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› CELESTION T6654 Pulse XL 10.20 Bass Guitar Speaker User Manual

## CELESTION T6654

# CELESTION T6654 Pulse XL 10.20 Bass Guitar Speaker User Manual

Model: T6654 | Brand: CELESTION

## 1. INTRODUCTION

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This manual provides essential information for the proper installation, operation, and maintenance of your CELESTION T6654 Pulse XL 10.20 Bass Guitar Speaker. Designed for bass guitar applications, this 10-inch steel-chassis speaker delivers a significant low-end response and clear articulation, making it suitable for various musical setups. Please read this manual thoroughly before use to ensure optimal performance and longevity of your speaker.



Image 1: CELESTION T6654 Pulse XL 10.20 Bass Guitar Speaker. This image shows the front view of the speaker with its distinctive cone and chassis design.

## 2. PRODUCT FEATURES

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The CELESTION T6654 Pulse XL 10.20 Bass Guitar Speaker incorporates several design elements to deliver high-quality bass performance:

- **10-inch Steel-Chassis Design:** Provides robust construction and reliable performance.
- **Extended Low-End Response:** Delivers a significant amount of bass for a speaker of its size.
- **Responsive Clarity:** Engineered for quick response, ensuring the bass cuts through the mix effectively.
- **Articulate Treble:** A fabric dust dome contributes to a clear and articulate treble response.
- **Multi-Roll Surround:** Allows for generous cone excursion, crucial for higher output levels without distortion.
- **Heat-Resistant Polyimide Former:** Ensures outstanding power handling capabilities and durability.

## 3. SETUP AND INSTALLATION

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Proper installation is crucial for the performance and safety of your speaker. Ensure the speaker is securely mounted in an appropriate enclosure.

### Mounting Guidelines:

- **Cut-out Diameter:** 233.2mm / 9.18in
- **Overall Diameter:** 256mm / 10.1in

- **Mounting Hole Dimensions:** 6.4mm / 0.25in diameter
- **Mounting Hole PCD (Pitch Circle Diameter):** 245.4mm / 9.66in
- **Number of Mounting Holes:** 8
- **Chassis Depth (including gasket):** 79mm / 9.33in
- **Magnet Depth:** 36mm / 1.42in
- **Overall Depth:** 108mm / 4.25in

When installing, ensure that the mounting surface is stable and capable of supporting the speaker's weight (4kg / 8.8lb). Use appropriate fasteners for secure attachment. Connect the speaker to your amplifier using high-quality speaker cables, ensuring correct polarity (+ to + and - to -) to prevent phase issues.

## 4. OPERATING INSTRUCTIONS

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The CELESTION T6654 Pulse XL 10.20 is a passive bass guitar speaker designed to be driven by an external amplifier.

1. **Impedance Matching:** Ensure your amplifier's output impedance matches the speaker's rated impedance of 8 Ohms. Mismatched impedances can lead to amplifier damage or poor sound quality.
2. **Power Handling:** The speaker has a power rating of 400W. Ensure your amplifier's output power does not exceed this rating to prevent speaker damage. It is generally recommended to use an amplifier with a power output slightly below or equal to the speaker's rating.
3. **Connection:** Connect the speaker to the amplifier's speaker output using a dedicated speaker cable. Avoid using instrument cables for speaker connections, as they are not designed to handle the power output and can cause damage.
4. **Volume Control:** Start with the amplifier's volume at its lowest setting before powering on. Gradually increase the volume to your desired level.
5. **Multiple Speakers:** If connecting multiple speakers, ensure the total impedance presented to the amplifier is within its safe operating range. Consult your amplifier's manual for specific guidelines on connecting multiple speakers.

## 5. MAINTENANCE

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To ensure the longevity and optimal performance of your CELESTION T6654 speaker, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to gently wipe the speaker cone and chassis. Avoid using harsh chemicals or abrasive cleaners, which can damage the materials.
- **Environment:** Store and operate the speaker in a dry environment, away from direct sunlight, extreme temperatures, and excessive humidity.
- **Protection:** Protect the speaker cone from physical damage. Avoid touching the cone directly. If the speaker is part of an open-back cabinet, consider adding a protective grille.
- **Transportation:** When transporting the speaker or cabinet, ensure it is securely packed to prevent impacts or vibrations that could damage internal components.
- **Inspection:** Periodically inspect the speaker for any signs of wear, such as tears in the cone or surround, or loose connections.

## 6. TROUBLESHOOTING

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If you encounter issues with your CELESTION T6654 speaker, refer to the following common troubleshooting steps:

- **No Sound:**

- Check all cable connections between the amplifier and speaker. Ensure they are secure and correctly wired.
- Verify the amplifier is powered on and functioning correctly.
- Confirm the amplifier's volume is not set to zero or muted.
- Test with a different speaker cable if available.

- **Distorted Sound:**

- Reduce the amplifier's volume. Overdriving the speaker can cause distortion.
- Check for proper impedance matching between the amplifier and speaker.
- Inspect the speaker cone for any visible damage (tears, creases).
- Ensure the speaker is securely mounted and not vibrating excessively within its enclosure.
- Test with a different amplifier or audio source to isolate the problem.

- **Intermittent Sound:**

- Check for loose or damaged speaker cable connections.
- Inspect the speaker terminals for corrosion or poor contact.
- Ensure the amplifier is not overheating, which can cause it to cut out.

If these steps do not resolve the issue, contact CELESTION customer support or a qualified technician.

## 7. TECHNICAL SPECIFICATIONS

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## General Specifications

Feature	Value
Brand	CELESTION
Model Number	T6654 (PULSE XL 10.20)
Nominal Diameter	254mm / 10in
Power Rating	400W
Rated Impedance	8Ω
Sensitivity	92dB
Magnet Type	Ferrite
Voice Coil Diameter	2in / 50mm
Voice Coil Material	Copper
Former Material	Polyimide
Cone Material	Cellulose
Surround Material	Triple roll, cloth sealed
Frequency Range	40-2200Hz
Unit Weight	4kg / 8.8lb
Overall Depth	108mm / 4.25in

## Thiele-Small Parameters

Parameter	Value
Sd	346.4cm <sup>2</sup> / 53.69in <sup>2</sup>
Fs	37.5Hz
Mms	39.8g / 1.4oz
Qms	6.678
Qes	0.493
Qts	0.459
Re	5.8Ω
Vas	76.92l / 2.7ft <sup>3</sup>
Bl	10.51Tm
Cms	0.453mm/N
Rms	1.4kg/s
Le (at 1kHz)	1.2mH
Xmax	8.25mm / 0.32in

## 8. WARRANTY AND SUPPORT

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For information regarding warranty coverage, technical support, or service for your CELESTION T6654 Pulse XL 10.20 Bass Guitar Speaker, please refer to the official CELESTION website or contact their customer service department. Keep your purchase receipt as proof of purchase for any warranty claims.

**CELESTION Official Website:** [celestion.com](http://celestion.com)

