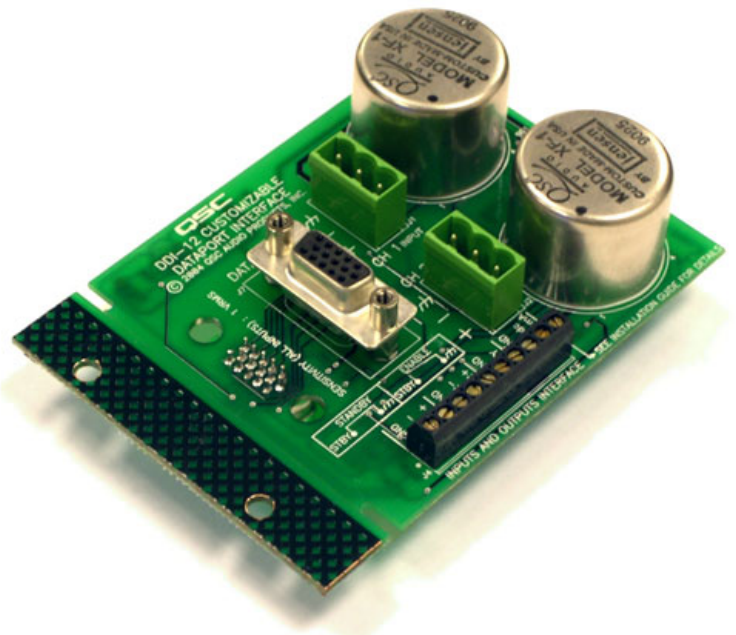




DDI-12

DataPort Accessory Card

INSTALLATION GUIDE



▼ DDI-12



TD-000182-00
Preliminary

Instructions for the DDI-12 DataPort Accessory Card

I. INTRODUCTION

The DDI-12 DataPort Accessory Card is designed for use with QSC amplifiers equipped with a DataPort connector.

The purpose of the DDI-12 is to reduce noise pickup in the amplifier through the use of fully isolated and balanced transformer-coupled inputs. Made by Jensen, the industry leader in high-quality audio transformers, the two 1:1 transformers are the same kind used in QSC's XF-1 input transformer kits. Their mu-metal shields protect against electromagnetic interference and drain electrostatic noise away harmlessly to chassis ground.

The DDI-12 also has balanced active circuitry to convert the full-gain input sensitivity to approximately 1 volt rms (+1.2 dBu).

The amplifier powers the DDI-12 DataPort Accessory Card through its DataPort, and the card puts its signals into the amp through the DataPort input pins. The card also has a female DataPort connector for attaching to a QSControl system or QSC DataPort accessory.

When used with a two-channel amplifier, the DDI-12 mounts directly to the back panel and secures to the amplifier chassis with three screws and a standoff. Its circuit board has a scored breakaway section that must be removed for direct mounting. The DDI-12 can be used also with four- and eight-channel amplifiers by mounting it to a DPX-4 accessory rack bracket and using a DataPort cable to connect to the amplifier.

To guard against oxidation, corrosion, or contamination, the circuit board is treated with non-toxic protectants. Therefore, it may have a slight odor and a slightly oily-feeling residue. Do not wash the protectant off the circuit board.

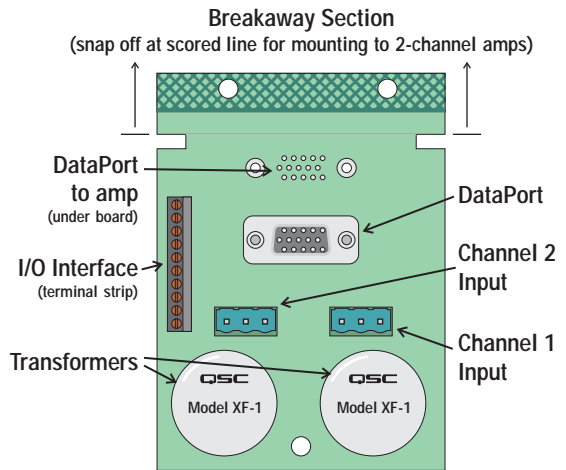


Figure 1. The DDI-12 DataPort Accessory Card

AUDIO INPUTS

Each channel of the amplifier has a fully balanced input connection in three locations:

- The female DataPort connector
- The detachable terminal block (Figure 2)
- The I/O interface terminal strip (Figure 3)

You can use any one input on each channel, but only one at a time. This is because the DDI-12 does not have any ability to sum the inputs.

Each input comprises two terminals: + (in polarity) and - (out of polarity). For optimum immunity to noise, use a *balanced* connection whenever possible.

For an *unbalanced* connection, connect the signal conductor of the cable to the + input and the shield to the - input, and also, connect a short jumper wire between the - input and the analog ground terminal (Figure 4).

Using any input of the DDI-12, the amplifier's full-gain input sensitivity (the input signal voltage at which the amplifier puts out a voltage corresponding to its power rating) is approximately 1 volt rms.

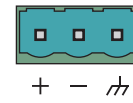


Figure 2. Pinout of the terminal block input.

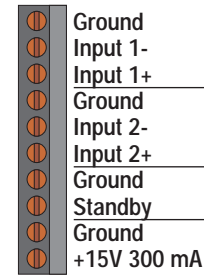


Figure 3. The I/O interface terminal

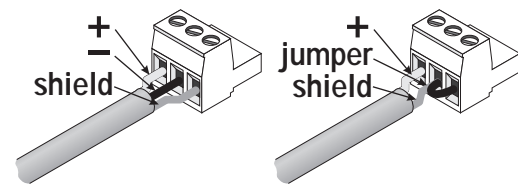


Figure 4. Balanced and unbalanced input connections.

STANDBY CONTROL

A feature of amplifiers with QSC's PowerWave switch-mode power supply technology is that they can be remotely put into standby. The DDI-12 allows you to easily exploit this feature by wiring a pair of low-voltage, low-current switch contacts to the STANDBY and GROUND terminals on the I/O interface (Figure 5).

When the switch is closed, the power supply shuts off and the amp goes into standby. When the switch is open, the power supply starts up again.

On eight-channel models, this feature works only on the DataPort for channels 1 and 2.

15 VOLT DC POWER

When the DDI-12 is used with a CX, DCA, or PL2 amplifier, the 15 VDC terminal provides 15 volts DC whenever the amplifier is on. This voltage is referenced to the ground terminal and can be used to power an external accessory at up to 300 mA. **CAUTION:** Do not use the 15-volt supply if you are using a DataPort signal processor accessory, such as a DSP-3, DSP-4, XC-3, LF-3, SF-3, or SPA-3, with the amplifier.

A polyswitch, a type of self-resetting fuse, prevents damage to the DDI-12 or to the amplifier if the accessory draws too much current or if the DC output is short-circuited.

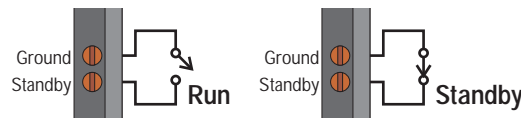


Figure 5. Using a switch contact closure to place the amplifier in standby.

II. INSTALLATION

The DDI-12 kit (QSC part # SG-000517-00) includes these items:

DDI-12 Accessory Card

Two #4-40 × ¼" black screws (QSC part # SC-040041-PP)

Three #8-32 × 0.375" standoffs (QSC part # 8427K-ND)

Three #8-32 screws (QSC part # SC-080051-PP)

Installation guide (QSC part # TD-000182-00)

CONNECTIONS TO THE DDI-12

1. To attach input wires to the DDI-12 detachable terminal blocks, strip about 5 mm (0.2") of insulation from the wire. Twist the wire strands together and make sure there are no stray ones. Loosen the screw on the terminal until you can fully insert the wire end into the terminal. Tighten the screw until the terminal clamps the wire securely. Repeat for all the wires needed. The terminal can accept stranded wire up to 17 AWG (1 mm²) or solid wire up to 16 AWG (1.5 mm²) in size. Insert the terminal block into the connector on the board.
2. To attach input, standby control, or DC supply wires to the I/O interface, strip about 2.5 mm (0.1") of insulation from the wire. Twist the strands together. Loosen the terminal screw and insert the wire fully. Tighten the screw so that it clamps the wire securely.
3. As an alternative, you can connect signals into the board through the female DataPort connection, as with a QSCControl or Basis system. You should not, however, use two or more audio inputs simultaneously on the same channel.

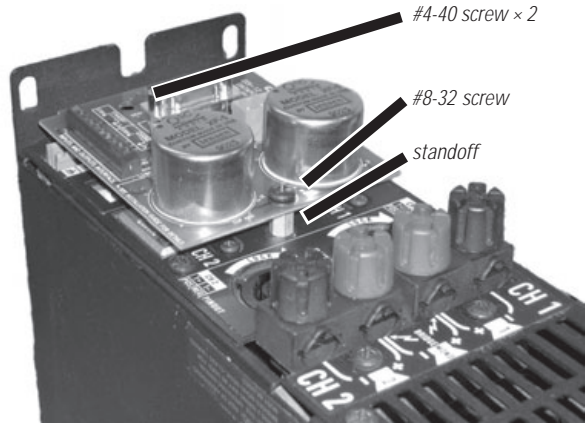


Figure 6. The DDI-12 card mounted to an amplifier.

INSTALLATION ON A TWO-CHANNEL AMPLIFIER

1. Turn off the amplifier.
2. Bend the DDI-12 card along the scored line. Snap off and discard the breakaway part.
3. Thread one of the standoffs into the threaded hole to the right of the XLR inputs (PowerLight 2A models) or the DIP switches (CX, DCA, PowerLight 2, or ISA models). See Figure 6.
4. Plug the DDI-12 card into the amplifier's DataPort. Insert and tighten the two #4-40 screws on each side of the DataPort to secure it; do not overtighten them.
5. Secure the DDI-12 to the standoff with a #8-32 screw. Do not overtighten.



Figure 7. As many as four DDI-12 cards can mount to a DPX-4 accessory bracket.

INSTALLATION WITH OTHER DATAPORT-EQUIPPED AMPLIFIERS

1. Turn off the amplifier.
2. Screw three standoffs into a suitable position on the DPX-4 bracket (up to four DDI-12 cards can fit on the bracket). See Figure 7.
3. Align the DDI-12 to the three standoffs. Use the #8-32 screws to secure the board to them. Do not overtighten the screws.
4. Through the rectangular opening in the DPX-4 bracket (Figure 8), connect a DataPort cable to the DDI-12. Attach the other end to the appropriate DataPort of the amplifier.

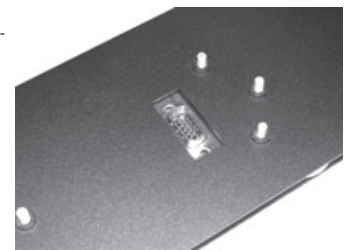


Figure 8. Connect the DataPort cable to the DDI-12 through the rectangular opening in the bracket.

IV. WARRANTY AND DISCLAIMERS

QSC Audio Products, Inc. is not liable for any damage to speakers, amplifiers, or any other equipment that is caused by negligence or improper installation and/or use of the DDI-12 DataPort Accessory Card.

PRODUCT WARRANTY

QSC Audio Products, Inc. ("QSC") guarantees its products to be free from defective material and / or workmanship for a period of three (3) years from date of sale, and will replace defective parts and repair malfunctioning products under this warranty when the defect occurs under normal installation and use - provided the unit is returned to our factory or one of our authorized service stations via pre-paid transportation with a copy of proof of purchase (i.e., sales receipt). This warranty provides that the examination of the return product must indicate, in our judgment, a manufacturing defect. This warranty does not extend to any product which has been subjected to misuse, neglect, accident, improper installation, or where the date code has been removed or defaced. QSC shall not be liable for incidental and/or consequential damages. This warranty gives you specific legal rights. This limited warranty is freely transferable during the term of the warranty period.

The customer may have additional rights, which vary from state to state.

In the event that this product was manufactured for export and sale outside of the United States or its territories, then this limited warranty shall not apply. Removal of the serial number on this product, or purchase of this product from an unauthorized dealer, will void this limited warranty.

Contact us at 800-772-2834 (USA only) or +1 (714) 957-7150, or visit our Web site at www.qscaudio.com

TECHNICAL ASSISTANCE

If you suspect that your DDI-12 card is defective, check your system configuration and connections to determine the origin of the problem. In many cases, incorrect audio interfacing, poor cabling, or other system level impairments are the causes of problems in audio systems. For technical assistance beyond the information given in this manual, contact the QSC Technical Services department.

FACTORY SERVICE

If your DDI-12 card ever requires factory service, contact the QSC Technical Services department for return instructions and a Return Material Authorization (RMA) number. QSC is not responsible for products returned without an RMA number.

PRODUCT RETURN GUIDELINES

1. Pack the product securely for protection during shipment. QSC will provide factory packaging free of charge, on request.
2. Include a photocopy of the sales receipt, along with your name, return address, phone number, and a description of the problem.
3. Call QSC Technical Services department for an RMA number.
4. Write the RMA number on the outside of the shipping package.
5. Ship the product prepaid to QSC Audio Products. We recommend United Parcel Service.

QSC Technical Services

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E-mail: tech_support@qscaudio.com

Web: www.qscaudio.com

QUALIFIED SERVICE CENTERS

QSC maintains a service center network for your convenience. If you choose to return your product to a local service center and need a referral, contact QSC Technical Services department. Accessories, input modules, and other peripheral QSC products must be returned to the factory for service.

INTERNATIONAL SERVICING

For QSC products purchased outside the United States, refer service to the distributor or dealer from which the product was purchased. There are numerous service centers in many countries. Your dealer, distributor, or QSC Technical Services can refer you to a service center in your country.

