

AKG ACOUSTICS

CU 4000 / BP 4000



Description

The AKG charging system 4000 consists of the **CU 4000 charging unit** and the **BP 4000 battery pack**. The charging unit itself is a stand-alone unit in a rugged plastic housing, featuring **2** charging compartments, each mechanically designed to hold either one HT 4000 handheld transmitter, a PT 4000 bodypack transmitter or a BP 4000 spare battery pack.

Two battery packs can be charged simultaneously by the CU 4000, if the battery pack is installed in either the HT 4000 or PT 4000 transmitters. There is no need to remove the battery pack from the transmitters since these transmitters are equipped with on-board charging contacts for a **plug-in charge**.

The **sophisticated charging electronics** of the CU 4000 comprises revolutionary functions to **carefully charge and service the BP 4000 battery packs** over the full lifetime of the battery.

The basic charging function is based on a **trickle charge** system with so-called **inflection point** switch-off automation. Safety switch off occurs by detection of the peak voltage, the negative voltage slope or a predetermined time out. Thus the battery pack is prevented **from overcharging**. An integrated **two-slot power management** system allows the Charging unit to charge two battery packs simultaneously in approximately 1 hour.

Since the BP 4000 battery pack incorporates **micro-processor-controlled surveillance intelligence**, there is a permanent data stream between the Charging Unit and the Battery Pack to protect the batteries from any damage caused by the charging process. A **charge balance management** circuit controls the exact amount of energy to be charged in the pack as the amount that was taken out of the pack (2nd level overcharge protection). The charge balance management also features a **self-discharging counter** used to detect the exact battery pack status after a long period of storage. With the help of this charge balance management, an accurate **remaining battery life display** can be realized on the transmitters (transferred via pilot tone to the SR 4000 receiver).

All necessary battery pack data will be stored in the **internal RAM or EPROM-memory** of the pack. All predetermined and initial parameters are stored in EPROM-memory of the battery pack to perform a correct recovery cycle.

The battery pack also features an **internal temperature surveillance circuit** that adjusts the charging current of the CU4000 to protect the device in case of low or high temperature during loading.

To reduce the so-called memory effect which leads to decreasing battery capacity, the communication between the BP 4000 and the CU 4000 is able to calculate if the batteries need a **recovery cycle** by the help of the stored date in the BP 4000. In this case, the CU 4000 draws the user's attention to this possible problem and suggests starting a recovery cycle. The user can activate the recovery cycle via a recovery button on the CU 4000's front panel. The recovery cycle refreshes the battery pack by charging and discharging cycles to determine the actual capacity and initialize the capacity counter for accurate use time calculation.

Other controls include a **3-step LED display** showing the charging status. A **lockable DC connector** on the rear panel of the CU allows the unit to be powered by either an external DC adapter or by the optional **PSU 4000** central power supply.

Due to the sophisticated charging system, the battery pack can power the HT 4000 and PT 4000 for **up to 12 hours** with one full charging cycle, plus its gentle charging function will ensure **up to 1,000 charging cycles**.

Features

- Intelligent battery supply system comprising CU 4000 charger and BP 4000 battery pack
- Microprocessor controlled charge/discharge monitoring function
- One-hour quick charging and Battery Recovery Management
- Charging compartment allows battery pack to be charged inside the transmitter



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Specifications

CU 4000

Charging current: 1.5 A

Operating voltage: 12 VDC, 1.3 A

Charging time: 1 hour typical

Recovery cycle: approx. 8 hours

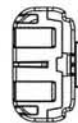
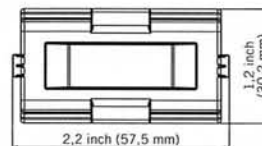
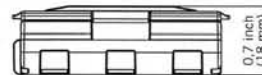
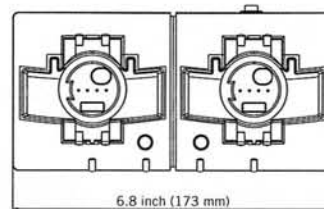
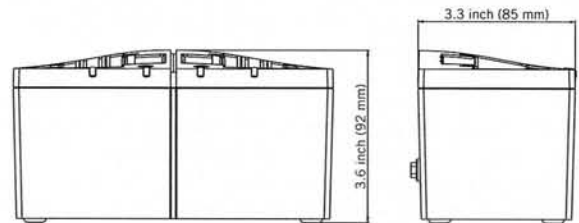
Dimensions: 3.6 x 6.8 x 3.3 in. (92 x 173 x 85 mm)

Weight: approx. 20.5 oz. (580 g)

Standard accessories: BP 4000 battery pack, power supply

Line Drawings

(us standard and metric measures)



Several chargers can be mounted in a rugged flightcase as a compact, "roadproof" solution for large systems.

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For detailed information on WMS 4000 and other products from AKG contact your dealer or visit www.akg.com
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