



## A P T APT-5 Passive Trainer User Manual

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## Product Information

### Specifications:

- **Weight:** APT-5
- **Length:** APT-5
- **Width:** APT-5
- **Height:** APT-5
- **Working voltage:** 100-240 V
- **Revolutions per minute:** Varies
- **Current Rating:** 1.25 A
- **Accuracy of measurement display:** Yes
- **Liquid ingress protection level:** Varies

## Product Usage Instructions

### 1. Introduction:

The APT-5 is an electric exercise machine designed to improve physical abilities. It offers a variety of exercise options and modes suitable for users of all ages. The machine is portable, easy to store, and recommended for maintaining muscle strength, flexibility, tone, endurance, and overall fitness.

### 2. Technical Data:

The APT-5 operates on a working voltage of 100-240 V with specific current ratings and dimensions. It is classified as Type B equipment with a Class I equipment rating. The machine is designed for continuous operation and complies with medical device directives.

### 3. Safety:

Ensure to read the manual and all labels before operating the APT-5. Avoid using it near sensitive medical equipment and be cautious of electromagnetic interference. Only authorized personnel should perform set-up procedures for safety reasons. Do not operate the machine under the influence of substances that may impair safety.

## FAQ:

• **Q: Can the APT-5 be used by individuals of all age groups?**

A: Yes, the APT-5 is suitable for users of all ages and is recommended for maintaining fitness and physical well-being.

• **Q: What should I do if the APT-5 behaves abnormally?**

A: If the APT-5 behaves erratically or abnormally, do not use it and contact your authorized dealer or service agent for assistance.

**NOTE:**

Design details may change without notice.

## **INTRODUCTION**

- The APT-5 is an electric exercise machine used for the improvement of physical abilities. The APT-5 provides the user with a variety of exercise options and modes of operation that meet a broad range of physical needs.
- A wide range of accessories are available that offer many exercise options and make the APT-5 suitable for the maintenance of fitness and physical well-being.
- The APT-5 can be operated in either the ACTIVE mode at varying degrees of resistance or in the PASSIVE mode at adjustable speed and torque levels. In the PASSIVE mode, it is also possible to combine
- PAS-SIVE with ACTIVE training by using physical effort in conjunction with the electrical operation of the motor. The APT-5 functions forwards or backward and is suitable for arm or leg exercises (upper or lower limbs). In case the user has limited strength in the arm, it is recommended to have an attendant present during exercise.
- The APT-5's lightweight makes it portable, easy to store, and convenient to use.
- Use of the APT-5 is recommended for the maintenance of muscle strength, flexibility, muscle tone, endurance, and general fitness for users of all ages.

## **TECHNICAL DATA**

### **APT-5**

- Weight 10 Kg. (22 lbs.)
- Length 72 cm. (28 in.) overall
- Width 46 cm. (18 in.)
- Height 16 cm. (6½ in.) folded
- Working voltage 24 VDC
- Revolutions per minute 20 – 60 RPM
- Current Rating 4.16 A Max.
- Accuracy of measurement display ±10%
- Liquid ingress protection level IPX1



Type B equipment

### **External Power Supply**

- Weight 800 g. (1.8 lbs.)

- Length 19 cm. (7½ in.)
- Width 9 cm. (3½ in.)
- Height 4.6 cm. (1¾ in.)
- Input: 100-240 V 47-63 Hz 1.25 A
- Output: 24 VDC 100 W Max. 4.16 A



Class I equipment

## Continuous operation

- Equipment is not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.
- **WARNING:** To avoid the risk of electric shock, this equipment must only be connected to a supply main with protective earth.
- The APT-5 and its accessories have been designed and manufactured under the specifications of the following:
  - DIRECTIVE: Medical devices 93/42 EEC (Annex V) CE 0123

## SAFETY

These safety considerations and tips will help you operate the APT-5 safely and prevent personal injury and damage to your wheelchair.

1. Read this manual and all labels before operating. If you do not fully understand any part of this manual, please contact your authorized dealer or service agent.
2. The APT-5 should not be used in the vicinity of sensitive medical equipment.
3. Electromagnetic interference ("EMI") can cause APT-5 to behave erratically, which could be dangerous to the user. For your safety and protection, you must read the information on EMI before operating the APT-5.
4. EMC Warning: Radio wave sources such as radio and TV stations, transmitters, and cellular telephones can affect the performance of powered wheelchairs and mobility devices.
5. Do not operate the APT-5 when under the influence of alcohol, medications, or drugs that may impair your safety.
6. Only the authorized dealer or service agent may perform specified set-up procedures and controller settings; programming of the settings outside the limits, as specified by the manufacturer, may have adverse effects on the performance.
7. Do not use the APT-5 if it behaves abnormally or erratically, contrary to the usual performance as described in this user manual.
8. CAUTION: Surface temperatures can increase when exposed to external sources of heat (e.g. sunlight).

## SYSTEM COMPONENTS AND DETAILS

### APT-5 unit (Figure 1)

1. Operator panel
2. Angle release knob

3. Angle securing knob
4. Crank-arm
5. Power input socket
6. Socket (not in use)
7. Height release knob (Hi-Lo only)
8. Height securing knob (Hi-Lo only)

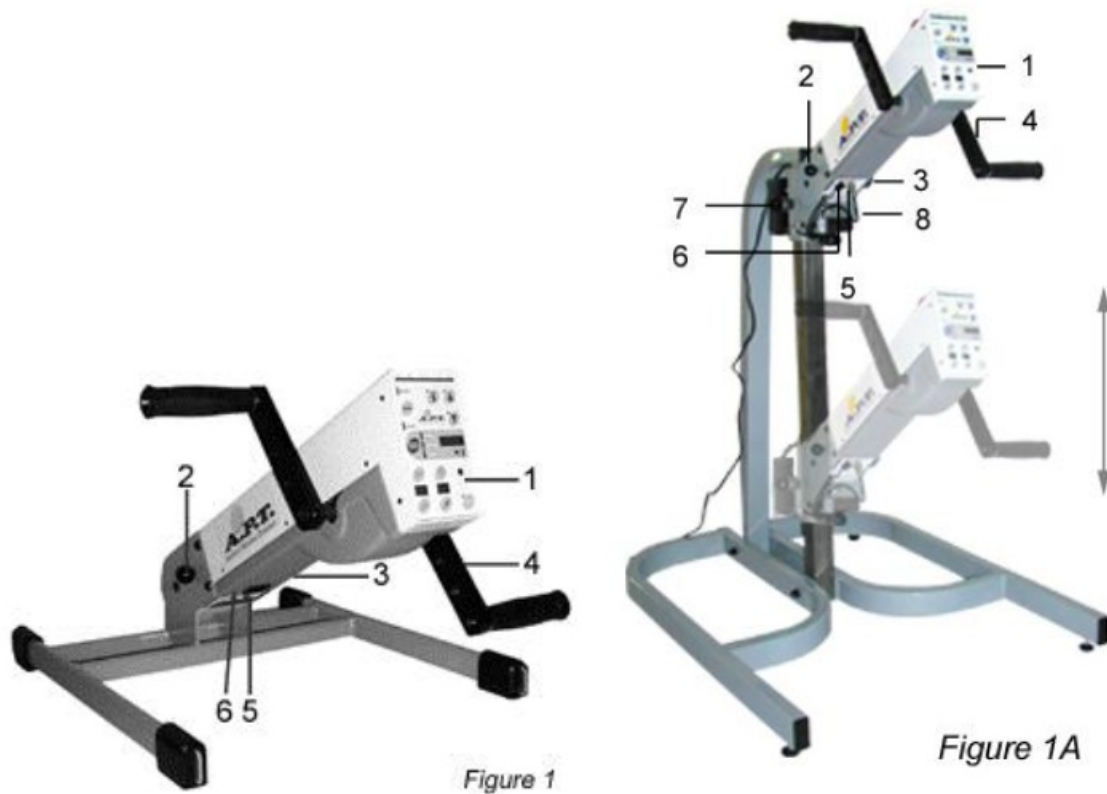


Figure 1

Figure 1A

**Primary components (Figure 2):**

1. Power supply unit
2. Straight hand-grips
3. Footrests
4. Finger protection disks
5. Securing straps

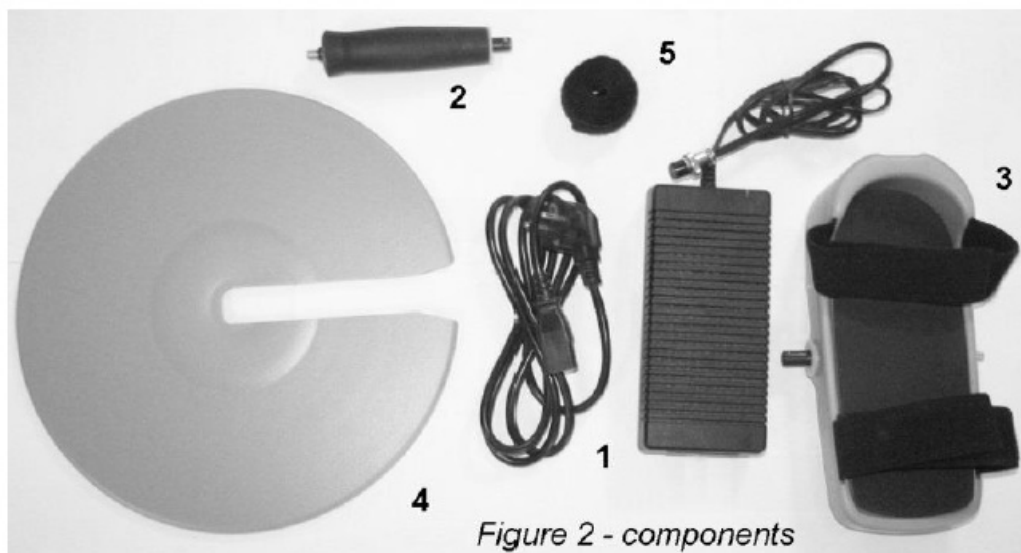


Figure 2 - components

### The Type Plate

The Type Plate can be found on the underside of the APT-5 body next to the power input socket.



Figure 2A

This label contains the serial number of the APT-5. The serial number consists of 11 digits and one letter: Example: Serial no. 32001103001X

3200	11	03	001	X
1	2	3	4	5

1. **Model:** APT-5
2. Year of manufacturing (last two digits of the year)
3. Month of manufacturing
4. Sequential number of batch
5. A letter identifying the manufacturing location

IPX1



0123



Liquid ingress protection level

Read this user manual and all labels before operating.

When this equipment is no longer operational it must be sent to a separate collection facility for recovery and recycling.

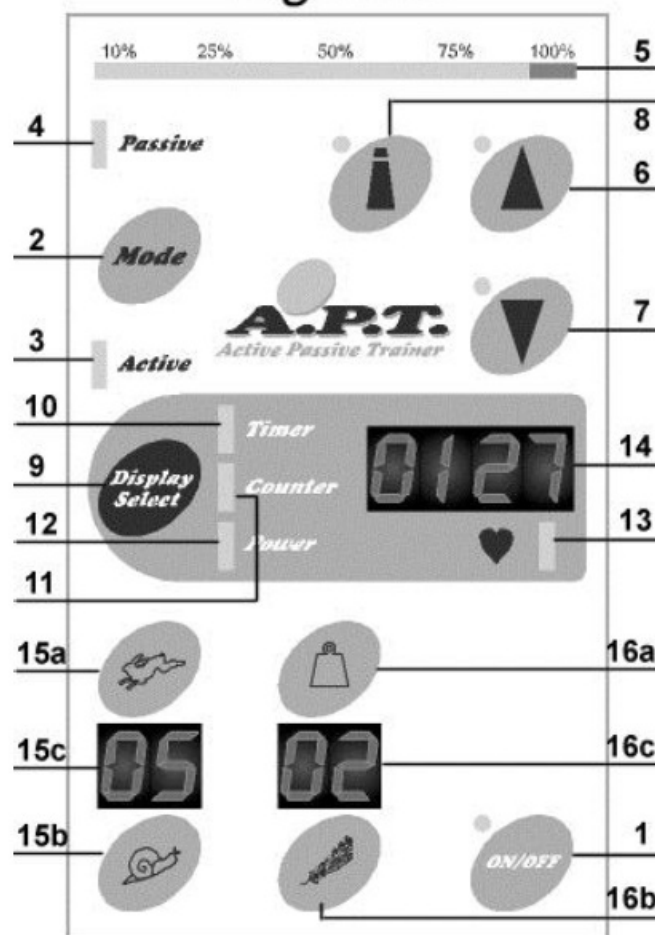
CE approved Notified Body No. 0123.

Type B equipment.

Read the warnings in this manual before operating.


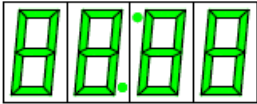


## The APT-5 – Operator Panel

Figure 3



1		On/Off button: green indicator is lit when the <b>APT-5</b> is switched on.
2		Mode button: for selecting active or passive mode of operation.
3		Green indicator is lit when ACTIVE mode is selected by mode button.
4		Green indicator is lit when PASSIVE mode is selected by mode button.
5		Indicates actual load level as percentage of chosen load level (see 16).
6		Button for forward operation in the PASSIVE mode. The green indicator is lit to indicate forward operation.
7		Button for backward operation in the PASSIVE mode. The green indicator is lit to indicate backward operation.
8		Button activating Auto-Reverse function in the PASSIVE mode. In the ACTIVE mode this button activates the constant force function. The green indicator is lit when activated.
9		Button for selecting display of data, (see 10-13):
10		Green indicator is lit when Timer display is selected. The display will show the time the <b>APT-5</b> has been used in the current exercise period.
11		Green indicator is lit when Counter display is selected. The display will show the total amount of revolutions of the crank arm in the current exercise period.
12		Green indicator is lit when Power display is selected. The display will show the power during exercise in Watts – only in Active mode.








13		<i>Not in use</i>
14		Display for Timer, Counter and Energy.
15		Exercise speed level selection push buttons 15a – Increases speed level (up to 10) 15b – Decreases speed level (down to 1)
16		Exercise load level selection push buttons 16a – Increases load level (up to 10) 16b – Decreases load level (down to 1)


## ACCESSORIES

The following items are designed for use in combination with the APT-5. CAUTION: The use of accessories other than these can be unsafe.

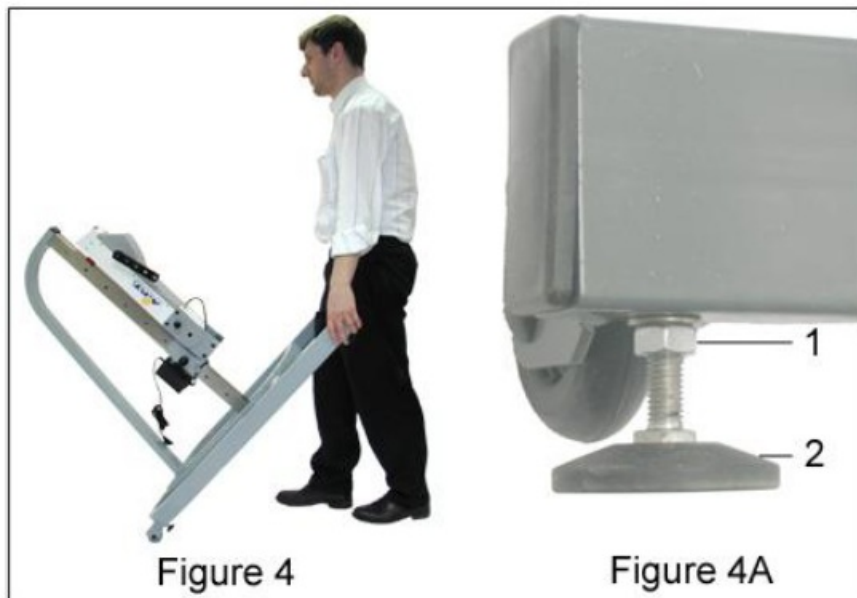
### Hand grips and Footrests

#	ACCESSORY	USAGE DESCRIPTION	FIGURE
a)	Straight Handgrips	Used for most of the upper limb exercising.	
b)	Angled Handgrips	Ergonomically designed, mainly for strength exercising in the Active mode.	
c)	Hemi-glove	Used for securely supporting the wrist and hand on the handgrips for users who have little or no muscle strength.	
d)	Pediatric Hemi-glove	Hemi-glove specially designed to be used by children.	
e)	Standard Footrests	Used for most of the lower limb exercising.	
f)	Pediatric Footrest	Footrest specially designed to be used by children.	
g)	High support for footrests	May be attached to footrests for supporting the lower limbs of users that have little or no muscle strength.	
h)	Handle Bar	Used to improve hold on APT-1 during leg exercise.	

#### Optional added functions

#	ACCESSORY	USAGE DESCRIPTION	FIGURE
a)	Remote Control	Used mainly for lower limb exercising by users who have difficulty in reaching the operating panel.	

#### PREPARING THE APT-5 HI-LO



### **Moving your APT-5 Hi-Lo**

The APT-5 Hi-Lo can easily be moved by lifting the end of the frame and pushing the unit using its wheels, see Figure 4.

### **Positioning the APT-5 Hi-Lo**

Position the APT-5 Hi-Lo close to an electrical socket outlet. The adjustable feet on the underside keep the APT-5 Hi-Lo level and prevent it from sliding.

### **NOTE:**

Ensure that the APT-5 Hi-Lo is level to prevent damage to the trainer or its components.

If readjustment of one of the feet is needed, open the contra nut (4A/1), turn the foot (4A/2) to the desired height, and secure the foot with the contra nut (4A/1).

## **INSTALLATION FOR USE**

### **ARMS EXERCISE**

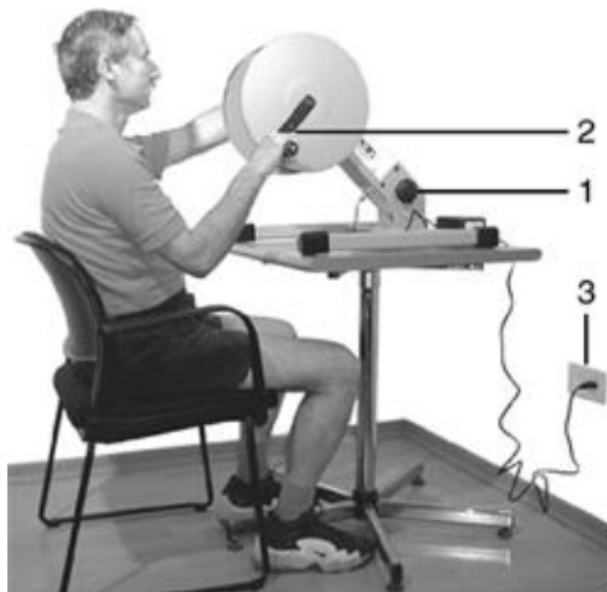


Figure 5

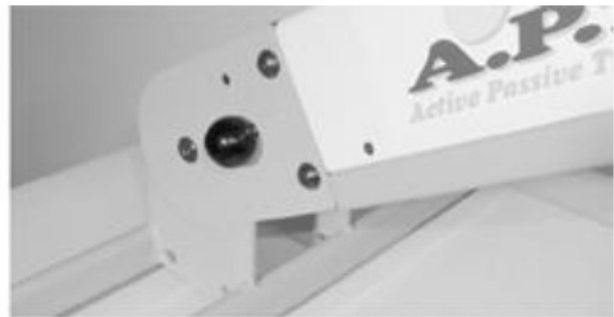


Figure 6 - angle release knob

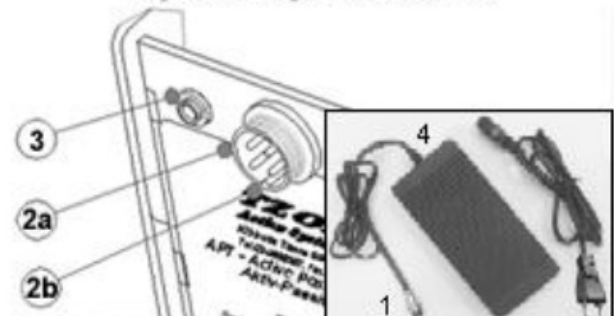


Figure 7 - power supply connector and APT socket

#### • Step 1:

- Position the APT-5 on a level tabletop close to an electrical socket outlet (Figure 5).
- For the APT-5 Hi-Lo: loosen the height securing knob (Figure 1A-8), pull the grey ring of the height release knob (Figure 1A-7), and adjust the unit to the required height. Release the grey ring and tighten the height securing knob (Figure 1A-7).

#### • Step 2:

- Loosen the angle-securing knob (Figure 5-1) and adjust the APT-5 to the required angle. To increase the angle, lift the body of the APT-5, allow it to “click” into one of the operating positions and retighten the securing knob. To decrease the angle, pull the angle release knob (Figure 6), lower the body of the APT-5, allow it to “click” into another operating position and tighten the securing knob.
- **CAUTION:** Make sure that the minimum distance between the crank arm and the table surface is approximately 5 cm. / 2” (Figure 5-2).

#### • Step 3:

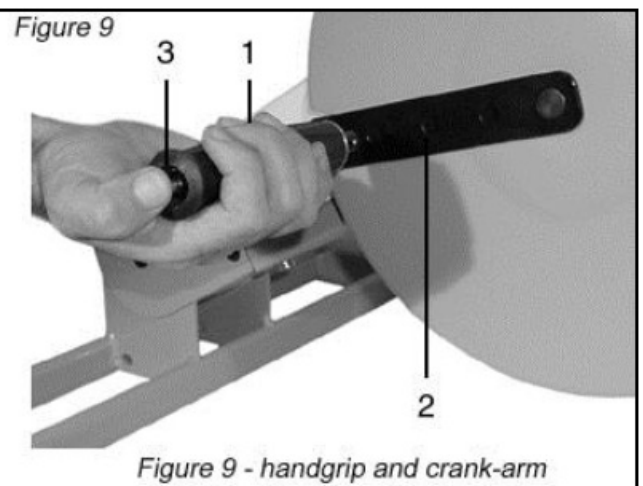
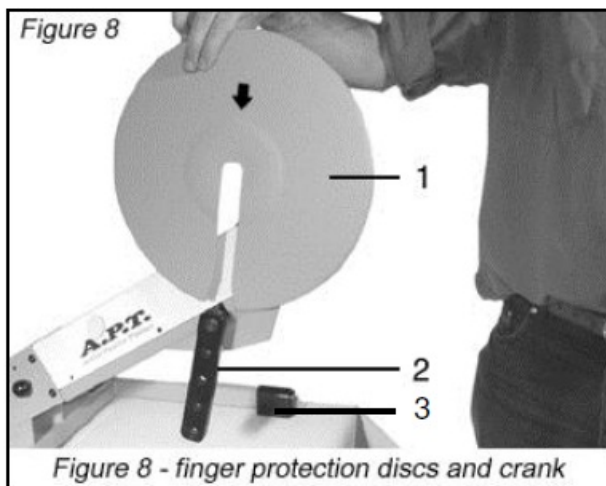
- Connect the output connector (Figure 7-1) of the power supply (Figure 7-4) to the APT-5 power input socket (Figure 7-2a) while ensuring the correct position of the connector groove opposite the guide key of the socket (Figure 7-2b).
- **NOTE:** The APT-5 must be used only with an original APT-5 Power Supply unit.

#### • Step 4:



- Install the finger protection discs (Fig. 8-1) by sliding them into the grooves on the outside edges of the crank arms (Figure 8-2) in the direction shown.
- **NOTE:** The finger protection discs are important for the safe operation of the unit during hand exercise.

#### • Step 5:

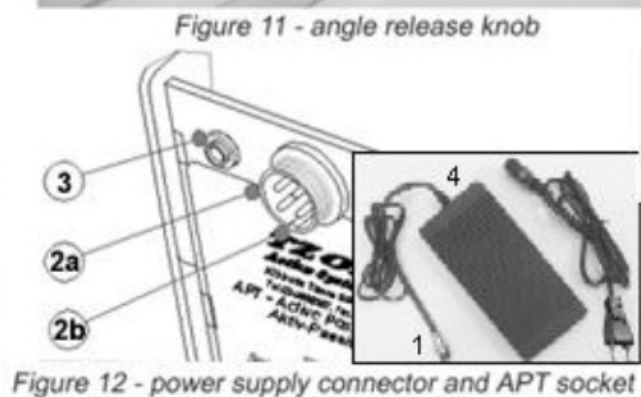
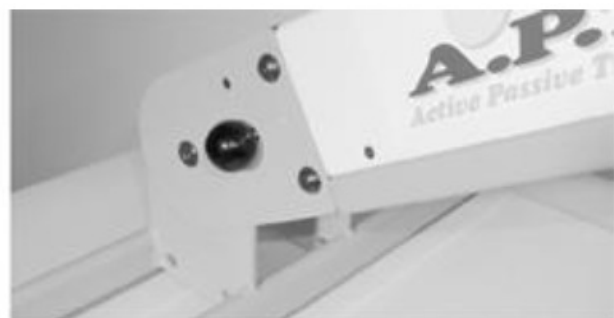
- Insert handgrip (Figure 9-1) in one of the four mounting holes (Figure 9-2) in each of the APT-5 crank arms. Installation or removal requires only a straight push or pull while simultaneously pressing on the release pin (Figure 9-3) at the end of the handle.
- **NOTE:** The choice of the mounting hole provides variable resistance levels and ranges of motion. See operation instructions.



#### • Step 6:

- Plug the power supply mains power plug into the electrical socket outlet (Figure 5-3). To start operating, press the  button.
- The APT-5 will enter the stand-by position. Then press the  button. The green ACTIVE mode indicator will light up. You may start exercising in the ACTIVE mode. For operation instructions.
- **NOTE:** If the APT-5 moves across the table during arm exercises, anti-slip pads (Figure 8-3) may require cleaning.

#### LEG EXERCISE



- **Step 1:** Position the APT-5 on the floor close to an electrical socket outlet (Figure 10).
  - **Step 2:** Loosen the angle-securing knob (Figure 10-1) and adjust the APT-5 to the required angle. To increase the angle, lift the body of the APT-5, allow it to “click” into one of the operating positions and retighten the securing knob. To decrease the angle, pull the angle release knob (Figure 11), lower the body of APT-5, allow it to “click” into another operating position, and tighten the securing knob.
- CAUTION:** Make sure that the minimum distance between the crank arm and the floor surface is approximately

5 cm. / 2" (Figure 10-2)

- **Step 3:** Place a chair at the desired distance from the APT-5. If necessary, attach the Securing straps (Figure 10-6) between the APT-5 base rings (Figure 10-5) and the chair legs to prevent any change in distance between the APT-5 and the chair during leg exercises.
- **Step 4:** Connect the power output connector (Figure 12-1) of the power supply (Figure 12-4) to the APT-5 power input socket (Figure 12-2a) while ensuring the correct position of the connector groove opposite the guide key of the socket (Figure 12-2b).

**NOTE:** The APT-5 must be used only with an original APT-5 Power Supply unit.

- **Step 5:** Insert the Footrest (Figure 13-1) in one of the four mounting holes (Figure 13-2) in each of the APT-5 crank arms. Installation or removal requires only a straight push or pull while simultaneously pressing on the release pin (Figure 13-3) as shown. Secure feet in place with straps fastened diagonally as shown in Figure 10.

**NOTE:** The choice of the mounting hole provides variable resistance levels and ranges of motion. See operation instructions.

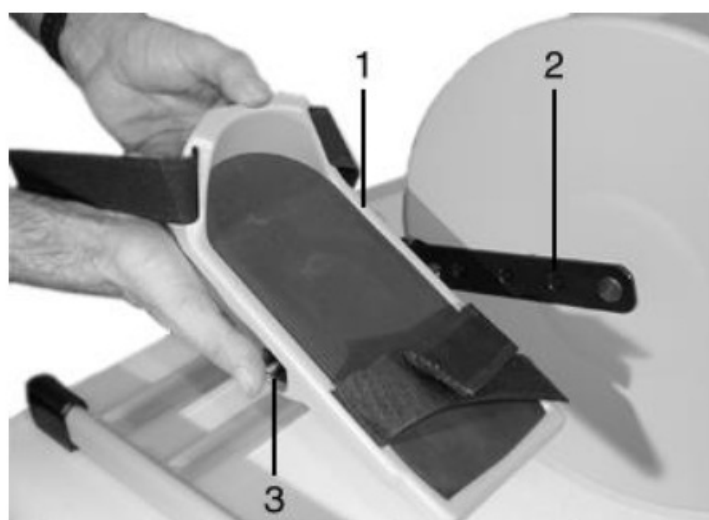




Figure 13 - footrest, crank-arm, mounting holes

- **Step 6:** Plug the power supply mains power plug into the electrical socket outlet (Figure 10-3). The APT-5 will enter a stand-by position. To start operating, press the  button. The APT-5 will enter the stand-by position. Then press the  button. The green AC-TIVE mode indicator will light up. You may start exercising in the ACTIVE mode. For operation instructions, see 5.1 & 5.2.

**NOTE:**

If the APT-5 moves across the floor during leg exercises, anti-slip pads (Figure 8-3) may require cleaning. If possible – use the APT-5 on a carpet or rubber mat.

## OPERATION INSTRUCTIONS

**NOTE:**





Install APT-5 for arms or leg exercises as described in the previous chapters.

### Active mode – ISOKINETIC operation

- **Step 1:** Insert the handgrips or footrests in one of the four mounting holes according to the radius and range of motion required.

**NOTE:** As the effective crank arm length is reduced in the ACTIVE mode, the amount of effort required




increases while the range of motion decreases, and vice versa.

- **Step 2:** To activate the active mode from the stand-by position (after the electrical power is supplied to the APT-5 and the  button is pressed): press the  button. The green ACTIVE mode indicator will light up.
- **Step 3:** Set the desired load level by pressing one of the selection push buttons,  to increase the level or  decrease the level.
- **Step 4:** Rotate the APT-5 handgrips or footrests forward or backward. Actual exercising force is displayed as a percentage (%) on the Bar Indicator.

#### NOTE:

In this mode, an increase in the rotation speed (RPM) will lead to an increase in the exercising force.








#### Active mode – CONSTANT FORCE Operation

- **Step 1:** Press the  button to activate the CONSTANT FORCE FUNCTION in the ACTIVE mode. The green indicator will light up.
- **Step 2:** Set the desired load level by pressing one of the selection push buttons,  to increase the level or  decrease the level.
- **Step 3:** Rotate the APT-5 handgrips or footrests forward or backward. The exercising force as displayed on the Bar Indicator will now remain constant at 50% for the selected load level, irrespective of the crank arm rotation speed.

#### PASSIVE mode


- **Step 1:** Insert the handgrips or footrests in one of the four mounting holes according to the radius and range of motion required.

**NOTE:** As the effective crank arm length is reduced in the PASSIVE mode, the range of movement is reduced and the degree of resistance that the motor can overcome is increased.

- **Step 2:** To activate the passive mode from the stand-by position (after the electrical power is supplied to the APT-5 and the  button is pressed): press the  button two times, until the green PASSIVE mode indicator lights up. From the ACTIVE mode – press once only.
- **Step 3:** Set the desired rotation speed by pressing one of the speed level push buttons and the desired force by pressing one of the force load push buttons:  to increase level,  and  decrease the level.
- **Step 4:** Hold onto the handgrips (for arm exercise) or secure both feet to the footrests (for leg exercise). Make sure that APT-5 is placed at a comfortable distance for exercise by turning the crank arms one complete revolution.
  - Press the  button for forward rotation.
  - Press the  button for backward rotation.





**NOTE:** There will be a short delay before the APT-5 begins to turn in the chosen direction.

- **Step 5:** The operation force of the crank arms should rotate the arms or legs with no effort on the part of the user. This rotation force varies according to the exercise level and crank arm mounting hole location selected.
- **Step 6:** To stop the rotation of the crank arms and exit the PASSIVE mode, press the  button. The indicators will turn off and the APT-5 will return to the standby position.



### COMBINED active/passive mode

- **Step 1:** Operate the APT-5 in the passive mode and work against the force of the motor by applying resistance to the rotation of the crank arms.
- **Step 2:** The resistance force to the rotation is displayed on the on the Bar Indicator as a percentage (%) at each level.
- **Step 3:** If the resistance force stops the crank arm rotation completely, the Bar Indicator reaches 100% and the red indicator will light up. After holding this position for approximately 2 seconds, the crank arm rotation will stop automatically.


### NOTE:





To restart, Press the  button for forward rotation or the  button for backward rotation.

### Passive mode – AUTO-REVERSE function

- **Step 1:** Push the  button to activate the AUTO-REVERSE function in the PASSIVE mode. The green indicator will light up.
- **Step 2:** Operate the APT-5 as in the usual passive or combined active/passive mode.
- **Step 3:** When the resistance force stops the crank arm rotation completely, the Bar Indicator reaches 100% and the red indicator will light up. After holding this position for approximately 2 seconds, the crank arm rotation will stop automatically. After a short delay, the DIRECTION OF ROTATION WILL BE REVERSED. This feature also serves as an ANTI-SPASM function, stopping the motor in case of muscle spasm and reversing the direction of rotation after a short delay.
- **Step 4:** As long as the  button indicator is lit, this function will continue to operate in the PASSIVE mode.

### Display




By pressing the  button, four different types of data can be displayed.

- Normally the display will show the time measuring the duration of exercising; the green  indicator will be lit. Each time the  button is pressed, the display will shift to show the next data type – as follows:
- **Counter:** displays the total of crank arm revolutions performed during an exercise period; the green  indicator will be lit.
- **Power:** display the power used during an exercise period; the green  indicator will be lit. This display



can only be activated in ACTIVE mode.

## Shut down

- **Step 1:** To turn off the APT-5, from the PASSIVE mode – press the  button once. From the Active mode – press twice. All indicators except for the one next to the  button will turn off and the APT-5 will return to its stand-by position. To turn off the APT-5 completely – press the  once.
- **Step 2:** Disconnect the power from the APT-5 by first disconnecting the mains electrical plug from the electrical socket outlet. Disconnect the Power supply output connector from the APT-5 power input socket.

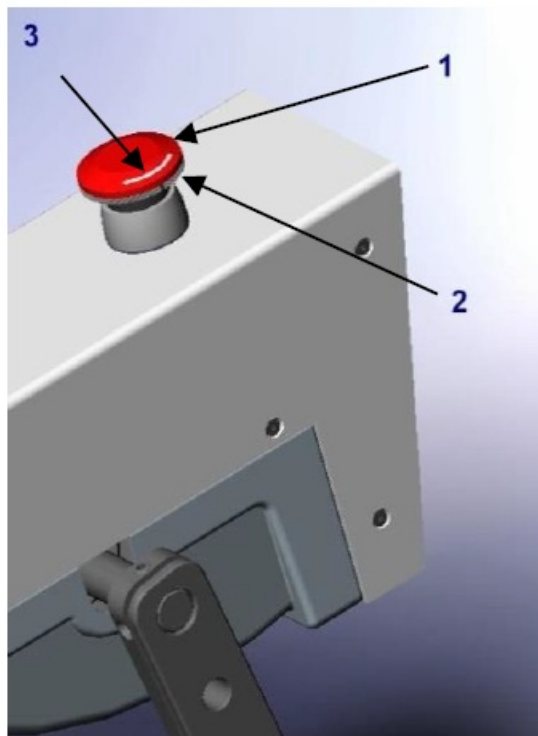
### CAUTION:

For safe disconnection always take the mains plug out of the electrical socket before disconnecting the Power supply from the APT-5.

## Emergency Switch

In the event of the need to stop the APT-5 quickly, press the red mushroom-headed button (Figure 14-1) situated on the top of the trainer body (above the control panel). This will immediately cut the electrical supply to the APT-5.

- The button will stay depressed and as long as it is in this position the APT-5 will not function.
- To restore the electrical supply to the APT-5, turn the knurled black disc underneath the red button (Figure 14-2) in the direction of the white arrow (Figure 14-3) on the red button (clockwise).
- The red button will then return to its original position.
- The APT-5 may then be restarted as previously described.



*Figure 14 – Emergency Switch*

## TRANSPORTATION AND STORAGE

- The APT-5 can be lifted safely in its folded position by grasping onto the centre of either of the legs of the base unit and carrying it like a suitcase.
- For storage in a confined space, fold the APT-5 unit by pulling the angle release knob (Figure 1-2) and lowering it to the flat position. Tighten the angle-securing knob (Figure 1-3) to prevent unintentional unfolding.
- Temperature range: -20°C to 40°C
- Relative humidity range: 10% to 80%
- Atmospheric pressure range: 700 hPa to 1060 hPa

## **EMI – ELECTROMAGNETIC INTERFERENCE**

### **CAUTION:**

You must read this information regarding the possible effects of electromagnetic interference on your APT-5.

### **EMI–Electromagnetic Interference**

#### **Electromagnetic Interference (EMI) From Radio Wave Sources**

The equipment may be susceptible to electromagnetic interference (EMI), which is interfering with electromagnetic energy (EM) emitted from sources such as radio stations, TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones. The interference (from radio wave sources) can cause the equipment to come to a sudden stop, or react in an uncontrolled manner. It can also permanently damage the equipment's control system.

There are many sources of relatively intense electromagnetic fields in the everyday environment. Some of these sources are obvious and easy to avoid. Others are not apparent and exposure is unavoidable. However, we believe that by following the warnings listed below, your risk to EMI will be minimized.

#### **The sources of radiated EMI can be broadly classified into three types:**

1. Hand-held portable transceivers (transmitters-receivers) with the antenna mounted directly on the transmitting unit. Examples include citizen band (CB) radios, "walkie-talkies", security, fire, and police transceivers, cellular telephones, and other personal communication devices.
  - **NOTE:** Some cellular telephones and similar devices transmit signals while they are ON, even when not being used;
2. Medium-range mobile transceivers, such as those used in police cars, fire trucks, ambulances, and taxis. These usually have the antenna mounted on the outside of the vehicle; and
3. Long-range transmitters and transceivers, such as commercial broadcast transmitters (radio and TV broadcast antenna towers) and amateur (HAM) radios.

### **NOTE:**

Other types of hand-held devices, such as cordless phones, lap-top computers, AM/FM radios, TV sets, CD players, and cassette players, and small appliances, such as electric shavers and hair dryers, so far as we know, are not likely to cause EMI problems to the equipment.

Because EM energy rapidly becomes more intense as one moves closer to the transmitting antenna (source), the EM fields from hand-held radio wave sources (transceivers) are of special concern. It is possible to unintentionally bring high levels of EM energy very close to the equipment's control system while using these devices. This can affect the equipment's operation. Therefore, the warnings listed below are recommended to prevent possible interference with the control system of your APT-5.


## **WARNINGS**

Electromagnetic interference (EMI) from sources such as radio and TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones can affect the equipment. Following the warnings listed below should reduce the chance of an unintended reaction, which could result in serious injury.

1. Do not operate hand-held transceivers (transmitters-receivers), such as citizens band (CB) radios, or turn ON personal communication devices, such as cellular phones, while your APT-5 is turned ON;
2. Be aware of nearby transmitters, such as radio or TV stations, and try to avoid operating your APT-5 close to them;
3. If an unintended reaction occurs, turn your APT-5 power switch OFF by using the emergency stop switch (see instructions on page 22);
4. Be aware that adding accessories or components, or modifying your APT-5, may make it more susceptible to EMI (Note: There is no easy way to evaluate their effect on the overall immunity of your APT-5);
5. Report all incidents of unintended reaction to your Authorized APT-5 dealer or service center, and note whether there is a source of EMI nearby.

Guidance and manufacturer's declaration – electromagnetic emission		
The Electric Exercise Machine is intended for use in the electromagnetic environment specified below. The customer or the user of the Electric Exercise Machine should assure that it is used in such an environment.		
Emissions test	Compliance	Electromagnetic environment - guidance
Harmonic emissions  IEC 61000-3-2	Class A	
Voltage fluctuations / flicker emissions  IEC 61000-3-3	Complies	

Guidance and manufacturer's declaration – electromagnetic immunity			
The Electric Exercise Machine is intended for use in the electromagnetic environment specified below. The customer or the user of the Electric Exercise Machine should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Electrostatic transient / burst  IEC 61000-4-4	± 2 kV for power supply lines  ± 1 kV for input/output lines	± 2 kV for power supply lines	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines  IEC 61000-4-11	$< 5\% U_T$ ( $>95\%$ dip in $U_T$ ) for 0,5 cycle  $40\% U_T$ (60 % dip in $U_T$ ) for 5 cycles  $70\% U_T$ (30 % dip in $U_T$ ) for 25 cycles	$< 5\% U_T$ ( $>95\%$ dip in $U_T$ ) for 0,5 cycle  $40\% U_T$ (60 % dip in $U_T$ ) for 5 cycles  $70\% U_T$ (30 % dip in $U_T$ ) for 25 cycles	Mains power quality should be that of a typical commercial or hospital environment. If the user of the Electric Exercise Machine requires continued operation during power mains interruptions, it is recommended that the Electric Exercise Machine be powered from an uninterruptible power supply or a battery.
NOTE $U_T$ is the a. c. mains voltage prior to application of the test level.			

Guidance and manufacturer's declaration – electromagnetic immunity			
The Electric Exercise Machine is intended for use in the electromagnetic environment specified below. The customer or the user of the Electric Exercise Machine should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Radiated RF IEC 61000-4-3	3 V/m	3 V/m	<p>Portable and mobile RF communications equipment should be used no closer to any part of the EQUIPMENT Electric Exercise Machine including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> $d = \left[ \frac{3,5}{E_1} \right] \sqrt{P} \quad 80 \text{ MHz to } 800 \text{ MHz}$ $d = \left[ \frac{7}{E_1} \right] \sqrt{P} \quad 800 \text{ MHz to } 2,5 \text{ GHz}$ <p>where <math>p</math> is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and <math>d</math> is the recommended separation distance in metres (m).<sup>a</sup></p> <p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,<sup>a</sup> should be less than the compliance level in each frequency range.<sup>b</sup></p> <p>Interference may occur in the vicinity of equipment marked with the following symbol:</p> 
<p>NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.</p> <p>NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.</p> <p><sup>a</sup> Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the Electric Exercise Machine is used exceeds the applicable RF compliance level above, the Electric Exercise Machine should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the Electric Exercise Machine.</p> <p><sup>b</sup> Over the frequency range 150 kHz to 80 MHz, field strengths should be less than <math>[V_1]</math> V/m.</p>			

Recommended separation distances between portable and mobile RF communications equipment and the Electric Exercise Machine.			
The Electric Exercise Machine is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the Electric Exercise Machine can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Electric Exercise Machine as recommended below, according to the maximum output power of the communications equipment			
Rated maximum output of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz $d = \left[ \frac{3,5}{P_1} \right] \sqrt{P}$	80 MHz to 800 MHz $d = \left[ \frac{3,5}{E_1} \right] \sqrt{P}$	800 MHz to 2,5 GHz $d = \left[ \frac{7}{E_1} \right] \sqrt{P}$
0,01	0.12	0.12	0.23
0.1	0.37	0.37	0.74
1	1.17	1.17	2.33
10	3.69	3.69	7.38
100	11.67	11.67	23.33
For transmitters rated at a maximum output power not listed above the recommended separation distance $d$ in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where $P$ is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.			
NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.			
NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			

## GENERAL MAINTENANCE, INSPECTIONS & STORAGE

- The expected service life of the APT-5 is at least 7 years.
- Minimum ongoing maintenance should prevent unnecessary repairs.
- The rugged design of the APT-5 and the use of selected, modern materials ensure minimal requirements for care and maintenance.
- **NOTE:** Improper handling or neglect in the care of the APT-5 may reduce or cancel the coverage of the manufacturer's warranty.

## Regular care

### Monthly checks

- Inspect Power supply cables and plug for visible damage.
- Check power-input connector for visible damage or insecure fastening.
- On a regular basis check that all screws and components are fastened tightly.
- Ensure that the anti-slip pads under the base are always kept clean.

### Annual checks – Checks after repair

These annual checks shall be performed by an authorized technician.

- Ensure full functioning of Operator Panel (Fig. 3, page 10)
- Smooth rotation of Crank Arms (Fig.1.4, page 8)
- Firm locking of Angle Securing Knob (Fig. 1.3 page 8)
- Ensure that the Input Socket (Fig. 1.5 page 8) is not damaged.
- Inspect the power supply for the following parameters:

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Safety Ground Leakage Current	Io=Full Load, Vin=240 VAC/60 Hz			0.1	mA
Earth Impedance	25 A 40 A		22 27		mΩ
Isolation Resistance	Test Voltage=500 VDC	50			mΩ

### CAUTION:

If any damage is detected – do not use the APT-5. Please contact your authorized dealer. Only authorized personnel may carry out repairs. The power supply is not to be repaired.

### Cleaning instructions

- Disconnect the Power Supply and wipe dry with a clean cloth.
- Take care not to allow water to enter the unit. Keep cables and electric components away from water and humidity.

### CAUTION:





For safe disconnection of the APT-5 always take the mains plug out of the wall socket before removing the connector from the APT-5 power socket.

## DISPOSAL AND RECYCLING

The packing material must be separated into plastic and paper/cardboard components and submitted to authorized recycling locations. The APT-5 device consists of electronic components, cables, plastic parts, steel body and base frame, and aluminum parts. Do not discard any components to normal refuse facilities. When APT-5 is no longer operational, it is to be dismantled and separated into the above material groups and submitted to authorized recycling facilities.

## TROUBLE-SHOOTING

Hereunder are some types of disorders, which can usually be repaired rather simply. If these following measures are unsuccessful, an authorized dealer should be contacted!

PROBLEM	CHECKPOINT
The <b>APT-5</b> does not function at all	The power Supply is not connected properly to the mains outlet or the <b>APT-5</b> .
	<b>APT-5</b> switched off. Press the  button to turn <b>APT-5</b> on.
	<b>APT-5</b> in standby mode. Press the  button to enter a ctive or passive modes.
	Stop the switch in the lower – disconnection position. Turn the switch anti-clockwise to release.
The crank-arms do not start to rotate in the passive mode	No direction selection button is selected. Press the  button (Figure 3-6) for
	forward rotation. Press the  button
	(Figure 3-7) for backward rotation
Model with remote control: The remote unit not functioning smoothly	The remote unit's transmitter LED needs to be wiped clean.
	Remote unit batteries need replacement.

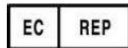
## WARRANTY

The warranty period for the APT-5 is twelve months and covers faulty materials and workmanship (consumables not covered: plastic coverings and batteries). Worn parts damaged as a result of excessive loading, improper handling, intentional damage, or unauthorized maintenance or modification are not covered by the warranty.

For safety and warranty assurance reasons, any modifications and re-pair of APT-5 or its components must be performed exclusively by authorized personnel and exclusively with original spare parts.




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99803, Israel  
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## Documents / Resources

	<p><a href="#">A P T APT-5 Passive Trainer</a> [pdf] User Manual APT-5 Passive Trainer, APT-5, Passive Trainer, Trainer</p>
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## References

- [TZORA - Folding mobility medical Scooters](#)
- [User Manual](#)

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