LOGIBIT 1200
MANUAL

)))))||||**Phonic Ear** ®

TABLE OF CONTENTS

1. FEATURES ON THE CONTROL PANEL
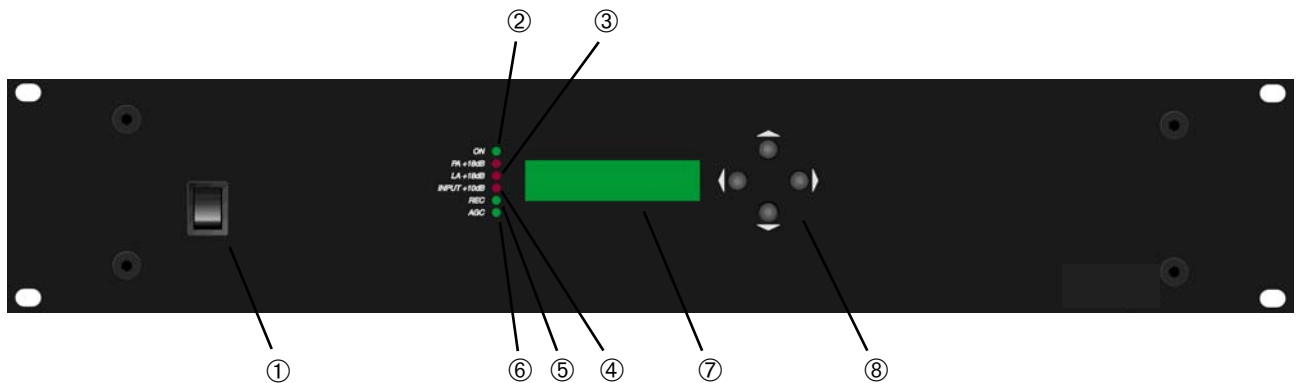
① **On/Off Switch:**   This switch switches the amplifier on and off.

② **On indicator:**   This green LED lights when the amplifier is on.

③ **LA +18 dB indicator:**   This red LED lights, when the signal level on the teleloop amplifier has reached maximum. With correct amplifier adjustment this LED should never light.

④ **INPUT +10 dB indicator:**   This red LED lights, when any one of the two to five +10 dB indicators on the back of the amplifier lights. With correct amplifier adjustment this LED should only blink when there are loud passages otherwise the level of the signal fed to the input of the amplifier is too high.

⑤ **REC indicator:**   This green LED lights, when REC function is chosen. The green LED is turned off, when the play function is chosen.

⑥ **AGC indicator:**   This green LED lights, when the AGC-circuit is active.

⑦ **Display**

⑧ **4 function keys:**   The LogiBit 1200 amplifier's 4 function keys are described in section 2.1 Function keys.

2. MENU STRUCTURE

2.1 FUNCTION KEYS
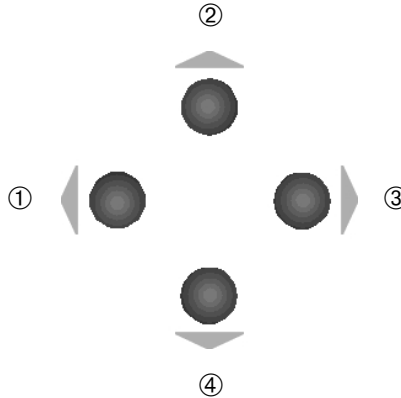
① **LEFT/UNDO:**   With this key you can move to the left in the menu structure. The key is also used to undo changes in a parameter, which has not already been saved.

② **UP/INCREASE:**   With this key you move upward in the menu structure. It can also be used to change/increase a parameter.

③ **RIGHT/SAVE:**   With this key you move to the right in the menu structure. The key is also used to save changes in a parameter.

④ **DOWN/DECREASE:**   With this key you move downward in the menu structure. The key is also used to change/decrease a parameter.

2.2 MENU POINTS

SERVICE MODE: The individual parameters in the amplifier can only be changed when the LogiBit amplifier is in SERVICE MODE. To do this you must switch off the amplifier at the on/off switch, then while holding function key ② up/increase and ④ down/decrease in at the same time, turn on the amplifier. Display will show "SERVICE" for a short period. If the LogiBit amplifier is not put in SERVICE MODE the only parameters that can be changed are RECORD and CONTRAST.
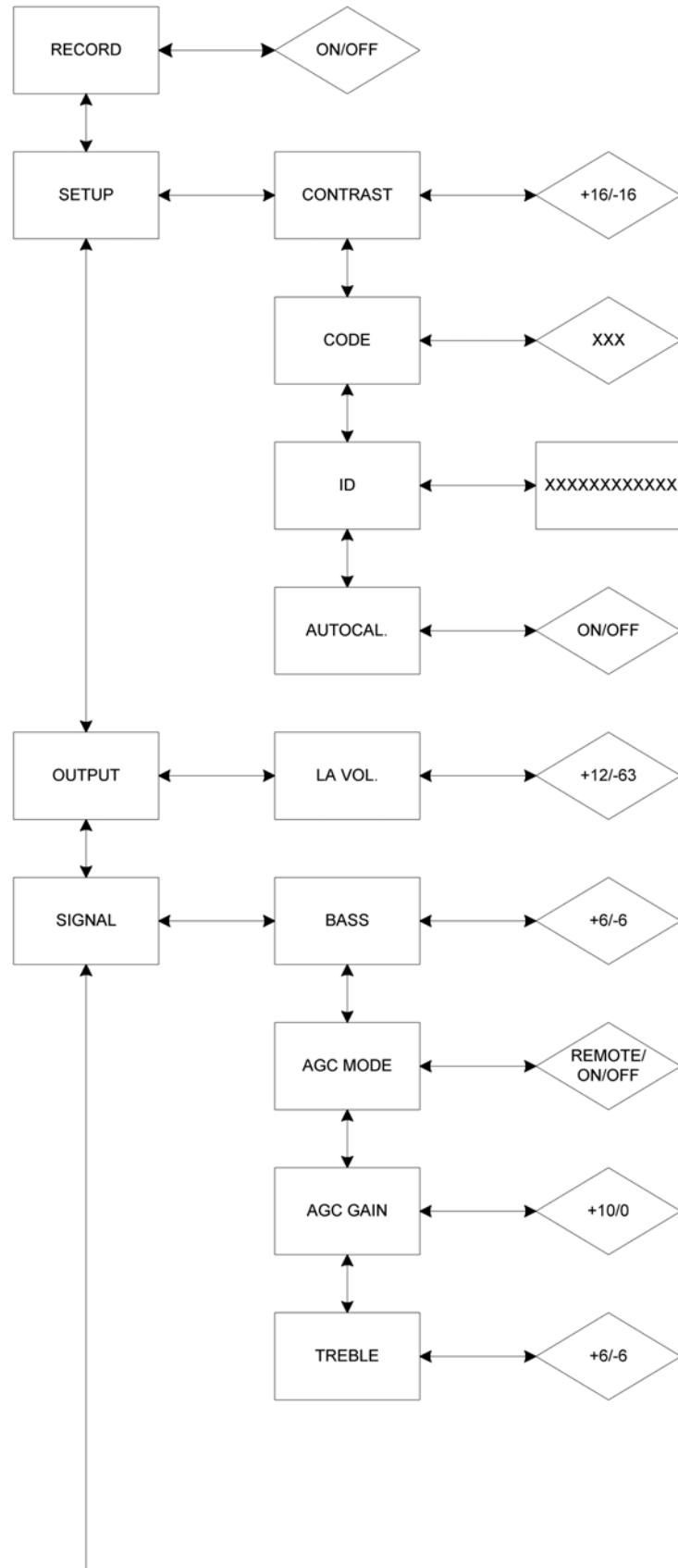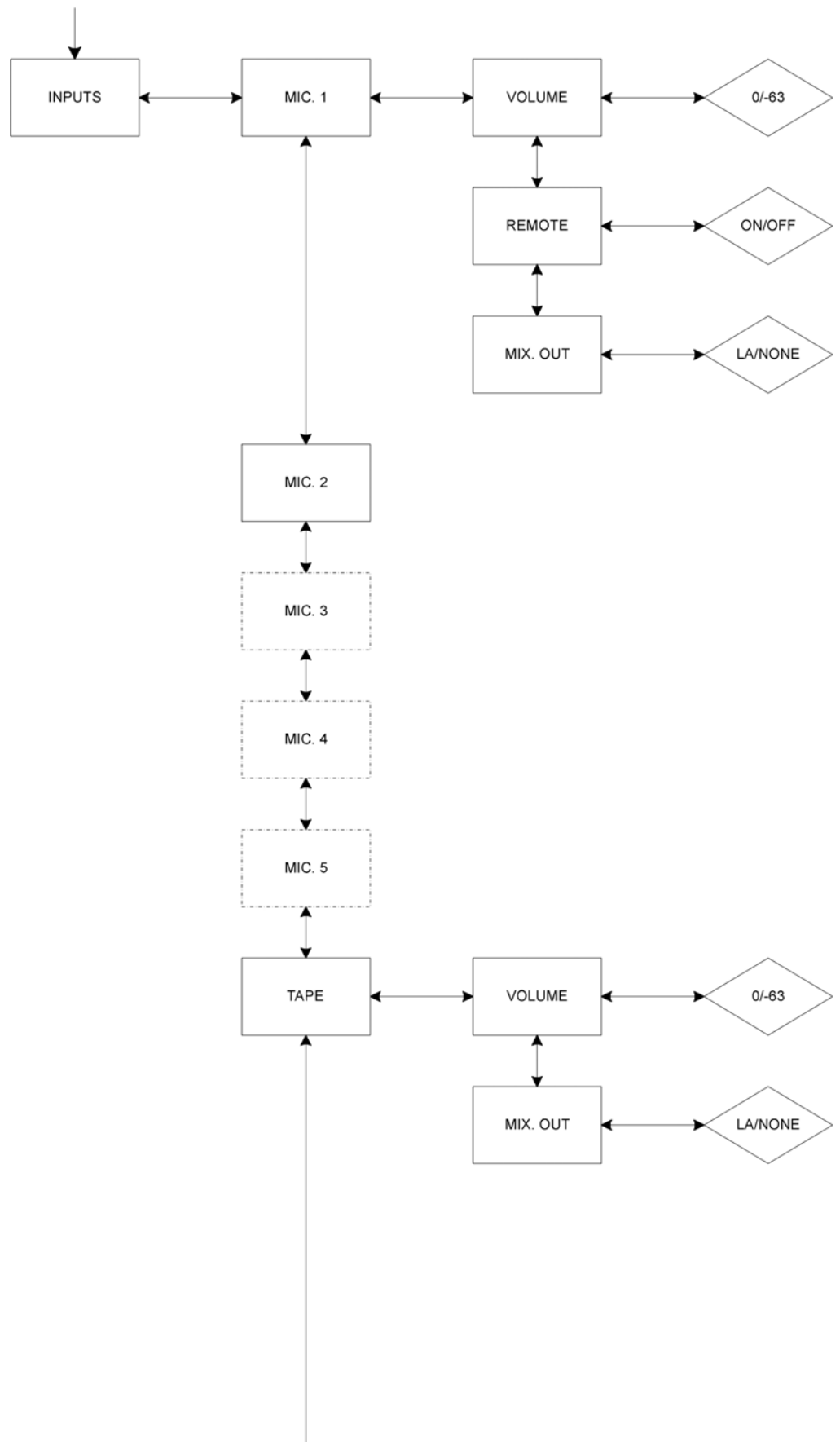
WARNING!   ***The above may only be carried out by authorized Phonicear personnel. It is strongly advised that no unauthorized person is allowed to put the amplifier in SERVICE MODE.***
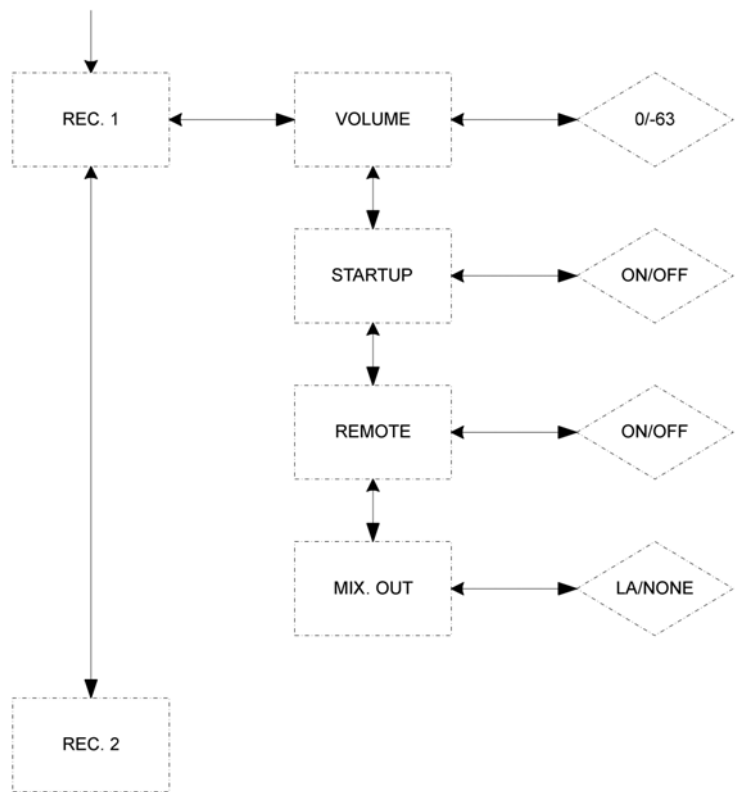
RECORD: Select "ON" when recording thereby switching off TAPE INPUT. This avoids feedback in situations where a tape recorder is connected to both TAPE INPUT and TAPE OUTPUT. In the "OFF" position both TAPE INPUT and TAPE OUTPUT are active. REC ON/OFF function can also be changed without the amplifier being in SERVICE MODE.

CONTRAST: Used for adjusting the contrast in the display. Contrast can also be adjusted, without the amplifier being in SERVICE MODE.

CODE: In connection with an upgrading of a LogiBit 1200 to a LogiBit 1260 it is necessary to type in a code (see also the next point ID). After the code has been typed in, the amplifier should be switched off for a short period to allow the upgrading to take effect.

ID: Before you can receive the code used in upgrading a LogiBit 1200 to a LogiBit 1260 it is necessary to give the ID-number of the amplifier to your Logia dealer.

AUTOCAL: In connection with a new installation, changes of the area size or changes in the dimensions of the teleloop cable, AUTOCAL shall be "ON" the first time the amplifier is turned on. In this position the amplifier calibrates with the teleloop cable. When the calibration is finished AUTOCAL should be in the "OFF" position. Thereby you avoid hearing on the teleloop the calibrating signals the amplifier uses when it is turned on. After the amplifier has completed its calibrating procedure for the first time, the current in the teleloop cable will automatically be set to 1 ampere. LA VOL will be automatically set to 0 dB.

LA VOL: Used to adjusting the current in the teleloop cable and thereby the strength of the magnetic field. After the amplifier has completed its calibrating procedure for the first time, the current in the teleloop cable will automatically be set to 1 ampere. LA VOL will be automatically set to 0 dB.

BASS: Select BASS to adjust the bass on the teleloop signal.

AGC MODE: Menu point REMOTE allows, that the AGC-circuit can be switched on and off via the 25 pin Sub-D port marked CONTROL on the back panel of the amplifier. Select "OFF" to switch off the AGC-circuit. Under normal operating conditions, select "ON", to activate the AGC-circuit.

AGC GAIN: Used to adjust the number of required dBs that the AGC-circuit should use to strengthen a weak signal. The AGC-circuit is able to reduce a powerful signal with up to 20 dBs.

TREBLE: Select TREBLE to adjust the treble on the teleloop signal.

MIC.1- 5:   Select this menu point to change the parameters for respectively microphone and line-in 1-5. Microphone and line-in 3-5 are not standard, but can be built in as an option.

VOLUME: Used for adjusting the signal level immediately before mixing point. As a starting point choose 0 dB. If the output signal is distorted, this parameter should be reduced.

REMOTE: REMOTE set to "ON" allows mute of line-in via the 25 pin Sub-D port marked CONTROL on the back panel of the amplifier.

MIX.OUT: This menu point determines, whether a signal connected to an input can be heard on the teleloop (LA) or not (NONE).

TAPE: Select TAPE to change the parameters for TAPE INPUT.

VOLUME: Used for adjusting the signal level immediately before mixing point. As a starting point choose 0 dB. If the output signal is distorted, this parameter should be reduced.

MIX.OUT: This menu point determines, whether a signal connected to an input can be heard on the teleloop (LA) or not (NONE).

REC.1 & 2:   Select this menu point to change the parameters for the wire less receiver modules. The wireless TOA receiver modules are not standard, but can be built into the amplifier as an option.

VOLUME: Used for adjusting the signal level immediately before mixing point. As a starting point choose 0 dB. If the output signal is distorted, this parameter should be reduced.

STARTUP: Select "ON" and the wireless TOA receiver modules are turned on, when the amplifier is turned on. Choose "OFF" and the wireless microphones are switched off when the amplifier is turned on.

REMOTE: REMOTE set to "ON" allows the wireless TOA receiver modules respectively switch on and off via the 25 pin Sub-D port marked CONTROL on the back panel of the amplifier.

MIX.OUT: This menu point determines, whether a signal connected to an input can be heard on the teleloop (LA) or not (NONE).

2.3 ILLUSTRATION OF MENU STRUCTURE

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┌──────────┐              ╱‾‾‾‾‾‾‾‾‾╲
│  RECORD  │◄────────────►│  ON/OFF  │
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     ▲
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│  SETUP   │◄─────►│ CONTRAST │◄─────►│  +16/-16 │
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     │             ┌──────────┐       ╱‾‾‾‾‾‾‾‾‾╲
     │             │   CODE   │◄─────►│   XXX    │
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     │                  │
     │                  ▼
     │             ┌──────────┐       ┌──────────────┐
     │             │    ID    │◄─────►│ XXXXXXXXXXXX  │
     │             └──────────┘       └──────────────┘
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     │             ┌──────────┐       ╱‾‾‾‾‾‾‾‾‾╲
     │             │ AUTOCAL. │◄─────►│  ON/OFF  │
     │             └──────────┘       ╲_____╱
     ▼
┌──────────┐       ┌──────────┐       ╱‾‾‾‾‾‾‾‾‾╲
│  OUTPUT  │◄─────►│ LA VOL.  │◄─────►│ +12/-63  │
└──────────┘       └──────────┘       ╲_____╱
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│  SIGNAL  │◄─────►│   BASS   │◄─────►│   +6/-6  │
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     │             ┌──────────┐       ╱‾‾‾‾‾‾‾‾‾╲
     │             │ AGC MODE │◄─────►│ REMOTE/  │
     │             └──────────┘       │  ON/OFF  │
     │                  ▲             ╲_____╱
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     │             ┌──────────┐       ╱‾‾‾‾‾‾‾‾‾╲
     │             │ AGC GAIN │◄─────►│  +10/0   │
     │             └──────────┘       ╲_____╱
     │                  ▲
     │                  │
     │                  ▼
     │             ┌──────────┐       ╱‾‾‾‾‾‾‾‾‾╲
     │             │  TREBLE  │◄─────►│   +6/-6  │
     │             └──────────┘       ╲_____╱
     │
     └──────────────────
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                    ┌──────────┐      ┌──────────┐      ┌──────────┐      ╱──────╲
                    │  INPUTS  │◄────►│  MIC. 1  │◄────►│  VOLUME  │◄────►│ 0/-63 │
                    └──────────┘      └──────────┘      └──────────┘      ╲──────╱
                                          ▲                  ▲
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                                          │             ┌──────────┐      ╱────────╲
                                          │             │  REMOTE  │◄────►│ ON/OFF │
                                          │             └──────────┘      ╲────────╱
                                          │                  ▲
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                                          │             ┌──────────┐      ╱─────────╲
                                          │             │ MIX. OUT │◄────►│ LA/NONE │
                                          │             └──────────┘      ╲─────────╱
                                          ▼
                                     ┌──────────┐
                                     │  MIC. 2  │
                                     └──────────┘
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                                          ▼
                                     ┌ ─ ─ ─ ─ ─┐
                                       MIC. 3
                                     └ ─ ─ ─ ─ ─┘
                                          ▲
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                                     ┌ ─ ─ ─ ─ ─┐
                                       MIC. 4
                                     └ ─ ─ ─ ─ ─┘
                                          ▲
                                          ▼
                                     ┌ ─ ─ ─ ─ ─┐
                                       MIC. 5
                                     └ ─ ─ ─ ─ ─┘
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                                     ┌──────────┐      ┌──────────┐      ╱──────╲
                                     │   TAPE   │◄────►│  VOLUME  │◄────►│ 0/-63 │
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                                          │            ┌──────────┐      ╱─────────╲
                                          │            │ MIX. OUT │◄────►│ LA/NONE │
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```

6

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            ┌ ─ ─ ─ ─ ┐        ┌ ─ ─ ─ ─ ┐        ⟋‾‾‾‾⟍
            |  REC. 1 | ◄────► |  VOLUME | ◄────► ⟨ 0/-63 ⟩
            └ ─ ─ ─ ─ ┘        └ ─ ─ ─ ─ ┘        ⟍____⟋
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                 |             ┌ ─ ─ ─ ─ ┐        ⟋‾‾‾‾⟍
                 |             | STARTUP | ──────► ⟨ ON/OFF ⟩
                 |             └ ─ ─ ─ ─ ┘        ⟍____⟋
                 |                  ▲
                 |                  ▼
                 |             ┌ ─ ─ ─ ─ ┐        ⟋‾‾‾‾⟍
                 |             | REMOTE  | ──────► ⟨ ON/OFF ⟩
                 |             └ ─ ─ ─ ─ ┘        ⟍____⟋
                 |                  ▲
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                 |             ┌ ─ ─ ─ ─ ┐        ⟋‾‾‾‾⟍
                 |             | MIX. OUT| ──────► ⟨ LA/NONE ⟩
                 |             └ ─ ─ ─ ─ ┘        ⟍____⟋
                 ▼
            ┌ ─ ─ ─ ─ ┐
            |  REC. 2 |
            └ ─ ─ ─ ─ ┘
```

7

3. FEATURES ON THE BACK PANEL
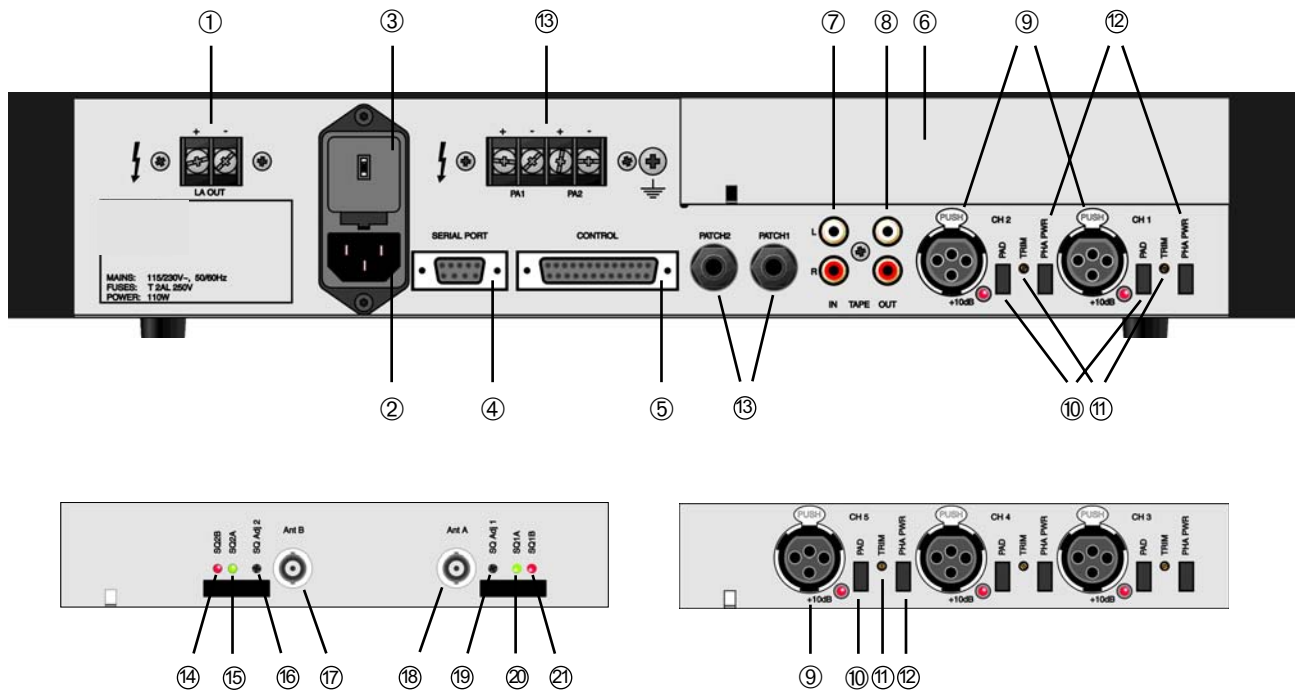
3.1 GENERAL

① **LA OUT:**

The teleloop cable is connected here. You should be aware of the demands made regarding the dimensions of the teleloop cable. These demands are described in section 7.1 Technical data. Read safety information in section 4. Safety information.

② **POWER SOCKET:**

The three pin power cord is plugged in here.
WARNING: Do not try to bypass or remove the earth, or you run the risk of getting an electric shock.

③ **FUSE COMPARTMENT:**

This contains the AC fuses. The fuse compartment makes it possible to choose between 230 volt AC or 115 volt AC.
NB! See AC fuses in section 3.4 Fuses and 115/230 volt AC exchanger. Changes may only be carried out by qualified personnel.

④ **SERIAL PORT:**

This nine pin Sub-D (female) port makes it possible to change the parameters via Windows® 95 PC Control Software (OPTION). See also section 3.6 Serial port.

⑤ **CONTROL:**

This 25 pin Sub-D (female) port makes it possible to remote control the LogiBit amplifier via external contacts and an external potentiometer. See also section 3.5 Control port.

⑥ **OPTIONS:**   Here it is possible to attach a module including 3 microphone-/line-inputs, a module for two TOA WTU 860 diversity receivers (37 MHz) or two TOA WTU 4800 diversity receivers (800 MHz). See installation of options in section 3.2 Options.

⑦ **TAPE IN:**   The two phono connectors make it possible to connect an external unbalanced line signal.

⑧ **TAPE OUT:**   TAPE OUT is two separate phono connectors L and R with an unbalanced line signal similar to the signal from the teleloop output.

⑨ **CH 1 & 2:**   CH 1 & 2 are two electronically balanced XLR line or micro-phone connections, that make it possible to connect external balanced signals. The XLR connector is connected by pin 2 high(+), pin 3 low(-), and pin 1 ground (GND).

⑩ **PAD:**   Press the PAD switch in to reduce sensitivity by 30 dB, so that the signal is a standard line input. Press the PAD switch out and CH 1 & 2 are standard microphone inputs.

⑪ **TRIM:**   TRIM control compensates for the input signal strength on CH 1 & 2. The trim potentiometer is adjusted, so that the +10 dB does not light constantly. The light should only blink during loud passages otherwise the signal is too high.

⑫ **PHA PWR:**   When this switch is active, it gives a +15 volt Phantom Power to input CH 1 & 2. **NB!** Only use Phantom Power for microphones that requires it, otherwise there is a risk that the equipment can be damaged.

⑬   These features are not active in the LogiBit 1200. They are only active in the LogiBit 1260.

⑭ **SQ2B:**   The red diode shows, when receiver 2 uses antenna B.

⑮ **SQ2A:**   The green diode shows, when receiver 2 uses antenna A.

⑯ **SQ Adj 2:**   This is a trim control, used to adjust the squelch on receiver 2. See also section 3.2 Options under Squelch.

⑰ **Ant B:**   The antenna port is used by both receiver 1 and 2. See also section 3.2 Options under Installation of external antenna.

⑱ **Ant A:**   The antenna port is used by both receiver 1 and 2. See also section 3.2 Options under Installation of external antenna.

⑲ **SQ Adj 1:**   This is a trim control, used to adjust the squelch on receiver 1. See also section 3.2 Options under Squelch.

⑳ **SQ1A:**   The green diode shows, when receiver 1 uses antenna A.

㉑ **SQ1B:**   The red diode shows, when receiver 1 uses antenna B.

3.2 OPTIONS

WARNING!   Before starting any of the following instructions the power cord
                                        must be removed from the main power supply socket and the
   installations should only be undertaken by qualified personnel.

Removing the   Remove the 3 screws on the top of the amplifier. Place the tip of
blank panel: a screwdriver in the hole in the panel and pull downwards
                                        carefully. The panel can then be pulled out (see figure below).

Installation of   Remove the blank panel as shown above. Install the WTU tuner
WTU module: module as shown below.
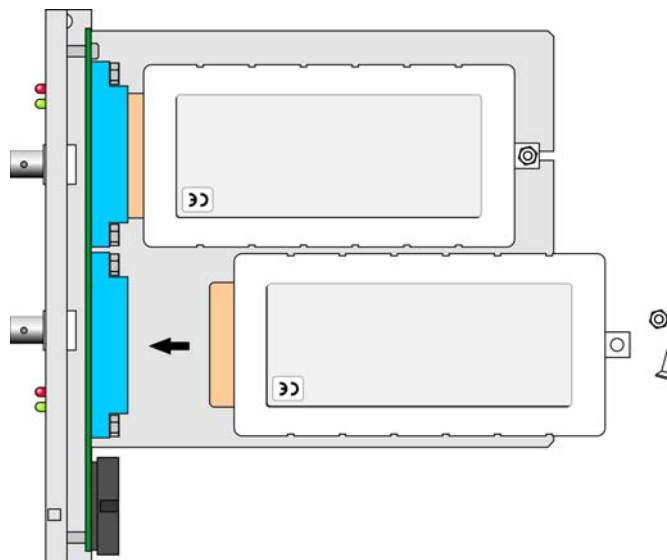
Install thereafter the console in the LogiBit amplifier. Make sure that the connections on the console and the amplifier fit into each other. Finally screw in the 3 screws in the top panel of the amplifier.

Installation of aerials on the WTU console:

Assemble the two aerials (YW570 75 Ohm), and install the BNC aerial sockets on the console. The aerials should be at an angle of 90 degrees from each other to give maximum coverage. The 2 aerials cover both receiver 1(REC1) and receiver 2 (REC2).

Installation of external aerials:

When installing external aerials (YW570 75 Ohm) with cable length of up to 30 meters, the cable should be RG-59 type and have an impedance of 75 Ohm. Cables longer than 30 meters should be type RG-11. The aerial should be mounted high and free on the wall. The aerial, cable or receiver should not be placed near high frequency noise generating equipment, for example, fluorescent lights or computers. Aerials should be at least 8 meters from each other if installed in the same room to give the best possible coverage. There should be a minimum of 3 meters between an external aerial and a receiver.

Squelch:

The squelch on receiver 1(REC1) and 2 (REC2) can be adjusted with a small screwdriver on the trim control. Turn the trim control fully to the left and the receiver is least sensitive, i.e. it requires high levels of noise to activate the receiver. Turn the trim control fully to the right and the receiver is most sensitive, i.e. it only requires low levels of noise to activate the receiver.

Installing 3 extra microphone/line inputs:

Remove the blank panel as described in point 2 (Removing the blank panel) in section 3.2. Install the console in the LogiBit amplifier as described in point 3 (Installation of WTU module) in section 3.2. Make sure that the connections from the console and the amplifier fit in each other. Finally screw in the 3 screws in the top panel of the amplifier.

3.3 INSTALLATION OF FRONT TO 19" RACK:

Remove all 4 screws from the front of the amplifier. The existing front can then be removed. The new front can now be installed using the 4 original screws.

3.4 FUSES AND 115/230 VOLT AC EXCHANGER:

The fuse compartment can be opened by placing a screwdriver under the fuse compartment and pressing the screwdriver down carefully. Use a 4 AT fuse for 115 volts and a 2 AT for 230 volts. If the equipment is connected to 115 volts turn the voltage exchanger in the fuse compartment to show 115. Likewise at 230 volts turn the exchanger to show 230. Then reinsert the fuse compartment.
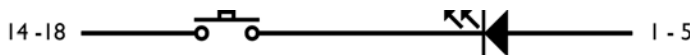
3.5 CONTROL PORT:
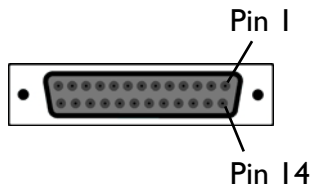
Pin 1

Pin 14

Control port connections:

Microphone and line-in 1-5 are switched on, when the external contacts are connected.
Line-in 1 is connected from pin 14 to pin 1.
Line-in 2 is connected from pin 15 to pin 2.
Line-in 3 is connected from pin 16 to pin 3.
Line-in 4 is connected from pin 17 to pin 4.
Line-in 5 is connected from pin 18 to pin 5.

14 -18 ———————○▭○——————◥◣◂|◂——— 1 - 5

Toggle wireless microphone 1 & 2:

When the start-up in menu is "ON", the wireless microphones are on, when the amplifier is switched on. When start-up in menu is "OFF", the wireless are off, when the amplifier is switched on.
Contact to microphone 1 is connected from pin 19 to pin 6.
Contact to microphone 2 is connected from pin 20 to pin 7.

19, 20 ———————○▭○————————————— 6, 7
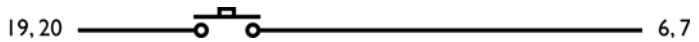
When the contact is activated:
If the wireless microphone is switched on when the contact is activated, the microphone will switch off.
If the wireless microphone is switched off when the contact is activated, the microphone will switch on.

Wireless microphones 1 & 2 diodes:

The diodes indicate, whether the signal from the wireless microphones can be heard on the teleloop output. If the diodes light, the signal can be heard. If the diodes do not light, the signal can not be heard.
Diode for wireless microphone 1 is connected from pin 24 to pin 12. Diode for wireless microphone 2 is connected from pin 21 to pin 8.

21, 24 ————〜〜〜——◥◣◂|◂———— 8, 12
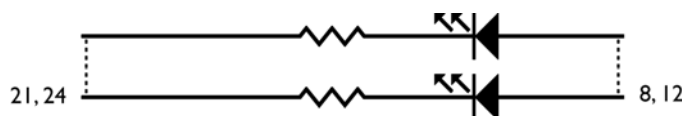
Resistance value is 1.2 kΩ. If more diodes are connected to the individual wireless microphones, they should be parallel connected with the first diode on the amplifier's control port.
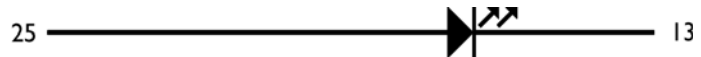
AGC remote: When the external contact is activated and REMOTE in the menu is "ON", AGC is switched off and the AGC diode is turned off. The contact is connected from pin 22 to pin 9.
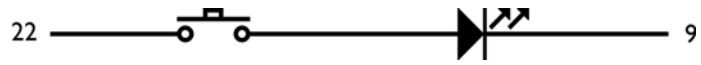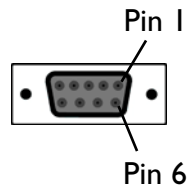
Power led on: The diode lights when the amplifier is turned on. The diode is connected from pin 25 to pin 13.
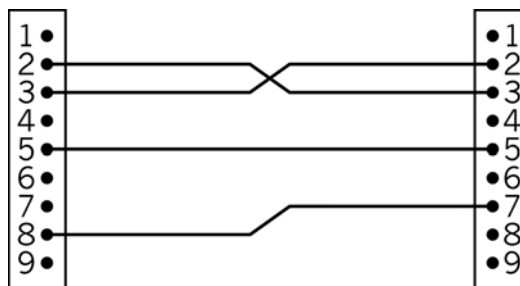
3.6 SERIAL PORT

Pin 1

Pin 6

Serial plug connections: Pin 1, 4, 6, 7 and 9 are not used.
Pin 2 receives data, input.
Pin 3 transmits data, output.
Pin 5 is ground.
Pin 8 programming pin to upgrading software.
The cable on pin 8 should only be plugged in when upgrading software, otherwise all software is lost. See the cable connections below.

4. SAFETY INFORMATION

WARNING:

During normal use of the amplifier there is up to 100 volts on the teleloop LA OUT on the back of the amplifier. To avoid electric shock, do not open the unit.

WARNING:

To reduce the danger for electric shock, the unit should not be exposed to rain or moisture.

CAREFUL:

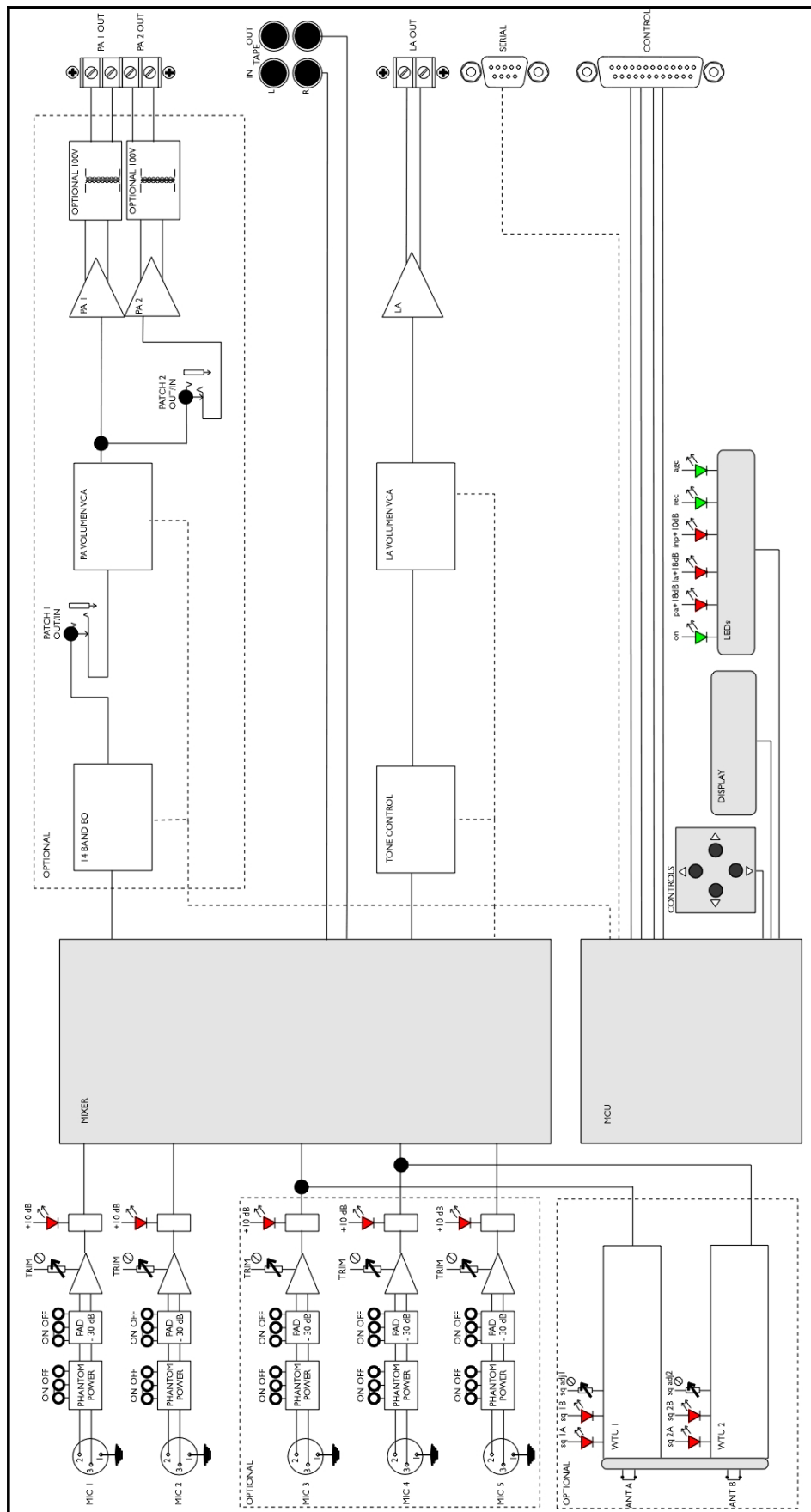This terminal is used only as a common ground of the units to avoid unwanted noise between the units.

The amplifier should not be covered. There should be free air circulation during use. Minimum distance to the unit should be 15 cm over, 2 cm under, and 5 cm to the ventilation grills on the side of the amplifier.

5. APPROVAL

CE approved:

The amplifier is CE approved in conformity with EMC and LVD directives.

6. BLOCK DIAGRAM

7. SPECIFICATIONS

7.1 TECHNICAL DATA

Band width: 100 Hz - 5 kHz

Distortion: <1.0%

Cross talk: < 60 dB

Signal-noise ratio: > 64 dB

AGC:

         Long time average:

                 Attack time: 1-2 sec.

                 Release time: 10-15 sec.

                 Maximum amplification: 12 dB

                 Maximum attenuation: 20 dB

         Limitter:

                 Attack time: 1.5 ms (typ.)

                 Release time: 120 ms (typ.)

                 Attack level: +12 dB

Sensitivity:

         Microphone in: 1.8 kohm/-64 dBu (0,5 mV)

         Line in: 2.5 kohm/-34 dBu (15 mV)

         Tape input: 47 kohm/-10 dBu (150 mV)

Tone control:

         Bass: +/- 6 dB

         Treble: +/- 6 dB

Output level:

         Tape output: 600 ohm/ -14 dBu (150 mV)

Power consumption:

         Average load: 140 W

         Maximum load: 330 W

Teleloop cable:

         0-100 m^2:   1 vinding 0.75$^{\square}$/20 AWG

         100-150 m^2:   1 vinding 1.5$^{\square}$/16 AWG

         150-600 m^2:   1 vinding 2.5$^{\square}$/14 AWG

         600-1200 m^2:   1 vinding 5$^{\square}$/12 AWG

         The impedance of the loop wire should be minimum 0.5Ω.

Cover area: Up to 1200 m^2

                                                (with reference to NSH

                                                Requirement specification for

                                                induction loop amplifiers, 2[nd]

                                                edition 29.10.1999)

Dimensions:

	Height:	
	without 19" front plate:	82 mm/3.23"
	with 19" front plate:	88.9 mm/3.5"
	Width:	
	without 19" front plate:	430 mm/17"
	with 19" front plate:	483 mm/19"
	Depth:	270 mm/10.7"

Weight:

Basic model:	9.5 kg
3 x balanced input module:	0.25 kg
2 x WTU module:	0.50 kg

Colour: Black

7.2 SPECIAL FUNCTIONS

· 2 electronically balanced microphone or line-inputs
· 30 dB pad control and 40 dB trim function for each microphone and line-input
· +10 dB peak LED for each microphone and line-input
· +15 volt phantom power option for each microphone input
· Bass and treble adjustment
· Manual mute of selected input via keys on front panel
· Remote mute of selected input via contact closures
· Tape input and output
· Selectable operating voltage 115/230V

7.3 OPTIONS

There is the possibility to build-in the following:

· **PA module:**
3 x 30W or 1 x 50W selectable (8Ω)
14 band equalizer
2 patch jack
2 x 100V output transformers

· **Wireless modules:**
2 x TOA WTU 860 diversity receivers (37 MHz)
2 x TOA WTU 4800 diversity receivers (800 MHz)

· **Microphone/line module:**
3 electronically balanced microphone or line-inputs.
Pad control and trimmer function for each microphone and line-input.
Peak LED for each microphone and line-input.

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