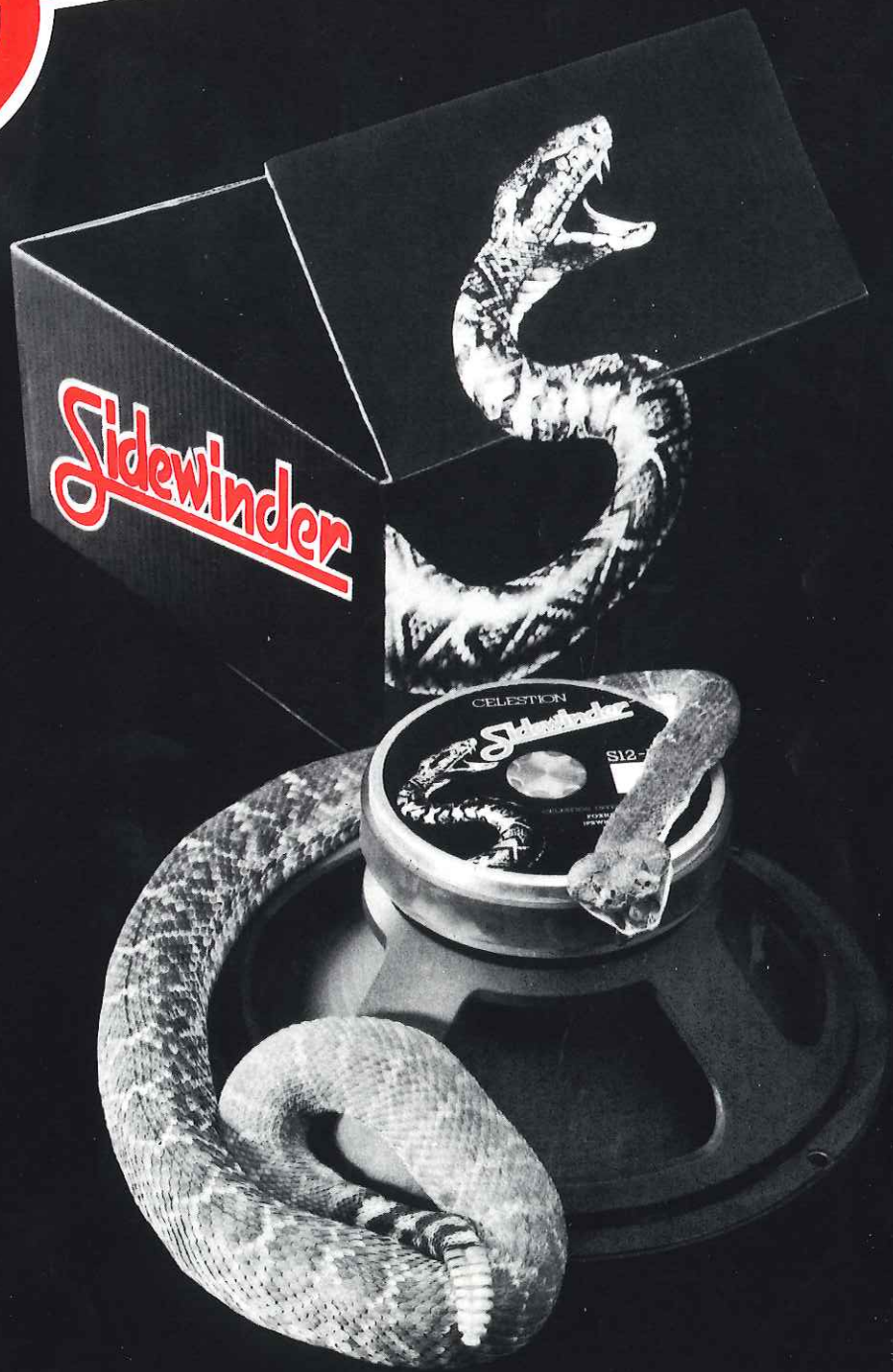


Sidewinder



The ultimate musical instrument loudspeaker

 CELESTION

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BY CELESTION

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Rock guitar has grown. Guitarists are no longer classified only as either skilful or heavy. The level of subtle detail which was once the exclusive and elusive trademark of a few master players can now be found in all kinds of music. The new breed of musicians who command the stage need a new breed of loudspeaker. One with both detail and smoothness, which can handle both clean melodic lead work and the muscle chords of heavy rock, and which is equally at home in both. If a guitarist has the skill to place fine detail and subtle nuances of style within his heaviest work why should he be prevented from reaching the audience by a loudspeaker which cannot deal with fine details and high power at the same time. Equally, why should the softer more technical player need to change speakers if he chooses to use a few heavy chords.

In the related field of bass guitar a player who had heard no music for ten years might be unable to recognise that he was listening to a bass at all. The new playing techniques amount almost to a redesign of the instrument. A similar Rip van Winkle of the keyboard could suffer a nervous collapse.

The Celestion Sidewinder musical instrument loudspeakers were developed to bring modern music and acoustic science firmly together. At the outset it was decided that a single statement of Celestion's skill and technical authority would be made in each of the main instrument loudspeaker domains, but first a new construction method was needed.

To effectively deal with modern playing styles a faster more accurate loudspeaker is essential. The Sidewinder range is the Celestion answer.

In instrument loudspeakers the careful use of deliberate distortion can give tremendous benefits. The classic Celestion G-series guitar loudspeakers are noted for their rich tone colour and their symbiotic relationship with good valve amplifiers. Using LASER-DOPPLER INTERFEROMETRY the causes of these desirable effects were analysed and quantified. The crucial role of minute time delays in smoothing and controlling electronic musical instrument output was documented and made scientifically controllable. Now Celestion alone can scientifically dictate precisely how much distortion should occur, and of which type. For each model the correct size of voice coil and the right cone configuration have been chosen to best suit the application. The Sidewinder range is the best place to choose from if you play guitar in lead or rhythm work, if you are a bass player or for keyboard applications.



All models share the use of edgewound voice coils of copper-coated aluminium ribbon. The increased packing density, higher number of turns and lighter weight of these coils give more efficiency and maximum high frequency output. The decreased bulk of the ribbon wire coil also allows a narrower magnet gap which means more flux density and still greater efficiency. Careful construction permits narrow clearances for better heat removal. This increases power handling and prevents power compression which can severely limit dynamic range. Care and clever micro-manipulation are applied to every Celestion loudspeaker and the Sidewinders are no exception. Special attention is paid to the voice coil terminations which are often the weak point of loudspeakers with ribbon wire coils. On this score it really is a case of "fit it and forget it".

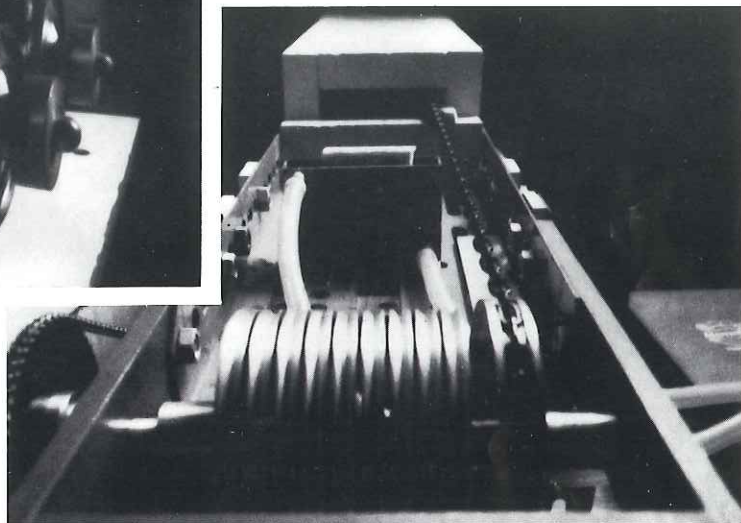
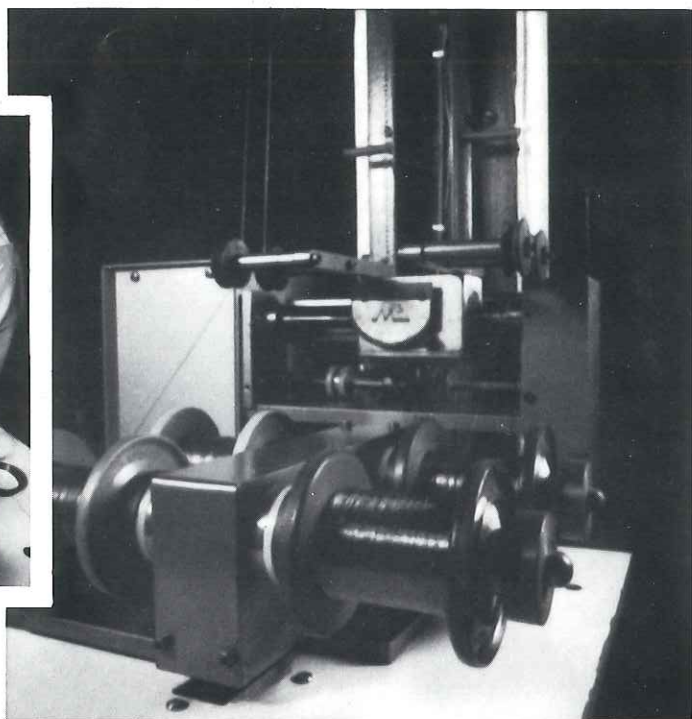
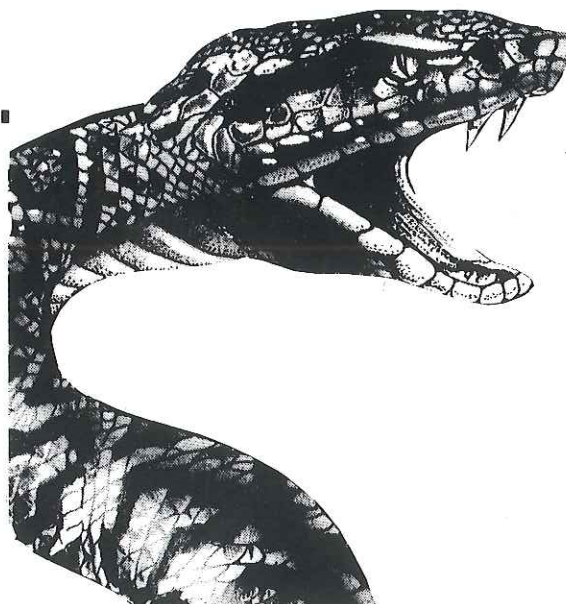
On stage or in the truck, a working musician cannot be gentle with his loudspeakers so the Sidewinders have rigid cast aluminium chassis to preserve the tight clearances. The non-magnetic material also keeps all the magnet energy in the gap where it belongs.

S12-150 PE The ultimate guitar speaker

Until now guitarists have had a choice. Either Celestion's classic G series with their rich gutsy rock'n'roll performance or American made units with edgewound voice coils and a cleaner, country feel to their sound.

Now there is no choice the new S12-150 does it all. From the open bluesy riffs of country music to the deep dark snarl of heavy metal,

ence of coil power ...



this is the loudspeaker. The S12-150 Sidewinder can be clean. It can be dirty. It is unbelievably loud.

But be warned all Sidewinders bite.

The bite here comes from the marriage of a 2" edgewound voice coil with a new cone designed to shorten the smoothing time delays of the classic G12's. The design uniquely combines the high efficiency performance of edge winding with the correct ratio of cone to coil diameter for precise control of break-up and overload behaviour. The voice coil size and cone configuration must be right to give the rich creamy overtones preferred for rock music. The extra detail, essential for modern musical styles can only be achieved if the break-up time signature is optimised.

The edge wound coil, narrow magnet gap and precisely configured cone geometry combine to give enormous efficiency (103dB/1 watt/1 metre) and massive power handling (150 watts) but these figures cannot tell the whole story. Efficiency of this order brings a whole new feel to the guitar/amplifier/loudspeaker interface. Any rig with this Sidewinder has massive sustain. Sidewinders are not loudspeakers for the raw beginner; they give the skillful performer a new and expressive way to talk to his audience.

Keep the amplifier signal clean and the S12-150 will tell the truth. Sweet highs and full-bellied lows, good enough even for amplified acoustic.

Drive the amp into distortion and the S12-150 responds. The creamy snarling overtones are there, but the details are finely etched. The awesome power embraces guitarist and guitar, creating a whole new instrument.

S12-150 CE Clean up your keyboard

The keyboard player has different needs from the guitarist. The sound must be cleaner to preserve the natural feel of a piano or to correctly reproduce the tone of a synthetic sound. The break-up so loved by guitarists is regarded as harmful. It is usually desirable to combine the cone speaker with a high frequency device for best results and this requires a particularly smooth midrange behaviour from the cone unit.

These requirements are ably met in the Sidewinder S12-150CE. The use of a precisely damped linen cone-surround smooths out the cone behaviour and prevents the vibrations which give rise to time signature delays. The result is smooth but accurate output with correct balance of lows and midrange. Even at high input levels break-up is absent to ensure dependable keyboard reproduction.

The S12-150CE uses the coil and magnet system of its guitar speaker relative but the heavier cone/surround system means slightly lower efficiency (102dB/1 metre). Power handling is the same (150 watts). In combination with a suitable high frequency device, like the Celestion RTT50, the S12-150CE gives a compact but powerful keyboard system of very high performance. Used in

multiples or as the midrange unit of a multiway rig the performance available confirms that the S12-150CE is the top-dog of the keyboard speaker world.

If the forced, hard edged character of a 4 by 12 cabinet is required the S12-150CE can also be used for bass guitar.

S15-250 CE The bass guitar loudspeaker

Modern bass players have a number of advantages over earlier musicians. New playing techniques have increased the versatility of the instrument and made it far more interesting to listen to. The changes have brought with them, however, a greatly increased demand for power and dynamics. Many of the new sounds are staccato and low in average power. Only by the use of very large amplifiers can the instrument be made to cut through the rest of the band. The demands which this places on bass guitar speakers are considerable. At the top of the list comes preservation of dynamics. The lead player's beloved distortion is usually not required and when it is will normally be introduced electronically.

To answer these demands the Celestion Sidewinder S15-250 was designed. A slightly

larger coil than the rest of the range is used (2½") with a carefully designed curved-profile cone to eliminate time delay distortion. A massive Gauss magnet gives the very highest efficiency obtainable while true power handling actually exceeds that of other units claiming greater numbers (250 watts). The frequency range extends smoothly up to 5kHz for just the right aggressive edge on the more forward playing styles but the absence of tonal emphasis due to delayed resonances ensures good performance in any type of music.

The design of the cone suspensions is very unusual with deliberately introduced assymetry and firm mechanical limiting. These features prevent loose, uncontrolled behaviour at the lowest frequencies under high power. In many applications bass guitar speakers are expected to remain controlled without proper cabinet loading. The converted PA units which many other makers call bass guitar speakers simply cannot match the tight, measured behaviour of the Sidewinder.

S15-250 can also be used for the low-end of multiway bass and keyboard systems. It performs well in small ported enclosures and is ultra rugged.

The best summary of this example of Celestion's mastery of musical instrument amplification speakers lies in listening to a great bass player using it. He enjoys it. So will you.

SPECIFICATIONS

S15-250 CE

Power Handling (watts).....	250
Frequency Response (Hz).....	40-5000
Average Sensitivity (dB 1W/1M).....	102
Output SPL at Rated Power (dB).....	125
Voice-Coil Diameter.....	64 mm (2.5 in)
Overall Weight.....	6.9 kg (15.2 lb)

S12 150 PE

Power Handling (watts).....	150
Frequency Response (Hz).....	80-6000
Average Sensitivity (dB 1W/1M).....	103
Output SPL at Rated Power (dB).....	125
Voice-Coil Diameter.....	51 mm (2.00 in)
Overall Weight.....	5.25 kg (11.6 lb)

S12 150 CE

Power Handling (watts).....	150
Frequency Response (Hz).....	60-6000
Average Sensitivity (dB 1W/1M).....	102
Output SPL at Rated Power (dB).....	123
Voice-Coil Diameter.....	51 mm (2.00 in)
Overall Weight.....	5.25 kg (11.6 lb)



THE FIRST NAME IN ACOUSTICS

ENGLAND
Celestion International Ltd
Ditton Works,
Foxhall Road, Ipswich
Suffolk IP3 8JP
Tel: 0473 73131
Telex: 98365 Ditton G

FRANCE
Celestion France SA
37 Boulevard Bourdon
75004 Paris
France
Tel: 1 277 7680
Telex: 240979

GERMANY
Celestion Industries GmbH
Schäferstraße 22-24
D-6780 Pirmasens
Germany
Tel: 6331 62392

U.S.A.
Celestion Industries Inc.
Kuniholm Drive
Holliston
MA 01746 U.S.A.
Tel: 617 429 6706
Telex: 948417