

DS18 DSP4.8BTM

DS18 DSP4.8BTM Digital Sound Processor User Manual

Model: DSP4.8BTM

Brand: DS18

1. PRODUCT OVERVIEW

The DS18 DSP4.8BTM is a 4-channel input and 8-channel output digital sound processor designed to provide comprehensive control over your vehicle's audio system. This water-resistant unit allows for precise sound tuning and optimization, ensuring a high-quality listening experience. It features Bluetooth connectivity for easy access to settings via a dedicated application.



Figure 1: Front view of the DS18 DSP4.8BTM Digital Sound Processor.

Key features include:

- Bluetooth connectivity to allow for easy and accessible audio tuning.
- User-friendly software available on Google Play and the App Store to fine-tune and monitor signal processing.
- 4 Channel RCA and/or HI-level speaker inputs.
- 8 Channel RCA outputs.
- Parametric equalizer with 8 independent bands per channel.
- Crossover with Butterworth, Linkwitz-Riley, and Bessel filters.

DIGITAL SOUND PROCESSOR WITH BLUETOOTH



Voltage DC:
10~15VDC



In Impedance: 100K Ω
Out Impedance: 100 Ω



In: 4 Channels
Out: 8 Channels

DS18[®]

DSP4.8BTM

Figure 2: The DS18 DSP4.8BTM highlighting its digital sound processing and Bluetooth capabilities.

2. SETUP AND INSTALLATION

Proper installation is crucial for optimal performance. Ensure all connections are secure and correctly wired before powering on the device.

2.1. Connections

The DSP4.8BTM features both input and output connections for integration into your audio system.



Figure 3: Rear view showing the 4-channel RCA inputs (A, B, C, D) and the power terminal (+12V, REM, GND).

- **Power Connection:** Connect +12V to a constant 12V power source, REM to a remote turn-on lead from your head unit, and GND to a solid chassis ground.
- **Audio Inputs:** Use the 4 RCA input channels (A, B, C, D) for your audio source. The unit also supports high-level speaker inputs.



Figure 4: Front view showing the 8-channel RCA outputs (1-8).

- **Audio Outputs:** Connect the 8 RCA output channels (1-8) to your amplifiers.

Your browser does not support the video tag.

Video 1: An overview of the DS18 DSP4.8BTM Digital Sound Processor, showcasing its physical features and connectivity options.

3. OPERATING INSTRUCTIONS

The DSP4.8BTM is controlled via a dedicated application available on mobile devices, allowing for comprehensive audio tuning.

3.1. Bluetooth Connectivity and App Usage

Connect your smartphone or tablet to the DSP4.8BTM via Bluetooth to access its full range of tuning options. The application provides a didactic and intuitive interface for configuring the processor in real-time.

Software found on Google Play or the App Store to fine tune and monitor every aspect of your signal processing.

DS18

- DSP2.60BT
- DSP2.80BT
- DSP4.8BTM

GREAT FOR:
CAR AUDIO, PRO AUDIO, MOTORCYCLE AUDIO,
HOME STUDIO, STUNT WALLS, DIY PROJETS

#WE LIKE IT LOUD

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Figure 5: The DS18 DSP control application interface on a smartphone, showing various tuning parameters.

Through the app, you can:

- Adjust routing channels (A/B/C/D / A+B / A+C / B+C).
- Control general and channel gain.
- Configure crossover frequencies (20Hz to 20KHz) with Linkwitz-Riley, Butterworth, and Bessel filter types and

various attenuations (6 to 48dB/OCT).

- Utilize the 15-band input equalizer and 8-parametric band channel equalizer per channel.
- Set time alignment (delay) from 0 to 18.95ms (0 to 6500mm).
- Adjust limiter threshold, attack, and release settings.
- Invert polarity (phase 0 or 180°).
- Save up to 3 fully configurable presets for different listening preferences.

SAVES PRESETS TO HAVE THE PERFECT *LISTENING EXPERIENCE*



**4 Channels RCA and/or HI-level speaker
inputs and 8 Channels RCA outputs**

MADE IN
BRAZIL



Freq. Response:
10Hz-24KHz (-1dB)



Total Harmonic
Distorsion: <0.01%



Max Input Lvl:
4,00Vrms (+14dB)

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Figure 6: The DSP4.8BTM allows saving presets for a customized listening experience.

4. MAINTENANCE

The DS18 DSP4.8BTM is designed to be water-resistant, offering durability in various environments. To ensure longevity

and optimal performance:

- Keep the unit free from excessive dust and debris.
- Ensure all connections remain secure and free from corrosion.
- Avoid exposing the unit to extreme temperatures beyond its operating range.
- While water-resistant, avoid submerging the unit or exposing it to high-pressure water jets.

5. TROUBLESHOOTING

If you encounter issues with your DSP4.8BTM, consider the following common troubleshooting steps:

- **No Power:**
 - Check all power connections (+12V, REM, GND) for proper wiring and secure contact.
 - Verify the power source is providing adequate voltage (10-15VDC).
 - Check for blown fuses in the power line.
- **No Audio Output:**
 - Ensure all RCA input and output cables are correctly connected and not damaged.
 - Verify that the audio source is active and sending a signal.
 - Check the gain settings in the app; ensure they are not set too low.
 - Confirm that the correct input channels are routed to the desired output channels in the app.
- **Distorted Audio:**
 - Check the input and output gain settings in the app. Reduce gain if the "CLIP" indicators on the unit are illuminated.
 - Ensure the audio source is not distorted before it reaches the DSP.
 - Verify speaker impedance compatibility with your amplifiers.
 - Check crossover and equalizer settings for any extreme adjustments that might cause distortion.
- **Bluetooth Connectivity Issues:**
 - Ensure Bluetooth is enabled on your mobile device and the DSP4.8BTM.
 - Try restarting both the DSP (by cycling power) and your mobile device.
 - Forget the device in your mobile device's Bluetooth settings and re-pair.
 - Ensure the DSP app is up to date.

If problems persist after attempting these steps, please contact DS18 customer support.

6. SPECIFICATIONS

Feature	Specification
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Feature	Specification
Routing Options	A / B / C / D / A+B / A+C / B+C
General Gain	-53 to 0dB
Channel Gain	-33 to +9dB
Cutoff Frequency (Crossover)	20Hz to 20KHz
Crossover Types	Linkwitz-Riley / Butterworth / Bessel
Crossover Attenuations	6 / 12 / 18 / 24 / 36 / 48dB/OCT
Input Equalization Bands	15 Bands
Input EQ Gain	-12 to +12dB
Channel Equalization Bands	8 Parametric per Channel
Channel EQ Gain	-12 to +12dB
Q Factor	0.6 to 9.9
Time Alignment (Delay)	0 to 18.95ms (0 to 6500mm)
Limiter Threshold	-54 to +6dB
Limiter Attack	1 to 200ms
Limiter Release	1 to 988ms
Polarity Inversion (Phase)	0 or 180°
Memories (Presets)	3 - 100% Configurable
Input Channels	4 (Electronically Symmetrical RCA)
Max Input Level	4.00Vrms (+14dBu)
Input Impedance	100KΩ
Output Channels	8 (Electronically Symmetrical RCA)
Max Output Level	3.50Vrms (+13dBu)
Output Impedance	100Ω
Frequency Response	10Hz to 24KHz (-1dB)
THD+N	<0.01%
Signal Latency	<0.6ms
Bit Rate	32Bits

Feature	Specification
Sampling Frequency	96KHz
Voltage DC	10~15VDC
Maximum Consumption	300mA
Dimensions (H x L x D)	1.6" x 5.6" x 4.25" / 41mm x 142mm x 108mm
Weight	277g / 9.7Oz

7. WARRANTY AND SUPPORT

For detailed warranty information, please refer to the documentation provided with your product or visit the official DS18 website. For technical support or further assistance, you may also refer to the official user manual PDF:

Download User Manual
(PDF)

You can also visit the [DS18 Store on Amazon](#) for more products and information.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

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

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question