

van den Hul[®]

User Manual

The Puppy Grail

Phonograph Preamplifier

with external power supply



Content

	page
SAFETY PRECAUTIONS	3
INSTALLATION AND USE	
Rear side overview, audio signal connections	4
Power supply connection, input sensitivity switch (MM/MC)	5
Choosing the proper impedance matching, matching MM cartridges	5
Impedance matching for MC cartridges and level matching,	6
Final hints	7
PROBLEM SOLVING	7
TECHNICAL SPECIFICATIONS	8

SAFETY PRECAUTIONS

Use "The Puppy Grail" phonograph preamplifier only for the designated application range it was intended for.

If the mains power cable or the external power supply is damaged, do not use the preamplifier! ***Touching wires connected to mains live will harm your health seriously!*** In case of this kind of damage, do not touch the preamplifier or its power supply box and unplug the mains plug immediately. Bring the preamplifier to an authorized service point for repair.

To avoid risk of fire or electrical shock: do not use the preamplifier and its external power supply in rooms with high humidity or in other wet environments. It may be used in dry places only. If any kind of fluids (water, drinks, soapsuds etc.) runs into the external power supply or into the preamplifier, please unplug the mains plug immediately and bring the preamplifier to an authorized service point for inspection.

Do not allow children to play with the preamplifier and do not let them use it without your supervision. Keep the preamplifier out of the reach of pets.

Keep away the preamplifier and its power supply from hot surfaces and from open fire. Don't use it on top of another audio system parts that emits heat and do not cover housing slots of the preamplifier.



The Puppy Grail is in conformity with the actual required standards in accordance with 89/336/EWG.

INSTALLATION AND USE

Rear side overview



- Items:
- 1) Toggle switch MM or MC for the input connector pair
 - 2) Ground connector for turntable ground signal (tonearm, motor-base etc.)
 - 3) Input connector pair left/right channel (RCA Phonoplug / Cinch)
 - 4) Output connector pair left/right channel (RCA Phonoplug / Cinch)
 - 5) Power supply connector, to connect with the external power supply*

***) always turn volume down to minimum before connecting the power supply connector**

Audio signal connections

Connect your high-level (control) preamplifier with a pair of RCA-Phonoplug (Cinch) connectors to the "Puppy Grail". The matching receptacles at the rear side of "The Puppy Grail" are labeled "Output" (No.4 shown in the picture *rear side overview*). Connect them to a free high-level input of your control amplifier, e.g. "Aux" or "Line".

Connect the RCA-Phonoplug (Cinch) cables coming from your turntable to the input sockets of the "Puppy Grail", labeled "Input" (No.3 shown in the picture *rear side overview*). Also connect the common ground cable from your turntable to the ground connector of "The Puppy Grail" (No.2 shown in the picture *rear side overview*). If your audio system has more ground cables, e.g. coming from your system rack or high-level preamp, join them to this ground connector as well.

Power supply connection

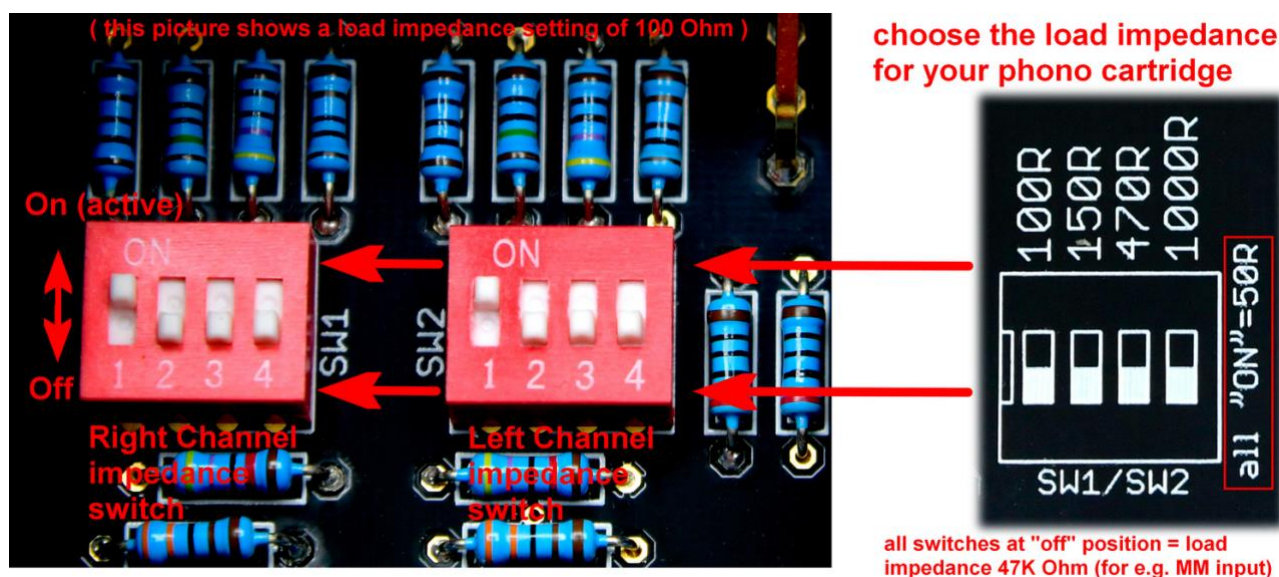
At first be sure the mains power cable of the external power supply is not connected to the wall socket. Now connect the round-shaped low voltage connector coming from the external power supply to the preamplifier's rear side socket labeled "24V DC" (No.5 in the picture). Now connect the power supply with its mains power cable to your mains wall plug. That's it, the preamplifier is powered up now. No need to actuate any power switch e.g. The preamplifier consumes very low power, so it is not necessary to switch it off (except during extended absences, in this case pull out the mains switch).

Input sensitivity switch (MM/MC)

Depending on the used phono cartridge, shift the switch "MM/MC" (No.1 shown in the picture *rear side overview*) into the corresponding switch position.

Choosing the proper impedance matching

To change the load impedance for your phono cartridge system, open up the upper lid of the "Puppy Grail" by removing the four screws on top with a suitable Phillips screwdriver. Remove the upper lid and take a look inside. You'll find two DIP switches to control the load impedance for your cartridge (see the following picture *inside view of the "Puppy Grail"*)



Settings in general are easy. Take a look at the right side of the above picture, there is a chart that explains the switch settings and their belonging input impedances.

Impedance matching of MM cartridges and corresponding input sensitivity

If you use a MM or MI (Moving Iron) phono cartridge, set all of the little rockers to the "off" position. That gives an input impedance of 47 KOhm. Further, set the input sensitivity switch at the Grails rear side to "MM" position and you're done.

What about MC phono cartridges?

In general, the MC cartridge manufacturer gives you a recommendation about the proper impedance load of his cartridge. This is a good starting point for your first listening test, take over this value to your "Puppy Grail" by setting the related DIP switch position. In almost all cases you're done. But as often happens, it's up to your listening habit (and maybe: the rest of your audio chain). If you find the sound is too bright, fidgety or tense, use the next lower impedance available. If this does not satisfy, go further in this direction. On the other side, if the sound seems to be dull, lifeless or undynamic to your ears, raise the load impedance. Maybe it takes some time 'til you find the right setting, but it is worth it. Yet as mentioned, in most cases the cartridge manufacturers recommendation is quite fine. Usually this value is around 100 Ohm, so we've chosen 100 Ohm as the delivery condition of the "Puppy Grails" input impedance. This setting is also shown for demonstration in the picture above.

"in between" impedance settings

The positions of a single DIP switch rocker for an input impedance is 100 Ohm, 150 Ohm, 470 Ohm and 1000 Ohm (1k Ohm). But combinations of these settings are possible. Look at the following table (the displayed numbers are rockers switched on at the same time to give the final impedance shown):

1+2+3+4 = 50 Ohms (this is the lowest possible value)

1+2 = 60 Ohms

1+3+4 = 76 Ohms

1+3 = 82 Ohms

2+4 = 130 Ohms

3+4 = 320 Ohms

all switches in "Off" position: input impedance = 47 KOhm (47000 Ohm) for MM/MI cartridges

Hint: other combinations are possible but of no concern.

Input sensitivity setting for MC cartridges

MC cartridges again divide into two groups:

- a) low-output types and
- b) high-output types

High-output types

For a real high-output MC cartridge please set the "The Puppy Grail's" input sensitivity switch to the "MM" position. Why? This way you avoid any overdrive of your preamplifiers or its following high-level preamplifiers input. Above 0,9mV@5cm/s sensitivity we talk about high-output MC systems.

Low-output types

If you have a low-output or standard-output MC system use "The Puppy Grail's" input switch position "MC". This is the right position for cartridges up to approx. 0,85mV@5cm/s sensitivity.

That's it! Put a record on your turntable, choose the desired volume and enjoy the music!

Some final hints:

As all electronic audio devices, "The Puppy Grail" has a pre-aging period when bought as a brand new device. Normally this ends after 50...100 hours of listening to music. During this time the sonic quality raises to it's maximum.

If you have a holiday and you leave your house for longer periods, pull the "Puppy Grails" external power supply off the wall socket (do the same with the rest of your audio chain). Save energy for the future of our planet. In case of a holiday trip you switch off your cooking plate too, don't you ?

About audio cables

A word about cables: "The Puppy Grail" is a high quality preamplifier that delivers you outstanding sound. But it can do this only if you use the right cables – using cheap, bad quality cables will degrade the sonic benefits you can get from "The Puppy Grail". Save your investment – use quality cables, e.g. cables from the **van den Hul** cable line. They will deliver you the best possible sound available at this moment.

PROBLEM SOLVING

In case of a malfunction, take a look at some things:

- 1) Is the proper mains voltage available? Are all other amplifiers switched on (control amplifier, power amplifier)? Is the corresponding input channel of the control amplifier chosen ? Volume knob is not at the left latch?
- 2) Is the wiring of all components in the audio chain correct? No "fallen off" connectors?

TECHNICAL SPECIFICATIONS

Mains power:	wide range power supply, 110..240V, 50/60Hz.
Power consumption:	appr. 1,7 Watts
Temperature operating range:	from 10deg. Celsius up to 35deg. Celsius room temperature. No condensing on item allowed Use only in dry rooms
Max. undistorted output voltage:	8 V _{ss} for k <1% THD
Output impedance:	220 Ohms (real resistive)
Signal to noise ratio:	76dB(A) typical
Input voltages	at input to achieve 0,775mV _{RMS} output level
MM input:	6,9 mV (amplification factor 41dB)
MM input impedance:	47 KOhm / 50pF
MC input:	0,69 mV (amplification factor 61dB)
MC input impedance:	from 50 Ohm up to 1K Ohm, set by DIP switch
Weight:	1,2 Kg (2,64 lbs) without the ext. power supply
Size (WxHxL):	135 x 91 x 210 mm
