

***Duotone™ Head***  
***All-Tube Guitar Amplifier***  
***Manual 1.1***



*deutsch*

*english*

*español*

*français*

*italiano*

**Congratulations and thank you for choosing the Hughes & Kettner® Duotone™!**

Your choice would indicate that you're one of a select group of players who know exactly what they want - a bona-fide, all-tube amp - and won't settle for anything less. Beyond that, you undoubtedly have a very definite, unique sense of what your tone and amp should be all about.

The Hughes & Kettner® Custom Tube Series models are all amps with distinctive personalities tailored to individual expression. Built for tube purists, each amp in this line is a no-frills, straightforward original. Each one delivers the goods in terms of tone, quality of components, workmanship and aesthetic design, living up to the most discerning standards - no ifs, ands or buts.

The Duotone™ is a no-compromise design dedicated to creating absolutely classic rock sounds. As its name would suggest, the Duotone™ offers two distinct tonal worlds. There's the rough-and-ready Overdrive Channel that packs a mighty wallop and the Clean Channel with dynamics galore. Plus, with the benefit of the Overdrive Channel's Boost circuit, you have enormous Gain reserves to dial in everything from a touch of grit for classic rock riffing to high Gain for singing leads. The Duotone™ delivers tube tone pure and simple: even the parallel effects loop is served by a tube. There is not a single transistor in the entire signal path.

The hallmarks of the Duotone™ are not only its exceptional sound quality but also its reliability and stage-worthiness. All amps of the Custom Tube Series ship with tubes that satisfy the highest standards for quality and assure maximum reliability under even the most arduous operating conditions. With two Footswitch-selectable Master volumes and a healthy 100 watts of tube-driven Power, the Duotone™ is a joy to play - with it you'll feel at home on any stage.

These qualities and its unique aesthetics make the Duotone™ a highly individual amp for equally individual guitarists.

We wish you all the fun and success in the world with the tone of your new Duotone™!

**Before Powering up!**

- Check that the local current and the amp's AC Power rating are identical before you plug the Duotone™'s mains cable (Power cord) into an AC outlet.
- Ensure that air can circulate freely around your amp's ventilation slots.
- Place the amp on a stable platform where it is not exposed to mechanical shocks and temperature extremes which may damage the amp or endanger the safety of bystanders.
- Hughes & Kettner® is not liable for any damage to the amp due to improper use.

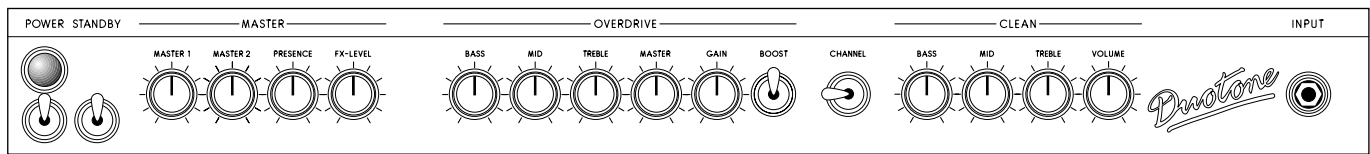
! Although we select our tubes according to the highest standards for quality, these are nonetheless sensitive components. Their service life may be shortened considerably by improper handling. Just like a top-notch athlete, they need to warm up before they're off to the races. Always Power the amp up in Standby mode and wait one to two minutes before you flip the switch from Standby mode to ON.

**Important!**

Before powering up please read the important safety instructions on pages 28-32!

**Table of Contents**

<b>1</b>	<b>Channels</b>	<b>S.8</b>
<b>2</b>	<b>Jacks and Control Features</b>	<b>S.8</b>
<b>3</b>	<b>Standard Setup/Cable Connections</b>	<b>S.9</b>
<b>4</b>	<b>Operating the Duotone™</b>	<b>S.9</b>
<b>5</b>	<b>Tubes, Maintenance and Care</b>	<b>S.10</b>
<b>6</b>	<b>Troubleshooting</b>	<b>S.11</b>
<b>7</b>	<b>Technical Specifications</b>	<b>S.11</b>
<b>8</b>	<b>Sample Settings</b>	<b>S.27</b>



## 1 Channels

### Overdrive

The Duotone™'s Overdrive Channel redefines what is typically known as the "British" sound - it makes the tone thicker, throatier, more articulate, with greater dynamic range. The Duotone™'s response to even the most subtle changes in attack is phenomenal. Note how your touch precisely controls the level of saturation and compression.

### Clean

Clear yet punchy, airy but focused, the Duotone™ Clean Channel delivers everything from pristine Clean to - depending on the type of guitar and pickup - remarkably responsive sweet blues sting, thus perfectly complementing the Overdrive Channel's tonal spectrum.

## 2 Jacks and control features

### Input (Front Panel)

Plug your guitar into this jack (it accepts all standard guitar Input levels).

### Clean Volume (Front Panel)

Determines the Clean Channel's volume. Depending on the output of the pickups in your instrument, you'll also be able to dial in wooly blues tone and slightly Overdriven crunch sounds.

### EQ Section (Front Panel)

Bass, Mid and Treble knobs for the Clean Channel. Mid and Treble influence one another, an attribute considered normal and desirable in a tube amp. Boosting treble decreases midrange honk and vice versa: jacking up the mids cuts back on the shimmer. You'll find that this feature offers a fairly staggering range of subtle tonal variations.

### Channel Select (Front Panel)

This Channel selector switches back and forth between the Clean and Overdrive Channels.

### Boost (Front Panel)

Hit this button to increase Input sensitivity and pump up the mids for fat, singing lead tone and a fairly bone-crunching, classic heavy rock sound

### Overdrive Gain (Front Panel)

Controls the Input sensitivity and thus the amount of distortion in the Overdrive Channel.

### Overdrive Master (Front Panel)

Determines the Overdrive Channel's volume. Adjust this to achieve the desired balance of levels between the Overdrive and Clean Channels.

### Overdrive EQ Section (Front Panel)

Bass, Mid and Treble knobs for the Overdrive Channel. AGain, Mid and Treble influence one another.

### FX Level (Front Panel)

Controls the level of the effect signal. In contrast to a conventional FX MIX knob, here the signal coming from any connected effect device is simply added to the original signal (like the AUX send on a mixing console), leaving the original signal intact at every setting.

### Presence (Front Panel)

This knob controls a Power amp circuit that determines the amount of upper mids and highs in the signal.

### Master 1 and Master 2 (Front Panel)

These knobs are used to dial in two basic overall levels, which may then be activated via Footswitch.

### Power (Front Panel)

The Duotone™'s mains Power switch.

### Standby (Front Panel)

Be sure to wait one to two minutes after turning on the Power switch before you flip this switch. It assures that the tubes warm up gradually when you first Power up the Duotone™ and mutes the amp during breaks. In the latter case, the tubes stay warm at a reduced level so that they don't have to heated up from a cold start aGain when you're ready to get back to playing.

### Red Mains LED (Front Panel)

The red LED illuminates when the Duotone™ is Powered up.

### Mains In (Rear Panel)

Connect the factory-included Euro-norm mains cable to this socket. Ensure the amp's voltage rating matches your local AC voltage rating before you plug into the wall socket. The mains fuse bracket is located next to this socket. When replacing blown fuses, make sure you use specified replacement fuses only (see TECHNICAL SPECIFICATIONS p. 26).

### Anode Fuse (Rear Panel)

This is the holder for the Power tubes' Anode Fuses. Here too, make sure you use specified replacement fuses only when replacing blown fuses. If a replacement fuse blows after just a short while in operation, you should definitely have the Power tubes checked for defects.

**FX Loop (Rear Panel)**

Parallel, tube-driven circuit designed to accept signal processors. The effect signal is mixed in with the original signal (rather than replacing it entirely, as is the more common method, in a serial effects loop). This ensures the purity of the original signal reMains Intact. For this reason, we recommend that you set the wet balance on the effect device itself to 100%, and do the mixing of wet-to-dry by adjusting the FX-Level knob on the amp.

**FX Send (Rear Panel)**

Sends the original or dry signal to the Input of your effect device.

**FX Return (Rear Panel)**

Receives the effect or wet signal from the output of your effect device.

**FX Send Level (Rear Panel)**

Adjust this control to make sure the level of signal you're sending to the Input of the effect device is neither too hot nor too soft.

**Footswitch (Rear Panel)**

This jack accepts the included 3-way Footswitch, which lets you remotely select Channels, Boost On / Off, and Master 1 / Master 2.

**Speakers (Rear Panel)**

The Duotone™ features 4, 8 and 16-ohm connections for perfect impedance matching. Its minimum impedance is 4 ohms (one 4-ohm speaker or two 8-ohm Speakers).

# 4 Operating the Duotone™

**Selecting Channles**

You can activate either Channel of the Duotone™ via the front panel Channel SELECT button or via Footswitch. The red LED on the panel Channel SELECT button illuminates when the Overdrive Channel is selected. When the LED is off, this indicates that the Clean Channel is active.

**Overdrive Channel Boost Function**

The Boost circuit is activated via the Boost switch on the front panel or via Footswitch. When you activate Boost, the red LED on the Footswitch lights up.

**Master 1 and 2**

Either of the two variable Master levels can be activated via Footswitch. The red LED on the Footswitch lights up when Master 2 is selected. When the LED on the Footswitch is off, this indicates that Master 1 is active.

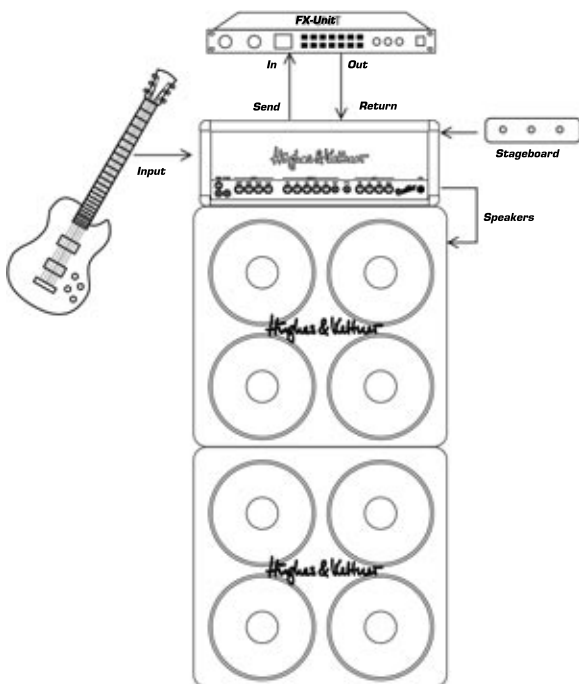
**The Duotone™ and Signal Processors**

The Duotone™ is equipped with a parallel effects loop, meaning the original signal always comes through, and the processed signal is mixed in with it.

**Connecting effect devices:**

- Connect the FX SEND jack to the Input of your effect device and the FX RETURN jack to the output.
- Adjust the FX LEVEL control on the rear panel to match the Input of your effect device.

# 3 Standard Setup/Cable Connections



! When you're trying to dial in a suitable signal level, you'll find that it's harder to come up with good results when you're using a multieffects processor that features an on-board preamp (actually, any kind of signal Boosting circuit) but does not allow you to patch signals in after its preamp and in front of its effects section. The reason for this is that when you have connected this type of processor to an FX loop, the signal is being routed through two preamps in series. Effects devices that are not equipped with this type of "preamp" are better suited for use in conjunction with effects loops because response is more dynamic and sound quality considerably better. If you happen to own one of these everything-but-the-kitchen-sink boxes and understandably want to use it, dial in the most dynamic Clean sound you can find on the effects device.

- Dial in the desired balance between dry and wet signals via the FX LEVEL knob located on the front panel of the amp.

+ If you choose not to connect an effects device to the effects loop, you can instead use the RETURN jack for patching in the signal of another instrument or tape deck (guitar, keyboard, drum machine, tape

player, etc.) for rehearsals or practice sessions. If you choose to use the FX RETURN this way, use the FX-LEVEL knob to determine the balance of levels between your guitar's signal and the connected signal source.

## 5 Replacing Tubes, Maintenance & Care

The Duotone™ ships with EL34 and 12AX7 tubes by RUBY®. Once they've been burned in (initial continuous operation under a load), these undergo an in-depth selection process where their electrical values and mechanical status (microphonics) are checked. Beyond that, they're installed in a finished amp and their sound is auditioned in a listening benchtest. One of the most important steps is Power tube matching, a process whereby tubes with the same characteristics are selected and combined to make matched sets.

### **When is it a good idea to replace tubes?**

The tubes in the Duotone™ are exemplary in terms of quality, workmanship and long service life. If you nevertheless come across a problem, please be sure to run down the following checklist before you swap out your old tubes for new ones:

Was the fault or failure of the Power tube caused by the tube itself or a flawed peripheral device or component, perhaps a defective speaker cable? (If you don't get to the bottom of the problem and remedy it, it may crop up aGain even after you replace the tubes.)

Did the mains voltage fluctuate or spike while the amp was on? In all-tube amps, over-voltage surges in the mains net can certainly blow fuses or even the amps. Over-voltages are often caused by generators or improperly installed high-current Power circuits.

Did a fuse blow even though none of the tubes is actually defective? An old fuse, tube de-ionization or mains voltage Power surges could conceivably have caused it to blow. In this case, replacing tubes of course is a waste of money and time.

Tubes definitely show signs of wear when their service life is coming to an end, such as increased microphonics, noise, muddier tone through loss of high-end frequencies, degraded performance, etc. You should take these indications seriously and replace old tubes because not only do these side effects take their toll on sound quality, they also indicate the affected tube is about to fail.

NOTE: Although it may be tempting to find out what an amp sounds like with different tubes, we urgently recommend that you refrain from replacing tubes for experimentation purposes. Handled improperly, this will damage the amp and lead to incredibly steep repair costs.

### **What should you keep in mind when you're replacing tubes?**

The golden rule: Replacing tubes is a job best left to qualified professionals. Accordingly, these guidelines are addressed to reputable technicians who earn their living with a screwdriver: Pull the mains plug of the Duotone™ and allow for a discharge time of at

least two minutes before removing the sheet metal panel on the rear of the amp. Once the panel is off, you can cautiously ease the tubes out of their sockets. A single Power tube may only be replaced if the replacement tube is precisely matched to the original, in other words, it has the same characteristics. As a rule, if you are replacing Power tubes, use matched sets only.

If you're installing a new set of Power tubes with characteristics identical to the old set, it is not absolutely necessary to re-bias the amp. If, on the other hand, you install a new set with characteristics that deviate from the old set, you definitely should re-bias the amp. AGain, biasing an amp is not a DIY task. It takes experience and an extensive working knowledge in measuring techniques, which is why this job should be carried out exclusively by qualified technicians with tube amp tuning experience.

### **How can you extend the service life of tubes?**

Never operate the Duotone™ without connecting a load (loudspeaker)! With this in mind, you should always use high-quality, heavy-duty speaker cables that won't crimp or snap.

Use the STAND BY switch! Warming tubes up unnecessarily wears them out that much quicker. Make a habit of shutting down the anode voltage via the Standby function and you'll enjoy many more hours of operation.

Avoid exposing the amp to vibrations, especially when it's Powered up. Switch the amp off a good while before moving the amp so that the tubes can cool off completely first.

Proper biasing and trimming extend service life. Whenever you feel that tube wear is on the rise, be sure to have a technician check the amp's bias and trim settings.

! Here are a few more basic rules that will extend the service life of your amp enormously if you follow them:

- Make sure all peripheral devices and connecting cables are in a state of good repair! - Ensure plenty of air can circulate around the amp's ventilation slots at all times - your Duotone™'s life depends on it.
- Definitely avoid exposure to mechanical shocks and extreme heat, dust and particularly moisture.
- Be very careful about the kind of peripheral devices you connect to your amp and always check out their specs before you plug them in. Never connect speaker cabinets with an impedance (ohm) rating lower than the Duotone™ is designed to handle. Under no circumstances should you connect devices with high output signal levels (e.g. Power amps) to your amp's Input.
- Be sure the AC Power source delivers the current that your amp is designed to handle before you plug it in. When in doubt about the local rating, ask the venue's sound technician or a stage hand.
- Refrain from DIY repairs! To be on the safe side, you should also have a qualified technician replace internal fuses.

## 6 Troubleshooting

### **The Duotone™ won't Power up when you switch it on:**

- It's not getting AC Power. Check the mains cable to see if it is connected properly!
- The mains fuse is defective. Replace the fuse with another fuse of the same type. If this fuse also blows, be sure to talk to your local Hughes & Kettner® dealer.

### **The Duotone™ is connected properly, but no sound is audible.**

- One or several Gain or Master controls are turned all the way down. Dial in higher settings.
- A shorted external speaker cable caused one of the internal fuses to blow. Have a qualified technician change the fuse (ensure the replacement fuse bears the proper rating).

### **The sound is washed out and muddy when you activate a connected effects device.**

- The signal processor is shifting the phase of the signal that is being blended with the original signal in the parallel effects loop. Turn the FX LEVEL knob clockwise to the far right to avoid this type of phase cancellation.

## 7 Technical Specifications

### **Preamp Section:**

Input	-10 dBV / 1 M Ohm
FX RETURN	0 dBV / 1 M Ohm
FX SEND	-10 dBV (+6 dBV)/8 K Ohm (15 K Ohm)

### **Power Amp Section**

Output Power	100 watts into 4/8/16 Ohms
Frequency response	20 Hz - 50 KHz

### **General data**

Input Power	230 volts AC (European version)
	117 volts AC (North American version)
	100 volts AC (Japanese version)
Max. Power consumption	470 VA
Power supply fuse	T 2,5 A (230-volt version)
	T 4 A (117-volt version)
	T 4 A (100-volt version)
Anode Fuse	1 x T 1 A
Internal fuses	2 x T 250 mA
Operational temperature range	-10°C - +35°C
Dimensions (W X H x D)	29.5" x 12.6" x 9.9" (750 x 320 x 250 mm)
Weight	52,5 lbs(24 kg)

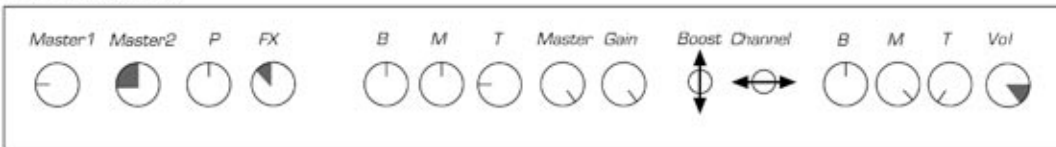
# 8 Sample Settings

“There is no right or wrong way to set up a sound. There are no wrong settings. Sound is a very subjective thing. When it sounds right for you, then it is right! Please remember that your guitar, your pick-ups, your strings, and not to forget your fingers, all contribute to making your own very unique sound. The suggested settings shown below will give you advice on how to find some of these sounds straight away...and don't be afraid to dial in extreme settings...have fun!”

## Single coils



## Humbucker



**IMPORTANT ADVICE ON SAFETY!  
PLEASE READ BEFORE USE AND KEEP FOR LATER USE!**

- The unit has been built by Hughes & Kettner® 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).

Hughes & Kettner® ONLY GUARANTEES THE SAFETY, RELIABILITY AND EFFICIENCY OF THE UNIT IF:

- Assembly, extension, re-adjustment, modifications or repairs are carried out by Hughes & Kettner® 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 isolated 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 IEC 127 type and specified rating.
- 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.
- Caution: The unit Mains switch must be in position OFF before the Mains cable is connected.
- 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**



**¡INDICACIONES DE SEGURIDAD IMPORTANTES!  
¡LÉANSE ANTES DE UTILIZAR EL APARATO Y GUARDENSE PARA SU USO POSTERIOR!**

- El aparato ha sido producido por Hughes & Kettner® según el IEC 60065 y salió de la fábrica en un estado técnicamente perfecto. Para conservar este estado y asegurar un funcionamiento sin peligros el usuario debe tener en cuenta las indicaciones y advertencias contenidas en las instrucciones de manejo. El aparato corresponde a la clase de protección I (toma de tierra protegida).

- LA SEGURIDAD, LA FIABILIDAD Y EL RENDIMIENTO DEL APARATO SOLO ESTAN GARANTIZADOS POR Hughes & Kettner® CUANDO:
- el montaje, la ampliación, el reajuste, los cambios o las reparaciones se realicen por Hughes & Kettner® o por personas autorizadas para ello;
- la instalación eléctrica del recinto en cuestión corresponda a los requisitos de la determinación del IEC (ANSI);
- el aparato se use de acuerdo con las indicaciones de uso.

**ADVERTENCIA:**

- Si se destapan protecciones o se retiran piezas de la carcasa, exceptuando si se puede hacer manualmente, se pueden dejar piezas al descubierto que sean conductoras de tensión.
- Si es necesario abrir el aparato, éste tiene que estar aislado de todas las fuentes de alimentación. Esto se debe tener en cuenta antes del ajuste, de un entretenimiento, de una reparación y de una sustitución de las piezas.
- Un ajuste, un entretenimiento o una reparación en el aparato abierto y bajo tensión sólo puede ser llevado a cabo por un especialista autorizado por el productor (según VBG 4) que conozca a fondo los peligros que ello conlleva.
- Las salidas de altavoces que estén provistas de la característica IEC 417/5036 (figura 1, véase abajo) pueden conducir tensiones peligrosas al contacto. Por ello es indispensable que antes de poner en marcha el aparato; la conexión se haya realizado únicamente con el cable de empalmes recomendado por el productor.
- Las clavijas de contacto al final de los cables conectores tienen que estar atornilladas o enclavadas a la carcasa, en tanto que sea posible.
- Sólo se pueden utilizar del tipo IEC 127 con la intensidad de corriente nominal indicada.
- El empalme del conductor de protección no se puede interrumpir en ningún caso.
- Las superficies provistas de la característica „HOT“ (figura 2, véase abajo), los paneles de fondo trasero o las protecciones con ranuras de ventilación, los cuerpos de ventilación y sus protecciones, así como las válvulas electrónicas y sus protecciones pueden alcanzar temperaturas muy altas durante el funcionamiento y por ello no se deberían tocar.
- Niveles elevados de la intensidad de sonido pueden causar continuos daños auditivos; por ello debe evitar acercarse demasiado a altavoces que funcionen a altos niveles. En tales casos utilice protecciones auditivas.

**ACOMETIDA A LA RED:**

- El aparato está proyectado para un funcionamiento continuo.
- La tensión de funcionamiento ajustada tiene que coincidir con la tensión de la red del lugar.
- Advertencia: el interruptor de la red del aparato tiene que estar en la posición OFF cuando conecte el cable de red.
- La conexión a la red eléctrica se efectuará con la fuente de alimentación o con el cable de red que se entreguen con el aparato.
- Fuente de alimentación: una línea de conexión dañada no se puede sustituir. La fuente de alimentación no puede volver a ponerse en funcionamiento.
- Evite una conexión de la red eléctrica a distribuidores con muchas tomas de corriente.
- El enchufe para el suministro de corriente tiene que estar cerca del aparato y ser de fácil acceso.

**SITUACION:**

- El aparato debería estar situado en una superficie limpia y totalmente horizontal.
- El aparato no puede estar expuesto a ningún tipo de sacudidas durante su funcionamiento.
- Se deben evitar la humedad y el polvo.
- El aparato no puede ponerse en funcionamiento cerca del agua, la bañera, el lavamanos, la pila de la cocina, un recinto con tuberías de agua, la piscina o en habitaciones húmedas. Tampoco se pueden poner objetos llenos de líquido - jarrones, vasos, botellas, etc. - encima de él.
- Procure que el aparato tenga suficiente ventilación.
- Las aberturas de ventilación existentes no se deben bloquear ni tapar nunca. El aparato debe estar situado como mínimo a 20 cm de la pared. El aparato sólo se puede montar en un rack, si se ha procurado la suficiente ventilación y se han cumplido las indicaciones de montaje del productor.
- Evite los rayos del sol directos así como la proximidad a radiadores, electro-radiadores o aparatos similares.
- Si el aparato pasa repentinamente de un lugar frío a otro caliente, se puede condensar humedad en su interior. Esto se debe tener en cuenta sobretodo en los aparatos con válvulas electrónicas. Antes de poner en marcha el aparato se debe esperar hasta que éste haya adquirido la temperatura ambiental.
- Accesorios: el aparato no se puede colocar encima de carros, estantes, trípodes, soportes o mesas inestables. Si el aparato se cae puede causar daños personales y se puede estropear. Coloque el aparato sólo en un carro, rack, estante, trípode o soporte recomendado por el productor o que se le haya vendido junto con el aparato. En la instalación se deben seguir las indicaciones del productor así como utilizar los accesorios recomendados por el mismo para colocarlo encima. El conjunto del aparato con el pedestal se debe mover con mucho cuidado. Un paro brusco, la aplicación de una fuerza desmesurada o un suelo irregular puede ocasionar la caída de todo el conjunto.
- Piezas adicionales: no utilice nunca piezas adicionales que no estén recomendadas por el productor, ya que se podrían provocar accidentes.
- Para proteger el aparato de una tormenta o si no se supervisa ni utiliza durante algún tiempo, se debería desconectar la clavija de la red. Así se evitan daños en el aparato a causa de un rayo y golpes de tensión en la red de corriente alterna.

**Figura 1**



**Figura 2**





This is to certify that

### **Hughes & Kettner® Duotone™ Head**

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  
May 2000

\* Stamer Musikanlagen manufactures exclusively  
for Hughes & Kettner

Für das folgend bezeichnete Erzeugnis

### **Hughes & Kettner® Duotone™ Head**

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



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abgegeben durch



Lothar Stamer Dipl.Ing.  
Geschäftsführer  
Mai 2000

\* Stamer Musikanlagen stellt exklusiv für Hughes & Kettner her

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