USER MANUAL

MODEL:

TBUS-1N
Table Connection Bus
TBUS-1N Quick Start Guide

This guide helps you install and use your product for the first time. For more detailed information, go to http://www.kramerav.com/manual/TBUS-1N to download the latest manual or scan the QR code on the left.

Step 1: Check what’s in the box

- The TBUS-1N table connection bus
- 2 Table clamps
- 1 Quick start guide
- 1 Cut out template

Step 2: Prepare the TBUS-1N for mounting

Assemble the Inner Frame. Carefully insert the power sockets and inserts to the inner frame.

Adjust the height of the Inner Frame.

Mount the Inner Frame into the TBUS-1N enclosure.

Note that the power sockets and inserts are purchased separately.

Step 3: Prepare the table for mounting

Cut out an opening in the table using the cut out template.

Step 4: Install the TBUS-1N into the table

Insert the unit through the table opening.

Secure the unit to the table.

Connect the cables.
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1 Introduction

Welcome to Kramer Electronics! Since 1981, Kramer Electronics has been providing a world of unique, creative, and affordable solutions to the vast range of problems that confront video, audio, presentation, and broadcasting professionals on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better!

Our 1,000-plus different models now appear in 14 groups that are clearly defined by function: GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Routers; GROUP 3: Control Systems; GROUP 4: Format/Standards Converters; GROUP 5: Range Extenders and Repeaters; GROUP 6: Specialty AV Products; GROUP 7: Scan Converters and Scalers; GROUP 8: Cables and Connectors; GROUP 9: Room Connectivity; GROUP 10: Accessories and Rack Adapters; GROUP 11: Sierra Video Products; GROUP 12: Digital Signage; GROUP 13: Audio; and GROUP 14: Collaboration.

Thank you for purchasing the Kramer TBUS-1N Table Connection Bus which is ideal for boardrooms, conference and training rooms!

Note that the inner frame, power socket assembly, power cord and other inserts for the TBUS-1N enclosure are purchased separately.
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 cables

Go to [www.kramerav.com/downloads/TBUS-1N](http://www.kramerav.com/downloads/TBUS-1N) to check for up-to-date user manuals and a complete list of Kramer wall plates and module.

2.1 Achieving the Best Performance

To achieve the best performance:

- Use only good quality connection cables (we recommend Kramer high-performance, high-resolution cables) to avoid interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables).
- Do not secure the cables in tight bundles or roll the slack into tight coils.
- Avoid interference from neighboring electrical appliances that may adversely influence signal quality.
- Position your Kramer TBUS-1N away from moisture, excessive sunlight and dust.

This equipment is to be used only inside a building. It may only be connected to other equipment that is installed inside a building.

Do not place heavy objects on top of the TBUS-1N.
2.2 Recycling Kramer Products

The Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC aims to reduce the amount of WEEE sent for disposal to landfill or incineration by requiring it to be collected and recycled. To comply with the WEEE Directive, Kramer Electronics has made arrangements with the European Advanced Recycling Network (EARN) and will cover any costs of treatment, recycling and recovery of waste Kramer Electronics branded equipment on arrival at the EARN facility. For details of Kramer’s recycling arrangements in your particular country go to our recycling pages at www.kramerav.com/support/recycling/.
3 Overview

The TBUS-1N is a modular furniture-mounted connection bus enclosure that is easily installed into a table or podium top. Once assembled, the TBUS-1N lets you connect any equipment to the room’s presentation system installations via cable access or passive interfaces (see Figure 1). When the cables are not in use, they can be stored inside the unit, covered by the lid and out of sight.

In addition, the TBUS-1N features:

- A modular design, letting you tailor the TBUS-1N according to your requirements
- A black anodized or brushed clear aluminium lid with a special opening for cable pass-through, (note that other customized colors can also be ordered)
- Height adjustment screw holes to set the inner frame (ordered separately) to the desired height
- Single or dual power socket openings that are suitable for any of the following power sockets: for the USA, the UK, Switzerland, Germany (the Europlug), Belgium-France, Italy, Australia, Israel, Brazil, South Africa or “Universal” for use anywhere (see compatibility restrictions in Section 7).

Order the power sockets separately from Kramer Electronics.

The TBUS-1N cover opens and closes manually. When open, the cover retracts into the unit to remain out of sight when the TBUS-1N is in use. When closed, all the cables and connectors are out of sight under the anodized cover.

Figure 1: TBUS-1N inside Table

Do not place heavy objects on top of the TBUS-1N.
Defining the TBUS-1N

This section defines the TBUS-1N.

Figure 2: TBUS-1N Table Connection Bus – Front View

<table>
<thead>
<tr>
<th>#</th>
<th>Feature</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Black/Clear Anodized Sandblast Textured Lid</td>
<td>Includes an opening for cable pass-through; covers the inner frame, leaving the table surface neat and tidy. When lid is open, retracts into the unit to remain out of sight.</td>
</tr>
<tr>
<td>2</td>
<td>Outer Rim</td>
<td>Fits over the table surface. A protective rubber guard protects the outer rim during shipping. Remove it before installing the unit.</td>
</tr>
<tr>
<td>3</td>
<td>Enclosure</td>
<td>Inserted into the table cut out.</td>
</tr>
<tr>
<td>4</td>
<td>Tie Holes</td>
<td>Insert the self-locking tie through the holes to fix the pass-through cables to the inside walls of the unit.</td>
</tr>
<tr>
<td>5</td>
<td>TOOL Height Adjustment Screw Holes</td>
<td>Used for installing Kramer TOOLs.</td>
</tr>
</tbody>
</table>
### Table Clamping Set

<table>
<thead>
<tr>
<th>Feature</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mounting Brackets (2 units)</td>
<td>Place in the bracket slits after inserting the enclosure into the table – for securing the unit to the table surface (one for each clamp).</td>
</tr>
<tr>
<td>Mounting Butterfly Screws</td>
<td>Tighten to secure the unit to the table surface (one for each clamp).</td>
</tr>
<tr>
<td>Locking Butterfly Screws</td>
<td>Tighten to lock the mounting butterfly screw (one for each clamp).</td>
</tr>
<tr>
<td>Rubber Protectors</td>
<td>Protect the table surface when mounting the unit and ensure soft tightening to the table underside (one for each clamp).</td>
</tr>
</tbody>
</table>

#### 4.1 TBUS-1N Optional Inner Frames

The following inner frames can be installed in the TBUS-1N enclosure:

<table>
<thead>
<tr>
<th>Inner Frames for TBUS-1N</th>
<th>Specifications</th>
</tr>
</thead>
</table>
| T1AF-16 (P/N: 80-000299) | 1 opening for 1 power socket  
2 cable pass-through inserts  
4 blank inserts |
| T1AF-26 (P/N: 80-000399) | 1 opening for 2 power sockets  
2 cable pass-through inserts  
4 blank inserts |
| T1AF-44 (P/N: 80-000499) | 2 openings for 4 power sockets  
2 cable pass-through inserts  
2 blank inserts |
4.2 TBUS-1N Accessories

<table>
<thead>
<tr>
<th>Accessories</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inserts</td>
<td>You can install any wall plate devices as well as any of the single or dual inserts—see our Web site for details.</td>
</tr>
<tr>
<td>T-RC8IR (P/N: 80-000599)</td>
<td>1 special panel to fit the Kramer RC-8IR Control Panel into the appropriate frame (P/N 80-000399 or P/N 80-000499 instead of two power sockets)</td>
</tr>
</tbody>
</table>

Custom made inner frames can be designed if required. Contact Kramer Electronics for more details.
### Accessories

<table>
<thead>
<tr>
<th>Accessories</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-4INSERT (P/N: 60-100199)</td>
<td>The T-4INSERT kit can be installed inside a dual power socket opening and includes:</td>
</tr>
<tr>
<td></td>
<td>2 single cable pass-through insert</td>
</tr>
<tr>
<td></td>
<td>2 dual cable pass-through insert</td>
</tr>
<tr>
<td>T-2INSERT (P/N: 80-0006699)</td>
<td>The T-2INSERT kit can be installed inside a single power socket opening and includes:</td>
</tr>
<tr>
<td></td>
<td>1 single cable pass-through insert</td>
</tr>
<tr>
<td></td>
<td>1 dual cable pass-through insert</td>
</tr>
<tr>
<td>T-TBLANK (P/N: 80-005099)</td>
<td>This TOOL blank covers a TOOL opening for the T1AF-1T3 (P/N: 80-005199) and T1AF-14T (P/N: 80-005299) inner frames</td>
</tr>
</tbody>
</table>

### 4.3 Power Socket Options

Inner frames support installing one or more of the following power socket assemblies.

**Note:** The Brazilian power sockets are supplied as dual power sockets in a single power socket assembly (see table below).

#### 4.3.1 Single Power Socket Assemblies

<table>
<thead>
<tr>
<th>Power Socket Type</th>
<th>Power Specs</th>
<th>Power Socket Type</th>
<th>Power Specs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universal:</td>
<td>TS-1U (80-000899)</td>
<td>Fully compatible with power plugs in the UK, India, Italy and Denmark, as well as with the 2-prong Europlug.</td>
<td>Fully compatible with power plugs in the UK, India, Italy and Denmark, as well as with the 2-prong Europlug.</td>
</tr>
<tr>
<td></td>
<td>100-240V AC, 50/60Hz, 5A Maximum 5A per power outlet</td>
<td>Partially compatible (if the polarity is reversed) with plugs in China, Switzerland, Israel and the USA. The universal socket does not supply grounding to plugs in Central Europe and France and so you should order country specific sockets instead.</td>
<td>Partially compatible (if the polarity is reversed) with plugs in China, Switzerland, Israel and the USA. The universal socket does not supply grounding to plugs in Central Europe and France and so you should order country specific sockets instead.</td>
</tr>
<tr>
<td>USA:</td>
<td>TS-1US (80-000999)</td>
<td></td>
<td>UK</td>
</tr>
<tr>
<td></td>
<td>100-240V AC, 50/60Hz, 5A Maximum 5A per power outlet</td>
<td>TS-1UK (91-000022)</td>
<td>100-240V AC, 50/60Hz, 5A Maximum 5A per power outlet</td>
</tr>
<tr>
<td>Power Socket Type</td>
<td>Power Specs</td>
<td>Power Socket Type</td>
<td></td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------</td>
<td>-------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Belgium and France:</strong></td>
<td>TS-1FR (80-001399) 100-240V AC, 50/60Hz, 5A Maximum 5A per power outlet</td>
<td>TS-1IL (80-001799) 220V AC, 50/60Hz, 5A Maximum 5A per power outlet</td>
<td></td>
</tr>
<tr>
<td><strong>Germany and EU:</strong></td>
<td>TS-1DE (80-001299) 100-240V AC, 50/60Hz, 5A Maximum 5A per power outlet</td>
<td>TS-1ZA (80-001699) 100-240V AC, 50/60Hz, 5A Maximum 5A per power outlet</td>
<td></td>
</tr>
<tr>
<td><strong>Italy:</strong></td>
<td>TS-1IT (80-001499) 100-240V AC, 50/60Hz, 5A Maximum 5A per power outlet</td>
<td>TS-1AU (80-001599) 100-240V AC, 50/60Hz, 5A Maximum 5A per power outlet</td>
<td></td>
</tr>
<tr>
<td><strong>Switzerland</strong></td>
<td>TS-1CH (80-000027) 100-240V AC, 50/60Hz, 5A Maximum 5A per power outlet</td>
<td>TS-BR (80-000034) 100-240V AC, 50/60Hz, 5A Maximum 5A/2.5A per power outlet</td>
<td></td>
</tr>
</tbody>
</table>
## 4.3.2 Dual Power Socket Assemblies

<table>
<thead>
<tr>
<th>Dual Power Socket Assemblies:</th>
<th>Power Specs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Universal:</strong></td>
<td>TS-2U (80-001899)</td>
</tr>
<tr>
<td></td>
<td>100-240V AC, 50/60Hz, 5A</td>
</tr>
<tr>
<td></td>
<td>Maximum 5A/2.5A per power outlet</td>
</tr>
<tr>
<td><strong>USA:</strong></td>
<td>TS-2US (80-001999)</td>
</tr>
<tr>
<td></td>
<td>100-240V AC, 50/60Hz, 5A</td>
</tr>
<tr>
<td></td>
<td>Maximum 5A/2.5A per power outlet</td>
</tr>
<tr>
<td><strong>Belgium and France:</strong></td>
<td>TS-2FR (80-002299)</td>
</tr>
<tr>
<td></td>
<td>100-240V AC, 50/60Hz, 5A</td>
</tr>
<tr>
<td></td>
<td>Maximum 5A/2.5A per power outlet</td>
</tr>
<tr>
<td><strong>Germany and EU:</strong></td>
<td>TS-2DE (80-002199)</td>
</tr>
<tr>
<td></td>
<td>100-240V AC, 50/60Hz, 5A</td>
</tr>
<tr>
<td></td>
<td>Maximum 5A/2.5A per power outlet</td>
</tr>
<tr>
<td><strong>Italy</strong></td>
<td>TS-2IT (80-002399)</td>
</tr>
<tr>
<td></td>
<td>100-240V AC, 50/60Hz, 5A</td>
</tr>
<tr>
<td></td>
<td>Maximum 5A/2.5A per power outlet</td>
</tr>
<tr>
<td><strong>Switzerland</strong></td>
<td>TS-2CH (80-000026)</td>
</tr>
<tr>
<td></td>
<td>220V AC, 50/60Hz, 5A</td>
</tr>
<tr>
<td></td>
<td>Maximum 5A/2.5A per power outlet</td>
</tr>
<tr>
<td><strong>UK</strong></td>
<td>TS-1UK (91-000023)</td>
</tr>
<tr>
<td></td>
<td>220V AC, 50/60Hz, 5A</td>
</tr>
<tr>
<td></td>
<td>Maximum 5A/2.5A per power outlet</td>
</tr>
<tr>
<td><strong>Israel:</strong></td>
<td>TS-2IL (80-002699)</td>
</tr>
<tr>
<td></td>
<td>220V AC, 50/60Hz, 5A</td>
</tr>
<tr>
<td></td>
<td>Maximum 5A/2.5A per power outlet</td>
</tr>
<tr>
<td><strong>South Africa:</strong></td>
<td>TS-2ZA (80-002599)</td>
</tr>
<tr>
<td></td>
<td>220V AC, 50/60Hz, 5A</td>
</tr>
<tr>
<td></td>
<td>Maximum 5A/2.5A per power outlet</td>
</tr>
</tbody>
</table>
Dual Power Socket Assemblies: | Power Specs
---|---
Australia: | TS-2AU (80-002499)
| 100-240V AC, 50/60Hz, 5A
| Maximum 5A/2.5A per power outlet

### 4.4 Power Cord Options

You can order any of the following power cords to use with a modular TBUS:

<table>
<thead>
<tr>
<th>Power Cord Type</th>
<th>Description</th>
<th>P/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>6ft/110V (North America)</td>
<td>C-AC/US (110V)</td>
<td>91-000099</td>
</tr>
<tr>
<td>6ft/125V (Japan)</td>
<td>C-AC/JP (125V)</td>
<td>91-000099</td>
</tr>
<tr>
<td>6ft/220V (Europe)</td>
<td>C-AC/EU (220V)</td>
<td>91-000199</td>
</tr>
<tr>
<td>6ft/220V (Israel)</td>
<td>C-AC/IL (220V)</td>
<td>91-000999</td>
</tr>
<tr>
<td>6ft/250V (UK)</td>
<td>C-AC/UK (250V)</td>
<td>91-000299</td>
</tr>
<tr>
<td>6ft/250V (India)</td>
<td>C-AC/IN (250V)</td>
<td>91-001099</td>
</tr>
<tr>
<td>6ft/250V/10A (China)</td>
<td>C-AC/CN (250V)</td>
<td>91-001199</td>
</tr>
<tr>
<td>6ft/250V/10A (South Africa)</td>
<td>C-AC/ZA (250V)</td>
<td>91-001299</td>
</tr>
</tbody>
</table>

To use one power cord for a 4-socket configuration, you can order any of the following types of power cords separately:

<table>
<thead>
<tr>
<th>Power Cord Type</th>
<th>Description</th>
<th>P/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>110V Y-version (6ft), North America</td>
<td>C-ACY/US</td>
<td>91-000399</td>
</tr>
<tr>
<td>220V Y-version (6ft), Europe</td>
<td>C-ACY/EU</td>
<td>91-000499</td>
</tr>
<tr>
<td>240V Y-version (6ft), UK</td>
<td>C-ACY/UK</td>
<td>91-000599</td>
</tr>
</tbody>
</table>
5 Installing the TBUS-1N

To install the TBUS-1N:

1. Assemble the inner frame (see Section 5.1).
2. Install the inner frame (see Section 5.2).
3. Cut an opening in the table (see Section 5.3).
4. Insert the unit through the opening and secure it to the table (see Section 5.4).
5. Connect the cables (see Section 5.5).
6. Insert the pass-through cables (see Section 5.6).
7. Adjust the height of the inner frame (see Section 5.7).

5.1 Assembling the Inner Frame

The modules mounted on the inner frame can include single inserts and/or dual inserts as well as power sockets and various Kramer devices. This section describes how to assemble these modules.

Each module kit is supplied with detailed assembly instructions.

5.1.1 Mounting the Inserts

You can rearrange or remove any of the plates mounted on the inner frame and replace them with Kramer passive wall plates or connector modules for interfacing A/V type signals.

To mount a Kramer insert or connector module:

1. Unscrew the two screws that fasten the blank plate to the inner frame and remove the blank plate.
2. Place the required Kramer insert over the opening, insert the two screws to fix the Kramer insert in place, and tighten them.
Figure 3: **TBUS-1N** Inner Frame (P/N: 80-000299)

<table>
<thead>
<tr>
<th>#</th>
<th>Feature</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Split Brackets</td>
<td>Support the split grommet for the pass through-cables.</td>
</tr>
<tr>
<td>2</td>
<td>Split Grommets</td>
<td>Push apart slightly to insert cables.</td>
</tr>
<tr>
<td>3</td>
<td>Blank Plates</td>
<td>Four blank covers that can be replaced with wall plates as required.</td>
</tr>
<tr>
<td>4</td>
<td>Power Socket Opening</td>
<td>Suitable for a single power socket or the <strong>T-2INSERT</strong>.</td>
</tr>
<tr>
<td>5</td>
<td>Adjustable Height Screw Holes</td>
<td>For adjusting the height of the inner frame.</td>
</tr>
</tbody>
</table>

5.1.2 **Mounting the Power Socket Assemblies**

To mount the power socket, place the power socket under the frame in its appropriate place and tighten with the two screws (supplied).

*Power socket kits are supplied with assembly instructions.*
5.1.3 Mounting a Kramer TOOL

To mount a TOOL (for example, to the T1AF-14T), as shown in Figure 4:

1. Screw the spacers to their designated places (one on each side).

2. Insert the TOOL, from beneath, through the TOOL opening.

3. Screw the screws (one on each side) through the frame holes and spacers.

Figure 4: Installing a Kramer TOOL

5.1.4 Installing the TOOL Blank

To install the T-TBLANK, as shown in Figure 5:

1. Insert the T-TBLANK from beneath, through the TOOL opening.

2. Screw the screws (one on each side) through the frame.
5.1.5 **Mounting the Special Panel for RC-8IR**

The Kramer T-RC8IR for the TBUS-1N Table Connection bus is used to fit the Kramer RC-8IR Control Panel into the appropriate frame (P/N 80-000399 or P/N 80-000499 instead of two power sockets).

![Diagram showing inner frame attachment hole, faceplate attachment hole, IR IN opening, and faceplate attachment hole](image)

Figure 6: T-RC8IR (P/N: 80-000599)
To replace the RC-8IR faceplate:

1. Unscrew the two faceplate attachment screws and remove the RC-8IR faceplate before installing the T-RC8IR.

![Faceplate attachment hole diagram](image)

Figure 7: RC-8IR Faceplate Holes Table Connection Bus

2. Place the T-RC8IR over the RC-8IR enclosure so that both face plate holes are aligned with the face plate holes on the RC-8IR enclosure and the IR IN receiver fits into the IR IN opening.

3. Insert the faceplate screws through the T-RC8IR and RC-8IR enclosure faceplate holes, and tighten.

To install the T-RC8IR:

1. Insert the T-RC8IR assembly through the dual power socket opening from beneath.

2. Use the two power socket screws to tighten the T-RC8IR assembly in place.

5.1.6 Installing the SI-1VGA / RC-3TB

To install the SI-1VGA / RC-3TB module, place it under the designated opening in the T1AF-14L (P/N: 80-000699) and then screw and tighten it in place using the two screws supplied with the inner frame.
5.2 Installing the Inner Frame

To install the inner frame:

1. Place the inner frame inside the TBUS-1N enclosure.

2. Set the required height using your fingers to bring the inner frame to the desired position, screw and tighten it in place using the height adjustment screws (supplied with the inner frame).

   Inner frame kits come with assembly instructions.

5.3 Cutting an Opening in the Table

To cut an opening in the table:

1. Place the included cut out template (that is included with your TBUS-1N) on the surface of the table exactly where you want to install the TBUS-1N.

2. Attach the template to the table with the included screws (if using the cut out template).

3. Following the inside edge of the template, cut a hole in the table surface with a sabre or keyhole saw according to the dimensions shown in Figure 8 (not to scale).

   The thickness of the table should be 76 mm / 3 inches or less.
4. Unscrew and remove the template from the surface of the table and clean the table surface.
   Take care not to damage the table.
   If needed, you can download a full-scale template from our Web site.

   ! Kramer Electronics is not responsible for any damage caused to the table.

5.4 Inserting the TBUS-1N through the Cut Out Opening

To install TBUS-1N in the opening:

1. Remove the protective rubber guard from around the outer rim of the TBUS-1N housing. **Beware of the sharp edge!**

2. Carefully insert the unit into the prepared opening (see Figure 9).

3. Take the support brackets under the table and place them into the support bracket grooves on both sides of the unit (see Figure 2, item 6).

4. Verify proper alignment of the unit before tightening the mounting screws.

5. Tighten both mounting butterfly screws upward until they reach the table surface (from underneath). Tighten firmly (see Figure 9).
6. Tighten the locking butterfly screws downward until tight against the mounting bracket.

![Figure 9: Inserting TBUS-1N into the Prepared Opening](image)

5.5 Connecting the Cables

**To connect the cables when replacing blank inserts with connector inserts (for example, VGA, audio, HDMI and so on):**

1. Insert the cables to their appropriate connectors from underneath.

2. Secure the cables to the tie holes on the **TBUS-1N**. Do not secure the cables too tightly or too loosely. Leave a small amount of slack.

5.6 Inserting the Pass-through Cables

**To insert the pass through cables (for example, to connect a laptop):**

1. Remove the two screws attaching the split pass-through bracket.

2. Remove the split grommet.

3. Insert the cable through the rectangular opening.

4. Open the split grommet slightly and insert the required cables.
5. Place the split bracket around the grommet and position this assembly over the inner frame.

6. Place the two screws appropriately and tighten the split bracket together with the grommet and inserted cables to the inner frame.

7. Insert the self-locking ties through the tie holes to secure the cables to the inside walls of the enclosure.

Figure 10: Cable Pass-through Insert (P/N: 80-000499)

5.7 Adjusting the Height of the Inner Frame

If needed, you can adjust the inner frame height to accommodate large or bulky cables.

To adjust the inner frame height:

1. Remove the height adjustment screws, while supporting the surface from underneath with your fingers.

2. Raise or lower the inner frame to the required height, insert the screws, and tighten them in place.
6 Using the TBUS-1N

Once the **TBUS-1N** is installed, you can easily customize it to suit your own requirements by plugging in the required A/V equipment, as illustrated in the example in **Figure 11**.

![Figure 11: TBUS-1N Boardroom Installation](image)
### Technical Specifications of the TBUS-1N

#### POWER SOURCE

**AC power limits:**

<table>
<thead>
<tr>
<th>Single Socket Assemblies:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Universal</strong></td>
<td>100-240V AC, 50/60Hz, 5A Maximum 5A per power outlet</td>
</tr>
<tr>
<td><strong>Fully compatible</strong> with power plugs in the UK, India, Italy and Denmark, as well as with the 2-prong Europlug. <strong>Partially compatible</strong> (if the polarity is reversed) with plugs in China, Switzerland, Israel and the USA. The universal socket does not supply grounding to plugs in Central Europe and France (you should order country specific sockets instead). <strong>Not compatible</strong> with South African plugs.</td>
<td></td>
</tr>
<tr>
<td><strong>USA</strong></td>
<td>100-240V AC, 50/60Hz, 5A Maximum 5A per power outlet</td>
</tr>
<tr>
<td><strong>Germany and EU</strong></td>
<td>100-240V AC, 50/60Hz, 5A Maximum 5A per power outlet</td>
</tr>
<tr>
<td><strong>Belgium and France</strong></td>
<td>100-240V AC, 50/60Hz, 5A Maximum 5A per power outlet</td>
</tr>
<tr>
<td><strong>Italy</strong></td>
<td>100-240V AC, 50/60Hz, 5A Maximum 5A per power outlet</td>
</tr>
<tr>
<td><strong>Australia</strong></td>
<td>100-240V AC, 50/60Hz, 5A Maximum 5A per power outlet</td>
</tr>
<tr>
<td><strong>Israel</strong></td>
<td>220V AC, 50/60Hz, 5A Maximum 5A per power outlet</td>
</tr>
<tr>
<td><strong>South Africa</strong></td>
<td>220V AC, 50/60Hz, 5A Maximum 5A per power outlet</td>
</tr>
<tr>
<td><strong>Dual Power Kit Assemblies:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Universal</strong></td>
<td>100-240V AC, 50/60Hz, 5A Maximum 5A/2.5A per power outlet</td>
</tr>
<tr>
<td><strong>USA</strong></td>
<td>100-240V AC, 50/60Hz, 5A Maximum 5A/2.5A per power outlet</td>
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<tr>
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<td>220V AC, 50/60Hz, 5A Maximum 5A/2.5A per power outlet</td>
</tr>
</tbody>
</table>

#### FUSE RATING:

T 6.3A 250V

#### OPERATING TEMPERATURE:

0° to +40°C (32° to 104°F)

#### STORAGE TEMPERATURE:

-40° to +70°C (-40° to 158°F)

#### HUMIDITY:

10% to 90%, RHL non-condensing

#### STORAGE HUMIDITY RANGE:

5 to 95%, RHL, non-condensing

#### DIMENSIONS:

21.4cm x 19.2cm x 13.6cm (8.42” x 7.56” x 5.35”) W, D, H.

#### WEIGHT:

**TBUS-1N:** 2kg (4.4lbs) approx.; accessories (table clamps, metal template and so on): 0.89kg (1.96lbs)

#### ACCESSORIES:

Six self-locking ties, metal template

#### OPTIONS:

Inner frames, passive wall plates and interfaces, power socket kits, power cord

Specifications are subject to change without notice at [www.kramerav.com](http://www.kramerav.com)
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This limited warranty does not cover any damage, deterioration or malfunction resulting from any alteration, modification, improper or unreasonable use or maintenance, misuse, abuse, accident, neglect, exposure to excess moisture, fire, improper packing and shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature. This limited warranty does not cover any damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by Kramer Electronics to make such repairs, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product. This limited warranty does not cover cassettes, equipment enclosures, cables or accessories used in conjunction with this product.

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2. Replace this product with a direct replacement or with a similar product deemed by Kramer Electronics to perform substantially the same function as the original product.

3. Issue a refund of the original purchase price less depreciation to be determined based on the age of the product at the time remedy is sought under this limited warranty.

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SAFETY WARNING
Disconnect the unit from the power supply before opening and servicing

For the latest information on our products and a list of Kramer distributors, visit our Web site where updates to this user manual may be found.

We welcome your questions, comments, and feedback.

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info@kramerel.com