

USER MANUAL

GOLDMUND TELOS 154
4-channel Power Amplifier



Thank you for purchasing the Goldmund Telos 154 4-channel Power Amplifier. You have acquired one of the best Universal Power Amplifiers ever made for professional and domestic uses.

Please take some time to read this manual. It will provide you with useful information to make your pleasure of listening to the Telos 154 even higher.

INTRODUCTION

GOLDMUND TELOS 154 – 4-channel Power Amplifier

Goldmund was founded in 1978 and has ever since been dedicated to the accurate reproduction of sound and image.

At Goldmund, we strive to lead in the creation, development and manufacture of the industry's most advanced technologies, including audio and video systems, home - networking and music distribution.

The guiding principle at Goldmund is to produce a precise sound with the least possible loss of quality through the different stages. Goldmund will never adopt a technology before it is sufficiently developed to satisfy the high quality standards we set. This is why Goldmund has often rejected mainstream technologies and developed its own.

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W A R N I N G !

No connection or manipulation must be done before reading these instructions. Damage to the amplifier may result if the following instructions are not understood and applied.

These extremely high quality amplifiers possess new technical features which are a necessity for accurate sound reproduction in the best audio systems.

Only careful installation and use can provide the satisfaction you are expecting.

The installation instructions must be carried out in full and the mentioned precautions taken to get the expected result and to avoid impairing the amplifier's performance.

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UNPACKING

You will find in the Goldmund Telos 154 box:

- The amplifier
- The power cord
- This manual

Please keep the packaging in case you need to transport the amplifier at a later date.

ATTENTION

If you need to return the Telos 154 to the factory or to your local representative for a warranty repair, **please note that it must be repacked in the original packaging.**

This packaging has been designed specifically to protect your Telos 154 in transit. Use of alternative packaging is likely to result in damage, invalidating warranty cover.

The Goldmund Telos 154 amplifier, as all high quality amplifiers, generates a large amount of heat when driven at high levels and must be vented properly. It is mandatory to allow a proper cooling of the heat sinks. Do not put temperature sensitive equipment on top of the amplifier.

Due to its weight, and to maximize the effect of the built-in "Mechanical Grounding" construction, the Telos 154 can be located on the floor or on other very strong supports if they offer rigid transmission to the floor.

The Telos 154 is built on four rubber feet to ensure proper the amplifier support. This avoids all detrimental vibrations inside the amplifier, following the famous Goldmund "Mechanical Grounding" principle.

If you use more than one Telos 154 at any location, you may decide to stack them. You may stack up to 3 amps provided extra care is taken to ensure proper air circulation vents the side heat-sinks.

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LINE VOLTAGE ADJUSTMENTS

A voltage selection is provided inside the amplifier.

If your line voltage is not adapted to the voltage indicated on the serial plate of the amplifier, please consult your local Goldmund dealer for internal adjustment.

ATTENTION

The Goldmund Telos 154 amplifier will function properly for main line voltages indicated page 11 (see rubric Power for more details).

If your main line is usually out of the tolerance or if you want change the main voltage of your amplifier, contact your authorized Goldmund retailer to assist you on your request.

Please check the value of the main line fuse. This fuse is located on the back panel of the amplifier, above the power cord receptacles.

Use an 8A delayed fuse.

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CONNECTIONS

Connect the power cord to the back of the amplifier and plug it into the nearest wall plug. Use only a 3 lugs grounded plug, for safety reasons. To get the best sound from the amplifier, avoid any multiple plug or extension cord.

Check if volume control is down to zero on the preamplifier.

Connect the digital input cable to the digital input 1 to 4. Connect the speaker cable to one of the red and black terminals in the back of the amplifier. Each input has its own output speaker connector.

You may notice that the ground of the input plug and the black speaker terminal are the same polarity. The amplifier is non-inverting in phase.

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AMPLIFIER CONTROLS

On the front plate of the Goldmund Telos 154 amplifier you will find only one POWER key.

As soon as the amplifier is connected to AC line, you can turn on the amplifier by pressing the power key. When turned ON the channel is connected after a few seconds and the front panel "POWER" LED lights up.

The amplifier may be powered OFF by turning off the "POWER" switch at any time. The LED will fade very slowly, indicating discharge of the filter capacitors. The speakers will be disconnected almost immediately.

When a digital signal is connected in one of the three digital inputs, the orange light will be turned on indicating that the input is locked.

You might use all input simultaneously, each input has its own power amplifier module.

Warm-up sonic effect

If the power amplifier has not been powered on for a few days, the optimum sound quality is reached after 15 minutes. This delay has been optimized to be minimal and the sonic quality when just powered on is much higher than other quality power amplifiers.

Speaker polarity

Even if you have an absolute phase inverter on your preamplifier, and even if you have carefully selected the proper line phase (see in next section), there is a possibility to again increase the sonic quality of your speakers by reverting the polarity of each speaker cable at amplifier termination. But since the line phase and the speaker polarity interfere to each other, you have to experiment carefully with all the combinations before picking the right one.

If your preamplifier has an absolute phase inverter, this will interfere too. If it does not have an absolute phase inverter, do not forget the result will depend on the source, as most records and CDs have been recorded without care for the absolute phase. Be patient...

Mains line phase inversion

The sonic quality of your Goldmund Telos 154 can be greatly improved if the mains AC line is properly connected. Try to invert the AC plugs of both your amplifiers, using special adapters.

We recommend that you try this carefully. You must do it in combination with the speaker polarity and/or with absolute phase switching to be sure of the best result.

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SAFETY AND PRECAUTIONS

Protection against DC

The Goldmund Telos 154 is a DC-coupled amplifier without protection. If it is associated with a badly designed or defective preamplifier the speakers could easily be damaged by the DC.

The Telos 154 doesn't amplify DC but DC applied at the input is passed to the output. This protection circuit is totally transparent and has no sonic effect.

Short-circuits warning

If one output is short-circuited by accident, the amplifier will source too much current. Such accident should be limited over time to avoid excessive heat. Short-circuits are not covered by the warranty.

ATTENTION: the Goldmund Telos 154 is an extremely high speed amplifier.

Any bad ground connection can generate high frequency oscillations which are dangerous for the tweeters.

It is also generally dangerous to run input cables and speaker cables in parallel for a long distance. If these cables are not of high quality or badly shielded, an "Antenna-Effect" can generate dangerous high-frequency oscillations.

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MAINTENANCE

The Goldmund Telos 154 amplifier usually requires no maintenance.

To clean your amplifier, use a very soft, clean, damp cloth to avoid scratching the surface. Dampen with water or a mild detergent solution. Avoid abrasive or harsh cleansers (e.g. products containing sodium carbonate). Always turn the power OFF before cleaning your amplifier.

POWER SUPPLY:

- 4 toroidal transformers
- 4 separated power supplies
- Power cord socket (3 lugs).
- Main Fuse (8A slow-blow)

FRONT PANEL CONTROLS:

- ON/OFF Switch
- Green LED for power
- Orange LED for lock
- Red LED for error

REAR PANEL CONNECTORS AND CONTROLS:

- Power cord socket 3 lugs
- Main fuse socket
- 4 digital Input RCA connectors
- 4 pairs of output speaker connectors (left and right)

GROUNDING

- Separated ground and earth signal
- Connection between earth and ground to cancel all ground loops

SAFETY FEATURES

- Automatic switching to MUTING if the AC line drops or is interrupted

POWER

- Power RMS (Goldmund FPP Standard): 4 x 150W on 8 Ohms
- Peak Power/Maximum voltage: 4 x 275W on 8 Ohms
- Nominal line voltage: 117 or 234 V (+/- 10 %)

BANDWIDTH

- 20Hz-20kHz +/-0.5dB typical

CIRCUIT SPEED

- Slew rate of the amplification stages: 60 V/us
- Rise time: < 500 ns

GROUP DELAY

- < 100 ns stable frequency from DC to 200 kHz

DISTORTION

- THD < 0,002% (0dBFS, 80KHz bandwidth measurement)

SIZE AND WEIGHT

- 385W x 310D x 220H (mm)
- Weight: 25kg

WARRANTY

- 3 years parts and labor

Information and product specifications contained in this manual are subject to change without prior notice. Updated versions of this manual will be posted on our website at www.goldmund.com.

Please visit our support page at <http://www.goldmund.com/support/register> to register your Goldmund product for warranty.

1. Read instructions. Read the safety and operating instructions before operating the appliance.
2. Retain instructions. Retain the safety and operating instructions for future reference.
3. Heed warnings. Observe all warnings on the appliance and in the operating instructions.
4. Follow instructions. Follow all operating and use instructions.
5. Water and moisture. Do not use the appliance near water, for example near a bathtub, in a wet basement, or near a swimming pool and the like.
6. Carts and stands. Use only with a cart or stand that is recommended by the manufacturer.

An appliance and card cart combination should be used with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.
7. Ventilation. Site the appliance so that its location or position does not interfere with its proper ventilation.
8. Heat. Site the appliance away from heat sources such as radiators, heaters, stoves, or other appliances (including amplifier) that produce heat.
9. Power sources. Connect the appliance to a power supply only of the type described in the operating instructions or marked on the appliance.
10. Grounding and polarization. Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
11. Power cord protection. Route power cords so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, power sockets, and at the point where they exit from appliance.

12. Protective attachment plug. As a safety feature the product is equipped with an attachment plug containing overload protection. See the instruction manual about resetting or replacing the plug. Should the plug need replacing ensure that a replacement is used which has the same overload protection as the original.
13. Cleaning. The product should be cleaned only as recommended by the manufacturer.
14. Power lines. An outdoor antenna should be located away from power lines.
15. Outdoor antenna grounding. If an outdoor antenna is connected to the tuner/receiver ensure that the antenna system is grounded to provide some protection against voltage surges and static build up.
In the USA see article 810 of the National Electrical Code ANSI/NFPA 70 concerning installation requirements.
16. Unplug this apparatus during lightning storms or when unused for long periods of time.
17. Objects and liquid entry. Take care not to let objects or liquids fall into the product.
18. Damage requiring service. The product should be serviced by qualified personnel if:
 - The power cord or plug has been damaged.
 - Objects or liquid have fallen into the product
 - The product has been exposed to rain
 - The product does not appear to operate normally or exhibits a marked change in operation.
 - The product has been dropped or the enclosure damaged
19. Servicing. Don't attempt to service the product beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.