

## PrimaLuna® ProLogue Premium

Herman van den Dungen: **PrimaLuna** ▶ in Italian language is "**First Moon**". My grandfather was the first "**Herman**". My grandmother, an aristocratic lady in a small Dutch village, had a special name for her husband: "**Maantje**", which means **Little Moon** (which is now also the name of our small dog), **van den Dungen**. The people in the village adopted that name, and having a strong accent, they soon called him "**Maontje**" van den Dungen. My father's first name was Cor, but in the village it was of course "**Cor from Maontje van den Dungen**". I was of course "**Herman from Cor from Maontje van den Dungen**" ..... etc. That's why I thought of **First Moon** as a brandname and that's why the logo is how it is ..... ◀

Loris Arrigucci: **PrimaLuna** ▶ believe it or not ... I discovered a small town located 50Km north of Milano called **Primaluna!!!** Please get yourself a map from Italy. You'll find **Primaluna** town near the upper-right corner. It is located 50Km north of Milano near the Lake of Como. This should eliminate every doubt regarding "italian" origin of **Primaluna** name. I've read the "history" section of the **Primaluna** village web site and found the following (literally translated):

One probable interpretation of the name of the village comes from latin "**Primum Lumen**", which means "**First Light**" of Christianity, since the very first evidence of Christianity in this region dates 495 Annus Domini. "**First Light**" translates into "**Prima Luce**" in Italian and this seems very interesting to me: **PrimaLuce (FirstLight)** is the first light that we, hi-fi lovers with small budgets, can see in this world of darkness populated by way too expensive esoteric gears ..... ◀



Please contact us for registering your PrimaLuna ProLogue Premium Integrated Amplifier. We will keep you updated of upgrades or any other information related to your amplifier. If you wish to comment on your PrimaLuna ProLogue Premium Integrated Amplifier, please do. If you want to send us a review of your experience with the amplifier, you are more than welcome to. If you have any technical questions, please don't hesitate to contact us. We thank you upfront for your time and attention.

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## PrimaLuna® ProLogue Premium

### PrimaLuna®

### ProLogue Premium

### Integrated Amplifier



Serialnumber .....

## THANK YOU!

We would like to thank you for choosing our PrimaLuna ProLogue Premium vacuum tube Integrated Amplifier as the heart of your music system. The ProLogue Premium Integrated Amplifier is the first member of the new ProLogue Premium series of affordable, high-quality tube products. The designers and builders of the PrimaLuna equipment all have a long history in high-end audio. We feel we have shown with PrimaLuna that we are able to offer a range of affordable audio instruments that can easily compete with today's most expensive brands and assure you we will continue that way. We firmly believe that our quality level will set the bar at a difficult height for other products to match.

This PrimaLuna ProLogue Premium Integrated amp features:

- Hand-made construction with the finest point-to-point wiring, using workmanship that is equal to or better than any product you can buy at any price.
- A heavy-gauge, fully-vented steel chassis with a five coat finish. Each coat is hand-rubbed and polished.
- Premium parts that include a toroidal transformer for power supply; custom designed -in conjunction with one of the most prestigious transformer designers in the USA- encapsulated output transformers the quality of which fits nicely between standard ProLogue and DiaLogue transformers; wide bandwidth for great bass and extended highs; ceramic tube sockets; ALPS volume control; Nichicon and Solen capacitors; superfast Philips-diode-circuitry; gold-plated heavy duty WBT style speaker terminals (all speakerconnectors are solid shaft, without hole, for better conductance, better sound and higher reliability); gold-plated panel mounted input jacks.
- SoftStart™ circuit for extended life of sensitive components, plus a reduced chance of tube failure from thermal shock.
- A new generation Adaptive AutoBias™ exclusive to PrimaLuna. This circuit monitors and smoothly adjusts bias constantly and instantly, reducing maintenance and increasing performance due to the dramatic reduction in distortion. It comes with a new extensive output stage protection circuitry with +B relay to protect output transformers, resistors and high voltage power supply in case a tube fails. In all ProLogue Premium Amplifier models the new generation Adaptive Auto Bias Board comes with our new BTI™ circuit. BTI™ stands for Bad Tube Indication (by LEDs), making tube-life again a bit easier.
- The ProLogue Premium Integrated Amplifiers as well as the Stereo and Mono amplifiers come with an EL34/KT88 bias switch. This means that with the flip of a switch you can choose for the optimum bias setting for EL34 type of tubes or KT88 type of tubes. No hassle with screwdrivers, no messing around with meters etc. Just switch tubes, switch bias!
- No more 12AX7 tubes in the ProLogue Premium range of products. Instead of a 12AX7/12AU7 combination in each channel, we use a double 12AU7 combination. Lower distortion levels, higher level of sound quality. Distortion levels in the first stage have dropped with a factor of 5 at low levels to at least 20 at higher levels, above 1V.

## Warranty Information

Two-year limited warranty

Six-month warranty on stock vacuum tubes

## Terms &amp; Conditions

1. **Limited to original purchaser.** This warranty is for the sole benefit of the original purchaser of the covered product, and may not be transferred to a subsequent owner.
2. **Conditions & Limitations.** This warranty is subject to conditions and limitations, as follows. This warranty is void and inapplicable if the product has not been used in accordance with the instructions found elsewhere in this manual, or if it has been misused, abused, damaged by accident or neglect, or in transport once in possession of purchaser. The warranty is also void if the product has been tampered with or has been repaired or modified by anyone other than Durob Audio BV or its specifically authorized representatives.
3. **Remedy.** If this product contains material, manufacturing, or workmanship defects, it must be packed in original packaging and returned to Durob Audio BV or its authorized representative via insured freight, at the owner's expense. Returned products must be accompanied by written description of the defect, and a return authorization number (available from Durob Audio BV or the authorized representative via e-mail). Upon receipt of the defective product, Durob Audio BV or the authorized representative agrees to repair the product without charge for parts (except vacuum tubes if the unit is more than 6 months old), or labor. The product will then be returned via prepaid, insured freight, with carrier at the sole determination of Durob Audio BV or the authorized representative. This constitutes the purchaser's sole remedy.
4. **Design change.** Durob Audio BV and its partners reserve the right to modify their products or change specifications at any time without obligation or liability to previous purchasers.
5. **Miscellaneous.** Any implied warranties relating to the above product shall be limited to duration of this warranty. This warranty does not extend to any incidental or consequential costs or damages to purchaser or third-parties. Our liability will be no more than the amount you paid for the product that is the subject of a claim. This is the maximum amount for which we are responsible. This warranty gives you specific legal rights. You may also have other rights which vary from country to country and state to state.

# PrimaLuna® ProLogue Premium

## Specifications

Power .....	35 Watts per channel
Frequency Response .....	10 Hz – 130 kHz -3dB
THD with AAB .....	less than 1% at full power
S/N Ratio .....	75 dB flat; 90 dB WTD A
Input Impedance .....	100 kOhm
Input Sensitivity .....	290 mV (for rated power at maximum volume setting)
Maximum Gain .....	36,5 dB
Power Consumption .....	255 Watts
Net Weight .....	49.5 lbs / 22.5 kg
Shipping Weight .....	58.4 lbs / 26.5 kg
Dimensions .....	15.4" x 14.4" x 8" / 390 mm x 365 mm x 202 mm (L x W x H)
Shipping Dimensions .....	22.7" x 18.4" x 12" / 577 mm x 468 mm x 305 mm (L x W x H)
Inputs .....	4 pairs Stereo RCA, 1 pair Home Theater Input
Outputs .....	4 & 8 Ohm Speaker Taps
Tube Complement .....	4 x EL34 4 x 12AU7
Remote control .....	Heavy Metal Remote Control

*All PrimaLuna products come with PrimaLuna SilverLabel tubes which are pre-selected by us following our simple 60 out of 100 rule (PTS™ - Premium Tube Selection) and as such, are already "special" when compared to other standard tubes on the market. Additionally, for certain models we have our GoldLabel tubes, which are available from us if you wish to upgrade.*

As of July 1, 2006 all PrimaLuna products are manufactured with RoHS compliant parts.

# PrimaLuna® ProLogue Premium

- All new PrimaLuna PTP™ (Power Transformer Protection) circuit. When the power transformer overheats due to environmental circumstances, overloading or some problem in the unit, an internal thermal switch breaks the primary, allowing the unit to cool down before harm is done. After it's cooled, contact is restored and if nothing is broken, the amp will repower and function properly.
- All new PrimaLuna OTP™ (Output Transformer Protection) circuit which further protects the amplifier.
- LIVE side of AC input connector indicated by aluminium color screw.
- 4 line level inputs, one stereo Home Theater pass thru.
- Heavy-gauge, brushed aluminum remote control included.

PrimaLuna SilverLabel tubes are pre-selected by us following our simple 60 out of 100 rule (PTS™ - Premium Tube Selection) and as such, are already "special" when compared to other standard tubes on the market. Additionally, for certain models we have our GoldLabel tubes, which are available from us and several other parties if you wish to upgrade. In the USA, Upscale Audio's inventory of New Old Stock tubes (which is another thing you might want to experiment with) is the largest you can find. Elsewhere, independent suppliers can assist you to make your best choice.

We hope that the PrimaLuna ProLogue Premium Integrated amplifier will make you want to follow our next steps in expanding this new range of products. If you have any questions or comments, don't hesitate to contact us. You can also share your thoughts with others at [www.audioreview.com](http://www.audioreview.com) or other review sites. On the [www.primaluna.nl](http://www.primaluna.nl) website you will find links to these and other websites. We keep our prices low by relying on word-of-mouth and customer feedback, and we would appreciate hearing what you have to say about our product. Finally, if you need service during or after the warranty period, please don't hesitate to contact us.

Thanks again for your support!

*Herman van den Dungen  
DUROB AUDIO BV*

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The information in this manual is subject to change without further notice.

## Troubleshooting

Some tips:

- No output. Power is on, but power LED is off and tubes do not light up. AC cable makes bad connection in IEC connector. Please check.
- No output. Power is on, but power LED is off and tubes do not light up. PTP™ protection may have switched off power transformer. If so, the amplifier will switch on again after internal temperature of power transformer returns to normal. Overheating might be caused by higher environment temperature than normal or heavy use.
- BTI switch-off. BTI switched off the high voltage supply to the power output tubes. This can happen when one (or more) output tube(s) draw(s) significantly more current than normal, like what can happen when a loudspeaker terminal is short circuited with volume turned up. Or, in case of an internal output tube failure, the BTI™ circuit understands that there is a new situation which can cause harm to the amplifier or the loudspeaker, and the high voltage power supply to the output tubes is interrupted as a protective measure. To reset, switch the amplifier's power off for at least two minutes, then switch back on. Of course this should only be done after the cause of the failure has been identified and resolved. Switching the power back on too early can fool the BTI circuit into acting as though the problem has not been totally resolved and it may put the amp back into protection mode again. So be sure to give it enough time to reset.
- No output. Power is on, but power LED is off and tubes do not light up. Mains fuse is out. Replace fuse as per instructions on page 9.
- Noise coming from one channel. Noisy tube. First swap the two inner 12AU7 tubes left to right. If noise follows tube swap, than you have found the problem tube. If noise does not follow, swap the two outer 12AU7 tubes left to right.
- Hum coming from one channel. Possible bad output tube. Swap the output tubes in pairs from right to left. If hum follows the swap, swap the far left and far right tubes. If the hum returns to the original problem channel, you have found the problem tube. If not, swap the inside output tubes left to right.
- Noise/distortion coming from both channels. Tubes may be in need of replacement. Read page 10 for tube basics and replacement options.
- Remote control does not function. Check battery and if necessary, replace with new.

If you try these possible solutions and problems persist, contact us or your local distributor for further investigation.

## Stereo Home Theater Pass Thru

The PrimaLuna ProLogo Premium Integrated Amplifier is equipped with a home theater pass thru that allows you to enjoy your stereo source material and the 2 main channels of your separate home theater processor.

This is a true pass-thru circuit. Most integrated amps that advertise having home theater pass thru circuits are only “unity gain” circuits. This means the volume is set at a pre-determined level, but the preamp section is still active and can introduce unwanted noise and coloration to the sound. The home theater pass thru of the ProLogo Premium Integrated Amplifier completely removes the preamp section from the signal path. This is a “direct-line” circuit that results in a lower noise floor, and less coloration.

## Connecting Your Surround Sound Component To The ProLogo Premium Integrated Amplifier

To avoid damaging your equipment, always make sure everything is turned off and unplugged from the wall before connecting your components.

Connect your stereo sources and speakers to the ProLogo Premium Integrated Amplifier as normal. To integrate the ProLogo Premium Integrated Amplifier into your home theater system, take the front left & right preamp outputs from your A/V processor or receiver and plug them into the “HT” input on the back of the ProLogo Premium Integrated Amplifier. When you want to watch a movie, simply turn the ProLogo Premium Integrated Amplifier on, and switch the input to “HT.” Now control the volume via your home theater processor as normal. We recommend you go into the setup menu of your processor to match the levels of the front Left & Right speakers to match the volume of your center channel. Consult your processor’s manual for more information.

## PhonoLogue Phono Stage (Optional)

Your ProLogo Premium Integrated Amplifier comes without a phonostage, but we have a high quality optional internal phono stage available. The PhonoLogue phono stage can be installed at any time by your dealer or any qualified person.

The PhonoLogue MM phono stage with RIAA equalization, requires no extra plugs or connectors. It fits (by soldering) on the existing RCA's of one of the inputs. It provides superior sound quality on a tiny footprint. We use Surface Mount Technology implementation for shortest signal paths as well as minimum parasitic capacitances and inductances. Excellent parts throughout, selected on sound quality as first priority: miniature film capacitors, minimelf resistors, superior opamp for highest accuracy, lowest noise, highest speed and most robust drive capabilities into the RIAA correction stage, resulting in a very detailed, open and lifelike sound from any LP record. Low impedance electrolytics, super low-noise powersupply. Dimensions: small as a big stamp!

## Specifications:

Input Impedance:	50 kOhm	RIAA accuracy:	<0,5B 20Hz - 20kHz
Gain:	42dB (127x)	Overload Margin:	>20dB rel 5mV
Frequency Response:	10Hz - 50kHz	Harmonic Distortion & noise:	-83dB
		Size:	3,2 x 3,8 cm (1.26" x 1.5")

## Warning

To prevent serious injury, electrical shock or fire:

- Do not operate with bottom plate removed.
- Keep away from rain and moisture.
- Always disconnect all cable connections to and from amplifier before changing fuses and/or tubes.
- Do not replace fuses with any fuse other than the same type and rating as used by the factory.
- Do not replace tubes without reading instructions.
- Do not replace fuses or tubes if you have any doubt about your ability to do so. We accept no responsibility for any personal or material damage due to incompetent use or users.

## Package Contents

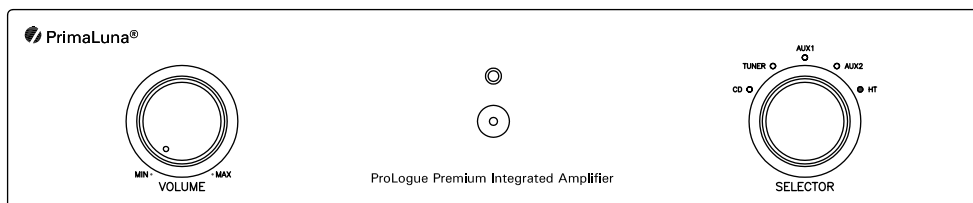
ProLogo Premium Integrated Amplifier .....	1
Power Cord .....	1
This Owner's Manual .....	1
White Gloves .....	1 pair
Tube Complement .....	4 x EL34 4 x 12AU7
Main Fuse .....	1 x Littelfuse® 218 Series 2.5A Slo-Blo® 5 x 20 mm fuse for 100-120VAC and Littelfuse® 218 Series 1.25A Slo-Blo® 5 x 20 mm fuse for 200-240VAC
Heavy Metal Remote Control .....	1

## Initial Setup

- Carefully remove the ProLogo Premium Integrated Amplifier from its packaging. Use the white gloves to prevent fingerprint smudges.
- Remove the tube cage by carefully pulling it up and away from the amplifier.
- Remove the protective foam surrounding the tubes.
- Tubes are already installed. Check that each tube is firmly seated in its socket. Use gloves.
- Replace cage back in its place if desired.
- Check to see the power switch is off (down).
- Connect each source to the corresponding plugs.
- Connect your speaker wires, positive to positive, negative to negative. This unit is non-inverting.
- Plug the powercord into the amplifier, then into the wall socket.
- Switch the amplifier on.
- The tubes will be warmed up and ready to use in about 60 seconds.

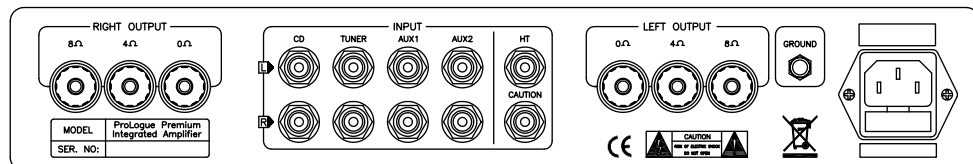
# PrimaLuna® ProLogue Premium

## Inputs, Controls & Remote Function Front Panel



PrimaLuna's front panels are made from machined aluminum, finished to match the black/blue metallic chassis. The volume is controlled with the knob on the left, source selection is on the right. Both volume and source can also be selected by remote control. Your sources are labeled CD, Tuner, Aux 1, Aux 2 (no functional differences between these) and HT (Pass Thru; volume fixed!!). The heavy metal remote control that comes with your PrimaLuna ProLogue Premium Integrated Amplifier can be used for selecting sources and adjusting volume. It also can be used to control functions on PrimaLuna's CD player. The power switch is located on the left side of the amp, just behind the front plate, the EL34/KT88 switch on the right side of the amp, just behind the front plate.

## Rear Panel



Looking at the rear panel, you will note you have four pair of stereo inputs, one pair of HT Pass Thru, one ground connection (for optional phono) and the pair of speaker terminals. Attach the positive (+) from your loudspeaker to the 4 or 8 ohm terminal that most closely matches the average impedance of your loudspeakers according to their manufacturer's specifications. The negative (-) from your loudspeaker attaches to the 0 Ohm terminal.

Tip: Experiment using the 4 or 8 Ohm positive (+) terminal to find the best match for your speakers. Do not make any assumptions. Trust your ears.

# PrimaLuna® ProLogue Premium

## PTS™ - Premium Tube Selection™

Our "standard" PrimaLuna SilverLabel tubes are pre-selected using our simple 60 out of 100 rule and as such, are already "special" when compared to other standard tubes on the market. Out of 100 tubes which have passed the final quality control from the manufacturer, we are allowed to select and keep the 60 best pieces. The other 40, which are in no way defective (these just do not belong to the best 60), go back to the manufacturer and are used to supply other clients.

Additionally, we keep an eye on all tubes still manufactured today and if special, high quality tubes become available, we consider them as candidates for our GoldLabel tubes. Normally these are tubes which are still in production—we don't want to offer minor quantities of N.O.S. (New Old Stock) tubes as PrimaLuna GoldLabel tubes.

Currently we have available 12AX7 and 12AU7 GoldLabel tubes but will be expanding our inventory in the near future. Please feel free to inquire.

## EL34/KT88 Switch

The ProLogue Premium Integrated Amplifiers—as well as the Premium Stereo and Mono amplifiers—come with an EL34/KT88 bias switch. This means that by the flip of a switch you can choose the optimum bias setting for EL34s or KT88s. No hassle with screwdrivers, no messing around with meters etc. If you swap tubes, simply flip the switch for optimum bias!

And should you use the "wrong" bias setting for the tubes in use, don't worry. It just means you did not choose the "optimum" bias setting as decided by the PrimaLuna design team. Some PrimaLuna owners even like to "play" with this switch to see what is the optimum bias setting for their circumstances and some go even further and play with this switch while having a mix of EL34 and KT88 within one channel. All is possible due to the PrimaLuna Adaptive AutoBias Circuit.



# PrimaLuna® ProLogue Premium

## Tube Basics

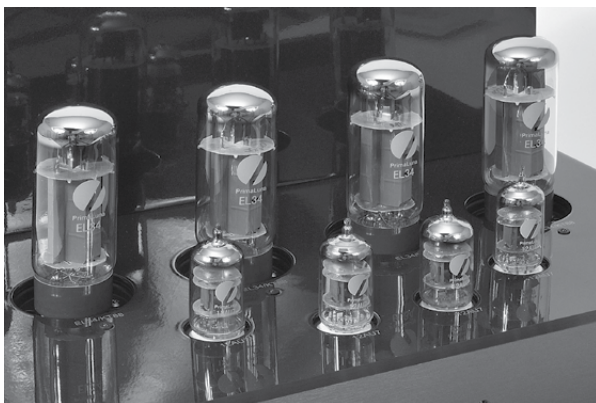
The 12AU7 tubes will have a life of about 5,000 to 10,000 hours. However, the life span of power tubes is more difficult to predict. It greatly depends on how "gently" or "roughly" you use your amplifier. In general, under normal conditions, you can figure between 2,000 and 3,000 hours.

Here are some other guidelines about tubes:

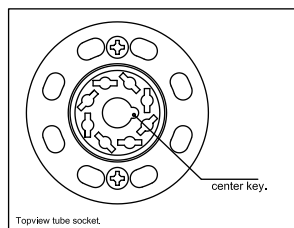
- Do not use treatments on tube pins or in sockets.
- If you decide to experiment with other tube types, it's best not to swap tubes in and out repeatedly. To do so requires you to turn your amplifier off and on and you never want to cycle amplifiers on and off rapidly. They should be left off for at least five minutes. Further, every time you insert a tube, you stand a chance of loosening the tube sockets. It's okay to have fun, and we support that, but don't go crazy and swap tubes in and out twenty times a day.
- Do not leave the amplifier on 24 hours a day. Just a short warm-up is required for the PrimaLuna to get into its groove.
- Break-in yields improvements. Every tube, when new, needs to be left alone for a little while. So, when your amplifier is new, or when you re-tube it, allow a little time to settle in. There is, however, no fixed "time rule" for break-in.
- Please note that tubes can vary electrically, and by plugging in the wrong type of tube you can damage the amplifier and void your warranty.

## Common Replacements:

- **For 12AU7:** ECC82, ECC802S, E82CC, 5814, 6189, CV4003
- **For KT88:** 6550, KT90. You may also use EL34, 6L6GC, 7581A and KT66 though power will drop slightly.
- **For EL34:** 6CA7, E34LS, E34L. You may also use 6L6GC, 7581A and KT66 though power will drop slightly.



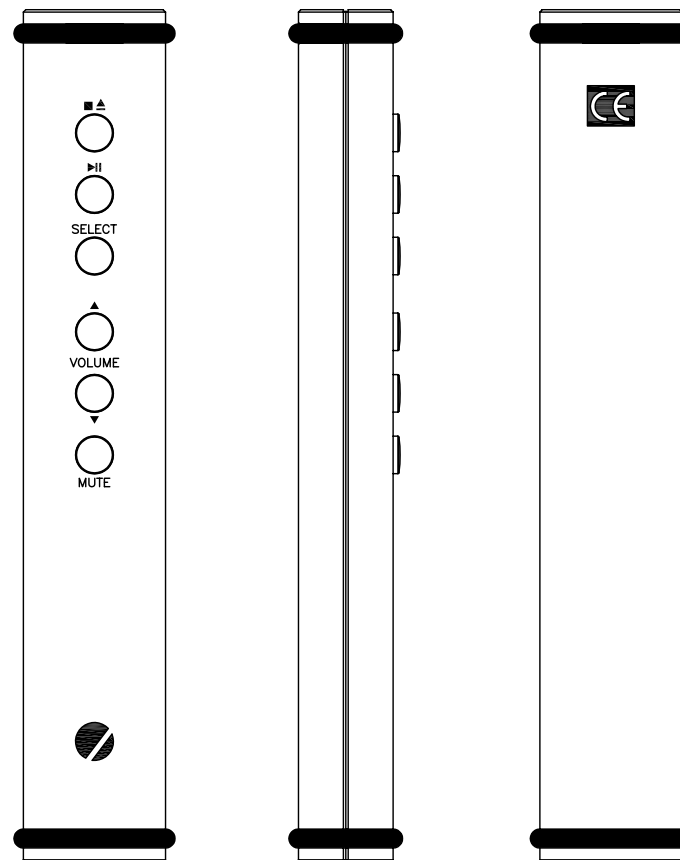
Top view of ProLogue Premium Integrated Amplifier



*Some tubes and tube sockets have a "center key" which must line up! If you misalign them and use brute force, you will damage important and expensive parts of your amplifier!!*

# PrimaLuna® ProLogue Premium

## Remote Control



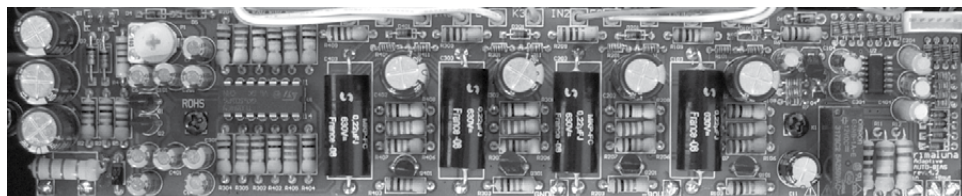
The functions of the PrimaLuna ProLogue Premium Remote Control are self-explanatory. It controls source selection, volume & mute functions. The ProLogue Premium remote will also control the basic functions of the PrimaLuna CD players.

The PrimaLuna ProLogue Premium Remote Control has two high quality silicon rubber rings on each end to protect it from becoming damaged or damaging your furniture. These rings can be easily removed in case batteries have to be replaced or if you don't like them.

In the event your remote control does not function, please first check the battery and if necessary, replace it with a new CR2032 model battery. To access the battery compartment, remove the rubber rings and unscrew the back plate. If the remote still does not function, contact your dealer for further assistance.

## AAB™ - Adaptive AutoBias™

Our PrimaLuna exclusive Adaptive AutoBias™ circuit monitors and smoothly adjusts bias constantly and instantly, reducing maintenance and increasing performance due to the dramatic reduction in distortion. The genius of this design is that the Adaptive AutoBias™ actually improves the overall sound quality and performance of the amp. Between 12 and 30 Watts, measured distortion levels drop by over 40%. In addition, tubes do not have to be matched, and there is no bias (re-)adjustments needed, ever. The new generation Adaptive AutoBias™ circuit comes with a new extensive output stage protection circuitry with +B relay to protect output transformers, resistors and high voltage power supply in case a tube fails.



## PrimaLuna Special Protection Circuits

### Soft-start™

Furthermore, the PrimaLuna Adaptive AutoBias™ circuit is equipped with Soft-start™, which powers the amplifier up slowly to prolong the life of internal components, including the tubes. This makes the PrimaLuna a joy to own and operate.

### BTI™ - Bad Tube Indication™

In all ProLogue Premium Amplifier models the next generation Adaptive Auto Bias Board comes with our new BTI™ circuit. BTI™ stands for Bad Tube Indication (by LEDs), making tube-life again a bit easier. The BTI™ circuit is totally inactive during normal operation. However when one (or more) output tube(s) draw(s) significantly more current than normal for a couple of seconds, such as when a loudspeaker terminal short-circuits with volume turned up, or in the case of an output tube failure, the BTI™ circuit “reads” the changes as a potential threat and as a protective measure, interrupts the power supply. To reset, simply turn the power off and after two minutes, turn back on. HOWEVER, you do not want to repower the unit until the cause of the failure has been identified and resolved. Switching the power back on too early also can fool the BTI circuit into acting as though the problem has not been totally resolved and it may put the amp back into protection mode again. So be sure to give it enough time to reset.

### PTP™ - Power Transformer Protection™

PrimaLuna has an impeccable reputation for reliability... maybe the best ever in the tube industry. Still we're constantly searching for ways to improve on what is arguably the best. Our PTP™ circuit is a thermal switch built into the power transformer. If for whatever reason the (internal) temperature of the power transformer becomes too high, AC is simply switched off. After cooling down, and if nothing is wrong with the amplifier, it will start functioning again as normal. If the problem occurs again (or persists) the unit should be turned off and checked out by your dealer.

## OTP™ - Output Transformer Protection™

While rare with PrimaLuna products, you might sometimes “lose” an output transformer, especially if you forget to switch off your equipment while changing something in your system. With our new Output Transformer Protection circuit we intend to minimize the chances of such bad luck. OTP™ as it's called only becomes “active” only when needed. Otherwise, this circuit is totally out of the signal route.

## Fuse Protection - Traditional

**A note on fuses:** If “someone who knows” tells you to wrap fuses with aluminium foil to avoid wasting money on new ones, it's best not to take his advice. Fuses are safety valves. They should always be replaced with the exact same value and type.

**Warning:** Never attempt to check or replace a fuse while the amp is plugged in. Turn it off and unplug all speakers, components and AC cords before continuing. Wait 10 minutes to let tubes cool down and the circuit to fully discharge.



### Mains Fuse:

The mains fuse is located on the rear of the amplifier, just below the power cord socket (see picture on this page). **The fuse rating is 1 x Littelfuse® 218 Series 2.5A Slo-Blo® 5 x 20 mm fuse for 100-120VAC and Littelfuse® 218 Series 1.25A Slo-Blo® 5 x 20 mm fuse for 200-240VAC.** Replace with the same type and value fuse! The fuse holder can be snapped out using a small slotted flat blade screwdriver.