

Reparaturhinweise

**HANSATON
LUMEO Power**

Ausgabe gültig ab: 03/ 2012

Repair Instructions

Edition effective: 03/ 2012

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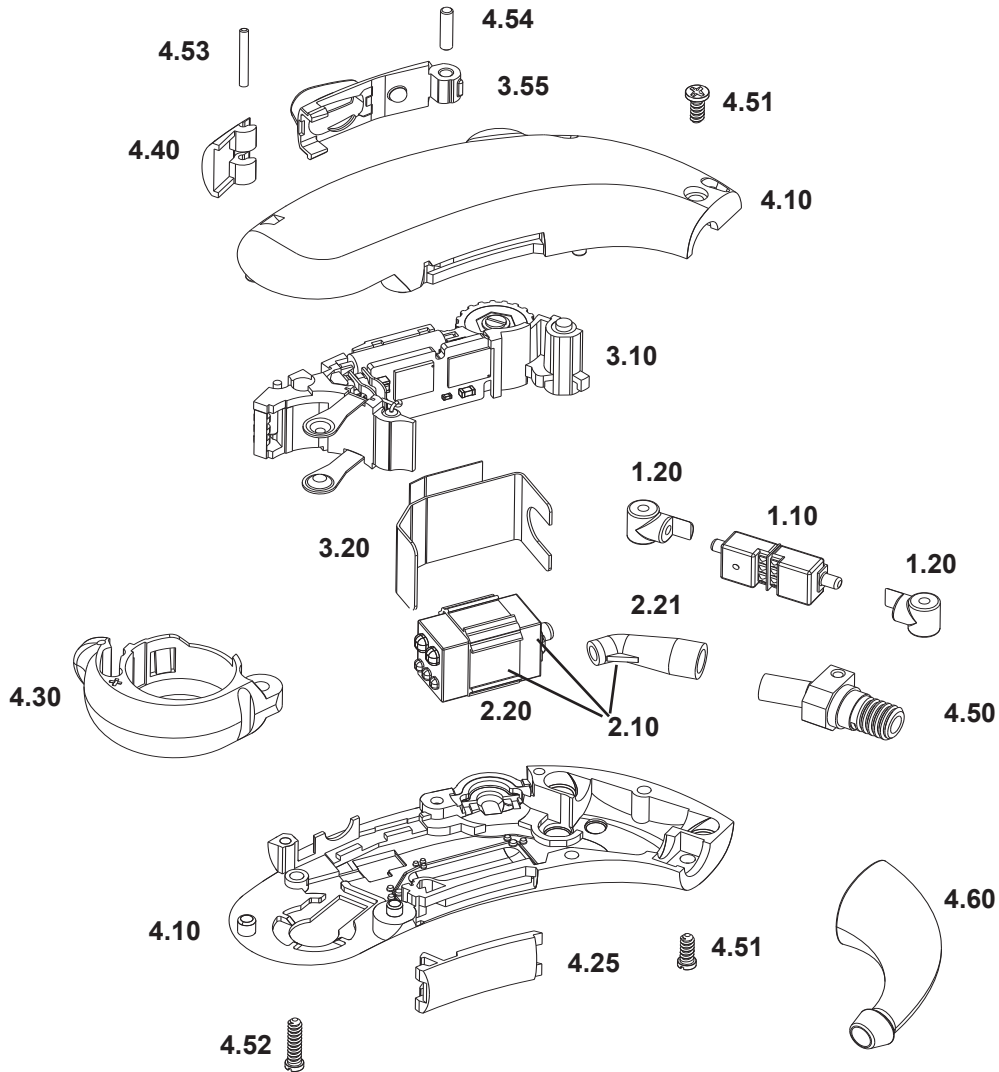
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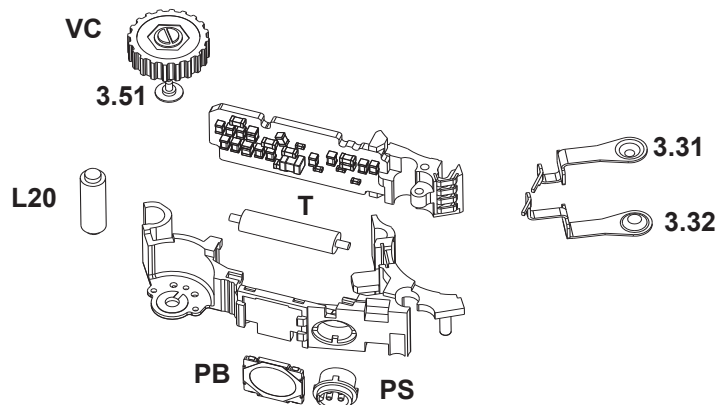
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Bauteileübersicht mit Positionsnummern Table of components with position numbers



Verstärkerbauteile mit Positionsnummern Amplifier components with position numbers

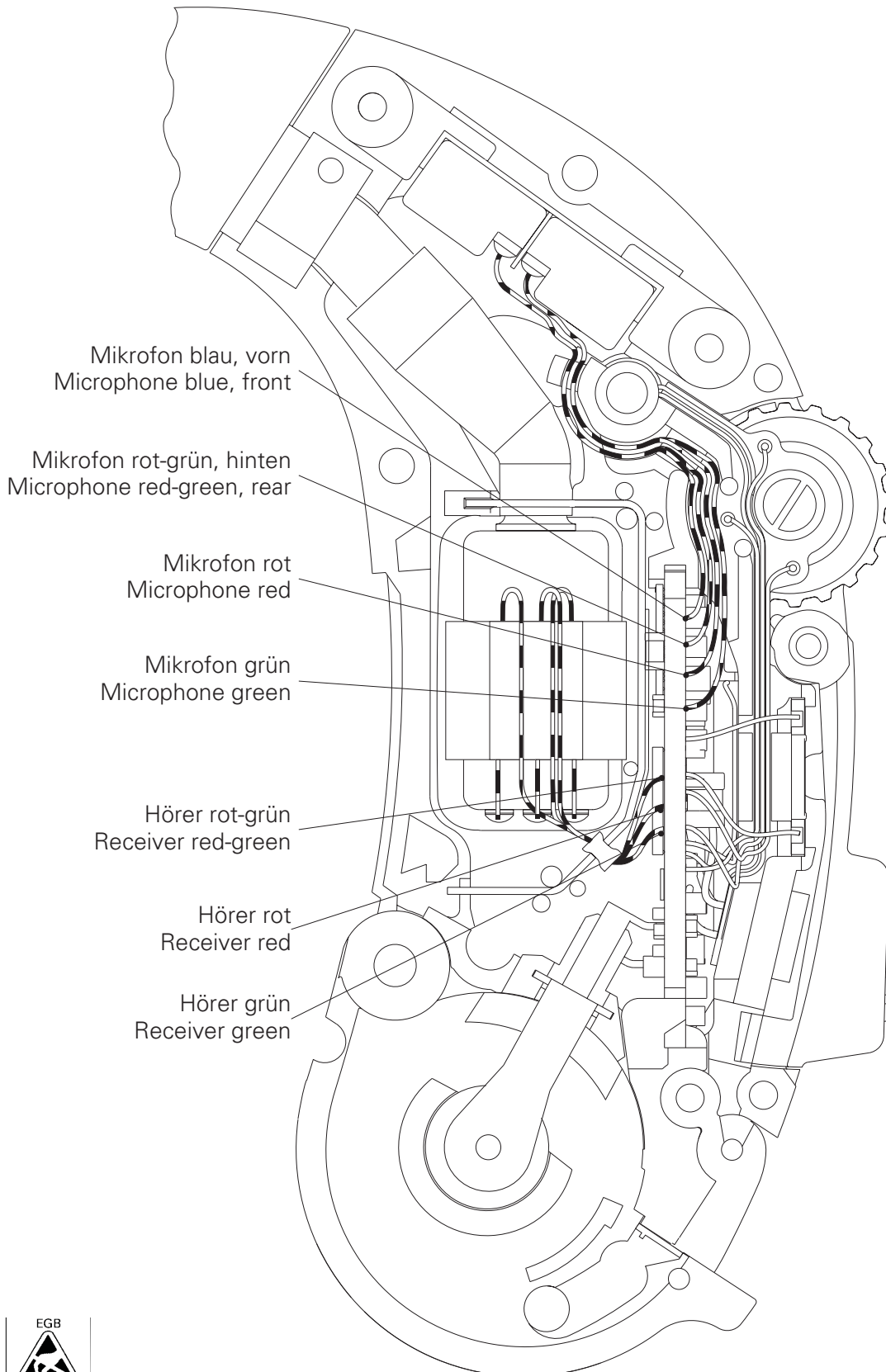


Ersatzteilstückliste - Spare Parts List

| Pos. | Bezeichnung | Description | Bestell-Nr. Part No. |
|------|------------------------------------|--------------------------------|-------------------------|
| 1.10 | Mikrofoneinheit komplett | Microphone unit complet | 64 225 |
| 1.20 | Mikrofonlagerung | Microphone suspension | 60 149 |
| 2.10 | Höreinheit komplett | Receiver unit complet | 64 226 |
| 2.20 | Hörerlagerung | Receiver suspension | 60 140 |
| 2.21 | Hörerschlauch | Nozzle for receiver | 64 228 |
| 3.10 | Verstärker, beige | Amplifier, beige | 75 953 |
| 3.10 | Verstärker, black | Amplifier, black | 75 954 |
| 3.10 | Verstärker, grey | Amplifier, grey | 76 000 |
| 3.20 | Abschirmblech | Shielding | 60 155 |
| 3.31 | Batteriekontakt plus | Battery contact plus | 60 137 |
| 3.32 | Batteriekontakt minus | Battery contact minus | 60 136 |
| 3.51 | Schraube für Potentiometer | Screw for VC | 60 151 |
| VC | Potentiometer, beige | Potentiometer, beige | 60 129 |
| VC | Potentiometer, schwarz | Potentiometer, black | 60 131 |
| VC | Potentiometer, grey | Potentiometer, grey | 60 130 |
| PS | Programmierbuchse | Programming socket | 60 133 |
| PB | Drucktaster | Push - button | 60 132 |
| 3.55 | Abdeckung Taster, beige | Cover push - button, beige | 59 662 |
| 3.55 | Abdeckung Taster, grey | Cover push - button, grey | 59 664 |
| 3.55 | Abdeckung Taster, silver | Cover push - button, silver | 59 665 |
| 3.55 | Abdeckung Taster, bronze | Cover push - button, bronze | 59 692 |
| 3.55 | Abdeckung Taster, gold | Cover push - button, gold | 59 693 |
| 3.55 | Abdeckung Taster, copper | Cover push - button, copper | 59 694 |
| 3.55 | Abdeckung Taster, pearl | Cover push - button, pearl | 59 666 |
| 3.55 | Abdeckung Taster, black | Cover push, black | 60 879 |
| 3.55 | Abdeckung Taster, rosarot | Cover push, light pink | 60 967 |
| 3.55 | Abdeckung Taster, himmelblau | Cover push, light blue | 60 968 |
| 3.55 | Abdeckung Taster, rot transparent | Cover push, red transparent | 60 969 |
| 3.55 | Abdeckung Taster, blau transparent | Cover push, blue transparent | 60 970 |
| 3.55 | Abdeckung Taster, gelb transparent | Cover push, yellow transparent | 60 971 |
| T | Telefonspule | Telecoil | 60 134 |
| 4.10 | Gehäuse, beige | Case, beige | 59 671 |
| 4.10 | Gehäuse, silver | Case, silver | 59 672 |
| 4.10 | Gehäuse, bronze | Case, bronze | 59 673 |
| 4.10 | Gehäuse, grey | Case, grey | 59 674 |
| 4.10 | Gehäuse, pearl | Case, pearl | 59 675 |
| 4.10 | Gehäuse, gold | Case, gold | 59 676 |
| 4.10 | Gehäuse, copper | Case, copper | 59 677 |
| 4.10 | Gehäuse, black | Case, black | 60 877 |
| 4.10 | Gehäuse, rosarot | Case, light pink | 60 961 |
| 4.10 | Gehäuse, himmelblau | Case, light blue | 60 962 |
| 4.10 | Gehäuse, rot, transparent | Case, red transparent | 60 963 |
| 4.10 | Gehäuse, blau transparent | Case, blue transparent | 60 964 |
| 4.10 | Gehäuse, gelb transparent | Case, yellow transparent | 60 965 |
| 4.25 | Typenschild, beige | Type plate, beige | 72 746 |
| 4.25 | Typenschild, black | Type plate, black | 72 750 |
| 4.25 | Typenschild, silber | Type plate, silver | 72 754 |
| 4.25 | Typenschild, grey | Type plate, grey | 72 771 |
| 4.25 | Set Typenschild, rot, blau | Set type plate, red, blue | 72 766 |
| 4.30 | Batterielade, beige | Battery compartment, beige | 59 687 |
| 4.30 | Batterielade, black | Battery compartment, black | 59 653 |
| 4.30 | Batterielade, silver | Battery compartment, silver | 60 878 |
| 4.30 | Batterielade, grey | Battery compartment, grey | 60 966 |

Ersatzteilstückliste - Spare Parts List

| Pos. | Bezeichnung | Description | Bestell-Nr. Part No. |
|----------------------------------------|--------------------------------------|---------------------------------------|-------------------------|
| 4.40 | Abdeckklappe Audio, beige | Cover plate audio, beige | 59 657 |
| 4.40 | Abdeckklappe Audio, silver | Cover plate audio, silver | 59 660 |
| 4.40 | Abdeckklappe Audio, grey | Cover plate audio, grey | 59 659 |
| 4.40 | Abdeckklappe Audio, bronze | Cover plate audio, bronze | 59 688 |
| 4.40 | Abdeckklappe Audio, gold | Cover plate audio, gold | 59 689 |
| 4.40 | Abdeckklappe Audio, copper | Cover plate audio, copper | 59 690 |
| 4.40 | Abdeckklappe Audio, black | Cover plate audio, black | 60 881 |
| 4.40 | Abdeckklappe Audio, pearl | Cover plate audio, pearl | 59 661 |
| 4.40 | Abdeckklappe Audio, rosarot | Cover plate audio, light pink | 60 997 |
| 4.40 | Abdeckklappe Audio, himmelblau | Cover plate audio, light blue | 60 998 |
| 4.40 | Abdeckklappe Audio, rot transparent | Cover plate audio, red transparent | 60 999 |
| 4.40 | Abdeckklappe Audio, blau transparent | Cover plate audio, blue transparent | 61 000 |
| 4.40 | Abdeckklappe Audio, gelb transparent | Cover plate audio, yellow transparent | 61 001 |
| 4.50 | Gewindestück | Sound stud | 60 156 |
| 4.51 | Kreuzschlitzschraube 1 x 2,6 | Phillips head screw 1 x 2,6 | 64 229 |
| 4.52 | Kreuzschlitzschraube 1 x 5,5 | Phillips head screw 1 x 5,5 | 64 230 |
| 4.53 | Gehäusestift 0,6 x 5,5mm * | Axle for case 0,6 x 5,5mm * | 44 025 |
| 4.54 | Stift 0,9 x 4 | Pin 0,9 x 4 | 60 154 |
| 4.60 | Tragehaken | Elbow | 60 211 |
| 4.60 | Kindertragehaken | Elbow for children | 60 212 |
| | Leitung 22 mm rot | Litz wire 22 mm red | 42 013 |
| | Leitung 22 mm rot grün | Litz wire 22 mm red green | 42 014 |
| | Leitung 22 mm grün | Litz wire 22 mm green | 42 015 |
| | Leitung 22 mm blau | Litz wire 22 mm blue | 42 016 |
| L5 | Filterspule 47 nH | Filter coil 47 nH | 39 796 |
| L20 | Induktionsspule (Wireless) | Induction coil (Wireless) | 62 173 |
| C43 | Kondensator 15 pF | Capacitor 15 pF | 56 794 |
| C11,C15,C72 | Kondensator 0,1 µF | Capacitor 0,1 µF | 44 619 |
| C1,C6 | Kondensator 47 nF | Capacitor 47 nF | 35 374 |
| C4,C5,C9 C23,C41,C44 C44,C70,C71 | Kondensator 1 µF | Capacitor 1 µF | 36 285 |
| C24 | Kondensator 4,7 µF | Capacitor 4,7 µF | 39 800 |
| C8,C13 | Kondensator 10 µF | Capacitor 10 µF | 61 837 |
| R10,R11 | Widerstand 33 Ohm | Resistor 33 Ohm | 44 622 |
| L12,L13,L14 L15,L16,L17 | Widerstand 47R Filter | Resistor 47R filter | 50 273 |
| L6,L7,L8 L10,L21,L22 | Widerstand 68R Filter | Resistor 68R filter | 39 802 |



Mikrofonmontage , Microphone assembling

Höreremontage , Receiver assembling

Mikrofon, Microphone
vorn, front

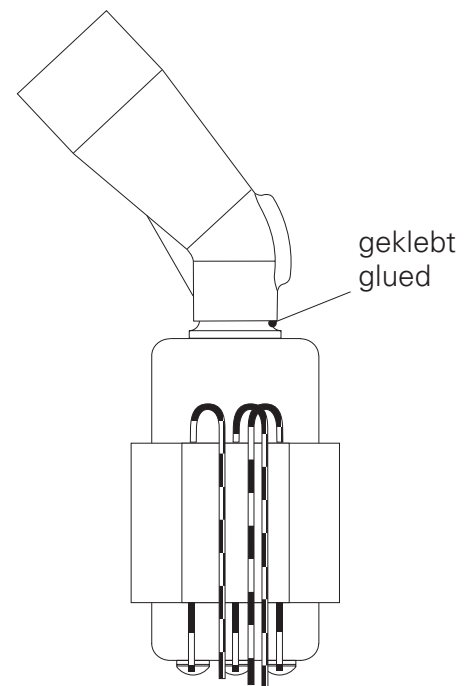
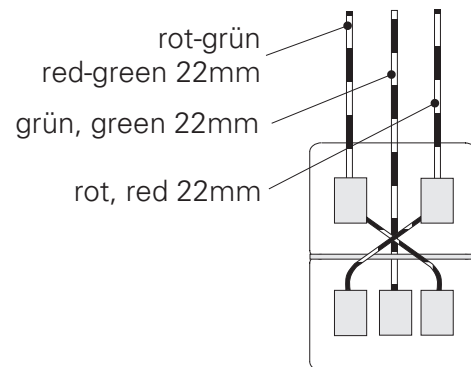
blau, blue 22mm

grün, green 22mm

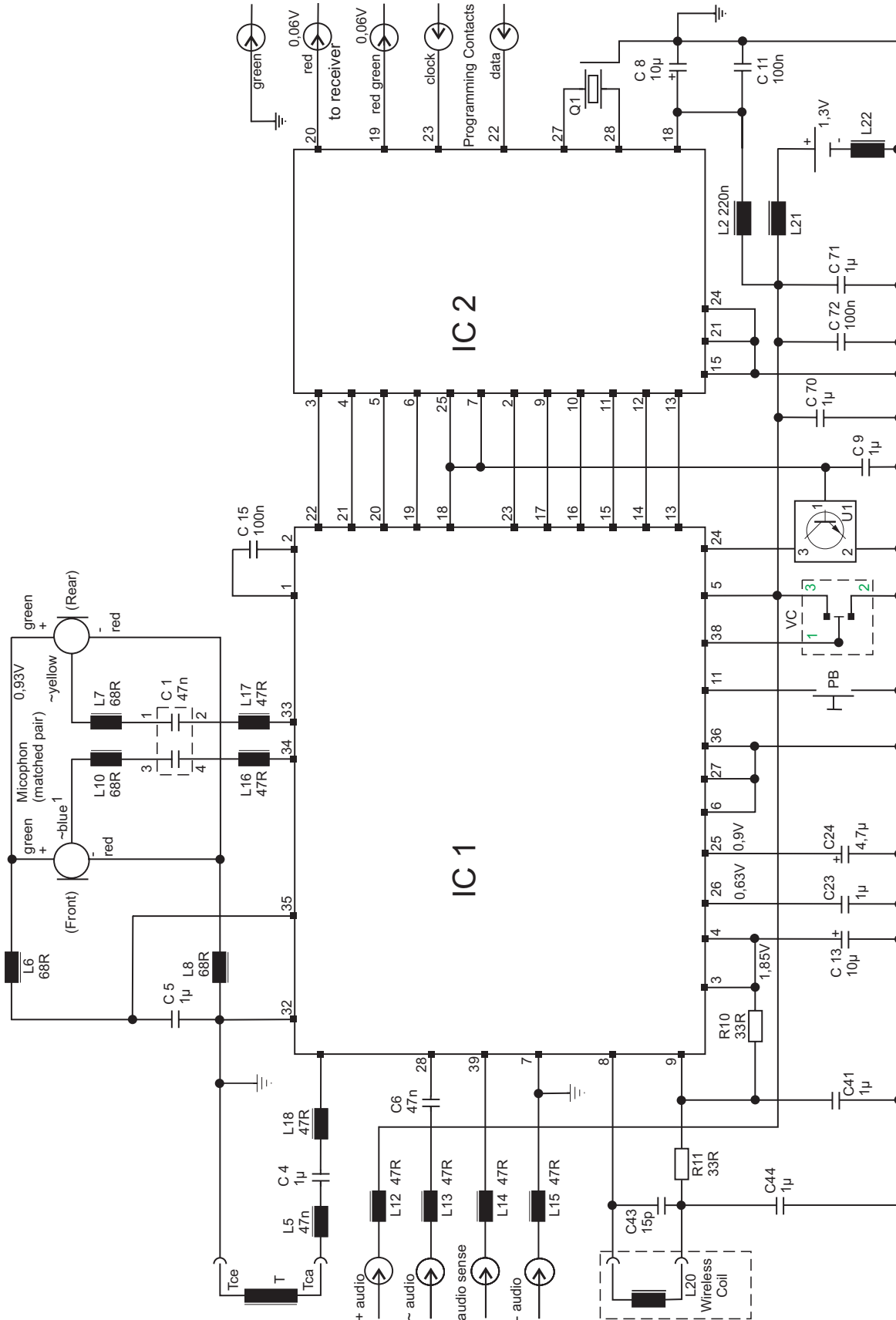
rot, red 22mm

rot-grün
red-green 22mm

Mikrofon, Microphone
hinten, rear



Schaltbild - Circuit diagram



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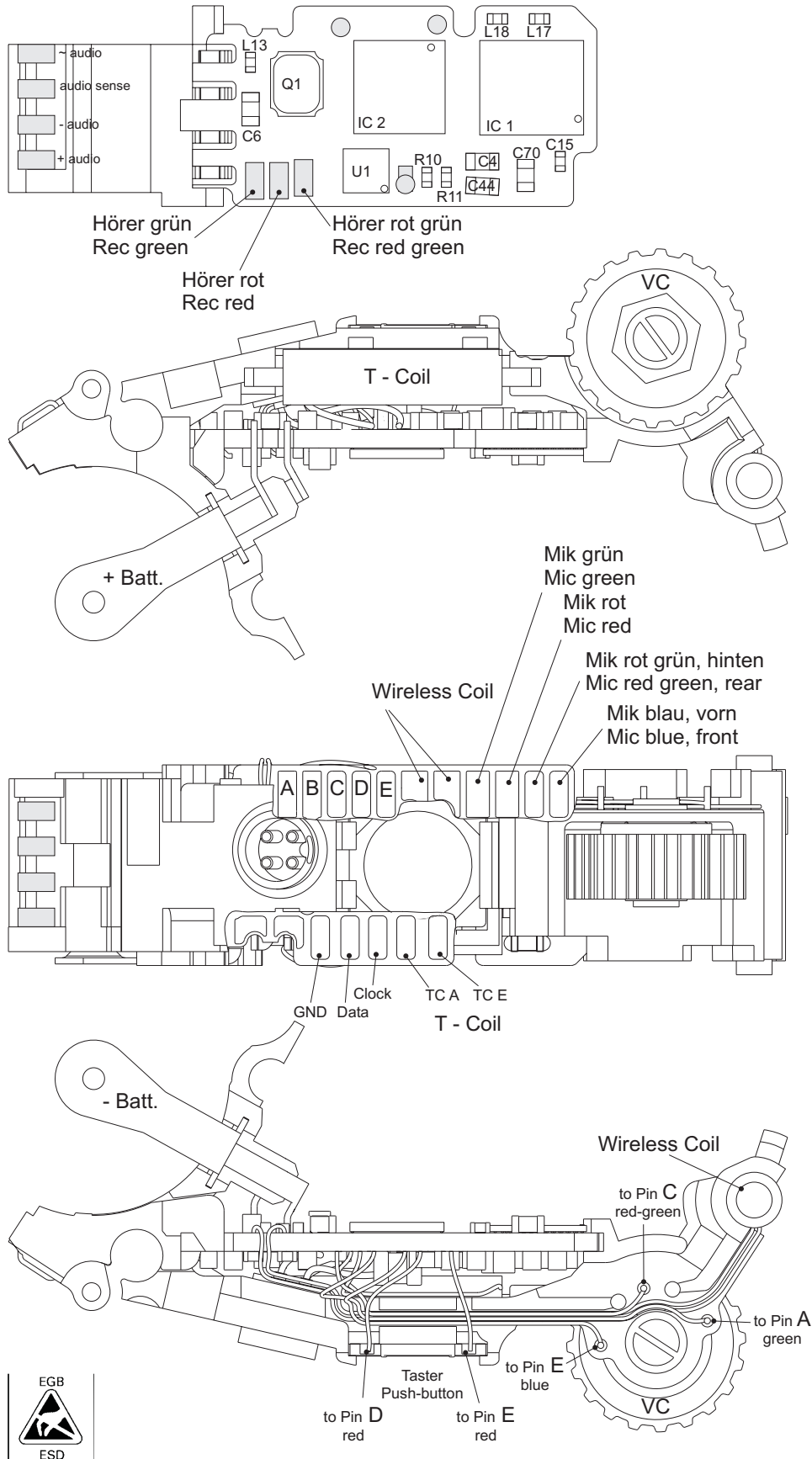
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Leiterbahn - Circuitboard





LUMEO Power



Measuring settings

If not mentioned differently in the individual diagrams, the following adjustments are effective:
Adaptive parameters: **off**
Full on Gain (CONNEXX Test setting)

Applicable standards

Ear simulator measurement **EN 60118-0: 1994**
2 cc coupler measurement **EN 60118-7: 2005**
ANSI-Standard (S3.22-2003)

| Ear-Simulator EN 60118-0: 1994 | Technical Specifications | 2 cc-Coupler ANSI-Standard (S3.22-2003) / EN 60118-7: 2005 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|---------------------------------------------------------------|
| Max. Output OSPL 90/ Maximum Acoustic Gain | Maximum output [dB SPL] | Max. Output OSPL 90/ Maximum Acoustic Gain |
| 141 133 - | Peak 1600 Hz HF-Average SSPL90 | 136 - 128 |
| | Gain [dB] input: 50 dB SPL | |
| 78 68 - 58 | Peak 1600 Hz HF-Average Full on Gain Reference Test Gain | 75 - 64 51 |
| Reference Test Gain | Frequency range [Hz] | Reference Test Gain |
| 100 5.500 | Low frequency limit High frequency limit | 100 5.000 |
| | Total harmonic distortion [%] | |
| 4,0 2,0 1,0 | 500 Hz 800 Hz 1600 Hz | 3,8 1,8 2,5 |
| Reference Test Gain of Telecoil | Equivalent input noise [dB] | Reference Test Gain of Telecoil/ SPLITS curve |
| 16 | | 17 |
| | Max. telecoil sensitivity [dB SPL] | |
| 127 120 - - - | Peak 1600 Hz MASL (60118-7) ETLS (60118-7) HFA-SPLITS (ANSI) | - - 93 0 105 |
| Remark | Total harmonic distortion of telecoil [%] input: 100mA/m | Steady state I/O AGC characteristics |
| This hearing instrument is able to achieve an output sound pressure level of more than 132 dB SPL. In order to exclude an increase of hearing loss special attention has to be given to protection of the residual hearing upon fitting. | - 2,5 1,5 | |
| | Battery type | |
| | 13 | 13 |
| | Battery voltage [V] | |
| | 1,35 | 1,35 |
| | Battery current [mA] | |
| | 1,0 | 1,65 |
| | Sensitivity of audio input [mV] | |
| | 2,0 | - |
| | AGC-O Attack- and Release time [ms] | |
| | - - | 85 550 |
| | Attack time Release time | |