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Dear music lover,

all of us at ASR would like to offer thanks and congratulations to you for purchasing the ASR Emitter High End Integrated Amplifier. We sincerely believe that your ASR Emitter will bring you many years of musical pleasure and enjoyment.

All ASR products are handmade with greatest care to details and with high-grade selected parts. Enjoy your music even more with this true High End Integrated Amplifier!

While every new owner is anxious to begin listening, we encourage you to take a few minutes to read this manual and familiarize yourself with the full capabilities of the ASR Emitter.

1.0 Receiving the ASR Emitter – First moves

1.1 Unpacking the ASR Emitter

Use care in unpacking your ASR Emitter. Inspect it for any shipping damage and call your dealer immediately if any is found. **Do not plug your ASR Emitter into an AC outlet if you find shipping damage.**

Accessories

Provided with the ASR Emitter are the following accessories:

- a) **Integrated amplifier ASR Emitter**
(main unit with three golden or chromium control knobs)
- b) **Separate power supply (ASR Emitter I = one, ASR Emitter II = two)**
(no controls) incl. one/two shielded ASR power cord(s)
- c) **ASR remote control**
- d) **repair-set** (Consisting of: 1x 3 mm-Allen-wrench, replacement screws M4 x 16, replacement fuses 1 Amp/slow for the battery power supply)
- e) **Care-set** (Consisting of: 1x bottle of antistatic plastic-cleaner and a special cloth)
- f) **(available only for the ASR Emitter Exclusive versions)**
Battery Power Supply (no controls) inclusive one power cord

1.2 Setting up the ASR Emitter

Check to make sure, your ASR Emitter has been manufactured for operation at your AC line voltage. Attempting to use your ASR Emitter at any voltage other than the specified on the battery power supply's back side may damage the unit. Damage caused by improper operation is not covered by ASR warranty. If the voltage specified is different from your AC voltage, contact your ASR dealer.

The heat sinks of the ASR Emitter radiate some heat, so please place the main unit in a place, where air can circulate around the heat sinks. Never put a unit on top of the main unit. The ASR power supplies do not radiate much heat. Please do not stack the ASR power supplies or place the ASR power supply unit(s) too close to the main unit. Place the main unit close to your source components and use a cable as short as possible to connect your source components to the main unit of the ASR Emitter.

1.3 Important safety precautions

To get the best performance from your ASR Emitter, and for your own safety, please read and follow these important safety instructions.

1. Before operating the ASR Emitter Integrated Amplifier, please read ALL operating and safety instructions.
2. Never place the ASR Emitter or the (battery) power supply unit(s) near heat sources such as radiators, fireplaces, stove, or other appliances that produce heat. Avoid placing the ASR Emitter where it will be subject to direct sunlight or low temperatures.
3. This product is equipped with three prong AC power cords which include an earth ground connection. To prevent shock hazard, all three connectors must always be used. If your electrical outlets will not accept this type of plug, an adaptor may be purchased. If an adaptor is necessary, be sure it is an approved type and that it is used properly., supplying an earth ground. If you are not sure of the integrity of your home's electrical system, contact a licensed electrician for assistance.
4. AC extension cords are not recommended for use with this product. If an extension cord must be used, be sure it is an approved type and has sufficient current carrying capacity to power this product.
5. Before cleaning the ASR Emitter, always turn the unit off and disconnect the power supply cord.
6. If you smell smoke, or an abnormal smell, immediately turn the ASR Emitter off and unplug the unit from the power supply and contact your ASR dealer.
7. Unplug unit if it becomes wet.
8. Replace fuse only with the exact type originally included.

| | |
|------------------------------|--------------------------|
| external power supplies | ASR Battery Power Supply |
| 115 Volt: 10 amps, slow-blow | 1 amps, slow-blow |
| 230 Volt: 5 amps, slow-blow | 0,5 amp, slow-blow |
9. THERE ARE NO SERVICEABLE PARTS INSIDE THE ASR EMITTER!
 - Do not attempt to repair or modify your ASR Emitter.
 - All service should be performed by qualified service personnel.
 - Do not open the unit while it is attached to the AC outlet.

1.4 The ground lift switch

The ground lift switch is located on the back panel of the ASR Emitter above the AC input. Switching to position „1“ will connect the ground of the power supply to the ground of the connected source components (on the RCA inputs). Audio ground should be once connected to the power supply ground in every audio system. If connected more often hum can occur. Switching to position „0“ disconnects the ground connection as described above. In any doubt: please switch the ground lift switch to „1“.

2.0 Connecting the ASR Emitter to your system

ATTENTION: Inputs (cables from source components) and outputs (cable to speakers) can be safely connected to the ASR Emitter when the units (left) control knob is set to „Off“. Be sure that the last cable you connect is/are the power cord(s) to the AC outlet.

To obtain the best performance please make sure, that all your cables from and to the ASR Emitter are as short as possible. The ASR Emitter's main unit should be placed close to your source components. If your source components are equipped with „fixed“ and „variable“ outputs always use the „fixed“ outputs to connect the component to the ASR Emitter. All standard inputs of the ASR Emitter are high-level-inputs and are identical, just the marking is different. Only exception from this rule: if your ASR Emitter is equipped with the ASR plug-in phono board (on special order, see 2.2.2), do not use the input „Ph“ to connect your high-level source components.

On the back panel of the main unit the RCA input sockets are located left and right above the speaker outputs. The RCA sockets are named (from left to right) „Ph, Ta, CD, Tu, DT, Vi“. The RCA input sockets for the right channel are marked with a red ring, for the left channel with a black ring.

Tip: please use high quality interconnects, speaker cables and power cords to connect your ASR Emitter. The performance of your system will be increased by using the best affordable cables.

Burn-in time

Straight out of the box, the performance of the ASR Emitter is not as impressive as the performance of a unit that has been broken in. Why?

Each ASR Emitter needs at least 100 to 200 hours of playing music to break in. Especially the ASR Emitter Exclusive versions with the large amounts of capacitors inside have to stabilize over the initial 200 hours of playing.

Tip: connect your CD player to the ASR Emitter and play a CD with dynamic music or a dedicated burn-in-CD in repeat mode a few times (ASR Emitter volume level should be set between 20 and 30).

If you are not playing the ASR Emitter for more than a week, the same effect will occur, but not as apparent as when connected for the first time. After one or two days of listening the ASR Emitter sounds as good as the unit did before.

Tip: if you are absent for more than three days, please disconnect all the power cords from the AC outlet. This is the safest and cheapest way to prevent your Audio system from any damages.

The ASR Battery Power Supply should not be disconnected from the AC outlet for more than 10 days. Like any other high-end amplifier, the ASR Emitter sounds best about one hour after you put the left control knob to the „1“ (ON) position.

Tip: about 30 minutes before you want to listen to music, turn the ASR Emitter on. Just turn the ASR Emitter Off, if you are not listening to music for more than two hours.

2.1 Standard connections

As a standard version the ASR Emitters are equipped with high-level inputs with RCA sockets (one of the inputs is a direct input), one (two) RCA tape outputs and one pair of speaker outputs as direct outputs.

2.1.1 Connecting high-level source components to the ASR Emitter

High-level source components are all audio components except turntables.

Every ASR Emitter is equipped with the following (identical) RCA inputs: „Ph“ = phono (*if your ASR Emitter is equipped with the ASR plug-in phonoboard, this is NOT a high-level input anymore!*), „Ta“ = tape, „CD“ = CD player, „Tu“ = Tuner, „DT“ = digital tape, „Vi“ = VCR. The additional RCA sockets (on the back panel, outer left/right side) are tape outputs – the ASR Emitter I is equipped with one, the ASR Emitter II with two tape out RCA sockets. These outputs are named „Out“.

Connect each of your source components to one input. Attention: connect the right outputs of your source components to the right inputs of the ASR Emitter (same for the left channel) and make sure, the RCA connectors fit tight.

2.1.2 Connecting a high-level source component to the direct input of the ASR Emitter

The RCA input sockets of the direct input are directly connected to the relays volume control via silver wire, the grounding is separately routed. The direct input was especially developed for audio systems with just one source component (for example a CD player). The signal of the direct input passes two relays less than the signals of the other inputs.

The RCA sockets of the direct input are located between the „Out“- and the „Vi“ RCA sockets on the back panel of the ASR Emitter. Connections to the direct input should be made like described in 2.1.1.

The direct input can not be switched via the input selector (right control knob on front panel of the ASR Emitter). If you have connected a source component to the direct input and switch the input selector to another input, where a source component is connected and playing, you will hear the signals of both inputs.

Tip: if you are using the direct input, switch the input selector to a position, where no other source component is connected. If your ASR Emitter is equipped with a balanced input, do not put the input selector to „CD“ while having a source component connected to the direct input. If you want to listen to another source component than the one, that is connected to the direct input, please turn the direct connected unit off or disconnect its power cord from the AC outlet.

2.1.3 Connecting a tape deck to the ASR Emitter

The ASR Emitter I is equipped with one, the ASR Emitter II with two tape outputs (additional tape output on special order).

Connect the „Line out“ or „Tape Out“-RCA sockets on your tape deck to the RCA input sockets „Ta“ on the ASR Emitter and the „Line In“- or „Tape In“-RCA sockets on your tape deck to the „Out“-RCA sockets (sockets closest to the heat sinks) on the ASR Emitter.

Additional tape decks or open-reel decks can be connected to each RCA input of the ASR Emitter. To make recordings, put the input selector knob to the position, where the source that you want to record from, is connected. The signal of the chosen source component will be routed to the „Out“-RCA sockets. Tape-to-tape recordings are possible in the same manner too.

ATTENTION: during a recording or when your tape deck is ready to record, DO NOT switch the input selector knob to the input, where your (recording) tape deck is connected to. Switching to the „Ta“-input means switching tape in- and output together – a feedback will be the result. This feedback may cause damages to your connected speakers.

2.1.3 Connecting an auxiliary source component to the ASR Emitter

The „Ta“ input of the ASR Emitter may as well be used to connect any auxiliary source components like equalizer. Connect the „Line out“-RCA sockets on your auxiliary component to the RCA input sockets „Ta“ on the ASR Emitter and the „Line In“-RCA sockets on your auxiliary component to the „Out“-RCA sockets (sockets closest to the heat sinks) on the ASR Emitter. Pressing the „monitor“-button (if available) on the ASR Emitters front panel or on the remote control will bring the signals of the auxiliary component into the signal path of the chosen input on the ASR Emitter.

2.1.5 Connecting a pair of speakers to the ASR Emitter

ATTENTION:

Put the left control knob to the „Off“ position before you connect or disconnect any speaker cables. Check all speaker cables for shortcuts. This will keep your speakers and the other connected components from being damaged. *A shortcut is easily detectable and is not covered by the ASR warranty!*

The standard versions of the ASR Emitter are equipped with a direct (speaker) output. To increase the performance of the ASR Emitter, the speaker outputs are directly connected to the output transistors and named „Direct“.

An ASR Emitter with direct output differs from an ASR Emitter with a relays-switched speaker output (read 2.2.5):

- while switching the ASR Emitter On or Off, there might be a audible sound in your speakers
- before switching the ASR Emitter to the „On“-position, the DC resistance can not be checked, if a shortcut has occurred on the speakers – this means: all speaker cables HAVE TO BE checked before the ASR Emitter is initially switched to the „On“-position

- if a technical defect occurs, the speaker output can not be turned off; in case of trouble, the protection circuitry shuts down the speaker outputs
- in case of over modulation the ASR Emitter with direct output will be immediately and completely turned off to protect your speakers; to listen to music again, the left control knob on the ASR Emitter has to be set to the „Off“ position and then to the „1“-(On)-position

The speakers connected to the ASR Emitter should have an impedance that is no lower than 1,5 ohms (20Hz to 20kHz). If the ASR Emitter is equipped with a relays-switched speaker output (named „A“) and/or with a second pair of speaker outputs, an impedance check will be automatically made, before the unit switches from „0“ to the „On“ position. The impedance check will not let the ASR Emitter switch to the „On“-position, when the measured value is under 1,5 ohms.

The speaker outputs are located on the back panel of the ASR Emitter below the RCA input sockets. Please connect the „minus“ (black on most speaker cables) of the right speaker cables to the „minus“ (black) terminal on your speaker, than the other end of the cable to the right black terminal on the ASR Emitter, and the „plus“ (red) of the right speaker cables to the „plus“ (red) terminals of your speakers, than the other end of the cable to the right red terminal on the ASR Emitter - same for the left channel.

Do not reverse „minus“ (black) and „plus“ (red) – neither on the ASR Emitter nor on your speakers.

If the ASR Emitter is equipped with one speaker output, the output relays for A and B are switched together to improve the output resistance.

2.1.6 Connecting the separate power supply/supplies to the ASR Emitter

Every ASR Emitter is equipped with external power supplies. The ASR Emitter I has one external power supply, the ASR Emitter II has two external power supplies. Due to the very high power capability of the ASR Emitters, the power supplies **MUST** be connected direct. to wall AC outlets.

Connecting the power supplies to the ASR Emitter is quite simple, please pay attention to the following order:

- a) **turn off** the ASR Emitter (left control knob to „Off“-position) and **disconnect** the power cords from the AC outlet, **disconnect** the power cord(s) from the AC input of the power supply/supplies
- b) **carefully connect** the heavy silver cable (with grey plug featuring 30 contacts) hanging out of the back panel of the ASR Emitter I’s main unit to the socket on the back panel of the external power supply. The ASR Emitter II features two cables hanging out of the back panel. Please connect the two cables (with 30 contacts) to each of the two power supplies; both power supplies are identical.
- c) **connect** the power cords to the AC input of the power supply/supplies
- d) **connect** the power cords to the AC outlet

If you want to disconnect the external ASR power supply/supplies please pay attention to the following order :

- a) **turn off** the ASR Emitter (left control knob to „Off“-position)
- b) **disconnect** the power cord(s) from the AC outlet, **disconnect** the power cord(s) from the AC input of the power supply/supplies
- c) **wait** until the Leds inside the ASR power supply/supplies are not shining anymore
- d) **disconnect** the heavy silver cable from the power supply/supplies

If the connection between the ASR Emitter's main unit and the power supply/supplies has been disconnected before the Leds have gone out, please wait at least two hours before you connect the power supply/supplies again. This will avoid damage on your audio system.

Tip: power cords have a big influence on the obtainable sound quality. We recommend to use the ASR Active Power cord on all the components in your audio system.

2.2 Additional connections (on special order)

Every ASR Emitter can be equipped with a lot of in- and outputs on special order at additional cost. The most common connections are described here.

2.2.1 Connecting a high-level source component to the balanced input of the ASR Emitter

The ASR Emitters (that are not equipped with the ASR plug-in phono board) can be equipped with a balanced input. This input can easily be chosen by switching the input selector (right control knob on the front panel) to the „CD“-position. In this case the RCA input sockets on the back panel named „CD“ should not be used, cause they are connected to the balanced inputs, and may sound no as good as the other RCA inputs.

You can connect either every high-level source component to the balanced inputs of the ASR Emitter. A balanced cable (with male-/female XLR plugs) can - due to international Studio standards (1= Ground, 2= plus, 3 = Minus) only be connected one way: the male XLR plug is connected to the source component and the female XLR plug is connected to the ASR Emitter.

The Balanced board has 2 dip switches. They can be used to switch the input impedance. When all switches are Off, the impedance is 10K, when On 900 Ohms for Studio use. Please check both positions for optimal sound results.

Tip: if you have to use a cable longer than approximately three meter between a source component and the ASR Emitter, you should use a balanced connection. Balanced connections are less susceptible for disturbances.

2.2.2 Connecting a turntable to the ASR Emitter

Every ASR Emitter (that is not equipped with a balanced input!) can be equipped with the ASR plug-in phono board. If an ASR Emitter is equipped with the ASR plug-in phono board a turntable with Moving Magnet- or Moving Coil-cartridge can be directly connected to the ASR Emitter. The turntable can be connected to the RCA input sockets named „Ph“ on the back panel of the ASR Emitter. The grounding cable of the turntable (if there is one) can be connected to one of the black speaker output terminals.

The ASR plug-in phono board can be retrofitted. Simply follow the described steps:

- before you put the phono board into the ASR Emitter, please adjust it according to the cartridge you are using (see 2.2.2.1)
- turn off the ASR Emitter (left control knob to „0“-position) and **disconnect** the powercords from the AC outlet, **disconnect** the powercord(s) from the AC input of the power supply/supplies
- carefully **release** the bolts of the top plate of the ASR Emitter (inside the heat sinks) and **remove** the top plate
- at the end of the pc-board in the middle (view from the front) there are two black 10fold sockets (right were the word „phono“ is written on the pcb); there are two bridge-wires in this sockets (one for each channel) - carefully **remove** this bridge-wires
- carefully **insert** the ASR plug-in phono board into the two black 10fold sockets; the parts on the phono board facing the front panel of the ASR Emitter)

2.2.2.1 Adjusting the ASR plug-in phonoboard

There is a 6fold DIP switch for each channel in the middle of the phono board to adjust the phono board according to your cartridge. The input resistance can be adjusted on DIP switches no. 1 and 2, the gain can be adjusted on the DIP switches no. 3 to 6.

- a) the DIP switches have two different settings: „on“ or „off“; be sure, that the switches are correctly set (when set correctly, you will hear a slight „click“)
- b) please set the DIP switches exactly the same for the right and the left channel (only exception from this rule: your cartridge needs to be balanced because of different output from the right and left channel)
- c) the ASR plug-in phono board was not developed to work with very low output MC cartridges

Adjusting the input resistance

We know from experience that if you are using an adjustment with a lower input resistance the ambiance is improved with limited dynamics, with a higher input resistance the overall performance is brighter and more dynamic, but definition and precision are limited. You can easily find out the perfect setting for you: make an adjustment and listen to the system. the best adjustment is the one you like best!

| DIP switch no. | 1 | 2 | Input resistance |
|----------------|----|----|--|
| 47k Ω | — | — | for MM- und High Output MC cartridges |
| 100k Ω | — | ON | for medium output MC cartridges (Denon/Yamaha) |
| 22 Ω | ON | — | for low output MC cartridges (Ortofon MC 200) |
| 18 Ω | ON | ON | for very low output MC cartridges (limited) |

Setting the gain

The gain can easily be adjusted on DIP switches no. 3 to 6. Please put just ONE switch to the „on“-position. Maximum gain is obtained by putting the DIP switches no. 3 to 6 to „on“.

The following chart shows, how the gain can be set:

| switch no. „ON“ | all four | 3 | 4 | 5 | 6 | none |
|------------------------|----------|-------|-------|-------|------|---------|
| Gain: | +34dB | +26dB | +20dB | +14dB | +9dB | minimum |
| | *1 | *2 | *3 | | | *4 |

*1 = for extreme low output MC cartridges (limited)

*2 = for very low output MC cartridges

*3 = for low output MC cartridges (limited)

*4 = for MM cartridges (minimum gain)

Please set the DIP switches exactly the same for the right and the left channel (only exception from this rule: your cartridge needs to be balanced because of different output from the right and left channel). The gain should be set as low as possible.

2.2.3 Connecting a headset to the ASR Emitter

Every ASR Emitter can be equipped with a headset output, either on the front- or the back panel. Connection can be made via a gold-plated 6,3mm-socket. The headset output can be easily chosen by switching the left control knob to the „Hs“-position or via remote control. Two yellow Leds indicate that the headset output is selected. The 6,3mm-plug must not be disconnected, when the headset is not in use.

2.2.4 Connecting a second pair of speakers to the ASR Emitter

Every ASR Emitter I can be equipped with an additional speaker output. The speaker outputs are named „A“ and „B“. Every ASR Emitter II can be equipped with up to two additional speaker outputs. The speaker outputs are named „A“, „B“ and „C“. The additional speaker outputs on the ASR Emitter can be either selected single („A“ or „B“, „A“ or „B“ or „C“) or together („A“ and „B“, „A“ and „B“ and „C“). The chosen mode is shown in the display on the front panel. If an ASR Emitter has additional speaker outputs, it has no longer a direct output. The speaker outputs are switched via relays then.

Connect the additional speakers according to 2.1.5.

2.2.5 Connecting the ASR Battery Power Supply (available only for the ASR Emitter Exclusive versions)

The input stages of the ASR Emitter Exclusive versions can be supplied with an optional, external ASR Battery Power Supply. The standard power supply/supplies should be connected before you connect the ASR Battery Power Supply to the ASR Emitter Exclusive (refer 2.1.6).

Connecting the ASR Battery Power Supply to an ASR Emitter Exclusive is quite simple, please pay attention to the following order:

- a) **turn off** the ASR Emitter Exclusive (left control knob to „Off“-position) and
- b) **carefully connect** the heavy silver cable (with grey plug featuring 20 contacts) hanging out of the back panel of the ASR Emitter Exclusive's main unit to the socket on the back panel of the ASR Battery Power Supply.
- c) **connect** the power cord to the AC input of the ASR Battery Power Supply.
- d) **connect** the power cords to the AC outlet

If you want to disconnect the external ASR Battery Power Supply please pay attention to the following order

- a) **turn off** the ASR Emitter Exclusive (left control knob to „Off“-position)
- b) **disconnect** all the power cords from the AC outlet,
- c) **disconnect** the power cord from the ASR Battery Power Supply.
- d) **disconnect** the heavy silver cable from the ASR Battery Power Supply

If the connection between the ASR Emitter Exclusive's main unit and the ASR Battery Power Supply has been disconnected before the Leds have not shone anymore, please wait at least two hours before you connect the power supply/supplies again. This will avoid damage on your audio system.

3.0 Operating the ASR Emitter

3.1 General operation of the ASR Emitter

All functions of the ASR Emitter can be controlled by the three golden or chromium knobs on the front panel of the main unit. The operation via remote control is even more convenient. The status of the ASR Emitter is shown in the display on the front panel. If there are any malfunctions inside the ASR Emitter, a red LED will indicate this immediately. How to react in case of malfunctions is referred to in chapter no. 4.0 and 5.2.

The external power supply/supplies of the ASR Emitter can be operated in an energy saving mode: all the internal voltages of the ASR Emitter are cut in half in this mode. After setting the left knob on the front panel from „Standby“- to „1“-position, every ASR Emitter is operating in the energy saving mode for one minute.

After connecting the ASR Emitter (see chapter 2.0), please set the left knob to the „Standby“-position. Now you can either set the left knob to the „1“ (On)-position or use the remote control to turn the unit on.

3.2 Front panel control knobs of the ASR Emitter

On-/Off-Selector (= left knob)

| Position (referred to standard ASR Emitter) | Function |
|--|---|
| Off | The unit is turned off. Before you switch from „Standby“ to „Off“ please wait at least 20 seconds. The ASR Emitter needs this time, to run a switch-off-program. |
| Standby | In this position - the ASR Emitter can be operated with the remote control - you can record from source to tape |
| 1 | volume can be adjusted from 0 to 61dB, normal operating position, energy saving mode can be activated |
| 2 | volume can be adjusted from 0 to 76dB, energy saving mode can not be activated. |

| Additional positions (for ASR Emitters with special features) | Function |
|--|--|
| A1 | (speaker-)outputs „A“, normal operating position |
| B1 | (speaker-)outputs „B“, normal operating position. |
| Hs | the headset-output is active, the speaker-outputs are muted |
| A2 | (speaker-)outputs „A“, volume control from 0 to 76dB, energy saving mode can not be activated. |
| B2 | (speaker-)outputs „B“, volume control from 0 to 76dB, energy saving mode can not be activated. |
| A+B1 | (speaker-)outputs „A“ and „B“ selected to play together, normal operating position |

If the ASR Emitter is controlled via remote control, the position of the left knob may not exactly correspond with the actual operating mode. The chosen input is indicated by an Led above the (right) input selector knob.

Volume control (= middle knob)

The volume of the ASR Emitter is controlled with a relays step control. The middle knob works as an impulse sender and can be turned around 360°. The chosen volume will be displayed in numbers from 0 to 76. In „Standby“-mode the volume can be pre selected up to 49 – this avoids too high sound pressure levels when turning the ASR Emitter on.

Input selector (= right knob)

In the standard version of the ASR Emitter, the input selector has six positions: six high level inputs and one tape input. To select an input, please move the input selector knob to the desired input. The chosen input is indicated by a yellow Led.

Monitor-switch (= if supplied, right beside the input selector knob)

As an option, the ASR Emitter can be equipped with a tape monitor switch. When the ASR Emitter is turned on, pressing the tape monitor switch allows you to listen to the source, that you are recording to the tape unit connected to the „Ta“-input. When activated a green bar in the display and a green led near the inputs will shine. If the ASR Emitter is in the „Standby“-mode, pressing the tape-monitor switch activates the adjustments for the input level adjust, energy saving mode, balance and display brightness (refer chapter no. 3.4).

3.3 Operating the ASR Emitter via ASR remote control

All functions of the ASR Emitter can be controlled via the supplied ASR remote control. To operate the ASR Emitter via ASR remote control, put the left knob to the „Standby“-position. If you press a key on the ASR remote control, the display lights up and shows the selected function. When using the ASR remote control, the three control knobs on the front panel of the ASR Emitter are not moving.

Functions of the remote control buttons

| Button | Function |
|---------------------|---|
| (right side) | |
| Power | switches ASR Emitter on/off |
| Mute | lowers the volume (- 15dB), pressing the button one more time increases the volume again (+ 15dB) |
| Vol | upper „Vol“-button = increases the volume the display lights up and indicates the increase lower „Vol“-button = lowers the volume the display lights up and indicates the decline |
| (left side)- | |
| Mode | selects the adjust mode for balance, energy saving mode, display brightness etc. and input level. press the „Mode“-button as long until the mode you want to adjust is displayed; adjustments can now easily be made using the „Vol“ buttons |
| Inp | allows direct input selection: Ph, Ta, CD, Tu, DT, Vi upper „Inp“-button = switches the inputs clockwise, lower „Inp“-button = switches the inputs anticlockwise LED above the input selector knob indicates the chosen input |

For remote control operation, the ASR Emitter uses the standard RC5 code set – this allows the remote control operation with a wide variety of different programmable remote controls. Philips and Marantz and many other brands uses the RC5 code, too.

3.4 Adjustments of the ASR Emitter

The ASR Emitter offers a lot of possibilities to adjust the unit. Most of these adjustments have to be set just once. Put the left knob on the ASR Emitter to the „Standby“-position. The adjustment menu can be easily accessed by pressing the „Mode“-button on the ASR remote control. Alternative you can access the menu by pressing the „Tape Monitor“-button on the front plate of the ASR Emitter (if supplied).

Please press the button on the ASR remote control (or the „Tape Monitor“-button on the front plate) until the parameter, that you want to adjust, appears flashing in the display. To adjust the parameter, please press either the “Vol”-buttons on the ASR remote control or move the middle knob on the ASR Emitter to the right (+) or left (-). To save your individual adjustments please put the left knob of the ASR Emitter to the „Off“-position and keep the unit switched off for at least ten seconds. All adjustments are stored now.

Adjusting the channel balance

Please press the “Mode”-button on the remote control (or the „Tape Monitor“-button on the front plate) *once* – the yellow LED „Balance“ is flashing. Now you can either use the “Vol”-buttons (upper “Vol”-button = increases left channel volume, lower “Vol”-button = increases right channel volume) on the ASR remote control or the middle knob of the ASR Emitter to adjust the channel balance. If one channels is adjusted to play louder, this channel will have an yellow „Balance“-LED illuminated. If both channels play at the same level, each channel has an yellow „Balance“-LED illuminated.

Adjusting the energy saving mode

You can easily adjust the volume level, where the ASR Emitter switches from energy saving mode to normal operating mode in a wide range from 01 to 51 (= display). If you set the display to „01“ the energy saving mode in enabled. The factory setting is „35“.

Please press the “Mode”-button on the remote control (or the „Tape Monitor“-button on the front plate) *twice* – the green LED „Energy“ is flashing. Now either use the “Vol”-buttons (upper “Vol”-button = ASR Emitter switches into normal operating mode at higher level, lower “Vol”-button = ASR Emitter switches into normal operating mode at lower level) on the ASR remote control or the middle knob of the ASR Emitter to adjust the energy saving mode.

Adjusting the display mode and brightness

The display of the ASR Emitter can be adjusted in brightness, parts of the display can be illuminated all the time or not and so on. The actual setting will be displayed numerical. Factory setting is „07“: maximum brightness and the display is switched off 10 seconds after the last turn of the knobs or receiving a signal from the remote control.

Only ASR Emitter Blue Version models: you can adjust the display to “37”, i. e. all blue Leds and the numbers of the display are illuminated all the time, maximum brightness.

Please press the “Mode”-button on the ASR remote control (or the „Tape Monitor“-button on the front plate) *three times* – the two yellow display numbers are flashing. Now either use the “Vol”-buttons on the ASR remote control or the middle knob of the ASR Emitter to adjust the display mode (see chart below).

| left yellow display number (= mode) | Adjustments |
|--|---|
| 0 | display switches totally off after ten seconds |
| 1 | the Leds above the left and right knob on the front plate of the ASR Emitter are illuminated constantly |
| 2 | the two numbers of the display are illuminated constantly |
| 3 | equivalent to mode 1 and 2 together |
| 4 | mode Less (i. e. Balance etc.) are illuminated constantly |
| 5 | equivalent to mode 1 and 4 together |
| 6 | equivalent to mode 2 and 4 together |
| 7 | the whole display is illuminated constantly |
| | |
| right yellow number (= brightness) | Adjustments |
| 0 to 7 | 0 (= off) to 7 (= max. brightness), altering the volume will illuminate just the yellow numbers |
| 8 to F | 8 (= off) to F = (= max. brightness) altering the volume will illuminate the whole display |

Adjusting the input level

To avoid difference in volume when switching from one input to another, the input level of each high level input can be adjusted. The input with the lowest level (like a phono preamplifier or an analogue tuner) should be left unaltered and work as a reference to adjust the input level for the other high level inputs of the ASR Emitter.

Please choose the input that you want to adjust (e. g. CD) – either via ASR remote control or with the right knob. Please press the “Mode”-button on the ASR remote control (or the „Tape Monitor“-button on the front plate) *four times* – the yellow „Input level“-LED is flashing. Now either use the “Vol”-buttons (upper “Vol”-button = increases input level, lower “Vol”-button = decreases input level) on the ASR remote control or the middle knob of the ASR Emitter to adjust the input level for the chosen input. For all other inputs do equal.

Adjusting the configuration of the ASR Emitter

The ASR Emitter is equipped with internal DIP switches to configure the unit. Factory setting depends on the features of the individual unit. To re-configure your ASR Emitter individually, please contact your authorized ASR Audio Systems dealer.

4.0 Protection circuits of the ASR Emitter

Every ASR Emitter is equipped with several protection circuits to avoid any damage on the unit itself and on your loudspeakers. Trouble during operation will be indicated by a flashing red LED „Fault“. The ASR Emitter and the voltage supply is switched off, if the protection circuits detect over-temperature, short circuit and/or repeated overloads during operation. If the protection circuits switch the ASR Emitter off, put the left knob to the „Off“-position and press the round „Status“-button on the remote control to cancel the „On“-lock.

4.1 Impedance-check before the ASR Emitter is switched on

If your ASR Emitter is equipped with more than one pair of speaker output-terminals and/or a headphone output, the direct current (DC) impedance of the connected loudspeakers is checked by an automatic circuit during the countdown from „99“ to „11“, when the ASR Emitter is switched on. If the left knob is put to the „Standby“-position, this check will be performed, too. The ASR Emitter will not be switched on and the red Led „Kurzschluß“ will be flashing, if the measured impedance is smaller than 1,5 ohms. If this occurs, the speaker cables have to be detached from the ASR Emitter. If the red Led is still flashing, please contact your authorized ASR Audio Systems dealer.

4.2 Distortion- and Overload-protection circuit

This protection switches the ASR Emitter Off in case of overload. Overload means, that the required output voltage is higher than the operational voltage of the amplifier. Distortion increases and represents a danger for the midrange- and treble drivers of the connected loudspeakers.

The protection circuits of the ASR Emitter detect distortion effectively. As soon as the protection circuits detect distortion, the distorted channel of the ASR Emitter is switched off – the display indicates the switch Off with two flashing Leds (red) „Overload“ and „Offset“. These two Leds are flashing, too, if the loudspeaker-outputs are not free from DC voltage.

The duration of the switch Off time delay is variable with one two switch Dip switch per channel

| | | | | |
|----------|-----|----------------------|----|---|
| Switch 1 | OFF | long switch-off time | ON | Switch-off time short |
| Switch 2 | OFF | no influence | ON | No disconnection at distortion or short-circuit |

If the protection circuit is switched OFF, the amplifier can no more recognise a short circuit of the loudspeaker outputs during operation! **!! WARNING !!** For this reason, this switch position should only be used in exception. A guarantee can not be undertaken at switched Off protection circuit.

4.3 Over-temperature protection circuit

The ASR Emitter is equipped with a sensitive over-temperature protection circuit. Temperature sensors are located at the large heat sinks of the ASR Emitter. If these sensors detect a temperature > 55° Celsius, the ASR Emitter will be switched off. The display indicates the switch off with a flashing Led (red) „Overheat“. Please put the left knob on the ASR Emitter's front plate to the „Off“-position. After the amplifier has cooled down you can switch the amplifier On again.

5.0 Maintenance of the ASR Emitter

5.1 Cleaning of the ASR Emitter

The standard cleaning set includes everything you need to take care of the finish of the ASR Emitter: antistatic plastic cleaner and a special cloth. Please do not use any other cloths than the supplied one to clean the acrylic glass of the ASR Emitter.

The use of the plastic cleaner is quite simple: spray some of the liquid on the acrylic glass and spread it with the cloth. Clean the acrylic glass, wipe off the liquid and polish it with the cloth. The knob on the front plate is sealed and may not be cleaned with anything else than a soft cloth with no liquids or chemicals on it.

Tip: if you are not using your equipment for a certain time cover it with a soft, fluff-free cloth – you avoid most of the soiling on your equipment.

Removal of scratches

Most of all scratches can easily be removed by using acrylic polishing paste. Please use as specified by manufacturer. After the use of acrylic polishing paste you should use the plastic cleaner. The ASR warranty does not cover any damage caused by using any other cleaner than the supplied one.

5.2 Trouble-shooting

Malfunction during operation

The ASR Emitter is equipped with a digital controller to control all functions of the amplifier. If any malfunction occurs, please follow these steps:

- please put the left knob on the ASR Emitter's front plate to the „Off“-position and wait a least 20 seconds
- switch the left knob to the „Standby“-position
- now you can switch the ASR Emitter on by either putting the left knob to the „1“-position or by pressing the „On/Off“-button on the remote control

5.2.1 No LED lights when the unit is turned on

!! First of all switch Off the ASR Emitter !!

- a) In position „Off“ (left knob): is a red LED shining in the external power supply/supplies?
No → go on with b)
Yes → Please contact your authorized ASR Audio Systems dealer
- b) Is/Are the heavy silver connection cable(s) from the main unit properly connected to the external power supply/supplies?
No → please connect the silver cable(s) properly
Yes → go on with c)
- c) Is/Are the power cord(s) properly connected to the external power supply and/or the AC outlet?
No → please connect the power cord(s) properly

- Yes** → go on with d)
- d) Detach the power cord(s) from the AC outlet. Check the fuse at the power input on the external power supply/supplies – is it/are they OK?
- No** → please replace fuse(s) (115V version = 10 amps, slow, 230V version = 5 amps, slow)
- Yes** → please contact your authorized ASR Audio Systems dealer!

5.3.2 External battery power supply: no LED lights when the unit is switched on (only for the ASR Emitter Exclusive versions with optional external battery power supply)

!! First of all : switch OFF the ASR Emitter !!

- a) Is the heavy silver connection cable from the main unit properly connected to the external battery power supply?
- No** → please connect the silver cable properly
- Yes** → go on with b)
- b) Is the power cord properly connected to the external power supply and/or the AC outlet?
- No** → please connect the power cord properly
- Yes** → go on with c)
- c) In position „Off“: are three yellow Leds shining in the external battery power supply?
- No** → Charge the batteries in the external battery supply. Are the Leds still not shining?
- Yes** → please contact your authorized ASR Audio Systems dealer!
- Yes** → the batteries are charged, go on with d)
- d) Check the fuse at the power input on the external battery power supply – is it OK?
- No** → please replace fuse (2 amps, slow)
- Yes** → please contact your authorized ASR Audio Systems dealer!

5.3.3 The ASR Emitter is not reacting on signals from the remote control

- a) Is the left knob on the front plate of the ASR Emitter in the „1“- or „2“-postion?
- No** → please put the knob to the „1“-position.
- Yes** → go on with b)
- a) Is the Led on the remote controller flashing green when pushing a button on the remote control?
- No, the LED is flashing red or not at all** → please insert fully charged new batteries!
- Yes** → please contact your authorized ASR Audio Systems dealer!

The acrylic glass parts of the main unit are „cracking“ while warming up/cooling off

The main unit of the ASR Emitter is assembled with acrylic glass and heat sinks of aluminium. These two materials expand differently during the warming up/cooling off-phase of the amplifier. Remedy: loosen the screws (located in the heat sinks) of the front-and/or back plate of the ASR Emitter.

Different channel volumes during phono playback

Please check if all DIP switches are set the same for both channels and are clicked into place properly.

Just in case: repair

If all the help we provided in this trouble-shooting-section of the manual did not help to make the ASR Emitter operate properly, please contact your authorized ASR Audio Systems dealer. Please pack the units into the original ASR boxes and with the original ASR packing accessories. Your authorized ASR Audio Systems dealer will take care of your unit and will repair it properly.

6.0 Facts about the ASR Emitter

6.1 How the external ASR power supply works

(optional only for the ASR Emitter Exclusive versions)

- after switching off the ASR Emitter Exclusive the batteries are charged automatically
- immediately after switching on the ASR Emitter Exclusive, the input stage of the amplifier is supplied with voltage from the charging transformer
- approximately one minute after switching on the ASR Emitter Exclusive, the input stage is supplied with voltage from the external battery power supply, the charging transformer is switched out of the signal path. The batteries voltage is currently checked during operation.
- when the batteries are discharged, the charging circuit will be activated automatically. The input stage of the ASR Emitter Exclusive is disconnected from the batteries and will be supplied with voltage from the charging circuit. This allows continuous listening to music, even when the batteries will be charged.
- when the batteries are fully charged, the charging transformer will be switched off automatically - the input stage of the ASR Emitter Exclusive now will be supplied with voltage from the batteries again.
- the input stage of the ASR Emitter can be continuously supplied with voltage from the batteries for about 100 hours.
- the charging status of the batteries can be checked at the external ASR battery power supply. The display on the front panel of the ASR battery power supply shows 10 (green) segments.

To prolong the lifetime of the batteries, please switch of the ASR Emitter HD after approximately 80 hours of playing to fully charge the batteries. One hour of playing equals approximately one hour of charging.

6.2 How the ASR Emitter works

The signal is passing the input and monitor relays and is routed straight to the relays step switch to be controlled in its level. The amplifier consists of a FET-input-amplification-IC, which controls the MOS-FET driver stage. This driver stage drives the MOS-FET output stage.

The loudspeaker and/or headphone outputs are switched via relays. A green/yellow LED each indicate the activation of the output relays for output A/B, a green LED indicates the activation of the headphone output relays.

A micro-controller controls the operation of the ASR Emitter. An EPROM (= programmable chip) contains the control-program of the micro-controller.

If the left knob on the front plate of the ASR Emitter is brought to the „Off“-position, a green and yellow LED indicate, that the external power supply/supplies of the ASR Emitter are connected to an AC outlet. If the left knob is brought to the „Standby“-position, the LED above the right (input selector) knob are illuminated and the protection circuits are supplied with voltage. The negative slave voltage of –10 volts is indicated by a yellow LED. In all other positions of the left knob, the transformers in the separate power supply/supplies is/are switched on to supply the amplifier section of the ASR Emitter – this is indicated by a shining yellow LED in the separate power supply/supplies.

6.3 Technical Data

ASR Emitter: integrated amplifier with adjustable input sensitivity, relays step switch volume control (75dB), remote control, six high level inputs switched via relays.

Input stage with FET inputs and separate voltage stabilization, output stage with high internal feedback, completely assembled with complementary MOS-FETs, temperature-dependent regulation of bias 400/600mA (ASR Emitter I/II), amplifier operates mostly in class a mode, DC amplification and offset-regulation is standard in every ASR Emitter.

PCB double-sided 2x 120µ copper-lead-pewter, total signal routing on the pcb is shielded, separate grounding for each channel (for signal routing and voltage supply, too), pcb assembly with silver solder, no capacitors in the signal path, electrolytic and foil capacitors are installed for buffering of the operational voltage.

External power supply with 2x 700 VA (ASR Emitter I)/power supplies with 4x 700 VA (ASR Emitter II) rated power, with more than 1000 VA output (impulse) for each Philbert-Mantelschnitt- transformer, separate transformers and rectifiers for positive and negative voltages (two transformers each in separated cases per channel for the ASR Emitter II). A built-in 72 VA transformer supplies the input stages and the controls with ± 15 volts.

Six relays for each power supply are used to switch the transformers in energy saving or normal power mode. The supply voltages are shown via 10 Leds in the power supply unit. The cases of the power supplies are made of heavy-duty metal for a better shielding, the main unit of the ASR Emitter is made of acrylic glass.

RMS output power at 20Hz to 20kHz, 0.1 % distortion, both channels driven:

ASR Emitter I Basic

2x 140 watts/8 ohms, 2x 250 watts/4 ohms, 2x 450 watts/2 ohms, 2x 600 watts/1 ohm

ASR Emitter I Exclusive:

2x 160 watts/8 ohms, 2x 290 watts/4 ohms, 2x 520 watts/2 ohms, 2x 700 watts/1 ohm

ASR Emitter II Basic:

2x 250 watts/8 ohms, 2x 450 watts/4 ohms, 2x 800 watts/2 ohms, 2x 1000 watts/1 ohms

ASR Emitter II Exclusive:

2x 250 watts/8 ohms, 2x 500 watts/4 ohms, 2x 900 watts/2 ohms, 2x 1150 watts/1 ohms

Dynamic output power: about 1,5x RMS output

Distortion: from 50mW to -1dB under RMS output at 1kHz < 0.02%, from 20Hz to 20kHz < 0.1 %.

Signal-to-noise-ratio: > 90dB (at 1 watt/8 ohms)

Frequency response: -0.2Hz to 500kHz (- 3dB)

Input impedance: 10 k ohms

Gain: up to 28 dB in position „1“, up to 43dB in position „2“ depending on volume set

Input sensitivity: position „1“ = 2,0V, position „2“ = 0,4V (for 150 watts into 8 ohms)

Separated supplies for

the input stage:

±16 volts/86.000µF (ASR Emitter I) and 152.000µF (ASR Emitter II)

the voltage amplification stage:

±76 volts/40.000µF (ASR Emitter I) and ± 96 volts/60.000µF (ASR Emitter II)

the current output stage:

± 60 volts/400.000µF (ASR Emitter I) and ±78 volts/600.000µF (ASR Emitter II)

Dimensions and weights:

(W x D x H)

ASR Emitter I:

42,0 x 41,0 x 18,0cm, 16kg, Power supply 43,0 x 32,0 x 15,0cm, 32,0kg
16,5 x 16,1 x 7,1 inches, 35,3 lbs., Power supply 16,9 x 15,6 x 5,9 inches, 70,6 lbs.

ASR Emitter II:

57,0 x 44,0 x 23,0cm, 40kg, two power supplies 43,0 x 32,0 x 15,0cm/each, 32 kg/each
22,4 x 17,3 x 9,1 inches, two power supplies 16,9 x 15,6 x 5,9 inches/each, 70,6 lbs./each

Note: ASR Audio Systems reserves the right to change specifications without notice as design improvements are incorporated.