets. If the switches are set to the upper position (towards the plug symbol), the connector sockets as shown in Illustration 1-1, point 2, are activated (if applicable). Here the pick-ups can be connected directly to the sockets through a cable.

1.4.2 Rear view

The rear side of the Lokal 100/6 hosts a number of connections and the interfaces of the hardware installed: the BNC connector sockets for the antennas, the socket for the power supply, and additional USB, PS2, and VGA or DVI connections (depending on model). If the Lokal 100/6 has been firmly installed, the connections and interfaces available may differ from the illustration and may be located on another side of the device.

In the upper left corner, the two BNC connector sockets (Illustration 1-2, point 1) for the antennas are located which are needed to receive the radio signals from measuring boxes A and B. Illustration 1-2, point 2, shows the BNC connector sockets where the pick-ups of the measuring boxes can be connected through a

cable. Please note that the switches for signal input on the front side (Illustration 1-1, point 5) need to be set correctly concerning the connection selected.

On the rear side of the device, there is also the socket for the power supply of the correlator (Illustration 1-2, point 7), which can be connected to the mains with a power supply unit (part of the delivery) and a safety switch to the left of the power supply socket links, with this safety switch being equipped with a fuse (12V/10A) (Illustration 1-2, point 6) as an overcurrent protective device.

Furthermore, the device is equipped with a VGA socket (Illustration 1-2, point 9) or, depending on the hardware applied and installed, a DVI interface (Illustration 1-2, point 10) to connect the correlator to a monitor. On the rear side, there is a PS2 interface (Illustration 1-2, point 9) and several USB interfaces (Illustration 1-2, point 10) respectively to connect a mouse or a keyboard to the correlator. These interfaces are not always located on the rear side but sometimes on the front side of the Lokal 100/6 correlator, depending on the installation situation.

In addition, further serial interfaces (Illustration 1-2, point 8) as well as a connection for a printer or for an F.A.S.T. internal service interface may be available, as shown in Illustration 1-2, point 3 to 5.

1.5 Accessories

An optional accessory as a substitute for the customary keyboard is the high-quality collapsible keyboard with short-travel keys (Illustration 1-4), which is dirt-resistant and thus easy to clean due to its flat surface (ar. No. 9010D). This collapsible keyboard can be attached to and used in combination with the Lokal 100/6 correlator. Please note that the Lokal 100/6 needs to be equipped with a PS2 interface in order to accept such collapsible keyboard.

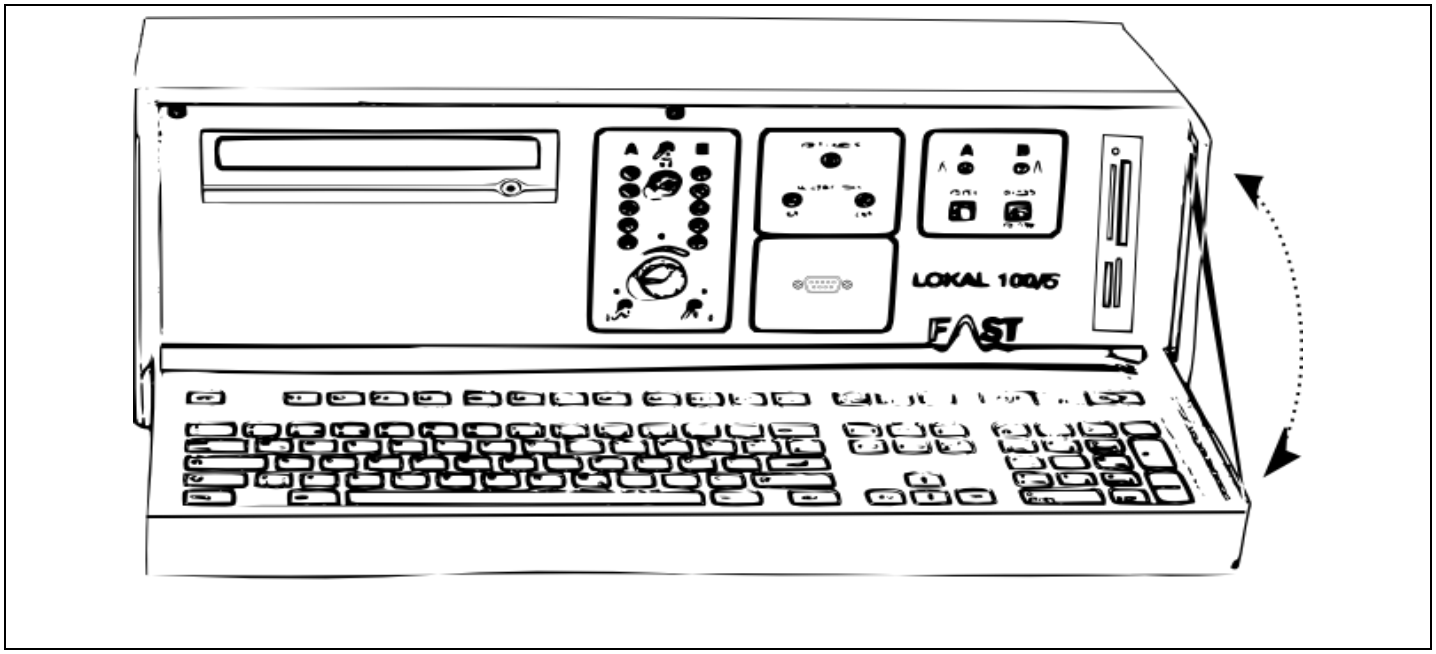

Illustration 1-4: collapsible keyboard, Lokal 100/6

1.6 Requirements for the software of the correlator

The following hardware features are necessary to run the software

- F.A.S.T. correlator card

  If the device is not equipped with a correlator card or if the correlator card is defective, the programme cannot be started.

- Pentium or compatible CPU with 1 GHz or higher
- 1 GB RAM
- Hard disc storage unit with 69.8 MB of available storage capacity
- CD/DVD drive
- VGA / SVGA graphics card featuring a minimum resolution of 800 x 600 pixels
- Mouse and keyboard

The installation of the correlator software requires the prior installation of any of the system softwares listed below, including the necessary Service Pack, on the F.A.S.T. correlator. If the software is installed on any other system software, the programme may refuse booting.

- Windows 2000 / Service Pack 4 --> 32Bit
- Windows XP / Service Pack 3 --> 32Bit