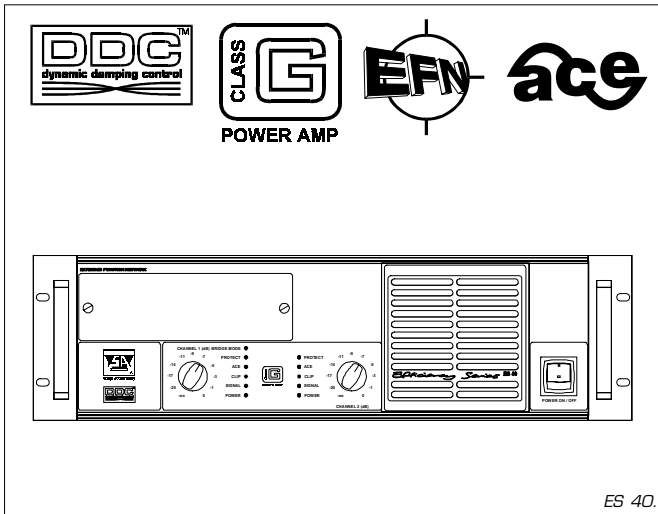




stage accompany

## Technical specifications ES 40



# Efficiency Series ES 40

In this documentation you will find information about:

- Excellent sonic performance
- “High speed, high current” Class G design
- Dynamic Damping Control™ DDC
- Active Clip Eliminator™ ACE
- Extended Function Network™ EFN
- Aluminum Reinforced Molest Resistant chassis™ ARMoR
- Road(y) proof
- Separate power supplies for both channels

### 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 exceeding 2000 W @ 4 Ω per channel (total energy supplied by the capacitor bank is a huge 400 Joules), a S/N ratio of more than 110 dB and a THD percentage of <0.007% @ 1 kHz [100W, 8Ω]. The ES 40 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™

An 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.

### Active Clip Eliminator™

Also built into the ES 40 is our Active Clip Eliminator (ACE), a circuit which constantly monitors both outputs of the amplifier for continued clipping. When clipping is detected, the related input level is inaudibly reduced to the safest maximum level in order to prevent harmonics from damaging the high frequency drivers, to maintain the amplifier’s sonic quality and to prevent thermal shut down.

### Extended Function Network™

Through the front-accessible 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.

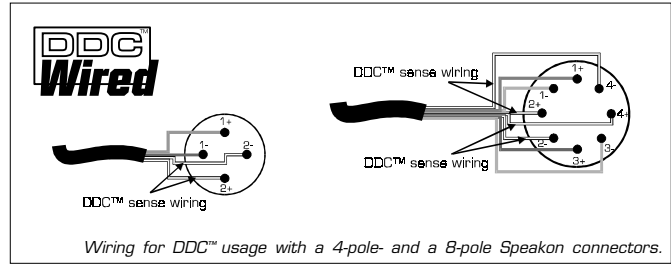
Indestructible, absolute torsion free, best strength to weight ratio in the industry, improved heat dispersion and a high radiation shielding are the characteristics of this chassis.

### 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”, “ACE”, “protect” and “bridge mode”. It is protected against high temperature, DC on output, short circuit, and HF on input.

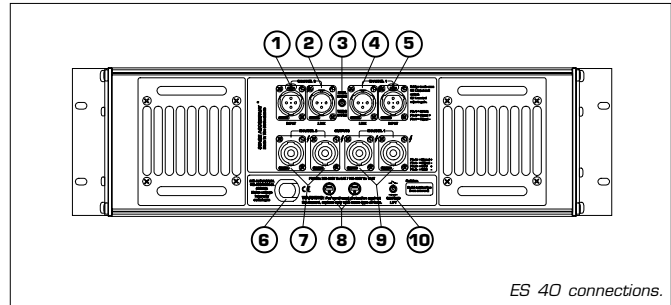
**Wiring for DDC™**

For absolute top quality sound reproduction, the ES 40 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 40 backside**

- ① Input (channel 2), XLR-3
- ② Link (channel 2), XLR-3
- ③ Bridge mode switch
- ④ Link (channel 1), XLR-3
- ⑤ Input (channel 1/bridge), XLR-3
- ⑥ AC mains cable
- ⑦ Output (channel 2), Speakon 4
- ⑧ Fuses
- ⑨ Output (channel 1/bridge mode), Speakon 4
- ⑩ Ground lift switch



**Technical specifications**

Input sensitivity	: 1.72 Vrms (+ 6.9 dBu) for full RMS power into 4 Ω
Max input level	: + 22 dBu
Input impedance	: 50 kΩ
Common mode rejection ratio	: >70 dB @ 20 Hz..20 kHz, >90dB @ 1Khz
Frequency range	: @ 100 W into 8 Ω 10 Hz..20 kHz +0..-0.4 dB 10 Hz..55 kHz +0..-3 dB
Gain	: 33 dB (44.7x)
Channel separation	: >90 dB @ 1 kHz, 100 W into 8 Ω >75 dB @ 20 kHz, 100 W into 8 Ω
Total harmonic distortion	: <0.3 % @ 20 Hz..20 kHz > 2 Ω load at all powers 1 dB below clipping <0,007 % @ 1 kHz, 100 W into 8 Ω <0,05 % @ 20 kHz, 100 W into 8 Ω
Intermodulation distortion (SMPTE)	: @ 100 W into 8 Ω <0.06 % @ 200 Hz..20 kHz
Signal to noise ratio	: >110 dB A-weighted
Slew rate	: >40 V/μs
Damping factor	: 10.000 @ 1 kHz, 8 Ω
Output power (RMS/Peak)	: @ 1 kHz, <1% THD 2 x 1010 W / 2 x 1250 W @ 8 Ω 2 x 1520 W / 2 x 2050 W @ 4 Ω 2 x 1930 W / 2 x 2700 W @ 2 Ω
Output power bridge mode (RMS/Peak)	: @ 1 kHz, <1% THD 1 x 2020 W / 1 x 2500 W @ 16 Ω 1 x 3040 W / 1 x 4100 W @ 8 Ω 1 x 3860 W / 1 x 5400 W @ 4 Ω
Mains supply voltage	: stated at rear of amplifier
Power consumption	: 200 VA (standby), 2800VA 1/8 of maximum output power pink noise in 2 Ω
Weight	: 35.2 kg (77 lb)
Housing	: 19 in. rack mount, 3 HU high, 440 mm (17.3 in.) deep behind the mounting surface. (without connectors)
Physical dimensions (h x w x d)	: 133 x 482 x 445 mm (5.25 x 19.0 x 17.5 in.) (without connectors and rack handles)
Warranty:	: 3 Years



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