

Emperor Extreme Integrated Amplifier User Manual



This product complies with European Union directive LVD 2014/35/EU, ERP 2009/125/EG, EMC 2014/30/EU and RoHS 2011/65/EU

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IMPORTANT SAFETY AND INSTALLATION INSTRUCTIONS

WARNING: Do not remove the product's covers. This product contains no user serviceable parts.

WARNING: To reduce the risk of electric shock or fire, do not expose this product to rain or moisture.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of an uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

SAFETY INSTRUCTIONS

WARNING: To prevent the risk of electric shock please carefully read and follow the instructions below.

1. Before attempting to use this product please read all of the safety and installation instructions and the explanation of safety symbols in this manual
2. This product must be grounded. This reduces the risk of electric shock in the event of a malfunction. This product is supplied with a power supply cable that incorporates a conductor to connect the equipment to ground and a power plug that incorporates a grounding pin. The plug must be connected to a power outlet that incorporates a ground connection and which has been properly installed and grounded in accordance with all the appropriate regulations. If the power cable or plug shows any signs of damage, please consult a qualified service technician.

DANGER: Incorrect connection of the equipment's grounding can result in a serious risk of electric shock. Under no circumstances should the cable or plug provided with this product be modified. If it will not fit in the power outlet, contact your supplier for a power cable fitted with the appropriate plug, or have an appropriate outlet installed by a qualified electrician.

NEVER use an adaptor that defeats the ground connection. This can have potentially fatal consequences.

If you have any doubt as to whether your product is properly grounded, please consult a qualified electrician.

3. The product is designed solely for operation indoors in audio and video systems in domestic environments.
4. Do not use this product in an environment that is damp or has a high relative humidity, or that is near water, such as close to a bath tub, wash basin, kitchen sink, in a damp basement, or near a swimming pool or other similar environment. Moisture can bypass the electrical insulation and pose a risk of lethal electric shock.
5. This product in combination with loudspeakers may be capable of producing sound levels that could cause permanent hearing loss. Do not operate at a high-volume level, or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.

6. Do not block the ventilation slots on the top and bottom of the product. If you are positioning the product on top of a carpet, ensure that the carpet pile does not obstruct the ventilation slots on the bottom of the product. If you are placing the product on a soft surface which will come closer to the underside of the unit than the height of the feet, place a suitable flat, hard base under the product.

If you are placing the product in a cabinet, ensure that there is adequate ventilation.

7. Do not position the product near naked flames or other sources of heat such as radiators, heaters or ovens.

Note that electric equipment, including some amplifiers, may heat up significantly during operation.

8. The product should only be connected to a power supply of the type shown on the product's rear panel by the power inlet.

9. If the product is to be left unused for a prolonged period of time, the power supply cable should be removed from the outlet.

10. Always remove cables by holding the connector. Never pull or twist the cable itself.

11. When connecting cables always ensure that the connectors are of the appropriate type and are properly aligned. Never use excessive force when inserting a plug into a socket. If a plug will not easily fit into the socket, find out why.

12. Arrange the power cable in such a way that there is no risk of it being damaged e.g. by being stepped on, by having anything placed on top of it, by someone tripping over it, having anything rolled over it, being abraded by sharp edges or by being bent in an excessively tight radius. Failure to observe these precautions may create the possibility of a fire risk and/or personal injury.

13. If the product is to be placed on a rack, stand or other supporting device, ensure that it is capable of safely supporting the weight of the product.

14. Do not allow any liquids, or foreign objects to enter the product. If this happens, immediately switch the product off and disconnect it from the power outlet, then contact qualified service personnel for assistance.

15. Always unplug the unit from the wall outlet before cleaning. All that is required is a wipe with a dry cloth or duster. Never use paint thinners or any other kind of solvent to clean this product. These constitute a fire hazard and may also damage certain plastics.

16. If you notice an abnormal smell, or smoke coming from the product, immediately switch the product off and disconnect it from the power outlet, then contact qualified service personnel for assistance.

17. In the event of any of the following occurring, you should seek the assistance of qualified service personnel.

- a. There is damage to the power supply cable or plug.
- b. The product has been exposed to rain.
- c. Objects have fallen on to the product, or liquid has been spilled and entered the product.
- d. The product does not appear to be operating normally, or exhibits a marked change in performance.
- e. The product has been dropped or the enclosure has been damaged.

18. Extreme temperature fluctuations, high humidity and extended exposure to light can damage the product and alter its appearance.
19. Observe the operating instructions of the equipment connected to this product.
20. Do not attempt to service the product beyond that described in this manual. All other servicing should be referred to qualified service personnel.

SIMPLIFIED EU DECLARATION OF CONFORMITY

DDD Manufactur GmbH hereby declares that this equipment is in compliance with directive LVD 2014/35/EU, ERP 2009/125/EG, EMC 2014/30/EU and RoHS 2011/65/EU.

1. INTRODUCTION

Thank you for selecting the German Physiks Emperor Integrated amplifier. The Emperor Integrated amplifier can deliver up to 600W RMS continuously into 4 ohms, which more than sufficient drive almost any loudspeaker currently on the market. Balanced and unbalanced inputs are provided to allow it to be connected to a wide range of sources. There are also two sets of outputs from the preamplifier section, allowing the user to add up to 2 additional power amplifiers in order to set-up a tri-amped system.

The preamplifier and power amplifier sections can be split. This allows the amplifier to be used with an active crossover such as the German Physiks DSP-X. The amplifier's output stage then drives one section of the loudspeaker and one or two extra stereo power amplifiers are used to drive the other sections, depending on whether the loudspeaker is a 2-way or 3-way design.

Two 12V trigger outputs are provided. When these are connected to devices with compatible trigger inputs, switching the Emperor Integrated amplifier on will automatically switch these units from standby mode to on. Switching the Emperor Integrated amplifier off, will automatically switch these units back to standby mode.

2. HOW TO USE THIS MANUAL

This manual is intended to give you all the information you need to safely install, connect, configure and use the German Physiks Emperor Integrated amplifier.



Please read this manual carefully before attempting to install or use this product. Failure to follow instructions in this manual may result in damage to the product which will not be covered by the warranty.

Please keep this manual in a safe place so that you can refer to when necessary.

Please observe all warning notices on the product and in this manual. If you have not already done so, please review the safety instructions on page 3 of this manual.

3. UNPACKING YOUR AMPLIFIER



The amplifier weighs approximately 65kg (143lbs). To avoid the risk of personal injury, it must not be lifted by one person alone. Always have help when lifting the amplifier out of the shipping carton.

Please keep all of the packing materials in case you need to ship the amplifier. If you need to ship the amplifier, you must use the original shipping carton. The use of any other packing may result in the product sustaining damage in transit. Such damage is not covered by the warranty. Replacement shipping cartons may be obtained via your German Physiks dealer, national distributor, or directly from the factory.

After unpacking please confirm that you have the following items:

| Item | Quantity | Description |
|------|----------|-----------------------------------------|
| 1 | 1 | Emperor Integrated amplifier |
| 2 | 1 | Leather case containing the user manual |
| 3 | 1 | Power lead |
| 4 | 1 | Cleaning cloth |
| 5 | 1 pair | Direct input jumper cables |
| 6 | 1 pair | Cotton gloves |

If any of these items is missing please contact the supplier.



Check that the power lead supplied is fitted with a plug that matches the power outlet you plan to use.

4. POWER SUPPLY

This product should only be connected to a power supply with a voltage included in the range indicated on the back panel as shown below in figure 1. The actual format of the labelling may differ from the picture below, but the meaning will be clear.



Figure 1. Product operating power supply indication label.

Ensure that the maximum power supply voltage does not exceed the upper limit of the operating voltage range that the unit has been set for, otherwise serious damage may occur. If the voltage of the power supply that you intend to use is not within the range indicated on the unit's back panel, do not connect the unit to the supply and consult your dealer.

5. LOCATION

The amplifier may be placed on a stand or shelf, provided it is safely able to support its weight.

It may also be placed directly onto the floor, provided that the ventilation slots on the underside of the amplifier are not obstructed by a carpet or other floor covering. The clearance between the underside of the amplifier and the floor covering should be the same as it would be if the amplifier was placed on a hard surface. If necessary, find a means to raise the amplifier up to ensure the necessary clearance, or place it on a flat base.

Do not place anything on top of the amplifier, as this may obstruct the ventilation slots on its upper surface.

Whilst the amplifier's power supply has been designed to have a low external magnetic field, we recommend that it is not sited close to sensitive items such as phono cartridges or phono stages.

Where ever the amplifier is located, allow a clearance of at least 5cm (3.5") above the unit.

A clearance of at least 15cm (6") should be allowed behind the amplifier so that cables may be routed without the need to impose sharp bends.

6. FRONT PANEL CONTROLS AND FUNCTIONS

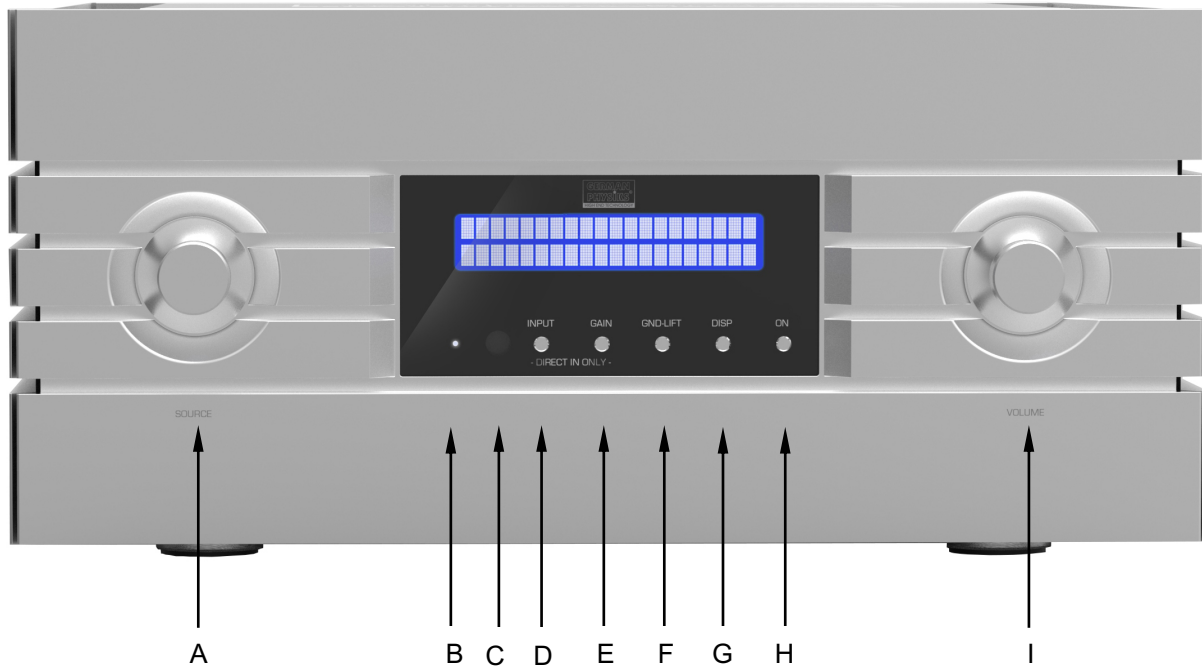


Figure 2. Emperor Integrated Amplifier front panel.

- A. **Source selector:** Rotate this to select the desired input.
- B. **Power indicator:** Indicates that power is connected to the amplifier.
- C. **Remote control receiver window:** Do not obstruct this, otherwise operation of the remote control may be impaired.
- D. **Direct input selection switch:** When the amplifier has been put into Direct Input mode by pressing the **Direct Input** button on the rear panel, the input to the output stage is disconnected from the preamplifier section and the user can connect directly to the input of the output stage via the rear panel DIRECT IN BAL and DIRECT IN UNBAL connectors. The **Direct Input** switch allows the user to select which of these two inputs is used.
- E. **Gain selector switch:** This only has effect when the unit is in the Direct Input mode. Pressing this button cycles the unit through the three gain settings. Each setting has a slightly different voicing, which allows the user to adjust the character of their system. When the **Gain** button is pressed, the display will show the word **GAIN** for about 3 seconds, then the gain in dB, followed by the voicing. Successive presses will select the next gain setting. These are shown in the table below.

| Gain | Voicing |
|------|------------|
| 0dB | Neutral |
| -9dB | Warm |
| +3db | Analytical |

To use function this in a standard set up requires that the supplied two balanced jumper cables are fitted between the preamplifier output and the power section input. See section 7 for full instructions.

! To avoid sudden jumps in volume that may damage your loudspeakers, always reduce the amplifier's volume setting to minimum before changing the gain setting.

- F. **Ground lift switch:** This disconnects the amplifier's signal ground from the chassis safety ground and is useful in eliminating hum when this is caused by a ground loop. This is where there is more than one ground connection between two pieces of audio equipment, thus forming a loop. This can act as a single turn coil and stray magnetic fields from nearby equipment and/or power cables can induce a mains frequency current in this loop, which then produces a hum that is heard from the loudspeakers. If this is the cause of hum in a system, using the ground lift switch to break this loop will stop the hum.
- G. **Display brightness button:** Successive presses of this button cause the display brightness to repeatedly step from maximum to minimum, to off. If the display has been switched off, it will come on for a few seconds when another control is used.
- H. **On switch:** Wakes the unit from standby into normal operation and visa versa.
- I. **Volume control:** Rotating the control clockwise will increase the volume level and rotating it counter-clockwise will reduce the volume level. After switching the unit on and before playing music, always check that the volume control has been set to a safe level. Failure to do this may result in the music being unexpectedly loud, which in extreme cases may damage your loudspeakers.

7. REAR PANEL FEATURES AND FUNCTIONS

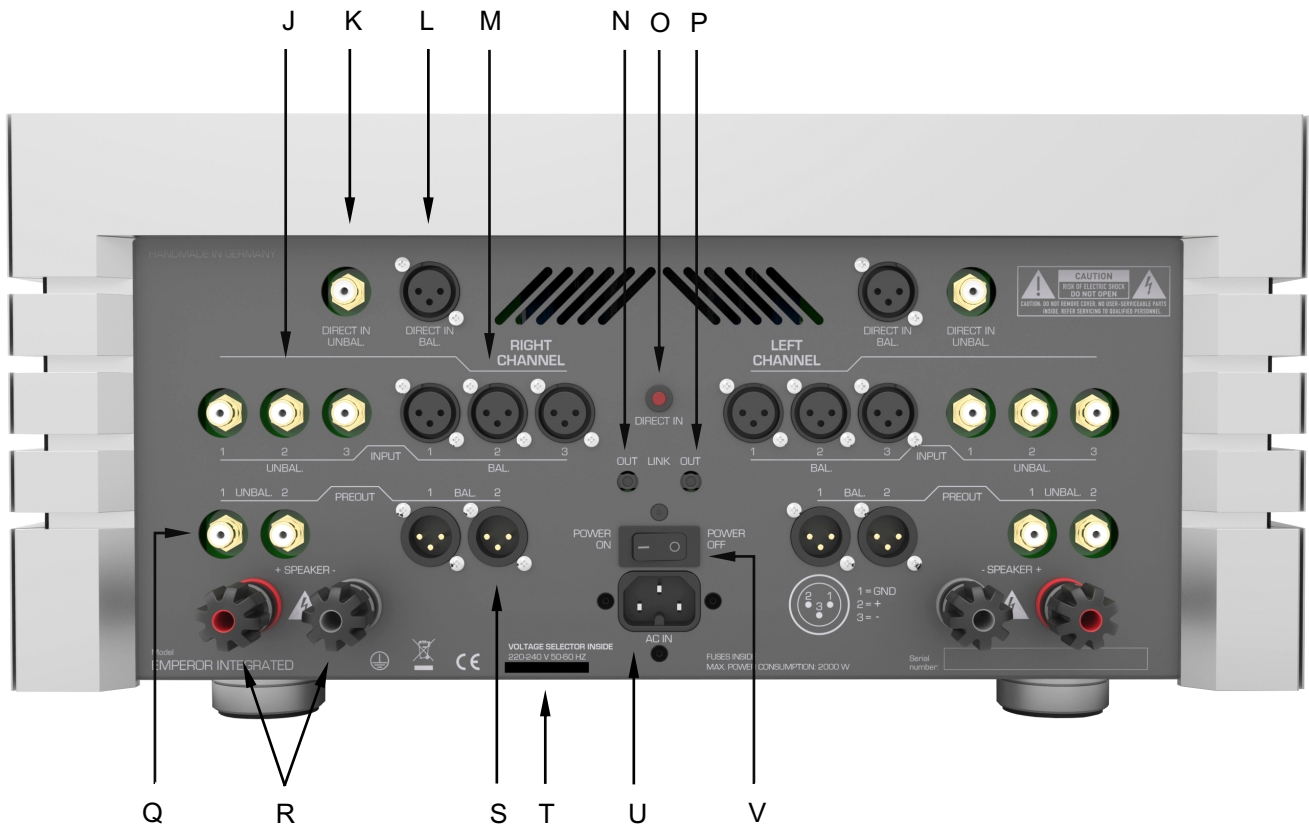


Figure 3. Emperor Integrated Amplifier rear panel.



NEVER make or break connections to any amplifier when it is switched on. Failure to observe this precaution could result in damage to the amplifier and your loudspeakers.

M. **Balanced input connectors:** Connect to sources having balanced outputs. If a source has both balanced and unbalanced outputs, we recommend that the balanced input is used as this will usually produce superior results.

N. **12V trigger output.** When connected to another device that has a compatible input, switching the Emperor Integrated amplifier on, will automatically switch this unit from standby mode to on. Switching the Emperor Integrated amplifier off, will automatically switch this unit back to standby mode. This is most often used in home theatre systems to control projectors and motorised screens, where, due to their location, easy access to their power switches may not be available.

O. **Direct In switch:** Puts the amplifier into Direct In mode, isolating the preamplifiers and power amplifier sections and allowing direct connection to the power amplifiers section. The switch will light up when the amplifier is in Direct In mode. This will also be indicated in the display.

P. **12V trigger output.** When connected to another device that has a compatible input, switching the Emperor Integrated amplifier on, will automatically switch this unit from standby mode to on. Switching the Emperor Integrated amplifier off, will automatically switch this unit back to standby mode.

Q. **Preamplifier section unbalanced outputs:** Provides an output from the preamplifier section allowing up to two more power amplifiers to be connected so that a tri-amped system may be set-up.

R. **Loudspeaker output terminals:** Connect to your loudspeakers.

S. **Preamplifier section balanced outputs:** Provides an output from the preamplifier section allowing up to two more power amplifiers to be connected so that the tri-amped system can be set-up.

T. **Power supply label:** Shows which power supply voltage range the unit has been set for.



If this does not cover the voltage of the power supply you plan to use, do not attempt to use the amplifier and consult your dealer.

U. **Power inlet:** Insert the power cable here.

V. **Power switch:** This is the main power switch. When installing the unit, this should be in the off position as shown in figure 3.

8. USING THE AMPLIFIER IN A STANDARD SYSTEM

This section describes how to connect and set up the Emperor Integrated amplifier for use in a standard 2-channel system with passive loudspeakers as shown in figure 4.

We have also assumed that this is an established system and the only thing being changed is the integrated amplifier. If any other components in the system are also being changed, please refer to the user manual(s) of the item(s) concerned for guidance.

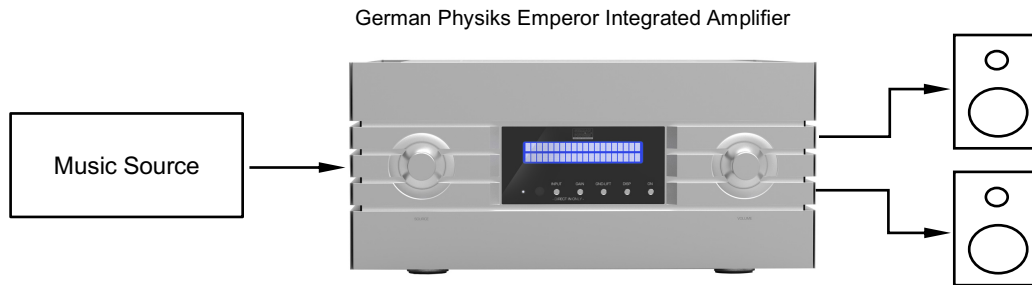


Figure 4. Standard 2-channel system.

1. Ensure that all equipment in the system is switched off.



NEVER make or break connections to any amplifier when it is switched on. Failure to observe this precaution could result in damage to the amplifier and your loudspeakers.

2. Connect right channel output of your main source to either, one of the amplifier's right channel unbalanced inputs (figure 3, J), or one of its right channel balanced inputs (figure 3, M). Where possible, we recommend that you use the balanced inputs for your main sources, as this will usually produce superior results.

Connect the left channel output of this source to the matching left channel input of the amplifier – for example, if you have used the right channel unbalanced #2 input, you must also use the left channel unbalanced #2 input.

Repeat this procedure with the remaining sources.

Make sure that all the plugs are pushed fully home into their sockets and that the left and right channels for each source are not accidentally swapped over.

Try to arrange for the input cables to be separated as much as possible from where power cables will run. This will reduce the chance of hum and other mains borne noise being picked up by the inputs.

3. Connect the right channel loudspeaker cables to the amplifier's right channel loudspeaker terminals, figure 3, R.

Ensure that that the loudspeaker's +ve terminal is connected to the amplifier's +ve loudspeaker terminal and that the loudspeaker's -ve terminal is connected to the amplifier's -ve loudspeaker terminal.

Repeat the process for the left channel.

These terminals will accept both banana plugs and spade terminals. Where possible we recommend that cables fitted with spade terminals are used, as this gives a superior connection.

If using banana plugs, ensure that each plug is pushed fully home into the hole in the centre of the terminal.

If using spade terminals, loosen the loudspeaker terminal cap by turning it anti-clockwise a few turns to allow the spade to be inserted so that it is pushed up against the centre of the terminal, then tighten the terminal cap so that the spade is securely held.

Only tighten the terminal by hand. Never use any sort of tool, as this may result in damage to the terminal.

Arrange the loudspeaker cables so that they lie smoothly without any sharp bends or kinks. Also take care that the cables are not stressed where they are joined to the terminations (banana plugs or spade terminals depending on which type has been used).

4. Switch on your music source and allow it to stabilise. Do not start it playing yet.

5. Confirm that the rear panel power switch, figure 3, V, is in the off position, then connect the power cable to the rear panel power inlet, figure 3, U, ensuring that it has been pushed fully home. Plug the other end into the power outlet on the wall, or the power extension block that you are using. If this has a switch, switch this on.

6. Switch on the power switch on the amplifier's rear panel, figure 3, V. The front panel power indicator, figure 2, B should come on. The unit is now in standby mode. **Do not switch it on yet.**

7. If you wish to use the **Gain** control on the amplifier's front panel, figure 2, E, so that the amplifier's gain can be adjusted, you will need to fit the two short, balanced jumper cables supplied with the unit. Otherwise go to step 10.

8. Fit one of the balanced jumper cables supplied with the unit between the right channel preamplifier section balanced output, figure 3, S, and the right channel power amplifier section balanced input, figure 3, L.

9. Repeat the above step for the left channel.

10. Switch the amplifier on by pressing the front panel **On** button, figure 2, H. Allow 30 seconds for the amplifier to stabilise.

11. Rotate the **Volume** control, figure 2, I, anti-clockwise and set the volume to minimum.

12. If you do not wish to use the **Gain** control and have not connected the preamplifier section to power amplifier section jumpers as described in steps 8 and 9 above, go to step 15. The amplifier will default to the nominal gain setting with a neutral voicing.

13. If you wish to use the **Gain** control on the amplifier's front panel, the Direct In mode must be selected. Check the front panel display. If it shows DIRECT IN ON, then the Direct In mode is already selected and you can go to the next step.

If the display shows DIRECT IN OFF, press the rear panel **Direct In** button, figure 3, O. This will light up to show that the Direct In mode has been selected. The front panel display will also show DIRECT IN ON.

14. If the front panel display shows EXTERN INPUT XLR, then the power amplifier section XLR inputs are already selected and you can go to the next step. Otherwise, press the front panel **Input** button, figure 2, D, so that the display shows EXTERN INPUT XLR

15. Rotate the **Source** control, figure 2, A, to select the input connected to the source that you are going to use.

If you are not using the **Gain** control go to step 17.

16. If you have followed steps 8, 9, 13 and 14 above to set-up the Direct In mode, you will be able to use the **Gain** control.

We recommend that initially the amplifier gain be set to 0dB (standard setting). This gives the amplifier a neutral voicing.

Press the **Gain** button, figure 2, E, on the amplifier's front panel once. The display will show the word **GAIN** for about 3 seconds, followed by the current gain setting in dB and the voicing of that setting. Press the **GAIN** button again as necessary until the gain is set to 0dB.

The voicing for the current gain setting is always shown in the top right hand corner of the default display.



To avoid sudden jumps in volume that may damage your loudspeakers, always reduce the amplifier's volume setting to minimum before changing the gain setting.

17. Start the music source playing, then slowly turn the **Volume** control clockwise until a comfortable listening level is achieved.

We suggest that you experiment with the gain settings to find the one that produces the sound most to your taste. To avoid sudden jumps in volume, always reduce the preamplifier volume setting to minimum before changing the amplifier gain setting. As the amplifier's sound may change during the first few days of use as it settles down, we recommend that you listen to the gain settings again after this to confirm that you have found the one you like best.

9. USING THE AMPLIFIER IN A BI-WIRED SYSTEM

If a loudspeaker can be bi-wired, it will have a separate set of input terminals for each section of its crossover: one set for the tweeter section and one set for the bass/mid-section. To bi-wire such a loudspeaker, you simply use a separate loudspeaker cable to connect each section of the crossover to the amplifier. To make this easy, the Emperor Integrated amplifier has two sets of loudspeaker terminals for each channel.

Bi-wiring can produce a useful improvement in sound quality, but bearing in mind the potential cost of an extra set of loudspeaker cables, we recommend that the user borrows some extra cables first to see how well this works with their loudspeakers. They can then decide if the improvement justifies the cost.

10. USING THE AMPLIFIER IN A MULTI-AMPED SYSTEM

In a multi-amped system, each section of the loudspeaker is driven by a separate power amplifier. This is only possible if the loudspeaker has separate input terminals for each section of its crossover. Figure 5 show how a system with a 3-way loudspeaker would be configured for multi-amping. For clarity, only one loudspeaker is shown. With a 2-way loudspeaker, only one additional power amplifier per channel would be needed.

We have shown stereo power amplifiers in our illustration, in this case the German Physiks Emperor Stereo power amplifier. This will work particularly well, as its power section is exactly the same as that used in the German Physiks Emperor Integrated amplifier, so the gains are the same and they are matched tonally. You could use other makers' stereo or mono power amplifiers, providing they all had the same gain as the Emperor Integrated amplifier.

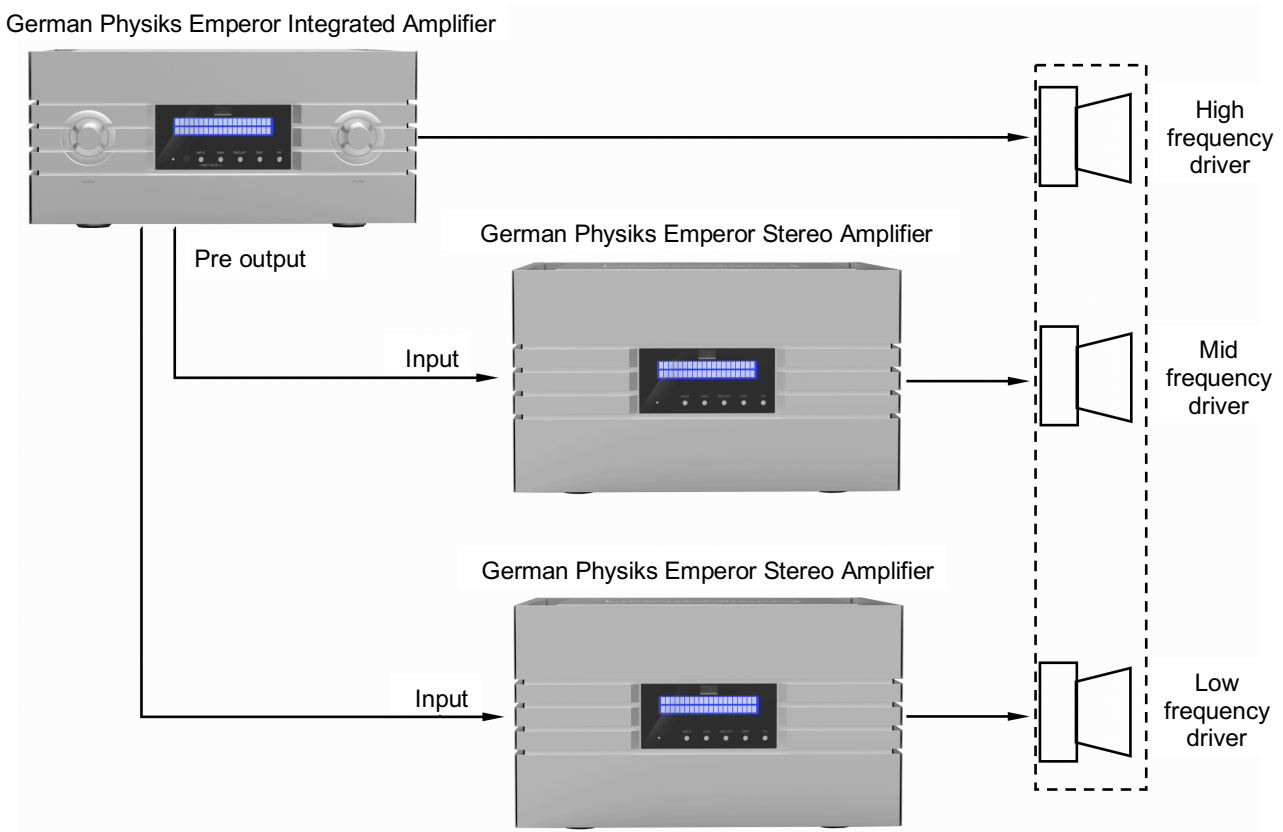


Figure 5. Multi-amped system.

Connecting the system



NEVER make or break connections to any amplifier when it is switched on. Failure to observe this precaution could result in damage to the amplifier and your loudspeakers.

1. Set the equipment shown in figure 5 in the locations where they are to be used, paying attention the ability of any supports used to be able to carry the loads imposed, cautions regarding not blocking cooling vents and the other safety precautions mentioned at the start of this manual.
2. Ensure that all equipment in the system is switched off.

3. Connect right channel output of your main source to either, one of the amplifier's right channel unbalanced inputs (figure 3, J), or one of its right channel balanced inputs (figure 3, M). Where possible, we recommend that you use the balanced inputs for your main sources, as this will usually produce superior results.

Connect the left channel output of this source to the matching left channel input of the amplifier – for example, if you have used the right channel unbalanced #2 input, you must also use the left channel unbalanced #2 input.

Repeat this procedure with the remaining sources.

Make sure that all the plugs are pushed fully home into their sockets and that the left and right channels for each source are not accidentally swapped over.

Try to arrange for the input cables to be separated as much as possible from where power cables will run. This will reduce the chance of hum and other mains borne noise being picked up by the inputs.

4. Connect loudspeaker cables between the right channel high-frequency crossover input and the amplifier's right channel loudspeaker terminals, figure 3, R.

Ensure that that the loudspeaker's +ve terminal is connected to the amplifier's +ve loudspeaker terminal and that the loudspeaker's -ve terminal is connected to the amplifier's -ve loudspeaker terminal.

Repeat the process for the left channel high-frequency crossover input.

These terminals will accept both banana plugs and spade terminals. Where possible we recommend that cables fitted with spade terminals are used, as this gives a superior connection.

If using banana plugs, ensure that each plug is pushed fully home into the hole in the centre of the terminal.

If using spade terminals, loosen the loudspeaker terminal cap by turning it anti-clockwise a few turns to allow the spade to be inserted so that it is pushed up against the centre of the terminal, then tighten the terminal cap so that the spade is securely held.

Only tighten the terminal by hand. Never use any sort of tool, as this may result in damage to the terminal.

Arrange the loudspeaker cables so that they lie smoothly without any sharp bends or kinks. Also take care that the cables are not stressed where they are joined to the terminations (banana plugs or spade terminals depending on which type has been used).

4. Connect the loudspeakers' mid-frequency crossover inputs and low-frequency crossover inputs to the loudspeaker terminals on their associated power amplifiers. In each case, ensure that that the crossovers' +ve terminals are connected to the amplifiers' +ve loudspeaker terminals and that the crossovers' -ve terminals are connected to the amplifiers' -ve loudspeaker terminals.

Take care not to mix up the left and right channels.

6. Connect the amplifier's right channel preamplifier section outputs, figure 3 Q or S, to the right channel inputs of the other power amplifiers. We recommend that you use the balanced outputs.

7. Connect the amplifier's left channel preamplifier section outputs, to the left channel inputs of the other power amplifiers. Use the same interface, unbalanced or balanced, as you use in step 5.

8. Confirm that the main power switches on all the amplifiers are off.

9. Connect power cables to each amplifier, ensuring that they are pushed fully home into their respective inlets.

10. Switch on your music source and allow it to stabilise. Do not start it playing yet.
11. Connect the amplifier power cables to the power outlets on the wall or extension block and confirm that these are all switched on.
12. Switch on the power switch on the integrated amplifier's rear panel, figure 3, V. The front panel power indicator, figure 2, B should come on. The unit is now in standby mode. **Do not switch it on yet.**
13. If you wish to use the **Gain** control on the amplifier's front panel, figure 2, E, so that the amplifier's gain can be adjusted, you will need to fit the two short, balanced jumper cables supplied with the unit. Otherwise go to step 16.
14. Fit one of the balanced jumper cables supplied with the unit between the right channel preamplifier section balanced output, figure 3, S, and the right channel power amplifier section balanced input, figure 3, L.
15. Repeat the above step for the left channel.
16. Switch the amplifier on by pressing the front panel **On** button, figure 2, H. Allow 30 seconds for the amplifier to stabilise.
17. Rotate the **Volume** control, figure 2, I, anti-clockwise and set the volume to minimum.
18. If you do not wish to use the **Gain** control and have not connected the preamplifier section to power amplifier section jumpers as described in steps 14 and 15 above, go to step 21. The amplifier will default to the nominal gain setting with a neutral voicing.
19. If you wish to use the **Gain** control on the amplifier's front panel, the Direct In mode must be selected. Check the front panel display. If it shows DIRECT IN ON, then the Direct In mode is already selected and you can go to the next step.

If the display shows DIRECT IN OFF, press the rear panel **Direct In** button, figure 3, O. This will light up to show that the Direct In mode has been selected. The front panel display will also show DIRECT IN ON.

20. If the front panel display shows EXTERN INPUT XLR, then the power amplifier section XLR inputs are already selected and you can go to the next step. Otherwise, press the front panel **Input** button, figure 2, D, so that the display shows EXTERN INPUT XLR
21. Rotate the **Source** control, figure 2, A, to select the input connected to the source that you are going to use.

If you are not using the **Gain** control go to step 23.

22. If you have followed steps 14, 15, 19 and 20 above to set-up the Direct In mode, you will be able to use the **Gain** control.

We recommend that initially the amplifier gain be set to 0dB (standard setting). This gives the amplifier a neutral voicing.

Press the **Gain** button, figure 2, E, on the amplifier's front panel once. The display will show the word **GAIN** for about 3 seconds, followed by the current gain setting in dB and the voicing of that setting. Press the **GAIN** button again as necessary until the gain is set to 0dB.

The voicing for the current gain setting is always shown in the top right hand corner of the default display.



To avoid sudden jumps in volume that may damage your loudspeakers, always reduce the amplifier's volume setting to minimum before changing the gain setting.

23. Switch on the rear panel mains switches on the other two amplifiers and then press their front panel **On** buttons. Allow 30 seconds for the units to stabilise.

If you are using another maker's power amplifiers, follow the start-up procedure in the maker's user manual.

24. If you are using German Physiks power amplifiers, follow the procedure above to set their gains to the same as that selected for the integrated amplifier, which at this stage should be 0dB.

If you are using another maker's power amplifiers, their gains must be set to be the same as that of the integrated amplifier. Refer to the user manual for instructions. Check whether the amplifier should be switched off when the gain is changed. You may have to adjust the integrated amplifier's gain setting to match the power amplifiers. Failure to set the same gain on all amplifiers will result in a serious frequency imbalance

25. Start the music source playing, then slowly turn the **Volume** control clockwise until a comfortable listening level is achieved.

We suggest that you experiment with the gain settings to find the one that produces the sound most to your taste. To avoid sudden jumps in volume, always reduce the preamplifier volume setting to minimum before changing the amplifier gain setting. As the amplifier's sound may change during the first few days of use as it settles down, we recommend that you listen to the gain settings again after this to confirm that you have found the one you like best.

11. USING THE AMPLIFIER WITH AN ACTIVE CROSSOVER

This section describes how to connect and set up the Emperor Integrated amplifier in a fully active system. This is where the audio signal is split into the bands required by each section of the loudspeaker at low level using an active crossover. Each band is then fed to a separate power amplifier to drive its section of the loudspeaker. The loudspeaker has no internal passive crossover and its drivers are connected directly to its input terminals.

In this example we are illustrating how a system with a 3-way loudspeaker would be configured – figure 6. With a 2-way loudspeaker only one additional power amplifier per channel would be needed.

We have shown the German Physiks Emperor DSP-X active crossover in our illustration, however any 3-way active crossover could be used, though with not necessarily such good results! One of the many advantages of the Emperor DSP-X is that if it is to be used with a set of German Physiks loudspeakers, it will be shipped pre-configured for the model concerned. The user then simply has to connect it into the system and switch it on.

We have also shown stereo power amplifiers in our illustration, in this case the German Physiks Emperor Stereo Power amplifier. This will work particularly well as its power section is exactly the same as that used in the German Physiks Emperor Integrated amplifier, so the gains are the same and they are matched tonally. You could use other makers' stereo or mono power amplifiers, provided that they all had the same gain as the Emperor Integrated amplifier.

For clarity, the connections for only one loudspeaker are shown in figure 6.

What are the advantages of an active system?

Although an active system is much more complex and therefore more expensive than a passive system, it offers several advantages, which are especially useful in very high-end systems.

1. There is usually very little scope to adjust the frequency characteristics of a passive crossover to compensate for variations in frequency response caused by individual room acoustics. The Emperor DSP-X provides two means of adjustment to enable a more even frequency response to be achieved. The relative levels of the 3 output sections may be adjusted via a front panel control and more sophisticated adjustments may be made using a remote-control application.
2. In an active system, the elimination of the passive crossover allows the power amplifiers to be connected directly to the drivers. This greatly improves the damping of the driver movement. This principally affects the low frequency drivers, significantly improving the clarity of the bass.
3. Resistive components in a passive crossover dissipate power. Eliminating these improve both the efficiency and the dynamic response of the system. More power can reach the drivers and the amplifiers work with more headroom.
4. The use of a digital filter allows the loudspeaker designer to get much closer the exact filter characteristic that they wanted, without having to accept the compromises imposed by the limitations of passive designs.
5. If a passive crossover is driven at high levels for a prolonged period, it can result in the resistive components heating up sufficiently for their values to change and have an effect on the crossover's characteristics. Whilst this is usually a minor effect, the Emperor DSP-X eliminates the possibility of this occurring.

In our experience, with a very high-end system where changes are more easily heard, the improvement in sound quality, especially in the areas of bass clarity and overall transparency that the Emperor DSP-X crossover provides, would be difficult to achieve by other means. This improvement is enhanced by the Emperor DSP-X's equalisation adjustment features.

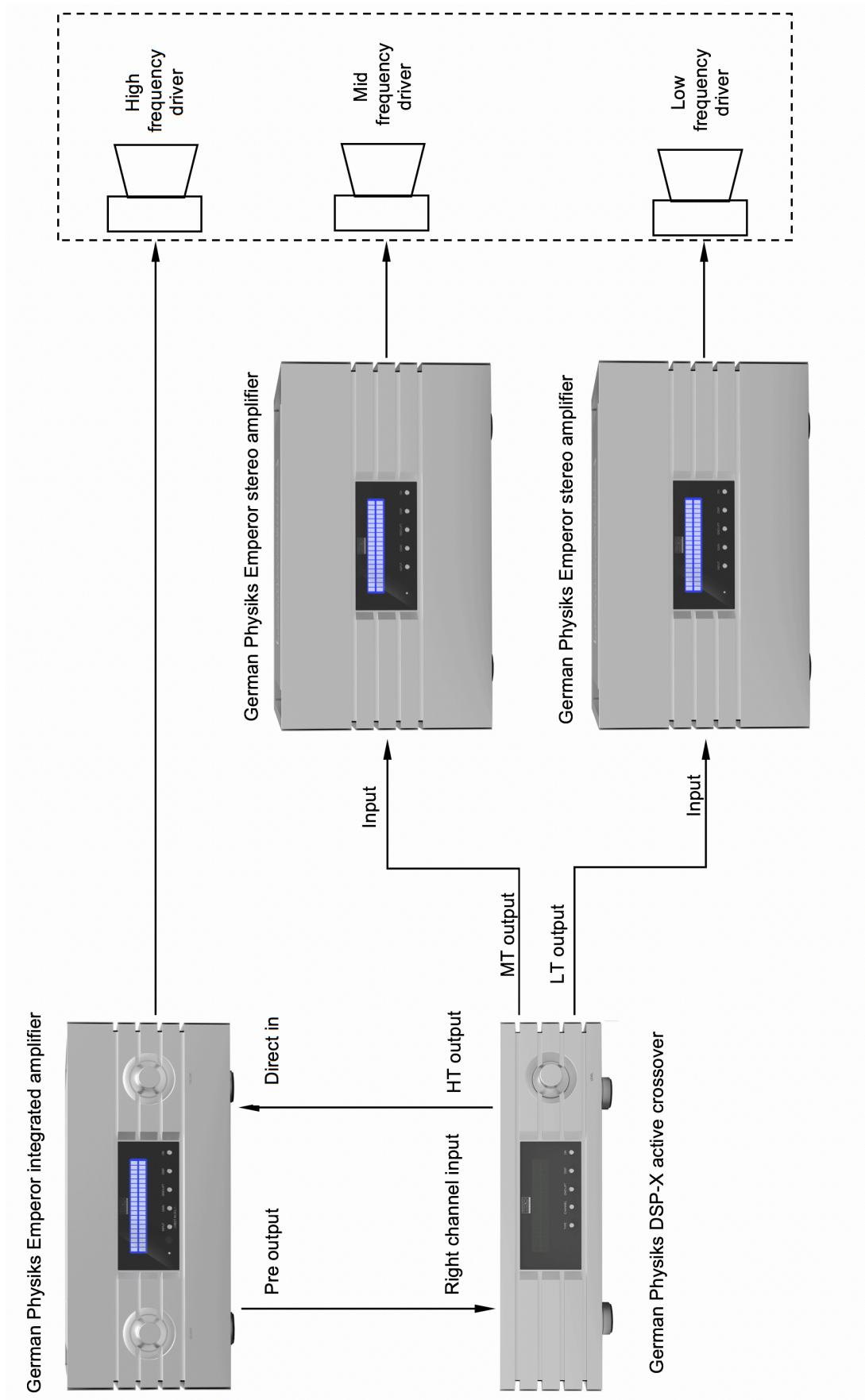


Figure 6. Using the Emperor integrated amplifier with an active crossover

Connecting the system



NEVER make or break connections to any amplifier when it is switched on. Failure to observe this precaution could result in damage to the amplifier and your loudspeakers.

1. Set the equipment shown in figure 6 in the locations where they are to be used, paying attention the ability of any supports used to be able to carry the loads imposed, cautions regarding not blocking cooling vents and the other safety precautions mentioned at the start of this manual.

2. Ensure that all equipment in the system is switched off.

3. Connect right channel output of your main source to either, one of the amplifier's right channel unbalanced inputs (figure 3, J), or one of its right channel balanced inputs (figure 3, M). Where possible, we recommend that you use the balanced inputs for your main sources, as this will usually produce superior results.

Connect the left channel output of this source to the matching left channel input of the amplifier – for example, if you have used the right channel unbalanced #2 input, you must also use the left channel unbalanced #2 input.

Repeat this procedure with the remaining sources.

Make sure that all the plugs are pushed fully home into their sockets and that the left and right channels for each source are not accidentally swapped over.

Try to arrange for the input cables to be separated as much as possible from where power cables will run. This will reduce the chance of hum and other mains borne noise being picked up by the inputs.

4. Connect loudspeaker cables between the right channel high frequency driver input terminals and the amplifier's right channel loudspeaker terminals, figure 3, R.

Ensure that that the driver's +ve terminal is connected to the amplifier's +ve loudspeaker terminal and that the driver's -ve terminal is connected to the amplifier's -ve loudspeaker terminal.

Repeat the process for the left channel high frequency driver.

These terminals will accept both banana plugs and spade terminals. Where possible we recommend that cables fitted with spade terminals are used, as this gives a superior connection.

If using banana plugs, ensure that each plug is pushed fully home into the hole in the centre of the terminal.

If using spade terminals, loosen the loudspeaker terminal cap by turning it anti-clockwise a few turns to allow the spade to be inserted so that it is pushed up against the centre of the terminal, then tighten the terminal cap so that the spade is securely held.

Only tighten the terminal by hand. Never use any sort of tool, as this may result in damage to the terminal.

Arrange the loudspeaker cables so that they lie smoothly without any sharp bends or kinks. Also take care that the cables are not stressed where they are joined to the terminations (banana plugs or spade terminals depending on which type has been used).

5. Connect the mid frequency drivers and low frequency drivers to the loudspeaker terminals on their associated power amplifiers. In each case, ensure that that the drivers' +ve terminals are connected to the amplifiers' +ve loudspeaker terminals and that the drivers' -ve terminals are connected to the amplifiers' -ve loudspeaker terminals.

Take care not to mix up the left and right channels.

6. Connect the amplifier's right channel preamplifier section output, figure 3 Q or S, to the right channel input of the crossover. The balanced interface is recommended.

7. Connect the amplifier's left channel preamplifier section output, to the left channel input of the crossover. Use the same interface as you used above.

8. Connect the crossover's right channel HT (high frequency) output to the amplifier's right channel power section direct input, figure 3, K or L. The balanced interface is recommended.

9. Connect the crossover's left channel HT (high frequency) output to the amplifier's left channel power section direct input. Use the same interface as you used above.

8. Connect the crossover's MT (mid frequency) left and right outputs to the associated power amplifier's left and right inputs. The balanced interface is recommended.

9. Connect the crossover's LT (low frequency) left and right outputs to the associated power amplifier's left and right inputs. The balanced interface is recommended.

10. Confirm that the main power switches on all units are off.

11. Connect power cables to the amplifier, crossover and power amplifiers, ensuring that they are pushed fully home into their respective inlets.

12. Switch on your music source and allow it to stabilise. Do not start it playing yet.

13. Connect the power cables to the power outlets on the wall, or extension block and confirm that these are all switched on.

14. Switch on the power switch on the amplifier's rear panel, figure 3, V. The amplifier's front panel power indicator, figure 2, B should come on. The unit is now in standby mode.

15. Switch the amplifier on by pressing the front panel **On** button, figure 2, H. Allow 30 seconds for the amplifier to stabilise.

16. Rotate the **Volume** control, figure 2, I, anti-clockwise and set the volume to minimum.

17. Switch on the crossover rear panel mains switch and then press the front panel **On** button. Allow 30 seconds for the unit to stabilise.

18. The integrated amplifier must be set to Direct In mode. Check the front panel display. If it shows DIRECT IN ON, then the Direct In mode is already selected and you can go to the next step.

If the display shows DIRECT IN OFF, press the rear panel **Direct In** button, figure 3, O. This will light up to show that the Direct In mode has been selected. The front panel display will also show DIRECT IN ON.

19. The appropriate input for the power amplifier section must be selected. The front panel display will show the input currently selected, either EXTERN INPUT XLR, or EXTERN INPUT RCA. If the input you have used is displayed you can go to the next step. Otherwise, press the front panel **Input** button, figure 2, D, so that the display shows that the appropriate input has been selected.

20. We recommend that initially the amplifier gain be set to 0dB (standard setting). This gives the amplifier a neutral voicing.

Press the **Gain** button, figure 2, E, on the amplifier's front panel once. The display will show the word **GAIN** for about 3 seconds, followed by the current gain setting in dB and the voicing of that setting. Press the **GAIN** button again as necessary until the gain is set to 0dB.

The voicing for the current gain setting is always shown in the top right hand corner of the default display.



To avoid sudden jumps in volume that may damage your loudspeakers, always reduce the amplifier's volume setting to minimum before changing the gain setting.

21. Switch on the rear panel mains switches on the other two amplifiers and then press their front panel **On** buttons. Allow 30 seconds for the units to stabilise.

If you are using another maker's power amplifiers, follow the start-up procedure in the maker's user manual.

22. If you are using German Physiks power amplifiers, follow the procedure above to set their gains to the same as that selected for the integrated amplifier, which at this stage should be 0dB.

If you are using another maker's power amplifiers, their gains must be set to be the same as that of the integrated amplifier. Refer to the user manual for instructions. Check whether the amplifier should be switched off when the gain is changed. You may have to adjust the integrated amplifier's gain setting to match the power amplifiers. Failure to set the same gain on all amplifiers will result in a serious frequency imbalance.

23. Start the music source playing and increase the output level by slowly turning the integrated amplifier's **Volume** control figure 2, I, clockwise until a normal listening level is achieved.

12. 12V TRIGGER



When using this feature on German Physiks Emperor electronics, only use trigger cables that are fitted with 3.5mm stereo plugs. This is the standard employed by most other manufacturers. If you are using German Physiks Emperor electronics with other makers' equipment, refer to the appropriate user manuals to confirm the type of cable that should be used.

When units using this system are connected together, switching the unit at the top of the chain from standby to on, will result in all the other units in the chain being switched on. The following connection instructions refer to an all German Physiks Emperor electronics system, with an extra Emperor stereo amplifier.

1. Ensure that all equipment in the system to be connected is switched off at the rear panel power switches.
2. Connect a trigger cable to either of the integrated amplifier's **LINK OUT** sockets – figure 3, N or P.
3. Connect the other end of the cable to the **LINK IN** socket on the stereo amplifier – stereo amplifier manual, figure 3, J.
4. To connect further units, connect a trigger cable between the **LINK OUT** socket on the last unit connected and the **LINK IN** socket on the next unit.
5. Confirm that the plugs on all the trigger cables have been pushed fully into their respective sockets.
6. When all units have been connected, switch on the rear panel power switches.

7. If the integrated amplifier's front panel **ON** button is now pressed (figure 2, H), all the other connected units should come out of standby.

13. REMOTE CONTROL

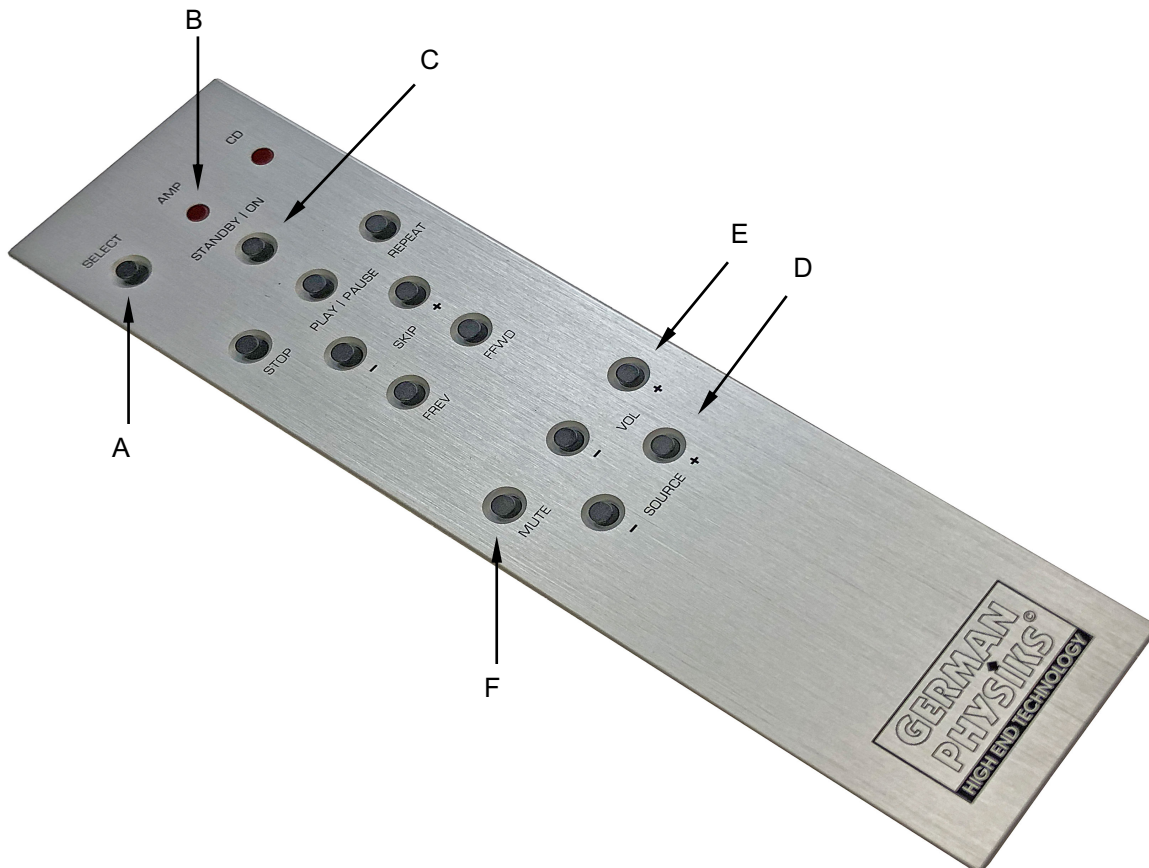


Figure 7. Emperor remote control.

This remote control will work with all the Emperor series amplifiers and also the Emperor CD player.

A. **Select:** To use the remote with an Emperor amplifier, press the **Select** button, once or twice, so that the **AMP LED**, figure 7 B, illuminates briefly.

B. **AMP LED:** Illuminates briefly when **Select** button pressed to show that the remote is set to control an Emperor amplifier.

C. **Standby | On:** Use this button to wake the unit from and return to standby. When the unit is running and the **Standby** button is pressed, the volume level is automatically reduced to zero, the unit is muted and it then enters the standby mode. When the **Standby** button is pressed again, after waking from standby, the unit is unmuted and the volume level is returned to its previous setting. This may take a few seconds.

D. **VOL:** Press the **VOL +** button to increase the volume level and the **VOL -** button to decrease the volume level.

E. **MUTE:** Use this button to mute and unmute the unit. When the unit is running and the **Mute** button is pressed, the volume control level is automatically reduced to zero and then the unit is muted. Pressing the **Mute** button again reverses the process. This may take a few seconds.

F. **SOURCE:** Press the **SOURCE +** button to cycle through the inputs in the same order as when the **SOURCE** control is rotated in a clockwise direction. Press the **SOURCE -** button to cycle through the inputs in the same order as when the **SOURCE** control is rotated in an anticlockwise direction.

14. AMPLIFIER BREAK-IN

Like all audiophile equipment, German Physiks electronics 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 smoother as the break-in progresses. Break-in should largely be complete after two or three days of use.

15. CARE OF YOUR AMPLIFIER



NEVER remove the product's covers. This product contains no user serviceable parts.



NEVER attempt to clean the unit with any abrasive materials or any cleaners containing ammonia, alcohol or other solvents, as these may damage the finish. Solvents may also constitute a fire hazard.



ALWAYS disconnect the unit from the mains supply before attempting to clean it.

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

16. FUSES



NEVER use any fuses other than the types shown below. To do otherwise risks creating electrical shock and fire hazards, with potentially fatal consequences.

If you suspect that the unit has blown a fuse, you must consult a qualified service technician. Do not attempt to replace the fuse yourself as the cause of the failure must be investigated in order to prevent a reoccurrence of the problem and possibly more serious damage. This will not be covered by the warranty.

The unit uses two of each of the fuses shown in the table below.

| Supply voltage | Fuse #1 | Fuse #2 |
|----------------|--------------------------------------------------------------------|----------------------------------------------------------|
| 115V or 230V | SGSITR1T25 Siba 1660x0.1,25 IEC60127-3/4 1.25A 250V time-lag | SGSICG16T0 Eska 632.330 IEC60127 16A 250V time-lag |

17. WARRANTY

The German Physiks Emperor Integrated amplifier is 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 at the end of this manual within 7 days of purchase. A copy of the receipt issued at the time of purchase must also be returned. The warranty may also be registered on the German Physiks web site at www.german-physiks.com, using the product registration form which may be found under the Contact top menu. 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, whichever is greater.

Any unauthorised modifications or repairs will invalidate the warranty. The warranty will also be invalidated if German Physiks determines that the amplifier has been subject to misuse.

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.

18. 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 6109 502 9823, by fax on + 49 6109 502 9826, or by email at service@german-physiks.com. You may 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 serial number of your amplifier and as much information about the problem as possible. The serial number is printed on the amplifier's rear panel.

In the event that it becomes necessary to return your product 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 have this replaced with new packing at the owner's expense. If you need new packing, please contact your German Physiks dealer or the factory.

Please also be aware that if it is necessary to ship the product, it must be shipped securely strapped to an appropriate size pallet. Failure to use a pallet may result in damage that will not be covered by the warranty. Do not leave any loose items in the shipping carton(s) that could damage the amplifier. Any such damage will not be covered by the warranty.

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 products 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 amplifier back to the customer.

German Physiks will not pay any shipping costs if:

- a. Product or parts are returned without a RA number.
- b. No fault is found.
- c. If the fault is judged to be due to misuse.

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

19. DISPOSAL

According to WEEE directive 2012/19/EU, old or defective products that are labeled with a crossed-out rubbish bin may not be disposed of with regular household waste. They must be handed in at local recycling centres in accordance with the applicable national legislation. Proper disposal helps to conserve resources and protect the environment.

20. 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 10.00 a.m. to 5.00 p.m. Monday to Friday, 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 6109 502 9823 |
| Fax | + 49 6109 502 9826 |
| Email | service@german-physiks.com |
| Web | www.german-physiks.com |

21. EMPEROR INTEGRATED AMPLIFIER SPECIFICATIONS

| | | |
|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------|
| Output power | 300W RMS into 8 ohms 600W RMS into 4 ohms | Both channels driven Both channels driven |
| Frequency response | 0.5Hz - 80kHz (-3dB) | 1W into 8 ohms |
| THD + Noise | 0.01% (22Hz - 22kHz) | 1W into 8 ohms |
| Maximum dynamic range | 127 dB | |
| Signal to noise ratio | - 91 dB A | A weighted @ 1W into 8 ohms Balanced input |
| Power amplifier section gain settings and voicings | 33dB - analytical side of neutral 30dB - neutral sound 21dB - warm side of neutral | |
| Pre-amp inputs | Unbalanced x 3 pairs Balanced x 3 pairs | |
| Pre-amp outputs | Unbalanced x 2 pairs Balanced x 2 pairs | |
| Power amp direct inputs | Unbalanced x 1 pair Balanced x 1 pair | |
| Output Terminals | 1 pair of high quality WBT screw terminals per channel | |
| Supplied accessories | Infra-red remote control | |
| Finish | Silver anodized aluminium | |
| Power supply | 110 -120V AC 50/60Hz 220 -240V AC 50/60Hz | |
| Power supply | 110 -120V AC 50/60Hz 220 -240V AC 50/60Hz | |
| Dimensions | 475 mm W x 230 mm H x 475 mm D | |
| Weight | Approximately 65kg | |
| Warranty | 5 years | |
| As part of our process of continually improving our products, we reserve the right to change specifications without notice. | | |

22. 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:

Warranty Registrations
 DDD-Manufactur GmbH
 Gutenbergstrasse 4
 D-63477 Maintal
 GERMANY

The warranty may also be registered on the German Physiks web site at www.german-physiks.com, using the product registration form which may be found under the Contact top menu.

| | |
|---------------------------------|------------------------------------|
| Title (Mr, Mrs, Dr. etc) | |
| Name | |
| Address | |
| | |
| | |
| Country | |
| Zip/Post Code | |
| | |
| Model | Emperor Integrated Amplfier |
| Serial Number | |
| Date of Purchase | |
| | |
| Where Purchased | |
| Address | |
| | |
| | |
| Country | |
| Zip/Post Code | |
| | |