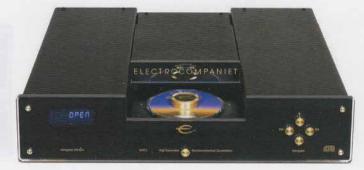
## Performance

There's a sense of ritual about loading a disc into the EMC 1UP that's vaguely akin to putting on a record, which perhaps reflecting the intentions of the designers. The cover over the Philips top-loading mechanism needs to be slid back, and then the disc is put straight into the spindle and held in place with a magnetic puck/clamp. Close the cover and the player reads the table of contents and prepares to play.

You can tell from this that the Electrocompaniet has all its technology on display, and it's not hard to admire the integrity of the engineering. That extends to the rest of the design of these two products, from their feet – more vibration isolation! – to their styling: they're certainly striking, but you can see why everything

has been done.

After a short experiment with the line outputs of the player running into one of the line-ins on the amplifier, I switched to the balanced connections, using cables provided by The Chord Company. Good though the two sound with conventional phono cables between them, the change to balanced hook-up makes the unbalanced connection sound rather thin and weedy. The sound now takes on a weight, an openness and a sense of power than eludes lesser cabling. That's not to say balanced connections are always better per se; instead it's clear that here the two components have been designed to be used in this way.



This is a relatively expensive system – £995 for the amplifier and £2995 for the player – but its sound quality represents significant value for money.

That sound can simply be classified as right, with an integrity and musicality that makes almost every disc equally enjoyable. It has just the right balance of weight and insight for orchestral music, delivering levels of detail that one might imagine to be the preserve of much more expensive systems, and the sort of effortless power that would suggest one is listening to an amplifier with much greater output.

So the player is undoubtedly impressive, as much for the scale of the sound it can deliver as for the way that it is able to extract high levels of detail without ever becoming overbright or overbearing, but it's the amplifier that's the real star of the show. For the money – just under £1000 – this is a remarkable device, breathtaking with the balanced connection

from the player but also good with other sources via its conventional non-balanced connections.

It will deliver realistic levels without apparently straining at all, and even at high levels it retains its combination of dynamic ability and detail, wrapping all of this up into a sound that just comes across as a flood of music. It's sweet and lush when the recording requires, but it can power out larger orchestral works with real drama and impact; and with that superb CD player supplying the music, it has more than ample opportunity to show what it can do.

This is a lovely combination: it looks stylish and – best of all – different, with little sign of the usual high-end machismo, and a sound that soon has you listening through the system and enjoying the performance. If you're considering a system at this level, Electrocompaniet should certainly be on your listening list.

The CD player that thinks like a turntable: Norwegian cool from Electrocompaniet

### ELECTROCOMPANIET ECM 1UP

Type CD player Price £2995

**Digital-to-analogue conversion** 24-bit/192kHz with upsampling

Analogue outputs

Phono, balanced

Digital output

Electrical (phono, AES/EBU)

**Dimensions** (W x H x D) 483 x 115 x 440mm

### LECTROCOMPANIET ECT 3

Type Stereo amplifier
Price £995

Output 2 x 70W (into 8ohms)

Inputs Balanced, 6 line-in

Outputs

Tape, balanced pre-out

**Dimensions** (W x H x D) 483 x 115 x 410mm

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# Electrocompaniet EMC 1UP/ECI 3

# Nordic engineering carries the day

Never mind their unconventional looks, this CD player and amplifier deliver a sound to keep Tony Williams transfixed

ang & Olufsen isn't the only name in Nordic audio: besides Swedish firm Copland, Electrocompaniet is another example of the thriving scene: it may not be well known outside high-end audio, but it has made innovative amplifiers and players since 1972. Its basic aim was to improve upon the designs of the time, with their low open loop frequency response, high open loop distortion and very high feedback. This could be done, but not without a loss of power - the transistors of the day weren't up to the job, so the company's first amp was a 25W design, which remained in production for years.

In the mid 80s the power problem was solved with the adoption of a new main amp design, and recently the company has developed a Floating Transformer Technology power supply, which does away with the conventional grounding of the secondary transformer winding, and thus makes a supply with a more linear delivery of power across the range of frequencies the amp must handle, not just designed to supply the DC voltage the rest of the circuitry requires.

Electrocompaniet remains a small company – just 25 staff, and it makes use of the latest

automated component insertion technology and soldering, along with computerised design and testing. This is no 'garden shed' operation where a small number of staff hand-build every product; that way of working may seem romantic, but Electrocompaniet's methods deliver quality and consistency, leaving the human element to do the important stuff of design and tuning. For example, each product is burned in and listened to after manufacture - there aren't too many companies of any size able to claim that - and comes with a card bearing the signatures of those responsible for electronic testing, listening and final inspection.

The two products submitted for this test represent current Electrocompaniet thinking on disc playback and amplification. They are designed to be used together: though both components have phono sockets, XLRs are the preferred connection method, providing better rejection of interference, as well as reducing the possibility of hum and giving greater headroom.

The EMC 1UP CD player is a development of past Electrocompaniet designs, and is described by the company as a 'Reference' machine. It uses 24-bit/192kHz digital-to-analogue conversion combined with an upsampling system, which has the benefit of increasing resolution while at the same time removing digital noise from the audible band. Indeed, the claim is that the upsampling reduces the noise floor by around 10dB – for which

read three times less noise than non-upsampling designs – with obvious implications for microdynamics and resolution.

But there's more to the EMC 1UP than just the DAC conversion: the symmetrical circuit design uses that Floating Transformer Technology power supply: or rather, four of them, one each for the digital section, the transport, the display and the analogue output section. Electrocompaniet draws analogies with record player design in terms of the need to get the cleanest possible signal from the disc. To this end, the player has what the company calls 'a proprietary mechanical filter'. This is designed to keep both external and internal vibration from reaching the optical pickup mechanism, and the company claims that it enhances bass, soundstaging and resolution.

All of this means that some work is needed on the part of the user before playing a note of music. You have to remove two wing-bolts and a wing-nut from underneath, remove a name-plate and a stop for the sliding cover over the top-loading mechanism a small Allen key is provided for this - then slacken off a transport bolt with another key provided before replacing the nameplate/ cover. You're now ready to use the machine, but a day or two of allowing it to cook will reap further benefits.

The ECI 3 amplifier requires less installation, but it is similarly solidly put together. It's a DC coupled fully balanced stereo amp able to deliver 2x70W, and it uses

a balanced motorised volume control and relay switching which allows for both remote control and an unusual main control layout: a quartet of buttons, arranged in a diamond pattern to the right of the fascia, for source selection and volume.

Six conventional phono inputs and a tape output are provided, along with balanced inputs for CD and a balanced output to feed external amplification, but there's no built-in provision for those who want to play records: for that you'll need an external phono preamp such as the Electrocompaniet ECP 1.

Under the lid, the ECI 3 uses the same symmetrical layout as the player, along with a 550VA transformer and a 40,000 F current reservoir to give a clean, dynamic sound with plenty of headroom - indeed, the amp can cope with a peak current of over 60A. The 70W per channel output is delivered into an 80hm load, but the amp is stable into loads right down to 0.5ohm, and will deliver 2x160W into a 20hm load, which means it will handle just about any speaker with few problems.

The finish of both units is impeccable. The transparent fascia and detailing give a real feel of quality and luxury, but the remote control is a little more prosaic, reflecting the relatively high cost of tooling such a device. Like many high-end manufacturers, Electrocompaniet takes the cost-effective approach to this part of the package, preferring to spend its money in sound-critical areas.