

FISCHER AMPS

INNOVATIVE TECHNOLOGY FOR STAGE AND SOUND

MANUAL

19-inch CHARGERS

ALC 89 ALC 161

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

This product – as well as the accompanying rechargeable batteries (accus) – 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*.

WHAT YOU SHOULD OBSERVE BEFORE FIRST COMMISSIONING !

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

- **The batteries supplied with the unit are already charged. You should 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.)

How you notice that a rechargeable battery is defective or old:

- The operating time of the unit working with the rechargeable battery decreases considerably.
- The rechargeable battery does not accept charging any more (status LED of the charging chamber flashes red immediately after inserting the batteries and does not switch over to fast charging (red light) after a longer period of time).

Functional description of the FISCHER AMPS Chargers:

The *FISCHER AMPS* ALC controllers have 8 resp. 4 charging chambers (ALC 89 resp. ALC 161) in which – depending on the type of Charger – 9 V block batteries are charged individually, or 4 AA batteries are charged in pairs. The AA batteries are charged in pairs because they are used in pairs in the UHF systems. Each of the charging chambers is controlled separately. After inserting the charging box with the battery into the charging chamber, a voltage measurement 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. A defective battery which cannot be charged any more is therefore detected, because it does not reach the voltage required for fast charging. When a regularly discharged battery is inserted, fast charging starts immediately.

In fast charging mode, the status LED of the charging chamber lights red. 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.

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 green. The battery can remain in the Charger for an indefinite period of time without danger of overloading.

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 2-pole power cable (ALC89) resp. the 3-pole power cable (ALC161) into the mounting jack at the rear connector panel of the Charger. Inside the ALC89 Charger, there is an isolated, encapsulated switching power supply with an input voltage of 90V to 250VAC with 50Hz to 60Hz. Therefore the ALC89 does not need to be grounded by a 3-pole grounded power cable. The ALC161 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. The integrated mains adapter of the unit has an electronic overload protection for short-circuit, defect or overvoltage. Inside the ALC89 there are no exchangeable fuses. The ALC161 is fused with a fine-wire fuse 1A. The fuse-holder at the mains input connector of the ALC161 contains a spare fuse.**

Switching on the Charger:

The mains switch with a green LED is at the front of the Charger on the left. After switching to position "On", the red

status LEDs of the charging chambers flash for a short time and the green Power ON LED lights. If the batteries have already been inserted the charging process starts immediately. When charging, the LEDs light red.

Operation:

Inserting the rechargeable batteries into the charging boxes and chambers:

9V block batteries:

Remove an empty charging box by slightly pulling it upwards and at the same time drawing it out. Insert the battery based on the drawing in the charging box. Inserting the batteries with the poles in incorrect direction is mechanically prevented. Push battery into the charging chamber until the box positively latches.

Mignon (AA) batteries:

Remove an empty charging box by pressing the two vertical strips and pulling out the box at the same time. Insert a pair or two pairs of AA batteries into the charging box based on the drawing in the charging box.

CAUTION: The two AA batteries left and right are charged together. As the batteries are used two by two, they always should be charged in pairs. This is very important for an optimum result as far as charging and operation with the batteries is concerned.

After inserting one or two pairs of batteries into the charging box, pull the box into the chamber until it latches safely and positively at both sides. Press both sides carefully to ensure the box is safely inserted in the charger.

When only one pair of batteries is inserted for charging, it is no problem to pull out the chamber and insert a second pair of batteries for charging. The charging process of the first pair of batteries continues after pushing in the box again.

Removing batteries from the Charger:

9V block batteries:

Remove an occupied charging box where the status LED lights green (battery charged) by slightly pulling it upwards and at the same time drawing it out.

AA batteries:

Remove an occupied charging box where the status LED lights green (battery charged) by pressing the two vertical strips at the box and pulling it out at the same time. Should charging of the second pair of batteries be interrupted by doing so, remove the fully charged pair of batteries and then push in the charging box again into the chamber; after that the charging process continues.

Switching off the Charger:

Put power switch in position "OFF" or switch off master switch of the rack.

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 mounting the appliance into a rack, leave 5 mm free space on top of it so that the air can circulate between the appliances. 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.

When rackmount, leave 5mm free space above the Charger so that the air can circulate to prevent buildup of heat.


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 excluded from the warranty. When the appliance has been subject to misuse or has been altered, the warranty expires. When returning the defective unit, enclose the receipt, pack the unit to avoid transit damage, and return the unit carriage prepaid. The manufacturer does not accept carriage forward consignments.

SPECIFICATION:

Type of Charger:	ALC 89	ALC 161
Operating voltage / frequency	90 – 260 VAC / 50-60Hz automatic voltage adjustment	90 – 260 VAC / 50-60Hz automatic voltage adjustment
Max. input power	35W	50W35W max. 1A
Type and number of batteries	8 x 9V block rechargeable battery NiMH 300mAh max.	16 x mignon (AA) rechargeable battery NiMH 2800mAh max. (charging in pairs!)
Charging current max.	8 x 70mA +/- 10%	8 x 600mA +/-10%
Charging time max. (depends on capacity and charging status)	180-300 min	120-320 min
Maximum timeout	360 min	360 min
Dimensions, W, H, D	483mm, 44mm, 195mm	483mm, 44mm, 195mm
Weight (excluding batteries)	approx. 2.0 kg	approx. 2.23.1 kg



	<p>Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)</p> <p>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.</p> <p>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.</p>
---	--

FISCHER AMPS

Hans-Ulrich-Breymann-Str. 3, D-74706 Osterburken / Germany, Phone +49 (0)6291-648 79-0, Fax 648 79-39
eMail: info@fischer-amps.de, Internet: www.fischer-amps.de