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› Intellitronix Corvette Tachometer Rebuild PCB User Manual

Intellitronix TB2102

Intellitronix Corvette Tachometer Rebuild PCB User Manual

Model: TB2102

Brand: Intellitronix

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of the Intellitronix Corvette Tachometer Rebuild Printed Circuit Board (PCB), Model TB2102. This product is designed to replace the original tachometer circuit board in 1980-1982 Corvette vehicles, restoring accurate tachometer functionality.

Please read this manual thoroughly before attempting installation to ensure proper procedure and safe handling.

2. SAFETY INFORMATION

Always prioritize safety when working with automotive electrical systems. Failure to follow these guidelines may result in personal injury or damage to the vehicle.

- Disconnect the vehicle's battery before beginning any electrical work to prevent short circuits and electrical shock.
- Wear appropriate personal protective equipment, including safety glasses and gloves.
- Ensure the work area is well-lit and free of obstructions.
- If you are unsure about any step of the installation process, consult a qualified automotive technician.
- Handle the PCB by its edges to avoid damaging components or contaminating the board with oils from your skin.

3. PACKAGE CONTENTS

Verify that all items are present and undamaged upon opening the package:

- Intellitronix Corvette Tachometer Rebuild PCB (Model TB2102)
- Installation Washers/Spacers (if applicable, as shown in packaging image)



Figure 3.1: Packaging and Included Washers/Components. This image shows the clear plastic bag containing the PCB and three white washers, indicating typical packaging and minor accessories.

4. SPECIFICATIONS

Feature	Detail
Model Number	TB2102
Compatible Vehicles	1980-1982 Corvette
Material	Aluminum, Stainless Steel (components)
Manufacturer	Intellitronix
UPC	818731012052

5. SETUP AND INSTALLATION

This PCB is designed as a direct replacement for the original tachometer circuit board in specified Corvette models. The installation process typically involves removing the instrument cluster, disassembling the tachometer unit, replacing the old PCB with the new Intellitronix board, and reassembling.

5.1. Preparation

1. Park the vehicle on a level surface and engage the parking brake.
2. Disconnect the negative terminal of the vehicle's battery.
3. Gather necessary tools, which may include screwdrivers, nut drivers, and possibly a soldering iron if the original

board requires desoldering.

5.2. Removal of Existing Tachometer PCB

1. Carefully remove the instrument cluster from the dashboard. Refer to your vehicle's service manual for specific instructions on cluster removal.
2. Once the cluster is out, locate and carefully disassemble the tachometer unit. This usually involves removing retaining screws or clips.
3. Identify the existing tachometer circuit board. Note its orientation and connections before removal.
4. Gently disconnect any wires or connectors attached to the old PCB. If the board is soldered in place, carefully desolder the connections.
5. Remove the old PCB.

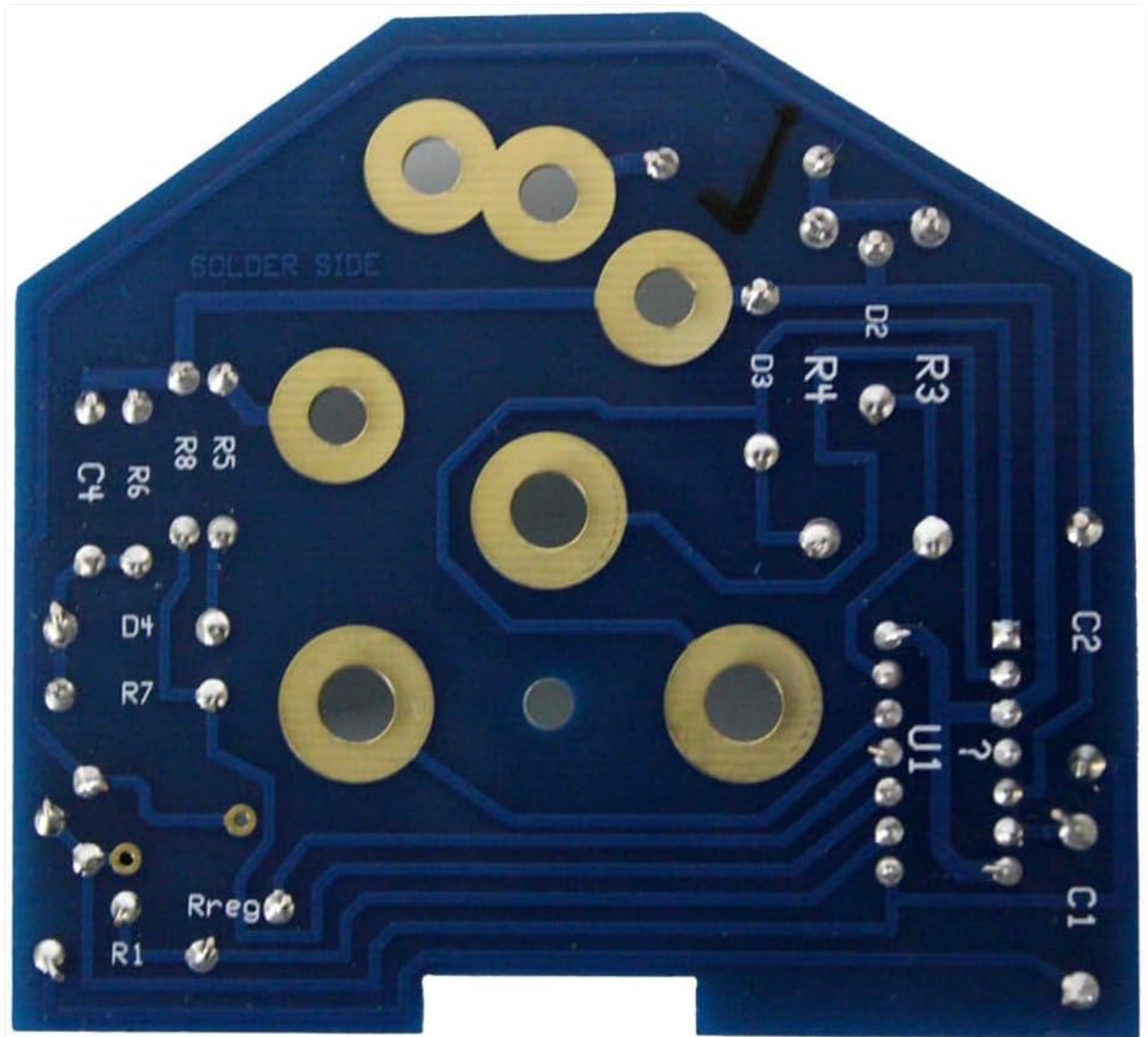


Figure 5.1: Intellitronix Corvette Tachometer Rebuild PCB (Component Side). This image displays the top side of the circuit board with various electronic components visible, including resistors, capacitors, and integrated circuits.

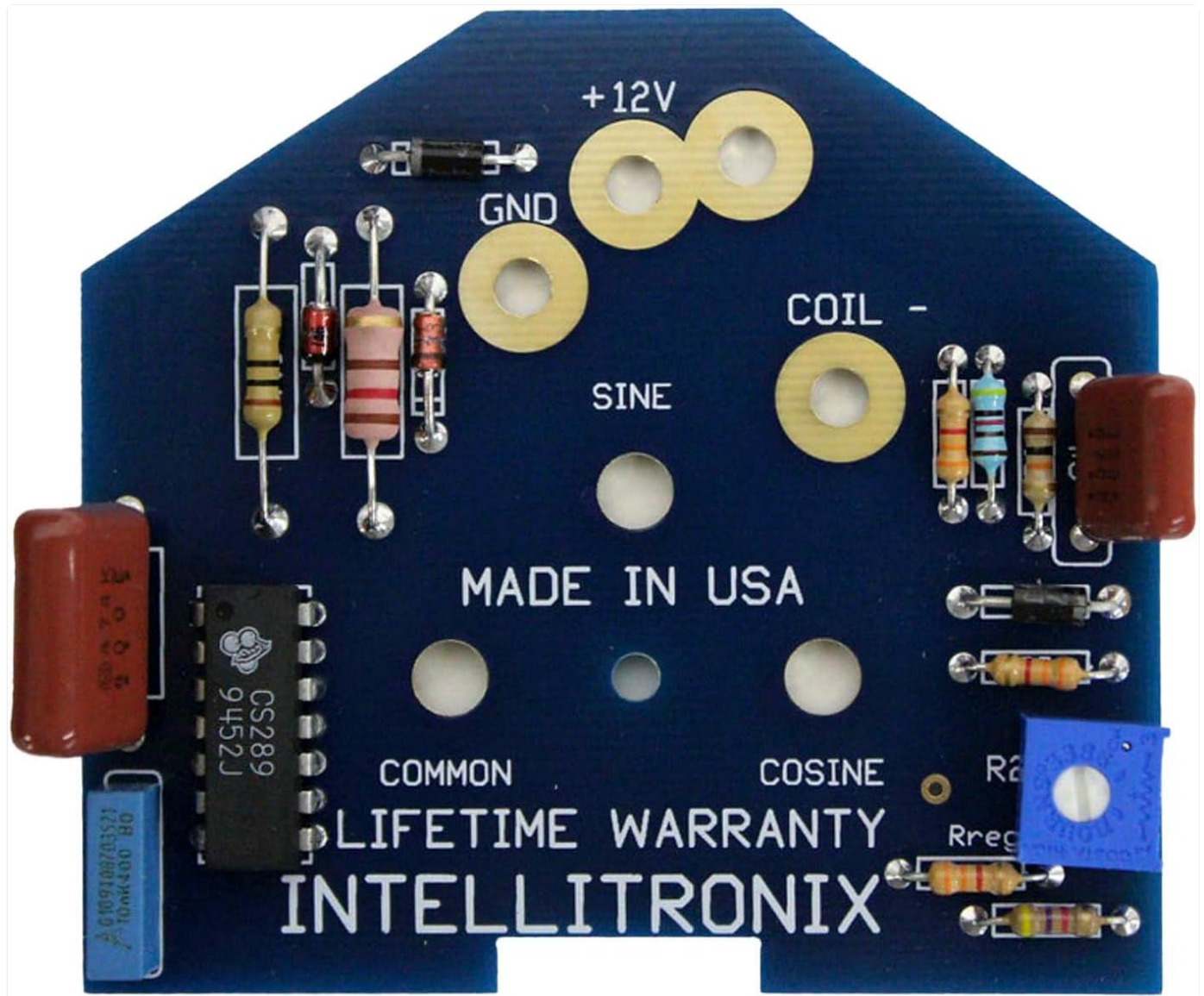


Figure 5.2: Intellitronix Corvette Tachometer Rebuild PCB (Solder Side with Connections). This image shows the underside of the circuit board, highlighting the solder points and labels for electrical connections such as +12V, GND, COIL -, SINE, COMMON, and COSINE.

5.3. Installation of New PCB

1. Carefully align the new Intellitronix PCB (Model TB2102) into the tachometer unit, ensuring it fits correctly and matches the orientation of the old board.
2. Reconnect any wires or connectors to the new PCB. Refer to Figure 5.2 for common connection points (+12V, GND, COIL -, SINE, COMMON, COSINE). Ensure all connections are secure and correctly polarized. If soldering is required, use proper soldering techniques to create strong, clean joints.
3. Secure the tachometer unit back together with its retaining screws or clips.
4. Reinstall the instrument cluster into the dashboard, ensuring all connectors are properly seated.
5. Reconnect the negative terminal of the vehicle's battery.

6. OPERATING INSTRUCTIONS

Once the Intellitronix Tachometer Rebuild PCB is correctly installed, the tachometer should function automatically upon starting the vehicle. The PCB is designed to interpret the engine's RPM signal and drive the tachometer needle accurately.

- Start the vehicle's engine.
- Observe the tachometer needle. It should now display the engine's revolutions per minute (RPM) accurately.

- If the tachometer does not function or displays incorrect readings, refer to the Troubleshooting section.

7. MAINTENANCE

The Intellitronix Tachometer Rebuild PCB is designed for long-term reliability and requires minimal maintenance once installed. As an internal component, it is protected from environmental elements.

- Keep the vehicle's electrical system in good condition to ensure stable power supply to the PCB.
- Avoid exposing the instrument cluster to excessive moisture or extreme temperatures.
- Do not attempt to clean the PCB directly with liquids or abrasive materials. If the instrument cluster needs cleaning, use a soft, dry cloth.

8. TROUBLESHOOTING

If you encounter issues after installing the Intellitronix Tachometer Rebuild PCB, consider the following troubleshooting steps:

Problem	Possible Cause	Solution
Tachometer does not work after installation.	Incorrect wiring connections; loose connections; faulty power supply; damaged PCB during installation.	◦ Verify all connections to the PCB are correct and secure, referring to Figure 5.2. ◦ Check for proper voltage supply to the tachometer unit. ◦ Ensure the vehicle's battery is fully charged and connections are clean. ◦ Inspect the PCB for any visible damage.
Tachometer reads inaccurately.	Incorrect signal input; calibration issue (less likely with direct replacement); interference.	◦ Ensure the engine RPM signal wire is correctly connected to the PCB. ◦ Verify the engine's ignition system is functioning correctly. ◦ Consult a professional if accuracy issues persist.
Intermittent tachometer operation.	Loose connections; intermittent power supply; vehicle electrical issues.	◦ Check all wiring and connectors for looseness or corrosion. ◦ Inspect vehicle's ground connections. ◦ Test vehicle's charging system.

9. WARRANTY AND SUPPORT

Intellitronix stands behind the quality of its products. The Intellitronix Corvette Tachometer Rebuild PCB (Model TB2102) is backed by a **Lifetime Warranty**.

For warranty claims, technical assistance, or further inquiries, please contact Intellitronix directly through their official website or customer service channels. Keep your proof of purchase for warranty validation.

For more information, visit the [Intellitronix Store on Amazon](#).

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Example: How do I reset this device or fix this error?

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