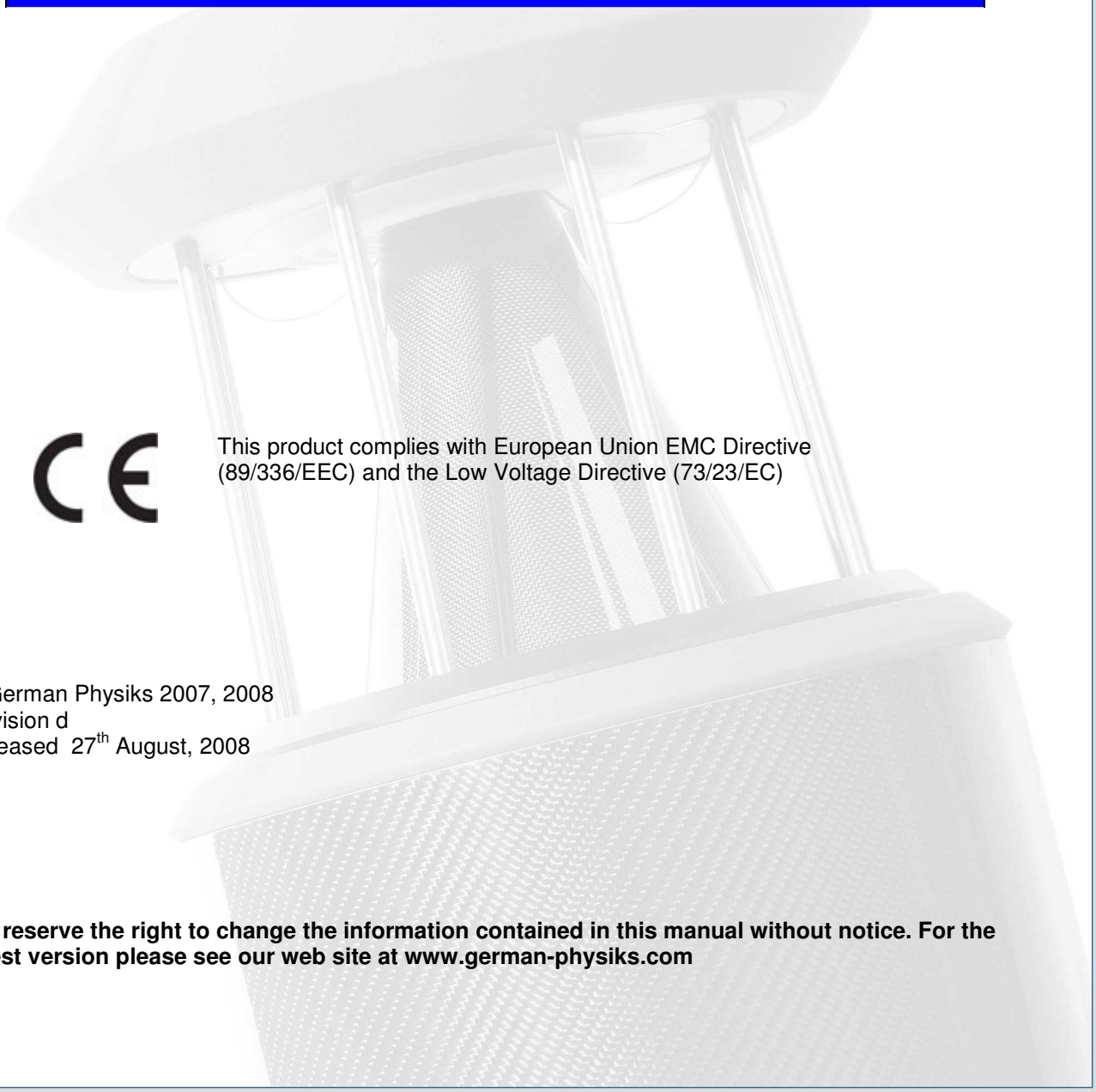
PQS-201 Mk II User Manual



This product complies with European Union EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EC)

Revision d
Released 27th August, 2008

We reserve the right to change the information contained in this manual without notice. For the latest version please see our web site at www.german-physiks.com

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1. INTRODUCTION

Thank you for selecting the German Physiks PQS-201 Mk II loudspeakers for your audio system. The PQS-201 Mk II is a 2 way design that uses a single DDD driver coupled with a vertically firing woofer. It is intended for use in both 2 channel and high end home theatre systems. It may be mounted on the dedicated PQS stands, on shelves or directly on to the wall using an optional wall attachment kit. The PQS-201 Mk II is entirely handmade and is built and tested by highly skilled technicians at our factory in Germany.

Every step in the design and manufacture of this product has been dedicated to producing a loudspeaker that will provide a lifetime of musical enjoyment.

We strongly recommend that you read this manual before attempting to use the loudspeakers.

2. UNPACKING YOUR LOUDSPEAKERS

NOTE: **When lifting the loudspeakers out of the packing, hold them by the upper or lower plates. Do not lift them by the DDD support pillars (see figure 2) as this may damage the driver.**

The DDD drivers may be protected with clear film or cardboard covers. We recommend that these be left in place until the loudspeakers have been placed in their final location, so as to guard against accidental damage during handling.

The two loudspeakers are packed in one carton. Before opening the carton, please inspect it for damage. If you see any damage to the carton, please contact the supplying audio dealer immediately and provide them with a full description of the damage. Do not attempt to unpack the loudspeakers until you have spoken with the dealer and have been advised how to proceed.

Please retain all of the packing as you will need this should it be necessary in the future to ship the loudspeakers. The use of any other packing may result in the loudspeakers sustaining damage in transit. Such damage is not covered by the warranty. Should you require replacement packing, please contact your German Physiks dealer, the national distributor or the factory directly.

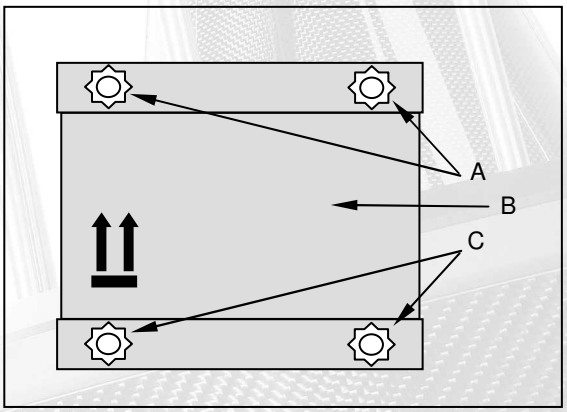

Figure 1. PQS-201 Mk II Shipping Carton

To unpack the loudspeakers please follow the instructions below:

1. Unscrew and remove the two screw caps on each side of the carton top cover – item A in figure 1.

2. Remove the carton top cover by carefully pulling it over the four screws.

3. Remove the foam packing piece from the top of the main body of the carton - item B in figure 1.

4. Unscrew and remove the two screw caps on each side of the carton lower tray – item C in figure 1.

5. Lift off the main body of the carton – item B in figure 1. This may be folded flat for easy storage.

6. Lift the loudspeakers off the lower packing tray by holding them around the cabinets or top plates. Do not lift the loudspeakers by the DDD driver support pillars.

7. Remove any clear film from around the loudspeakers taking care not to scratch the finish. Do **not** use a knife.

Please confirm that the carton contains the following items:

Item	Quantity	Description
1	2	PQS-201 Mk II Loudspeakers
2	1	PQS-201 Mk II User Manual
3	2	Cleaning Cloths

If any items are missing, or show signs of damage, please contact the supplying audio dealer immediately.

3. THE PRINCIPLE FEATURES OF THE PQS-201 Mk II

Figure 2. The Principle Features of the PQS-201 Mk II

4. LOUDSPEAKER PLACEMENT AND SET-UP

NOTE: DO NOT place the loudspeakers close to cathode ray type monitors or projectors, as the very powerful magnets used in the drivers may affect the picture. We recommend a minimum separation of 90cm.

Adjusting the Spikes

The base of the PQS-201 Mk II is fitted with four spikes. These are double ended as shown in figure 3 and are locked in position with a nut. You will need an open ended 10mm spanner to adjust them - figure 4.

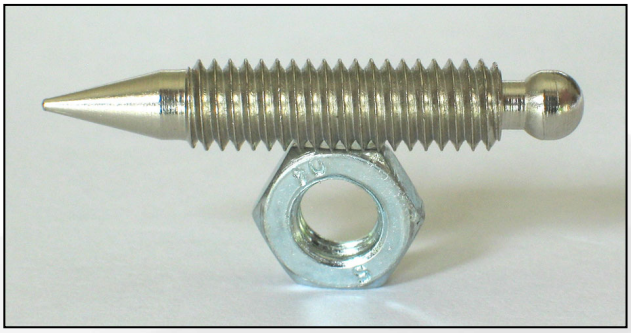

Figure 3. Double Ended Spike and Nut

The round ends of the spikes should be used when the loudspeakers are to be placed on a hard surface such as tile or wood and the pointed ends should be used when the loudspeakers are to be placed on the PQS Stand. The loudspeakers are shipped with the round ends of the spikes facing out.

The easiest way to adjust the spikes is to lay the loudspeaker on its side. To protect the finish, we suggest that you use a clean soft blanket to lay the loudspeaker on. Set the two spikes at the back and the left hand front spike to protrude approximately the same amount - within 1 or 2mm – and then tighten the locking nuts. Set the right hand front spike to protrude the same amount, but do not tighten the locking nut.

Stand the loudspeaker up and place it in its initial position. Please refer to figure 6 for guidance on positioning.

To check that the loudspeaker is sitting squarely on the spikes:

1. **If the loudspeaker can be rocked in the 10 o'clock to 4 o'clock direction**, lean the loudspeaker to the left and screw **out** the right hand front spike by the amount of movement you saw at the base of the cabinet. It is best to have an assistant to help hold the loudspeaker. Stand the loudspeaker back up and repeat the process until it is sitting squarely on its spikes. Lean the loudspeaker to the left again and lock the nut on the right front spike (figure 4), taking care not to change the spike's setting. Do not use excessive force when locking the nut as this may damage the loudspeaker base plate.

2. **If the loudspeaker can be rocked in the 2 o'clock to 8 o'clock direction**, lean the loudspeaker to the left and screw **in** the right hand front spike by the amount of movement you saw at the base of the cabinet. It is best to have an assistant to help hold the loudspeaker. Stand the loudspeaker back up and repeat the process until it is sitting squarely on its spikes. Lean the loudspeaker to the left again and lock the nut on the right front spike (figure 4), taking care not to change the spike's setting. Do not use excessive force when locking the nut as this may damage the loudspeaker base plate.

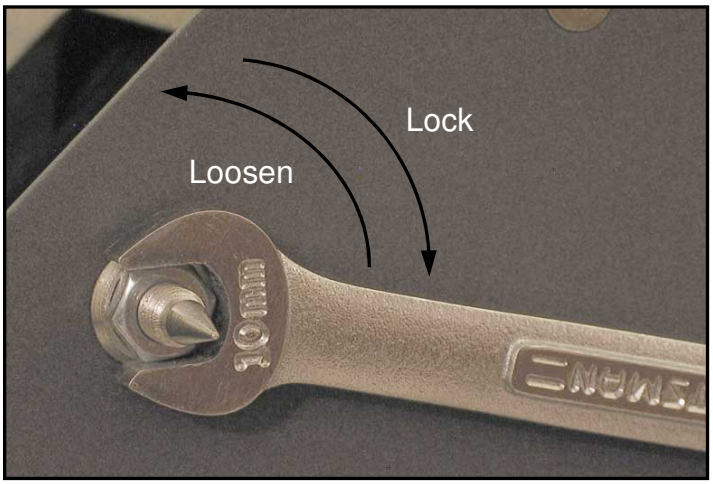

Figure 4. Adjusting a Spike Nut

Listening Room Layout

The following points will help you optimise your listening room layout.

1. The left and right sides of the room should be symmetrical. If the room is asymmetrical, this will degrade the quality of the stereo image. This is because most of the sound energy that you hear is reflected before it reaches your ears.

2. Place the loudspeakers symmetrically in the room, i.e. the same distance from the centre line of the room and the same distance from the front wall.

3. Avoid placing the loudspeakers similar distances from the side and front walls, as this may lead to an uneven bass response

4. Avoid having any hard surfaces between your listening position and the loudspeakers. This will generate additional reflections that may degrade the stereo image. For this reason, where ever possible, equipment should be located at the side of the room. If you have a hard floor (wood or tile), it may be advantageous to place a carpet on the floor covering the area between the loudspeakers and the listening position, as this will reduce unwanted early reflections.

5. Avoid having the listening position closer than 1.2m from the rear wall as early reflections from this wall will degrade the stereo image.

Placement When Used as Front Loudspeakers

Stands

The PQS-201 Mk II may be placed on stands or on a shelf. The DDD driver should be at approximately ear level when you are in the listening position. A dedicated PQS Stand is available from German Physiks – figure 5.

Figure 5. PQS Stand

In either case please follow the recommendations below regarding distances from the front and side walls

Distance from the Front Wall
We recommend that the loudspeakers be positioned against the front wall and set facing directly down the room as shown in figure 6. It is not necessary to toe-in the loudspeakers towards the listening position. If the bass level is excessive try moving the loudspeakers progressively away from the wall. Aim to find a position that provides an even bass response, combined with a well focussed stereo image when you are seated at the listening position.

Distance from the Side Wall
We recommend that the distance of the listening position from the loudspeakers be 1.5 to 2 times the distance between the centres of the loudspeakers. Moving the loudspeakers further apart will degrade the stereo image.

Avoid placing the loudspeakers closer than 1m from the side walls, as early reflections will degrade the stereo image. Positioning the loudspeakers too close to the side walls will also lead to an uneven bass response. Aim to find the position that provides the best defined and most realistic stereo image combined with an even bass when you are seated at the listening position.

Figure 6 gives a general guide to loudspeaker positioning and the location of the listening position. Note how the recommended listening position varies with the separation between the loudspeakers.

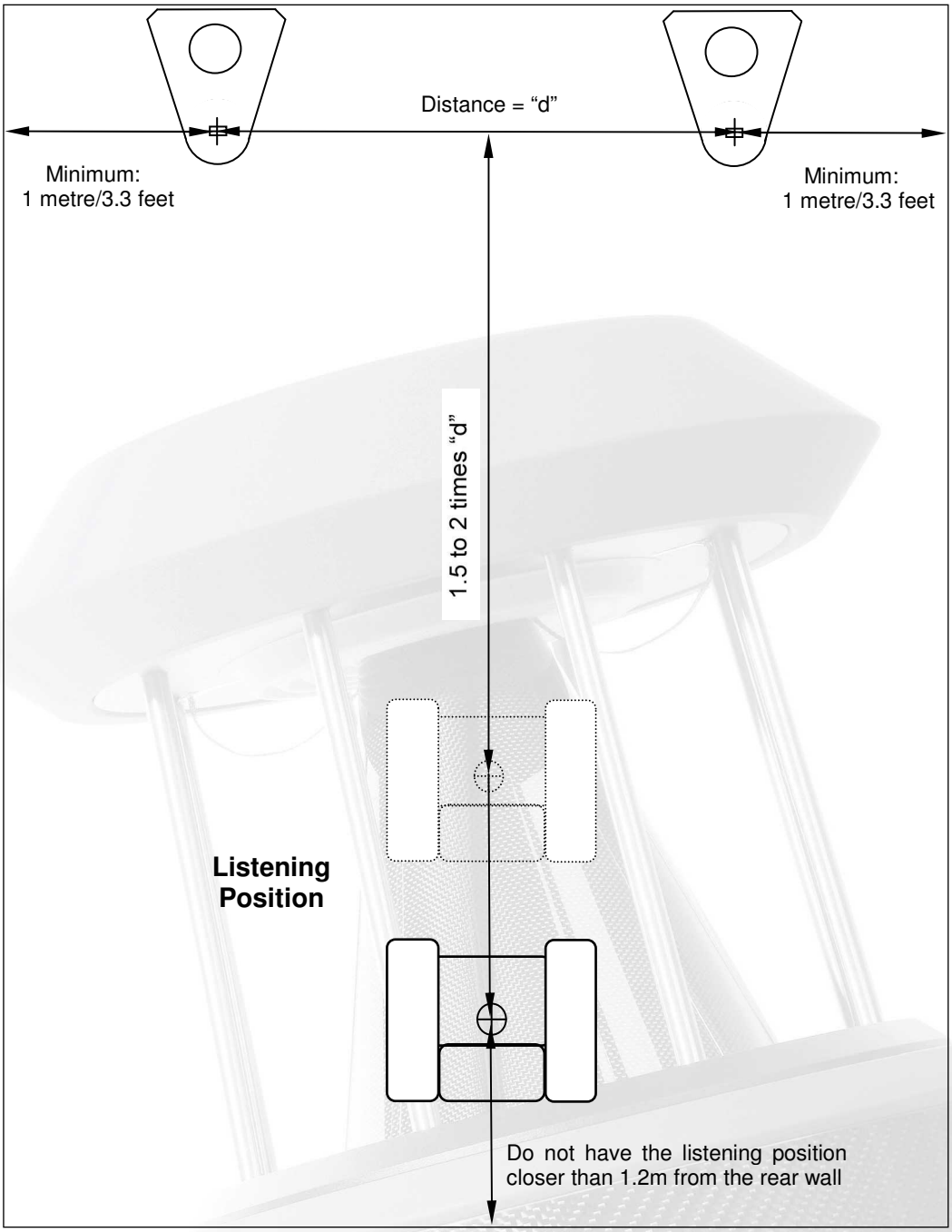

Figure 6. Listening Room Arrangement

Placement When Used as Side or Rear Channel Loudspeakers

The PQS-201 Mk II may be used as side or rear channel loudspeakers in a high quality home theatre system. In this application it may be fixed directly to the wall of the listening room. A wall attachment kit is available from German Physiks as an optional extra. The table below shows the recommended mounting heights for the various possible loudspeaker combinations.

Front Loudspeaker Type	Side/Rear PQS-201 Mk II Loudspeaker Height
German Physiks with 1 DDD driver	Same height as front loudspeaker DDD driver
German Physiks with 2 or more DDD drivers	Same height as centre of front loudspeaker DDD array
Other makers' loudspeakers	Same height as front loudspeaker tweeter

5. CONNECTING YOUR LOUDSPEAKERS

NOTE: An amplifier capable of delivering at least 70W into 4 ohms must be used for each loudspeaker.

The German Physiks PQS-201 Mk II is a 2 way loudspeaker with separate input terminals for the low frequency and high frequency sections of the crossover. These drive the woofer and DDD driver respectively. The loudspeaker also has a high frequency control.

The input terminals and crossover adjustment control are located on a panel fitted on the back of the cabinet. Figure 7 identifies the features on this panel.

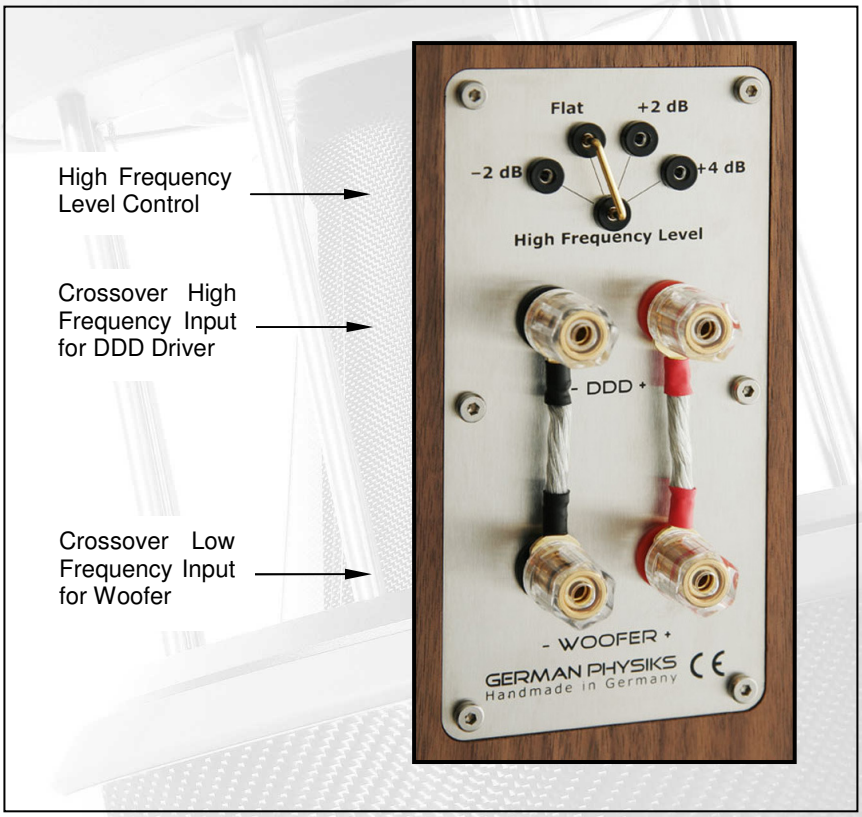

Figure 7. Input Terminals and Crossover Adjustment

High Frequency Level Control
This adjusts the output from the DDD driver. 4 settings are provided: -2dB, Flat, +2dB and +4dB. The centre frequency of this control is 8,000Hz. To adjust the control, pull the jumper out and then push it back into the appropriate pair of sockets. For the initial setting of the loudspeakers this should be set to the Flat position. The final setting should be made once the loudspeakers have been broken in and the final position in the listening room established. We suggest that you experiment with different settings to determine which gives the most satisfactory frequency balance.

Input Terminal Connections

NOTE: The loudspeaker terminals should be tightened as firmly as possible by hand. Do not use pliers or any other tools as this may damage the terminals.

There are two recommended methods of connecting the loudspeaker to the power amplifier

Single Wire Connection
This is the most commonly used method of connecting a loudspeaker and power amplifier. Only one loudspeaker cable is used for each loudspeaker. The PQS-201 Mk II will be shipped configured for this mode of operation. In this case the red terminals on the DDD driver and woofer inputs will be connected together and the black terminals on the DDD driver and woofer inputs will be connected together as shown in figure 7. These connections must be made using the special links provided.

Connect the loudspeaker cable to the woofer input terminals taking care to ensure that the woofer positive terminal is connected to the power amplifier positive output terminal and the woofer negative terminal is connected to the power amplifier negative output terminal.

Bi-Wire Connection
In this method of connection the woofer and DDD driver inputs are connected to the power amplifier with separate loudspeaker cables. Ensure that the links fitted between the woofer and DDD driver input terminals have been removed.

Connect one loudspeaker cable to the DDD driver input terminals taking care to ensure that the positive terminal is connected to the power amplifier positive output terminal and the negative terminal is connected to the power amplifier negative output terminal.

Connect the other loudspeaker cable to the woofer input terminals taking care to ensure that the woofer positive terminal is connected to the power amplifier positive output terminal and the woofer negative terminal is connected to the power amplifier negative output terminal.

Loudspeaker Cables

We recommend that you use loudspeaker cables terminated with high quality spade lugs, as these provide the best electrical connection. The lugs should be either soldered or crimped to the loudspeaker cable – the latter is preferred. We do not recommend the use of bare wire to connect to the loudspeaker terminals. This produces an inferior connection that will further degrade as the bare conductors become tarnished.

NOTE: Do not switch the power amplifier on until the DDD shipping covers have been removed as shown in section 6.

6. REMOVING THE DDD SHIPPING COVERS

NOTE: Do not touch the DDD driver diaphragms.

If your loudspeakers are fitted with titanium DDD drivers these will be covered with either a layer of clear film or cardboard to protect them whilst in transit. This should now be removed. The film should be peeled off by hand. Do **not** use a knife.

To remove the cardboard protector, slit the adhesive tape securing it by sliding a **short** bladed knife between the two layers of cardboard whilst holding the knife as shown in figure 8. Do not cut in the way shown in figure 9, as there is a danger that you will cut the DDD driver diaphragm.

Figure 8. The Correct Way to Remove the DDD Driver Cover

Figure 9. The Wrong Way to Remove the DDD Driver Cover

7. LOUDSPEAKER BREAK IN

Like all audiophile equipment, German Physiks loudspeakers require a break in period from new before they reach their optimum level of performance. Initially the sound may seem harsh. Please do not be concerned. The sound will become more relaxed and smooth as the break in progresses. The music used for the break in should be dynamic in order to properly exercise all the components of the loudspeakers.

For the first 10 hours play the loudspeakers at low level only. This is a level where you would easily be able to carry out a conversation without needing to raise your voice.

After this, the loudspeakers may be played at normal listening levels. The break in process will be complete after 200 to 300 hours.

8. CARE OF YOUR LOUDSPEAKERS

NOTE: NEVER attempt to open the cabinets. There are no user serviceable parts inside the loudspeakers.

NEVER touch the diaphragms on the DDD drivers, or allow any object to come into contact with the diaphragms.

NEVER attempt to clean dust off the diaphragms. Dust has no affect on their performance and may be safely ignored.

NOTE: NEVER attempt to clean the loudspeakers with any abrasive materials or any cleaners containing ammonia, alcohol or other solvents, as these may damage the finish.

The only maintenance the loudspeakers will require is periodic dusting to remove dust and any finger prints from the cabinets. Please use the cleaning cloths supplied with the loudspeakers. These cloths should be used dry. Do not use any form of liquid with them. Additional cloths may be obtained via your local German Physiks dealer, national distributor or direct from German Physiks.

9. WARRANTY

These German Physiks loudspeakers are warranted to be free from defects if used under normal conditions for a period of 5 years from the date of purchase, provided that the customer registers their purchase by completing and returning the registration form in this manual within 7 days of purchase. A copy of the receipt issued at the time of purchase must also be returned. If this is not done the warranty period will be 5 years from the date of shipment from the factory. This warranty is transferable to subsequent owners, who must register their purchase with us.

Modifications or repairs performed by the factory, or by an authorised repair agent, shall be guaranteed for the remaining period of the warranty, or for 1 year, which ever is greater.

Any unauthorised modifications or repairs will invalidate the warranty. The warranty will also be invalidated if German Physiks determines that the loudspeakers have been subject to misuse including, but not limited to, burnt out voice coils and dents or scratches on driver diaphragms or cabinets.

There is no other express warranty on German Physiks products. This warranty shall not extend beyond the stated warranty period. No responsibility is assumed for incidental or consequential damage.

10. SERVICE AND SUPPORT

In the first instance please contact your local German Physiks dealer or distributor. They will diagnose the fault and liaise with German Physiks to decide the best way to affect a repair. If they are unable to assist you, please contact German Physiks by phone on + 49 61 09 50 29 823, by fax on + 49 61 09 50 29 826, or by email at service@german-physiks.com. You can also contact us via our web site at www.german-physiks.com. Please take into account time differences between Germany and where you are calling from should you need to phone us. Email is our preferred method of initial contact. Please supply the model name and serial numbers of your loudspeakers and as much information about the problem as possible.

In the vast majority of cases, the repair will be dealt with by sending spare parts from the factory. In the unlikely event that it becomes necessary to return your loudspeakers or any part of them to the factory, you will be given a Return Authorization (RA) number. This number must be clearly marked on the outside of the packing. Returns made without a RA number will not be accepted. Any returned items must be shipped in the original packing. German Physiks will not be responsible for any damage that occurs as a result of the use of non-standard packing. Returns received in non-standard packing will be replaced with new packing at the owner's expense. If you need new packing, please contact your German Physiks dealer or the factory.

For items returned to the factory under warranty during the first year, German Physiks will pay for the shipping charges both ways. A shipping company approved by German Physiks must be used and the items will be returned to the customer using the same carrier, or an equivalent service.

For loudspeakers returned to the factory under warranty after the first year, the customer is responsible for paying all shipping and related charges back to the factory. A shipping company approved by German Physiks must be used. Providing this condition is met, German Physiks will pay the cost of shipping the loudspeakers back to the customer.

German Physiks will not pay any shipping costs if:

a. Loudspeakers or parts are returned without a RA number
b. No fault is found
c. If the fault is judged to be due to misuse such as, but not limited to, burnt out voice coils and dents or scratches on driver diaphragms or cabinets.

Customers are responsible for all freight, duties and related shipping charges for loudspeakers returned for non-warranty repairs.

11. HOW TO CONTACT US

If you wish to get in touch with us please use the contact information shown below. Please note that our office hours are from 9.30 a.m. to 5.00 p.m. Monday to Thursday, excluding public holidays and that we cannot respond to enquiries outside of these hours. We recommend that where ever possible you contact us by email, as this will allow us to give your enquiry more consideration and thus provide a more detailed reply.

Address	DDD-Manufactur GmbH Gutenbergstraße 4 D-63477 Maintal GERMANY
Telephone	+ 49 61 09 50 29 823
Fax	+ 49 61 09 50 29 826
Email	service@german-physiks.com
Web	www.german-physiks.com

12. PQS-201 Mk II SPECIFICATIONS

	With DDD Titanium Driver	With Carbon DDD Driver
Impedance	5.8 ohms at 130Hz	5.1 ohms at 2.2Hz
Frequency Response	60Hz – 21,500Hz	60Hz – 24,000Hz
Power Handling **Nominal** **Short term**	70W 100W	
Amplification required	Minimum 70W/4 ohms	
Crossover frequency	280Hz	270Hz
Crossover slopes **DDD section** **Woofer section**	12dB/octave electronic & 12dB/octave acoustic 12dB/octave electronic & 12dB/octave acoustic	
High frequency adjustment	-2dB, Flat, +2dB or +4dB centred at 8,000Hz	
Sensitivity	86dB for 1W at 1m	
Operating principle	2 way loudspeaker with 360° surround radiation using the DDD Bending Wave Converter.	
Input connectors	2 sets of binding posts	
Drivers	1 x Titanium DDD driver 1 x 6 inch woofer	1 x DDD driver 1 x 6 inch woofer
Dimensions **Loudspeaker**	430mm W x 305mm H x 500mm D 16.9" W x 12.0" H x 19.7" D	
PQS Stand	430mm W x 615mm H x 500mm D 16.9" W x 24.2" H x 19.7" D	
Weight **Loudspeaker** **PQS Stand**	21.0kg 46.2lbs 9.7kg 21.3lbs	
Warranty	5 years	
As part of our process of continually improving our products, we reserve the right to change specifications without notice		

13. WARRANTY REGISTRATION

In order to register your purchase and obtain the full 5 year warranty, please complete the form below within 7 days of purchase and return it by post together with a copy of the receipt of purchase to:

DDD-Manufactur GmbH
Gutenbergstraße 4
D-63477 Maintal
GERMANY

Name	
Address	
Country	
Zip/Post Code	
Model	**PQS-201 Mk II**
DDD Type Delete as necessary	**Titanium/Carbon**
Serial Number See label under speaker	
Finish	
Date of Purchase	
Where Purchased	
Address	
Country	
Zip/Post Code	