



# DFR11EQ Version 5

**Digital Equalizer with Feedback Reducer, Limiter, and Delay**  
**Egaliseur graphique numérique à réducteur de Larsen, écrêteur, et délai**  
**Digitaler graphischer Equalizer mit Ruckkopplungsreduzier-Stufe, Limiter, und Delay**  
**Ecuilizador gráfico digital con reductor de realimentación, limitador, y retardo**  
**Equalizzatore grafico digitale con attenuatore di retroazione, limitatore, e ritardo**  
**デジタル・イコライザー（フィードバック・リデューサー，リミター，ディレイ付き）**



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## DFR11EQ VERSION 5 QUICK REFERENCE GUIDE

The Shure DFR11EQ Version 5 offers the user a wide variety of digital sound processing capabilities. The DFR11EQ is most commonly controlled through its software interface; however, the system can be used effectively as a stand-alone product.

This quick reference guide provides all necessary information for the installation of the operating software, as well as for use of the DFR11EQ without the computer interface. Additional information on the advanced characteristics of the software is offered in the complete user guide included on the furnished CD-Rom. The user guide can be used on line or printed. In addition, the system software includes searchable online help.

For information on the following topics, please see the full version of the DFR11EQ Version 5 user guide on the furnished CD-Rom.

- Characteristics of the hardware and the software
- Using the Shure Link system
- Full operation of the DFR11EQ Version 5 software
- Feedback reduction software
- Graphic and parametric equalizers
- Digital delay software
- Clipping reduction software

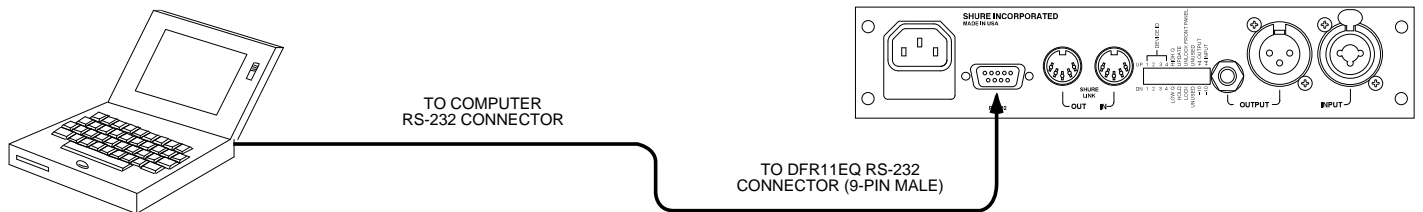
## INSTALLING THE DFR11EQ SOFTWARE

### MINIMUM COMPUTER REQUIREMENTS

The following are the minimum requirements to install and run the DFR11EQ Version 5 software.

- One 486DX 50 MHz IBM\*-compatible computer (math coprocessor required)
- 2 MB hard drive space
- 4 MB RAM
- CD-ROM drive
- Windows version 3.1x, 95, 98 or NT
- 1 available RS-232 serial (COM) port
- One RS-232 cable (9-pin to 9-pin)

### CONNECTING THE DFR11EQ TO A COMPUTER VIA THE RS-232 (COM) PORT



1. Connect a 9-pin plug (male) of the cable to the RS-232 port of the DFR11EQ.
2. Connect the other end of the cable to the RS-232 port of the computer.

### SOFTWARE INSTALLATION

1. Insert the supplied CD-ROM into the CD-ROM drive of your computer. (After initial installation, the CD-ROM is not necessary to run the software.)
2. When the installation menu appears, click on DFR11EQ Software. You will be led through the installation process. **Note:** if you are using Windows 3.1X, go to File/Run and run d:\SETUP16.EXE.
3. Shure Setup will suggest a destination on your hard disk for the DFR11EQ files and will check the computer hardware to ensure that a coprocessor is present. It will also prompt you for your name and organizational information.

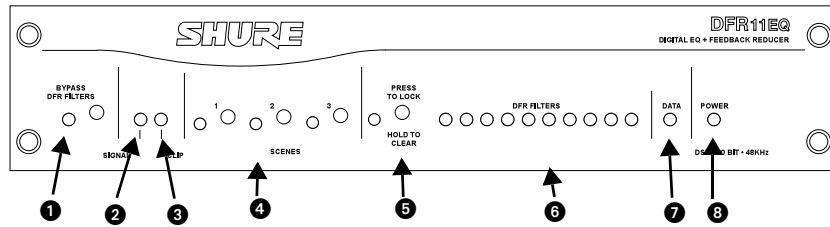
**NOTE:** Remember to register your software by filling out and mailing the enclosed registration card, or online via the Shure World Wide Web site ("<http://www.shure.com>"). This will ensure that you receive information about software updates with additional features as they become available.

### ACCESSING THE ONLINE USER GUIDE

1. Insert the CD-Rom in your computer's CD-Rom drive. (Users of Windows 3.1x: double-click on the "Setup 16" icon in the file of the CD-Rom.)
2. An installation menu appears. Double-click on View User Guides, then choose your preferred language.
3. The user guide is in PDF format. Acrobat Reader is necessary to view PDF documents. Acrobat Reader is included on the CD-Rom, and should be installed if necessary.
4. The full guide, or required sections of the guide, may be viewed online or printed.

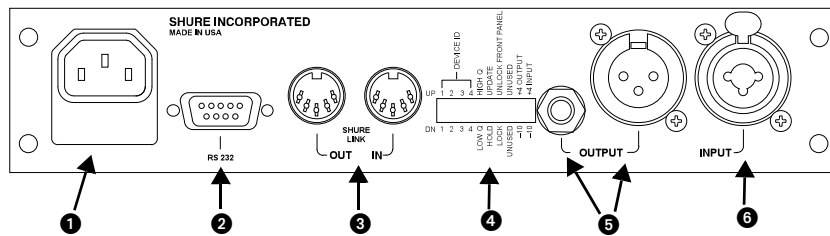
## DFR11EQ PANELS

### FRONT PANEL



- ❶ **BYPASS DFR FILTERS Button and LED.** Press this button to suspend feedback reducer operation and remove feedback filters from the audio path. The bypass does not affect the equalizer, delay or limiter. When the LED illuminates, the feedback reducer is bypassed.
- ❷ **SIGNAL LED.** Illuminates when input signal is present. Intensity varies with input signal level.
- ❸ **CLIP LED.** Illuminates when the input signal is within 6 dB of clipping.
- ❹ **SCENE Selection Buttons and LEDs.** Press one of these three buttons to select a pre-set scene. When a scene is selected, the corresponding LED will light.
- ❺ **LOCK/CLEAR Filters Button and LED.** Press and release this button to lock the filters you have set. Hold down the button for three seconds, and the filters will clear. The LED indicates that the filters are locked.
- ❻ **DFR FILTER LEDs (10).** Indicate when individual feedback filters are active. When a filter changes or is added, the LED flashes, then stays on.
- ❼ **DATA LED.** Flashes in unison with the feedback filter LEDs when the detector is deploying a new feedback filter or changing an existing one, and also blinks whenever the unit is communicating with a connected computer.
- ❽ **POWER LED.** LED illuminates when unit is attached to a power supply.

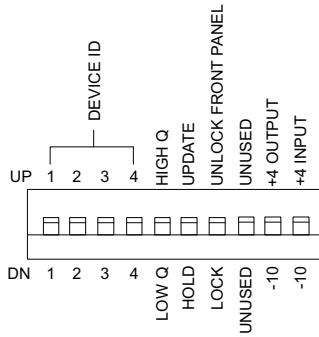
### BACK PANEL



- ❶ **Power Connector with Integral Fuse.** Connects to AC power. The fuse is located in the drawer below the connector.
- ❷ **9-Pin RS-232 Port.** Connects the unit to a computer. For use with DFR11EQ software and for DSP firmware upgrades. (Compatible with AMX and Crestron systems.)
- ❸ **Shure Link Interface.** Allows linking of up to 16 Shure Link devices (DFR11EQs, DP11EQs, and UA888s), which may be accessed by computer.
- ❹ **DIP Switches.** Switches 1 through 4 are used to select the device ID. Switches 5 through 10 change other available options. See *DIP Switches*.
- ❺ **Separate 1/4" and XLR audio output jacks.**
- ❻ **Combined 1/4" and XLR audio output jacks.**

## DIP SWITCHES

There are ten DIP Switches located on the back of the DFR11EQ. The following table describes the function of each switch. See the DFR11EQ User's Guide on the Software CD ROM for instructions on how to set the Device ID.



DIP SWITCH	FUNCTION	POSITION	
		UP	DOWN
1-4	Shure Link Device ID (see CD-Rom user guide)		
5	Feedback Filter Bandwidth Select Determines the Q of the feedback filter.	<b>High Q</b> 1/10-octave Feedback Filters remain narrow as they deepen	<b>Low Q</b> 1/10-octave Feedback Filters widen as they deepen
6	Feedback Filter Memory Mode	<b>Update</b> Stores changed feedback filter settings on power down	<b>Hold</b> Discards changed feedback filter settings on power down, but holds original settings
7	Front Panel Lockout	Unlock Front Panel Front panel buttons operational	<b>Lock</b> Front panel buttons inactive (except the power switch).
8	unused	-	-
9*	Output Sensitivity	+4 dBu Output	-10 dBV Output
10*	Input Sensitivity	+4 dBu Input	-10 dBV Input

**\*NOTE:** See the *Set Up* instructions in the *Using the DFR11EQ as a Stand-Alone Feedback Reducer* section of this Quick Reference Guide for instructions and warnings regarding use of the Input and Output Sensitivity DIP switches.

## HOLD/UPDATE

**UPDATE position...** When the HOLD/UPDATE DIP switch is in the UPDATE position (default), the DFR11EQ saves the feedback filters every time the unit is powered off. When the DFR11EQ is powered on again, the feedback filters will be at exactly the same settings as when the unit was powered down.

**HOLD position...** When the HOLD/UPDATE DIP switch is changed to the HOLD position, the DFR11EQ immediately saves the feedback filters at the current settings. When the DFR11EQ is powered off, any changes made to the feedback filters after the switch was set will be forgotten. When powered on again, the feedback filter settings will be exactly the same as when the HOLD/UPDATE DIP switch was changed to the HOLD position. This feature is useful for storing the best filter settings for a sound system.

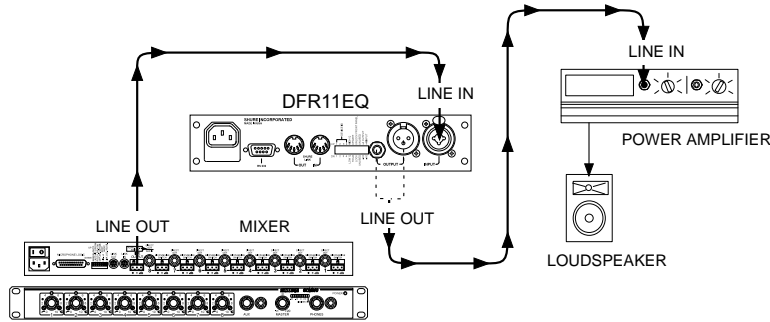
To store filter settings in the HOLD memory:

1. Set the Hold/Update DIP switch to the Update position;
2. Ring out the room until all fixed filters are set;
3. Set the Hold/Update DIP switch to the Hold position;
4. During the performance, the DFR11EQ will change dynamic filters and deepen fixed ones;
5. After the performance, turn the power off and back on; the DFR filters are restored to the state they were in before the performance.

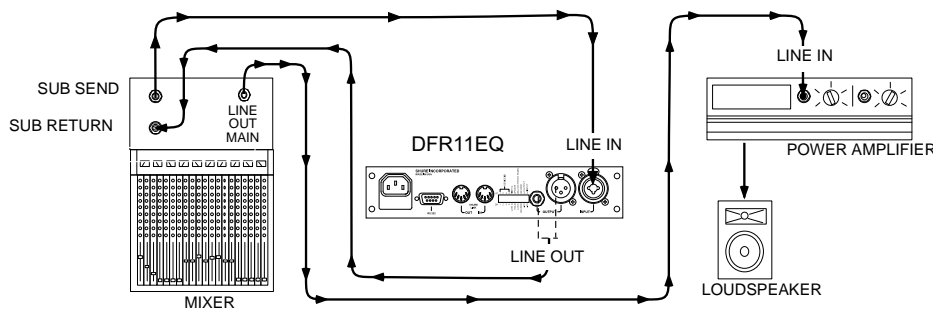
## AUDIO CONNECTIONS

**NOTE:** All cables must be shielded.

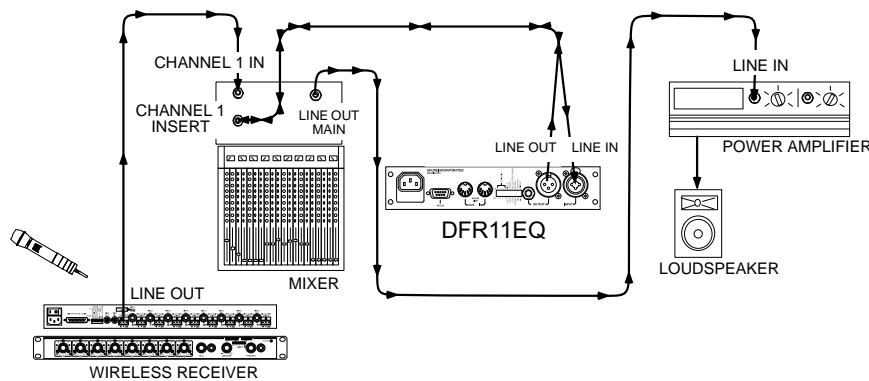
**Between the Mixer Main Output and the Power Amplifier** The DFR11EQ is most commonly placed between the main output of a mixer and the input of a power amplifier. At the main output, the unit will affect all input channels. This setup is ideal for using the DFR11EQ as a feedback reducer and as an equalizer.



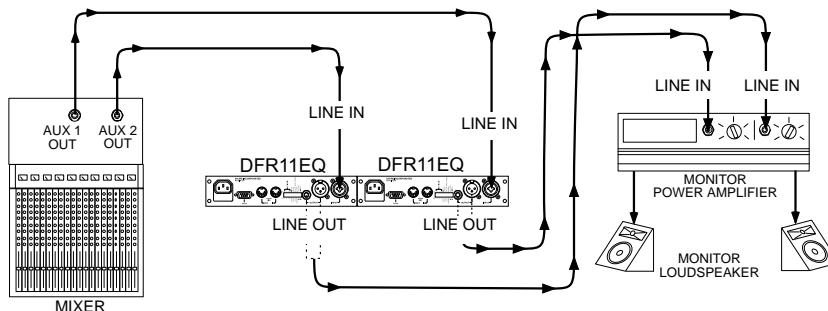
**At a Subgroup Insert** When using a multiple bus mixer, the DFR11EQ can be connected to a single subgroup insert. The unit will affect only the channels associated with that subgroup: the other channels will remain unaffected.



**Inserted in an Input Channel** If only a single microphone is creating feedback problems, the DFR11EQ can be inserted on that channel alone. This is especially useful for wireless microphones, because the constant movement of a performer may bring the microphone too close to the sound reinforcement loudspeakers.



**Inserted Between Mixer and Monitor** Since monitor loudspeakers and microphones are usually in close proximity, the DFR11EQ can be connected to stabilize a monitor system. Place a DFR11EQ on the monitor output which goes to the monitor loudspeaker. For multiple monitor mixes, a DFR11EQ should be placed at the output of each monitor send.



## USING THE DFR11EQ AS A STAND-ALONE FEEDBACK REDUCER

### SETUP FOR FEEDBACK CONTROL

There are two basic ways in which to set-up the DFR11EQ as a stand-alone feedback reducer: The “Ring Out” method and the “Insurance Policy” method. Each is valid for different situations.

The “**Ring Out**” method is a preemptive measure in which the system gain is raised beyond the normal setting to deliberately make the system feed back. The DFR11EQ will then set its filters, and the system gain is then reduced slightly, and the system is stable and usable. This set-up method is primarily used for systems which are operated near the feedback point and need an extra margin of stability.

For the “**Insurance Policy**” method, the DFR11EQ is simply installed in the sound system, but filters are not set prior to use. The DFR11EQ adds extra insurance against feedback: the system is not expected to feedback, but if it does, the DFR11EQ is there to catch it. This set-up method is used for systems which already have sufficient gain-before-feedback, but need protection from the occasional stray feedback which can occur due to non-stationary microphones or user-adjustable gain controls.

### SETUP

1. Connect the DFR11EQ in the desired signal path location. See *Audio Connections*.
2. Set the input and output level DIP switches to the appropriate settings for the sensitivities of the connected equipment.

**WARNING:** Other equipment may potentially be damaged after the DFR11EQ is powered off if the DFR11EQ input is set to +4 and the output is set to -10. It is recommended that you avoid using this setting.

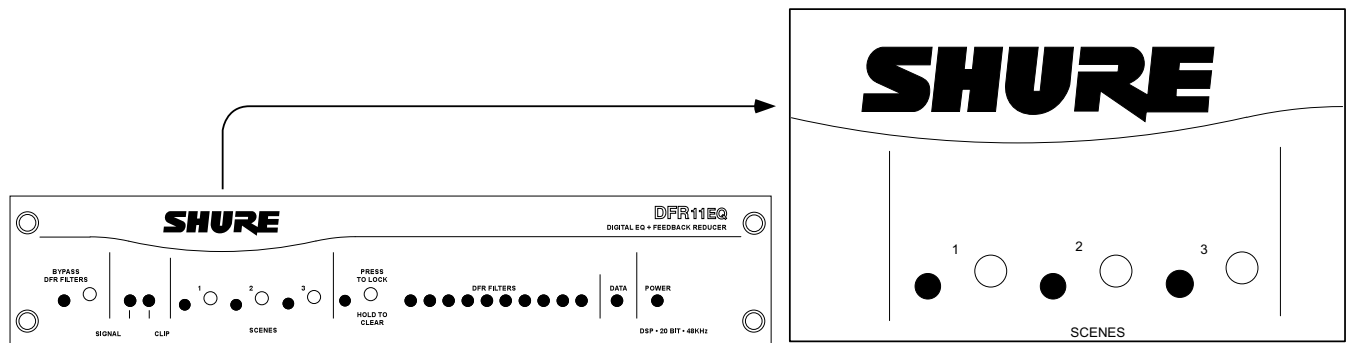
3. Set the system gain to minimum, and power up all of the equipment.
4. Slowly raise the gain of the system, and set the gain of each microphone to achieve the desired level.
5. The red CLIP LED should illuminate only on the highest signal peaks. If it illuminates more frequently, check to see that the input level switch is set properly. If it is, lower the level of the signal going into the DFR11EQ.
6. At this point it is highly recommended to equalize the sound system with the DFR11EQ's built-in equalizer (see *Computer Interface*) or an external equalizer. The DFR11EQ's feedback reducer is more effective on a well-equalized sound system.

### RINGING OUT THE SYSTEM (“RING OUT” METHOD ONLY)

1. If necessary, clear any notch filters in the DFR11EQ by pressing the CLEAR button. Turn off the BYPASS and LOCK LEDs if they are not already off.
2. Slowly raise the gain of the signal going through the DFR11EQ. When feedback occurs, the DFR11EQ will insert a filter deep enough to stop the feedback.
3. Repeat step 2 until all fixed filters are set. (There are 5 fixed filters, unless changed by the user via the computer interface.)
4. Lower the gain by 3 to 6 dB to stabilize the sound system.

**NOTE:** If you are using an auto mixer, lock on all inputs during ring-out phase.

### SCENE SELECTION



There are three SCENE SELECTION buttons and LEDs on the front panel of the DFR11EQ. These allow easy access of scenes (preset EQ, DFR filter and delay settings) without a computer. This allows access to scenes created using the DFR11EQ Version 5 software after disconnecting the computer from the DFR11EQ. Alternatively, DFR-only scenes may be created without a computer as follows:

1. Select scene one, two or three on the front panel.
2. Ring out the system (see *Ringling Out the System*). The filters created during the ringing out phase will now be recalled whenever the selected scene is chosen.

**NOTE:** The three Scene buttons on the front panel are factory preset to provide a flat response until specific scenes are created by the user.

## SPECIFICATIONS

### Frequency Response

20 to 20k Hz  $\pm$  1.0 dB re 1 kHz

### Dynamic Range

104 dB minimum, A-weighted, 20 Hz to 20 kHz

### Sampling Rate

48 kHz

### Digital-to-Analog, Analog-to-Digital Conversion

20 bit resolution

### Voltage Gain

-1 dB  $\pm$  1dB (power off)

0 dB  $\pm$  2 dB (equal input and output sensitivities)

12 dB  $\pm$  2 dB (input -10 dBV, output +4 dBu)

-12 dB  $\pm$  2 dB (input +4 dBu, output -10 dBv)

### Impedance

Input: 47 k $\Omega$   $\pm$  20% actual

Output: 120  $\Omega$   $\pm$  20% actual

### Input Clipping Level

+18 dBu minimum (at +4 dBu setting)

+6 dBu minimum (at -10 dBV setting)

### Output Clipping Level

+18 dBu minimum (at +4 dBu setting)

+6 dBu minimum (at -10 dBV setting)

### Total Harmonic Distortion

< 0.05% at 1 kHz, +4 dBu, 20 to 20 kHz

### LED Signal Indicators

Clip: 6 dB down from input clipping

### Propagation Delay from Input to Output

< 1.0 ms, all filters set to Flat (0 ms delay setting)

### Polarity

Input to output: non-inverting

XLR: pin 2 positive with respect to pin 3

1/4 in. TRS: tip positive with respect to ring

### Operating Voltage

DFR11EQ: 120 Vac, 50/60 Hz, 75 mA max

DFR11EQJ: 100 Vac, 50/60 Hz, 75 mA max

DFR11EQE: 230-240 Vac, 50/60 Hz, 38 mA max

### Temperature Range

Operating: -7° to 49° C (20° to 140° F)

### Dimensions

219 mm x 137 mm x 44.5 mm (8 5/8 in x 5 3/8 in x 1 3/4 in)

### Weight

930 g (2.05 lbs)

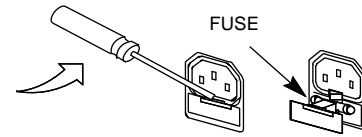
### Fuse

DFR11EQ: 120 Vac. Fuse: 100 mA, 250V time delay

DFR11EQJ: 100 Vac. Fuse: 100 mA, 250V time delay

DFR11EQE: 230-240 Vac. Fuse: 50 mA, 250 V time delay

In order to change a blown fuse, remove the power cord and pry open the drawer with a flathead screwdriver.



### FEEDBACK FILTERS

Ten (10) 1/10 octave adaptive notch filters from 60 Hz to 20 kHz

Deployed to 1 Hz resolution of feedback frequency

Deployed in depths of 3 dB, 6 dB, 9 dB, 12 dB, and 18 dB (12.5 Low Q in graphic EQ mode) attenuation

Filter shape variable between HI Q and LOW Q (see *High Q* vs. *Low Q Filters*).

### GRAPHIC EQUALIZER

#### Frequency Bands

30 bands on ISO, 1/3 octave centers

#### Filter Type

1/3 octave, constant Q

#### Maximum Boost

6 dB per band

#### Maximum Cut

12dB per band, high- and low-pass filters, 12dB/octave nominal

### PARAMETRIC EQUALIZER

#### Frequency Bands

10 bands, variable frequency, variable Q

#### Boost/Cut Range

+6 dB to -18 dB per band

#### Q Range

1/40 octave to 2 octave

#### Shelf/Rolloff Filters

Shelf, +6 to -18 dB per filter

Rolloff, 6dB, 12dB, 18dB, or 24dB per octave nominal

### DELAY

Up to 1300 ms

### LIMITER

Threshold: -60 dBFs to -0.5 dBFs, 0.5 dB resolution

Attack: 1 ms to 200 ms

Decay: 50 ms to 1000 ms

Ratio:  $\infty$  to 1



# AUDIO CONNECTORS

## DFR11EQ AUDIO INPUT

<b>Connector:</b> (XLR and 1/4 inch combined)	XLR (female)	1/4 inch phone plug (female)
<b>Configuration:</b>	active balanced	active balanced
<b>Actual Impedance:</b>	47 kΩ	47 kΩ
<b>Nominal Input Level:</b>	+4 dBu (+4 input level) -10 dBV (-10 input level)	+4 dBu (+4 input level) -10 dBV (-10 input level)
<b>Maximum Input Level:</b>	+18 dBu (+4 input level) +6 dBV (-10 input level)	+18 dBu (+4 input level) +6 dBV (-10 input level)
<b>Pin Assignments:</b>	Pin 1 = ground Pin 2 = hot Pin 3 = cold	Tip = hot ring = cold sleeve = ground
<b>Voltage / Current / Phantom Power Protection?</b>	yes	yes

## DFR11EQ AUDIO OUTPUT

<b>Connector:</b> (XLR and 1/4 inch separate)	XLR (male)	1/4 inch phone plug (female)
<b>Configuration:</b>	active balanced cross coupled	active balanced cross coupled
<b>Actual Impedance:</b>	120 Ω	120 Ω
<b>Nominal Output Level:</b>	+4 dBu (+4 output level) -10 dBV (-10 output level)	+4 dBu (+4 output level) -10 dBV (-10 output level)
<b>Maximum Output Level:</b>	+18 dBu (+4 output level) +6 dBV (-10 output level)	+18 dBu (+4 output level) +6 dBV (-10 output level)
<b>Pin Assignments:</b>	Pin 1 = ground Pin 2 = hot Pin 3 = cold	Tip = hot ring = cold sleeve = ground
<b>Voltage / Current / Phantom Power Protection?</b>	yes	yes

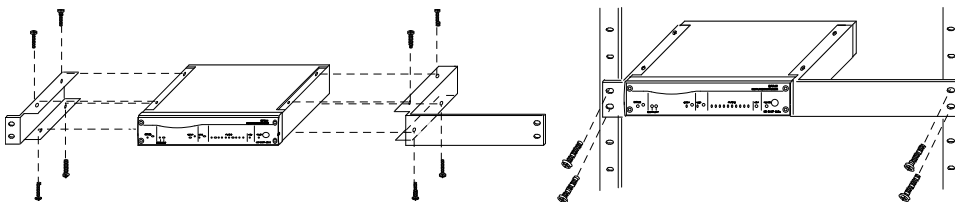
## FURNISHED ACCESSORIES

- Power Cable (DFR11EQ/DFR11EQJ)\* ..... 95A8389
- Power Cable (DFR11EQE)\* ..... 95A8247
- Power Cable Clamp.....\*95A8712
- 5 pin DIN Shure Link Cable ..... 95A8676
- Single Mount Rack Bracket ..... 53A8484
- Dual Mount Rack Bracket ..... 53B8484
- Straddle Bars ..... 53A8443
- DFR11EQ Version 5
- Software/User's Guide CD-ROM..... 95A8830A

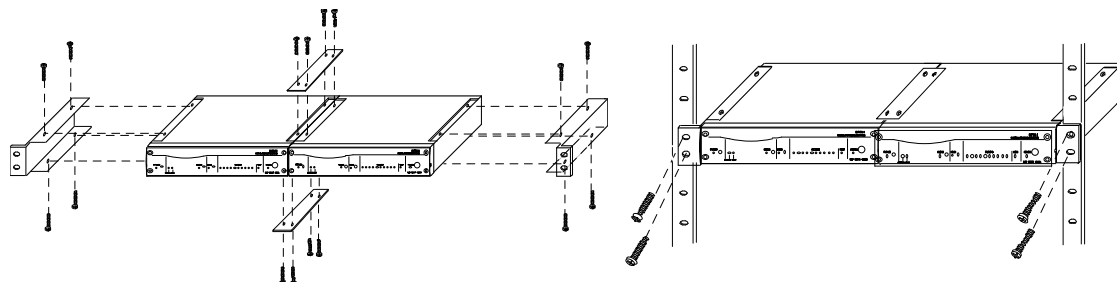
**\*NOTE:** The power cord and power cable clamp is supplied assembled. If a replacement power cord is needed, a power cord clamp is also required. If not assembled, the power cord clamp should be clamped as close to the female end of the power cord as possible.

## RACK MOUNTING

### SINGLE UNIT



### DUAL-MOUNTED UNITS



## CERTIFICATIONS

### DFR11EQ (VERSION 5)

UL Listed and cUL Listed to UL 6500 and CSA E65. Approved under the Verification provision of FCC part 15 as a Class B Digital Device.

### DFR11EQE (VERSION 5)

Eligible to bear CE marking. Conforms to European Union Low Voltage Directive 2006/95/EC; VDE GS-Certified to EN 60065.

Conforms to European EMC Directive 89/336/EEC. Meets applicable tests and performance criteria in European Standard EN55103 (1996) Parts 1 and 2, for residential (E1) and light industrial (E2) environments.

**NOTE:**

\*EMC conformance testing is based on the use of supplied and recommended cable types. The use of other cable types may degrade EMC performance.

\*Under extremely abnormal conditions of electrical fast transients on the power line, communication may be interrupted between the DFR11EQ and the controlling PC. The unit will not be damaged; normal operation will resume after the CONNECT button or command is used to restore the connection

\*This Class B digital apparatus complies with Canadian ICES-003


## INFORMATION TO USER

Changes or modifications not expressly approved by Shure Incorporated could void your authority to operate this equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

### ! IMPORTANT SAFETY INSTRUCTIONS !

- |  |   |
|--|---|
| <ol style="list-style-type: none"> <li>1. READ these instructions.</li> <li>2. KEEP these instructions.</li> <li>3. HEED all warnings.</li> <li>4. FOLLOW all instructions.</li> <li>5. DO NOT use this apparatus near water.</li> <li>6. CLEAN ONLY with dry cloth.</li> <li>7. DO NOT block any ventilation openings. Install in accordance with the manufacturer's instructions.</li> <li>8. DO NOT install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.</li> <li>9. DO NOT defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wider blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.</li> <li>10. PROTECT the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.</li> <li>11. ONLY USE attachments/accessories specified by the manufacturer.</li> </ol> | <ol style="list-style-type: none"> <li>12.  USE only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.</li> <li>13. UNPLUG this apparatus during lightning storms or when unused for long periods of time.</li> <li>14. REFER all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.</li> <li>15. DO NOT expose the apparatus to dripping and splashing. DO NOT put objects filled with liquids, such as vases, on the apparatus.</li> <li>16. The MAINS plug or an appliance coupler shall remain readily operable.</li> <li>17. The airborne noise of the apparatus does not exceed 70dB (A).</li> <li>18. Apparatus with CLASS I construction shall be connected to a MAINS socket outlet with a protective earthing connection.</li> <li>19. To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.</li> <li>20. Do not attempt to modify this product. Doing so could result in personal injury and/or product failure.</li> </ol> |
|--|---|



This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

**WARNING:** Voltages in this equipment are hazardous to life. No user-serviceable parts inside. Refer all servicing to qualified service personnel. The safety certifications do not apply when the operating voltage is changed from the factory setting.

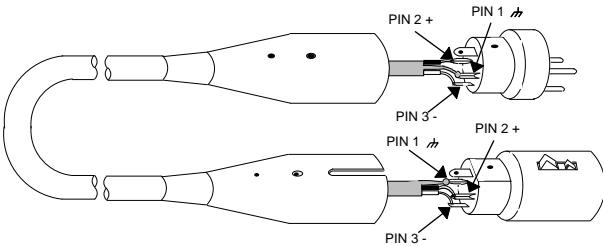
## AUDIO CABLES

The variety of connectors on audio equipment sometimes leads to confusion in cabling. The diagrams below provide cabling recommendations for most common cabling situations. The following is not a complete list, only a sample of some of the more commonly used cables and applications. Some of the equipment in a given sound system may have different pinouts than the given examples. Consult the documentation for that equipment.

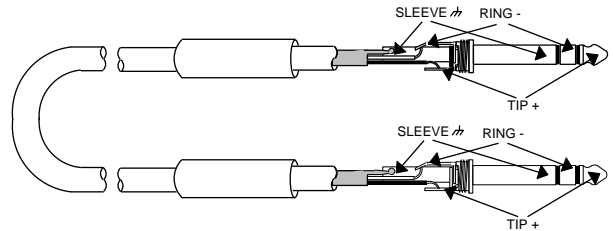
**NOTE:** All audio cables must be shielded. Except for the Shure Link cable, none of the cables shown is supplied with the DFR11EQ Version 5.

- Mixer Line Out to DFR11EQ Input
- DFR11EQ Output to Amplifier Input
- DFR11EQ Output to Mixer Sub Return
- Mixer Send to DFR11EQ Input
- Mixer Sub Send to DFR11EQ Input

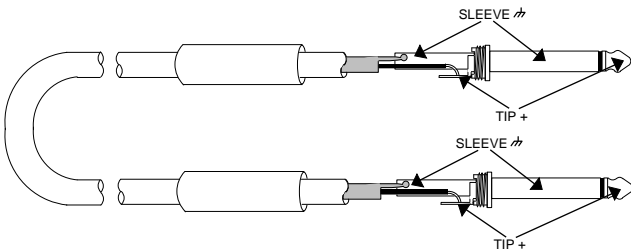
### XLR (MALE) TO XLR (FEMALE)



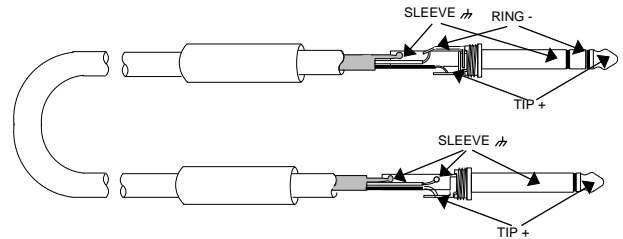
### 1/4 IN. TO 1/4 IN. BALANCED



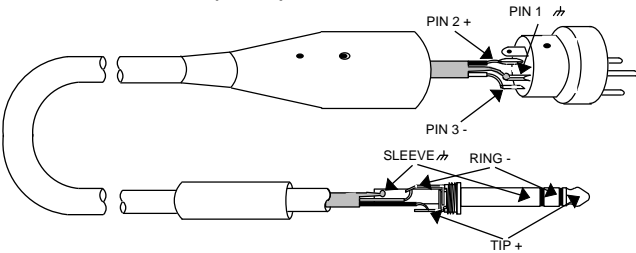
### 1/4 IN. TO 1/4 IN. UNBALANCED



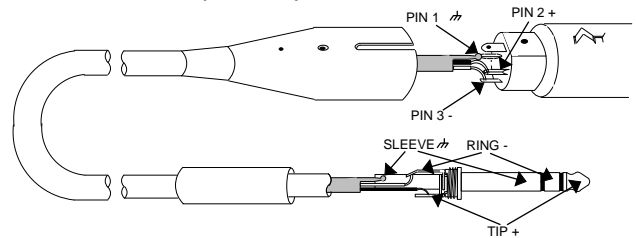
### 1/4 IN. BALANCED TO 1/4 IN. UNBALANCED



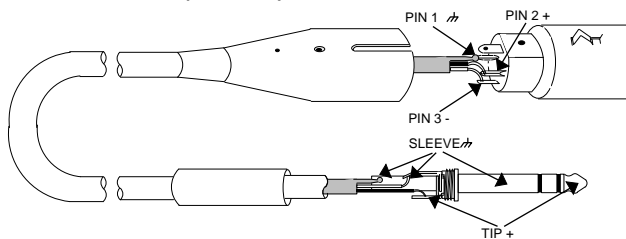
### XLR (MALE) TO 1/4 IN. BALANCED



### XLR (FEMALE) TO 1/4 IN. BALANCED

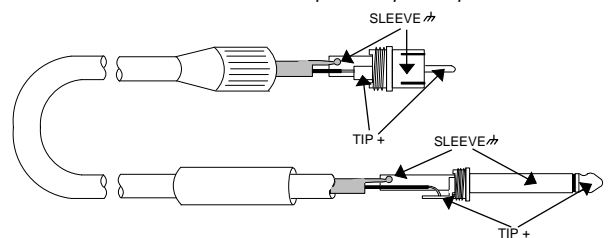


### XLR (FEMALE) TO 1/4 IN. UNBALANCED



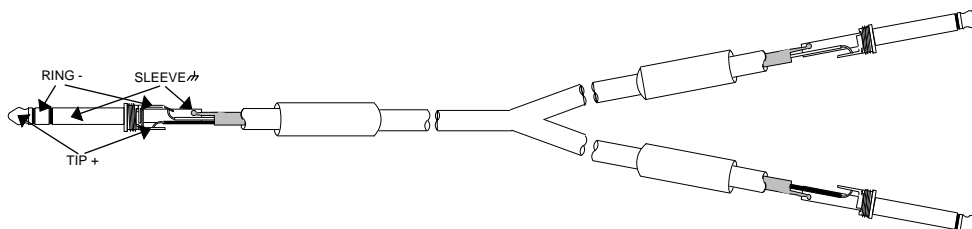
### RCA TO 1/4 IN. UNBALANCED

- DFR11EQ output to amplifier input



### Y-ADAPTER CABLE, 1/4 IN. BALANCED TO 1/4 IN. UNBALANCED

- Mixer send/return (insert) to DFR11EQ input and output

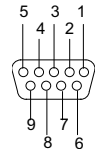
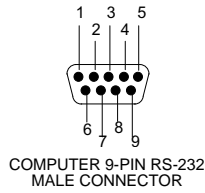
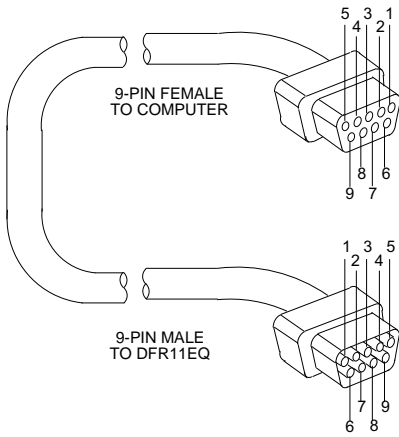


## DIGITAL CONNECTORS AND CABLES

### BRETELLE ¼ PO SYMÉTRIQUE À ¼ PO ASYMÉTRIQUE

**NOTE:** All digital connectors and cables must be shielded.

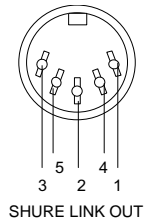
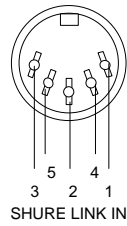
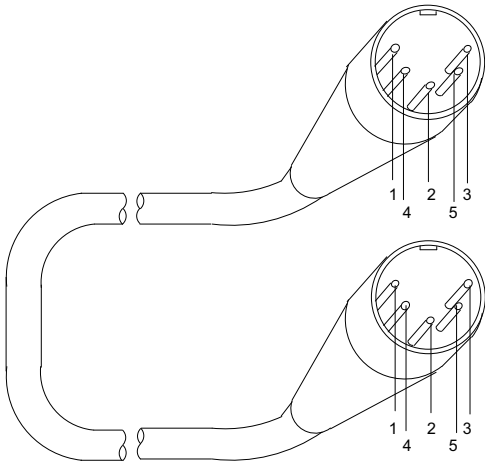
#### COMPUTER INTERFACE: 9-PIN TO 9-PIN RS-232 CABLE



DFR11EQ RS-232 FEMALE CONNECTOR

FUNCTION	PIN #
-	1
RX	2
TX	3
DTR	4
GND	5
DSR	6
RTS	7
CTS	8
-	9

#### SHURE LINK CABLE: 5-PIN DIN CABLE (MIDI-COMPATIBLE CABLE)



FUNCTION	PIN #
-	1
DATA	4
SHIELD	2
DATA	5
-	3



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