

ASR I Emitter Exclusive, Extraordinary Transparent Quality

ASR is in the hi-end amplifier business since the year 1980. They are building top class and extraordinary power and phono amplifiers. As the owner and the technical leader Mr Friedrich Schafer has a deep knowledge and wide experience about building amplifiers. Although ASR has a very good reputation in its class and even some are calling these amplifiers as "World's best Amplifiers" Mr Schafer is not tired and still tries to do more improvements. A good example of this is the last upgraded version of the ASR Emitters. You can not find something missing in the former version but he could do a major audible improvement

I have read a lot of reviews about ASR Emitters but as i am a curious person i was having some more questions in my mind. I have contacted to local dealer to learn more. The local dealer Mr Tunc helped me a lot. He said that we can easily ask these questions to Mr Schafer. I was surprised because i was not expecting that Mr Schafer could contact with an end user. But I was wrong because he answered all of my questions with more details than i expected. I should say that i confess to having admired his knowledge about the amplifiers.

What is remarkable in ASR is the transparency . The amplifier itself is made by transparent acrylic glass, all the details and the working principle is given publicly, furthermore Mr Schafer also informed me what i wanted to know without any hesitation. After having so much valuable information i admired the amplifier architecture and i have decided to have one.

It took a long time to get the amplifier because of the summer season. It was a friday evening when i get the two big boxes of ASR I Emitter Exclusive . The boxes contain a 22 kg main unit and a 32 kg power supply unit. When i opened the boxes I saw that the units are covered with silk cloths carefully. In the boxes i have seen some special fuses , allen wrench key , replacement screws and a care set as a service kit. The beautiful corian remote and user manual was at the bottom of the box. I had quick look to the manual and i saw the pcb views and the part locations which is not very common in this class of amplifier. As i mentioned before almost everything is transparent in ASR:

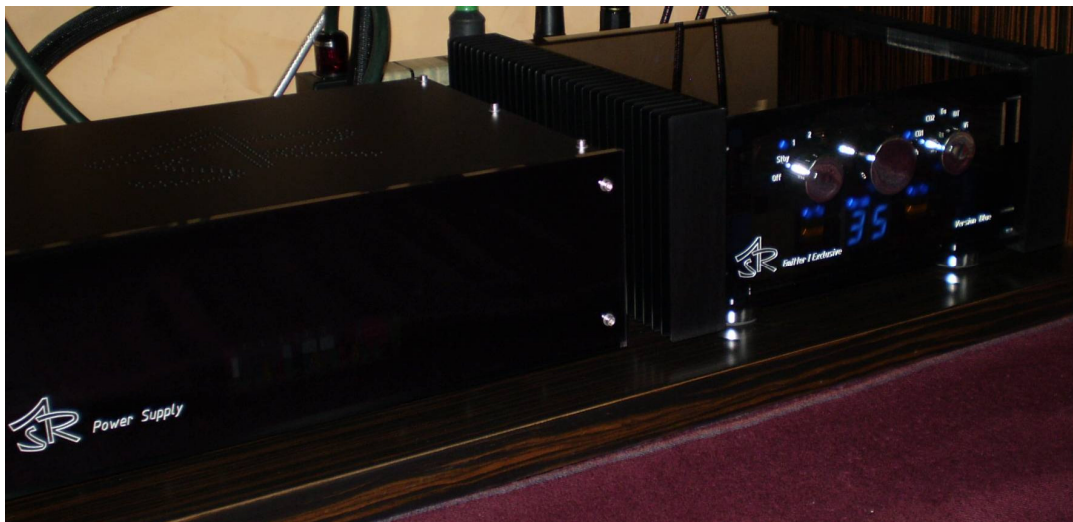


Figure-1 ASR I Emitter Exclusive and Power Supply Unit



Figure-2 ASR I Emitter Exclusive Back View

Characteristics

When i get the units out of the box i noticed the build quality of the amplifier and the power supply unit. They were so well constructed. The main unit is made by acrylic glass except the heat sinks. Beautiful shiny metal knobs on the front panel and lights coming from the inside of the amplifier are extraordinary. Especially the view of the amplifier in the dark is lovely. The lights of the different leds inside the amplifier are like the shining stars in the space. Mine was the "version blue" which has blue leds .Volume level is given in the *seven segment led* form on the front panel. What is interesting you can setup the brightness of these leds , even you can make the amplifier totally dark.

ASR I Emitter Exclusive has 6 inputs . CD1: unbalanced cd player, CD2(XLR): balanced cd player, Tu:Tuner, DT: Digital Tape, Vi: Home Theater and phono (Phono input is active when there is a phono card installed). Adjusting the input levels is something unusual. Mr Schafer gives us the ability to adjust the input level sensitivity of each input differently. For example you can set the tuner input sensitivity higher than the cd player sensitivity which can be very useful for low output tuners

There isn't any knobs or switches on the front panel of the power supply unit. You can see only the in-line leds just behind the acrylic glass There is a switch on the back panel just above the 20 amp iec plug. You may think it is the power switch but it is not. It is the ground switch which lets the units to connect or disconnect to the ground. The power on is made from the main unit.

The knob located on the left side of the main unit is for the power on . This knob has four position; Off, Standby, "1" and "2". When the amp is in "1" position you can adjust the volume level up to 61 . If it is in the "2" position you can go up to 76. The other unusual feature of the ASR is the half power and full power modes. When the volume level exceeds the level 35 you hear a relay switch from the power supply unit and you see that two blue leds start shining on the left and right side of the psu. Exceeding the volume level 35 means that the ASR is going in full power mode. In this mode the voltages of the output transistors gets doubled. But as Mr Schafer has done the appropriate arrangements you don't hear a doubled sound level, everything is done smoothly.

The volume level of 35 is the factory setting for switching to full power mode but you can easily change this level by using the remote control

When discussing about the power modes I think it is significant to mention the details that Mr Schafer has given to me; The famous 700w Philbert-Mantelschnitt transformers of the ASR Emitter has been built different than usual. The primary windings of the transformer are constructed in two parts. In the half power mode these two windings are in the serial position and in the full power mode they go the parallel state. ASR powered on in the half power mode . When the volume level exceeds the level 35 it goes to full power mode by switching the primary windings from serial to parallel . By this way output transistors get full voltage level and the primary windings of the transformers can sustain to higher currents. Another important role of this feature is to control the initial startup current of the amplifier which has an enormous total of 570,000 μF smoothing capacity.

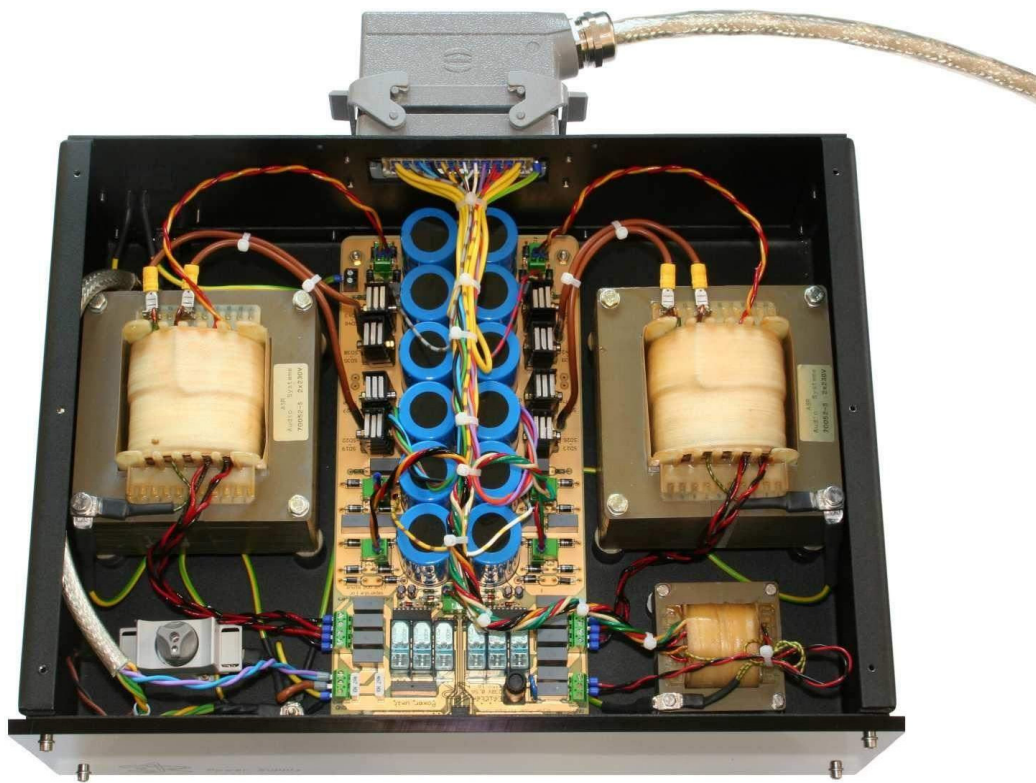


Figure-3 ASR Power Supply Unit (Exclusive Version)

First Impressions

I have Vienna Acoustics Concert Grand Speakers, their woofers need to be damped very well. otherwise you listen to a boomy and laid back sound. That's why i were selected my former amplifier which has a very high damping factor. I was hesitating to have the ASR I Emitter Exclusive because on the paper my old amplifier was having better figures than the ASR . I was expecting some degradation for the bass control but on the other hand the tube like sound of the ASR was attracting me. I was planning to sacrifice the lower octaves but as i will get much more from the mid and high octaves i was thinking that this not a bad deal. I powered on the ASR and started to listen. In the first minute i understand that i am wrong . The ASR which has a damping factor of 600 was controlling the VA Concert Grand better than my former amplifier which has a damping factor of 4000. I have changed the cd's , I have played Dire Straits, Diana Krall, George Duke, Patricia Barber, Jacques Loussier . But nothing changed, the ASR outperformed my old amplifier. The Mid and high octaves are much better, human voices are excellent with a very good bass control . Bass control issue was very strange. In theory an amplifier with a damping factor 4000 has to be better than the amplifier with a damping factor of 600. I decided to ask this subject to Mr Schafer. He told me that the damping factor is not the only parameter for the bass control. The power supply linearity and stability is as important as the damping factor. I can say that the power supply of the ASR Emitter is perfect; Each power rail handled separately with so much special fast capacitors and ultrafast diodes. The Total capacity of these small but many capacitors is 570,000 μF which is unbelievable. Of course it is not possible to install so much capacitors in a single amplifier box..That's why the transformers and some amount of the smoothing capacitors reside in the second box.

In the manual break-in time of the ASR is given as 100-200 hours. You have to listen at the volume levels between 20 and 30 during break-in time Mr Schafer told me that break in time is important and after the break-in i should notice a better sound . I couldn't imagine what can be better than this sound because everything was perfect. But some hours later when i played some special cd's i noticed that some details were missing . It was audible in my former amplifier but now i couldn't hear them . I was worried but fortunately this is not longed last. After listening to 35-40 hours I could easily hear these details and they were better .

After Some More Hours

After having listened for 60 hours the mid and high octaves became warm, liquid and human voices were as real as i never heard before. I guess i was listening to the best sound that i can hear from the Concert Grand Speakers. Before the ASR some of my cd's that are produced in some specific studios were not sounding too good and i was reluctant to play these cd's. I have tried these cd's too and i found them quite better than before . I think i can play them without hesitation from now on. At least they became listenable.

One of the characteristic of the new ASR is that you can listen to it for many hours you like , it nevers feels you tired .This feature is very important for Mr Schafer . He said he did put some additional efforts to make the amplifier relaxing. According to him the soundstage has to be formed just behind speakers and you should feel the instrument locations. To understand this concept better i have decided to play the Opus 3 Test CD 4 . This is a XRCD and it contains classical and jazz pieces. These pieces have been recorded in huge churches and you can feel the depth , timbre and dynamics of the music .For each track the instrument locations has been given on the cd cover sheet. I should say that i was able to locate the instruments in almost all of the tracks. Especially the sound depth was amazing.

Opus 3 recordings have some special technique . They use only a single but very sensitive microphone and their philosophy is not to touch the recorded sound after the real recording. What is strange i had this XRCD from a friend of mine and he doesn't like the cd at all. For me the recordings and the pieces were very good and the sound was as close as to the real performance . You really feel like you are in the church. Especially in the 9. track of the cd , For Double Bass and String Orchester, there is a contrabass passage that make you feel very strange.

Another feature of the ASR is that you can play it as loud as you can . The only limit is the speakers. If your speakers can handle more power you can crank up to the max volume and i guess ASR will still deliver perfect sound signal. But i have to mention that when you play louder there exist an inevitable vibration in your room. To overcome this side effect i suggest to put some spikes or absorbants under the ASR . I have used some special springs and i have seen the positive effects immediately .

Most of the hi-end amplifiers gets very hot even at the low volumes but ASR is not that kind of amplifier. It stays almost cold at the half power mode. If you switch it to full power it starts heating but still not too much. I guess Mr Schafer cares about global warming issues and he designed a nature friendly amplifier.

Some Technical Details

Behind the perfect sound of the ASR I.Emitter Exclusive there are extraordinary technical specifications; The ultra wide frequency response of -0.2hz to 500 Khz , power figures from 2x160 watts into 8 ohms up to 2x700 watts into 1 ohm ! are quite significant . Please pay attention to the ability of going down to 1 ohm. There are not much amplifier that can go down to 1 ohm.

There are three pairs of very fast MosFET Toshiba transistor for each channel in the ASR I . The ASR has a class AB architecture but it works close to class A because of a relatively high bias current. The military opamp driver AD 843 SQ is another noticeable chip . It has a ceramic package , it can handle very high temperatures without any degradation and it has an unbelievable speed , 250V / μ secs . From these figures we can understand how the amplifier can be so fast and can have a total rise time below 1 μ secs.

At the first glance you may think that ASR is an integrated amplifier . But is not . It is a power amplifier with very special volume control . Volume control is handled by a total of 32 very special and silent relays.

Coming to the power supply unit, i can say that the power supply of the ASR is best in its class or may be better than some much more expensive amplifiers . Rectification and smoothing of each power rail is done with special care with a total of 56 ultrafast diodes and 570,000 μ F capacitors . This total capacity goes up to 890,000 μ F in the ASR I Emitter Exclusive Accumulator version. These figures are really extraordinary . I can say that power supply is so linear and stable that you may think that you feed the amplifier using a battery.

Although i was knowing these specifications I have decided to push the amplifier hard . I wanted to see it in the stress. I have formed a 2 ohms 100 watts load resistance by making 4 of 8.2 ohms 25 watts resistors in parallel . I set the amplifier to the volume level of 35 and I gave a 10 khz square wave in the input. Square wave is the hardest signal type for the amplifiers because it has very sharp risings . I have seen many amplifiers that fail from this test. I was curious about ASR wondering to know what it can do because it is not is easy to amplify a square wave signal under a load of 2 ohms.

I started the function generator and something astonishing happened, ASR could amplify the square wave nearly without any defect. In the figure 4 we see the 10 khz input signal in the bottom and the output of the ASR is just above it. It is amazing , output is almost perfect . We should congratulate Mr Schafer because of this result.



Figure-4 10 Khz Oscilloscope results

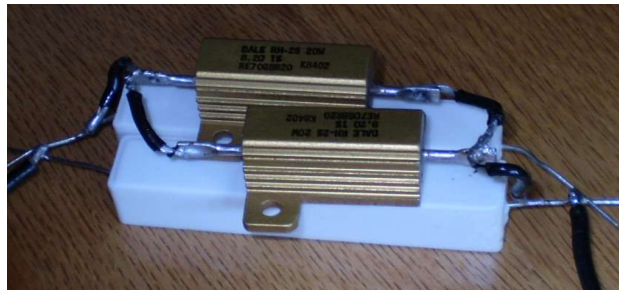


Figure-5 2 ohm 100 watts load resistance



Figure -6 Function Generator for the Square Wave

This test proved that you can play any speaker that goes down to 2 ohms . And you will know that the output of the ASR will still stay so stable

Another noticeable point of the ASR are the ultrafast schottky diode rectifiers used in the power supply unit . These diodes are so fast that their reverse and forward recovery times are just within few nanoseconds. This point is important because during the recovery smoothing capacitors need a stable current . In the high volume levels ASR needs more current. To handle that much current you have to have powerfull diodes . But there is no powerfull diode in the market fast enough that ASR needs . To overcome this situation Mr Schafer used many ultrafast diodes in parallel and he didn't sacrifice from the speed. So we understand why he mentioned 56 pieces of rectifier diodes.

Conclusion

ASR I Emitter Exclusive is an extraordinary amplifier with a perfect sound. Sound characteristic is like a solid state amplifier but it has also the timbre and the soundstage of a tube amplifier. It means that for the music passages that it needs a hard and controlled sound it can be very stiff and muscular , for the passages with timbre and harmonics it acts like a tube amplifier. Especially the human voices are perfect. Even mine is the ASR I Emitter Exclusive without the battery option i can say that my system has promoted significantly. After having discussed the ASR I specifications there is no point to mention the ASR II Emitter Exclusive. You can imagine what can it be .

For the conclusion I can say that if your budget fits to ASR II really think having ASR II . If your budget fits to ASR I go and get it. They are very highly recommended amplifiers.

14/09/2008
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