CRYSOUND

CRY580

A²B Interface

User Manual

Table of Contents

01 User Notice 04

02 Introduction 06

03 Product Instruction 07

3.1 Appearance 07

3.2 Front Panel 07

04 Usage Tips 09

05 Contact Us 11

5.1 Hangzhou Headquarters 11

5.2 U.S. Office 11

Revision History

Revision Number		Description	Revision Date
1.0	●	Initial Version	2025/12/03

01 User Notice

Legal Disclaimer

Copyright © 2025 Hangzhou CRYSOUND Electronic Co., Ltd. All rights reserved. This manual, including its text, images, graphics, and other content, is the property of Hangzhou CRYSOUND Electronic Co., Ltd. or other authorized companies. Without written permission, no entity or individual may excerpt, reproduce, translate, or modify this manual in any way. Hangzhou CRYSOUND Electronic Co., Ltd. does not provide any express or implied warranties.

Compliance

This device has been tested and found to comply with the applicable regulations for electronic products. It may cause interference to RF receivers in residential areas, and users are responsible for correcting any such interference.

In the event of product version upgrades or other needs, CRYSOUND may update this manual. The latest version of the manual can be viewed on the device itself or accessed on the official website of CRYSOUND.

Warranty and Calibration

This product is covered by a one-year free warranty service for defects or malfunctions from the date of purchase. The free warranty repair service does not cover issues caused by improper use or accidental damage such as drops. Unauthorized disassembly of the product will void the warranty.

In case of malfunctions caused by improper use or accidental damage, we offer repair services at cost price. The device is calibrated during the manufacturing process.

Safety Usage Reminder

To prevent potential fire or personal injury, please note:

1. Please carefully read this safety notice before using the product.
2. Only use the product for its designated purpose.
3. Do not disassemble the device without authorization.
4. If the device experiences any malfunctions or abnormal heating, please stop using it.

5. Please contact the manufacturer for device repair services.
6. Do not place the device near heat sources, flames, or in high-temperature environments.
7. Note: The main power remains connected even when the ON/OFF switch is in the OFF position. Disconnect the 12 V power adapter if the device will not be used for an extended period.

02 Introduction

The CRY580 A²B Interface is a flexible audio interface designed for testing and validating A²B®-based audio systems. It bridges A²B nodes to analog and digital audio interfaces, making it easy to connect A²B microphones to audio analyzers, data acquisition systems, or PCs.

CRY580 integrates A²B audio codecs and digital audio interfaces in a compact housing. It supports both analog and digital audio outputs, as well as multiple PDM/I²S/TDM audio inputs, enabling users to decode audio signals from the A²B bus efficiently.

With its open interfaces, CRY580 can be conveniently used together with CRY6151B, SonoDAQ and other mainstream audio analyzers. It is suitable for laboratory verification, end-of-line production tests, and A²B audio development.

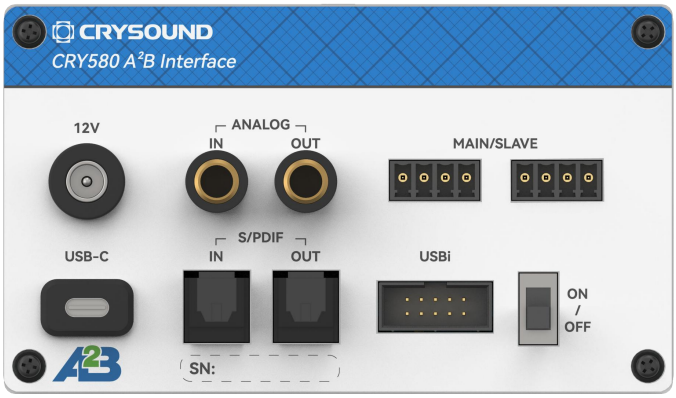
By providing stable and controllable A²B bus conditions, the CRY580 helps engineers:

- Verify the performance of A²B microphones and loudspeakers
- Evaluate system-level audio quality and channel mapping
- Build automated test systems for A²B audio products

03 Product Instruction

3.1 Appearance

3.2 Front Panel



The layout of the front panel may vary by product revision. A typical front panel includes the following indicators and connectors:

1 – 12V Connector (DC IN)

Provides DC power input for the CRY580. Connect a 12 V DC power adapter that meets the specifications on the product label.

2 – USB-C Port

Used for communication with a PC , and can also serve as a power input under specific configurations.

3 – ANALOG Port

Analog audio output connector. It supports output of analog test signals to external audio analyzers, amplifiers or monitoring devices.

4 – S/PDIF Port

Digital audio output connector. It supports S/PDIF digital signal output to external digital audio analyzers or recorders.

5 – A^2B MAIN/SLAVE Port

A^2B bus connector. It supports input from up to four high-dynamic-range A^2B microphones or other A^2B nodes, and can operate as MAIN or SLAVE according to the configuration.

6 – USBi Port

Used for hardware debugging and programming during development, production or maintenance.

7 – ON/OFF Switch

Function control switch of the CRY580. Used to enable or disable the debugging and test functions, and **does not cut off the main power supply**.

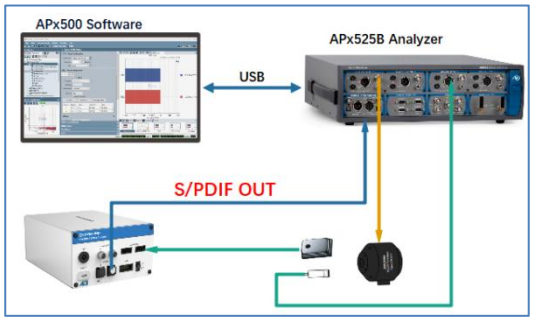
04 Usage Tips

1) Connect DUT Microphone

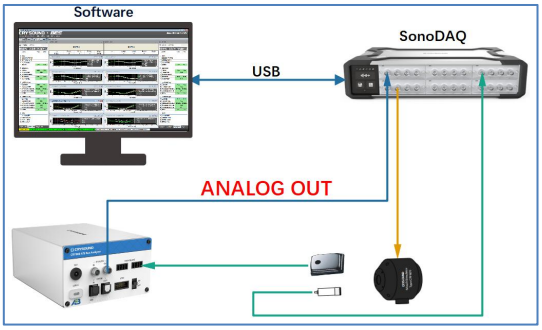
Connect the DUT microphone to the MAIN / SLAVE microphone interface of the device.

2) Connect Output to Test System

The CRY580 can output digital and analog signals simultaneously. Connect the ANALOG OUT interface and S/PDIF OUT interface to the sound card respectively. The test system wiring is as follows:



Digital Signal



Analog Signal

- Digital Signal Path: Connect using an S/PDIF optical fiber cable.
- Analog Signal Path: Connect using a 3.5 mm to BNC cable.
- DUT (A^2B Microphone) MAIN/SLAVE Interface Cable: Connect via a 4-pin dedicated cable according to the pin definition:
  a) Pin 1 → Connect to the AN (Audio Negative) of the A^2B mic
  b) Pin 2 → Connect to the PN (Audio Positive) of the A^2B mic

3) Connect Communication Path

Connect the USB-C communication interface to the computer via a serial port. This interface also provides power supply.

4) Power On the Device

Connect the 12V interface to a DC power supply to start the device normally. (To avoid current interference, connect the power supply last.)

Notes

In standard operation, both the USB-C port (for communication) and the 12 V DC input must be connected; otherwise, the device may not work properly. USB-C-only power is available only in specific configurations and should be used according to CRYSOUND's technical guidance.

To avoid current interference, do not power on the device until the DUT microphone is connected.

You can send commands via the USB-C interface to control the CRY580's power on/off and hard reset (instead of manual button operation or re-powering):

A^2B power on\r\n	Power On
A^2B power off\r\n	Power Off
A^2B hard reset\r\n	Reset

05 Contact Us

5.1 Hangzhou Headquarters

Tel: +86-571-88225128
E-mail: info@crysound.com
Add: No.10 Xianqiao Rd, Yuhang Dist, Hangzhou, China
Web: www.crysound.com

5.2 U.S. Office

Tel: +1-877-215-7752
E-mail: info@crysound.com
Add: 515 S Fry Rd, Suite A-221, Katy, TX 77450, USA
Web: www.crysound.com

Empowering 100+ industries through acoustic testing technology

make the world safer, greener and more efficient!