

# ***PATCO Inc.***

***Thermal & Mechanical Wire Strippers***

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## MODEL PTS-10

This thermal wire stripper is a small, lightweight, low power, line operated wire stripping tool which far surpasses all previous devices in safety, versatility and economy. The patented design incorporates a uniquely shaped nichrome heating element, which heats up quickly (less than five seconds) to an optimal temperature of 450° F and efficiently strips thermoplastic insulation from solid, stranded or shielded wires from #14 to #30 AWG, and will not burn the skin if accidentally touched due to its low power and minimal mass. The smooth design heating element eliminates nicks and broken strands of conductors and reduces lead pull on sensitive components. The comfortably sized tool may be easily handheld, which is ideal for use in hard to reach places. The thermal wire stripper may be conveniently table-mounted for one-hand operation. Model PTS-10 operates on 120V AC, 60 HZ, with a power consumption of only 3 Watts.

Different line voltages are available on special orders.



## MODEL PTS-100

This model operates exactly the same as the PTS-10.

The PTS-100 is powered by a universal switching power supply housed in a separate enclosure which makes the tool very light (less than 3 oz.). The PTS-100 stripper is also equipped with an in-line ON/OFF switch and a built-in temperature controller. This allows the user to precisely match the temperature of the stripping element to the melting temperature of insulation in a vast variety of different types of wire.

## PVC INSULATION PTS - 10/20 SERIES

- AC line or battery powered
- Fast, small, portable
- Safe to use
- No wire or shield nicking
- Solid, stranded or shielded wires
- Table mounted or hand held
- Low Cost

## SPECIFICATIONS: PTS-10

**Dimensions** — 4.3 in. (110 mm.) x 2.00 in. (51 mm.) x 1.8 in. (46 mm.)

**Weight** — 13 ounces (.37 kg.)

**Line Cord** — #18 AWG 2 wire flexible cord, 6 feet (1.8 m.) long

## ADDITIONAL SPECIFICATIONS: PTS-100

**Dimensions** — (Power Supply) 3.00 in. (76 mm) x 2.00 in. (50 mm) x 1.4 in (35 mm)

**Weight** — (Power Supply) 4.4 oz. (0.125 kg)

**Input Power** — 100-240 VAC 50/60 Hz

## PTS-1

Stripping head only

## PTS-100P

Power supply only

## STRIPPING ELEMENT



P/N 0010-001

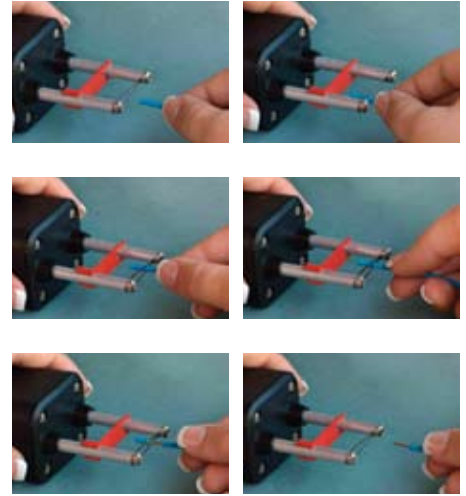
PTS-10 & PTS-1

## **PATCO Thermal Wire Stripper PTS-10 step by step operation.**

Use this method to strip short pieces of wire. For higher production, the thermal wire stripper can be temporarily table mounted using double stick tape for one-hand operation.

- 1) Align the wire with the largest opening in the element.
- 2) Insert the wire as far as required using visual judgment of adjustable wire stop.
- 3) Move the wire towards the tapered end of the stripping element, applying pressure until resistance is felt.
- 4) Rotate the wire 1/4 turn maintaining slight pressure into the "V", so the insulation is completely cut.
- 5) Without releasing the slight side pressure, pull the wire away from the element.
- 6) This will remove the insulation slug without any damage to the conductor.

Please note that the six illustrated pictures are actually one fluid motion lasting only less than a second.



## **MODEL PTS-20**

Slightly larger than Thermal Wire Stripper PTS-10, powered by a single rechargeable battery. Designed for technicians and servicemen for field operation without access to a line power. The extremely fast and efficient tool includes battery and charger and can produce over 1,500 strips on a full charge in the same wire size range as the PTS-10.

## **MODEL PTS-20A**

Same as PTS-20 but A/C powered.

## **MODEL PTS-20 HD**

Same as PTS-20 except designed for electricians. The heavy duty production tool will strip the toughest insulation from wires #14 to #10 AWG and can produce over 1,200 strips on a full charge.

## **MODEL PTS-25**

Same as PTS-20HD but A/C powered

## **SPECIFICATIONS: PTS-20, PTS-20A, PTS-20 HD, PTS-25**

**Dimensions** — 5.2 in. (132 mm.) x 2.25 in. (57 mm.) x 2 in. (51 mm)

**Weight** — 10 ounces (.28 kg.) including battery

**Battery** (Only PTS-20 & PTS-20HD) — NiMH 1.2 Volts, 10 Ahr. Single D cell.

## **BATTERY CHARGER:**

**Dimensions** — 2.3 in. (58 mm) x 1.9 in. (48 mm) x 2.2 in. (54 mm)

**Weight** — 6 ounces (.17 kg)

**Input** — 120 VAC 50/60 HZ, 2.8 W

**Output** — 1.45 VDC 400mA.

## **STRIPPING ELEMENTS**



P/N 0020-001

PTS-20 & PTS-20A



P/N 0020HD-001

PTS-20 HD & PTS-25



**PTS-30** thermal wire stripper is a low-power, line-operated tool, which far surpasses all previous devices in safety, versatility, speed and economy. The patented design incorporates a uniquely shaped nichrome heating element, which heats up quickly (less than 4 seconds) to an optimal temperature of 1700°F and efficiently strips high temperature PTFE insulation from solid, stranded, or shielded wires in the range of #16 to #30 AWG.

The Extremely thin heating element evaporates such a negligible amount of insulation that the use of these strippers does not require any kind of special ventilation. Toxic fumes from the use of the competitive thermal strippers must be exhausted.

The low mass, guarded element minimizes the risk of burns, eliminates nicks and broken strands of conductors and reduces lead pull on sensitive components. These comfortably-sized, handheld tools operate on 120 VAC, 50/60 Hz, with power consumption of 40 watts or less, depending on model.

Different line voltages available on special orders.

**PTS-40** series: same as the PTS-30 Series except powered by a rechargeable battery.

Designed for field operation without access to a line power, each unit includes battery and charger and can produce over 100 strips on a full charge.

## WIRE SIZES:

**Model PTS-30** — #16 to #30 AWG solid, stranded or shielded.

**Model PTS-30S** — #30 to #40 AWG solid or stranded.

**Model PTS-30C** — Microwave type coaxial cables .160" to .220" O.D. (GORE etc.)

**Model PTS-30HD** — #14 to #10 AWG solid or stranded.

**Model PTS-30HDS** — #8 AWG solid or stranded.

## PTFE INSULATION PTS - 30/40 SERIES

- AC line or battery powered
- Fast, small, portable
- Safe to use
- No wire or shield nicking
- Solid, stranded or shielded wires
- Hand held
- Low Cost

## SPECIFICATIONS: PTS-30 Series

**Dimensions** — 5.9 in. (150 mm.) x 2.25 in. (57 mm.) x 2 in. (51 mm.)

**Weight** — 1 Pound (.453 kg.).

**Line Cord** — #18 AWG 2 wire flexible cord, 6 feet (1.8 m.) long

(International line cords available on special orders.)

## SPECIFICATIONS: PTS-40 Series

**Dimensions** — Same as PTS-30 Series.

**Weight** — 9 ounces (.255 kg.) including battery.

**Battery** — NiCad 1.2 Volts, Single D cell.

## BATTERY CHARGER

**Dimensions** — 2.27 in. (58 mm.) x 1.89 in. (48 mm.) x 2.12 in. (54 mm.)

**Weight** — 6 ounces (.17 kg.)

**Input** — 120 VAC 50/60 Hz, 2.8W

**Output** — 1.45 VDC 400mA.

Custom elements available on special orders.

## NOTE:

The operator may remove insulation with this tool because of a fixed, calibrated stripping section, which eliminates conductor scraping. Weapons specification WS-6536 E does not permit this when other thermal strippers are use.



## STRIPPING ELEMENT CONFIGURATIONS



PTS-30: (PTFE only) #16-#30 AWG



PTS-30C: (PTFE only) “.160-.220” OD Microwave Type Coaxial Cables (Gore ect.)



PTS-30S: (PTFE only) #30-#40 AWG



PTS-30HD: (PTFE only) #10-#14 AWG



PTS-30HDS: (PTFE only) #8 AWG

## PTS-300 SERIES

These models operate exactly the same as the PTS-30 Series.

The PTS-300 Series Tool consists of a Universal Switching Power Supply (PTS-300P) and a detachable Stripping Head. Each Power Supply is equipped with a built-in temperature controller which allows the user to precisely match the temperature of the stripping element to the melting temperature of insulation in a vast variety of different types of wire. It is housed in a separate enclosure which makes the stripping head very light (less than 6 oz.).

The PTS-300 Series can be purchased as a complete unit (PTS-300, PTS-300C, PTS-300S etc.) or just the individual stripping head ( PTS-3, PTS-3C, PTS-3S, PTS-3HD, etc.).

The PTS-300P power supply is compatible with all the PTS-3 Series Heads. Please, note, you must have the PTS-300P power supply to operate the PTS-3 series stripping heads.

## SPECIFICATIONS:

**Dimensions** — (Power Supply) 3.00 in. (76 mm) x 2.00 in. (50 mm) x 1.4 in (35 mm)

**Weight** — (Power Supply) 4.4 oz. (0.125 kg)

**Input Power** — 100-240 VAC 50/60 Hz

**PTS-30/300 SERIES**



**STRIPPING ELEMENTS**

*Actual Size*



P/N 0030-001

PTS-30



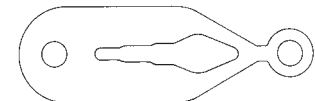
P/N 0030-002

PTS-30S



P/N 0030C-001

PTS-30C



P/N 0030HD-001

PTS-30HD



P/N 0030HDS-003

PTS-30HDS

**Universal Power Adapter  
PTS-300 PU**





## **PTS-50**

The Thermal Wire Stripper Model PTS-50 is a low-power, line-operated tool, which far surpasses all previous devices in safety, versatility, speed and economy. The patented design incorporates a uniquely shaped nichrome heating element, which heats up quickly (less than 5 seconds) to an optimal temperature of approximately 450° F and efficiently strips coaxial type cables such as RG-58, RG-59, RG-62 etc. The smooth design and low mass element minimizes the risk of burns and eliminates nicks and broken strands of conductors. This comfortably-sized, handheld tool operates on 120 VAC, 50/60 Hz, with power consumption of only 8 watts.

Different line voltages available on special orders.

## **SPECIFICATIONS: PTS-50**

**Dimensions** — 5.2 in. (132 mm.) x 2.25 in. (57 mm.) x 2 in. (51 mm.).

**Weight** — 1 pound (.453 kg.)

**Line Cord** — #18 AWG 2 wire flexible cord, 6 feet (1.8 m.) long

(International line cords available on special orders.)

## **PVC INSULATION**

### **PTS - 50/60 SERIES**

- AC line or battery powered
- Fast, small, portable
- Safe to use
- No wire or shield nicking
- Coaxial type cables
- Hand held
- Low Cost

## **PTS-60**

Same as the PTS-50 Series except powered by a rechargeable battery. Designed for field operation without access to line power. Each unit includes battery and charger and can produce over 500 strips on a full charge.

## **SPECIFICATIONS: PTS-60**

**Dimensions** — 5.2 in. (132 mm.) x 2.25 in. (57 mm.) x 2 in. (51 mm)

**Weight** — 10 ounces (.28 kg.) including battery

**Battery** — NiCad 1.2 Volts, Single D cell.

## **BATTERY CHARGER:**

**Dimensions** — 2.27 in. (58 mm.) x 1.89 in. (48 mm.) x 2.12 in. (54 mm)

**Weight** — 6 ounces (.17 kg.)

**Input** — 120 VAC 50/60 HZ, 2.8 W

**Output** — 1.45 VDC 400mA.

## **STRIPPING ELEMENT**



P/N 0050-001

PTS-50/60



**CLEANING BRUSH  
P/N 0050-008.**

Designed to keep element in top operating condition. Recommended for all models

**E-LUBE P/N 0030-009.**

Specially formulated PTFE release agent. Prevents sticking of insulation to the element. (Recommended for all low temperature models. Not recommended for PTS-30/40 Models)

**CUSTOM STRIPPING  
ELEMENTS**

Patco Inc. also makes a wide variety of custom elements. Please call for more details.



1 2 3

**ADJUSTABLE WIRE STOP**

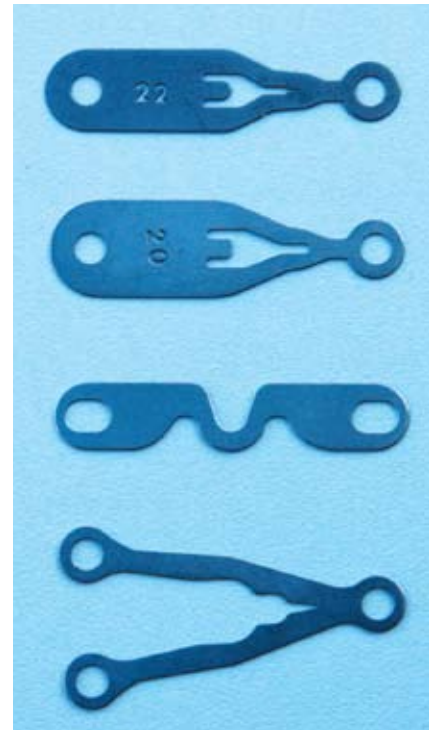
- 1) PTS-1/10 P/N 0010-005
- 2) PTS-20/20A/20HD/25 & PTS-50/60 P/N 0050-005
- 3) PTS-30/40 P/N 0030-005



1 2

**GAUGE SELECTOR**

- 1) PTS-30HD P/N 0030HD-003
- 2) PTS-30/40 P/N 0030-004



**FLICKER ASSEMBLY**

- PTS-30/40 & PTS-300 Series P/N 0030-007





## Cable Stripper

### PKR-1

- Fast, small, portable
- Precision circular and axial cut
- No wire or shield nicking
- Any insulation
- Window strips
- Safe and easy to use
- Low cost

**PKR-1** wire stripper & coaxial cable stripper is a precision and extremely versatile hand-operated cable stripping tool. It is designed to strip insulation ranging from .150" to .750" OD. It can strip a larger variety of wires and cables than any other wire stripping tool available. It will remove any type of insulation at any length, including window strips. Patented design incorporates interchangeable dies and cutters. Stock dies are available in .050" increments such as .300", .350", .400", etc. Wire cutters for different depths of cuts are color coded for easy identification. The range of available blade lengths is from .020" to .10" in .010" increments. Custom dies and cutters are available on special orders.

### SPECIFICATIONS:

**Wire Size** — 0.15 in. (3.8 mm) to 0.75 in. (19 mm)

**Dimensions** — 6 in. (153 mm) x 2 in. (51 mm) x 3.7 in. (94 mm)

**Weight** — 7 ounces (.2 kg)

### Dies

P/N 0002- Followed by cable die size in inches.

(Example: P/N 0002-.500 is recommended for the cable size ranging from .451" to .501" OD and die P/N 0002-.350 ranging from .301" to .351 OD)

### Additional PKR Cutters (Pkg. of 5)

Color	Razor Point Length	Part Number
Red	.020"	0001-020
Orange	.030"	0001-030
Yellow	.040"	0001-040
Green	.050"	0001-050
Blue	.060"	0001-060
Purple	.070"	0001-070
Gray	.080"	0001-080
White	.090"	0001-090
Black	.100"	0001-100
Pink	Custom	Specify Blade Length

### Additional PKR-1 Dies



P/N 0002-.150	P/N 0002-.450
P/N 0002-.200	P/N 0002-.500
P/N 0002-.250	P/N 0002-.550
P/N 0002-.300	P/N 0002-.600
P/N 0002-.350	P/N 0002-.650
P/N 0002-.400	P/N 0002-.700
	P/N 0002-.750



## **OPERATION OF CABLE STRIPPER PKR-1**

### **CIRCULAR CUT**

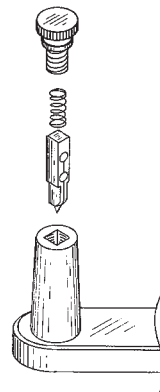
The selected die size should closely match the diameter of the cable. The cable OD should not exceed the size of the die. This can cause an excessive friction between the cable and the die, thus inhibiting rotation of the tool. (Correct die can be ordered from PATCO.)

The die is inserted into the tool and secured with provided thumb screw. The correct alignment is assured by provided keyway.

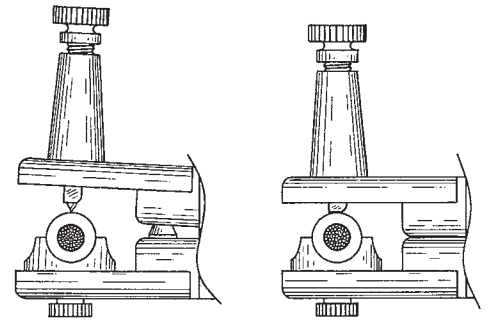
Properly-sized, disposable cutter is selected depending on the cable insulation thickness. All cutters are color coded for easy identification.

Once selected, the user need only remember the cutter's color. When the cutter becomes dull and requires replacement, it is simply replaced with a cutter of the same color. No adjustments and trial cuts are necessary.

The cutter is inserted into the tool followed by a tension spring and a black thumb screw which provides variable cutter tension. Too much tension can make the closure and rotation of the stripper difficult; not enough tension will inhibit sufficient insulation penetration. The side of the cutter with holes and a slit must face the latching mechanism when inserted into the tool. (Fig.1) The tool will cut in one direction only!



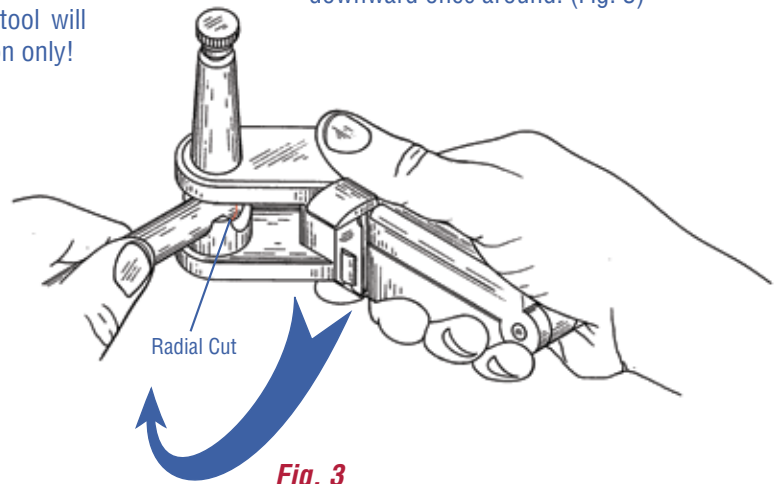
**Fig. 1**



**Fig. 2**

The tool will open by releasing the thumb latch. The cable is placed into the groove designated for a radial cut. The desired stripping length can be selected by making a mark on the cable prior to insertion or just by using visual judgment. Closing the tool will cause the cutter to penetrate the insulation and latch its self on the cable. The razor point will penetrate the insulation and the spring loaded cutter will automatically adjust for the cable height. (Fig. 2) Different types of insulation will require different tension settings.

The cable should be held firmly as close as possible to the die. The tool is rotated downward once around. (Fig. 3)



**Fig. 3**

Please note that any side pressure on the tool while it is being rotated can produce an undesirable spiral cut.

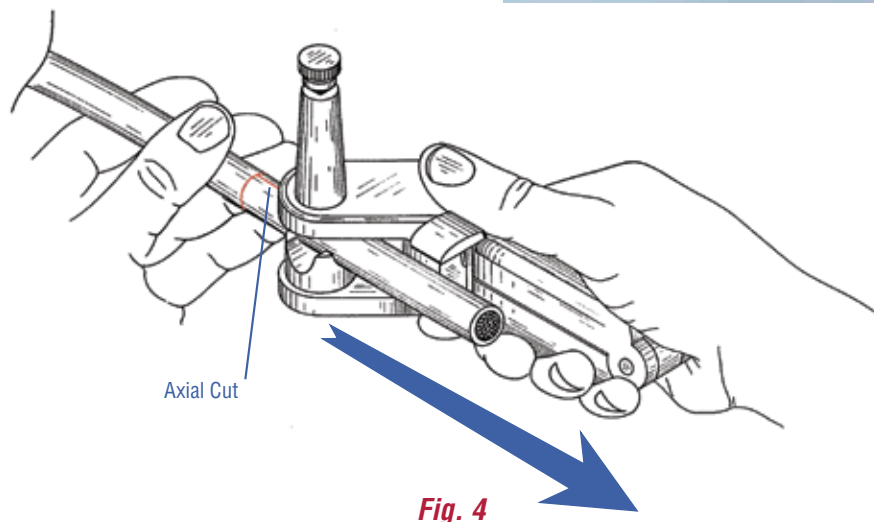
A properly selected cutter will not penetrate the insulation completely and will leave a thin layer of insulation uncut. The insulation should break after the cable is bent.

Short sections of insulation can be removed by bending the cable in the cut area to break loose the insulation, and then pulling it off by hand. If it cannot be removed easily, an axial cut can be made and insulation peeled off. (Some types of insulation may require two axial cuts, each on the opposite side of the cable to simplify removal.)

## **AXIAL (LENGTHWISE) CUT**

Cable is placed into a smooth groove designated for an axial cut so the razor point penetrates the insulation just below the previously made radial cut. The tool is latched on the cable and simply pulled off lengthwise, slitting the insulation. (Fig. 4)

The insulation is peeled off starting at the end of the slit cable.



**Fig. 4**

## **PKR-13**

Complete kit includes Carrying Case, 13 Dies and 9 cutters.

Dies range from 0.150" to 0.750" in 0.050" increments. The stripping tool will strip any cable ranging from 1/8" O.D. to a maximum of 3/4" O.D.

The depth of cut for the disposable cutters is from 0.020" to 0.100" in 0.010" increments.

Custom dies and cutters are available on special orders.

## **SPECIFICATIONS:**

**Case Size** — 11" x 11" x 3.25"

**Weight** — 2.5 lb.

Thermal Wire Strippers are the future of hand-held wire strippers used in the electronic and electrical industry. Patco Inc. is the manufacturer of the largest variety of thermal wire strippers in the world.

Traditionally, the electronics Industry has preferred mechanical wire strippers, because thermal types have had the following detrimental qualities:

- Thermal wire strippers have produced a poor quality strip.
- Thermal strippers have been slower than mechanical means.
- The price of thermal strippers has been too high.

Now, PATCO, INC. has developed a series of thermal wire strippers which outperform mechanical types on all three points.

- Our unique patented stripping element design consistently produces excellent quality strips.
- Our strippers cost less than good quality mechanical strippers.
- Our strippers last longer, are more versatile, produce consistent high quality strips, eliminate nicks and broken strands of conductors, reduce lead pull on sensitive components, and, what is probably most important, they are FASTER. Once mastered, our tools will prove to be the fastest manual means available for stripping wires. Never before was this possible.

High quality cut is achieved by rounded edges of heated, super thin stripping element (.008" - .010" depending on model), rather than sharp edge. Insulation is thermally cut all the way to the conductor, but without nicks.

We can say we have revolutionized wire stripping technology. A five year test on our model PTS-10, with over 2 million stripped wires using the same element, speaks for itself. The stripper has won a "FIVE STAR PRODUCT OF THE MONTH" award in DESIGNFAX magazine and was also featured in POPULAR SCIENCE magazine.

Our strippers also exhibit the lowest possible lead pull on sensitive components, because of the complete separation of the stripped slug from the insulation. Moreover, this high quality performance continues unchanged, strip after strip, unlike any mechanical strippers which rely on a sharp edge which begins to dull on the first strip. It is not the cutting that dulls the edges of the sharp edge strippers but the removing of the insulation slug.

After the sharp edges of the mechanical jaws close around the wire to be stripped, the insulation slug must be pushed off the conductor. It is physically impossible to maintain the conductor precisely centered between the two sharp jaws in order to prevent conductor damage. The conductor dragged over the razor sharp edges not only scrapes the conductor but also dulls the edges.

Sincerely yours,



Tony Nesor, President

## **WARRANTY & REPAIR POLICY FOR THERMAL WIRE STRIPPER LINE PRODUCTS**

PATCO warrants this product to be free of defects in workmanship and materials, and to perform per published specifications under normal conditions for a period of one year.

### **WARRANTY REPLACEMENT POLICY**

If the wire stripping unit becomes defective due to workmanship or materials at any time within one year or purchase, return this unit to the distributor or dealer from whom the unit was purchased along with proof of purchase (sales slip, invoice, or receiving slip copy), for a replacement with a new unit.

### **REPAIR POLICY**

If the wire stripping tool becomes defective beyond the one year warranty period, or was damaged due to physical abuse, or attempts to operate the tool beyond its specification limits, warranty replacement does not apply.

However, PATCO maintains a repair service which can repair and return your damaged unit in proper operating condition at a fixed charge.

### **WARRANTY**

PATCO products are warranted for operation per specification for a period of one year from the date of shipment, providing products have been properly stored, handled and used. Warranty is limited to repair or replacement at PATCO's option.

Buyer assumes responsibility to apply PATCO's products with due regards to safety where personal injury, death, or property loss is concerned, and PATCO accepts no responsibility for these or for other consequential damages. PATCO recognizes no other warranty policy than this policy as stated, regardless of the fact that orders may be accepted which attempt to blind PATCO to other stipulation.



**Thermal Wire Strippers are the future of hand-held wire strippers used in the electronic and electrical industry.**

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