

Kramer Electronics, Ltd.



USER MANUAL

Model:

482xl

Bi-directional Audio Transcoder

Contents

1	Introduction	1
2	Getting Started	1
3	Overview	2
4	Your Bi-directional Audio Transcoder	2
5	Connecting the Bi-directional Audio Transcoder	4
5.1	Adjusting the Audio Output Level	6
6	Technical Specifications	6

Figures

Figure 1:	482xl Bi-directional Audio Transcoder	3
Figure 2:	482xl Bi-directional Audio Transcoder – Top / Lower Side Panels	3
Figure 3:	482xl Bi-directional Audio Transcoder Connections	5

Tables

Table 1:	Features and Functions of the 482xl Bi-directional Audio Transcoder	4
Table 2:	Technical Specifications of the 482xl Bi-directional Audio Transcoder	6

1 Introduction

Welcome to Kramer Electronics (since 1981): a world of unique, creative and affordable solutions to the infinite range of problems that confront the video, audio and presentation professional on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better! Our 350-plus different models now appear in 8 Groups¹, which are clearly defined by function.

Congratulations on purchasing your Kramer Tools **482xl Bi-directional Audio Transcoder**. This product is ideal for:

- Video and audio production facilities
- Audio recording studios
- Live sound applications

The package includes the following items:

- **482xl Bi-directional Audio Transcoder**
- Power adapter (12V DC Input)
- This user manual²

2 Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment
- Review the contents of this user manual
- Use Kramer high performance high resolution cables³

1 GROUP 1: Distribution Amplifiers; GROUP 2: Video and Audio Switchers, Matrix Switchers and Controllers; GROUP 3: Video, Audio, VGA/XGA Processors; GROUP 4: Interfaces and Sync Processors; GROUP 5: Twisted Pair Interfaces; GROUP 6: Accessories and Rack Adapters; GROUP 7: Scan Converters and Scalers; and GROUP 8: Cables and Connectors

2 Download up-to-date Kramer user manuals from our Web site: <http://www.kramerelectronics.com>

3 The complete list of Kramer cables is on our Web site at <http://www.kramerelectronics.com>

3 Overview

Your **482xl** *Bi-directional Audio Transcoder* has two separate channels that function independently of each other¹:

- Converting an unbalanced audio input signal to a balanced² audio output signal on one channel
- Converting a balanced audio input signal to an unbalanced audio output signal on the other channel

In addition, the **482xl** *Bi-directional Audio Transcoder*:

- Lets you adjust the gain or attenuation while transcoding, to compensate for the 14dB change between IHF audio levels and the state-of-the-art balanced DAT input levels
- Is designed with very low noise and low distortion components

To achieve the best performance:

- Connect only good quality connection cables, thus avoiding interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables)
- Use good quality sockets and connectors to avoid signal path breaks³. Aim for Zero Ohm connection resistance
- Avoid interference from neighboring electrical appliances that may adversely influence signal quality and position your Kramer **482xl** away from moisture, excessive sunlight and dust

4 Your Bi-directional Audio Transcoder

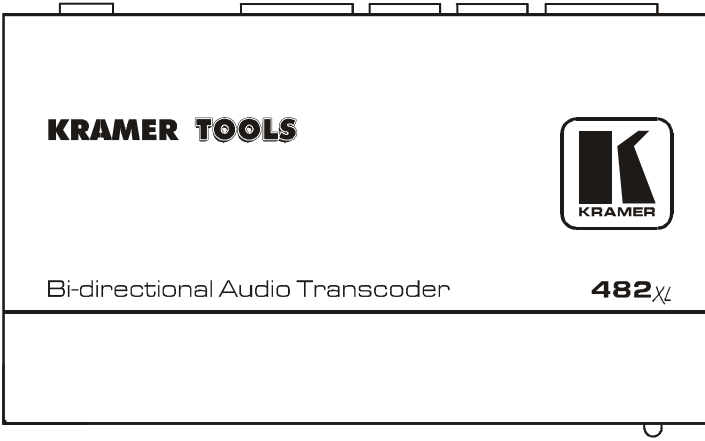
Figure 1, Figure 2 and Table 1 define the **482xl** *Bi-directional Audio Transcoder*:

1 As both channels function independently, you can use just one channel or both channels simultaneously

2 Balanced audio is more immune to noise and interference

3 Poor quality connectors tend to rust, which may cause breaks

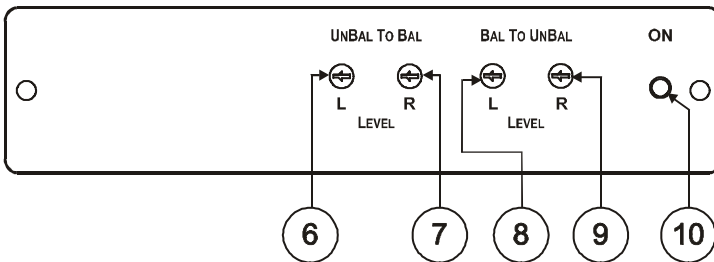
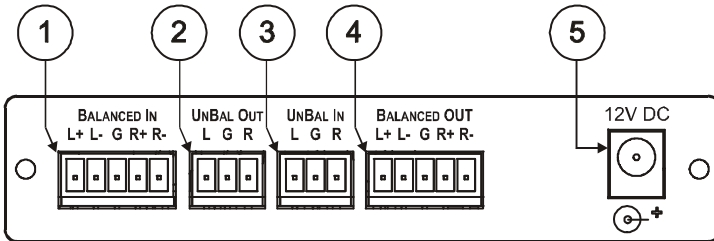
Top Side Panel



Lower Side Panel

Figure 1: 482xl Bi-directional Audio Transcoder

Top Side Panel



Lower Side Panel

Figure 2: 482xl Bi-directional Audio Transcoder – Top / Lower Side Panels

Table 1: Features and Functions of the 482xl Bi-directional Audio Transcoder

#	Feature		Function
1	BALANCED IN 5-pin Terminal Block Connector		Connect to the balanced audio source
2	UNBAL OUT 3-pin Terminal Block Connector		Connect to the unbalanced audio acceptor
3	UNBAL IN 3-pin Terminal Block Connector		Connect to the unbalanced audio source
4	BALANCED OUT 5-pin Terminal Block Connector		Connect to the balanced audio acceptor
5	12V DC		+12V DC connector for powering the unit
6	UNBAL TO BAL	L LEVEL Trimmer	Adjust ¹ the left balanced audio output signal level
7		R LEVEL Trimmer	Adjust ¹ the right balanced audio output signal level
8	BAL TO UNBAL	L LEVEL Trimmer	Adjust ¹ the left unbalanced audio output signal level
9		R LEVEL Trimmer	Adjust ¹ the right unbalanced audio output signal level
10	ON LED		Illuminates when receiving power

5 Connecting the Bi-directional Audio Transcoder

This section describes how you can use the **482xl** to convert the unbalanced audio signal to a balanced audio signal and the balanced audio signal to an unbalanced audio signal.

To convert the audio input signals at the UNBAL IN² and the BALANCED IN³ connectors, as the example illustrated in Figure 3 shows, do the following:

1. Connect the unbalanced audio source (for example, an unbalanced audio player) to the UNBAL IN 3-pin terminal block connector.
2. Connect the BALANCED OUT 5-pin terminal block connector to the balanced audio acceptor (for example, a balanced audio recorder).
3. Connect the balanced audio source (for example, a balanced audio player) to the BALANCED IN 5-pin terminal block connector.
4. Connect the UNBAL OUT 3-pin terminal block connector to the unbalanced audio acceptor (for example an unbalanced audio recorder).
5. Connect the 12V DC power adapter to the power socket and connect the adapter to the mains electricity (not shown in Figure 3).

¹ Insert a screwdriver into the small hole and carefully rotate it, trimming the appropriate level

² To the balanced audio output

³ To the unbalanced audio output

Connecting the Bi-directional Audio Transcoder

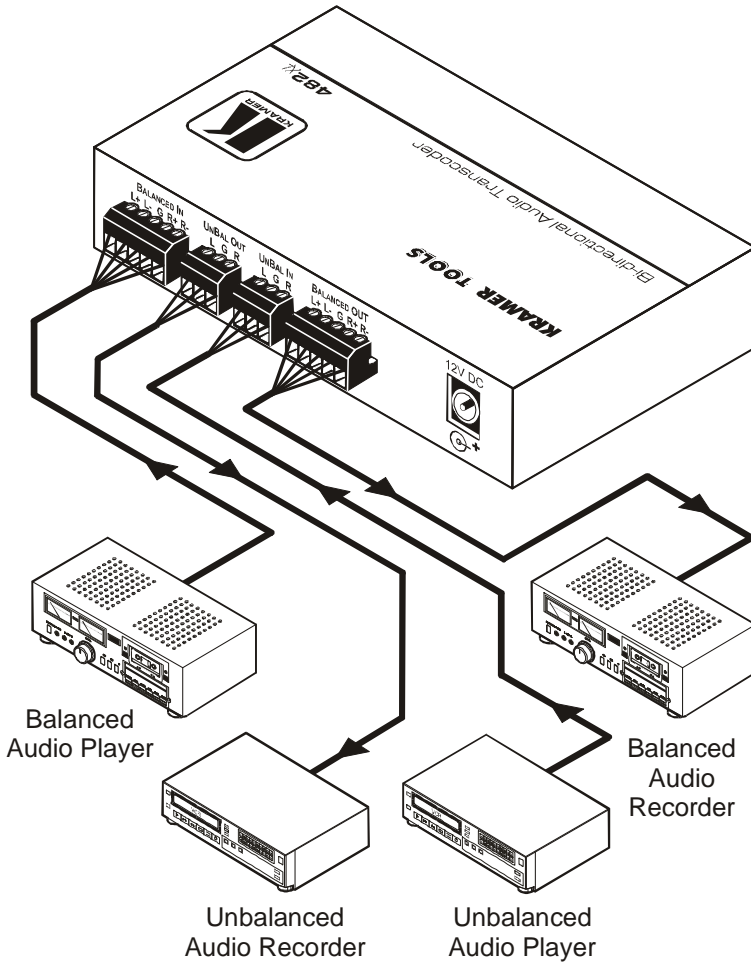


Figure 3: 482xl Bi-directional Audio Transcoder Connections

5.1 Adjusting the Audio Output Level

The **482xl Bi-directional Audio Transcoder** comes factory pre-set for 1:1 transparency¹.

To adjust the appropriate audio output levels:

1. Insert a screwdriver into one of the four small holes² on the lower side of the **482xl Bi-directional Audio Transcoder**, enabling access to the appropriate trimmer.
2. Carefully rotate the screwdriver, adjusting the appropriate audio output level, as required.

6 Technical Specifications

Table 2 includes the technical specifications³:

Table 2: Technical Specifications of the 482xl Bi-directional Audio Transcoder

INPUTS:	1 unbalanced audio stereo on a 3-pin terminal block connector 1 balanced audio stereo on a 5-pin terminal block
OUTPUTS:	1 balanced audio stereo on a 5-pin terminal block connector 1 unbalanced audio stereo on a 3-pin terminal block connector
MAX. OUTPUT LEVEL:	Balanced: 21dBm; unbalanced: 21dBm @ max gain
BANDWIDTH (-3dB):	>100 kHz
CONTROLS:	-57dB to + 6dB (balanced to unbalanced level); -16dB to + 19dB (unbalanced to balanced level)
COUPLING:	Balanced to unbalanced: in=AC, out=DC; Unbalanced to balanced: in=AC, out=DC
THD+NOISE:	0.049%
2ND HARMONIC:	0.005%
S/N RATIO:	95db/87dB @ balanced to unbalanced/unbalanced to balanced, unweighted
POWER SOURCE:	12 VDC, 190 mA (fully loaded)
DIMENSIONS:	12cm x 7.5cm x 2.5cm (4.7" x 2.95" x 0.98"), W, D, H
WEIGHT:	0.3 kg. (0.66 lbs.) approx.
ACCESSORIES:	Power supply, mounting bracket
OPTIONS:	19" rack adapters RK-T1, RK-T3

1 Readjusting the 482xl Bi-directional Audio Transcoder will upset this transparency. However, if necessary, you can fine-tune both channels' audio output levels

2 See Figure 2

3 Specifications are subject to change without notice

LIMITED WARRANTY

Kramer Electronics (hereafter *Kramer*) warrants this product free from defects in material and workmanship under the following terms.

HOW LONG IS THE WARRANTY

Labor and parts are warranted for seven years from the date of the first customer purchase.

WHO IS PROTECTED?

Only the first purchase customer may enforce this warranty.

WHAT IS COVERED AND WHAT IS NOT COVERED

Except as below, this warranty covers all defects in material or workmanship in this product. The following are not covered by the warranty:

1. Any product which is not distributed by Kramer, or which is not purchased from an authorized Kramer dealer. If you are uncertain as to whether a dealer is authorized, please contact Kramer at one of the agents listed in the web site www.kramerelectronics.com.
2. Any product, on which the serial number has been defaced, modified or removed.
3. Damage, deterioration or malfunction resulting from:
 - i) Accident, misuse, abuse, neglect, fire, water, lightning or other acts of nature
 - ii) Product modification, or failure to follow instructions supplied with the product
 - iii) Repair or attempted repair by anyone not authorized by Kramer
 - iv) Any shipment of the product (claims must be presented to the carrier)
 - v) Removal or installation of the product
 - vi) Any other cause, which does not relate to a product defect
 - vii) Cartons, equipment enclosures, cables or accessories used in conjunction with the product

WHAT WE WILL PAY FOR AND WHAT WE WILL NOT PAY FOR

We will pay labor and material expenses for covered items. We will not pay for the following:

1. Removal or installations charges.
2. Costs of initial technical adjustments (set-up), including adjustment of user controls or programming. These costs are the responsibility of the Kramer dealer from whom the product was purchased.
3. Shipping charges.

HOW YOU CAN GET WARRANTY SERVICE

1. To obtain service on you product, you must take or ship it prepaid to any authorized Kramer service center.
2. Whenever warranty service is required, the original dated invoice (or a copy) must be presented as proof of warranty coverage, and should be included in any shipment of the product. Please also include in any mailing a contact name, company, address, and a description of the problem(s).
3. For the name of the nearest Kramer authorized service center, consult your authorized dealer.

LIMITATION OF IMPLIED WARRANTIES

All implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to the length of this warranty.

EXCLUSION OF DAMAGES

The liability of Kramer for any effective products is limited to the repair or replacement of the product at our option. Kramer shall not be liable for:

1. Damage to other property caused by defects in this product, damages based upon inconvenience, loss of use of the product, loss of time, commercial loss; or:
2. Any other damages, whether incidental, consequential or otherwise. Some countries may not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, which vary from place to place.

NOTE: All products returned to Kramer for service must have prior approval. This may be obtained from your dealer. This equipment has been tested to determine compliance with the requirements of:

EN-50081:	"Electromagnetic compatibility (EMC); generic emission standard. Part 1: Residential, commercial and light industry"
EN-50082:	"Electromagnetic compatibility (EMC) generic immunity standard. Part 1: Residential, commercial and light industry environment".
CFR-47:	FCC Rules and Regulations: Part 15: "Radio frequency devices Subpart B – Unintentional radiators"

CAUTION!

- ☒ Servicing the machines can only be done by an authorized Kramer technician. Any user who makes changes or modifications to the unit without the expressed approval of the manufacturer will void user authority to operate the equipment.
- ☒ Use the supplied DC power supply to feed power to the machine.
- ☒ Please use recommended interconnection cables to connect the machine to other components.





For the latest information on our products and a list of Kramer distributors, visit our Web site: www.kramerelectronics.com, where updates to this user manual may be found. We welcome your questions, comments and feedback.



Caution

Safety Warning:

Disconnect the unit from the power supply before opening/servicing.



Kramer Electronics, Ltd.

Web site: www.kramerelectronics.com

E-mail: info@kramerel.com

P/N: 2900-000134 REV 1