TCL Series Troubleshooting Guide
TCL Series 12-24VDC

Identify the Sign Problem:
Follow the flowchart to diagnose the symptoms

Tools Needed:
Philips head screwdriver
Multi-meter

Always turn off the power to the sign prior to opening the cabinet.
Disconnect the power wires going to the sign.

Note: Clear all metal chips created by drilling into sign cabinet.
Note: Do not overtighten fasteners or distort back panel.
Note: Make appropriate wiring connections per local codes.

Description of Normal Operation for the Sign’s Internal Power Supply
Diagnostic LEDs are included on the internal power supply to aid in verifying that input power is present and is being transferred to the sign face through the output connectors.

+12V LED
This LED illuminates Green when 12-24VDC power is applied to the internal power supply’s input power pigtail.

Note: The transformer on the power supply converts 12-24VDC power to +12V.

A Output LED
Illuminates with power applied to Blue wire on the input power pigtail

B Output LED
Illuminates with power applied to Yellow wire on the input power pigtail

C Output LED
Illuminates with power applied to Red wire on the input power pigtail

Output Connectors
These connectors transfer power from the internal power supply to the sign face to illuminate the individual message(s).
Problem: There are some LEDs out
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There are some LEDs out

- **YES**
  - < 10 LEDs Lit
  - **YES**
    - Can you measure the correct incoming voltage at the sign?
    - **YES**
      - Entire sign needs replaced
    - **NO**
      - Supply is defective and needs replaced
  - **NO**
    - Output voltage is > 12VDC?
      - **YES**
        - Check switches and wiring
      - **NO**

Contact sales with the serial number of the sign, and be prepared with other relevant information:
- Input voltage reading from multimeter.
- Output voltage of power supply.
- Photos/video showing the issue/damage.
- Photos of the inside of the sign, showing the wiring and power supplies.
Problem: A message is lit that shouldn’t be
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A message is lit that should not be

Do the wires run parallel to other high power devices?

YES → Run wires in separate conduit

NO

Is there incoming voltage on that channel?

YES → Recheck all connections to switches or controlling system

NO

Replace power supply

Contact sales with the serial number of the sign, and be prepared with other relevant information:
- Input voltage reading from multimeter.
- Output voltage of power supply.
- Photos/video showing the issue/damage.
- Photos of the inside of the sign, showing the wiring and power supplies.
Problem: Display is flickering
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Display is flickering

Is the +12V LED illuminated steady?

NO →
External power source may be AC or it may not have adequate current capacity to accommodate the sign's power supply inrush current. Check incoming voltage, power source, switches and wiring

YES →

Is the output connector secure?

YES →
Supply is defective and needs replaced

NO → Re-attach connector

Contact sales with the serial number of the sign, and be prepared with other relevant information:
- Input voltage reading from multimeter.
- Output voltage of power supply.
- Photos/video showing the issue/damage.
- Photos of the inside of the sign, showing the wiring and power supplies.

Please refer to the diagrams on page 1.
Problem: Entire display is out
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Please refer to the diagrams on page 1.

Entire display is out

Is the +12V LED illuminated steady?

NO

Is the input polarity correct?

NO

Can you measure the correct incoming voltage at the sign?

NO

Check switches and wiring

YES

Supply is defective and needs replaced

YES

Supply is defective and needs replaced

YES

Is the output connector secure?

NO

Re-attach connector

YES

Is the output LED for the affected message illuminated?

YES

Is the output connector secure?

Contact sales with the serial number of the sign, and be prepared with other relevant information:
- Input voltage reading from multimeter.
- Output voltage of power supply.
- Photos/video showing the issue/damage.
- Photos of the inside of the sign, showing the wiring and power supplies.