



Passion For Tools



AMTE 400 ASSEMBLY TABLE

USER MANUAL v3.1021

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PURPOSE OF THIS MANUAL

This user manual is intended to familiarize the users with the safe operation and maintenance procedures for the AMTE-400 Assembly Table.

KEEP THIS MANUAL

Make it available to all personnel. Replacements can be obtained free of charge. Please visit www.alfratools.com for more documentation and information.

DISCLAIMERS

READ AND UNDERSTAND ALL OF THE INSTRUCTIONS AND SAFETY INFORMATION IN THIS MANUAL BEFORE OPERATING OR SERVICING THIS EQUIPMENT.

ALFRA TOOLS, LLC SHALL NOT BE LIABLE FOR DAMAGES RESULTING FROM MISAPPLICATION OR MISUSE OF ANY PRODUCTS.

WE RESERVE THE RIGHT TO MAKE UNANNOUNCED TECHNICAL CHANGES TO THIS PRODUCT AS PART OF OUR CONTINUOUS IMPROVEMENT PROCESS.

SAFETY ALERT TYPES

We use the following symbols and alerts in this document:



This symbol is used to call your attention to hazards or unsafe practices which could result in an injury or property damage. The signal word, defined below, indicates the severity of the hazard. The message after the signal word provides information for preventing or avoiding the hazard.



DANGER!

Immediate hazards which, if not avoided, **WILL** result in severe injury or death.



WARNING!

Hazards which, if not avoided, **COULD** result in severe injury or death.



CAUTION!

Hazards or unsafe practices which, if not avoided, **MAY** result in injury or property damage.

IMPORTANT SAFETY INFORMATION

Safety is essential to the use and maintenance of Alfa Tools tooling and equipment. This instruction manual and any markings on the unit provide information for avoiding hazards and unsafe practices related to the use of this table. Observe all of the safety information provided.



CAUTION!

- Read and understand all the instructions and safety information in this manual before operating or servicing this table.
- Do not modify the product without written consent from the equipment manufacturer.
- This table was designed for indoor use only. Do not operate the table outdoors.
- Only use the assembly table on a flat, level surface that can withstand the weight of the table, including the maximum load.
- Ensure that all table wheels are locked or otherwise unable to rotate before mounting any object on the table.
- Ensure all parts and components on the table are secured before operating the table.
- Do not sit or stand on the mounting table.
- Use this product for the manufacturer's intended purpose only. Use other than which is described in this manual may result in injury or property damage.



WARNING!

- Do not **OVERLOAD** the mounting table! Maximum allowed load weight is 408kg or 900 lbs.
- Loading and unloading must be carried out only with the table in the horizontal position.
- Ensure the load is evenly distributed over the assembly table work surface. An uneven load may create a tilt hazard.
- Do not attempt to install replacement batteries. Injury or possible damage to the equipment can occur if this warning is violated. Contact Alfa Tools, LLC if a replacement battery is required.
- The table operation is not permitted if:
 - a. Flammable or explosive gases or vapors may be present in the work area;
 - b. The operator is untrained or a child;
 - c. Children are present in the immediate area.
- Do not exceed the rated maximum duty ratio of operation of the device. Each linear actuator is rated for 2 minutes of continuous operation only, followed by a required rest for 18 continuous minutes. Failure to comply may cause injury or equipment failure.
- Do not rock, shake, bounce, or otherwise agitate the table, or the workpiece while the table is in use.
- Do not reach, or otherwise climb underneath the table while the table is in use.

SCOPE OF DELIVERY

Standard AMTE-400 components are listed below. If you ordered any of the available options, those will be listed in the packing slip in addition to the standard components listed within this manual.

Caution: Use gloves and two people to unbox your new assembly table. All wooden packaging material is Heat Treat stamped and can be prone to splinters. First remove the top, then remove the sides.

AMTE-400 ASSEMBLY TABLE DELIVERY SCOPE

DESCRIPTION	QTY
AMTE 400 Assembly Table includes:	
Caster Wheels, Locking	2
Caster Wheels, Non-Locking	2
Vertical Lower Extension	1
Vertical Upper Extension - 78" MAX	1
Tilt Actuator	1
Vertical Upper Extension - 78" MAX	1
Linear Actuator	1
Lift Actuator	1
AC Power Supply	1
Electronics Extension Cable	1
Keypad	1
Clamping Units - Variable Adjustment	4
Extension Hardware	4
Quick Release Pin	1
User Manual	1

AMTE-400 ASSEMBLY TABLE OPTIONS

We offer a range of optional accessories for our assembly tables. These accessories must be purchased in addition to the base unit.

Please refer to the assembly table options on page 14 in this user manual for a list of commonly purchased accessories.

Please contact your local Alfa Tools Distributor for direct accessory recommendations or suggestions based on your individual application requirements.

HOW TO ORDER

To place an order for another table, replacement parts, or additional assembly table accessories, please contact us at:

Phone: **(847)844-8900**
E-mail: **insidesales@alfra.us**

PACKAGING

Please re-use or recycle any included packaging materials.

OVERVIEW



The AMTE-400 is a versatile assembly table intended for the ergonomic, effective, and time-saving assembly of electrical panels and enclosures.

THE AMTE-400 SHOWN WITH THE TOP IN THE HORIZONTAL POSITION



THE AMTE-400 SHOWN WITH A PANEL MOUNTED TO THE TOP IN TILTED POSITION

This table is designed as a tool to increase productivity, reduce assembly times, and prevent stress on the operator(s) during the assembly of control panels/enclosures, wire harnesses, product assemblies, or any other applicable repetitive motion or strenuous assembly/manufacturing processes.

OVERVIEW (CONTINUED)



ADJUSTABLE ANGLE OF TILT:
0-70° ±1.4°

The AMTE-400 table's linear actuators and control system are rechargeable and battery operated. This table has a maximum surface area of 80.5" (2050mm) in width and 83.5" (2130mm) in height when using separately sold table extensions. The maximum load weight the table can support is 900 lbs or 408 kg. Please keep in mind that the table can support panels and enclosures larger than the table's surface - operation of such must be done with tipping hazards in mind.

Each AMTE-400 is equipped with two electronically controlled linear actuators that allow the user to set the work surface in a range of positions, including height and tilt angle adjustments.

The AMTE-400 has four casters, two locking and two non-locking for quick and safe positioning. Typical operations performed on the AMTE-400 table include panel making, drilling, thread cutting/tapping, hole punching, channel/rail fitting, component mounting, and wiring installation.



THE AMTE-400 SHOWN WITH THE TOP IN
THE RAISED TILTED POSITION

DISCLAIMER

ALFRA TOOLS, LLC NOR ANY OF IT'S SUBSIDIARIES OR PARTNERS WILL BE HELD LIABLE FOR DAMAGES OR INJURY DUE TO TIPPING OF THE TABLE.

TECHNICAL INFORMATION

OPERATIONAL PARAMETERS	
Maximum load bearing capacity:	900 lbs (408 kg)
Working height range:	31-7/8" to 45-7/8" (809 mm to 1165 mm)
Adjustable angle of tilt:	0-70° ± 1.4°

ACTUATOR SPECIFICATIONS	
Nominal voltage:	24-29 VDC
Nominal load power consumption:	up to 2.2 A, 50 W
Maximum push force:	6000 N
Maximum pull force:	4000 N
Maximum holding force:	6000 N
Duty cycle:	2 minutes of operation / 18 mins of rest
Maximum load actuator speed:	7 mm/s
No-load actuator speed:	11 mm/s

UNIT DIMENSIONS AND WEIGHT	
Footprint (L x W):	41 x 60" (1041 x 1524 mm)
Base unit table top, retracted (L x W):	44 x 49" (1117 x 1244 mm)
Base unit table top, extended (L x W):	44 x 78" (1117 x 1981 mm)
Maximum table top dimensions, retracted (L x W):	65.5 x 49" (1663 x 1244 mm)
Maximum table top dimensions, extended (L x W):	80.5 x 83.5" (2044 x 2120 mm)
Base unit weight:	344 lb (156 kg)

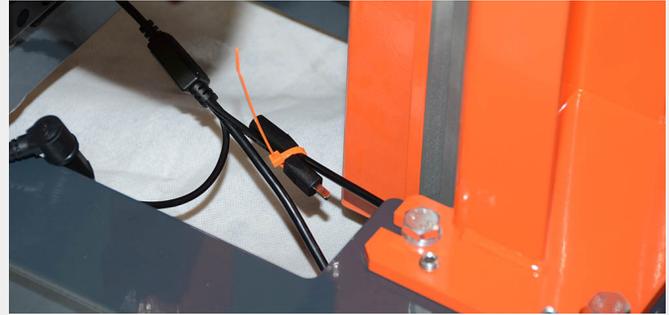
RECOMMENDED ENVIRONMENTAL CONDITIONS	
Relative Humidity:	30-75 %
Ambient Temperature:	10-40° C (50-104° F)
Atmospheric Pressure:	860-1060 hpa (12.5 -15.4 psi)

SHIPPING DIMENSIONS AND WEIGHT	
Base Unit Shipping Dimensions:	66 x 56 x 51" (168 x 143 x 130 cm)
Base Unit Shipping Weight:	680 lbs (309 kg)

OPERATION

NOTICE

Your AMTE-400 table has been disabled for shipping purposes. In order to use your assembly table, please locate the **ORANGE** cable tie on the lower portion of your unit, found below the **CONTROL** actuator. This cable tie will need to be cut, and the extension cable here will need to be connected in order to power your assembly table.



The AMTE-400 is put into the horizontal position and the panel is securely mounted to the work surface.

Using the included keypad, the operator can control the linear actuators to adjust the AMTE-400 to the optimum height and tilt angle for each step of the panel building process.

GETTING FAMILIAR WITH THE AMTE-400 KEYPAD



ALWAYS PERFORM THE FOLLOWING CHECKS BEFORE OPERATING THE TABLE:

- AMTE-400 parts should not be bent or twisted.
- Test the caster brakes and check the wheels for abnormal wear.
- All moving parts should be wiped down with a lint-free cloth weekly to reduce dirt and debris buildup.
- Safety-pin must be secured with all extensions tightened in place.
- If there are defects, contact us for troubleshooting assistance.

OPERATION (CONTINUED)

SETTING UP THE WORK SURFACE

Take a moment to verify your AMTE-400's surface is clear of foreign material, and the AMTE-400's felt surface is clear of rips, tears, or other damage to avoid scratches or scuffing on your work-piece.

Always secure all table extensions, accessories, wires, and any movable parts before operating the AMTE-400.

TABLE EXTENSIONS

BOTTOM EXTENSION

1. Before adjusting the bottom extension, remove the Safety Pin inserted into the safety splinter (Fig. 1).
2. Loosen two bottom extension star knobs from underneath the table surface (Fig. 2).
3. Adjust the bottom extension position to one of the preset positions on the splinter.
4. Insert Safety Pin into desired position. Lower the bottom extension until the Safety Pin rests against the horizontal bar of the table top.
5. Tighten the star knobs.
6. Push up and down slightly on the lower extension to verify the knobs are tightened and the safety pin is operable.

SIDE EXTENSIONS

1. Loosen the star knobs holding the extension in place (2 per each extension).
2. Adjust the extension position as needed.
3. Take care not to extend past the ORANGE safety marker (Fig. 3).
4. Tighten the star knobs.

*side extensions sold separately (max width - 80.5" or 2050mm)

UPPER EXTENSION

1. Follow the same procedure as Side Extensions.



FIG. 1: SAFETY SPLINTER WITH PIN INSTALLED

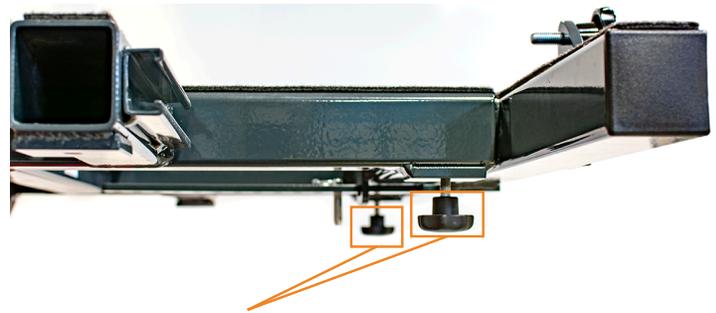


FIG. 2: STAR KNOBS



FIG.3: SAFETY MARKERS

OPERATION (CONTINUED)

MOUNTING HARDWARE AND SECURING THE PANEL/BACKPLANE/ENCLOSURE

1. Verify all extensions are secured in place. Ensure the safety pin is properly installed.
2. Carefully lower the work-piece into place while the AMTE-400 is in the horizontal position.
3. Position the heaviest portion of the panel near the lower extension. Excessive weight on the upper and side extensions may result in an improperly balanced load.
4. Loosely position the upper and lower clamping units across the top and bottom extensions (factory pre-installed, Fig. 4).
5. Once both the panel and clamping units are evenly positioned, swing clamping units into place, positioning the threaded portion of the star knobs over the panel edges (Fig. 5). Secure down the clamping units by tightening the adjustable handles.
6. Additional use of strapping to secure the panel/enclosure to the table top is always recommended. Strapping used must be rated appropriately for the entire load.

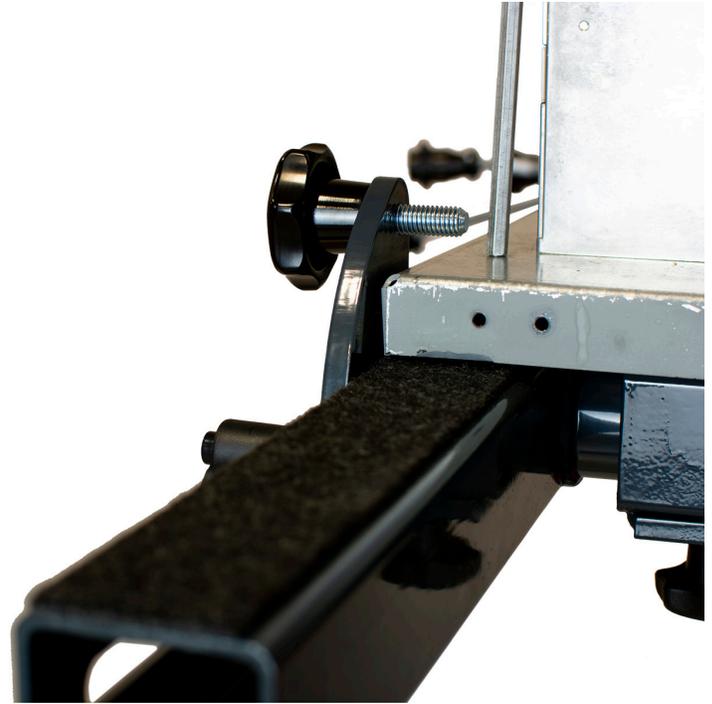


FIG. 4



WARNING!

Certain accessory mounting points may create pinch and or collision points during operation. Use common sense when mounting accessories to avoid collisions.

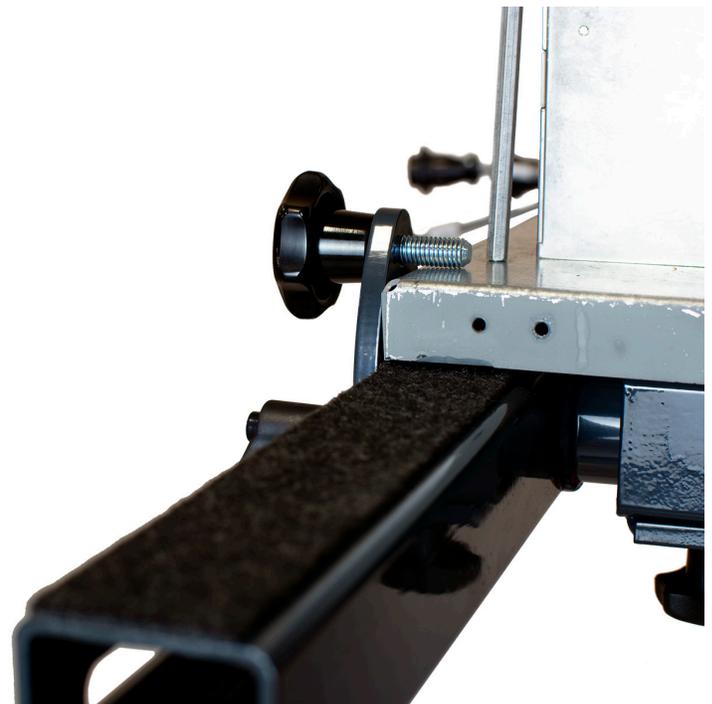


FIG. 5

OPERATION (CONTINUED)

CHANGING MOUNTING HARDWARE

Standard backplane and flat panel Mounting Hardware is pre-installed on your AMTE table. Additional Mounting Hardware options are available to offer various ways to safely secure a wide variety of potential work-pieces. In order to safely use your table to its fullest extent, be absolutely sure to use the proper hardware for the work being completed. If a mounting hardware change needs to take place, please take note of the following steps:

1. Carefully remove the plastic end cap from the extension, take care to not damage the plastic ribbing (Fig. 6).
2. Slide the pre-existing mounting hardware to the extension end (Fig. 7). Hold the counternut with one hand, and unscrew the adjustable handle. Take care not to allow the M10 counternut to fall back into the extension. If the counternut becomes stuck midway through the extension, or is unscrewed beyond your reach, completely remove the table extension from the table top, and physically tilt the extension in order to allow the stuck M10 counternut to dislodge and fall free.
3. Replace pre-existing clamping units with the new mounting hardware by screwing the adjustable handle back into the M10 counternut in the opposite fashion as the clamping units were removed.
4. Replace the plastic end cap as needed, a mallet may be used to gently tap the plastic end cap back into place.

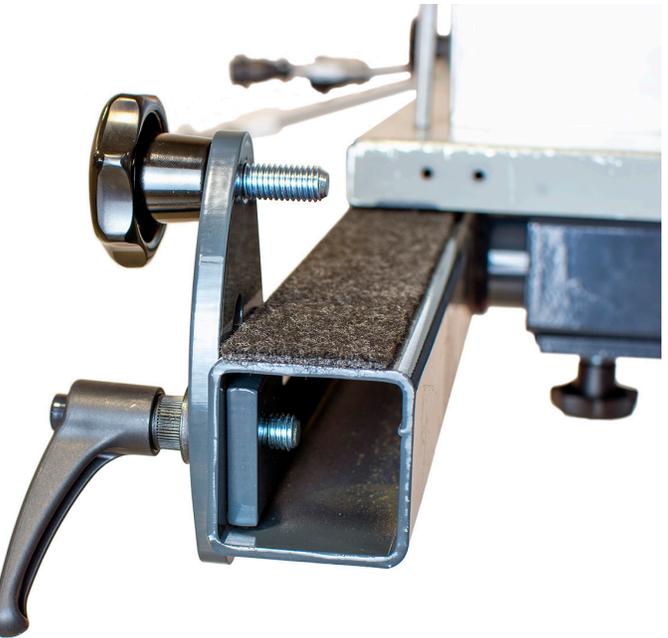


FIG. 7 (ABOVE): ADJUSTABLE HANDLE

FIG. 6 (LEFT)



WARNING!

- The work surface must remain in the horizontal position until the panel is safely mounted and secured using clamps and/or other accessories.
- All load-bearing mounting hardware must be used with provided M10 mounting hardware in slotted rail extensions only. **DO NOT USE** any mounting hardware in standard accessory channels.
- **DO NOT MIX** standard accessory hardware with Mounting hardware.

BATTERY MAINTENANCE

Rechargeable battery packs may be purchased separately. Please contact your local supplier to purchase a battery pack for your AMTE table.

Rechargeable battery packs should be stored at room temperature (app. 25°C or 77°F).

Even if stored at room temperature, batteries will need to be charged once every 3 months. Each additional 10°C increase in temperature will double the rate at which the battery discharges. Therefore, the battery will have to be charged twice as often for each 10°C increase in temperature above 25°C or 77°F.

Charge the batteries as soon as possible after they have been depleted. Failure to comply will reduce life span and total charge capacity of the batteries.

Please conform to local regulations when disposing of batteries. Do not allow the battery to be included with general waste. Online resources such as www.call2recycle.org contain recycling and disposal information for batteries as well as other materials.

CHARGING INSTRUCTIONS

Connect the provided charger (located in the electronics storage compartment) to a 120VAC power source.

INITIAL/IDLE BATTERY CHARGE CYCLE



IMPORTANT!

Perform an initial 8-12 hour cycle to fully charge the battery for first time use. Repeat the cycle after each extended idle period of more than 90 days.



CAUTION!

- Do NOT short-circuit the battery's output terminals.
- DO NOT use an alternate charger.
- DO NOT COVER the battery access location.



WARNING!

- DO NOT reach or climb under the table while the table is in use.

SAFETY AND MAINTENANCE TIPS

- Visual inspections should be performed regularly. Check for damaged wires, loose fittings, as well as cracks or deformities in any plastic components.
- Full inspections should be performed every six months by an electrician or electrical engineer. The AMTE-400 is designed to be mostly maintenance free. Six month verification includes an in-depth visual inspection as well as smoothly exercising both actuators to their limits under average load.
- Do not expose the battery to heat or open flame. Avoid direct sunlight. Do not weld or solder near the battery.
- If the battery leaks, do not touch. If exposed to battery liquids, flush with water and contact emergency services immediately.
- Cleaning should be completed as needed using soap/detergent suitable for ABS plastic.
- Do not operate while cleaning or performing maintenance on the AMTE-400.
- The linear guide rails are 100% self-lubricating.
- All moving parts should be checked weekly. Keep free of debris using a dry, lint-free cloth.
- Compressed air may be used to clear debris from moving parts.
- Do not operate the AMTE-400 with foreign material on any moving parts.
- Verify cable connections are clear and free of dirt, debris, or any foreign material.
- Verify cables are clear from moving parts, and secured tightly via the appropriate mounting locations.
- Each levelling pad can also be mounted directly to a concrete floor for added stability.

TROUBLESHOOTING

The following table was developed to help identify common faults and their applicable solutions. Please contact your supplier for faults not represented in this table. Troubleshooting should only be performed by an expert engineer.

PROBLEM	POSSIBLE CAUSE	SOLUTION
Motor does not function. No actuator movement.	<ul style="list-style-type: none"> Battery not charged Cables seated incorrectly Pinched cable Defective power supply, battery, actuator, or keypad 	<ul style="list-style-type: none"> Charge Battery fully Verify AC Power Connection for batteryless units Unplug and re-insert all cables Contact Supplier
Incorrect axis moves when correct button is activated .	<ul style="list-style-type: none"> Cables seated incorrectly Defective keypad, or control actuator 	<ul style="list-style-type: none"> Verify for cable pinches or other shorts. Unplug and re-insert all cables Contact Supplier
Charging LED does not indicate when plugged in.	<ul style="list-style-type: none"> Cables seated incorrectly Defective power supply Defective battery 	<ul style="list-style-type: none"> Unplug and re-insert ALL cables Verify 120VAC at source Verify power supply output with DMM Contact Supplier
Audible noise when button is activated	<ul style="list-style-type: none"> Debris in stroke pipe Table overloaded Defective actuator, battery, or keypad 	<ul style="list-style-type: none"> Wipe clean with dry cloth Contact Supplier
Actuator operates without using remote	<ul style="list-style-type: none"> Actuator plugged directly into the power supply 	<ul style="list-style-type: none"> Plug Power Supply into power supply connection on control actuator ONLY

CE-DECLARATION OF CONFORMITY

The manufacturer: Alfra Tools, LLC
100 Chaddick Drive
Wheeling IL 60090

declares herewith that the following product:

Product type: Mounting Assembly Table

Product description: AMTE-300
AMTE-400

Relevant Guidelines:

FCC Part 15 Subpart B

conforms to the regulations of the above quoted guideline.

The following harmonized standards are applicable to guarantee conformity:

EN 61000-4-2:2008	Test Standard for Electrostatic Discharge (ESD) Immunity
EN 61000-4-3:2006/A1:2007/A2:2010	Electromagnetic compatibility (EMC)
DIN EN 82079:2019	Preparation of information for use. Part 1: Principles and general requirements
UL 2595	General Requirements for Battery-Powered Appliances
EN 55014-2:2015/CISPR 14-2:2015	EMC Compatibility - Requirements for household appliances, electric tools, and similar apparatus - Part 2: Immunity - Product Family Standard

Construction changes, which affect the technical data and the correct use of the equipment, or other considerable changes in the AMTE-300 or AMTE-400 invalidate this Declaration of Conformity.

Technical Documentation held by:

Alfra Tools, LLC
100 Chaddick Drive
Wheeling IL, 60090
USA



Passion For Tools