

# FAMILY PRE

The ATC family of products

features high end British speakers, including active models with power amps. Now the company's first pre-amplifier, the SCA2, joins the range

by PETER J COMEAU

**A**TC is perhaps better known for its speakers than for electronics, yet amplifiers and speakers have always gone hand in hand in its active and studio ranges. What was missing from a complete ATC amplifier line up was a pre-amp — an omission which has now been addressed by the SCA2 control amplifier.

Visually the SCA2 is a match for the hunky 850W power amplifier supplied as part of the ATC 200 active speaker system [HFN/RR, Aug '95]. In slim line form the bead-blasted cast aluminium side cheeks which blend over the fascia look sleek and interesting. A matching array of easy-turn knobs for listen and record selection and volume relieve the starkness of a polished acrylic black fascia panel.

A matching chunky bead blasted aluminium remote handset complements the SCA2's appearance, and is of generous dimensions so as not to get lost down the side of the sofa. The twin array of black push buttons looks daunting at first, but once you realise that the right hand row selects the listen inputs (labelled 'monitor'), and the left hand row selects the recording inputs, the function

becomes plain. Button labelling is clearly picked out in white, though the font size may be a little small for near-sighted users.

Spaced below input selection are volume (labelled 'level') buttons and, again sensibly spaced apart, the mute and attenuate buttons, both of which are repeated on the pre-amplifier fascia. At the bottom are CD player transport buttons which accord to the Philips codes and so will operate those players based on the Philips RC5 function set.

Input selection is by precision gold plated relays which are almost totally silent in operation but light up the requisite bright green LED on the fascia to show that the input has changed. The volume control is motorised, again by an ultra quiet

motor, and has an inset bright red LED to show its position. All the knobs have a precision feel to them and feature non-slip rubber rings for good finger contact.

## TECHNOLOGY

Eight line inputs include two tape circuits and two balanced sources, and all are electronically buffered to avoid loading the source by the volume control. An optional m-m and m-c phono stage can be included to order (price to be announced). Circuitry has been designed specifically to avoid ICs in the signal path, making full use of discrete component gain blocks. The input stage features a dual long tail pair of complementary transistors with cascoded junction FETs providing constant collector voltage. Output of the current mirrors is buffered by a pair of complementary Darlingtons.

The main gain block has been designed for wide bandwidth, low distortion and high gain with a single pole characteristic making for simple feedback application without complex high frequency phase shifts. Outputs are available as balanced and unbalanced with a 10 ohm source impedance capable of driving

## SUPPLIER

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long runs of cable. Only in the tape output circuit do we see the use of an NE5532 monolithic op-amp for buffering.

Each gain stage includes its own active decoupling from the power supply voltage rails, and left and right channels are fed individually. A separate voltage regulator feeds the digital control panel behind the fascia.

Though the main circuitry sits on a single PCB, signals are cable fed from the input selection board on the back panel to the input circuits, and the Alps motorised potentiometer is also cable coupled. The main circuits complete with rear panel can be easily removed for servicing, a feature which will endear the SCA2 to professional users.

## SOUND QUALITY

For this critique I was very pleased to re-acquaint myself with the ATC SCM50 active speakers which had been sorely missed from my listening room since they were whisked away at the end of a review. These were connected to the SCA2 using Belden shielded twisted pair cables from the balanced output, while the sources were AVI S2000 and Teac T1/DT1 CD players.

From its volume knob to its output the SCA2 exudes precision control. There is no sign of any overt characteristic anywhere in the sound spectrum so that the performance remains clean and free from distortion. Neither is it possible to ascribe any coloration due to the pre-amplifier, a feature which not only provides a realistically natural sound but matches all types of music without favour or preference.

The precision is immediately heard in the soundstage presented by the SCA2 and SCM 50 combination. Ambient recordings display a deep and wide stereo aspect with thrilling recovery of the acoustics of the venue. Even closer studio recordings, such as the Brahms *Violin Sonatas* with Augustin Dumay [DGG 435 80-2], portray the performers as three dimensional images with a solid feel.

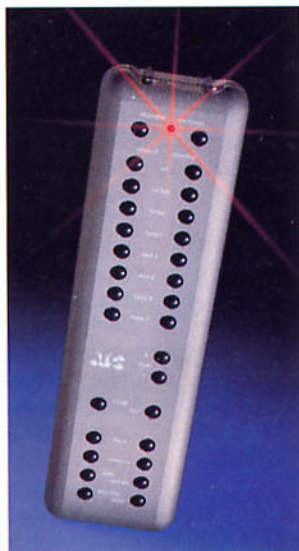
We are so used to the sound of the spoken voice that any inaccuracy in this region becomes an obvious distortion or coloration. Yet it is here that the SCA2 excels, delivering

such a transparent account of the recording that you can believe the singers are in the room with you. My old favourite of English choral songs directed by John Rutter with the Cambridge singers [Collegium COLCD 104], was rendered with superb clarity of both diction and vocal inflection. Yet all the vagaries of CD reproduction in terms of gritty sibilance and other high frequency distortions seemed to be controlled by the SCA2 to the point of insignificance.

This was a clue to the pre-amplifier's only departure from ultimate transparency. The SCA2 seems to tailor the input signal for its own purposes, perhaps an aspect of the buffering and gain block characteristics, so that the wild excesses of some of the less well recorded CDs in my collection seemed tamed. For many listeners this will be a welcome feature, as it ensures they will rarely be troubled by piercing brightness of strings or splashy sibilance of cymbals. I felt, however, that some of the ultimate frisson of excitement at the crescendo was ever so slightly dulled; as though the full dynamic expression was clamped.

On the other hand the dynamic range of the SCA2 cannot be faulted. From the swell of the chorus on the Rutter disc to the climactic conclusion of Led Zeppelin's 'Since I've Been Loving You' [from the *Remasters* of course], the SCA2 delivers both the inner dynamics and overall power envelope without compression or distortion. And of course it manages this into long cables which no passive pre-amp can manage.

Lest readers think that the sonic control offered by the ATC means a cool attitude to the emotional message of the music, let me reassure them. The ATC combination delivered all I could wish in terms of both sound quality and musicality of performance. This is the sort of system you can snuggle up to late at night, wallowing in the warmth and richness of Corelli's and Pachelbel's baroque compositions. In the morning advance the volume and wake yourself up to some stirring Elgar. The SCA2 provides tingles at all the right moments and never puts a foot wrong. Thoroughly recommended. ✦



ATC's chunky remote handset will also operate Philips-based CD players

## AMPLIFIERS

### ATC SCA2

#### LAB REPORT

As promised by the design, distortion artefacts are vanishingly small and intermodulation results show a negligible amount of difference tone. The good performance for stereo separation and noise will help with the accuracy of the stereo image and the retrieval of ambient information.

Volume control tracking worsens at very low levels, though this is audibly insignificant and in any case can be offset by the 13dB attenuator operated from both the front panel and remote handset.

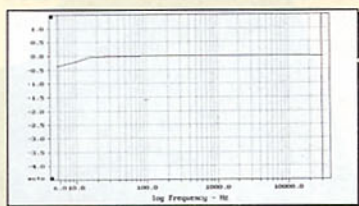


Fig 1. ATC SCA2: frequency response at 1 volt output from CD input

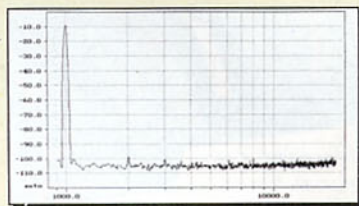


Fig 2. ATC SCA2: distortion from 1kHz tone into CD input

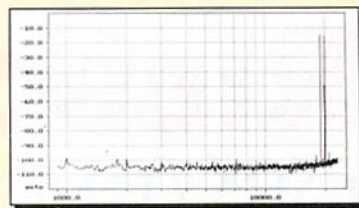


Fig 3. ATC SCA2: intermodulation distortion from 19/20kHz tones into CD input

Test results	ATC SCA2
Distortion (dB)	1kHz
Total harmonic distortion at 0.5V output, aux input	-112
Intermodulation 19kHz/20kHz, 0.5V, aux	-98
Noise (dB)	<-120
Aux input (IHF, CCIR wtd)	<-120
Input overload (dB)	>28
Aux/CD input (IHF)	>28
Stereo separation (dB)	
Aux input	103
Volume/balance tracking	0dB -20dB -60dB
Aux input (dB)	0.02 0.01 0.22
Input data (aux)	
Socket type	phono
Sensitivity	150mV
Loading	10k ohms
Output	
Max level	8V
Impedance	10 ohms
Dimensions (whd)	440x100x360mm
Typical price (inc VAT)	£2490 (handset £199)

