Desktop charger DG-630 N
(Order no. 10 106)

Intended use and conformity:
The stand-alone charger DG-630N is intended to charge up to 9 nickel-metal hydride batteries inside the battery compartment of Albrecht radios AE 2980, AE 2990 AFS and similar devices. The device complies with the European EMC directive 2004/108/EG,LVD directive 73/23/EWG and R&TTE directive 99/5/EC and the technical amateur radio standards EN 301 783-2 and CB radio EN 300 433 –2 and/or EN 300 135-2 and carries the CE mark. Do not dispose of defective devices with the household waste; return for environmentally correct recycling to collecting points for waste electric and electronic equipment.

Cautions and warnings:
Only use the charger if the battery compartment is ***completely*** equipped with NiMH (nickel-metal hydride) batteries and observe all instructions in this manual.

Never charge conventional batteries such as alkaline manganese cells; risk of personal injury and explosion! Never mix batteries of different capacity or manufacturers. All batteries should be completely identical and of the same age, if possible. According to the manufacturer the batteries must be certified for boost-charging (this applies to most of the newer battery types).

Never do this: Never place a radio without batteries in the stand-alone charger. The stand-alone charger is only intended to charge batteries and cannot operate the radio. Without batteries the higher charging voltage can damage the radio.

Charger operation:
The stand-alone charger comes with intelligent charging circuit with a processor, which was especially developed for boost charging and detects the charge status of the battery to switch off at the right time. This is the point when the internal pressure of the battery increases and the voltage is at its peak (the so-called Delta-U detection).
The charging duration depends on the battery capacity. Standard batteries with 1000mAh are already fully charged after less than 3 hours, batteries with higher capacity achieve 90% after the respective duration.
At this point the charger switches to the so-called trickle charge.
Now only approx. 5% of the maximum charging current is drawn.
Batteries can tolerate this current (approx. 20mA) indefinitely, without being overcharged. This trickle charge also adds the missing last 10% capacity within 1-4 hours after the boost charge.

Connect charger:
Connect the mains adaptor to a 230V wall outlet and connect the cable to the power jack at the rear of the stand-alone charger. After correct installation the left-hand red PWR LED lights up. Only use the supplied original mains adaptor for 220/230VAC. Other power adaptors may have different specifications and may cause dangerous overcharge effects. Direct connection to vehicle onboard power is not possible, since for charging 9 x NiMH batteries 12V is not sufficient.

Tip for use in vehicles, trucks or boats:
Use a commercially available 12V notebook adaptor, **set to 20…22VDC** and connect to the power jack of the DG 630 N if it is unavoidable to charge

batteries in vehicles! The polarity of the DC plug of the notebook adaptor is of no consequence.

Start charging:
Insert the batteries in the battery compartment and observe the correct capacity as marked inside the compartment. Ensure that the batteries make good contact by attaching the battery pack to the radio and switching it on. Now place the assembled battery pack (with or without the attached
radio) in the stand-alone charger; the charging contacts at the bottom of the battery must be in contact with the power supply contacts in the stand-alone charger (we recommend to clean the contacts from time to time with a dry cloth). The **right-hand LED** on the stand-alone charger (CHARGE) lights up as soon as contact is made. Boost charge with approx. 420mA starts.

Defective battery auto detection:
The stand-alone charger signals right at the beginning if your battery pack contains defective batteries with an internal short circuit: the charge LED does not light up, but flashes. Remove the battery and replace defective cells with identical new cells. Individual battery cells can easily be tested with a voltmeter: chargeable cells must supply a measurable voltage of approx. 1.2V after being connected for a few seconds to the stand-alone charger. Defective cells with internal short-circuit show no voltage.

Charging and receiving at the same time?
Avoid simultaneous charging with the radio switched on, since the charging time is considerably longer and on the other hand the safety timer will turn off the boost charge to start trickle charge. This may discharge the battery (depending on volume setting). However, removing the radio from time to time and replacing it in the charger restarts the boost charge and switches off after 90% battery capacity is detected or after 3 hours. This process can be repeated. Reliable information that your battery is fully charged is thus for continuous charging and operation not possible. The safety timer in your stand-alone charger prevents overcharging of a battery, which is constantly removed and replaced, since Delta-U point auto detection in this case is not always possible, especially if the radio is repeatedly removed for short-term transmissions.

Automatic trickle charge:
At the end of the automatic charge the right-hand LED starts flashing. This means, that the battery is charged to approx. 90% and charging carries on with trickle charge. The battery can stay indefinitely in the charger while the LED is flashing; this ensures maximum battery capacity when removing the battery from the stand-alone charger.

Useful hints:
Former nickel-cadmium batteries were known for their memory effect, which occurs considerably less often in NiMH batteries. Using them for a short time and recharging them to full capacity leads to a shorter and shorter operating time: you could say that the battery gets used to the short operating time and is not able to supply power over a longer period. This is what you can do. Use your battery, as often as possible, until it is fully discharged. Do not accustom yourself to immediately replacing the radio in the stand-alone charger! A second battery is very convenient, which can be taken along and be replaced at the right time!