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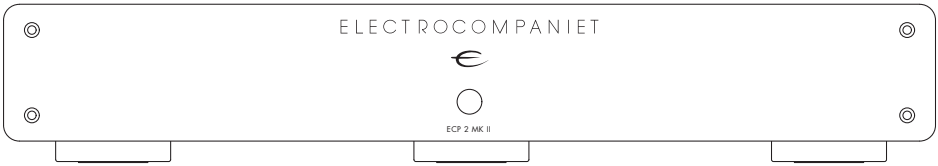
If music *really* matters™



ECP 2 MKII

High Performance Balanced Phono Stage

Owner's Manual

EN

ENGLISH

Welcome to the world of Electrocompaniet!

We thank you for choosing an Electrocompaniet high-end product.

At Electrocompaniet we are relentlessly focused on developing audio equipment that is capable of bringing the fabulous experience of the concert hall into the very heart of your home.

Our aim when developing and testing new products is to ensure that the wonderful richness of tone and every nuance of feeling and emotion of a piece of music is delivered to you just as the artist intended.

We continually strive to give you the very best musical listening experience available whatever your preferred musical genre.

Sincerely yours,
The Electrocompaniet team

UNPACKING THE ECP 2 MKII

Immediately upon receipt of the ECP 2 MKII, inspect the carton for possible damage during shipment. The carton and packaging have been designed to provide the safest possible protection for transport of your phono stage. Unpack the unit carefully. Save all packaging materials for future shipment.

The contents of the carton

- 1 pc. Electrocompaniet ECP 2 MKII Balanced phono stage.
- 1 pc. AC mains cord.
- 1 pc. Inspection card.
- 1 pc. Owner's manual.
- 1 pc. Spare main fuse.

How to avoid damages

Do not under any circumstances connect or disconnect equipment when power is turned on. The design of the RCA plug generates a huge transient when inserted. Connecting or disconnecting equipment with the power on can result in severe damage to both speakers and phono stage.

How to avoid noise problems

The ECP 2 MKII contains delicate circuits that are sensitive to magnetic stray fields. The unit should not be placed near power voltage transformers, TV sets etc. Care should also be taken regarding placement of the interconnect cables. Do not run interconnect cables in parallel with main cords or speaker cables. Keep interconnect cables as short as possible.

HOW TO CONNECT YOUR SYSTEM

The rear panel connector layout is illustrated on page 10. Please refer to this when making connections to ECP 2 MKII.

Single ended RCA input and GND screw

The RCA input connects the phono cartridge through the arm cable and fixed or detachable RCA interconnects, to your ECP 2 MKII phono stage. Be sure to use high quality shielded interconnect cables for this purpose.
In addition, most turntables is equipped with a separate grounding wire. This connects the earth plane of the turntable chassis, the tone arm and the phono cartridge to the earth plane (GND) of the phono stage. As a default, connect the grounding wire (if there is one) to the phono stage, but be aware that in some (very rare) instances you may experience less noise (hum) with the grounding wire detached.

Single ended RCA output

The RCA output connects your ECP 2 MKII phono stage to your line stages, pre amplifier, or integrated amplifier. Use a high quality interconnect cable for best result. If your line stage, pre amplifier or integrated amplifier have a XLR input option, use the optional XLR output instead, for better sound quality.
The ECP 2 MKII has a fixed (high) output, so DO NOT connect it directly to a power amplifier. This may cause damage to your power amplifier and loudspeakers.

Balanced XLR output

The XLR output connects your ECP 2 MKII phono stage to your line stages, pre amplifier, or integrated amplifier. Use a high quality interconnect cable for best result.
The balanced output can only be used with line stages, pre amplifiers and integrated amplifiers that have this input option. Use an XLR interconnect with GND on pin 1, + on pin 2 and – on pin 3. If your line stage, pre amplifier or integrated amplifier does not have a XLR input option use the optional RCA output instead.
The ECP 2 MKII has a fixed (high) output, so DO NOT connect it – directly - to a power amplifier. This may cause damage to your power amplifier and loudspeakers.

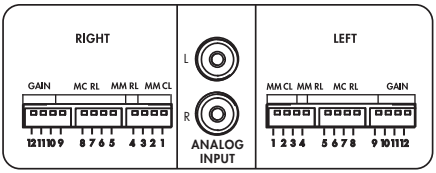
How to power up your system

You should always power up your system the following way: Signal sources (CD players, tuners DACs, phono stages etc.) first. Then turn on line stage / preamplifier / integrated amplifier. Finally turn on potential power amplifier(s).

When switching off your system

Follow the procedure for powering up in reverse. Start by turning off potential power amplifier(s), then turn off line stage / preamplifier / integrated amplifier before finally turning off signal sources.

Adjusting the ECP 2 phono stage for best performance



The ECP 2 MKII phono stage is built to work with a majority of the phono cartridges made today. High- and low-output Moving Coil (MC), Moving Magnet (MM), Moving Micro Cross (MMC) and Moving Iron (MI) cartridges will all work well with this unit. To give every different cartridge optimal working conditions the ECP 2 MKII phono stage is highly adjustable. All adjustments can be performed on the DIPswitch array (mouse piano) on the rear panel.

Operating the DIPswitch array

A DIPswitch is a small mechanical switch. It is often placed together with other DIPswitches, in an array. On the ECP 2 MKII there are two arrays of 12 switches, one for each channel. In the down position the switch is ON and in the up position the switch is OFF. It is not easy to operate the DIPswitches with your fingers, so some sort of pencil should be used. There are actually special tools for this purpose, but a pencil or a pen will do the job just as well.

A tip before we get started

Since all the variable settings are located in the DIPswitch array on the rear panel of the phono stage, it is practical to place the ECP 2 MKII so you have access to these switches, during the initial "tuning" period. If the phono stage is to be placed in a rack, simply place it with the rear panel pointing to the front of the rack. **Make sure to turn the volume all the way down, or change the input on your line stage / pre amplifier / integrated amplifier, when operating the DIP swiches!**
When you are content with the settings and the sound quality of your turntable playback system, simply turn the phono stage back around. And enjoy!

Gain settings - DIPswitches 10 - 11 -12

The output of different phono cartridges may vary a lot. There are low output moving coil cartridges with as little as 0,05 mV output and there are high output moving magnet cartridges with up against 10,00 mV output. The ECP 2 MKII will work with both of these extremes, and everything in between. With cartridges having very low output, you simply have to crank up the volume on your amplifier a little more.
"To find the amplification factor (ratio) you need - divide 1,0 V RCA (2,0 V XLR) (to match most modern line sources) with the output of your cartridge. Go for the closest gain setting (above (if your line stage can handle the voltage) or below) that result."

Example: *If your cartridge have an output on 2,2 mV –*
you will need; 1,0 V / 2,2 mV = 454 x amplification.
Go up to 944x/59,5 dB gain, or down to 372x/51,4 dB.
The phono stage will then amplify the signal to:
2,2 mV x 944x = 2,08 V (RCA) or
2,2 mV x 372x = 0,81 V (RCA).

The gain of the ECP 2 MKII phono stage is set by adjusting the tree DIPswitches labeled GAIN (number 10 - 11 -12) on the back of your unit. With these tree switches, you may get a variety of different gain settings. (For XLR output – add 6 dB gain).

Gain dB	Amplification factor (ratio)	DIPswitch 10 (+20 dB)	DIPswitch 11 (-10 dB)	DIPswitch 12 (-5 dB)
71,4	3.715 x	X	-	-
66,4	2.089 x	X	-	X
61,4	1.175 x	X	X	-
59,5	944 x	X	X	X
51,4	372 x	-	-	-
46,4	209 x	-	-	X
41,4	120 x	-	X	-
39,8	98 x	-	X	X

X = ON (Down) - = OFF (Up)

Resistance loading (RL) - DIPswitches 4 - 5 - 6 - 7 - 8 - 9

Like output, the internal resistance of cartridges may vary a lot. Check the cartridges specifications sheet for the cartridges internal resistance/coin resistance in Ohms, and the manufacturer's recommendations for loading in Ohms.
Theoretically a cartridge should "be loaded" with an input resistance 10 -20 times greater than its own internal resistance / coin resistance. The input resistance, divided by the output resistance of the source, is called damping factor. Like all things theoretical, this setting may not necessarily give you the best sound quality - or the sound quality you are looking for. Some cartridges sound better with a dampening factor greater than 20. Fortunately, you may "play around" with the resistance settings without causing damage to the cartridge or the phono stage. Find the setting that suits you the best.

The resistance loading (RL) of the ECP 2 phono stage is set by adjusting the six DIPswitches labeled RL (number 4 - 5 - 6 - 7 - 8 - 9) - on the back of your unit. With six DIPswitches - and six fixed values of resistors - you get a variety of different usable settings:

Resistance Ω (Ohm)	DIPswitch 4 (2k7 Ω)	DIPswitch 5 (H/L)	DIPswitch 6 (47 Ω)	DIPswitch 7 (100 Ω)	DIPswitch 8 (220 Ω)	DIPswitch 9 (470 Ω)
47.000	-	-				
2.553	X	-				
832	-	X	-	-	-	-
786	-	X	X	-	-	-
636	X	X	-	-	-	-
618	-	X	-	X	-	-
609	X	X	X	-	-	-
573	-	X	X	-	X	-

Resistance Ω (Ohm)	DIPswitch 4 (2k7 Ω)	DIPswitch 5 (H/L)	DIPswitch 6 (47 Ω)	DIPswitch 7 (100 Ω)	DIPswitch 8 (220 Ω)	DIPswitch 9 (470 Ω)
521	-	X	-	X	X	-
503	X	X	-	X	-	-
475	-	X	X	X	X	-
473	X	X	X	-	X	-
437	X	X	-	X	X	-
404	X	X	X	X	X	-
384	-	X	-	-	-	X
336	X	X	-	-	-	X
328	-	X	X	-	-	X
292	X	X	X	-	-	X
275	-	X	-	X	-	X
250	X	X	-	X	-	X
211	X	X	X	X	-	X
229	-	X	X	X	-	X
156	-	X	-	-	X	X
147	X	X	-	-	X	X
110	-	X	X	-	X	X
106	X	X	X	-	X	X
56	-	X	-	X	X	X
55	X	X	-	X	X	X
10	-	X	X	X	X	X
10	X	X	X	X	X	X

X = ON (Down) - = OFF (Up)

For high output cartridges, the standard input resistance (RL) - set by the "Recording Industry Association of America (RIAA)" - is 47 kOhms. This value will work very well with a large majority of the Moving Magnet (MM), Moving Iron (MI), Moving Micro Cross (MMC) and high output Moving Coil cartridges out there. However, some cartridges especially high output MCs and some MMCs will sound better with a harder (lower) resistance loading. The ECP 2 MKII is therefore equipped with an optional 2,5k Ohm loading on its MM input.
The input resistance (RL) for high output cartridges is set by adjusting the DIPswitch labeled MM RL 4. DIP 5 is set in the OFF position to disables the low value resistor array - so the setting of DIP 6 - 7 - 8 - 9 becomes without importance. Se the **top two lines** in the table above.

Capacitance loading (CL) - DIPswitches 1 - 2 - 3

To compensate for the high inductance in MM, MI and MMC cartridges, arm cables and interconnect cables (that will cause peaks in the high frequency range), the ECP 2 MKII is equipped with capacitive loading on its input. Check the cartridges instruction manual for the recommended setting for your cartridge. Like the resistor loading above, the capacitive loading is a subjective setting. You may "play around" with the capacitive loading without causing damage to the cartridge or the phono stage. Find the setting that suits you the best.

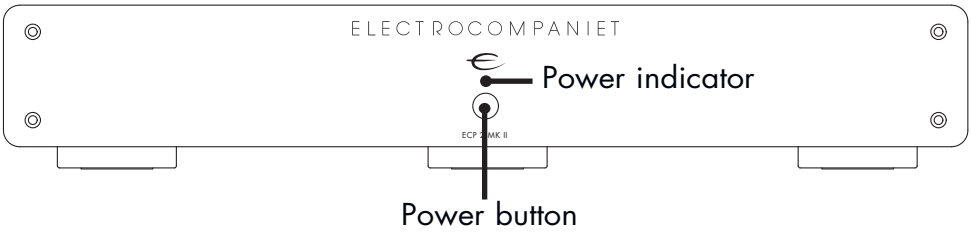
With DIPswitches 1, 2 and 3 one can adjust the input capacitance from 0 to 350 pF (picoFarad).
Low output cartridges using low resistance loading do not need to be capacitance loaded. In these cases, set capacitance to zero (DIP 1-2-3 = OFF).

Capacitance pF	DIPswitch 1 (50 pF)	DIPswitch 2 (100 pF)	DIPswitch 3 (200 pF)
0	-	-	-
50	X	-	-
100		X	-
150	X	X	-
200	-	-	X
250	X	-	X
300	-	X	X
350	X	X	X

X = ON (Down) - = OFF (Up)

Using your ECP 2 MKII phono stage

Press the power button on the front panel to turn the unit on. The blue E power indicator will ignite. Press the power button one more time to turn the unit off.
The phono stage will sound slightly better after a warm up period, so do not turn it off for short pauses in your listening. Some users leave their phono stages turned on permanently, but we recommend turning the unit off when leaving the residence.



TECHNICAL SPECIFICATIONS ECP 2 MK II

The following technical data were measured on randomized test objects and are typical data. All measurements are made at 120V / 240V // 50Hz / 60Hz

Gain @ 1 kHz RCA:.....Adjustable 39,8 – 71,4 dB
Gain @ 1 kHz XLR:.....Adjustable 45,8 – 76,4 dB
Resistance loading (RL):.....Adjustable 10 Ω – 47 kΩ
Capacitive loading (CL):.....Adjustable 0 – 350 pF

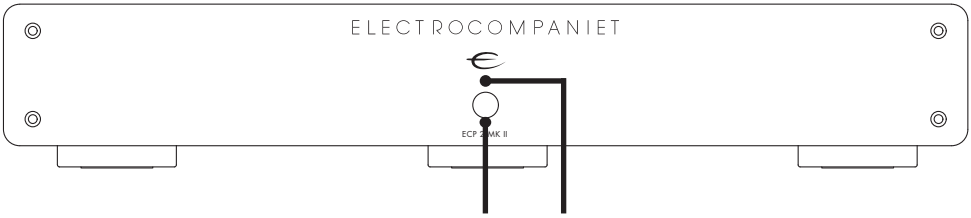
Maximum output level: ..... 17.5 V rms (+ 25 dB V)
Overload margin:..... > 31 dB @ 1 kHz
Output impedance:..... 100 Ω single-ended, 200 Ω balanced
Frequency response:..... 20 – 20 kHz +/- 0.2 dB
RIAA Correction Accuracy:..... +/- 0.1 dB
Subsonic filter:..... -3dB @ 11 Hz, 24 dB/octave
Channel separation:.....> 85 dB, 20 – 20 kHz
THD + Noise:.....< 0.003 % @ 1 kHz
S/N-R:.....96 dB, 1 kHz, A-weighted, ref. 10 dB V output
S/N-R: .....91 dB, 1 kHz, A-weighted, ref. 5 mV input
S/N-R:.....67.4 dB, 1 kHz, A-weighted, ref. 500 µV input

Dimensions

Width ..... 470 mm / 18.5 inches
Depth ..... 373 mm / 14.6 inches
Height ..... 78 mm / 3 inches
Weiht..... 9 kg / 19.8 lbs

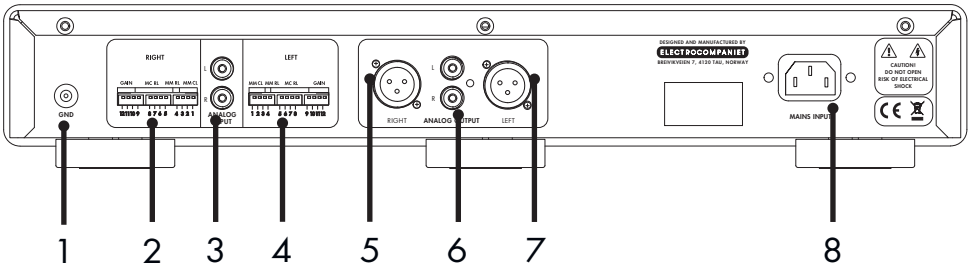
**The manufacturer reserves the right to alter these specifications without further notice.*

Front panel



1. Power button
2. Power indicator

Rear panel connections



#	Name	Used for	Connection type/Cable
1	Ground screw	Grounding wire	
2	DIP switch array - Right channel	Adjusting the phono stage	
3	RCA input Left/Right channel	Turntable connection	RCA / 75-ohm coaxial cable
4	DIP switch array - Left channel	Adjusting the phono stage	
5	XLR balanced output - Right channel	Balanced Turntable connection	XLR / balanced audio cable
6	RCA line output Left/Right channel	Unbalanced Turntable connection	RCA / 75-ohm coaxial cable
7	XLR balanced output - Left channel	Balanced Turntable connection	XLR / balanced audio cable
8	AC power cord socket	Input power	Supplied power cable

IF SERVICE IS NEEDED

Your dealer will have all relevant information regarding the service centers in your area, and will ensure that your unit is serviced with minimum delay. It is our general policy to have your unit returned to you within five working days. This is an average time and can vary locally, depending on the workload at that particular service station. If, for some reason there are no service facilities available in your country, contact Electrocompaniet support first. If requested to do so by technical personnel, please ship the unit to the following address:

EC Living AS,
Breivikveien 7,
N-4120 Tau,
Norway
Web: www.electrocompaniet.com

Service department: support.electrocompaniet.com

The end user is responsible for all shipping charges, insurance, re-import and duty charges.

When shipping a product to the factory for service, always include the following:

1. A sales slip or other proof of purchase if repair is claimed under warranty.
2. A proforma invoice with value of goods, stating that the ECP 2 MKII is returned to Norway for repair.
3. An accompanying letter describing faults, symptoms, or problems with the unit.
4. Always ship the unit in its original carton and packaging material to prevent damage in transit.

Electrocompaniet will not cover damages incurred in transit. If you require further information concerning the operation of the unit, or if you have any questions related to service, please do not hesitate to contact your dealer or your national distributor.

User manual updates online

An updated version of the user manual may be available online at the Electrocompaniet web site. Occasional updates are needed to reflect new features added to the product since the user manual was printed.

ELECTROCOMPANIET

If music *really* matters™

DEALER
STICKER
HERE

LOCAL DEALER

Warning!

To avoid risk of fire or electric shock, do not expose this appliance to rain or moisture. Verify line voltage before use. Do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personal. The warranty is void if the product is tampered by non-authorised personnel.Use only authorized Electrocompaniet service center.

REV 1.0 2020

Designed and manufactured in Norway
www.electrocompaniet.com