USER'S MANUAL FOR INTEGRATED AMPLIFIER
Energy

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1 Vorwort

1 Introduction

Valued **TRIGON** - Customer,

We are excited that you have chosen to purchase the **ENERGY** integrated amplifier.
This unit was built using the highest quality control to insure utmost precision in manufacturing.
Whether you are a beginner to High-Fi or advanced user, it is highly recommended that you read and understand this User's Manual thoroughly before using your new integrated amplifier.
Be sure to keep this manual easily accessible as it could come in handy during normal use of this amplifier.
We hope that you enjoy your new amplifier and thank you for choosing **TRIGON**.

2 General Description

The **ENERGY** is a High-End integrated amplifier with seven high-level inputs.

This amplifier is completely controlled by a sophisticated Microprocessor. The features of the **ENERGY** are both accessible via the front panel or via the Director remote control. The front panel features a dimming Display that informs users of the active in-use configuration. The unit can also be turned off or on via the remote control when in stand-by mode.
The volume setting is controlled through a special D/A Converter and as such is both technically and sonically far superior to a traditional volume pot (potentiometer). This method of volume control allows for a channel output that is exact at low volume as well as high volume settings, insuring that the soundstage doesn't wander or lose focus with each change of the volume setting.
The power supply also boasts noteworthy features in its design. Every stereo channel has it own torrodial transformer. This so-called double mono structure ensures optimal channel separation where more power being sent to one channel has no impact on the other channel. The controlling microprocessor is powered by a small standby power supply. Therefore, the sensitive audio signals remain separated, i.e. they will not be adversely affected by the digital section of the integrated amplifier.
The **ENERGY** is equipped with seven high-level inputs including one balanced input as well as an effects loop (Splitt) where a surround processor or other effects unit (such as an equaliser) can be connected.
In addition, the integrated amplifier features a preamplifier output which can also be used as a tape record output, if required.
Two loudspeakers (4 to 8 Ohm) can be connected to the massive gold-plated binding posts of the terminal provided at the rear panel. A 6.3mm stereo headphone plug (impedance 32 to 2000 Ohm) can be inserted into the jack provided at the front panel featuring its own special headphones amplifier.

2.1 Safety Information

TRIGON ELEKTRONIK GMBH will not assume any responsibility for damages occurred from unsafe handling of the product or from not adhering to the recommend safety instructions below.

- The amplifier should not be used un-monitored in close proximity to heat producing devices such as Water heaters, Fireplaces or Flammable materials.
- The amplifier is not designed to withstand heavy impacts or severe vibrations.
- The amplifier should not be used un-monitored when being transported from a cold environment into a warm room.
- The amplifier should not be used when placed out in direct contact with the Sun.
- Insure that the installation location for this product has adequate ventilation.
- The amplifier should not be doused with any type of liquid. It is imperative that no liquid get inside the unit.
- Never use this product without the shielded top cover installed.
- Before removing the top cover always insure that the AC cord has been removed from the AC outlet and that the product has sat to drain any residual current.
- Never short any of the fuses. Replace broken fuses only with original fuses of the same value and type.
- Do not attempt to service this unit. Repairs are only to be done by authorized service centers or through the factory direct. Any such unauthorized repairs will result in a voided warranty.
- Always make sure that your complete audio system is shut off before changing any cables or connecting any other components.

The ENERGY power supply is set at the factory to be operated in 115V. Contact your local dealer or TRIGON directly if you should need a different voltage version.

2.2 Installation Information

During unpacking, please inspect the unit for any potential transportation damage. If you notice any damage, please get in contact with your dealer.
Confirm the contents of the box. In addition to the ENERGY, you should also have the following:

- User's Manual
- Warranty Card
- Power cord

Place the unit on a dry, level surface. Be sure that the unit has good ventilation around it. Strong magnetic fields commonly found in amplifier transformers and halogen light transformers can induce hum into a system. Because of this, it is best to place the unit a reasonable distance from such devices. Also, the audio interconnects should not be run

in parallel to AC power cables as this can also induce noise.

Hum is also produced from light bulbs. It is best to place audio equipment at least 3 feet away from them.

Try to utilize natural light and make sure not to use the ENERGY unmonitored next to heat sources.

2.3 Warranty and Service Information

In choosing the ENERGY, you have selected a valuable and technologically advance product. We at TRIGON are trying to improve our quality control through all steps in the production cycle to insure that all TRIGON products meet our quality expectations.

If a problem is experienced, TRIGON ELEKTRONIK GMBH offers a three-year warranty. This warranty covers repairs for any manufacturing defects.

It does not cover damages that are the result of neglect or misuse. It also is considered void if unauthorized personnel do any repairs or modifications. Any alterations to the serial number, or transportation damage are not covered as part of this warranty.

3 Initial Setup

After you have unpacked the preamplifier, you should first connect the unit to the power supply and plug it into the AC outlet. Before you have connected any of your other components turn the unit on to test that it powers up properly.

After a short warm-up period, you will hear a quiet "clicking" sound from Relays within the ENERGY signalling that the unit is ready to be operated. At this time you should become more familiar with the proper usage and connection possibilities of the ENERGY. Test the various controls (i.e. input selection, volume, etc..) at this time for functionality, while none of your sources are connected. This will insure that no damage can occur. After you have tested all the functions and understand how to control the ENERGY, you can begin to connect your other audio components.

When connecting cables between components, be sure that both the ENERGY and other components are powered OFF!

3.1 Front Panel Controls
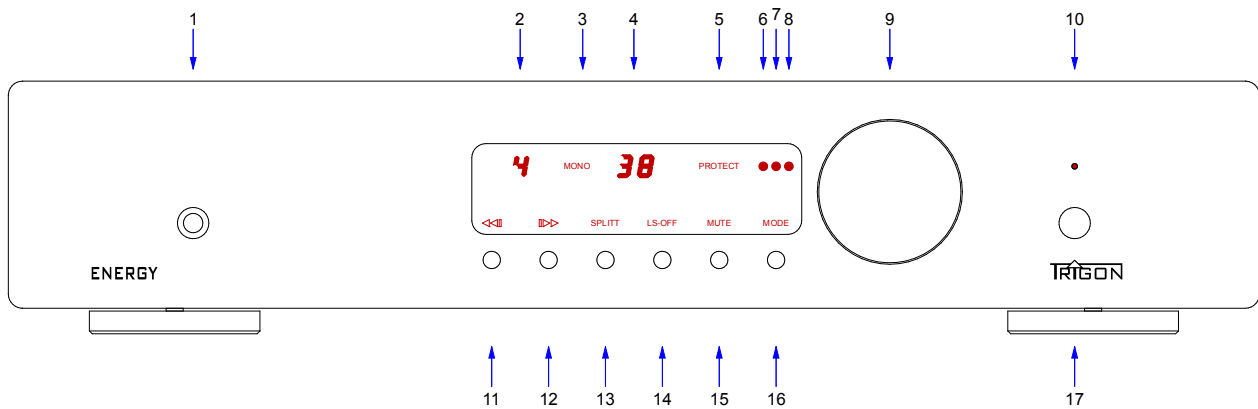
1 – Headphone Connector :

The 6.3mm stereo plug of the headphones can be connected to the jack. Make sure that the impedance of the headphones is not rated below 32 Ohm. Low impedance headphones must be connected to the loudspeaker terminals.

2 - Input Display :

This display shows what input is currently selected and active. A small dot will light up behind the display if the *Display Off* function is selected.

3 - MONO :

This LED lights up when the remote control has been used to set the ᴇɴᴇʀɢʏ to mono operation.

4 – Volume Display :

This display shows the select volume level. It also displays other values when in the *MODE* menu. This is more fully described in the MODE-Menu section (Chapter 4) below.

5 – PROTECT :

The LED flashes if a defect has been detected by the electronic safety system. Turn the integrated amplifier off, wait a few minutes and then turn it back on. If the LED continues to flash, return the amplifier to the factory for service or return it to your authorised dealer for examination.

6 – LED :

This LED shines, if the Stereobalance is shifted to the left.

7 – LED :

This LED is flashing once the amplifier receive a remote signal.

8 – LED :

This LED shines, if the Stereobalance is shifted to the right

9 – Volume Knob :

This knob is used to set and adjust the volume of the Energy. It is designed as a pulse generator without an end-stop where, at each step, an electronic pulse is transmitted to the microprocessor which in turn handles the electronic volume control. Chapter 4

provides more information on the functions of the rotary knob.

10 – LED ON :
This LED will light up when the Energy is powered on. (operation display)

11 – Input pushbutton < :
Pressing this button will select every next input before adjustment of the previous one. The display [2] shows what input is currently selected.

12 – Input pushbutton > :
Pressing this button will select every next input after adjustment of the previous one. The display [2] shows what input is currently selected.

13 – pushbutton SPLIT :
Pressing this button will turn the effect input on/off. The display above becomes brighter when the effect input is activated.

14 – pushbutton LS-OFF :
Pressing this button will turn the loudspeakers off. This function enables you to listen via the headphones only. When the loudspeakers are turned back on, they will be set to the initial volume level saved in the MODE menu instead of being adjusted to the possibly higher sound level set for your earphones - which could otherwise make for an unpleasant surprise.

15 – pushbutton MUTE :
Pressing this button will turn the volume level to "zero". A handy solution to silence music when a phone call is received. Pressing the MUTE button again will deactivate the MUTE function and restore the "previous" volume level.

16 – pushbutton MODE :
Pressing this button will engage the MODE menu. This menu enables you to perform a variety of adjustments, therefore an entire chapter is dedicated to the MODE menu. More information is provided in chapter 4.

17 – pushbutton ON/OFF :
This button is used to switch the unit on or off (Standby). From the off-position, the standby power supply is still active. Press the on/off switch on the rear panel of the Energy in order to completely turn off the integrated amplifier.

3.2 Rear Panel Connections
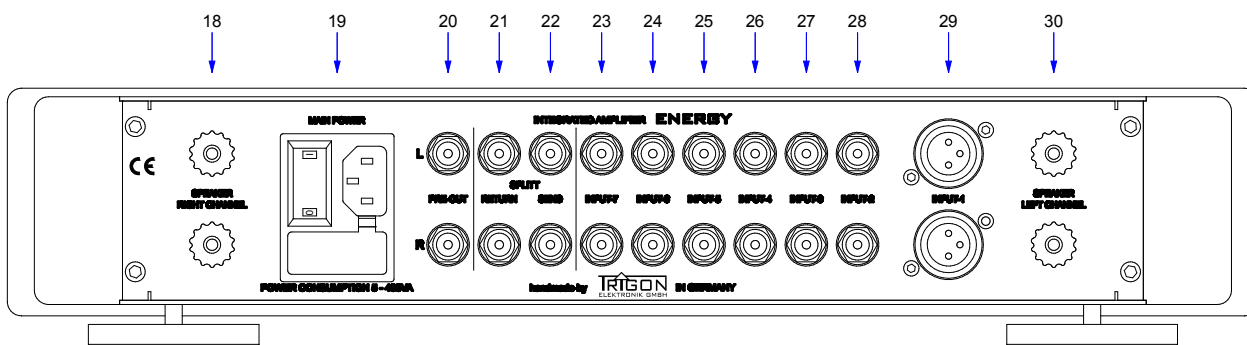
18 Loudspeaker Output – Right Channel :

The loudspeaker cable can be connected to the two binding posts of the terminal. The positive output terminal is in the top row, the negative is in the bottom row. Make sure that no loudspeakers with an impedance of less than 3 Ohm are connected. Never short-circuit the binding posts in order to avoid damage to your integrated amplifier.

19 Power Connection, Power Switch and Fuse :

Use the supplied high-quality power cord Volt to connect the unit to the power supply. Pay close attention to the markings (red dot) and be sure that all power plugs of your system are connected properly by inserting them in the same direction into the AC outlet. Set the power switch to the on position to supply AC power to the unit. When the fuse blows, replace it only by a fuse of the same rating. Be sure to unplug the unit before replacing the fuse.

20 Preamplifier Output :

A preamplifier can be connected to this RCA pair. If required, the output can also be used as a record output (Record). Information on how to activate the record output is provided later on in this manual under MODE menu.
CAUTION! If the record output is activated, you must not connect a preamplifier to the output since there is no volume control on the output.

21 SPLIT RETURN :

The output of an effects unit such as surround decoders, equalisers etc. can be connected to this RCA pair.

22 SPLIT SEND :

The input of an effects unit such as surround decoders, equalisers etc. can be connected to this RCA pair.

22 - 28 UNBALANCED INPUTS (Input 2 – 7) :

The RCA pairs INPUT2 through INPUT7 are the unbalanced inputs. The top row of the inputs is the left channel and the bottom row for the right stereo channel. These inputs can be used with all traditional line-level sources such as Tuners, CD Players, Tape Deck, etc.
Turntables will need a separate phonostage (such as the Trigon Vanguard II or Advance) to amplifier the signal of the phono cartridge to a level which the ENERGY can accept.

29 Balanced Input (Input 1) :

This pair of connectors can be used with a source unit which is provided with a line level,

8

balanced input.
Pin 1 - Ground
Pin 2 - Positive Signal (+).
Pin 3 - Negative Signal (-).

30 Loudspeaker Output – Left Channel :
The loudspeaker cable can be connected to the two binding posts of the terminal. The positive output terminal is in the top row, the negative is in the bottom row. Make sure that no loudspeakers with an impedance of less than 3 Ohm are connected. Never short-circuit the binding posts in order to avoid damage to your integrated amplifier.

3.3 Remote Control

The ENERGY offers an optional IR Remote called the Director.
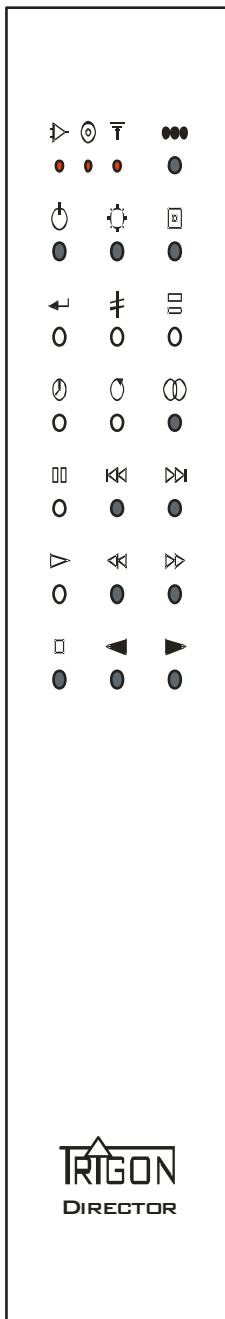
The Director is a system remote that can control multiple components. It controls the following functions for the ENERGY integrated amplifier.:

- On/Off (Standby) : used to turn the preamp on or off.
- Display On/Off : used to turn the display on or off.. When switched off, a small dot will be displayed behind the Input LED [2]. Also when switched off, the display will come on for a few seconds if the preamp is used in order to show any changes made.
- Mode Menu : used to engage the MODE-Menu. More information can be found in Chapter 4.
- Mono/Stereo : used to engage Mono operation. Once engaged, the Mono LED[5] will light up.
- Input + : each press will select the next input.
- Input – : each press will select the previous input.
- Volume +10 : the volume will increase by 10
- Volume -10 : the volume will decrease by 10
- Mute : used to mute the outputs. When engaged, a small dot will be displayed behind the Mute LED[6].
- Volume + : Increase volume
- Volume – : Decrease volume

The buttons used for these functions are described in the User Manual for the Director remote control.
(The image to the left has the relevant buttons for the ENERGY highlighed in bold.)

TRIGON
DIRECTOR

4 The *MODE* Function

We have included many additional features in this integrated amplifier that can be accessed via the *MODE* menu.

The following functions are available in order of access in the *MODE* menu:

- Balance control
- Adjusting initial volume level
- Adjusting Display brightness
- Activating the Record Output
- Unity Gain (Home Theater through-put)
- Input level adjustment
- Factory Default Setting

Press the Mode button [16] to enter the *MODE* menu. Within the *MODE* menu, press the pushbuttons [11] and [12] to move to the individual menu items. If no changes are made within approx. 12 seconds, the unit will automatically return to the "normal" operation mode.

The changes made are automatically saved when the pushbuttons are used to move to the next menu item. Pressing the pushbuttons [11] and [12] will enable you to move freely within the *MODE* menu. Pressing the MODE button again will enable you to exit the *MODE* menu at any time.

The menu options are explained in detail in the following chapters.

4.1   Balance Control

The following should be seen on the display to adjust balance:
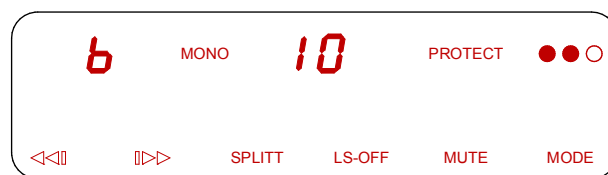
The volume control knob [9] is used to adjust the channel balance. When adjusting channel balance, please note that either the left LED [6] or right LED [8] will be lit to indicate which channel is receiving more signal. The volume display will indicate exactly how much more signal is being sent to an individual channel. Each number represents a difference of 1 dB of gain. The maximum difference is 100 dB. All changes in are automatically saved once the pushbutton [12] is used to move to the next menu option, or the MODE-button [16] is pressed to escape the *MODE* menu.

The adjustments made to the channel balance are saved until you change them again in the *MODE* menu.

Pressing the pushbuttons [11] and [12] will move you to the next menu item. Pressing the MODE-button [16] will exit the *MODE* menu.

4.2 Adjusting Initial Volume Level

The ENERGY uses an electronic volume control system. In addition to offering better performance (over the conventional Potentiometer), it also allows for special features that have previously not been available. One of these features is the ability to adjust the Initial volume level. It ensures that a *high* volume level which the unit was set to when last turned off will not immediately be played at the output and via the loudspeakers.

You can choose a default volume setting for the initial volume level in the *MODE* menu. Press the pushbutton [12] again to move to the second menu option which enables you to adjust the initial volume level.

```
    A      MONO      10      PROTECT    O O O


  ◁◁❙    ❙▷▷     SPLITT    LS-OFF    MUTE     MODE
```
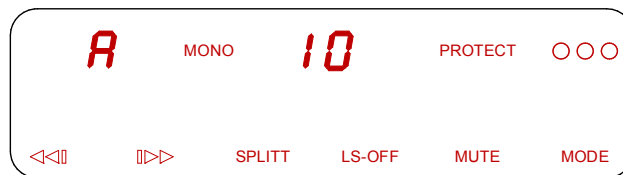
The initial volume level can only be adjusted, based on the level currently set, by turning the volume knob. The level set is automatically saved when the buttons are used to move to another menu item or to escape the *MODE* menu.

If you don't want to change any other options, simply press the MODE button [16] or wait for approx. 12 seconds to automatically exit the *MODE* menu.

4.3 Adjusting Display brightness

The brightness of the complete Display can be adjusted in 99 steps.

```
    h      MONO      99      PROTECT    O O O


  ◁◁❙    ❙▷▷     SPLITT    LS-OFF    MUTE     MODE
```
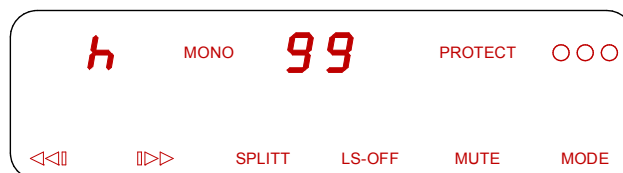
Turning the volume knob will adjust the display brightness in this menu option. The volume display will show the select brightness level.

Pressing the pushbutton [12] will move you to the next item in the *MODE* menu.

If you don't want to change any other options, simply press the MODE button or wait for approx. 15 seconds to exit the *MODE* menu.

4.4 Activating the Record Output

The ENERGY is shipped from the factory (preset) with a pre-amp output [20]. This output can be converted to a Record Output
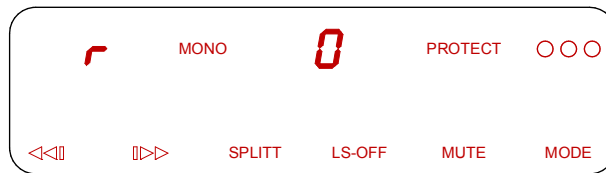
To convert the output [20], once in the Record Output option, press and hold the volume knob for approx. 3 seconds until the " 0 " in the volume display changes to " I ".

This change is then saved until, using the same sequence, it is reverted back to an input by changing the " I " in the volume display to a " 0 ".

To move to the next item in the *MODE* menu press the pushbutton INPUT [12]. If you don't want to change any other options, simply press the MODE pushbutton or wait for approx. 12 seconds to exit the *MODE* menu.

4.5 Unity Gain

This setting option will by-pass the volume control of a chosen input. This feature is useful if integrating the **ENERGY** into a multichannel system.
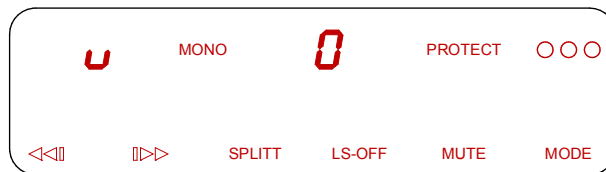

Once in the Unity Gain mode, you will see a " U " in the input display as well as the currently selected input, e.g. " 4 ", each second. Use the pushbuttons to select the input you want in order to set to Unity Gain.

The two LEDs [6] and [8] start flashing when you press and hold the volume knob [9] for a moment. After a few seconds the display [4] changes from " 0 " to " I ". The volume control is now by-passed and the input signal is sent directly to the output stage without signal increase or decrease. The volume level must be set via the surround processor.

CAUTION! Be very careful when activating the Unity Gain feature. If the selected input has a musical signal at the time of activation, it could cause extreme damage to amplifiers and/or loudspeakers.

The Unity Gain setting is then saved until, using the same sequence, it is reverted back by pressing and holding the volume knob again. The Unity Gain setting only applies to the input for which it is activated. All other inputs operate in *"normal"* mode. Only one input can be selected for the Unity Gain feature.
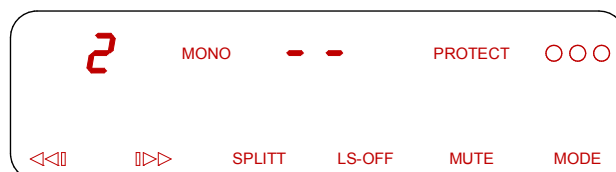
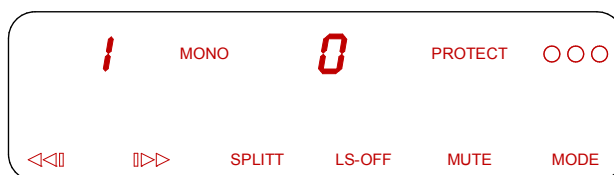Unity Gain display when set to Input 2

4.6 Input level adjustments

It can be that the various sources connected to the ENERGY have different output levels. This is usually noted when switching inputs and noticing that different sources play at more loudly than others. The ENERGY offers the option to adjust the sensitivity for each input.

In the MODE menu, there is an adjustment for input level. Pressing the pushbuttons [11] und [12] will enable you to select the input you want to adjust. The display will then, at position [2] and each second, alternate between the letter " E " and the number of the currently selected input. Turning the volume knob [9] to the right will increase the level, turning the volume knob to the left will decrease the level. The volume display [9] indicates the incremental increase/decrease. With an increase, the red LED [8] will also light up, with a decrease the left LED [6] will light up.

Input level adjustment display …

E	MONO	0	PROTECT	○ ○ ○
◁◁▯	▯▷▷	SPLITT	LS-OFF	MUTE	MODE
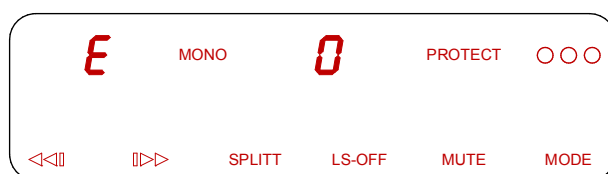
… alternating with the following for Input 1:

1	MONO	0	PROTECT	○ ○ ○
◁◁▯	▯▷▷	SPLITT	LS-OFF	MUTE	MODE

Now you can use the volume knob [9] to adjust the input level. The adjusted value is automatically saved when the pushbuttons are used to move to the next input. Using the same sequence, you can individually adjust and compare the input levels for each input.

The adjustment range is +/- 12dB in 0.5dB steps or, in other words, 24 digits (steps indicated in the display) "up" and 24 digits "down".

The level adjustments are permanently saved to the memory and will not be lost when the integrated amplifier is switched off. They are saved until you change them again or reset them to the factory default setting "zero" as is described further on.

If you don't want to change any other level settings, simply press the MODE button [16] or wait for approx. 12 seconds to automatically exit the *MODE* menu. Press the pushbutton [12] to move to the next menu item.

4.7 Factory Default Setting

The ENERGY can be reset to the factory default settings in this menu option.

If you are not happy with the adjustments made in the *MODE* menu and wish to reset the unit to the factory default settings, press and hold the volume knob [9] for approx. 3 seconds in this menu (display [2] shows an "n"). The entire display will flash several times and the *MODE* menu will then close. Meanwhile, the factory default settings will be restored: Stereo balance is set to zero, display brightness is increased to "99", the highest possible value, the initial volume level is set to " 10 " whereas all input level adjustments are changed to "zero", and the PRE-OUT (preamplifier output) is available.

--- All of your settings will be lost! The **ENERGY** will be reset to the Factory Default settings. ---

If you don't want to reset your settings, press the MODE button to exit the *MODE* menu.

5 What to do, if...

This chapter is designed to help diagnose and trouble-shoot some of the most common errors.

5.1 ... unit doesn't turn on?

Is the AC plug from the Power supply connected properly to the AC outlet? – *Secure connection.*

Does the AC outlet that you have the power supply connected to have current, or is it possible that the fuse for that outlet has been blown? – *Test the fuse for that AC outlet at the house fuse box.*

Is the internal fuse blown? – *Contact your dealer.*

Is the power switch on the rear panel set to the on position? – *Turn on the power switch.*

5.2 ... no sound is produced?

Do you have the correct input selected? – *Select the intended input..*

Is the selected source even sending a signal? – *Select a different input with another connected source to test if it works. If this source works, then you should test the first source to be sure that it is functioning properly.*

Is the *MUTE* function activated? – *Press the MUTE button, or simply turn the volume*

knob.

Has the unit encountered a static electric charge? – *Sometimes it can occur, especially during winter months, when humidity is higher, that your clothing will carry a slight static electric charge. This charge can be transmitted to the preamplifier during normal use and may confuse the microprocessor used to control the* ENERGY. *This is a common problem with many common computers as well. If this happens, the* ENERGY *will turn off the output relays to protect the rest of the system. To fix, first try to change the selected input, which should reset the output relays. If this doesn't seem to work, disconnect the AC cord from the wall outlet for approx. 30-60 seconds. Reconnect the AC cord and the preamplifier should work without any problems.*

5.3 ... there is a hum?

Are all the connections fastened securely? – *Test all cable connections.*

Sometimes multiple problems can contribute to a magnetic reception, which will result in a system hum. To fix these types of problems, it is recommend that you contact your local dealer who has many years of experience in trouble shooting such issues.

It hums only when connected to a Tuner, VCR or Television? – *All of these components are also connected to some type of grounded Antenna. This problem can also be related to a magnetic reception. In this case however, the resolution is quite simple. Use of a shielded power filter on the antenna can reduce or eliminate this hum. These types of shielded power filters are readily available at most HiFi or Radio stores.*

5.4 ... the remote control doesn't seem to work?

Does the remote work when set into the Preamplifier mode? – *Press the PREAMP button on the remote control. It is now set to control the* ENERGY *integrated amplifier.*

Are the batteries empty? – *Install new batteries.*

Are you using the remote too far from the preamplifier? – *Get closer to the preamplifier. IR-remote controls do have an ideal use distance. With full batteries, the unit will only function with in 8 meters from the preamplifier.*

If the sensor of the remote control is exposed to direct, bright sunlight, the use distance will become shorter. *- Avoid direct sunlight!*

6 Technical Data

Output power (RMS)	: 2x 70Watt at 8 Ohm, 2x 100Watt at 4 Ohm
Frequency range	: 2Hz – 150KHz (- 3dB)
Distortion	: < 0.02 %
Channel separation	: < 80 dB (1kHz)
Signal-to-Noise ratio	: < 96 dBA
Inputs	: 6x Cinch + 1x XLR
Input Impedance	: 47kOhm
Outputs	: 1x Speaker , 1x Preamp or 1x Record 1x : head phone
Output Impedance	: Line Cinch and XLR connectors @ 47 Ohm
Headphone	: 1x , Impedance > 200 Ohm
Accessories	: IR-Remote Control
Weight	: 14 kg
Size (WxHxD)	: 440 x 85 x 360 mm (WxHxD)
Warranty	: 3 Years

Specifications subject to change.