



# Cen-Tech Seven Function Digital Multimeter

## Ball Bearings Replacement

This guide will show how to locate and replace the ball bearings used to allow the dial to glide.

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## INTRODUCTION

If the dial cannot spin then it is likely that the ball bearings are missing or not properly lubricated.



### TOOLS:

- [Phillips #0 Screwdriver](#) (1)
- [Flathead 3/32" or 2.5 mm Screwdriver](#) (1)



### PARTS:

- [Penetrating Lubricant](#) (1)
- [2mm Ball Bearings](#) (1)

## Step 1 — Position Device



- Place the meter face down, and the back panel and screws can be seen.

## Step 2 — Remove Back Panel Screws



- Unscrew the two 9mm screws on the back panel using a #0 Phillips screwdriver.

### Step 3 — Remove Back Panel



- Remove the back panel of the device by lifting upward.
- Remove the battery from the meter before continuing.

### Step 4 — Unscrew Motherboard



- Remove the four 7mm Phillips screws holding the circuit board in place.

## Step 5 — Remove Motherboard



- Gently lift the circuit board away from the device casing.
- ⓘ Remove the battery after removing the back cover to reduce the chances of short-circuiting the circuit board.

## Step 6 — Locate Dial



- The dial is located in the central part of the device.

## Step 7 — Remove Dial



- Carefully remove dial from device by lifting upward.
- Clean existing dial or replace if necessary.
- ⚠ Take care not to lose the small ball bearings.

## Step 8 — Locate and Remove Ball Bearings



- Locate ball bearings. Carefully remove.
- If both ball bearings are still present, try lubricating ball bearings with multi-use lubricant.
- If one or both ball bearings are missing, simply replace.

To reassemble your device, follow these instructions in reverse order.