

# Safety Information Sheet - TPT-3000

## Smart Protection System



It protects the amplifier and your vehicle's electrical system from damage caused by electrical or thermal faults.

This amplifier includes a **Smart Protection System** designed to automatically detect operational failures and prevent potential damage. When a problem is detected, the **PROT LED** will blink a specific number of times to indicate the type of issue. The amplifier will automatically shut off to protect itself and your vehicle.

### ⚠ Diagnostic Codes and Safety Actions



| Condition Detected                    | Description                | Possible Cause                                                             | Recommended Action / Solution                                                                                                                                                                                                                                                                                                                   |
|---------------------------------------|----------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Short Circuit or Output Overload      | PROT LED blinks repeatedly | Speaker wires touching or output impedance too low                         | <ol style="list-style-type: none"><li>1. Turn off the amplifier immediately.</li><li>2. Check all speaker cables to ensure they are properly insulated.</li><li>3. Verify the total speaker load (impedance) is within amplifier specifications.</li></ol>                                                                                      |
| Low Supply Voltage (< 9V)             | PROT LED blinks            | Insufficient power from battery or unstable power source                   | <ol style="list-style-type: none"><li>1. Check the voltage at the amplifier power terminals.</li><li>2. Recharge or replace the vehicle battery if necessary.</li><li>3. Ensure the power cables are secure and free of corrosion.</li></ol>                                                                                                    |
| High Supply Voltage (> 15V)           | PROT LED blinks            | Overvoltage from charging system or alternator issue                       | <ol style="list-style-type: none"><li>1. Check the charging system or power supply output.</li><li>2. Ensure voltage regulator is working properly.</li></ol>                                                                                                                                                                                   |
| Excessive Temperature (~194°F / 90°C) | PROT LED blinks            | Amplifier overheated due to restricted airflow or high ambient temperature | <ol style="list-style-type: none"><li>1. Turn off the system and allow it to cool.</li><li>2. Check if the amplifier is installed in a well-ventilated area.</li><li>3. Make sure cooling fans and vents are unobstructed.</li><li>4. After a few minutes, the amplifier will automatically recover once safe temperature is reached.</li></ol> |

### Additional Safety Recommendations

- Do not block the amplifier's ventilation openings.
- Avoid installing the amplifier near heat sources or in enclosed spaces without airflow.
- Use only properly rated fuses and power cables as specified by the manufacturer.
- Disconnect the amplifier from power before making wiring adjustments.
- Always verify system voltage before reconnecting.

### Vehicle Protection Notice

The Smart Protection System ensures safe operation by preventing electrical overloads, voltage irregularities, and overheating from causing damage to your vehicle's electrical system or audio equipment. Following the above guidelines will help maintain amplifier performance and ensure long-term safety.