

# Replacing the DU-111-02 Delegate Unit Battery 2012-07-27

The *DU-111-02 Delegate Unit* uses an industry standard lead-acid battery as a power source. The lead-acid type of battery is a very reliable and time-tested battery technology and will provide years of use if maintained properly, typical battery life time is 3-4 years but up to 6-7 years have been experienced.

## Important!

Please read this instruction in full! Damages caused by improper handling of the batteries is *not* covered by any warranties. *Close Talk Conference System* will under *no* circumstances assume *any* responsibilities for direct or indirect damages caused by handling the system batteries. If in doubt, refer the battery replacement to a qualified technical service provider.

## Warning!

- The battery type used contains corrosive acids, *do not* try to open the battery
- The battery is of a sealed, maintenance-free type and should not show any signs of leaking. In case of signs of leakage (liquid in the battery compartment, whitish residues), be sure to use rubber gloves when handling the battery. Clean the battery compartment with soap and water
- A battery is a storage of energy. Even a used battery may still contain large amounts of energy, *do not* short the battery terminals
- The battery contains lead, a substance known to be harmful to the nature. Handle damaged batteries with care
- **Please recycle the used battery**

## Battery make and model

The battery type is 6VDC/3.xAh with the dimensions 134(L)x35(W)x61(H) millimeters approximately. There are many manufacturers in the world of this type of battery and not all of them provides good quality. We only recommend well-known brands and our preferred manufacturer and type is the **Panasonic LC-R063R4P**.



Fig. 1: The preferred battery manufacturer and type



Fig. 2: Generic battery type with the most common connector placement.

## Requirements

Replacing the battery is a relatively simple operation but should only be carried out by a qualified technician. The required tools are:



Fig. 3: Hex/allen key 3mm for late and current unit types with trolley charging support

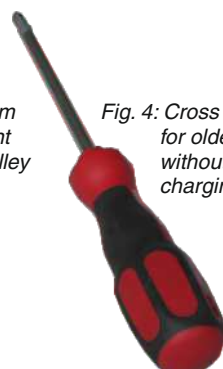


Fig. 4: Cross screw driver for older unit types without trolley charging support



Fig. 5: Scalpell/box cutter OR small and sharp wire cutter for older unit types with hard plastic battery connector housing (see text)

## Opening the unit

Place the delegate unit upside down on a soft surface, be sure to not damage the microphone. Locate the battery cover holding screws and use the appropriate tool to remove them. Do not loose the screws.



Fig. 6: Delegate unit upside down, cover holding screws are circled



Fig. 7: Use the appropriate tool to remove the two screws

## Removing the old battery

With the battery cover removed and the battery exposed, carefully lift the battery out of the compartment and *without* pulling or damaging the battery connector cables, disconnect the battery terminals.

## Warning!

On delegate units that are trolley charger capable, the brass threads for the cover screws are live with battery power, *do not* short the battery terminals to these threads or an internal fuse may blow and require factory service!



Fig. 8: Battery cover removed, battery exposed. The brass threads circled in red are live with battery power on charger trolley capable units!



Fig. 9: Battery removed

## Replacing the battery

Replacing the battery is a little different depending on the battery terminal placements. With the common placement of having the terminals on one long side as figure 9 shows, just reconnect the battery and replace it in the compartment in the same way the old battery was and continue to page 5.

When using the preferred Panasonic battery, follow the instructions below.

## Warning!

*Do not* connect the battery in reverse or short the terminals to the brass battery cover screw threads as an internal fuse may blow and require factory service!

## Extra steps needed for the Panasonic battery type

The Panasonic battery type has its terminals on the opposite diagonal corners as the figure below shows. The battery compartment is not designed for this placement and the battery and negative pole connector needs a little preparing. Start by flattening the *negative pole* as figure 11 shows.



Fig. 10: The Panasonic battery type has its terminals on the opposite diagonal corners



Fig. 11: The terminals are slightly bent upwards, flatten the negative pole only in parallel level with the body as the image shows

## Preparing the battery connector

To fit the Panasonic battery in the compartment, the *negative pole only* (black lead) connector must be modified. The connector housing/insulator must be removed and there are two models of the housing on the market, the old hard plastic housing as the figure to the left shows and the new soft plastic housing as shown to the right:



Fig. 12: Older, hard plastic connector housing



Fig. 13: Newer, soft plastic connector housing



Fig. 14: The Panasonic battery with correct placement. The image shows the new soft plastic connector housing. The arrow is pointing to the correct negative pole placement

With the newer soft plastic connector housing, simply slide it back up on the cable and place it as figure 14 shows, near the hole into the unit. Then place the battery with the *negative pole* towards the black rubber as the figure shows. Be careful to not connect the battery in reverse or short it to the brass threads! Be sure to *keep* the connector housing on the positive pole (red lead) connector!

## Older connector housing

The old hard plastic connector housing needs to be removed completely. Use the scalpel/carpet knife/wire cutter to remove it as the figures shows below. **Caution!** Risk of injury from cutting, be careful!



Fig. 15: Cut the housing long-side like this

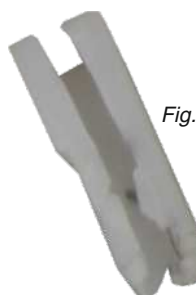


Fig. 16: Flip it open and remove it



Fig. 17: The negative pole connector with housing removed

## Replacing the battery cover

When the battery has been replaced, carefully return the plastic battery cover, make sure that it fits properly on all sides.



Fig. 18: Replace the battery cover, making sure it fits properly on all sides

Return and fasten the battery cover screws using the appropriate tool. Turn the unit back up and test it. Done!



Fig. 19: Return and fasten the cover screws. Do not overtight the screws or thread damage may occur!