

Efficiency Series ES 20

In this documentation you will find information about:

- Excellent sonic performance
- Very low noise and distortion level
- “High speed, high current” Class G design
- Dynamic Damping Control™ DDC
- Extended Function Network™ EFN
- Aluminum Reinforced Molest Resistant chassis™ ARMoR
- Road(y) proof

Excellent sonic performance class G design

High power and very pure signal amplification under heavy user conditions were the main goals in the development of the ES Series amplifier range. The power amplifiers are built with a “high speed, high current” class G design, for increased efficiency. With a peak output power of 1000 W @ 4 Ω per channel (total energy supplied by the capacitor bank is a huge 280 joules!), a S/N ratio of more than 110 dB and a THD percentage of 0.01% @ 1 kHz, the ES 20 combines (sound)quality, power and flexibility into one unit. The Efficiency Series amps are among the best sounding amps on the pro-audio market!

Dynamic Damping Control™

Important feature is Stage Accompany's Dynamic Damping Control (DDC™) system, with which a very high damping factor is being realized (10.000 @ 1 kHz!) The result is even more remarkable in combination with a Stage Accompany “DDC™ pre-wired” loudspeaker system. This unique circuit compensates for the cable and connector resistance, which can be enormous when long loudspeaker cables are used (lengths sometimes exceed 50 meters, 164 feet). The result is an extremely tight and accurate bass and mid response, in combination with a “DDC™-prewired” loudspeaker system. Furthermore, with DDC™ both linear and non-linear distortion are reduced substantially. The amps can also be used on a normal, not “DDC™-prewired” loudspeaker.

Extended Function Network™

Through the internal EFN™ circuit, extra functions can be added to the amplifier with plug-in modules. In this way the amp can be fully dedicated to every (SA) sound system. The EFN-XP module provides high-quality cross-over filtering with standard 24dB Bessel filters (others optionally available) for every type of sound system.

The EFN-DP module has 3 functions; SA speaker dedicated parameters for clip/excursion protection, dedicated filtering and power optimizing. With EFN-DP all SA systems can deliver maximum output and optimum sound quality without any chance of (mechanical) damage. Without the need for a loudspeaker management system.

Please specify SA cabinet type and/or system specifications when ordering EFN modules.

Aluminum Reinforced Molest Resistant chassis™

As basis, the well known Stage Accompany ARMoR™ chassis is used, made from 3mm thick (“mil-spec”) aluminum.

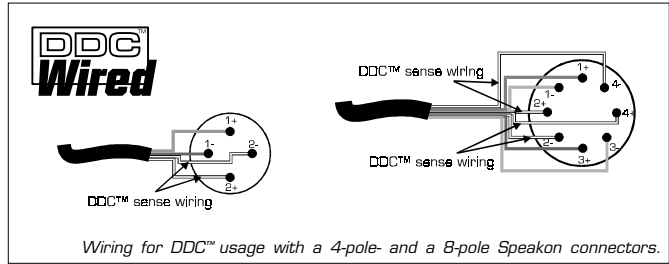
Indestructible, absolute torsion free, best strength to weight ratio in the industry, improved heat dispersion and a high radiation shielding are the characteristics of this chassis.

Road(y) proof

The amp is equipped with “Soft Start” circuit, variable fan speed, easy bridge mode, groundlift and LED indication for “power”, “signal”, “clip”, “thermal” and “DC”. It is protected against high temperature, DC on output and short circuit.

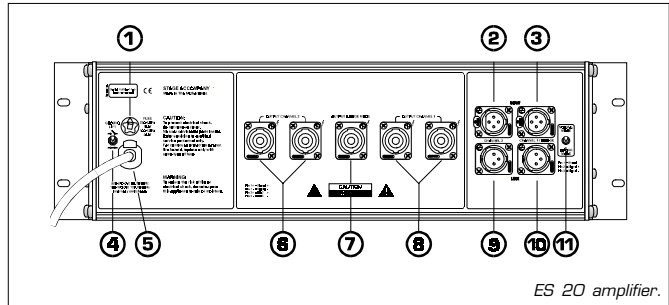
Wiring for DDC™

For absolute top quality sound reproduction, the ES 20 is equipped with Dynamic Damping Control™. The DDC™ system is based on 2 loudspeaker wires that return from the speaker to the (SA) amplifier. The picture on the right shows the wiring of 4-pole and 8-pole Speakon connectors in combination with the DDC™ system.



ES 20 backside

- ① Fuse
- ② Input (channel 2)
- ③ Input (channel 1 or bridge mode)
- ④ Ground lift switch
- ⑤ AC mains cable
- ⑥ Output (channel 2)
- ⑦ Output (bridge mode)
- ⑧ Output (channel 1)
- ⑨ Link output (channel 2)
- ⑩ Link output
- ⑪ Bridge mode switch



Technical specifications

Input sensitivity	: 1.76 Vrms (+7.1 dBu) for full RMS power into 4 Ω
Max input level	: + 22 dBu
Input impedance	: 50 kΩ each leg (30 kΩ unbalanced)
Common mode rejection ratio	: >70 dB @ 20 Hz..20 kHz
Frequency range	: @ 100 W into 8 Ω 10 Hz..20 kHz +0..-0.4 dB 10 Hz..65 kHz +0..-3 dB
Gain	: 30 dB (31.6x)
Channel separation	: >75 dB @ 1 kHz, 100 W into 8 Ω >60 dB @ 20 kHz, 100 W into 8 Ω
Total harmonic distortion	: <0.2 % @ 20 Hz..20 kHz > 2 Ω load at all powers 1 dB below clipping <0,01 % @ 1 kHz, 100 W into 8 Ω <0,1 % @ 20 kHz, 100 W into 8 Ω
Intermodulation distortion (SMPTE)	: @ 100 W into 8 Ω <0.1 % @ 200 Hz..10 kHz <0.3% @ 10 kHz..20kHz
Signal to noise ratio	: >110 dB A-weighted
Slew rate	: >40 V/μs
Damping factor	: 10.000 @ 1 kHz, 10 V across 8 Ω
Output power (RMS/Peak)	: @ 1 kHz, 1% THD 2 x 500 W / 2 x 610 W @ 8 Ω 2 x 770 W / 2 x 1000 W @ 4 Ω 2 x 960 W / 2 x 1400 W @ 2 Ω
Output power bridge mode (RMS/Peak)	: @ 1 kHz, 1% THD 1 x 1000 W / 1 x 1220 W @ 16 Ω 1 x 1540 W / 1 x 2000 W @ 8 Ω 1 x 1920 W / 1 x 2800 W @ 4 Ω
Main supply voltage	: stated at rear of amplifier
Power consumption	: 100 VA (standby), 1400VA 1/8 of maximum output power pink noise in 2 Ω
Weight	: 21.4 kg (47 lb)
Housing	: 19 in. rack mount, 3 HU high, 410 mm (16.1 in.) deep behind the mounting surface (without connectors)
Physical dimensions (h x w x d)	: 133 x 482 x 415 mm (5.25 x 19.0 x 16.3 in.) (without connectors)
Warranty:	: 3 Years



Stage Company
Anodeweg 4
1627 LJ HOORN
The Netherlands
Tel: +31 (0)229 282930
Fax: + 31 (0)229 282920
E-mail: info@StageAccompany.com

© Copyright 2001 Stage Company.

The information in this document is continually being developed. Whilst every effort has been made to make it as accurate as possible, no warranty of accuracy is made or implied by the makers. Stage Company shall have neither liability, nor responsibility to any person or entity with respect to loss or damages in connection with or arising from the information contained in this document.

www.StageAccompany.com

A NEW WORLD OF SOUND!®