

Electronic ball for the blind

This new product is an audible ball with an electronic jingle. Unlike the standard ball for the blind, which has a classical bell, our new ball can be found without sight even after it stops rolling.

The electronic ball can be heard not only while moving but also for about 30 seconds after it comes to a stop. The electronic jingle reacts to the movement of the ball by making a sound. When the ball stops, the sound changes into a regular beep. This makes the ball easy to find for blind people.



If the ball is left unmoved for 30 seconds, the beeping ends to prevent the ball from being discharged. The sound function of the ball can be turned off for the same reason, for example during the ball's transport.

The ball is turned on and off in a contactless electronic way simply by placing it in a charger. When inserted correctly, the ball makes a beep. However, if the ball's battery is entirely flat, the ball will not beep even if inserted correctly in the charger. After recharge, the ball is activated by being removed and inserted back into the loop (spiral) of the switched-on charger.

Inside the ball, there is an electronic device with a movement detector and a miniature battery.

To convey energy into the ball and charge the battery, there is a charger with a loop. The charging process starts by putting the ball into the loop.

Energy is transferred by electromagnetic coupling through high-frequency oscillations. Therefore, the coil inside the ball needs to be wound correctly to let the energy flow into the accumulator. The correct position can be identified by a dividing seam that can be found on the ball's surface. This seam can be easily found by touch only. The seam should be parallel with the loop of the charger. Deflection of 1-2 cm does not make the charging process less effective. The ball does not need to be placed exactly in the centre of the loop: it is sufficient for the dividing seam to be near the loop (about 1 cm from it) so that friction keeps the ball in place. However, inserting the ball completely in the charging loop will do no harm. If the ball falls from the charging loop, a piece of foam rubber or any non-inductive material can be used to keep it in place.

The Ball:

The ball is delivered in the off position. Turn the sound on by placing the ball in the loop of a switched-on charger so that the dividing seam of the ball and the loop overlap (they are parallel). Put the ball in the charger to turn it on. (Turn it off the same way). When the ball is on, it reacts to movement by beeping. After the ball stops rolling, it continues to beep for about 30 seconds and then stops making sounds. New movement reactivates the beep.

When the ball is turned off, it does not react to any movement and its energy consumption is considerably lower. A battery remains fully charged for approximately one month in a turned-off ball for approximately one month and then it needs to be recharged. A charged ball can be used for several hours. The exact time until discharge depends on how it is being used. When the battery has run down, the ball automatically turns off (falls silent). It then needs to be recharged (in the right

position) for approx. 14 hours. Slight overcharging does not affect the result but leaving the ball in the charger for many hours over the charging time may shorten the battery lifetime.



Before charging for the very first time it is necessary to discharge the ball entirely (by using it) until it turns off. The ball then needs to be recharged. The battery (NiMH) is similar to a battery of a mobile phone and requires analogical manipulation.

Keep away from water! The holes in the ball that make the beeping more audible lead up to the electronics inside, which could be damaged by water (especially the membrane of the loudspeaker).

The ball has been produced for children to play. It is not strong enough for football games played by adults and similar activities. Both the inside electronics and the foam rubber coating would be damaged by hard kicking and throwing. When playing fiercely with the ball, its durability is limited.

Charger:

The charger is fed from the mains (230V) by a wall socket adapter. This adapter draws energy of approximately 4 watts even after disconnecting the wire from the charger. Therefore, it is better to unplug the adapter from the electrical plug after use.

The battery inside the ball is charged by high-frequency field. The charger transfers energy into the ball via induction (wirelessly) through a large aluminum loop (spiral). When charging, the ball needs to be put in the spiral in an optimal position. There is a tactual seam on the ball, easy to find, which needs to be parallel with the spiral while charging. The charger's operation is signalized by red lights on both sides of the base. The ball can only be charged by the original charger that is included in the package. Each charger is set individually to its ball.

Contents of the package:

The ball is delivered in a box containing: 1 sounded ball, 1 wall-socket charging adapter and 1 desktop charger. (As an extra accessory, it is possible to order a power cord for plugging it to a socket in a car.)

Safety instructions:

The charger can only be fed by the supplied wall-socket adapter.

The spiral of the charger radiates high-frequency field similar to one of a mobile phone. This field is not dangerous, however, it is not advisable for children to put their head inside the spiral or play with the charger while switched on.

Guarantee and servicing

We provide full guarantee for this product. If making a claim, please do not contact the store, but send the goods directly to us together with a simple description of its defect. Please do not forget to enclose the receipt of purchase when making a claim. If you were dismantling the claimed product yourself or you do not possess the receipt of purchase, we will not be able to admit your claim.

When the inbuilt battery lifetime expires, we can replace old components for new ones within the scope of servicing.

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