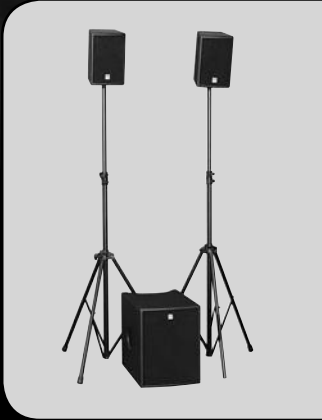




**Portable
Sound**



**L.U.C.A.S
Smart**

Manual 1.0

Important Safety Instructions

Before connecting, read instructions

Important Advice on Safety!

Please read before use and keep for later use!

Wichtige Sicherheitshinweise!

Bitte vor Gebrauch lesen und für späteren Gebrauch aufbewahren!

- Read all of these instructions!
- Save these instructions for later use!
- Follow all warnings and instructions marked on the product!
- Do not use this product near water, i.e. bathtub, sink, swimming pool, wet basement, etc.
- Do not place this product on an unstable cart, stand or table. The product may fall, causing serious damage to the product or to persons!
- Slots and openings in the cabinet and the back or bottom are provided for ventilation; to ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered. This product should not be placed in a built-in installation unless proper ventilation is provided.
- This product should not be placed near a source of heat such as a stove, radiator, or another heat producing appliance.
- Use only the supplied power supply or power cord. If you are not sure of the type of power available, consult your dealer or local power company.
- Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
- Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in risk of fire or electric shock. Never spill liquid of any kind on the product.
- Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks. Refer all servicing to qualified service personnel.
- Clean only with dry cloth.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for the safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - When the power cord or plug is damaged or frayed.
 - If liquid has been spilled into the product.
 - If the product has been exposed to rain or water.
 - If the product does not operate normally when the operating instructions are followed.
 - If the product has been dropped or the cabinet has been damaged.
 - If the product exhibits a distinct change in performance, indicating a need of service!
- Adjust only these controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
- Exposure to extremely high noise levels may cause a permanent hearing loss.
- Individuals vary considerably in susceptibility to noise induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a sufficient time. The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the following permissible noise level exposures:

Duration Per Day In Hours	Sound Level dBA, Slow Response
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 or less	115

- According to OSHA, any exposure in excess of the above permissible limits could result in some hearing loss.
- Ear plug protectors in the ear canals or over the ears must be worn when operating this amplification system in order to prevent a permanent hearing loss if exposure is in excess of the limits as set forth above. To ensure against potentially dangerous exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels such as this amplification system be protected by hearing protectors while this unit is in operation.
- Fuses: Replace with IEC 127 (5x 20 mms) type and rated fuse for best performance only.

TO PREVENT THE RISK OF FIRE AND SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO MOISTURE OR RAIN. DO NOT OPEN CASE; NO USER SERVICE-ABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Version 1.0 10/2004

- The unit has been built by HK AUDIO® in accordance with IEC 60065 and left the factory in safe working order. To maintain this condition and ensure non-risk operation, the user must follow the advice and warning comments found in the operating instructions. The unit conforms to Protection Class 1 (protectively earthed).
- HK AUDIO® ONLY GUARANTEE THE SAFETY, RELIABILITY AND EFFICIENCY OF THE UNIT IF:
 - Assembly, extension, re-adjustment, modifications or repairs are carried out by HK AUDIO® or by persons authorized to do so.
 - The electrical installation of the relevant area complies with the requirements of IEC (ANSI) specifications.
 - The unit is used in accordance with the operating instructions.
 - The unit is regularly checked and tested for electrical safety by a competent technician.

WARNING:

- If covers are opened or sections of casing are removed, except where this can be done manually, live parts can become exposed.
- If it is necessary to open the unit this must be insulated from all power sources. Please take this into account before carrying out adjustments, maintenance, repairs and before replacing parts.
- The appliance can only be insulated from all power sources if the mains connection is unplugged.
- Adjustment, maintenance and repairs carried out when the unit has been opened and is still live may only be performed by specialist personnel who are authorized by the manufacturer (in accordance with VBG 4) and who are aware of the associated hazards.
- Loudspeaker outputs which have the IEC 417/5036 symbol (Diagram 1, below) can carry voltages which are hazardous if they are made contact with. Before the unit is switched on, the loudspeaker should therefore only be connected using the lead recommended by the manufacturer.
- Where possible, all plugs on connection cables must be screwed or locked onto the casing.
- Replace fuses only with IEC127 type and specified ratings.
- It is not permitted to use repaired fuses or to short-circuit the fuse holder.
- Never interrupt the protective conductor connection.
- Surfaces which are equipped with the "HOT" mark (Diagram 2, below), rear panels or covers with cooling slits, cooling bodies and their covers, as well as tubes and their covers are purposely designed to dissipate high temperatures and should therefore not be touched.
- High loudspeaker levels can cause permanent hearing damage. You should therefore avoid the direct vicinity of loudspeakers operating at high levels. Wear hearing protection if continuously exposed to high levels.

MAINS CONNECTION:

- The unit is designed for continuous operation.
- The set operating voltage must match the local mains supply voltage.
- The unit is connected to the mains via the supplied power unit or power cable.
- Power unit: Never use a damaged connection lead. Any damage must be rectified by a competent technician.
- Avoid connection to the mains supply in distributor boxes together with several other power consumers.
- The plug socket for the power supply must be positioned near the unit and must be easily accessible.

PLACE OF INSTALLATION:

- The unit should stand only on a clean, horizontal working surface.
- The unit must not be exposed to vibrations during operation.
- Keep away from moisture and dust where possible.
- Do not place the unit near water, baths, wash basins, kitchen sinks, wet areas, swimming pools or damp rooms. Do not place objects containing liquid on the unit - vases, glasses, bottles etc.
- Ensure that the unit is well ventilated.
- Any ventilation openings must never be blocked or covered. The unit must be positioned at least 20 cm away from walls. The unit may only be fitted in a rack if adequate ventilation is ensured and if the manufacturer's installation instructions are followed.
- Keep away from direct sunlight and the immediate vicinity of heating elements and radiant heaters or similar devices.
- If the unit is suddenly moved from a cold to a warm location, condensation can form inside it. This must be taken into account particularly in the case of tube units. Before switching on, wait until the unit has reached room temperature.
- Accessories: Do not place the unit on an unsteady trolley, stand, tripod, base or table. If the unit falls down, it can cause personal injury and itself become damaged. Use the unit only with the trolley, rack stand, tripod or base recommended by the manufacturer or purchased together with the unit. When setting the unit up, all the manufacturer's instructions must be followed and the setup accessories recommended by the manufacturer must be used. Any combination of unit and stand must be moved carefully. A sudden stop, excessive use of force and uneven floors can cause the combination of unit and stand to tip over.
- Additional equipment: Never use additional equipment which has not been recommended by the manufacturer as this can cause accidents.
- To protect the unit during bad weather or when left unattended for prolonged periods, the mains plug should be disconnected. This prevents the unit being damaged by lightning and power surges in the AC mains supply.

Diagram 1



Diagram 2



- Das Gerät wurde von HK AUDIO® gemäß IEC 60065 gebaut und hat das Werk in sicherheitstechnisch einwandfreiem Zustand verlassen. Um diesen Zustand zu erhalten und einen gefahrlosen Betrieb sicherzustellen, muss der Anwender die Hinweise und die Warnvermerke beachten, die in der Bedienungsanleitung enthalten sind. Das Gerät entspricht der Schutzklasse I (schutzgeerdet).
- DIE SICHERHEIT, ZUVERLÄSSIGKEIT UND LEISTUNG DES GERÄTES WIRD VON HK AUDIO® NUR DANN GEWÄHRLEISTET, WENN:
 - Montage, Erweiterung, Neueinstellung, Änderungen oder Reparaturen von HK AUDIO® oder von dazu ermächtigten Personen ausgeführt werden.
 - die elektrische Installation des betreffenden Raumes den Anforderungen von IEC (ANSI)-Festlegungen entspricht.
 - das Gerät in Übereinstimmung mit der Gebrauchsanweisung verwendet wird.

WARNUNG:

- Wenn Abdeckungen geöffnet oder Gehäuseteile entfernt werden, außer wenn dies von Hand möglich ist, können Teile freigelegt werden, die Spannung führen.
- Wenn ein Öffnen des Gerätes erforderlich ist, muss das Gerät von allen Spannungsquellen getrennt sein. Berücksichtigen Sie dies vor dem Abgleich, vor einer Wartung, vor einer Instandsetzung und vor einem Austausch von Teilen.
- Ein Abgleich, eine Wartung oder eine Reparatur am geöffneten Gerät unter Spannung darf nur durch eine vom Hersteller autorisierte Fachkraft (nach VBG 4) geschehen, die mit den verbundenen Gefahren vertraut ist.
- Lautsprecher-Ausgänge, die mit dem IEC 417/5036-Zeichen (Abb.1, s.unten) versehen sind können berührungsfähige Spannungen führen. Deshalb vor dem Einschalten des Gerätes Verbindung nur mit dem vom Hersteller empfohlenen Anschlusskabel zum Lautsprecher herstellen.
- Alle Stecker an Verbindungskabeln müssen mit dem Gehäuse verschraubt oder verriegelt sein, sofern möglich.
- Es dürfen nur Sicherungen vom Typ IEC 127 und der angegebenen Nennstromstärke verwendet werden.
- Eine Verwendung von geflickten Sicherungen oder Kurzschließen des Halters ist unzulässig.
- Niemals die Schutzleiterverbindung unterbrechen.
- Oberflächen, die mit dem "HOT"-Zeichen (Abb.2, s.unten) versehen sind, Rückwände oder Abdeckungen mit Kühlschlitzen, Kühlkörper und deren Abdeckungen, sowie Röhren und deren Abdeckungen können im Betrieb erhöhte Temperaturen annehmen und sollten deshalb nicht berührt werden.
- Hohe Lautstärkepegel können dauernde Gehörschäden verursachen. Vermeiden Sie deshalb die direkte Nähe von Lautsprechern, die mit hohen Pegeln betrieben werden. Verwenden Sie einen Gehörschutz bei dauernder Einwirkung hoher Pegel.

NETZANSCHLUSS:

- Das Gerät ist für Dauerbetrieb ausgelegt.
- Die eingestellte Betriebsspannung muss mit der örtlichen Netzspannung übereinstimmen.
- Der Anschluss an das Stromnetz erfolgt mit dem mitgelieferten Netzteil oder Netzkabel.
- Netzteil: Eine beschädigte Anschlussleitung kann nicht ersetzt werden. Das Netzteil darf nicht mehr betrieben werden.
- Vermeiden Sie einen Anschluss an das Stromnetz in Verteilerdosen zusammen mit vielen anderen Stromverbrauchern.
- Die Steckdose für die Stromversorgung muss nahe am Gerät angebracht und leicht zugänglich sein.

AUFSTELLUNGORT:

- Das Gerät sollte nur auf einer sauberen, waagerechten Arbeitsfläche stehen.
- Das Gerät darf während des Betriebs keinen Erschütterungen ausgesetzt sein.
- Feuchtigkeit und Staub sind nach Möglichkeit fernzuhalten.
- Das Gerät darf nicht in der Nähe von Wasser, Badewanne, Waschbecken, Küchenspüle, Nassraum, Swimmingpool oder feuchten Räumen betrieben werden. Keine mit Flüssigkeit gefüllten Gegenstände - Vase, Gläser, Flaschen etc. auf das Gerät stellen.
- Sorgen Sie für ausreichende Belüftung der Geräte.
- Eventuelle Ventilationsöffnungen dürfen niemals blockiert oder abgedeckt werden. Das Gerät muß mindestens 20 cm von Wänden entfernt aufgestellt werden. Das Gerät darf nur dann in ein Rack eingebaut werden, wenn für ausreichende Ventilation gesorgt ist und die Einbauanweisungen des Herstellers eingehalten werden.
- Vermeiden Sie direkte Sonneneinstrahlung sowie die unmittelbare Nähe von Heizkörpern und Heizstrahlern oder ähnlicher Geräte.
- Wenn das Gerät plötzlich von einem kalten an einen warmen Ort gebracht wird, kann sich im Gerätinnern Kondensfeuchtigkeit bilden. Dies ist insbesondere bei Röhrengeräten zu beachten. Vor dem Einschalten solange warten bis das Gerät Raumtemperatur angenommen hat.
- Zubehör: Das Gerät nicht auf einen instabilen Wagen, Ständer, Dreifuß, Untersatz oder Tisch stellen. Wenn das Gerät herunterfällt, kann es Personenschäden verursachen und selbst beschädigt werden. Verwenden Sie das Gerät nur mit einem vom Hersteller empfohlenen oder zusammen mit dem Gerät verkauften Wagen, Rack, Ständer, Dreifuß oder Untersatz. Bei der Aufstellung des Gerätes müssen die Anweisungen des Herstellers befolgt und muss das vom Hersteller empfohlene Aufstellzubehör verwendet werden. Eine Kombination aus Gerät und Gestell muss vorsichtig bewegt werden. Plötzliches Anhalten, übermäßige Kraftanwendung und ungleichmäßige Böden können das Umkippen der Kombination aus Gerät und Gestell bewirken.
- Zusatzvorrichtungen: Verwenden Sie niemals Zusatzvorrichtungen, die nicht vom Hersteller empfohlen wurden, weil dadurch Unfälle verursacht werden können
- Zum Schutz des Gerätes bei Gewitter oder wenn es längere Zeit nicht beaufichtigt oder benutzt wird, sollte der Netzstecker gezogen werden. Dies verhindert Schäden am Gerät aufgrund von Blitzschlag und Spannungssößen im Wechselstromnetz.

Abb.1



Abb.2





Welcome to the HK AUDIO® family!

Thank you for choosing (another) HK AUDIO® product.

L.U.C.A.S SMART consists of two satellites and a compact subwoofer equipped with a power amp and all the electronics required to drive the bass bin and satellite. Painstakingly fine-tuned to match the speakers for superior impulse response and the best possible sound, the electronic circuitry makes the system easy to handle and protects it from overloads. You don't have to worry about tweaking frequencies and finessing levels, all you have to do is set up the system components, connect the signal-carrying cords and power cable, and you're ready for action.

Every HK AUDIO® active system is much more than just a cabinet with an onboard power amp. Each one is a full-fledged sound reinforcement solution consisting of a subwoofer, satellite and meticulously matched electronics. Our engineers brainstormed new technologies specifically to satisfy stringent performance requirements. Unique and sophisticated, these features make an active HK AUDIO® sound reinforcement system stand out from the crowd.

Warranty

Register your L.U.C.A.S SMART using the enclosed warranty card to extend your warranty to five years free of charge.

Use the convenient **Online Registration** option at www.hkaudio.com

If you are unable to register online, please fill out the enclosed warranty card completely and mail or fax it to us. The registration is only valid if the warranty registration card is filled out and returned to HK AUDIO® or the device is registered via the Internet within 30 days after the date of purchase.

We are also interested in learning where and by whom our devices are used. This information will help us design future products. Your data is of course protected by privacy laws.

Thank you.

HK AUDIO®

Technical Service
Postfach 1509
D-66595 St. Wendel, Germany

Table of Contents

1	L.U.C.A.S SMART's Control Features	6
2	Setting Up and Connecting L.U.C.A.S SMART	7
3	Mounting Satellites on Speaker Stands	7
4	Operating the System	8
5	Settings	8
6	L.U.C.A.S SMART Accessories	9
7	Tips and Tricks	9
8	Troubleshooting	10
9	Technical Specifications	11

Digital Amping

Enhanced Efficiency and Dynamic Response

With an efficiency rating topping the 90% mark, digital power amps are smaller, lighter, and more compact than comparable conventional amps. The reduced thermal load on components clearly enhances reliability. The slew rate is far faster and the damping factor is higher, resulting in audibly more responsive and accurate performance.

- Outperforms analog power amps in efficiency for greater reliability and lower current consumption
- Faster signal transmission for enhanced dynamic response

OFR™

Optimized Frequency Response Technology

HK AUDIO®'s unique OFR™ technology deliver commanding yet well-balanced sound at every level. It corrects for non-linear frequency response in the speaker components at the same time as it compensates for the way human hearing works at varying levels.

- Fine-tuned to each system
- Rectifies non-linear frequency response
- Adapts the system to different volumes
- Powerful, balanced sound in every situation

MultiBand Limiting

Specialized limiting for each frequency range

Several limiters, each specializing in its own frequency range, work side by side to keep the entire system under control. This ensures even dynamic response and punchy projection for a highly musical sound across the entire frequency spectrum.

- Tighter low-end punch, snappier kick
- Clean, emphatic mids for smooth, rich vocals
- Transparent, glossy highs with extra headroom
- Speaker overload protection

Subsonic Filter

Preventing Low Frequency Interference

The integrated subsonic filter eliminates accidental and unintentional signals such as footfalls, wind, or the sound of a hand accidentally brushing a microphone. It cuts these frequencies drastically, freeing energy to render bass impulses better. Goodbye squashed dynamics and artificial sound, hello authenticity and natural sounding low/mid frequencies.

- Increases power and volume in the useful frequency range
- Protects power amps and speakers from harmful ultra-low frequencies

DuoTilt™ and MicroTilt™

Making the Most of Sonic Energy

The new DuoTilt™ and MicroTilt™ speaker stand mounting collars allow sound energy to be utilized far more efficiently. The DuoTilt™ offers downward angles of 7.5° and 15°, and MicroTilt™ 10°, to better aim the mid/high-range cabinets directly at the audience. Troublesome ceiling reflections are minimized; the soundscape is clearer, tighter, and more focused.

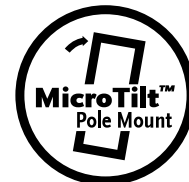
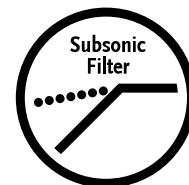
- Tilts at angles designed for the best possible alignment of the enclosure to the audience
- Minimizes ceiling reflections, maximizes energy efficiency

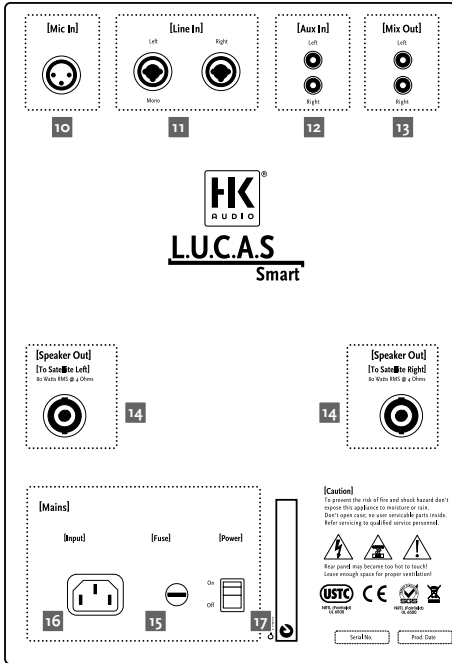
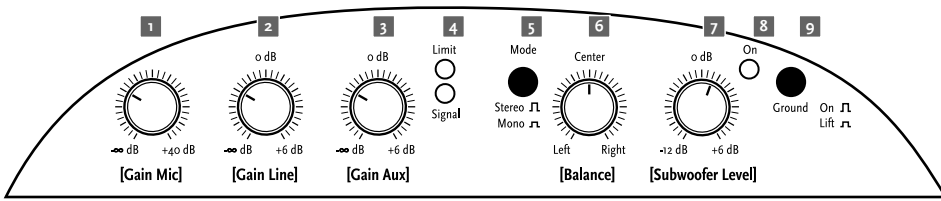
Easy Setup and Handling

Less Pre-Gig Stress for a Better Show

All HK AUDIO® Active Systems were designed as cohesive units consisting of perfectly matched components. Painstaking effort was invested in developing systems that are easily transported and swiftly set up. Operation couldn't be easier; endless tweaking is a thing of the past.

- A true system design: All components were perfectly matched for performance as a unit.
- Fast set-up and effortless handling saves time and spells less pre-performance stress





1 L.U.C.A.S SMART's Control Features

1 Gain Mic

Twist this knob to adjust the microphone level.
Note: You can adjust the microphone and line or auxiliary inputs separately and mix them as desired.

2 Gain Line

This knob adjusts power amp gain to match input signal levels. In the event that distortion becomes audible, the incoming signal level is too high. Simply back off this knob.

3 Gain Aux

This knob adjusts power amp gain to match input signal levels. In the event that distortion becomes audible, the incoming signal level is too high. Simply back off this knob.

4 Limiter Status LEDs

These dual-color LEDs indicate the operating status of the multi-band limiter. Green = incoming signal, limiters inactive; yellow = limiter occasionally activated; red = limiters operating continuously.

5 Mode

If you have just a mono signal available, patch it to the left input of the Line In or Aux In circuits. Set the Mode switch to Mono. When you do this, the system outputs the monaural input signal on both sides (the left and right).

6 Balance

Use this knob to adjust the relative levels of the left and right channels.

7 Subwoofer Level

Use this knob to adjust the relative volume of the subwoofer.

8 Power On LED

This LED lights up when the system is plugged into a mains power supply and the Power switch (see rear panel) is set to On.

9 Ground

Ground lift switch for separating the signal and chassis ground when you encounter problems with humming noises. The ground circuit is severed when you press the button in.

Caution: Never tape over the plug's ground terminal – this endangers lives!

10 Mic In

You may plug a microphone directly into this electronically balanced XLR input. (pin 1= ground, 2= +, 3= -).

11 Line In Left/Right

This electronically balanced XLR input is designed to take mixer signals (pin 1= ground, 2= +, 3= -). You can also use cables equipped with 1/4" TRS (stereo-style) plugs (tip = +, ring = -, shield = ground).

12 Aux In

RCA connector designed to take external signal sources such as (DJ) mixing consoles and CD players.

13 Mix Out

Master output for patching Line, Aux In and Mic In signals through to other devices such as tape decks and MD recorders or another L.U.C.A.S SMART system.

14 To Satellite Left/Right

Connect these Speakon® outputs to L.U.C.A.S SMART's satellite speakers.

15 Fuse

Mains fuse. In the event of a malfunction, this fuse will blow, severing the connection between L.U.C.A.S SMART and the mains power supply in order to protect the system from harm. Replace only with another fuse of the same type and rating as specified.

16 Mains Input

Use the factory-included power cord to connect this socket to a mains outlet.

Caution! Make sure the local mains voltage matches the voltage specified on the rear panel of L.U.C.A.S SMART. If you connect the L.U.C.A.S SMART system to the wrong mains voltage, you can damage its electronic components.

17 Power Switch

L.U.C.A.S SMART on/off switch. The light within the switch will glow red to indicate that it is powered up.

2 Setting Up and Connecting L.U.C.A.S SMART

Line In

Connect cables carrying signals from your mixer (master left/right, line out, or a similar circuit) to the balanced Input sockets using a cord equipped with standard XLR microphone connectors or 1/4" plugs. Make sure the XLR connectors have the following pin assignments: 1= ground, 2= +, 3= -. You can also use cables equipped with 1/4" TRS (stereo-style) plugs (tip = +, ring = -, shield = ground).

Aux In

Connect cables carrying signals from your DJ mixer, CD player or tape deck (CD out, tape out, or similar output) to Aux In using a cable equipped with RCA connectors.

Mic In

If you want to connect a microphone directly to L.U.C.A.S SMART without going into a mixer first, plug it into the balanced Mic In socket. Use a standard XLR microphone cable for this. Make sure the XLR connectors are wired with pin 2 hot (pin assignments: 1 = ground, 2 = +, 3 = -).

Satellite Left/ Right

Connect the L.U.C.A.S SMART system's satellite speakers to the Satellite Left and Satellite Right outputs. Use Speakon® loudspeaker cables with wire cross-sections of at least $2 \times 1.5 \text{ mm}^2$ to do this.

Caution: The Satellite Left and Satellite Right outputs are designed for a nominal impedance of four

ohms. Under no circumstances may the impedance fall below this value, otherwise the power amp may suffer serious damage! Use L.U.C.A.S SMART satellite loudspeakers only!

Note: This system's components were matched and tuned for superior audio performance in the configuration described herein. Do not set up or use this system in any other configuration. If you use satellites other than those that ship with the system, this could degrade the system's sound or even damage the power amp.

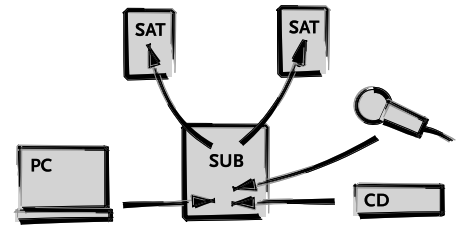
An electrical connection between the cord and input jack is not established until the Speakon® connector locks into place. Turn the Speakon connector clockwise until it engages.

3 Mounting the Satellites on Speaker Stands

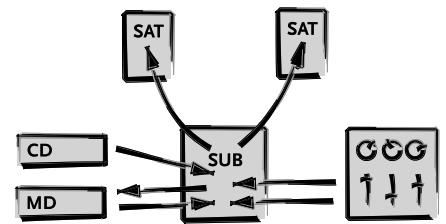
The newly developed, integrated MicroTilt™ pole mount enables far more efficient use of sound energy. Offering a 10° angle of tilt, it lets you line up cabinets so that they face the audience rather than towards walls and ceilings. Troublesome ceiling reflections are minimized, and you end up with a focused sound that is clear and punchy. Cabinets are stabilized

at their center of gravity - no wobbling, tilting, or unintentional turning. What's more, the HK AUDIO® MicroTilt™ collar can accept microphone stands. The maximum attainable height with microphone stands is 165 to 170 cm (about 5 1/2 feet), which is often sufficient for smaller events or presentations at which the audience is seated.

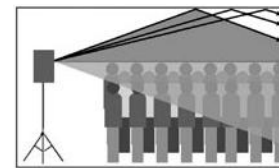
The HK AUDIO® L.U.C.A.S SMART Add-On Package is highly recommended for musical performances or presentations requiring coverage of greater areas and distance (10 to 15-meters / 30 to 50 feet). This kit consists of two stands (extendable to a height of 205 cm / 6' 8"), a practical gig bag for easy transport and two loudspeaker cables for connecting the satellites to the subwoofer.



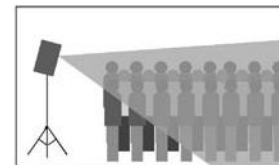
Presentation setup



Live performance setup



That was then: Up to 50% of the sound energy was wasted



HK AUDIO® MicroTilt™: Full utilization of sound energy

4 Operating the System

First, make sure the Power On switch is set to the Off position.

Caution! Connect the power cable only after you have made absolutely sure that the local mains voltage matches the voltage specified on the device. If you connect the system to the wrong mains voltage, you can easily damage the electronic components of the L.U.C.A.S SMART system.

Gain Line In, Aux In, Mic In

Turn all Gain knobs (Gain Line, Gain Mic and Gain Aux) all the way down (counterclockwise as far as they will go).

Before you power L.U.C.A.S SMART up, make sure that all connected peripheral components are switched on first. Your mixer, and all signal sources connected to it such as keyboards, instrument amps, effects and so forth, should be switched on-first.

The L.U.C.A.S SMART system should always be switched on last. Again, that means after you switch on all connected devices. After you power the system up by activating the On/Off switch (it will light up red when it is set to On and getting mains power), set the Gain Line knob to the center or 12 o'clock position (= 0 dBV).

This is the preferred level if you have connected a mixer to L.U.C.A.S SMART. If you connect a CD player or a keyboard directly to the system, turn the Gain Line knob clockwise all the way to the far right to achieve maximum volume.

Note: Many DJ mixing desks are equipped with RCA-format outputs only. If you want to employ this type of mixer, use either an RCA/XLR adapter (or RCA/1/4" jack adapter) and plug it into the Line In port, or connect the mixer to Aux In using a standard RCA connector-equipped cord.

If you want to plug a CD player directly into the system, use Aux In to do this. Depending on signal level, you can turn the Gain Aux knob all the way to the right in order to achieve maximum volume.

5 Settings

Gain Mic Knob

Use this knob to adjust microphone level.

Note: You can adjust the microphone and line inputs separately and mix them as desired. In the event of audible distortion or saturated signals, back off the Gain Mic knob.

Gain Line Knob

If you hear distortion or saturated signals, first check the signal sources and, if possible, reduce the output signal level there. If the signal that you are routing to the L.U.C.A.S SMART system cannot be adjusted at the source, adjust the power amp by backing off the Gain Line knob.

Gain Aux Knob

Use this knob to adjust the level of the Aux In channel.

Note: You can adjust Aux In and Line In separately and mix them as desired. In the event of audible distortion or saturated signals, back off the Gain Aux knob.

Mode

If you have just a mono signal available, patch it to the left input of the Line In or Aux In circuits. Set the Mode switch to Mono. This way the system can output the monaural input signal on both left and right sides.

Balance

Use the Balance knob to adjust the relative levels of the left and right channels. The two sides' volume levels are equal when the knob is set to the center position.

Subwoofer Level

When this knob is set to the center position, the volume of the subwoofer is perfectly balanced with the levels of the satellites so that the audience is treated to a homogeneous sound with an even distribution of bottom-end and top-end (satellite) signals. If you want to boost or cut the bass frequencies, simply turn the Subwoofer Level knob to the left (down to -12 dB) or right (up to +6 dB).

Ground Lift Switch

If you encounter low frequency hum, try activating the Ground Lift switch, which severs the chassis earth circuit. If this doesn't eliminate the problem, check all cables connected to the L.U.C.A.S SMART system and all signals routed to the mixer until you pinpoint the problem.

Caution: Never tape over the plug's ground terminal – this endangers lives!

6 L.U.C.A.S SMART Accessories

L.U.C.A.S SMART Add-On Package

This complete accessory kit for L.U.C.A.S SMART consists of two aluminum speaker stands, one gig bag and two seven-meter speaker cables.

L.U.C.A.S SMART Roller Bag

A convenient and secure transportation solution for the L.U.C.A.S SMART system, this roller bag offers rugged upholstered bags designed to protect the subwoofer and satellites. Simply strap the bag containing the satellites to the subwoofer and transport the entire PA system easily on the built-in casters. The roller bag also offers several practical compartments, perfect for storing cables, microphones and even small mixers.

L.U.C.A.S SMART Wall Mount

Wall-mounting bracket for L.U.C.A.S SMART satellite speakers.

To learn more about original HK AUDIO® accessories, talk to an HK AUDIO® dealer near you or visit www.hkaudio.com

7 Tips and Tricks

- 1 Don't expose electronic circuitry to moisture! When you set the system up outdoors, be sure to protect it against rain. Keep soft drinks, beer or any other liquids well away from the cabinets to protect their electronic components from short circuits.
- 2 L.U.C.A.S SMART delivers optimum sound when you provide it with optimum input signals! Noise such as hum is generally caused by defective cables, the wrong type of cables, or unbalanced signals routed into the mixing console. Check all signal and mains cables.
- 3 Prevent distortion! Not only is it unpleasant to the ears of your audience, it can also endanger your equipment. Make sure all components that are connected directly and indirectly to the L.U.C.A.S SMART system have sufficient power ratings, and that they don't distort from running at their respective limits. Provide an undistorted signal to the system. If you send a distorted signal, backing off the Gain knob won't help clean it up. Keep it clean!
- 4 Avoid ground loops! Even if the signal-carrying circuit is balanced, redundant ground circuits in a single audio system may generate undesirable humming. For example, you may encounter a ground loop when the mixer is grounded via a mains cord that isn't connected to the same mains circuit as the L.U.C.A.S SMART system. To prevent this problem, always be sure to connect L.U.C.A.S SMART and the mixing console to the same electrical circuit. (Same phase!) If your equipment hums despite this precaution, the Ground Lift switch can be a great help.

Caution: Never tape over the plug's ground terminal – this endangers lives!



L.U.C.A.S SMART Add On Package



L.U.C.A.S SMART Roller Bag



L.U.C.A.S SMART Wall Mount

8 Troubleshooting

The Power On LED and the mains switch do not light up red after you switch the system on.

- Check if the power cord is plugged into the Mains Input.
- Check if the mains power supply is actually providing current.
- Check if L.U.C.A.S SMART's fuse is defective. Replace only with another fuse of the same type and rating as specified.

The Power On LED and the Power switch light up red, but no sound is coming from the cabinets.

- Check the cables that you connected to the Line In, Mic In and Aux ports.
- Check if the signal sources (mixer, keyboard, CD player) are on.
- Are the Gain knobs turned up?
- Check the loudspeaker cables for damage.
- Check if the Speakon® connectors plugged into the Satellite Left and Satellite Right sockets are engaged all the way (rotated fully to the right). Only then will an electrical connection be established.

The subwoofer's bass response sounds thin or weak.

- Check the setting of the Subwoofer Level knob. Adjust the volume of the subwoofer using the Subwoofer Level knob until you get the kind of bottom end you want to hear.

The signal sounds distorted.

- Check the LED displays on your mixer. They should not be constantly in the red. If necessary, back off the volume at the mixer.
- If the LED displays on your mixer are in the green, turn down the L.U.C.A.S SMART's Gain knob (Line In or Aux In).
- Observe the LEDs of the Limiter Status displays on L.U.C.A.S SMART's control panel. If the yellow LED lights up continuously, the integrated protective functions are working at full capacity. In this instance, do not turn the volume level up any higher.

Annoying hum

- Check the cables that you are using to connect the signal source to L.U.C.A.S SMART. Replace damaged cables.
- If you cannot pinpoint the cause of the hum, press the Ground Lift switch. This should remedy the problem in most cases.

9 Technical Specifications

L.U.C.A.S SMART Subwoofer

Inputs/Outputs:

Line In: XLR female, 1/4" combination jack (pin 1= ground; 2= +, 3= -) electronically balanced & floating

Aux In: RCA connector unbalanced

Mic In: XLR female (pin 1 = ground; 2 = +, 3 = -) electronically balanced & floating

Sum Out, Master Out: RCA connector unbalanced

Output level: +4 dBV peak

Satellite speaker outs: Speakon® (pin 1+ = +, 1- = -)

Amplifier and loudspeakers Subwoofer

Subwoofer power output: 250 W / 3 ohms @ 0,3 % THD

Satellite power output: 2x 80 W / 4 ohms @ 0,3 % THD

Protection circuits: HK AUDIO® Multi Band Limiter, Subsonic Filter

Low-frequency loudspeaker: 1x 10" HK AUDIO® Custom

Impedance: 3 ohms

Active crossover: 90 Hz; 24 dB/octave,

Frequency response: 43 Hz to 92 Hz, +/-3dB

34 Hz to 140 Hz, -10dB

Sound pressure level 1W/1m, half-space: 97 dB

Max. sound pressure level/1m, half-space: 117 dB @ 10% THD

Weight: 21 kg/ 46.2 lbs.

Dimensions (WxHxD): 32 cm x 41 cm x 46,5 cm (12-5/8" x 16-1/8" x 18-3/8")

L.U.C.A.S SMART Satellite

Loudspeaker input: Speakon® NL 4 (pin 1+ = +, 1- = -)

Mid-range loudspeaker: 1x 6.5" HK AUDIO® Custom

Tweeter: 1x 1" Dome Tweeter

Mounting collar: HK AUDIO® MicroTilt™, 15 mm

Impedance: 4 ohms

Nominal power handling capacity: 80 W RMS

Crossover frequency (passive, internal): 3 kHz;

12 dB/octave

Frequency response (via active crossover): 92 Hz to

21 kHz, +/-3dB; 85 Hz to 23 kHz, -10dB

Sound pressure level 1W/1m, half-space: 97 dB

Max. sound pressure level/1m, half-space: 115 dB

@ 10% THD

Weight: 4.5 kg/9.9 lbs.

Dimensions (WxHxD): 18.5 cm x 27.5 cm

x 21.5 cm (7-1/4" x 10-7/8" x 8-1/2")

General electrical data:

Protection class 1 (protectively earthed)

Mains fuse:

Version 230 V: 250 V / T 1.6 A

Version 120 V: 250 V / T 3.15 A

Version 100 V: 250 V / T 3.15 A

Max. power consumption: 370 VA

Mains voltage range: ± 10%

Ambient operating temperature: -10° C to +35° C during operation

L.U.C.A.S SMART Satélite

Entrada altavoz: Speakon® NL 4 (pin 1+= +, 1=- -)

Altavoz: 1x 6,5" HK AUDIO® Custom

Altavoces de agudos: 1x 1" Dome Tweeter

Brida para soportes elevados: HK AUDIO® Micro-Tilt™, 15 mm

Impedancia: 4 Ohmios

Carga nominal: 60 W RMS

Frecuencia de separación (pasiva): 3 kHz; 12 dB / Octava

Crossover (a través de crossover activo): 92 Hz a 21 kHz, +/- 3dB

85 Hz a 23 kHz, - 10dB

Presión acústica 1W/ 1m, halfspace: 97 dB

Presión acústica máx. / 1m, halfspace: 115 dB

@ 10% THD

Peso: 4,5 kg / 9.9 lbs.

Dimensiones (LxAxP): 18,5 cm x 27,5 cm x 21,5 cm (7-2/8" x 10-7/8" x 8-1/2")

Características eléctricas generales:

Clase de protección 1 / protection class 1 (protección puesta a tierra)

Fusible:

Version 230 V: 250 V / T 1.6 A

Version 120 V: 250 V / T 3.15 A

Version 100 V: 250 V / T 3.15 A

Consumo de potencia máx: 370 VA

Rango de tensión de red: +/- 10%

Rango de temperatura ambiente: -10° C hasta +35° durante la operación.

Für das folgend bezeichnete Erzeugnis

HK AUDIO® L.U.C.A.S SMART

wird hiermit bestätigt, dass es den wesentlichen Schutzanforderungen entspricht, die in der Richtlinie des Rates zur Angleichung der Rechtsvorschriften der Mitgliedsstaaten über die elektromagnetische Verträglichkeit (89/336/EWG) und der Niederspannungsrichtlinie (73/23/EWG) festgelegt sind. Diese Erklärung gilt für alle Exemplare, und bestätigt die Ergebnisse der Messungen, die durch die Qualitätssicherung der Fa. Stamer Musikanlagen GmbH durchgeführt wurden. Zur Beurteilung des Erzeugnisses hinsichtlich elektromagnetischer Verträglichkeit wurden folgende Normen herangezogen: EN 50081-1 • EN 50082-1. Zur Beurteilung der Einhaltung der Niederspannungsrichtlinie wurde folgende Norm herangezogen: EN 60065

Diese Erklärung wird verantwortlich für den Hersteller



Stamer Musikanlagen
GmbH*
Magdeburger Str. 8
66606 St.Wendel

abgegeben durch



Lothar Stamer Dipl.Ing.
Geschäftsführer
St.Wendel, den 13/02/06

* Stamer Musikanlagen stellt exklusiv für
HK AUDIO® her.

This is to certify that

HK AUDIO® L.U.C.A.S SMART

complies with the provisions of the Directive of the Council of the European Communities on the approximation of the laws of the Member States relating to electromagnetic compatibility (EMC Directive 89/336/EEC) and the low voltage Directive (73/23/EEC).

This declaration of conformity of the European Communities is the result of an examination carried out by the Quality Assurance Department of STAMER GmbH in accordance with European Standards EN 50081-1, EN 50082-1 and EN 60065 for low voltage, as laid down in Article 10 of the EMC Directive.



Stamer Musikanlagen
GmbH*
Magdeburger Str. 8
66606 St.Wendel



Lothar Stamer Dipl.Ing.
Managing Director
St.Wendel, 02/13/06

* Stamer Musikanlagen manufactures exclusively for HK AUDIO®.

Technische Änderungen vorbehalten
Copyright 2006 Music & Sales GmbH • 06/2006



HK Audio® • Postfach 1509 • 66595 St. Wendel
Germany • info@hkaudio.com • www.hkaudio.com
International Inquiries: fax +49-68 51-905 215
international@hkaudio.com