



**Installation and Operation Manual**

**for the**

**IPC-1, Bi-Directional stereo level matching interface**

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IPC-1, Bi-Directional stereo level matching interface

**INTRODUCTION**

Thank you for your purchase of a Broadcast Tools, Inc., IPC-1, Bi-Directional stereo level matching interface. We're confident this product will give you many years of dependable service. This manual is intended to give you all the information needed to install and operate the unit.



NOTE: This manual should be read thoroughly before installation and operation.

**SAFETY INFORMATION**

Only qualified personnel should install Broadcast Tools products. Incorrect or inappropriate use and/or installation could result in a hazardous condition.

Broadcast Tools Products, as any electronic device, can fail without warning. Do not use this product in applications where a life threatening condition could result due to failure.

**WHO TO CONTACT FOR HELP**

If you have any questions regarding your product, or you need assistance, please *contact your distributor from whom you purchased this equipment or contact us directly.*

If you would like more information about Broadcast Tools, Inc., products, you may reach us at:

**Broadcast Tools, Inc.  
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Thank you for choosing Broadcast Tools!

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**BROADCAST TOOLS, INC.  
LIMITED WARRANTY AND REMEDIES**

**LIMITED WARRANTY**

The term "Buyer" as used in this document refers to and includes both (but only) (a) any person or entity who acquires such an item for the purpose of resale to others (i.e., a dealer or distributor of an item), and (b) the first person or entity who acquires such an item for such person's or entity's own use.

Broadcast Tools warrants to each Buyer of any item manufactured by Broadcast Tools that the item will be free from defects in materials and workmanship at the time its is shipped by Broadcast Tools if the item is properly installed, used and maintained.

**EXCLUSIVE REMEDIES**

If Broadcast Tools is notified of in writing of a failure of any item manufactured by Broadcast Tools to conform to the foregoing Limited Warranty within one (1) year following the date of the Buyer's acquisition of the item, and if the item is returned in to Broadcast Tools in accordance with Broadcast Tools' instructions for confirmation by inspection of the defect (which at Broadcast Tools' election may include, without limitation, a requirement that the Buyer first obtain a Return Authorization number from Broadcast Tools, that the Buyer furnish proof of purchase in the form of an invoice and/or receipt, and that the Buyer prepay all freight charges associated with any return of the item to Broadcast Tools using such freight service as Broadcast Tools reasonably may specify), Broadcast Tools will repair or replace the defective item, or will refund the purchase price paid by the Buyer for the item. Broadcast Tools shall have the exclusive right to choose between these alternative remedies.

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**SPECIFICATIONS**

**IHF Input to Professional Output**

IHF Input Level	-10dBv Nom, @ 23K $\Omega$ , Hi Gain -20dBv @ 10K $\Omega$
Gain	6 to 30db
Professional output level	+4dBu nom, + 24dBu max. @ 100 $\Omega$ , active balanced
Frequency Response	DC to 20kHz, +/- 0.25dB
Noise	87dB below nom, output
THD	.007% any frequency
IMD (250/7kHz)	.009%

**Professional Input to IHF Output**

Professional Input Level	Max, +26dBu, Nom, @ 25K $\Omega$ , active balanced
Gain	-15dB to Off
IHF output level	-10dBv nom, @ 2K $\Omega$
Frequency Response	DC to 20kHz, +/- 0.25dB
Noise	82dB below nom, output
THD	.007% any frequency
IMD (250/7kHz)	.009%
Interfacing	<i>IHF Inputs and Outputs</i> – Gold Phono Jacks (RCA) <i>Professional Inputs and Outputs</i> – Removable screw terminals
Power Requirement	16.5 Vac, 600 ma, wall transformer, Supplied.
Dimensions	7.75"W x 1.00"H x 4.00"D.
Weight	2.0 lb.

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**PRODUCT DESCRIPTION**

The IPC-1 is an active bi-directional stereo level-matching interface. The IPC-1 is designed to interface IHF consumer (-10dBv or -20dBv) audio equipment with professional (+4/+8dBu) audio equipment. The IPC-1 is equipped with input and output level controls. The IHF inputs and outputs feature gold plated phone jacks, while the professional inputs and outputs are provided with removable screw terminals and are active balanced insuring immunity from hum and RF pick-up. The direct-coupled circuitry provides for sonic transparency.

**APPLICATIONS**

Active bi-directional stereo level matching for Digital audio systems, R-Dat, Mini-Disk, Cassette, CD player, etc.

**POWER**

2.1mm coaxial type (barrel) power connector and 16.5Vac @ 600ma wall transformer. (220 Vac 50-60 Hz wall transformer OPTIONAL)

**IHF INPUT/OUTPUT CONNECTORS**

Gold phono (RCA) connectors

**PROFESSIONAL LEVEL INPUT/OUTPUT CONNECTORS**

Removable Screw Terminals

**INSTALLATION**

Installation of the IPC-1 in **high RF environments** should be performed with care. Shielded cable is suggested for all audio inputs and outputs. All shields should be tied to the Ground terminals. The station ground should be connected to the chassis ground screw located on the far right side of the IPC-1 as viewed from the rear. It is recommended that all cables connected to the IPC-1 be looped through ferrite cores to suppress RF. Surge protection with RF filtering such as the Tripp Lite "ISOBAR 4 or 6" is also suggested for the wall transformer.

The IPC-1 is a breeze to install. Professional inputs and outputs are connected via removable screw terminals. Installation of the IPC-1 consists of five steps:

1. Inspection
2. Bench test
3. Mount the unit
4. Connect your equipment to the unit
5. Adjust levels

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**INSTALLATION**, cont.

**STEP 1: INSPECTION**

Please examine your IPC-1 carefully for any damage that may have been sustained during shipping. If any is noted, please notify the shipper immediately. Retain the packaging for inspection by the shipper. The package should contain the IPC-1, 16.5Vac @ 600ma wall power transformer and this manual.

**STEP 2: BENCH TEST**

Place the IPC-1 on a workspace and connect power to the unit. Check to see if the power LED is lit.

- 1 - Connect the "IHF" source to the IPC-1 "IHF" input phono jacks.
  - 2 - Connect the IPC-1 "PRO" outputs to the desired Professional input.
  - 3 - Connect the professional source to the IPC-1 "PRO" input removable screw terminals.
  - 4 - Connect the IPC-1 "IHF" outputs to the desired "IHF" input
- Verify that the audio signals are present. Repeat the process until each channel's operation has been verified. Remove all cables and install at the desired location

**STEP 3: MOUNTING**

Mount the unit allowing adequate airflow for cooling.

**STEP 4: CONNECT YOUR EQUIPMENT**

- 1 - Connect the "IHF" source to the IPC-1 "IHF" input phono jacks.
- 2 - Connect the IPC-1 "PRO" outputs to the desired Professional input.
- 3 - Connect the professional source to the IPC-1 "PRO" input removable screw terminals.
- 4 - Connect the IPC-1 "IHF" outputs to the desired "IHF" input.

**STEP 5: SET LEVELS**

Adjust the level controls to the required level. If more gain is needed, install the "HI-Gain" jumpers for each channel. Jumper descriptions are below.

- \* IHF # 1 left input "HI-Gain jumper, install Jp-1
- \* IHF # 1 right input "HI-Gain jumper, install Jp-2

**MONAURAL JUMPERS**

- \* Jumper JpP-3 monaural setup for IHF inputs
- \* Jumper Jp-4 monaural setup for IHF outputs