FISCHER AMPS

INNOVATIVE TECHNOLOGY FOR STAGE AND SOUND

MANUAL

Professional Rackmount Charger *ALC 161 II*

Dear customer,
You have decided to buy a ***FISCHER AMPS*** product. Thank you.

This product – as well as the accompanying rechargeable batteries– has been developed according to the latest state-of-the-art of technology and will be steadily developed further as required. The Charger complies with the European Safety Standards and VDE (Association of German Electrical Engineers) regulations.

Please read this manual carefully prior to the first use, you will get important information for use and safety of the unit. These safety and operating instructions should be retained for future reference.

Should you have further questions, please do not hesitate to contact *FISCHER AMPS*.

BEFORE FIRST OPERATION:

When choosing your rechargeable batteries, ensure that they are suitable for fast charging. Particularly older or very cheap batteries are often not admitted for this type of charging.

New rechargeable batteries

- **If batteries are supplied in the unit, the batteries are already charged. You should re-charge all batteries first before using them, since they discharge after a long storage time.**
- **The maximum capacity of the rechargeable battery is only achieved after several charging/discharging cycles.**

What you should note in general when working with NiCd and NiMH rechargeable batteries:

- Do not dispose of batteries in domestic waste, but take them to a battery collecting point.
- Use nickel/metal-hydride (NiMH) rechargeable batteries instead of nickel/cadmium (NiCd) batteries, since NiCd cells contain environment-polluting and unhealthy heavy metals. NiMH batteries have a higher capacity and thus longer operating times.
- Do not charge batteries in extreme cold or hot (> 40 °C) conditions.
- Always store a rechargeable battery in charged condition when the rechargeable battery is not used for a longer period of time.
- After a longer time of non-use, recharge battery before use.
  (NiMH batteries have a self-discharge rate of approx. 10 % per month when not used.)

Functional description of the *FISCHER AMPS* Chargers:

The *FISCHER AMPS* ALC 161 Charger has 4 charging chambers for 4 AA or AAA batteries each. The new version of the ALC 161 has 16 separate channels. Each of the charging chambers is controlled separately by 4 micro controllers. After inserting the charging box with the batteries into the charging chamber, a voltage measuring process detects whether the battery is extremely deep-discharged. In this case, the battery is charged in refresh mode with a small amount of current until a voltage has been reached which allows fast charging. In fast charging mode, the status LED of the corresponding charging chamber flashes red every 2 seconds. A defective battery which cannot be charged any more is therefore detected, because it does not reach the voltage required for fast charging. In case of battery fault, the status LED of the charging chamber flashes every second. When a regularly discharged battery is inserted, fast charging starts immediately.

In fast charging mode, the status LED of the charging flashes red every 2 seconds. After a qualifying period for voltage stabilisation at the battery, the charging current is switched off for a short time and the voltage of the battery is measured. After approx.. 15 minutes of charging the controller detects if a AA- or a AAA battery is inserted and controls the charging current to 800mA for AA batteries and 400mA for AAA batteries.

When the charging processor detects that the battery is fully charged, the fast charging current is switched off and the battery is kept full by means of trickle charging until it is removed, while the status LED lights red with short OFF-impulses. The battery can remain in the charger without danger of overloading. When the batteries are not needed for a longer time, switch off the charger and reload the batteries to maximum capacity before use. This saves electric power and protects our environment.

A fully charged battery is detected as "charged" after approx. 10 to 15 min. when charged again (i. e. switching on the Charger) and changeover to trickle charging mode is made.

Commissioning:

Power Cable:

Plug in the 3-pole power cable into the mounting jack at the rear connector panel of the Charger. The unit includes a switching power supply with an input voltage of 100V to 240VAC with 47Hz to 63Hz. The ALC 161 has a 3-pole power supply line and therefore has to be connected to a 3-pole plug with earthing. **Voltage adjustment of the units is made automatically depending on the mains voltage. Inside the units are no exchangeable fuses. The ALC161 is fused with a fine-wire fuse 1A in the mains input connector. The fuse-holder at the mains input connector contains a spare fuse. There are no further fuses inside the unit which could be replaced.**

Switching on the Charger:

The mains switch with a blue LED is at the front of the Charger on the left. After switching to position “ON”, the blue power LED lights. If the batteries have already been inserted, the charging processes start immediately. When charging, the LEDs of the chambers with batteries light red every 2 seconds.

Operation:

Inserting the rechargeable batteries into the charging boxes and chambers:

AA and/or AAA batteries:

Remove a charging box by pressing the two vertical strips and pulling out the box at the same time. Insert up to four AA- or AAA batteries according to the drawing in the charging box.

CAUTION: In the chamber, the (+) poles of the batteries (AA and AAA) always point to the front. Inserting a battery in wrong polarity can damage the rechargeable battery as well as the electronics. If a battery is inserted with wrong polarity, the red LED of this chamber flashes fast (every second) for approx. 30 seconds. Remove the battery with wrong polarity immediately and insert it again in correct direction.

After inserting the batteries into the charging box, push the box into the chamber until it latches safely and noticeably at both sides. Press both sides carefully to ensure the box is safely inserted in the charger.

When the inserted chamber does not yet contain four AA or AAA batteries, it is no problem to pull out the chamber and insert more batteries for charging. The charging process of the first installed batteries continues after pushing in the box again. The micro controller detects whether a battery is defective (e. g. Internal short-circuit) and the LED flashes every second. Please remove the defective battery and do not re-use it.

Removing batteries from the Charger:

AA and AAA rechargeable batteries:

Open the charging box where the status LED lights red (battery charged) by pressing the two vertical strips at the box and pulling it out at the same time. Should charging of one of the batteries be interrupted by doing so, remove the fully charged batteries and then push in the charging box again into the chamber; after that charging of the other batteries is continued.

Switching off the Charger:

Shift power switch in position "OFF" or switch off master switch of the rack. In OFF-Position the charger needs no standby power (0 Watts). If the charger and the batteries are not required for a longer time period, switch off the charger to save energy and protect the environment and re-charge the batteries before using them again.

CAUTION! Never insert dry batteries or alkaline / manganese cells into the Charger, the Charger could be damaged. In such a case *FISCHER AMPS* do not undertake liability for damage of the appliance or consequential damage or loss.

Keep your Charger in a dry place (indoor use only). Do not spill liquid into the enclosure through openings. Danger of fire and electric shock!
Do not expose appliance to direct solar radiation (danger of overheating).
The ventilation openings on top of the appliance should not be covered or blocked.
When rackmount, leave 5mm free space above the Charger so that the air can circulate to prevent buildup of heat.

Do not impede the flow of air through ventilation openings.

Do not insert hot rechargeable batteries (>40°C). Allow the batteries to cool before charging them.
There are no parts inside the appliance which need maintenance service. Do not open appliance.

Repair may only be carried out by the manufacturer.

WARRANTY:

The manufacturer grants a warranty of 24 months from the date of purchase by the original owner for defects in materials or workmanship. The rechargeable batteries are not part of the manufacturer's warranty. When the appliance has been subject to misuse or has been altered, the warranty expires. When returning the defective unit to the manufacturer, enclose the receipt, pack the unit to avoid transit damage, and return the unit carriage prepaid. The manufacturer does not accept carriage forward consignments.

SPECIFICATIONS:

Type of Charger:	**ALC 161 II**
Operating voltage / frequency	**100 – 240 VAC / 47-63Hz** **automatic voltage adjustment**
Max. input power	**35W max.**
Type and number of batteries	**16 pcs. AA and/or AAA rechargeable battery NiMH** **3000mAh max. (AA)** **1300mAh max. (AAA)**
Charging current max.	**800mA +/-10% AA-batteries** **400mA +/- 10% AAA batteries**
Charging time max. (depends on capacity and charging status)	**120-300 min**
Maximum timeout	**360 min**
Dimensions, W, H, D	**483mm, 44mm, 195mm**
Weight	**approx. 2.,6 kg (excluding batteries),** **approx.. 3.10 kg incl. 16 pcs. AA-batteries**

	**Disposal of Old Electrical & Electronic Equipment** **(Applicable in the European Union and other European countries with separate collection systems)** This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

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