

# TrainBoss™ Defect Detector

Changing Voice Chips

Model No. TB-22F

Model No. TB-22M

## **IMPORTANT: Before You Begin**

- Your **TrainBoss™ Defect Detector** can be damaged by static electricity. Before touching the circuit board or removing the new voice chip from its packaging, discharge static electricity by touching a bare metal surface.
- Do not make connections when circuits are powered.
- Read through the rest of these instructions before beginning.
- Visit [www.bouldercreekengineering.com](http://www.bouldercreekengineering.com) for additional information.

## **Changing Voice Chips**

Your Talking Defect Detector's Voice Chip is shown in Figure 4 of the Product Manual. The paper label part number indicates voice type: "M" is male, "F" is female.

1. Discharge static electricity by touching bare metal.
2. Ensure your **TrainBoss™ Defect Detector** is unpowered.
3. With a small flat blade screwdriver (1/8" or 3.0 mm or smaller), gently pry the original voice chip from its socket, working from the left end. Strive to keep the chip parallel to the surface of the board as you work as this will minimize pin bending.  
  
The chip and its socket are about the same thickness, with a 1 mm gap between them. Be sure your screwdriver blade is between them as you begin.
4. When the chip is removed, straighten any bent pins, ensuring pin spacing and alignment along each side. Insert into the conductive foam.
5. Check pin alignment on the new voice chip. Straighten pins as needed.
6. Place the new chip in the socket with the pins just resting in their holes.
7. Check that the pins align with their holes and the chip is oriented with the notch to the left. There is a corresponding notch on the left end of the socket. The label printing will be readable from left to right.
8. Gently but firmly press the chip into the socket until seated.
9. Check that all pins are seated and none are bent.
  - a. If any pins are out of place, **remove the chip, straighten pins and try again.**
  - b. If all pins are in place, **congratulations, you are done.**

## **Support & Service**

If you have problems with your **TrainBoss™ Defect Detector**, please consult our website [www.bouldercreekengineering.com](http://www.bouldercreekengineering.com). If you need additional help, please contact us at [support@bouldercreekengineering.com](mailto:support@bouldercreekengineering.com).

Your Defect Detector can be repaired with a charge for parts and labor. Please contact [support@bouldercreekengineering.com](mailto:support@bouldercreekengineering.com) for a cost estimate on non-warranty repairs before sending product to us.

## **Limited Warranty**

Boulder Creek Engineering, LLC warrants its products to be free of defects in materials and workmanship for a period of **one (1) year** from the purchase date. Defective product received by Boulder Creek Engineering during the warranty period will be repaired or replaced at our option. You must pay shipping to and from Boulder Creek Engineering.

This warranty does not cover damage resulting from negligent installation, improper operation, or unauthorized repair or modification. Removal of the heat shrink voids this warranty. Boulder Creek Engineering makes no other warranty of any kind, expressed or implied. In no event shall Boulder Creek Engineering be liable for incidental or consequential damages.

For warranty service, please contact Boulder Creek Engineering for a Return Merchandise Authorization (RMA) number. Product must be shipped to Boulder Creek Engineering with dated proof of purchase (your receipt).



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