

# Electrocompaniet ECI 5 MK II

We discover the latest revisions to the Norwegian company's long-running ECI 5 integrated make an already capable amplifier even more versatile and bombproof  
Review: **Steve Harris** Lab: **Paul Miller**

**W**hen it's writ large enough to half-fill the fascia, it's got to be a name to conjure with, as well as being reasonably long. Fortunately, Electrocompaniet is more than just an agglomeration of 16 letters: it's a brand which earned its audiophile credentials well over 30 years ago.

Electrocompaniet's current Classic series looks forward as well as back, with products designed to be integrated into modern multichannel, multi-source systems. By the end of this year the line-up is expected to include the ECR-1 FM/DAB internet radio tuner and the EBD-1 7.1 channel Blu-ray player.

In the spring of 2010, though, these introductions were preceded by an update of a long-established model, the ECI 5 MK II integrated amplifier reviewed here. Apart from a wider display window, it looks pretty much the same as the previous ECI 5 model, which we reviewed in October 2009. But there are major internal changes, and the company says that this is 'in many ways a brand new amplifier'.

At the same time, Electrocompaniet emphasises that all its amplifiers are still 'made in the TIM-free school based on the principles laid down in the works of Dr Otala and Dr Jan Lohstroh'.

## FIRST PRINCIPLES

It was at the Audio Engineering Society Conference in March 1973 that Lohstroh and Otala presented a paper called 'An Audio Amplifier For Ultimate Quality Requirements'. This described an amplifier designed 'with particular emphasis on lack of transient intermodulation distortion (TIM)', in which 'excellent phase and amplitude linearity is obtained using low

feedback values, class A operation for most of the signal time, and a fully symmetric DC-coupled high frequency design'.

A delegate from Norway, record and broadcast producer Svein Erik Barja, was impressed. He took the paper to Per Abrahamsen, who made electronics for pro use, suggesting that he might build the 'Otala' amplifier. Abrahamsen agreed, Nils Jørgen Kjaernes of the Oslo radio company Nera was enlisted to design the circuit board. Two prototypes performed well, and Abrahamsen built a first production run of ten amplifiers.

Development continued, and according to Terje Sandstrøm, who joined Electrocompaniet in 1974, the 'golden ears' of Svein Erik Barja were a key factor.

The amp had informally been named after Otala, but after discussion with him it became 'The 2 Channel Audio Power Amplifier'. In 1976, a review in the US underground magazine *Audio Critic* called it 'the world's best sounding amplifier,' and the small company was quickly swamped with orders. With sales booming, an operation was set up in 1978 to manufacture in Scotland under the Norse Ecosse banner, but this proved short-lived.

A power output of 25W/8ohm was really too low, so a bridged version was offered, giving a mono output of around 85W. But in 1981, both were replaced by the Ampliwire II, rated at 50W, and the bridged Ampliwire I monoblock, giving 150W. More power amps followed, the 1986 AW100



**RIGHT:** Internal changes in the MK II include a bigger mains transformer and reservoir capacitors, and, as seen on the left, the number of output devices has been doubled



at last providing 100W/ch from a stereo chassis. This formed the basis for the first Electro integrated, the ECI 1, in 1991.

Remote control arrived in 2000 with the 70W/channel ECI 3, the first version to use a motorised volume control hidden behind the impressive acrylic fascia, with the now-familiar blue light rotating to show the volume setting, and an array of four buttons for volume control and source selection. A year later came the more powerful 120W/channel ECI 4, replaced in 2004 by the ECI 5.

### LATEST CHANGES

Coming up to date, the changes in the new ECI 5 MK II seem to have been mainly intended to meet the demands of big modern speakers when driven to high levels with rock music. So the MK II has been given 'a more powerful output stage', using twice the number of output devices, and a much bigger power supply to increase current capability. This uses a new 500VA transformer, with reservoir capacitance increased to 80,000µF.

A new overload detection system dispenses with the previous output relay, avoiding the possibility of such a relay in the signal path deteriorating over time.

From the user's point of view, though, the most obvious change is in the display, which now indicates the source in very large characters, easily readable across a large room. When using the system remote handset provided, the display can be

dimmed, in four steps, but not completely turned off.

Unchanged from the previous model is the rear-panel array of six line inputs. Two of these are balanced XLR pairs, labelled CD and Tuner, while the remaining unbalanced (RCA phono) inputs include a direct HT, or Home Theatre input, bypassing the volume control. When selected, this mutes for a few seconds as a precaution against accidental overload.

It's clearly intended that you use a CD player with balanced outputs. Otherwise, you will need to use the unbalanced-to-balanced adaptors provided. To avoid using these, you can of course plug a CD player into one of the single-ended inputs, but these are labelled Tape, VCR and DVD and there is no obvious way of renaming one of them to give 'CD' in the display.

Apart from the Rec ('tape') out, there are balanced and unbalanced Pre Out connections, so an additional power amplifier can be connected for bi-amping or to power remote speakers.

Once set up, the ECI 5 MK II proved very tractable and easy to use. Although the main power switch is on the front, it's intended that in daily use you just switch off by using the remote's Mute button. I found that the remote's up/down buttons gave a pleasantly precise control of volume, and responded quickly. The blue

**ABOVE:** Electro's 'Diamond' control layout is unchanged from the previous model, but the display is much larger. Left and right buttons select source, the other two control volume

light which indicates the position of the volume pot behind the fascia looks really good, but of course it's not as informative as a numeric display.

### NORDIC CONNECTIONS

I got down to serious listening with the suitably-Scandinavian audiophile classic, *Jazz At The Pawnshop*, recorded on analogue tape in the same year that Electrocompaniet's original 25W amp first broke into the US market. This time I was listening to one of the more recent *Pawnshop* remasterings (the CD layer of Proprius PRSACD7879).

With this disc, I think the ever-fascinating audience noises can often tell you straight away whether you're going to like the sound

or not, even before the music starts. In this case, I felt myself thoroughly drawn into the club/pub atmosphere. And I was captivated by the music too.

For more modern jazz with a Nordic connection, I put on *Alive* [Edition Records EDN1021] from Phronesis, the trio led by the great Danish bassist Jasper Høiby. The big sound of Høiby's double-bass was fat and dominant but didn't get out of control. At the other end of the spectrum, the widely-spread sound of Ivo Neame's piano had a bright clarity at the top end that stopped short of being brittle.

Moving on to one the great female rock vocalists, Jennifer Warnes, and one of the great opening tracks, 'First We Take Manhattan' from *Famous Blue Raincoat* [RTHCD 5052], I continued to be impressed. The ECI 5 MK II had Jennifer's voice projecting forcefully, and yet with a smooth-toned power, convincingly placed in the fairly spacious soundstage, and very expressive. Treble sounds generally

'The big bass drum on "God's Kingdom" was just right'

### A HIGHER PROFILE

A change of ownership in 2004 brought new life to Electrocompaniet. It is now a division of Westcontrol, a successful Norwegian electronics company which develops and manufactures electronic systems for industry and agriculture. Westcontrol has transformed Electro's profile as an international brand, setting up subsidiary distribution companies in Germany, the UK and the USA. Launching Electrocompaniet USA in 2009, Westcontrol's founder and CEO Mikal Dreggevik said 'These last few years have seen Electrocompaniet grow by more than 200 per cent, with quality distribution in more than 45 countries worldwide'. While continuing to develop the Classic range, Electrocompaniet also offers the lower-cost Prelude series, which includes amplifiers, speakers, a USB DAC and the Maestro all-in-one Blu-ray network player.

## INTEGRATED AMPLIFIER

## LAB REPORT

### ELECTROCOMPANET ECI 5 MKII



**ABOVE:** Rear panel layout is also unchanged, with two balanced line inputs and a balanced preamp output. Unbalanced inputs include home theatre bypass

were bright enough but without exaggeration, hardness or 'sizzle'.

Next, I turned to my favourite Chesky chanteuse, Marta Gomez, and *Entre Cada Palabra* [JD301]. Although I'd felt that the bottom end could have been tighter on Warnes' 'Manhattan', the ECI 5 MK II resolved the often-problematic heavy bass sound on the opening 'Maria Mulata'. And its top-end clarity was highlighted here by the way the flute solo sprang convincingly from the acoustic.

#### LIGHT AND AIR

On *Ultimate Mancini* [Concord SACD-1-34-6], the little discord, high up the keyboard which kicks off the beautifully re-crafted 'Pink Panther' theme was arrestingly sharp and clear, like striking a light. There was a huge stereo spread. On this recording, it's somehow not the same kind of space that you hear in the Hollywood studios of the 1950s and '60s but it's still big and impressive – at least it was here.

By contrast, there is a real and very dominant acoustic to be heard in Mitsuko Uchida's Debussy *Études* [Philips 464 698-2]. From the velvety opening notes, you could feel the life in the acoustic, and the piano still kept its singing quality even as the percussive treble sounds audibly sent their echoes around and back. The Electro did exceptionally well on this material.

On 'Easy Money' from *Rickie Lee Jones* [Warner 256 628], that double-bass intro really seemed to come to life, with perceptible 'air' around it, and Rickie Lee's vocal was also presented with a real sense of presence, from the convincing detail of her breath sounds to – again – a sense of air from the studio acoustic. I caught myself listening to the decay of the cymbal splash that illustrates 'They flipped a dime...'

and, yes, it was a commendably long time dying.

With *Gef Onboard*, [Telarc CD-83675], surely one of Eric Bibb's gutsiest, most amplified albums, the Electrocompaniet certainly let loose the power of the opening 'I Am The Spirit I Am'. And the ragtimey-jugbandy 'New Beale Street Blues' was truly foot-tapping.

The ECI 5 MK II was good too on the tracks like 'Pockets', starting with just his mellow vocal and beautiful, clean-picking guitar, before the other instruments steal in quietly. Finally, I felt that the big bass drum on 'God's Kingdom' was just right: weighty and natural.

With Ry Cooder's *Boyz n the City* [Warner 7599-27398-2], the Electrocompaniet produced a fine wide soundstage filled with enticing detail, the solid, uncomplicated bass sound giving the music depth and weight. It was nice to hear real texture in the background vocals, and to appreciate the way Cooder can make his guitar sound like horn riffs. It was almost as if, to this sometimes clinical-sounding studio recording, the ECI 5 MK II was bringing real flesh and humanity. ☺

#### HI-FI NEWS VERDICT

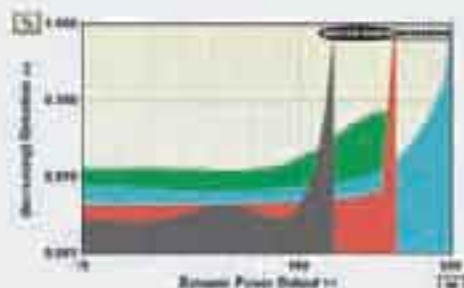
Electrocompaniet was the first to produce a commercial amplifier based on the precepts of Dr Matti Otala, and has largely stuck to them. Other designers have long ago caught up, but with the beefed-up ECI 5 MK II, Electro strikes a commendable balance between traditional 'subjectivist' virtues and modern demands for high power and neutral sound. A fine-sounding, enjoyable product, which will inspire much affection.

Sound Quality: 80%

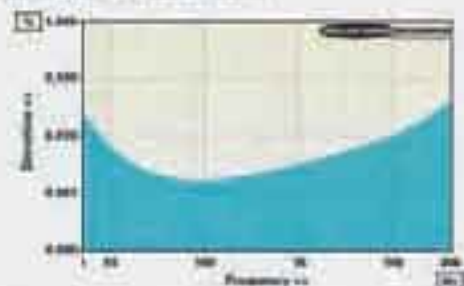


A bigger power supply and doubling of the number of output devices has conferred some real benefits to the ECI 5 MK II although these are revealed in its dynamic rather than steady-state figures. Compared directly with the original ECI 5 [HFN Oct '09] this MK II model offers almost exactly the same 2x130W/8ohm and a slightly higher 2x240W/4ohm, an increase of around 20W. It seems that the MK II PSU is far better regulated so that under dynamic conditions (see Graph 1, below) the MK II actually offers less headroom than its predecessor at 145W and 290W into 8-ohm versus 160W and 300W, respectively. However, distortion under dynamic conditions is halved (~0.003% versus ~0.006% into 8ohm) while into lower impedances still the MK II leaps ahead with 540W versus 440W into 2ohm. So the MK II will be slightly more tolerant of difficult speaker loads despite the revised electronic protection, limiting output into 2ohm at 265W. Gain is unchanged at +27.7dB (balanced input) but the A-weight S/N ratio is closer to 92dB (rather than the MK I's 97dB (w. 0dB)) – an excellent figure nonetheless.

The high frequency characteristics of the ECI 5 have been remapped – the amp now offers a slightly lower output impedance above 20kHz even if figures of ~0.04ohm remain typical for bass and midrange. Bandwidth has been extended in tune, the old -0.4dB/20kHz response flattened out to just -0.06dB/20kHz reaching -1.5dB/100kHz in place of -5.1dB/100kHz. As promised by Electro, this amp is still DC-coupled throughout with a response of +0.04dB at 1Hz. Which begs the question: just how low will your speakers go? PM



**ABOVE:** Dynamic power output versus distortion into 8ohm (black trace), 4ohm (red), 2ohm (blue) and 1ohm (green) speaker loads.



**ABOVE:** Distortion vs. frequency from 5Hz to 40kHz (10W/8ohm). This MK II version of the ECI 5 offers a wider bandwidth and slightly lower distortion.

#### HI-FI NEWS SPECIFICATIONS

Power output (1% THD, 8/4ohm)	145W / 290W
Dynamic power (1% THD, 8/4/2/1ohm)	145W / 290W / 500W / 940W
Output impedance (20Hz-20kHz)	0.039-0.070ohm
Frequency response (20Hz-100kHz)	+0.03dB to -1.5dB
Input sensitivity (w. 0dBu) (20kHz)	116mV / 1295mV
A-weight S/N ratio (w. 0dBu) (20kHz)	91.2dB / 111.7dB
Distortion (20Hz-20kHz)	0.0015-0.016%
Power consumption (w. 0dBu) (w. 0dBu)	84W/100W
Dimensions (HxWxD)	442x226x107mm