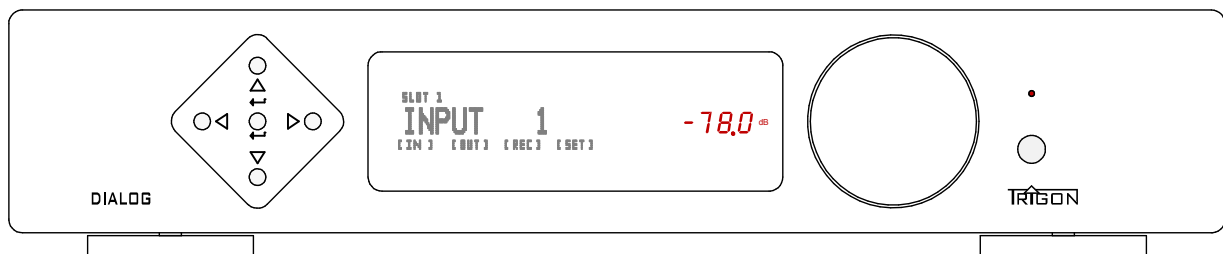




## OWNER'S MANUAL

PREAMPLIFIER

DIALOG



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# 1. PREFACE

Dear Customer,

Thank you for choosing a DIALOG preamplifier. This product is manufactured with care under strict quality control and is a perfect example of state-of-the-art precision technology. Even if you are familiar with hi-fi equipment, please take a moment to study these instructions carefully and follow the instructions contained therein. Keep this manual for future reference, it is intended as a tool to help you make the best use of your new preamplifier.

Enjoy your new preamplifier!

Best wishes from your TRIGON - team.

## 2. GENERAL DESCRIPTION

The DIALOG is a FULLY modular pre-amplifier. This principle allows us to continually stay at the forefront of new technology, without having to replace the entire unit. In addition this offers you the opportunity to make your preamplifier fit your specific requests. There are two basic types of modules: input modules and output modules. FOR basic operation you need at least one input and one output module. As its name suggests, input modules are linked to the source devices. These modules select and process the source signals before they are forwarded to the output module(s).

As an example, a phono input module has the task to amplify the very small signal coming from the turntable and at the same time re-equalize it according to the RIAA specification. Only then, the signal has the required level and frequency response to be forwarded to the next stage, i.e. the output module to be subsequently sent to the power amplifier to drive your loudspeakers. In short, the various input modules normalize input signals to have a similar and usable structure so that they can be processed further. Output modules in turn prepare the signal to be sent to the power amplifier(s) be further amplified to drive the speakers, or depending on the type of output module, to a recording device. In addition, depending on the type of output module, this is where the playback volume is controlled. The currently available selection of modules includes: Phono, single-ended and balanced analog line input and a digital module with optical and co-axial S/PDIF and USB inputs. Output modules include a balanced and a single-ended module which to sets of configurable line outputs.

The control logic and power supply for individual modules is provided by the base unit. The base unit is the heart and the control center of DIALOG. A microprocessor manages and controls all modules and the system automatically detects each module.

A large portion of the R&D has gone into this audio control center. Today's audio devices usually include a small computer for ease of use. Remote control is a

standard feature and a clearly legible display makes it possible to explore all the possibilities of the unit. Without a micro-computer all this would be impossible.

From time to time it may be necessary to update the base unit's software. For this purpose, a USB socket (19) is located on the back of the unit. This software is provided free of charge and available for download on our website (more on that later). Software updates will be necessary whenever a newly developed module, that did not exist at the time of purchase of your DIALOG is to be used. The currently loaded software version is displayed in the info menu of DIALOG. On our website you can find the latest software version, and determine whether an update is needed.

The DIALOG's chassis is mostly made of solid aluminum. To minimize microphonics, a mix of materials such as steel, aluminum and wood (MDF) is used in certain areas. The top cover, for example, consists of a sandwich of steel and aluminum and is acoustically "dead" in the critical frequency range. The feet use a diaphragm spring principle and decouple the DIALOG effectively from the surface on which it rests.

The outboard main PSU contains separate supplies for audio electronics and control electronics. In addition to this, another analog power supply used exclusively for the audio circuitry is connected downstream in the base unit to avoid any potential contamination of audio signals.

The **TRIGON DIRECTOR** system remote control operates the main functions and features of the preamplifier.

## 2.1 Safety

**TRIGON ELEKTRONIK GMBH** assumes no liability for any damage caused by improper handling, or failure to follow safety instructions.

Amplifiers must not be installed in close proximity to heat sources such as radiators, stoves, high power light sources, open flames, etc... and should not be exposed to severe shocks or vibrations.

Do not connect any electronic device to AC mains immediately after transport from the cold into a warm environment. Condensation may occur and cause damage to the device. Please wait until the unit has reached room temperature.

The amplifier should not be exposed to direct sunlight.

Make sure to install the unit with enough space for proper ventilation.

Never operate the equipment without the protective housing cover. Before opening the unit remove the AC plug from the socket.

Never attempt to bypass the fuse. Please replace a blown fuse only with a fuse of the same type and value.

No user serviceable parts inside. All maintenance or repair must be performed by authorized and specially trained personnel only. Tampering and damage caused by improper use or unauthorized intervention will void warranty.

Please turn amplifier off before connecting cables and/or other components.

The mains voltage must be between 100V and 240V AC.

Use only attachments and accessories specified by the manufacturer and intended for this purpose.

To clean the cabinet, use only a damp cloth if possible. Do not use corrosive or abrasive cleaning fluids. Unplug the unit before cleaning. Be careful not to accidentally damage or loosen any wiring when cleaning. Check all connections for proper fit before re-connecting the DIALOG to the grid.

**WARNING!** Always make sure that no liquids enter the interior of the device!

## **2.2 Setup**

After unpacking, first check the equipment for shipping damage. If you notice any damage, please immediately contact your dealer. Then check the contents of two boxes to be complete.

You should see, besides the DIALOG:

- one network cable TRIGON VOLT -
- one DIALOG instruction manual -
- one warranty registration form -
- one module removal tool -
- one DIALOG main PSU (in separate box)

The preamplifier should be installed level and in a dry location. Always ensure good ventilation. Please be aware that strong magnetic fields, such as caused by halogen or fluorescent light transformers can cause hum – it is recommended to keep a minimum distance of 1m (3'). Avoid direct sunlight and proximity to heat sources.

## **2.3 Warranty and Service**

By choosing the DIALOG preamplifier, you have purchased a high quality and technologically advanced product. In order to meet TRIGON's requirements, every product must undergo numerous quality tests in every stage of production and a rigorous outgoing inspection. Furthermore, TRIGON ELECTRONICS GmbH offers a limited 3-year warranty on all products. This warranty covers the repair or

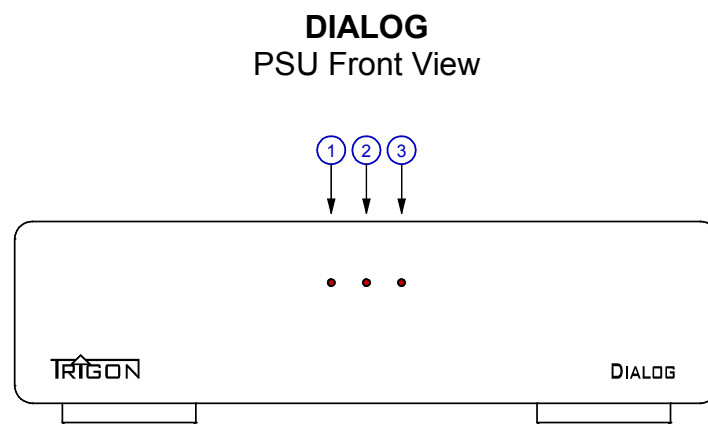
replacement of defective components. Warranty repair is usually done at the factory. Further claims are excluded.

The warranty excludes all damage caused by improper installation, improper operation or resulting from repairs by unauthorized dealers and/or individuals. Furthermore, this warranty does not cover units with obliterated or missing serial numbers. Likewise, shipping damage or damage caused by accidents are not covered under warranty.

Please make sure to complete the included warranty card. The 3-year warranty eriod starts from the date of delivery by the dealer. Keep the warranty card and proof of purchase.

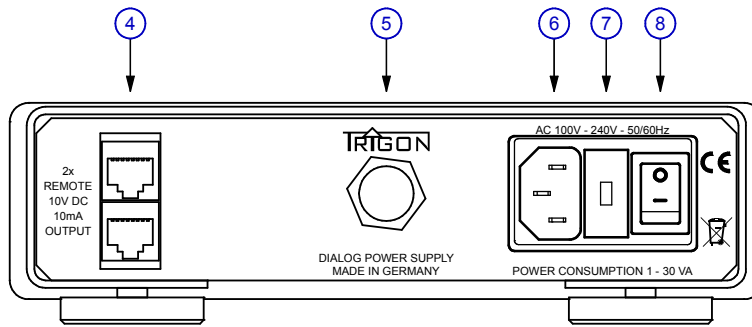
### 3. Before You Begin

After unpacking the preamp and power supply, both components should be allowed warm up to ambient temperature. Especially during the cold season humidity may form inside a component as it is moved from the cold to a warm environment.



Once the devices are acclimatized, we recommend that you first get acquainted with your new DIALOG preamplifier. The first step will be to connect the outboard power supply's captive low-voltage cable (5) to the DC input jack (20) on the back of the DIALOG's main chassis. Then plug the included TRIGON VOLT power cord to the power input socket (6) on the power supply and the AC plug to the mains. Now turn on the power supply with the switch (8) on the back of the PSU.

**DIALOG**  
PSU Rear View



The DIALOG is now in standby mode, and the center LED (2) on the front panel of the power supply will be lit dimly. To power the DIALOG on completely, press the on-off button (18) on the front of DIALOG. All three LEDs on the front panel of the PSU will light up and the power indicator LED on the main chassis (17) flashes while a few relay click softly. Once the front panel display turns on, the DIALOG is ready.

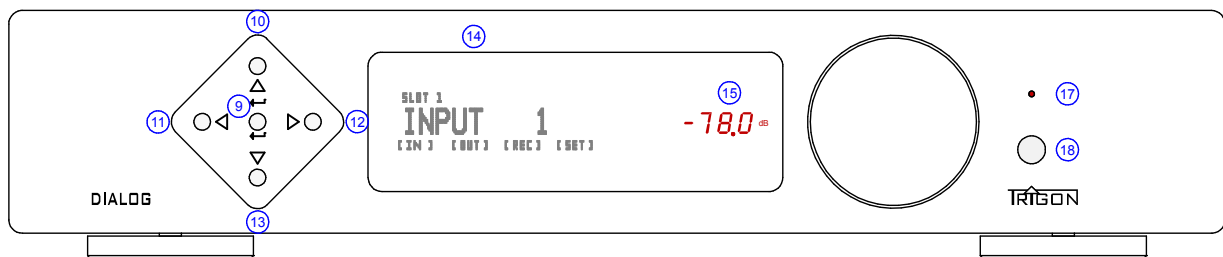
Now is a good time to get familiar with the basic functions and operation of the DIALOG before proceeding to hook the preamplifier up to your system.

**CAUTION:** Before you start making any connections, you should - as always when working on the wiring - turn off the DIALOG, as well as the other devices in the system! Do not connect or disconnect RCA plugs to/from a UNBAL INPUT while the DIALOG is powered up, since with this type plugs the signal connection makes contact before the ground, which may cause a very strong buzzing sound which can under certain circumstances damage your speakers!

## 3.1 Front Panel Controls and Display

We've tried to limit the number of control elements in accordance with the motto "as much as necessary, as little as possible". An important design consideration for the DIALOG preamplifier was to keep the basic functions easy to use and intuitive – e.g. anyone is likely to associate the large knob (16) with the volume setting, the keys (11) and (12) with inputs selection, and the button (18) for turning the DIALOG on or off.

**DIALOG**  
Front View



### Individual Elements:

#### (9) Key ← :

Depressing this button once switches the unit to MONO. Pressing it again switches back to STEREO.

#### (10) Key Menu Up:

Use this button to navigate within the Settings menu. See also section 3.4

#### (11) Key Input Select – (left):

This button selects the input (-). Also use this key to navigate in the settings menu. Read details in addition to in Section 3.4.

#### (12) Key Input Select + (right):

This button selects the input (+). Also use this key to navigate in the settings menu. Read details in addition to in Section 3.4.

#### (13) Key Menu Down:

Use this button to navigate within the Settings menu. See also section 3.4

**NOTE:** There may be modules in the future that use the keys (9 , 10 , 11 , 12 , 13)  
For details, refer to the description of the modules.



#### **(14) Display:**

The display gives you information about the various operating states of the DIALOG. It can be switched off with the DIRECTOR remote control. In this event it comes on to show information only when you make a change.

#### **(15) Volume Level:**

This LED display shows the output volume in dB relative to the level of the input signal. As long as a "minus" before the number, the output level is lower than the input signal by that value. When the display is switched off from the DIRECTOR remote control, the volume level will be displayed momentarily whenever a change is made.

The display can be switched off in two stages. The first time the display button is depressed, the display (14) is switched off with the volume level still showing. When the display button is depressed a second time, the volume display (15) is turned off as well. Pressing the display button again will re-activate the full display (14 and 15).

#### **(16) Volume Control:**

This knob adjusts the volume. An electronic pulse generator transmits its signals to the microprocessor. The microprocessor in turn passes the corresponding command to each output module. This is where the actual volume adjustment is done. Depressing the volume button mutes the output. Instead of a numeric volume level value only dots are displayed.



Depressing the volume button again or turning the volume control cancels the MUTE function. The previous volume setting is restored.

Another push on the knob or turning the volume knob lifts the mute function is turned on and the previous volume level is restored.

#### **(17) Power Indicator LED:**

This LED lights up when the DIALOG is connected to the main power supply, with AC mains power switched on (switch 8). When the Standby button (18) is depressed, the LED flashes until the Dialog is powered up and ready for use.

### (18) Standby Button:

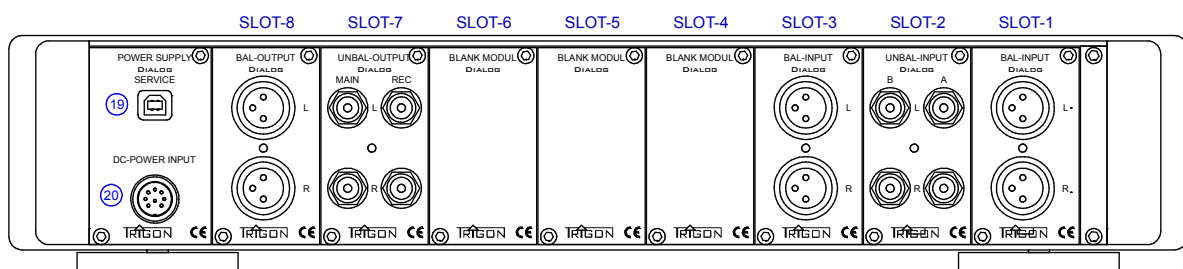
Turns the Dialog on or off. When Power Indicator LED (17) is not lit, the main PSU is not turned on or not connected to AC mains

NOTE: The DIALOG is equipped with an energy-saving power supply. Power consumption in standby mode is less than 1 watt, which means you can leave the DIALOG always in standby mode. If you're not using the Dialog for a longer period of time (holidays, travel, etc...) you can turn the power supply off completely with the main power switch (8). In severe storms with possible danger of lightning strikes, you may unplug the power cord from the AC outlet for added safety!

## 3.2 Connections

Up to eight modules can be inserted at the back of the DIALOG main chassis. You need at least one input and one output module, to operate the DIALOG preamplifier. The display (14) will show an error message if no modules are present. The DIALOG ships from the factory with at least three modules installed, unless otherwise specified. Each module has its own manual, since the DIALOG main chassis is basically a control unit with a power supply. However, it houses a large part of the "intelligence" of the entire device, namely the main microprocessor, which contains all the control software. The modules contain the actual audio circuitry, ie the gain stages, D/A converters and related electronics, depending on the individual module.

### DIALOG Back Panel



### (19) USB-SERVICE Socket

To be used for future software updates.

Since the DIALOG is a modular design, new modules may be developed over time, which can be added to the preamplifier, hence the need to possibly update the control software.

You may refer to our website to find out about the latest hardware (modules) and/or software developments. We will provide the most current software available for free

download from our website. In the DIALOG SETTING menu there is a "info" sub-menu, which will inform you which software version is currently running on your DIALOG. The Aufspielvorgang for required software and a detailed description of the procedure, such as the operating software is recorded in the DIALOG is also available on our Internet site.

## (20) DC-POWER INPUT

Connect the DIALOG main PSU's umbilical cord to this socket.

Note: Only low DC voltage is present on this connection.

## 3.3 Quick Start Instructions

For the impatient among you who already have some experience with high-end preamplifiers, here's a short guide to get to the music quickly:

- Hook up all devices
- Connect to AC mains and switch on the power switch (8) on the power supply.
- Turn the DIALOG on with the standby switch (18)
- Select source device with the input selector buttons (11) and (12)
- Set desired listening level with volume knob (16)
- Done!

## 3.4 Settings and Menus

The concept of the **DIALOG** provides an intuitive user interface. Nevertheless, this component provides useful additional features that are "hidden" in sub-menus. To fully take advantage of the DIALOG's capabilities, we recommend to take the time to read the following.

### On power-up:

During power-up cycle the DIALOG's display will generally read as follows:



```
TRIGON DIAGLOG V1.1B
[] INITIALIZING MODULE
```

The microprocessor checks which modules are available. There must always be at least one input module and one output module present to ensure useful configuration, otherwise you may get one of the following error messages:



```
TRIGON DIAGLOG V1.1B
NO INPUTS
PLEASE INSERT MODULE
```

A - No input module detected (above)  
or  
B - No output module detected (below)



```
TRIGON DIAGLOG V1.1B
NO OUTPUTS
PLEASE INSERT MODULE
```

In either case please shut down and disconnect the preamplifier from AC mains and verify that the respective modules are present and properly installed, or insert the necessary module(s).

**Make sure that at least one input module and one output module are installed!**

With at least the minimum number of modules installed, the display will read as shown in the following picture:



### Display structure:

The first line of the display indicates the number of the first occupied slot and the type of module present. As long as no specific name for an input has been set, it will be automatically designed as INPUT 1 in the second line of the display.

The third line indicates the sub-menus for the configuration of the module and general setup. E.g. Sub-menu for configuring the input modules [IN], sub-menu for the configuration of the output modules [OUT], sub-menu to select the source for record out [REC] (when a corresponding module is detected) and a sub-menu for basic settings [SET].

A red numeric LED display shows the the volume level in dB.

### Basic Operation:

You can start enjoying music as soon as the unit is turned on. All that is needs to select an active input and the desired volume, without having to go to any sub-menu.

The keys (11) and (12) toggle between inputs. Use the volume knob (16) to set the desired volume. That's all you need to get started.

### Menus:

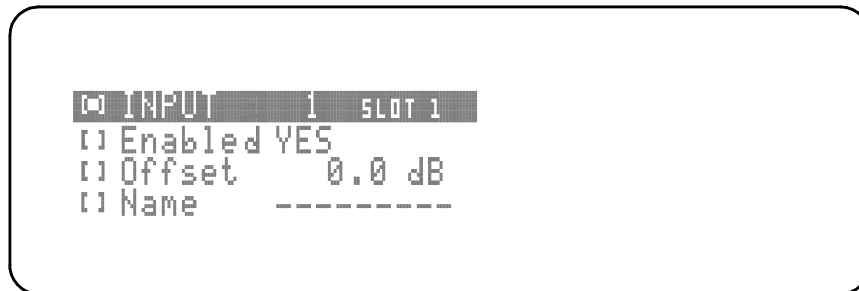
To access the menus press the button (13). This will recall the previously selected menu. High-light the menu to be edited with the buttons (11) or (12). Suppose we want to edit the input setting menu [IN], we see the following message:



Use key (12) to navigate to the next menu to the right, e.g. [OUT]  
Likewise, key (11) takes you in the opposite direction (left).

## Editing the [IN] Menu:

After high-lighting the [IN] menu enter the desired menu with key (13) to get the sub-menu screen below:



Now you are in the [IN] sub-menu, where you can edit the following settings:

- |                                  |             |       |        |
|----------------------------------|-------------|-------|--------|
| 1. Input selection               | [■] INPUT   | 1     | SLOT 1 |
| 2. Activate or de-activate input | [ ] Enabled | YES   |        |
| 3. Adjust input trim             | [ ] Offset  | 0.0   | dB     |
| 4. Name input                    | [ ] Name    | ----- |        |

### [■] INPUT 1 SLOT 1

Use the first line to select the input to be edited with keys (11) and (12). This line also shows in which slot the selected module is installed so that you can assign the input exactly. Use button (13) to navigate to the next item.

### [■] Enabled YES

Key (11) disables the selected input. Display: [■] Enabled NO  
Key (12) enables the selected input. Display: [■] Enabled YES

### [■] Enabled NO

This function is useful if you do not use an input. When you toggle between inputs the disabled input is skipped.

Press key (13) to select the next item.

### [■] Offset 0.0 dB

This sub-menu allows to set the level of individual inputs to match the level of other sources to compensate for differences in playback volume when changing inputs. Note that levels can only be reduced - choose as a benchmark the weakest source and adjust for louder source devices in this menu. Maximum attenuation is -12dB, which should be sufficient in most cases.

Press key (13) again to select the next item.

[■] Name      - - - - -

Select a name for the selected input from a list with keys (11) and (12). This name will be displayed when that input is selected. If no name is chosen - - - - - INPUT will be displayed.

To exit the input menu press the key (10) repeatedly, until you get back to USER mode.

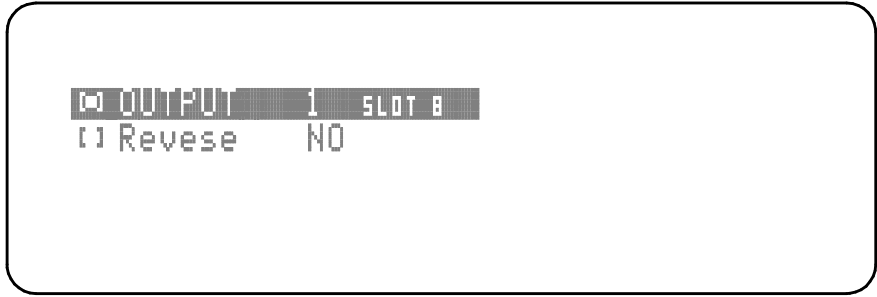


Display in USER mode

Assuming that you are currently in "user mode" and you want to edit the start menu, press the key (13), and navigate using the buttons (11) and (12) to high-light the [OUT] sub-menu and get the following screen display:



Enter the [OUT] sub-menu by pressing the key (13) .The display will show:



Now you are in the [OUT] sub-menu, where they can make the following adjustments:

- 1. Selecting the output to be edited
- 2. Reverse cannels

[■] OUTPUT 1 SLOT 8  
[ ] Reverse NO

**[■] OUTPUT 1 SLOT 8**

On the first line select the output be edited with the keys (11) and (12). In this line you can also see the slot in which the module is installed, so that you can assign the output as desired.

**[■] Reverse YES/NO**

This feature allows you to swap the left and right channels with the key (12). With key (11) the channel swap will be reversed to normal. To exit the Output menu, press key (10) repeatedly until you are back in user mode.

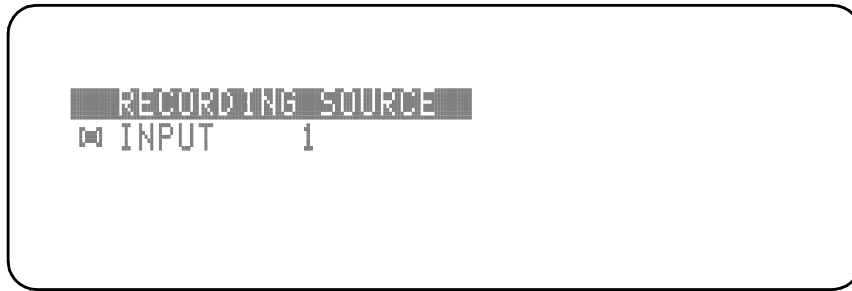
**Editing the [REC] menu:**

Assuming that you are currently in "user mode" and you want to edit the Record menu, press the key (13). Navigate using the buttons (11) and (12) until you see the [REC] screen displayed as shown here:



Enter the [REC] sub-menu by depressing key (13)





This menu allows to link a specific input to the Record Out connectors on the "UNBALANCED OUTPUT" module, when installed. This function is only possible if at least one module "UNBALANCED OUTPUT" are installed in a slot. Using the keys (11) and (12) you can select the input to be fed to the REC OUT connectors.

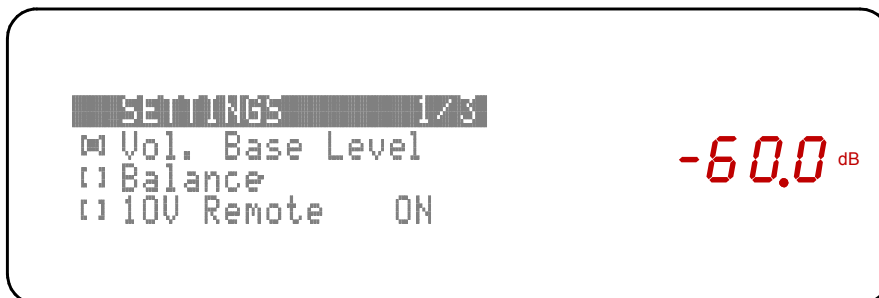
To return to user mode press key (10) repeatedly.

#### Editing the [SET] menu:

From "user mode" navigate to the SETUP menu by pressing the key (13) and using the buttons (11) and (12) until [SET] is high-lighted.



:  
Enter the sub-menu with key (13) und see following screen displayed:



You are now in the [SET] menu, where you can make the following adjustments:

1. Set initial volume level [■] Vol. Base Level

2. Adjust stereo balance	[ ]	Balance	
3. 10V Trigger On/Off	[ ]	10V Remote	ON
4. Adjust display brightness	[ ]	Brightness	
5. Select language	[ ]	Language	ENGLISH
6. Display status information	[ ]	Infos	
7. Reset to Factory Default	[ ]	Reset Settings	

The **[SET]** menu contains three pages.

Various sub-menus can be accessed with key (13) (down) and key (10) (up).

### **[■] Vol. Base Level**

This function allows setting the initial volume level assumed by the Dialog upon turn-on.

This value can be set with the volume knob (16) or with keys (11) und (12). Leaving this sub-menu stores the setting.

### **[■] Balance**

Set the L/R channel balance. This value can be adjusted using the volume knob (16) with keys (11) and (12).

### **[■] 10V Remote ON/OFF**

Enable or disable the 10V trigger output with keys (11) and (12) for remote switching of associated equipment (e.g. power amplifiers, powered speakers, etc...) equipped with this feature. The control voltage is output at the jack (4) on the main power supply.

### **[■] Brightness**

The intensity of the front panel display can be adjusted from this sub-menu. Note that the text displays (14) as only four intensity levels, whereas the volume display can be adjusted from 10% to 100%.

Use this sub-menu to adjust the display brightness. Note that the text display (14) has only four brightness levels, while the volume indicator can be set between 10% and 100%. Adjust with volume knob (16), or with keys (11) and (12). The adjustment is stored when exiting this sub-menu.

### **[■] Language**

Select the display language with keys (11) and (12).  
(Currently two choices are available: German (Key 11) and English (Key 12))

## [■] Infos

For this sub-menu press key (12) to display the currently installed Software version.

### [SET] menu

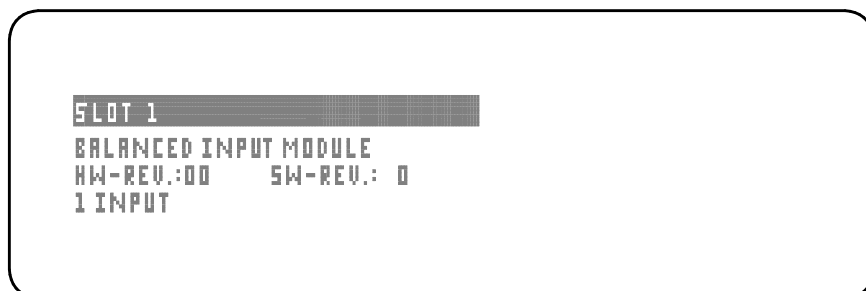


The currently installed Software version is displayed in the first line, after the **TRIGON** Logo.

The second line [**INS**] displays the information about installed input modules and number of available inputs.

The third line [**OUTS**] displays the information about installed output modules and number of available outputs.

Pressing the key (12) again does play information about the modules installed in the individual slots.



In this example: Slot 1 contains a balanced input module with hardware revision 0 and software revision 0. This module has one input.

Use keys (11) and (12) to get detailed information on every slot.

Press key (13) to exit the info sub-menu and go to the next sub-menu.

## [■] Reset settings

In the event that you want to reset the DIALOG to factory default settings, depress button (9) in this menu for at least (5) seconds. The DIALOG will display a count-down sequence and then re-boot. The DIALOG then reverts to normal playback mode.

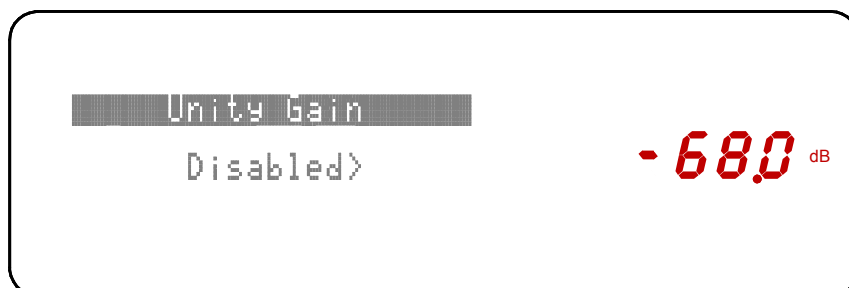
To exit the SET menu depresses the key (10) repeatedly until you are back in user mode.



User mode display. The red volume display will reflect the currently selected level.

### 3.5 Unity Gain

If the epilogue should be looped in a surround setup, because the two main speakers are connected at DIALOG, then it may be useful to adjust the volume setting on the surround amplifier only. For this DIALOG has the UNITY GAIN function. Use the arrow keys (11) and (12) to select the input to which the surround amplifier is connected. Use the arrow key (10) to enter the UNITY GAIN menu and the display shows the following picture:



Now you hold the arrow key (12) pressed, a Countdown counts down from 5 - 0 and the volume at DIALOG is continuously increased. When "0" is reached, loose the button (12) again and the display now shows the following:



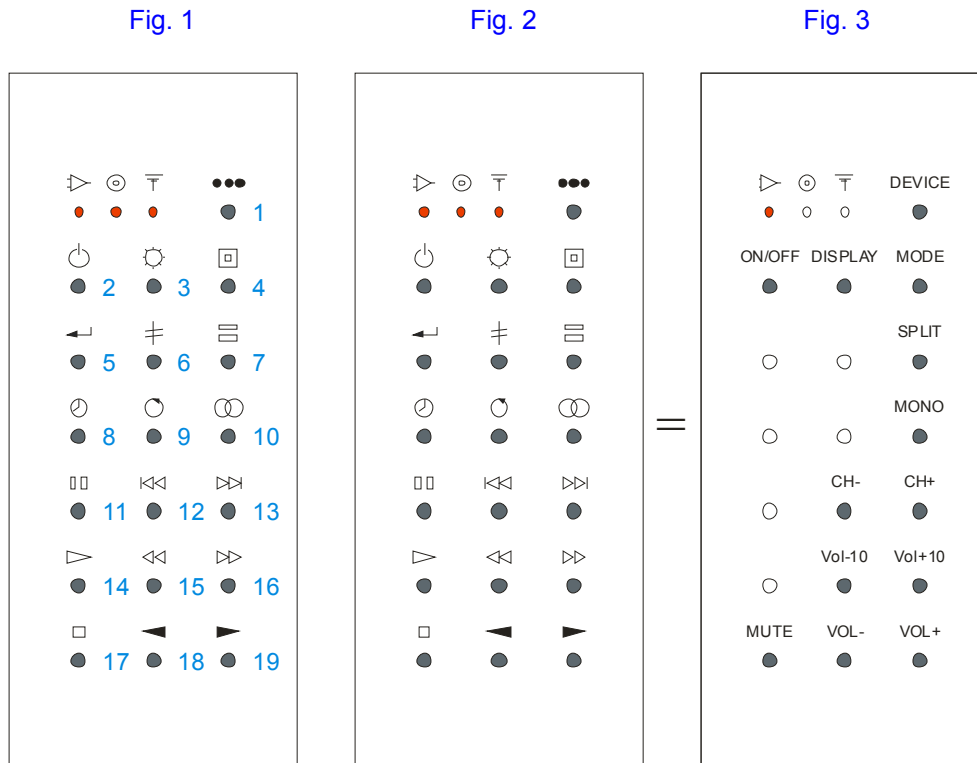
Now the volume control is bypassed for the selected input. With button (13) you leave the UNITY GAIN menu.

To switch off UNITY GAIN again, you go back into the UNITY GAIN menu and press the arrow key (11). Now, the volume is adjustable by using the volume knob for this input again.

**NOTE!** Proceed extremely careful with this setting. Use this setting only with devices that also have their own volume setting. Adjust the volume of the source device in the activation of UNITY GAIN function to a "quiet" value and only then increase the volume to the desired value.

### 3.5 DIALOG and DIRECTOR remote control

The main playback functions of the DIALOG can be remotely controlled with the TRIGON DIRECTOR System remote control.



Figures 1 through 3 illustrate the layout of the remote control DIRECTOR. In Figure 3 only the keys that relate to a function of the DIALOG preamplifier are identified. The DIRECTOR is a system remote control, which can remotely control various devices from **TRIGON**. The entire keyboard can be used three fold. Individual function levels are provided for control of amplifiers, CD players and tuners. The key (1), top right, next to the device LED's, selects which type of device is controlled. To operate the DIALOG press the key (1) repeatedly until the first LED below the amplifier symbol [ $\triangleright$ ] flashes. Thus the "Amplifier Level" is selected and remains selected until another level is selected with key (1). Each time the key (1) is pressed the LED lights up to indicate the current is selected level.

#### Individual functions:

Key (1) selects the type of device to be controlled. The three LEDs indicate the currently selected user interface type.

Key (2) switches the **DIALOG** from/to standby mode (PSU must be powered up).

Key (3) toggles the **DIALOG's display** on or off in steps. Pressing once turns off the text portion, pressing again turns the volume display off. Pressing a third time turns the display back on completely.

Note: All settings are retained even after turning off of DIALOG. However, when the display is switched off, it will come on briefly whenever an adjustment is made to the DIALOG. For example, when the volume is changed, the change is shown briefly before the display is switched off again. The same goes for adjustments that are usually displayed on the text display.

Key (4) recalls the SET UP menu of the DIALOG, just like the button {9} ENTER on the front of the unit. (See section above).

Key (5) has no function for **DIALOG**.

Key (6) has no function for **DIALOG**.

Key (7) calls up the SPLIT function if a corresponding module is installed. The split function allows devices such as equalizers, surround processors, etc. to be inserted in the signal path. If no module is installed with split function, the DIALOG will display an error message when this key is depressed.

Key (8) has no function for **DIALOG**

Key (9) has no function for **DIALOG**

Key (10) switches the **MONO** mode on or off. **MONO** is displayed when this mode is selected.

Key (11) has no function for **DIALOG**

Key (12) selects next input to the left.

Key (13) selects next input to the right.

Key(14) has no function for **DIALOG**

Key (15) reduces the volume **by 10 steps**.

Key (16) increases the volume **by 10 steps**

Key (17) mutes the DIALOG . Pressing this key again restores the previous volume setting. When **MUTE** is engaged, the volume display shows:“- - - -“. Changing the volume setting cancels the **MUTE** function.

Key (18) decreases the volume

Key (19) increases the volume

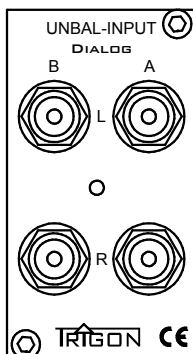
**TIP:** The „volume“ keys (18 and 19) are independent from the device selection. Therefore, these two keys have no function for CD player or tuner.

## 4 MODULES

The entire audio range of DIALOG is built with modules. This way you can compose your own ideas for preamplifier. Example, if you prefer a purely symmetrical preamplifier, so you just use only symmetric input and output modules. You can also freely mix, for example, or if you need a preamp with five outputs, this is also feasible. As mentioned elsewhere, you must comply with only one condition: at least one input module and output module must be used, otherwise denied the DIALOG service. Currently we offer four different modules (see below). The concept of DIALOG is so designed that we already have more of **TRIGON** modules in the design and the fact DIALOG with each new module is always interesting.

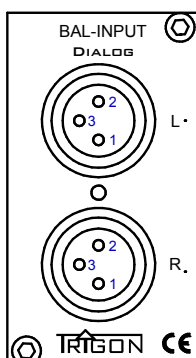
For this reason, we have the manual and designed so that you get when purchasing a new module, a new chapter 4.x, you can then attach these instructions. For new modules can be of troubles, replace the control software with a new software so that the DIALOG this new module can also operate. Therefore, is located on the back of DIALOG a USB socket (17), which you can connect to a computer to update to the latest "firmware" (software mode) in the DIALOG. The software is provided free download at our website for available.

### 4.1 UNBAL-INPUT module



The UNBAL-INPUT module has two single-ended stereo inputs. Each input can be trimmed independently to match the level of other sources/inputs to avoid large jumps in volume when changing inputs.

### 4.2 BAL-INPUT module



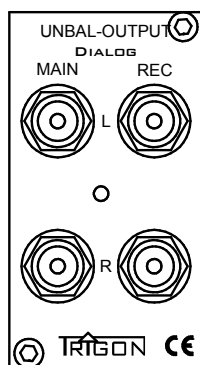
The INPUT BAL module is a balanced stereo line level input. This input can be trimmed independently to match the level of other sources/inputs to avoid large jumps in volume when changing inputs.



Die PIN-out:  
Pin-1 = Ground  
Pin-2 = Signal +  
Pin-3 = Signal –

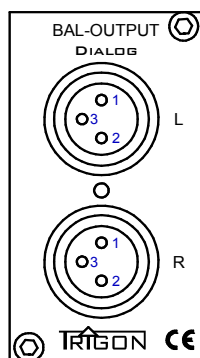
Up to seven **BAL-INPUT** modules can be used in one **DIALOG**. Together with one **BAL-OUTPUT** module the DIALOG becomes a fully balanced preamplifier.

### 4.3 UNBAL-OUTPUT module



This module contains one single-ended MAIN preamplifier output with adjustable volume and a RECORD output to connect a recording device. The MAIN output is typically connected to a power amplifier or a loudspeaker amplifier with active electronics. The output impedance is 47 ohms, i.e. low enough that even long interconnect cables (up to 8 meters) can be used.

### 4.4 BAL-OUTPUT module



The module BAL- OUTPUT contains a balanced amplifier whose output is also capable of driving longer cables without significant quality loss. This output is connected to the balanced input of a power amplifier or active speaker. Balanced connections have the advantage that noise and interference with the signal are effectively suppressed.

Several BAL OUTPUT modules can be used in one DIALOG preamplifier. The volume of all output modules is controlled by the master volume control designated in the SET menu. However, it is possible to trim the relative output level for each module. The individual outputs are electronically separated from each other.

### 4.5 PHONO Module

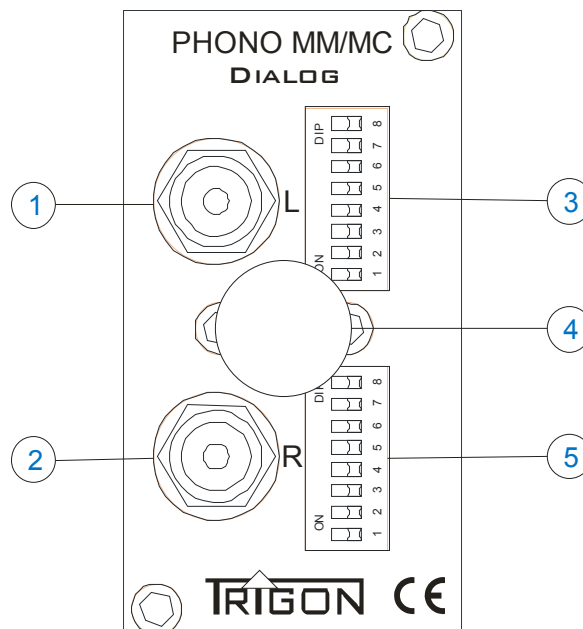
The PHONO module can be connected to a turntable with MM or MC pickup. The impedance matching of the pickup is made on the rear of the module by subminiature switches. Please refer to the tables [A] and [B] for the adjustable values.

Also, the gain of the PHONO module must be adapted to the used pickup. This setting is made on the front of the DIALOG. Up to seven PHONO modules can be installed in the DIALOG.

### 4.5.1 The Necessary Software

To operate the PHONO module, the DIALOG requires the firmware with the version V0.10 or higher. If the installed firmware is "older" than V1.34 (the number is less than 1.34), so you need only perform an update. (See section 4.1)

### 4.5.2 The connectors on the back



To the RCA connectors [1] and [2] the record player are connected. Normally turntables have a separate ground wire. This cable must be connected to the screw terminal [4] (Ground socket).

The two switch banks [3] and [5] are used to separate channel impedance matching of the connected pickup. Each switch bank has 2 switches for capacitive adaptation of a MM pickup and 6 switches for adjusting a MC pickup.

### 4.5.3 The settings and menus

The module PHONO can be optimally adjusted to the used pickup of the turntable. The value can be taken from the operating instructions manual of the pickup. The available adjustment values are listed in Tables [A] and [B].

Table [A] shows the values for a capacitive adjustment, as is required for MM cartridges. Table [B] shows the values for impedance matching, as is required for MC cartridges.

#### MM-Cartridges:

The switches **S1** and **S2** are for adapting to MM cartridges. S3 to S8 are normally not necessary for MM and are switched off.

#### 4.5.4 Table A of the switch settings for the input capacitance

S1	S2	S3	S4	S5	S6	S7	S8	Input Capacitance	Input Impedance Ohm
0	1	0	0	0	0	0	0	47pF	47000,0
1	0	0	0	0	0	0	0	100pF	47000,0
1	1	0	0	0	0	0	0	147pF	47000,0

The input capacitance without connected capacity of the module PHONO is 60 - 100pF. Each capacitor that is connected must be added to the input capacitance.

The interconnection cable capacitance and the capacitance of the arm tube of the turntable have to be added, too. In this way, often more than 200pF - 300pF capacity is added without any additional capacitors.

Should be noted, however, that deviations from the recommended cartridge manufacturer adaptive capacity, on the order 20-30% are acceptable, as in the production of pickups often similar tolerances occur.

**MC-Cartridges:** The switches **S1** and **S2** have no meaning in MC and should remain in the neutral position. Switches **S3** to **S8**, are matching the impedance of a connected MC system. The value can be taken from the operating instructions manual of the pickup. Table [B] shows all the possible values for this module and associated switch positions.

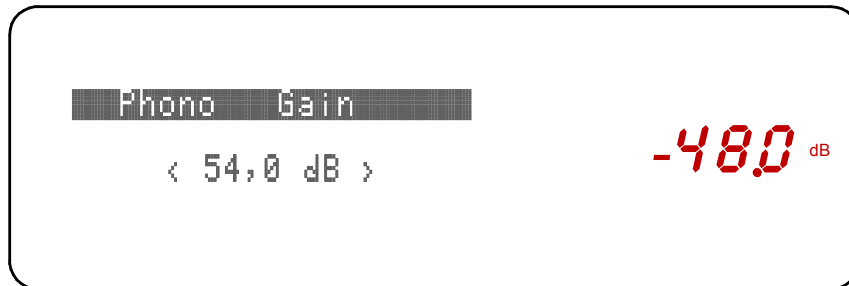
It is also possible to set the switches like you want, because it may happen that different input impedance sounds better than the proposed values. Consequently, quite a few pick-up manufacturers also give a very wide range of adjustment for your pickup to (eg 200 Ohm to 47 KOhm). So try out different settings and set the value that comes closest to your ideal sound. Nothing can go wrong. Please set the volume low every time you do a switching process between the Switches **S1** to **S8** to avoid any switching noises.

### 4.5.5 Table B Switch settings for the input resistors

100p	47p	1800	1000	470	220	100	47	
S1	S2	S3	S4	S5	S6	S7	S8	Input resistance calculated in Ohm
0	0	0	0	0	0	0	0	47000,0
0	0	1	0	0	0	0	0	1733,6
0	0	0	1	0	0	0	0	979,2
0	0	1	1	0	0	0	0	634,2
0	0	0	0	1	0	0	0	465,3
0	0	1	0	1	0	0	0	369,8
0	0	0	1	1	0	0	0	317,6
0	0	1	1	1	0	0	0	269,9
0	0	0	0	0	1	0	0	219,0
0	0	1	0	0	1	0	0	195,2
0	0	0	1	0	1	0	0	179,6
0	0	1	1	0	1	0	0	163,3
0	0	0	0	1	1	0	0	149,4
0	0	1	0	1	1	0	0	137,9
0	0	0	1	1	1	0	0	130,0
0	0	1	1	1	1	0	0	121,2
0	0	0	0	0	0	1	0	99,8
0	0	1	0	0	0	1	0	94,5
0	0	0	1	0	0	1	0	90,7
0	0	1	1	0	0	1	0	86,4
0	0	0	0	1	0	1	0	82,3
0	0	1	0	1	0	1	0	78,7
0	0	0	1	1	0	1	0	76,1
0	0	1	1	1	0	1	0	73,0
0	0	0	0	0	0	1	1	68,6
0	0	1	0	0	1	1	0	66,1
0	0	0	1	0	1	1	0	64,2
0	0	1	1	0	1	1	0	62,0
0	0	0	0	0	1	1	1	59,9
0	0	1	0	1	1	1	0	58,0
0	0	0	1	1	1	1	0	56,5
0	0	1	1	1	1	1	0	54,8
0	0	0	0	0	0	0	1	47,0
0	0	1	0	0	0	0	1	45,8
0	0	0	1	0	0	0	1	44,8
0	0	1	1	0	0	0	1	43,8
0	0	0	0	1	0	0	1	42,7
0	0	1	0	1	0	0	1	41,7
0	0	0	1	1	0	0	1	40,9
0	0	1	1	1	0	0	1	40,0
0	0	0	0	0	1	0	1	38,7
0	0	1	0	0	1	0	1	37,9
0	0	0	1	0	1	0	1	37,3
0	0	1	1	0	1	0	1	36,5
0	0	0	0	1	1	0	1	35,8
0	0	1	0	1	1	0	1	35,1
0	0	0	1	1	1	0	1	34,5
0	0	1	1	1	1	0	1	33,9
0	0	0	0	0	0	1	1	32,0
0	0	1	0	0	0	1	1	31,4
0	0	0	1	0	0	1	1	31,0
0	0	1	1	0	0	1	1	30,4
0	0	0	0	0	1	0	1	29,9
0	0	1	0	1	0	1	1	29,4
0	0	0	1	1	0	1	1	29,0
0	0	1	1	1	0	1	1	28,6
0	0	0	0	0	1	1	1	27,9
0	0	1	0	0	1	1	1	27,5
0	0	0	1	0	1	1	1	27,1
0	0	1	1	0	1	1	1	26,7
0	0	0	0	1	1	1	1	26,3
0	0	1	0	1	1	1	1	26,0
0	0	0	1	1	1	1	1	25,7
0	0	1	1	1	1	1	1	25,3

A 1 means switch is set to ON  
A 0 means switch is set to OFF

Because different pickups provide different output voltages, it is necessary to adjust the gain of the Phono module to the respective pickup. To access the menu for the gain setting, you select the Phono module with the input selector buttons and then press the button (10) of the DIALOG. Now you should see the following screen.



Display menu Phono gain (54dB here are just set)

The gain adjustment is on the DIALOG with the arrow keys (11) and (12). Table (C) also provides you again a few benchmarks. In the User s instruction usually the value of the output voltage of the pickup is specified. Select a value for the gain, where the output voltage of your system is the closest. Press button (13) on the DIALOG you leave the Gain menu.

#### 4.5.6 Table [C] Gain Adjustment

Gain In dB	For cartridges with these levels
42	4mV
47,5	2,1mv
51,3	1,4mV
54	1,0mV
55	0,89mV
56,5	0,75mV
58,5	0,60mV
59,5	0,53mV
62,5	0,38mV
63	0,35mV
64	0,32mV
64,5	0,3mV
65	0,29mV
65,5	0,28mV
66	0,25mV
66,5	0.24mV

With the settings specified in table [C] you get a preamp output voltage of 500 mV.

Cartridge manufacturer often offer the output voltage of their pickups as follows:

Output voltage = 0,4mV at 3,54cm/s

The normalized output voltage usually refers to a reference of 5.6 cm / s. In our case, therefore, results in the output voltage to:

$$V_{out} = \frac{0,4mV}{3.54cm / s} * 5,6cm / s$$

Thus, there is an output voltage of about 0.63 mV, ie. you should set a gain of about 58.5 dB.

## 4.5.7 Technical Data PHONO Module

Input	: 2x Cinch
Distortion (THD + N)	: < 0.03%
Frequency response	: 20 Hz – 20 kHz (+-1dB)
S/N	: -86 dB
Weight	: ca. 350g
Dimensions	: 40 x 73,5 x 173,5 mm ( BxHxT )

## 4.6 DAC Modul

Four digital source devices can be connected to a DAC module. Use the arrow keys (11) and (12) on the front panel of the DIALOG to choose the input. Following inputs are available:

2x Coax (Cinch) SPDIF  
1x Toslink  
1x USB

If this is four digital inputs are not enough, further DAC Modules can be installed.

Seven DAC modules are possible so that you get 28 digital inputs!

The DAC module translates the digital music information into analog audio signals that can then be processed in the DIALOG. The maximum resolution of the DAC module is 24 bits and 192 kHz (compared to CD players have a resolution of 16 bits and 44.1 kHz). The maximum resolution of the USB input is 24 bits at 96 kHz. The DAC module automatically adjusts to the required resolution.

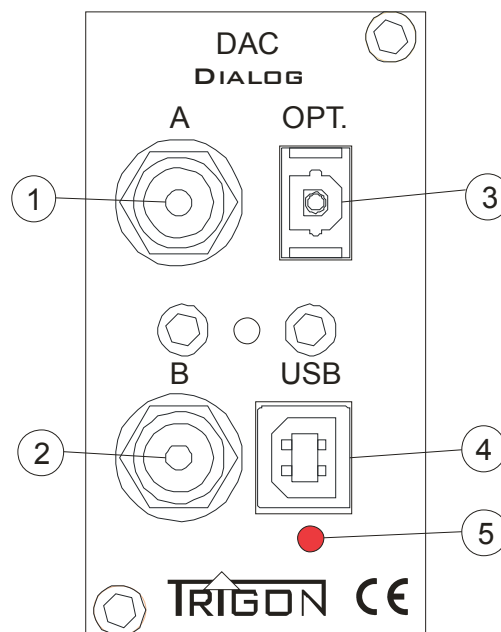
All inputs are galvanically isolated, i.e. the DAC is connected to an input transformer or optically coupled to the source equipment. In this way, any hum are (keyword ground loop) effectively prevented.

To avoid damage to the DIALOG to your system, please connect only digital source devices to the DAC module! The module can not handle analog signals at the inputs, and also the source device could suffer damage.

## 4.6.1 The necessary Software

To drive the DAC module DIALOG needs firmware version V1.36 or higher. If the installed firmware is "older" than V1.36 (the number is less than 1.36), so you need only perform an update. (See section 4.1)

## 4.6.2 The connectors on the back



### [1] and [2] A and B

The RCA jacks A (1) and B (2) are the two coaxial SPDIF inputs. Here, all devices can be connected, which have a standards-compliant SPDIF output.

### [3] OPT.

To the optical fiber input OPT. (3) can be connected to a source device with a Toslink optical cable. The data format is also SPDIF.

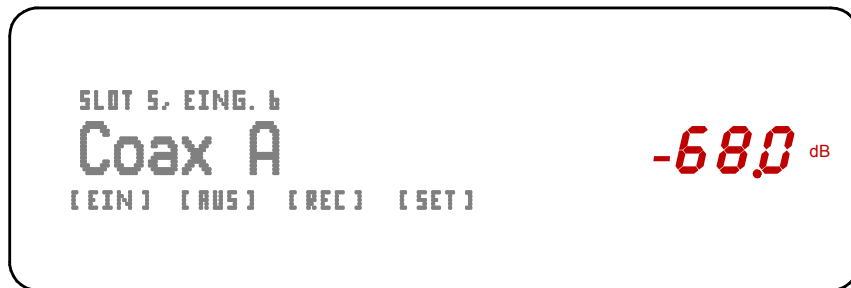
### [4] USB

To the USB port (4) a computer can be connected. If the computer is the first time connected to the epilogue, it takes a moment for the computer to install the required default drivers. The computer treats the DIALOG now as a separate USB sound card. The maximum resolution is 24-bit 96 KHz at this entry.

### 4.6.3 The settings and menus

As described in detail under 3.5.1, the names of the inputs can be set individually. In the initial state (factory setting), the coax digital inputs with the names shown in the following images A, B coax, and USB Opt appear. The gain of each input is individual adjustable. This level adjustment is behind the DAC in the analog domain.

Please note that there is not the possibility of an independent playback / record function on the digital inputs.



Display when the coax input A is selected.



Display when the coax input B is selected.



Display when the optical input is selected.





Display when the USB input is selected.

#### 4.6.4 Technical Data DAC Module

Inputs	: 2x Cinch SPDIF, 1x Toslink, 1x USB
Distortion (THD + N)	: < 0.03%
Frequency response (analogue)	: 20 Hz – 20 kHz (+-1dB)
Signal / Noise ratio	: -106 dB
Weight	: 350g
Dimensions	: 40 x 73 x 173 mm ( BxHxT )

## 5 What if...

This chapter is ment to help you troubleshooting, locating and eliminating small problems.

### 5.1 ... nothing happens?

- Is the power cord properly connected? - *verify that everything is plugged in correctly.*
- Is the AC outlet live, or was a breaker tripped? - *check electric panel.*
- Is the main power switch on the back of the PSU (8) on? – *Check main power switch.*
- Is the micro-fuse blown? – *replace micro-fuse with identical type/value. If fuse blows again send the unit in for service.*

### 5.2 ... there's no sound?

- Correct input selected? - *verify source selection.*
- Does the source output a signal? –
- Was the unit exposed to a static electricity discharge? *This can happen in very dry environment, especially during the winter heating season. A static discharge can cause the micro processor to crash. Shut down and disconnect the unit from the AC mains for approx. 60 seconds and re-start the system. Generally the device will operate normally.*

### 5.3 ... it hums?

Are all cable connections secure? - *Verify cabling.*

Sometimes multiple earth connections can cause so-called ground loops. Troubleshooting this requires some experience. We recommend to contact your dealer for help.

It only hums when a TV or video recorder is connected – *these devices are connected to an antenna or a cable feed, which are grounded themselves, possibly causing a ground loop. Try using a „ground breaker“ - These are readily available from good specialty dealers.*

### 5.3 ... errors made by man or machine?

The DIALOG has been designed to be used under normal operating conditions as a high quality audio pre-amplifier for domestic use. Unrealistic test such as listening to a un-used input at high volume will result in noise coming from the speakers, which is perfectly normal. Rapid and repeated pressing of random buttons on the unit itself or the remote control is not part of the purpose for which a high quality audio component has been designed. It is rather ment to provide many years of good sound and enjoyment, which it will do when it is used the way it was intended in the first place.

## 6 Specifications

<b>Inputs</b>		: depending on installed modules
<b>Input impedance</b>		: typically 47 KOhm
<b>Sensitivity</b>		: depending on modules
<b>Distortion ( THD + N)</b>		: < 0.03%
<b>Frequency response</b>		: typically 0.5 Hz – 250 kHz -3dB
<b>Noise</b>	unbal	: 10µV ( A-weighted) 14µV ( unweighted )
	bal	: 15µV ( A-weighted) 22µV ( unweighted )
<b>Fremdspannungsabstand</b>		: -103 dB bezogen auf 1 Watt an 4 Ohm
<b>S/N ratio</b>		: -106 dB relative to 1 Watt an 4 Ohm
<b>Weight</b>		: 10.5Kg
<b>Dimensions</b>		: 440 x 89 x 350 mm ( BxHxT )

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