Richmar®

APT Performer

USER MANUAL

DQAPT

Please read this user manual before starting to use the device.

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Foreword

*Thank you for purchasing **DQAPT** from our company.*

*This manual has been written for the owners and operators of the **DQAPT**. It contains general information on the instructions for safety, intended use, working principle, operation, maintenance, trouble shooting, and warranty. In order to maximize the use, efficiency, and working life of your unit, please read this manual thoroughly and become familiar with the controls, as well as the accessories, before operating the unit. This manual contains general safety, working principle, operation, protocols guidance, maintenance, and trouble shooting for the owners and operators of the **DQAPT**.*

Specifications put fifth in this manual were in effect at the time of publication. However, owing to policy of continual improvement by Compass Health Brands, Corp., any changes to these specifications may be made at any time without obligation on the part of Compass Health Brands, Corp.

Before administering any treatment to a patient, the user of this equipment should read, understand, and follow the information contained in this manual for each mode of treatment available, as well as the indications, contraindications, warnings, and precautions.

Operator Qualifications

***DQAPT** is intended exclusively for use by medical specialists and is only allowed to be used by qualified and instructed medical persons in a*

clinical environment. Specialists must have the basic physical and cognitive prerequisites such as vision, hearing, and literacy. Also, the basic function of the upper extremities is expected.

Operator Training

*Operators of the **DQAPT** must have been adequately trained in using this system safely and efficiently before they operate the unit. A documented, cross-functional review must be performed, as many times as necessary, in order to ensure that instructions can be understood by users. The operator must be instructed in the following points:*

Instruction in operation and designated use of the instrument with practical exercises;

- *Mode of effect and function of the unit;*
- *Settings of all components;*
- *Indications for use of the unit;*
- *Contraindications and side effects of the device;*
- *Explanation of the warning notes in all operating status;*
- *Instructions on how to maintain the unit.*

Further training requirements vary from country to country. It is the operator's responsibility to ensure that the training meets the requirements of all applicable local laws and regulations. Other information about training in the operation of this system can be obtained from Compass Health Brands, Corp.

Product Description

***DQAPT** is a rehabilitative training device that suitable for the active and passive movement of a person's lower and upper extremities. It has four training modes (STRENGTH, ENDURANCE, SYMMETRY and ROM training mode) and spasm control function. The device can connect the heart rate sensor via Bluetooth to real-time display heart rate during training.*

Clinic purpose: Therapeutic and Rehabilitation

Suitable places: Clinic and hospital

Safety Instructions

Symbols

1. Symbols on the medical device

Symbols	Explanation
	*Manufacturer*
	*Date of manufacture*
	*Correct Disposal of This Product (Waste Electrical & Electronic Equipment) Statement: Contact the local authorities to determine the proper method of disposal of potentially bio-hazardous parts and accessories.*
	*Type B applied part complying with IEC 60601-1*
	*This device emits non-ionizing radiation.*
	*Refer to instruction manual/ booklet*

2. Symbols on the package

Symbols	Explanation
	*This side up* *The transportation package must be vertical and straight up during transportation.*
	*Fragile, handle with care* *The product inside the packaging could be easily damaged if dropped or handled without care and attention.*
	*Keep away from rain* *The product package should keep out of the rain and not to store it in damp conditions.*
	*Temperature limitation* *The product package should be stored at a temperature between -20 and 55 degrees (centigrade).*
	*Upper limit of humidity* *The product package should be stored at a humidity less than 93%.*
	*Atmospheric pressure limitation* *The product package should be stored at an atmospheric pressure between 86kPa and 106kPa.*

Precautionary Definitions

The precautionary instructions found in this section and throughout this manual are indicated by specific symbols. Understand these symbols and their definitions before operating this equipment. The definition of these symbols is as follows:

CAUTION

Text with a "CAUTION" indicator will explain possible safety infractions that could have the potential to cause minor to moderate injury or damage to equipment.

WARNING

Text with a "WARNING" indicator will explain possible safety infractions that will potentially cause serious injury and equipment damage.

Refer to Instruction Manual/Booklet

NOTE: *Throughout this manual, "NOTE" may be found. These Notes are helpful information to aid in the particular area or function being described.*

Type B applied part

The LE pedal and calf support combination, the UE pedals, and the handlebar are considered as one type B applied part.

Warnings and Cautions

*Please read carefully the user manual before using **DQAPT** and take care of what follows:*

WARNING

- *Read, understand, and practice the precautionary operating instructions. Know the limitations and hazards associated with using the **DQAPT**. Observe the precautionary and operational decals placed on the unit.*
- *Improper installation, operation or maintenance of **DQAPT** may result in malfunctions of this unit or other devices.*
- *To avoid the risk of electric shock, the **DQAPT** must only be connected to supply mains with protective earth.*
- *MAINS PLUG is used as the isolation means to isolate form supply mains. Do not position the product so that it is difficult to operate the mains plug.*
- *Ensure that the power cord is easily detachable in an emergency situation.*
- *Take care not to allow water to enter the device. Liquid penetration could damage the device. Keep cables and electric components away from water and high humidity.*
- *Do not connect or disconnect the device from plug with wet hands.*
- *Before you plug the **DQAPT** into a main socket please check that the voltage of the device stated on the marking corresponds with the voltage of the power supply.*
- *Do not press, bend or damage the electric cable.*
- *Avoid connecting more devices to the same multiple plug (Overheating risk).*

- *Do not use in the following circumstance: the mixture of the flammable anesthetic gas and air; the mixture of the flammable anesthetic gas and oxygen or nitrous oxide, or other flammable agents.*
- *In case of display failure or other obvious defects, switch the device off immediately, and notify a certified service technician.*
- *Adjustments or replacement of components may result in the equipment failing to meet the requirements for interference suppression.*
- *Use the device only for the intended purpose as defined in this manual*
- *If experiencing any pain, nausea, circulatory weakness, the training should be stopped right away and your doctor should be consulted.*
- *During training, if the motor is out of control, please press the emergency stop button immediately to stop training.*
- *Please stop the device if there is abnormal circumstance during the process of the training. If the device smokes please press the OFF button and turn it off, disconnect the power cord and contact with the distributor as soon as possible.*
- *No modification of this equipment is allowed.*
- *Prior to replace the fuse of the device, make sure that the device is turned off and the power cord has been disconnected.*
- *Do not remove the covers. This may cause unit damage, malfunction, electrical shock, fire, or personal injury.. If a malfunction occurs, discontinue use immediately, disconnect the Mains Power Cord from the outlet, and contact the after-sale service department of COMPASS for service.*
- *Never perform unauthorized service work. All service work must be performed only by service technicians who have been authorized by the manufacturer.*
- *Do not perform maintenance when the patient uses the unit.*

CAUTION

- *During the process of operation, constantly watch patients and instrument case, always pay attention to whether the abnormal conditions occur.*
- *Please pull the plug before move the device and try to avoid vibration during moving the device.*
- *If the device has not been used for a long time (≥2 weeks), please check and make sure the device and accessories are in good conditions before use.*
- *The **DQAPT** should be kept out of the reach of children.*
- *Do not use this device on infants or people not capable of expressing their intensions. May cause an accident or ill health.*
- *Do not use this device in places with high-intensity magnetic field , electromagnetic wave and impulse voltage.*
- *Do not use this device in places with corrosive gas and sunlight.*
- *Do not use this device in places with chemicals.*
- *Please make sure all the electrical cables are connected correctly and safe before use.*
- *Pay attention that your feet have enough space while adjusting the arm trainer in height. When using the leg trainer, the legs must not collide with the arm trainer.*
- *Before starting your training, make sure that the supporting module of the handlebar or the arm trainer is tightened and that your legs or arms are secured properly.*
- *Ensure before each training session that the screws of all adjustable parts of the device (handlebar, supporting module, calf support) are tightened and intact. In case they get loose during the operation you have to stop the training immediately and tighten the screws.*
- *Suitable clothing must always be worn. Wide trousers, long towels*

and scarves that could get caught or tangled in pedal crank must not be worn (especially during leg training). Shoes with shoe laces must not be worn, either.

- *Before starting leg training, the arm trainer has to be swiveled back so that the patient can hold on the handlebar.*
- *Before each leg training, you must check whether the patient's feet are in the correct position on the LE pedals and have been secured with straps.*
- *Only put patient's feet into the LE pedals while seated. Do not put patient's feet into the LE pedals while standing. Hands are not allowed into the LE pedals.*
- *While the pedals are moving, you should not make any mechanical adjustments to the device. Never try to grab hold of any moving parts.*
- *Please train only after you have switched on the **DQAPT**.*
- *The device performs a self-check when it is turned on or release emergency stop. DO NOT approach the movement area of the ARM and LEG trainer of the device.*
- *Please avoid the excessive vibration of the device, and operate the touch screen should be gently.*
- *The training parameters should be set by the doctor or under the doctor's the professional guidance.*
- *Do not exceed 20 minutes in the first training.*
- *Do not clean the main unit with organic solvent such as gasoline or diluents, otherwise damage will be happened to the main unit such as deformation and falling off of the paint.*
- *Clean the device using a dry soft cloth. Do not use cleaning solvents or other chemical substances in order to avoid any damages.*
- *Do not use bleach to clean the straps. Do not put the straps under high temperature or high pressure to sterilize.*

- *Please dispose of the equipment and other accessories according to local regulations.*

FCC

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/ TV technician for help.

FCC ID: 2AXDGDQAPT

CAUTION

- *This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:*
  1) this device may not cause harmful interference, and
  2) this device must accept any interference received, including interference that may cause undesired operation.

Bluetooth®

The Bluetooth® word mark and logos are owned by the Bluetooth SIG, Inc. and any use of such marks by Compass Health Brands, Corp. is under license.

Communication between the device and the heart rate sensor is via Bluetooth.

Bluetooth Specifications:
Bluetooth Version: 4.0
Frequency Range: 2.402 GHz - 2.48 0GHz
Modulation Type: GFSK
Effective Radiated Power: 0 dBm
Quality of Service (QoS)
Throughput: > 6.4Kb/s
Latency: < 500ms
Packet Error Rate: <10%

EMC Guidance

*The **DQAPT** needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided. This device has been thoroughly tested and inspected to assure proper performance and operation.*

- *Do not use the **DQAPT** simultaneously with other therapeutic device (such as microwave), to avoid mis-operation.*
- *Do not place or use the **DQAPT** nearby radio, television, copy machine and fax machine.*
- *Keep the **DQAPT** away from active HF surgical equipment and the RF shielded room of a medical device for magnetic resonance imaging, where the intensity of EM disturbances is high.*
- *Use of the **DQAPT** adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.*
- *Portable RF communications equipment (including peripherals such as antenna cables and external antennas) other than the specified heart rate sensor to be used with the **DQAPT** should be used no closer than 30 cm (12 inches) to any part of the **DQAPT**, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.*
- *Use of accessories, transducers and cables other than those specified or provided by the manufacturer of the **DQAPT** could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.*

Cable Information:

Item	Cable Length	Manufacturer
Power cord	2.5 m	Ching Cheng Wire Material Co., Ltd.

Guidance and manufacture's declaration – electromagnetic emission		
The DQAPT is intended for use in the electromagnetic environment specified below. The customer of the user of the DQAPT should assure that it is used in such an environment.		
Emission test	**Compliance**	**Electromagnetic environment – guidance**
RF emissions CISPR 11	Group 1	The DQAPT use RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class A	The DQAPT is suitable for use in all establishments, other than domestic and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

Guidance and manufacture's declaration – electromagnetic immunity			
The DQAPT is intended for use in the electromagnetic environment specified below. The customer or the user of DQAPT should assure that it is used in such an environment.			
Immunity test	**IEC 60601 test level**	**Compliance level**	**Electromagnetic environment - guidance**
Electrostatic discharge (ESD) IEC 61000-4-2	±8 kV contact ±2,4,8,15 kV air	±8 kV contact ±2,4,8,15 kV air	Floors should be wood, concrete or ceramic tile. If floor are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast 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.
Surge IEC 61000-4-5	± 0.5kV, ± 1 kV line(s) to lines ± 0.5kV, ± 1 kV, ± 2 kV line(s) to earth	± 0.5kV, ± 1 kV line(s) to lines ± 0.5kV, ± 1 kV, ± 2 kV line(s) to earth	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruption	0% U_T; 0.5 cycle (0°,45°, 90°,135°,180	0% U_T; 0.5 cycle (0°,45°, 90°,135°,180	Mains power quality should be that of a typical commercial or

s and voltage variations on power supply input lines IEC 61000-4-11	°,225°,270° and 315°) 0% U_T; 1 cycle and 70% U_T; 25/30 cycles Single phase: at 0° 0% U_T; 250/300 cycles	°,225°,270° and 315°) 0% U_T; 1 cycle and 70% U_T; 25/30 cycles Single phase: at 0° 0% U_T; 250/300 cycles	hospital environment. If the user of the DQAPT requires continued operation during power mains interruptions, it is recommended that the DQAPT be powered from an uninterruptible power supply or a battery.
Power frequency (50/60Hz) magnetic field IEC 61000-4-8	30 A/m	30 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE U_T is the a.c. mains voltage prior to application of the test level.			

Guidance and manufacture's declaration – electromagnetic immunity (Continued)			
The DQAPT is intended for use in the electromagnetic environment specified below. The customer or the user of LGT- DQAPT should assure that it is used in such an environment.			
Immunity tes	**IEC 60601 test level**	**Compliance level**	**Electromagnetic environment - guidance**
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz - 80 MHz 6 V rms in ISM bands between 150 kHz and 80 MHz 80 % AM at 1 kHz	3 Vrms 150 kHz - 80 MHz 6 V rms in ISM bands between 150 kHz and 80 MHz 80 % AM at 1 kHz	N/A
Radiated RF IEC 61000-4-3	3 V/m 80 MHz - 2.7 GHz 80 % AM at 1 kHz	3 V/m 80 MHz - 2.7 GHz 80 % AM at 1 kHz	N/A
Proximity fields from RF wireless communica -tions equipment IEC 61000-4-3	See table: Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless communications equipment.		N/A

Table: Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless communications equipment						
Test frequency (MHz)	Band (MHz) [a]	Service [a]	Modulation [b]	Maximum power (W)	Distance (m)	Immunity TEST LEVEL (V/m)
385	380 to 390	TETRA 400	Pulse Modulation [b]: 18Hz	1.8	0.3	27
450	430 to 470	GMRS 460, FRS 460	FM [c] ± 5 Hz deviation 1 kHz sine	2	0.3	28
710 745 780	704 to 787	LTE Band 13, 17	Pulse Modulation [b]: 217 Hz	0.2	0.3	9
810 870 930	800 to 960	GSM 800/900, TETRA 800, iDEN 820, CDMA 850, LTE Band 5	Pulse Modulation [b]: 18 Hz	2	0.3	28
1720 1845 1970	1700 to 1990	GSM 1800; CDMA 1900; GSM 1900; DECT; LTE Band 1, 3, 4, 25; UMTS	Pulse Modulation [b]: 217 Hz	2	0.3	28
2450	2400 to 2570	Bluetooth, WLAN, 802.11 b/g/n , RFID 2450, LTE Band 7	Pulse Modulation [b]: 217 Hz	2	0.3	28

5240 5500 5785	5100 to 5800	WLAN 802.11 a/n	Pulse Modulation [b)]: 217 Hz	0.2	0.3	9

NOTE:

a) For some services, only the uplink frequencies are included.

b) The carrier shall be modulated using a 50 % duty cycle square wave signal.

c) As an alternative to FM modulation, 50 % pulse modulation at 18 Hz may be used because while it does not represent actual modulation, it would be worst case.

Clinical Instructions

Indications

Before a training with the Active Passive Trainer for Upper and Lower Limbs, a correct examination and diagnosis should be performed.

Please stay current with the latest developments and medical publications on Active Passive Training for details on contraindications and side effects not known at the time of manufacturing.

Active Passive Trainer for Upper and Lower Limbs is a rehabilitative training that suitable for the active and passive movement of a person's lower and upper extremities.

Contraindications

*Patients with the following disease are forbidden to use the **DQAPT**:*

1) *Ligaments, knees or ridge joints rupture;*
2) *Post-osteoporosis;*
3) *Crippled limbs;*
4) *A person with severe spasticity or stiffness in the limbs;*
5) *Acute thrombosis;*
6) *Pregnant woman;*
7) *The clinical vital signs are unstable, such as those with severe pulmonary dysfunction;*
8) *Extremities tumors;*
9) *Fracture internal fixation is unstable;*

10) *Limbs need to be braked;*
11) *Mental disorder;*
12) *Other patients that doctors think not suitable use this device.*

Adverse Effects

You should stop using the device and consult your doctor if you experience adverse reactions from the device. Possible adverse reactions may include the following:

- *partially increased pain;*
- *partially too strong muscle tone reduction;*
- *skin injuries.*

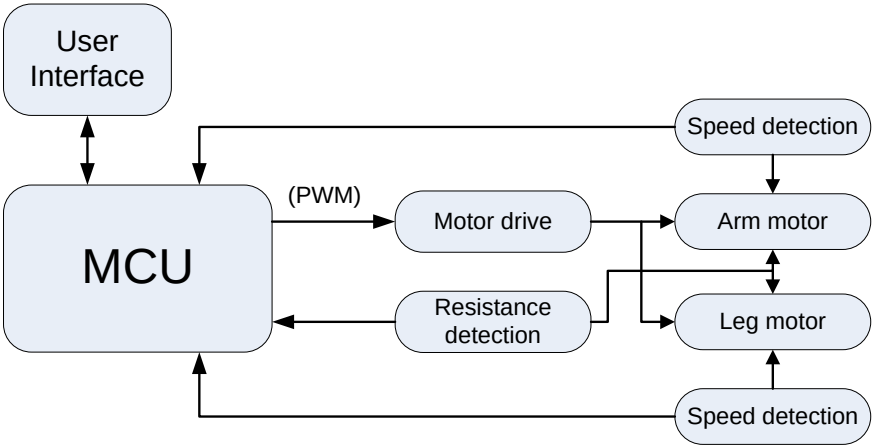
These adverse effects are rare and they can be avoided when you use properly according to the user manual or under the guidance of the doctor.

Technical Specifications

General	
Product Name	APT Performer
Product Model	DQAPT
Dimensions (W×L×H)	710×760×1072 mm (28×30×42 inch)
Standard Weight	45.7 kg (102 lbs)
Interface	8" touch screen
Safe Working Load	
UE pedals (total)	5 kg (11 lbs)
LE pedals (total)	10 kg (22 lbs)
Handlebar	20 kg (44 lbs)
Adjustable Range	
Supporting module	0-150 mm (0-5.90 inch)
Handlebar	180°
Display (max.)	270°- 360°
Rotation Radius	
UE pedal	100 mm (3.94 inch)
LE pedal	67 mm (2.64 inch)
Rotate Speed	**5-60 r/min**
Resistance Level	**0-24**
Spasm Level	**1-5**

Spasm Relief Rate	**1-5**
Timer (duration time)	**1-60 min**
Electrical	
Power Supply	AC100-240V, 50-60Hz
Rated Power	160 VA
Mode of Operation	Continuous
System of Protection	Class I, Type B Applied Part
Ingress Protection	IPX0
Fuse (Main part)	F2AL250V (Φ5×20mm)
Operation and Storage Condition	
Environmental Conditions of Operation:	● Temperature: 5 to 40°C ● Rel. humidity: ≤80% ● Atmosphere Pressure: 86 to 106kPa
Environmental Conditions of Transport and Storage:	● Temperature: -20 to 55°C ● Rel. humidity: ≤93% ● Atmosphere Pressure: 86 to 106 kPa

Working Principle



Inspection of the Goods

Unpacking the Unit

The unit is generally delivered with the packaging material supplied by the manufacturer. Proceed as follows:

- *Position the transport packaging so that the arrows are pointing upward.*
- *Remove the transport packaging upward.*
- *Remove the remaining foam material.*

Inspections

Immediately upon unpacking the unit, perform the following steps:

1. *Verify the delivery documents to make sure that the delivery is complete.*
2. *Check the LCD touch screen of the unit when unpack the packaging and make sure it is in good condition. Any scratch on the surface during use will be not covered in the warranty.*
3. *Check the external components and accessories for possible damage due to transport.*
4. *Verify that the packaging contains the following:*

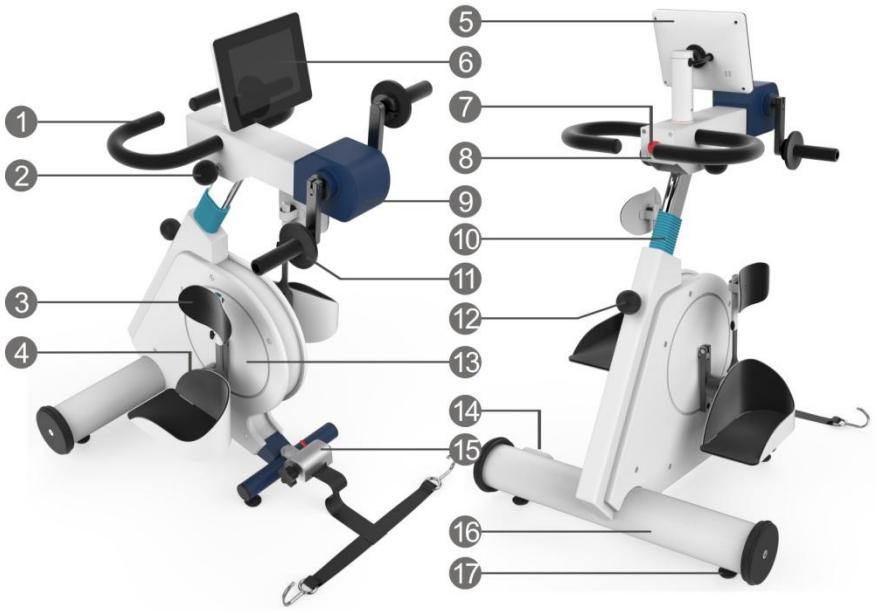
No.	Item Name	Amounts	Unit
1	**DQAPT** main unit	1	set
2	Power cord	1	piece
3	Upper extremity straps	2	pieces

No.	Item Name	Amounts	Unit
4	*Anti-tipper wheelchair hook*	*1*	*piece*
5	*Fuses*	*4*	*pieces*
6	*Certificate of quality*	*1*	*piece*
7	*Warranty card*	*1*	*piece*
8	*User manual*	*1*	*piece*

*Other parts of **DQAPT** are available as accessory on demand. Visit website **www.compasshealthbrands.com** to obtain more information.*

Overview of the Unit

Nomenclature

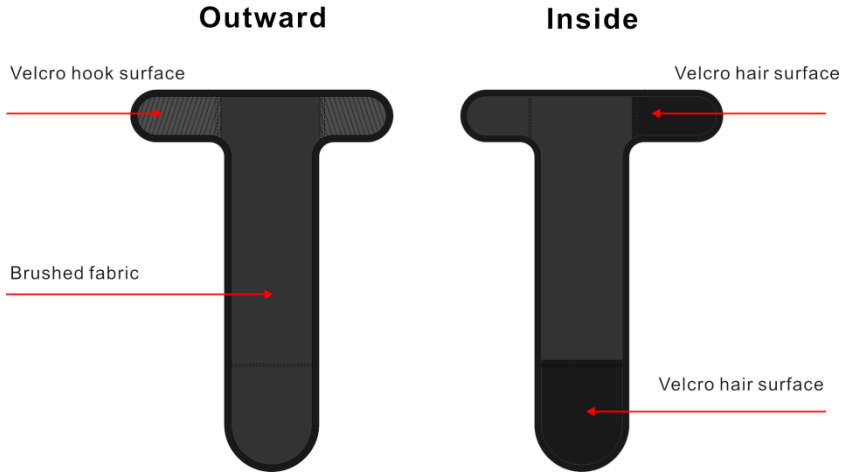


A	**Host**	5	Control system
		6	LCD Display (Capacitive touch screen)
		7	Emergency stop switch
		8	USB port: connect with USB flash disk for software update and training data export
B	**Arm trainer**	9	Upper limb turntable
		11	UE pedal (Upper extremity pedal)
C	**Leg trainer**	3	Calf support

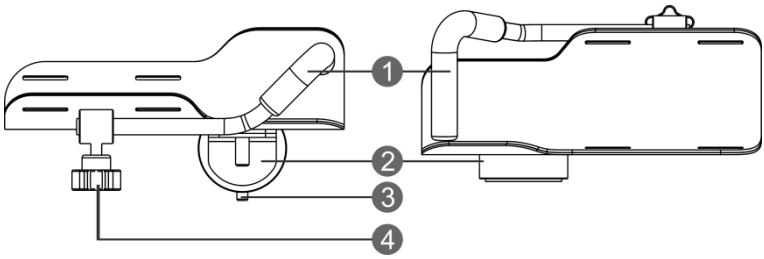
	4	LE pedal (Leg extremity pedal)
	13	Lower limb turntable
	1	Handlebar
	2	Locking screw knob: for adjusting Arm trainer direction
	12	Locking screw knob: for adjusting trainer height
D Main structure	10	Supporting module
	16	Pedestal: transport wheels
	14	Power switch, power socket and fuse
	17	Leveling glides: rotate to adjust the table balance
	15	Anti-tipper wheelchair hook

Accessories

1. Upper Extremity Straps



2. UE pedals with forearm support (optional)



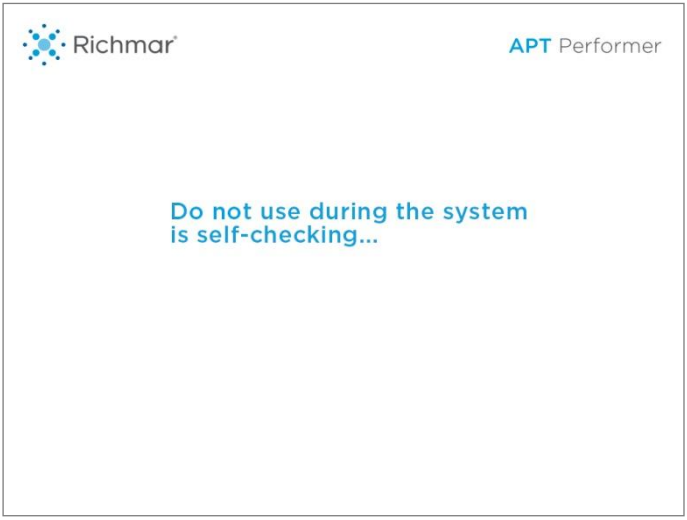
1	Hand Grip
2	Connection part with Arm trainer
3	Snap: fix UE pedal to the Arm trainer
4	Adjustment Knob: adjust the position of grip

Please purchase the accessories from Compass Health Brands, Corp.

Interface Introduce

Self-inspection

Insert the power supply; turn on the switch button in the pedestal of the machine, the system will enter into self-inspection interface.

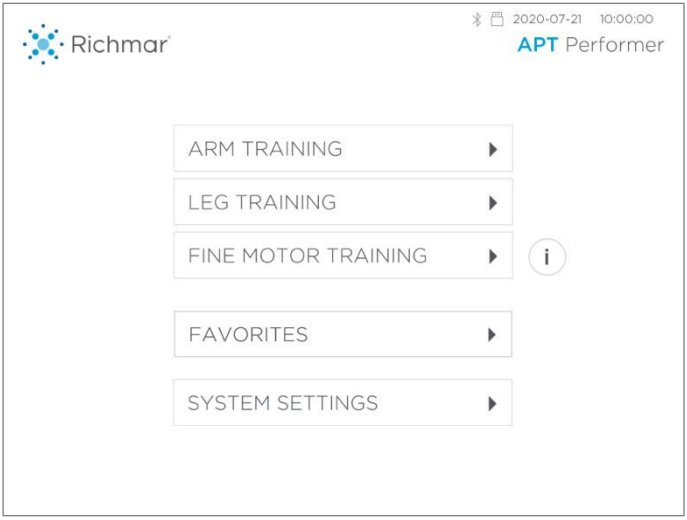


CAUTION

- ***The device performs a self-check when it is turned on. DO NOT approach the movement area of the ARM and LEG trainer of the device.***

Main Menu Interface

A few seconds, the main menu interface appears on.



Item	Description
Bluetooth icon	Indicate that the unit has connected with the Heart Rate Sensor.
USB icon	Indicate that the USB flash disk has been inserted into the unit and recognized. See ***Training Date Export*** as details.
Information icon	Press into a page shows the relevant application information of the training mode.
ARM TRAINING	Press into ARM TRAINING interface. See ***Arm Training*** as details.
LEG TRAINING	Press into LEG TRAINING interface. See ***Leg Training*** as details.

Item	Description
FINE MOTOR TRAINING	Press into FINE MOTOR TRAINING interface. See ***Fine Motor Training*** as details.
FAVORITES	Press into FAVORITES interface. See ***Favorites*** Interface as details.
SYSTEM SETTINGS	Press into SYSTEM SETTINGS interface. See ***System Setting*** as details.

System Setting

Press **SYSTEM SETTINS** *in the MAIN MENU to enter this interface, the default training parameters can be reset here. Training parameters are maintained even when the device is turned off. Press* **DEFAULT SETTINGS**, *the system will return to the factory settings. After the parameter have been set, press* **MAIN MENU** *button to return to the MAIN MENU interface.*

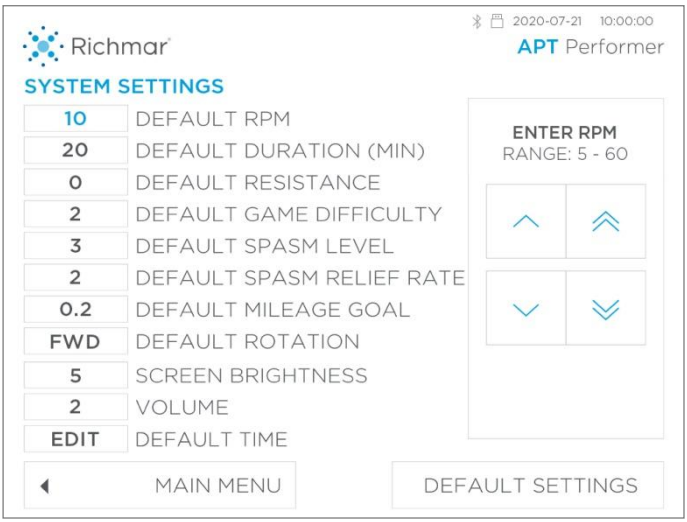


Table 1: System Settings

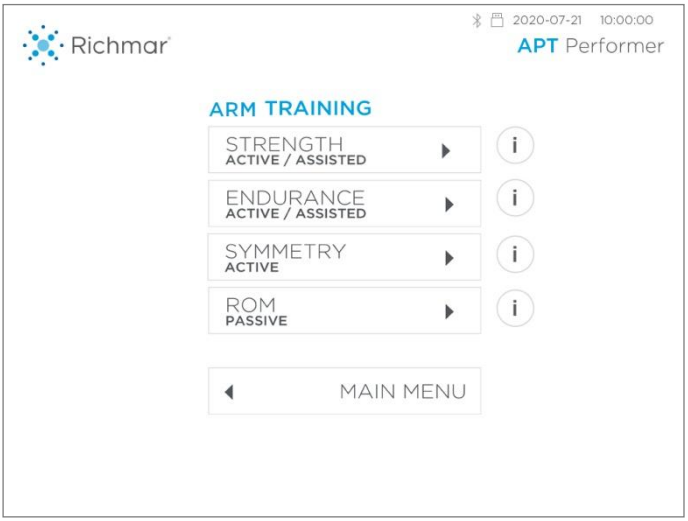
Parameters	Range	Step	Defaults
DEFAULT RPM (r/min)	5-60	1 or 10	10
DEFAULT DURATION (min)	1-60	1 or 10	20
DEFAULT RESISTANCE	0-24	1 or 6	0
DEFAULT GAME DIFFICULTY	1-5	1 or 2	2
DEFAULT SPASM LEVEL	1-5	1 or 2	3
DEFAULT SPASM RELIEF RATE	1-5	1 or 2	2
DEFAULT MILEAGE GOAL (mile)	0.1-5.0	0.1 or 1	0.2
DEFAULT ROTATION	FWD, REV	--	FWD
SCREEN BRIGHTNESS	1-10	1 or 2	5
VOLUME*-1	1-3	1	2
DEFAULT TIME*-2	2000-2099	--	--

NOTE:

1) ***Volume is the device sound volume, including the button, prompt and warning tones, voice prompt.***
2) ***Default time: Press the EDIT to set the Date and Time, then press OK button. The Date and Time setup is necessary for training data export. Please set this value according to the local time before first using the unit.***

Arm Training

Press **ARM TRAINING** *in the MAIN MENU to enter this interface. There are four training modes, STRENGTH, ENDURANCE, SYMMETRY and ROM training mode.*



1. Strength Training

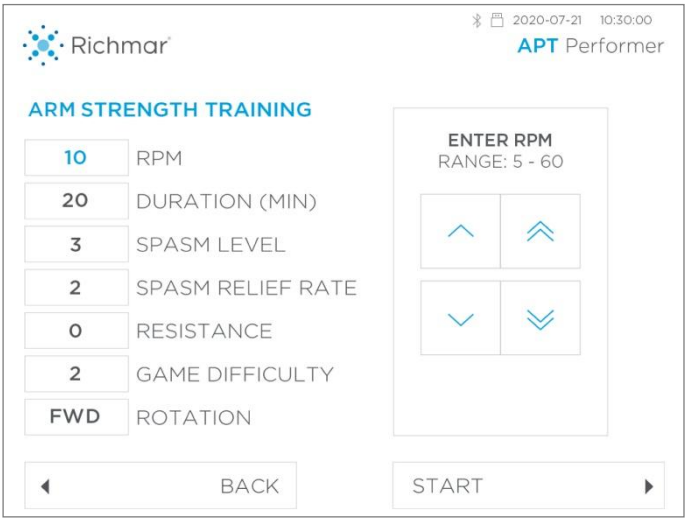
STRENGTH training is a mode that system can automatically switch between active mode and passive mode according to the patient's training situation. It is designed to motivate the patient to move actively and try to maintain the state of active movement.

Press Information icon (i) *to view more application information about this training mode.*

STEP 1st: Enter the ARM STRENGTH training mode

STEP 2nd: Setting ARM STRENGTH training parameters

You can set the training parameters as the picture shows.



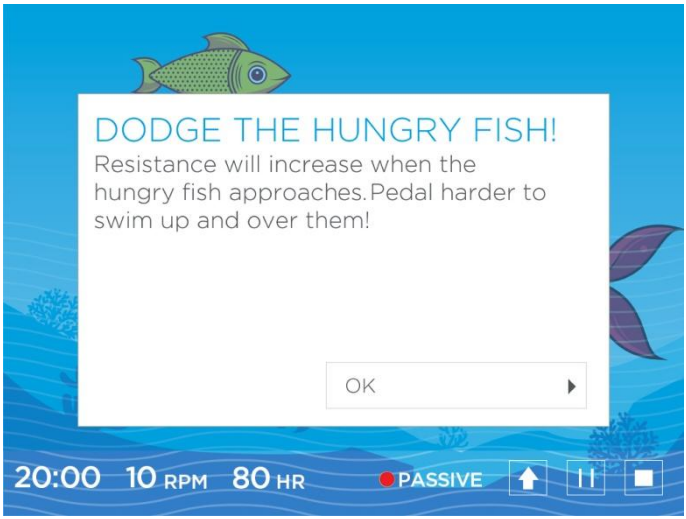
NOTE: The number/letter in the frame changes blue, indicating that you have selected the item.

STEP 3rd: Start Training

After you have set the training parameters, press **START** *button to start the training.*

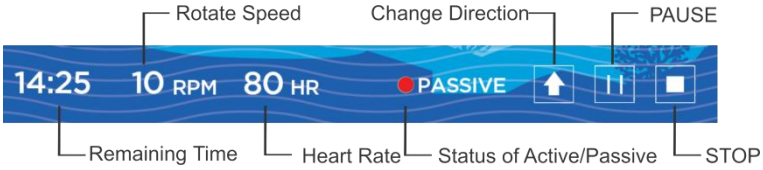
If the speed is set to 30 r/min or above, a prompt will appear on the interface, prompting whether to set the speed to this value, you can press **YES** *to start the training, or press* **NO** *to return to the previous interface.*

The following interface shows some tips about how to play this game, will appear after press **YES** *button. In this game, the patient can control the moving range (up or down) of the little fish to doge the hungry fish (big fish) by rotating the pedals. Resistance will increase when the hungry fish approaches, the patient should cycle the pedals harder to swim up and over the hungry fish. Read the game tips and tell the patient how to play, then press* **OK** *button to start training.*



STEP 4th: During Training

- ***Status and Operation Bar***



Item	Description
Remaining Time	Real time display the remaining time of set duration time
Rotate Speed	Real time display the actual rotation speed when it is greater than the set value
Heart Rate*1	Real time display heart rate value
Status of Active/Passive	Real time display of the active/passive status

Item	Description
Change Direction	Press to change the rotation direction FWD REV
PAUSE	Press to pause the training, enter into setup interface, which you can adjust the training parameters.
STOP	Press to stop the training

NOTE:

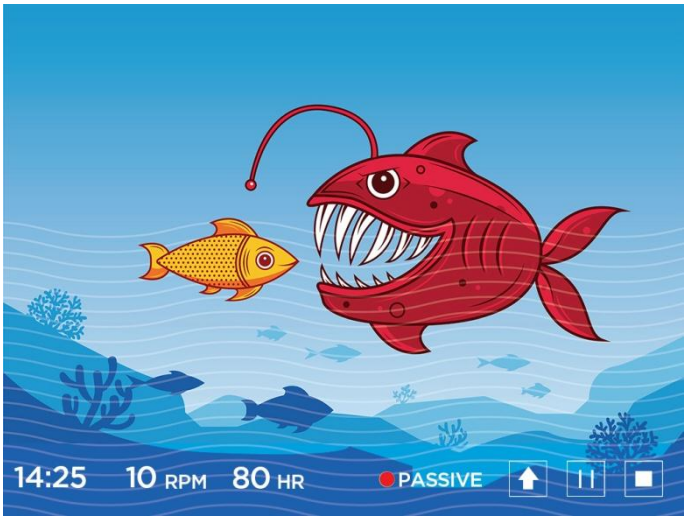
1) ***The heart rate monitoring value is for reference only.***
2) ***If the heart rate sensor is not connected, the heart rate value is displayed 0.***

- ***Active/Passive Switching***

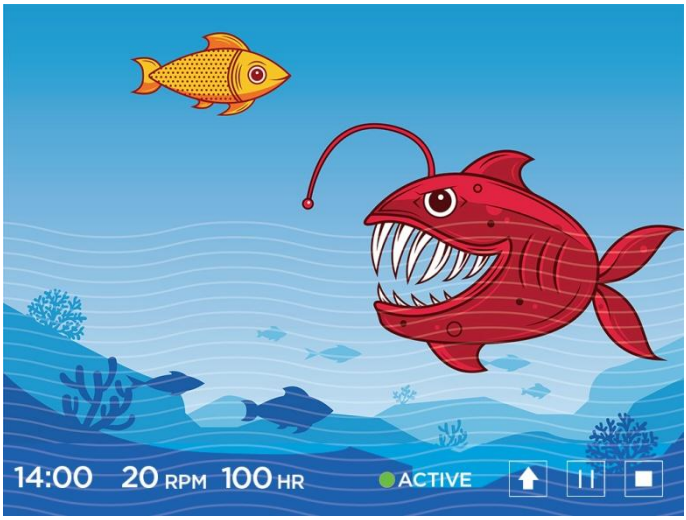
The training mode starts from the PASSIVE mode.

When it is detected that the current speed of the motor exceeds 10 r/min of the set speed, the system will automatically switch to the ACTIVE mode with a voice prompt.

When it is detected that the current speed of the motor is lower than 10 r/min of the set speed, the system will return to PASSIVE mode with a voice prompt.
The interfaces of ACTIVE/PASSIVE mode are shown in the following pictures.



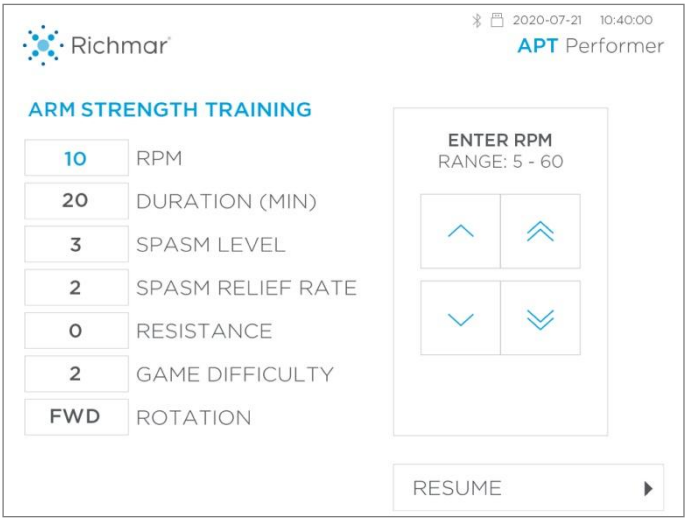
Passive Mode



Active Mode

- ***Adjust the Training Parameters during Training***

During the training, if you need to change the training parameters, please press **PAUSE** *button, than the system will go to the ARM STRENGTH TRAINING setup interface as picture follows. Adjust the parameters then press* **RESUM** *button to start again.*



2. Endurance Training

The ENDURANCE training is also a mode that system can automatically switch between active and passive mode according to the patient's training situation, designed to motivate the patient to move actively and try to maintain the state of active movement, same as STRENGTH training mode.

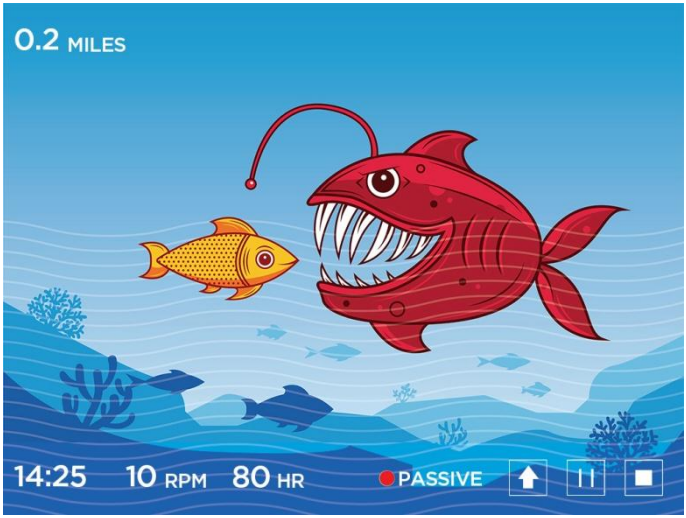
The difference with STRENGTH training is that ENDURANCE training can set the training mileage. When the patient training reaches the set mileage, the trainer will automatically stop and end the training.

Compared with the STRENGTH training, the game is also slightly

different. In ENDURANCE training game, resistance will decrease when the hungry fish approach, the patient should cycle the pedals faster than the set speed to swim up and over the hungry fish.

Press Information icon ⓘ *to view more application information about this training mode.*

During training process, the remaining mileage is displayed in real time at the upper left corner of the screen, as the picture shows below.



3. Symmetry Training

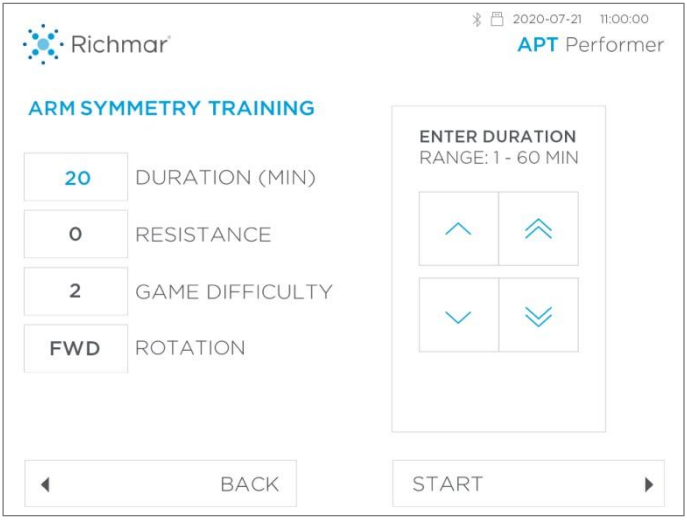
The SYMMETRY training is an active mode that uses the patient's muscle strength to move the pedals, designed to encourage the patient to maintain an even ratio or balance between the left and right side or come as close to 50/50 as possible, helps to train the patient's coordination.

Press Information icon ⓘ *to view more application information about this training mode.*

STEP 1st: Enter the ARM SYMMETRY training mode

STEP 2nd: Setting ARM SYMMETRY training parameters

You can set the training parameters as the picture shows.

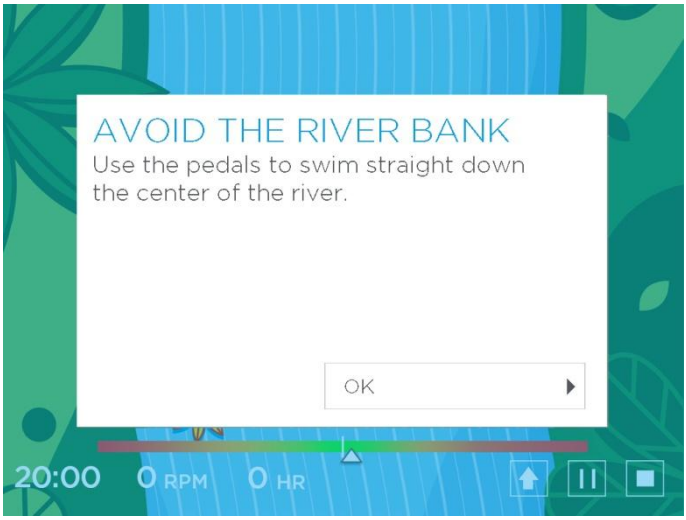


STEP 3rd: Start Training

After you have set the training parameters, press START button to start the training.

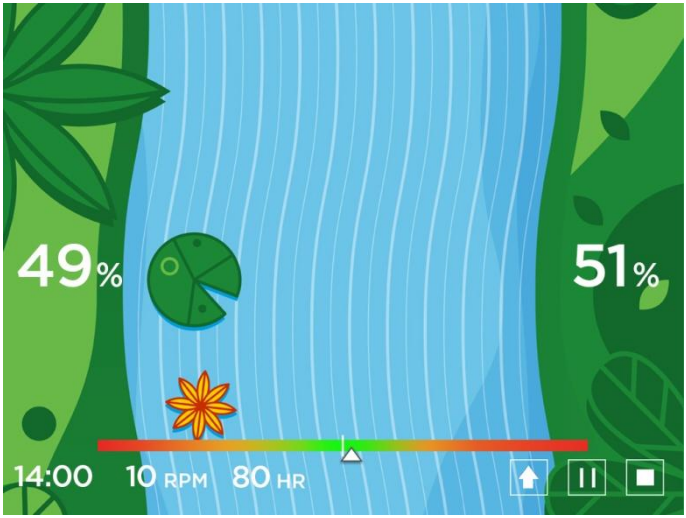
If the speed is set to 30 r/min or above, a prompt will appear on the interface, prompting whether to set the speed to this value, you can press **YES** *to start the training, or press* **NO** *to return to the previous interface.*

Then the following interface will appears. On this page, there are some tips about how to play this game. In this game, the patient should cycle hard evenly with both limbs to keep the fish swimming in the center to avoid hitting the curved river bank. Read the game tips and tell the patient how to train, then press **OK** *button to start training.*



STEP 4th: During Training

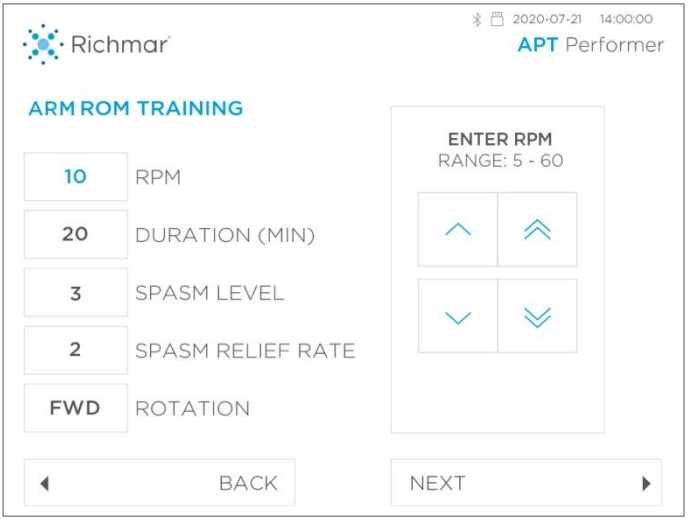
The horizontal bar chart and percentage value shows the relative muscle strength level of the left and right side of the patient during active training.



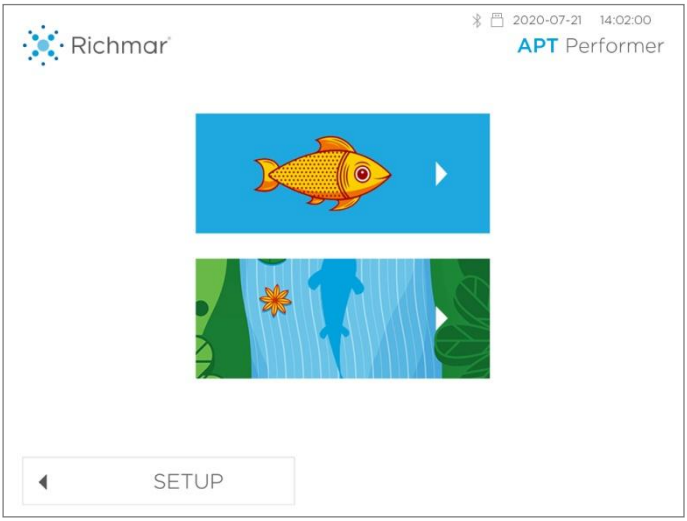
4. Arm ROM Training

The ROM TRAINING, short for range of motion training, is a passive training mode that uses the motor to cycle the pedals, helps to increase the range of movement in a joint and to prevent contractures.

Press Information icon ⓘ *to view more application information about this training mode.*

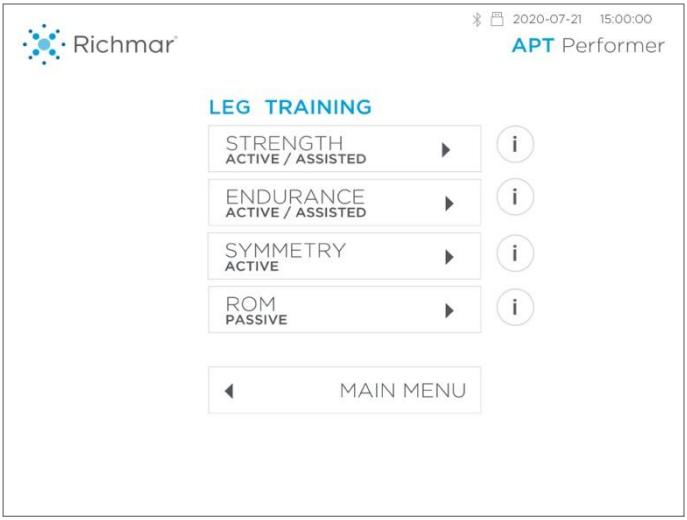


In the ROM TRAINING mode, you can press to select one of the two training background images for passive training.



Leg Training

Press **LEG TRAINING** *in the MAIN MENU to enter this interface. The mode of the Leg Training is the same as that of the Arm Training.*



Spasm Control

When you get a spasm during passive training, the trainer can identify spasms and prompt "spasm" on the screen with sound prompt. When the spasm protection is activated, the speed of the motor slows down to zero and then change the rotation direction, slowly increased to the original speed to relieve spasm.

When the spasm protection is activated more than 5 times, the device will automatically stop the current training. Please stop training and take a break.

Emergency Stop

The DQAPT is equipped with an Emergency Stop function.

- ***During training, if the motor is out of control, please press the emergency stop button immediately to stop training.***

1) Emergency stop

Press the emergency stop button nearby handlebar to break the motor circuit. The trainer motor will stop immediately. Prompt appears on the screen.

2) Release emergency stop

Reset the emergency stop button by pulling out the red button. Then the system will automatically enter the self-check interface.

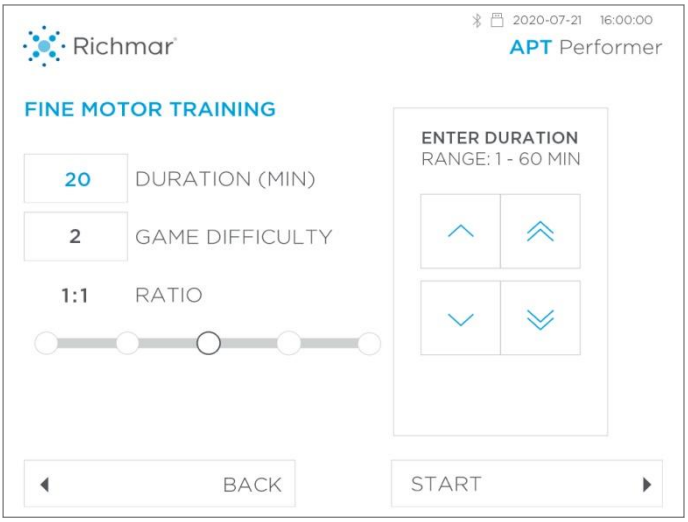
CAUTION

- ***The device performs a self-check when release emergency stop. DO NOT approach the movement area of the ARM and LEG trainer of the device.***

Fine Motor Training

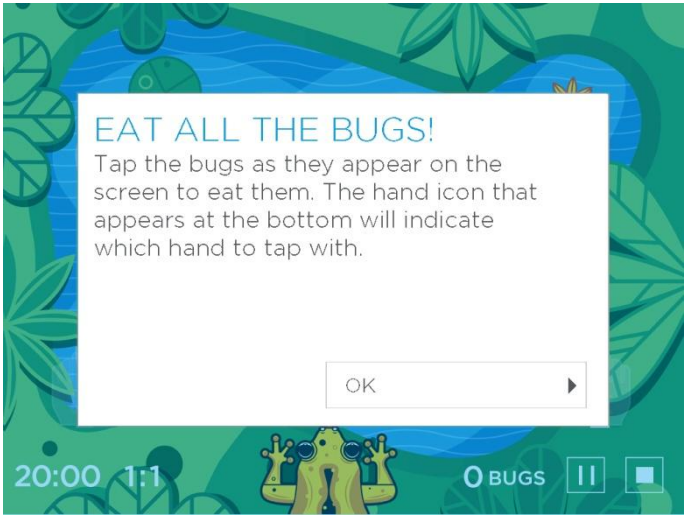
The FINE MOTOR TRAINING mode is for only upper excises training to help the patient with cognitive and functional movements using hand, eye coordination.

Press Information icon ⓘ *to view more application information about this training mode.*



NOTE: RATIO *indicates the ratio of the number of bugs that appear on the left and right of the screen.*

Read the game tips and tell the patient how to train, then press **OK** *button to start training.*

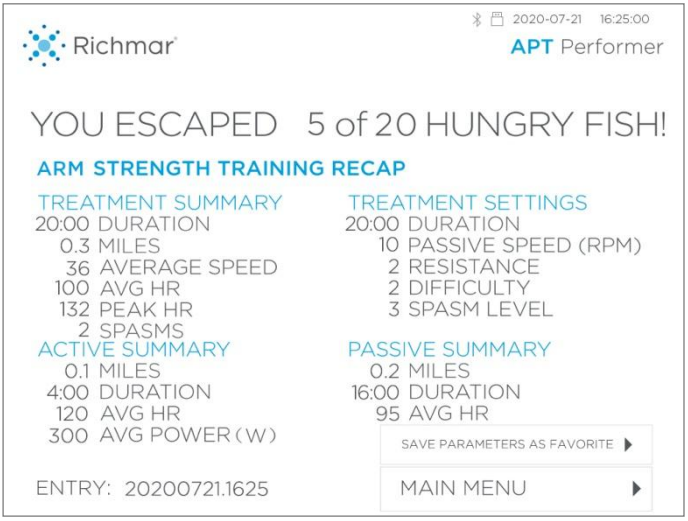


Pause and End of Training

During the training, if you need to pause the training, please press **PAUSE** *button, if you need to stop the training, please press* **STOP** *button. At the end of training, the buzzer will beep, and the sound will stop automatically after three times. The trainer will automatically stop moving and display the training data summary.*

Training Data Summary

After ending training, the unit displays the training data summary, as the following picture shows.

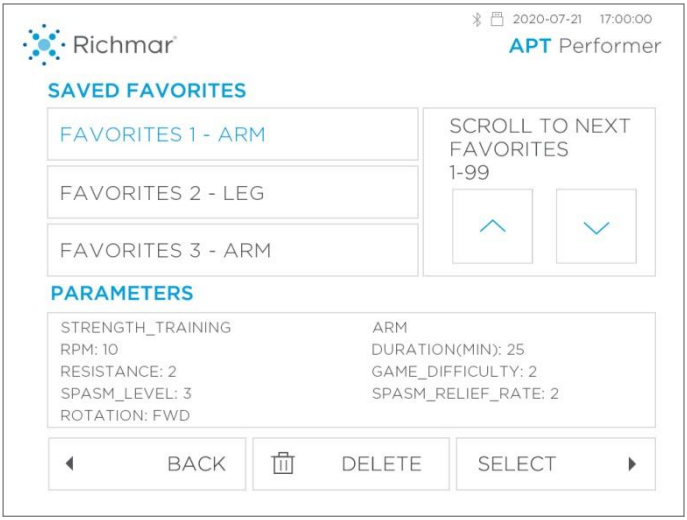


Training Data Analysis of Arm Strength Training

NOTE: ENTRY indicates the day-time stamp of the training finish.

Favorites Interface

Press **Favorites** *button on the MAIN MENU to enter the favorites interface. The system can store up to 99 collections.*



1. How to Save a Favorite?

When the training is finish, the training summary interface appears.

Press the **SAVE PARAMETERS AS FAVORITE** *button on the lower right corner of the screen, enter the favorite storage page. Fill the name of this favorite and save.*

WARNING

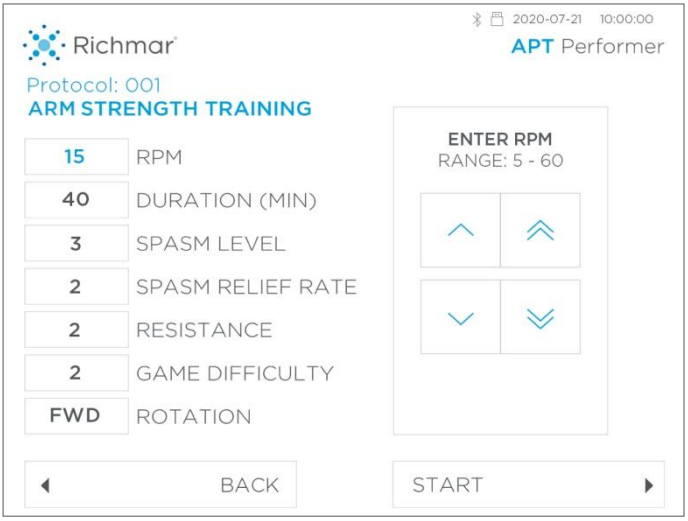
- ***Due to HIPAA guidelines, DO NOT save favorites as patient name. It is recommended to save as a general diagnosis, chart number, etc.***

2. How to Delete a Favorite?

In the Favorites Interface, Choose the favorite you want to remove, the favorite name becomes blue, press **DELETE** *button, a confirmation prompt will appear, press* **OK** *button to delete.*

3. Start Training from the Favorite Interface

In the favorite interface, select the desired favorite and press the **SELECT** *button, the system jumps to the setup interface of the training mode, as following picture shows. The training parameters are the favorite parameters, and the interface displays the name of the favorite. Press* **START** *to start training.*



Training Date Export

The system is equipped a training data export function.

How to Export Training Data?

In the training summary interface, or before the start of each training program, insert a USB flash disk (FAT32 format) into the USB port, the icon  *will appear on the upper right corner of the screen, when the icon changes to*  *, the data has been copied.*

Symbol	Description
 USB icon 1	Indicate that the USB flash disk has been inserted into the unit and recognized, training data is not copied.
 USB icon 2	Indicate that the USB flash disk has been inserted into the unit and recognized, training data has been copied.

Operation Guidance

Preparation before Training

1) *Make sure the trainer is in a stable place.*
2) *Connect the power cord: connect the male end of the power supply cord to an appropriate electrical outlet, and connect the female end of the power supply cord into the socket on the unit.*
3) *Press the Power switch to start the unit.*

- ***Before you plug the DQAPT into a main socket please check that the voltage of the device stated on the marking corresponds with the voltage of the power supply. The DQAPT is earthed by the ground wire in the mains cable.***

Use Heart Rate Sensor

1) *Wear the Heart Rate Sensor according to its user manual.*
2) *The Bluetooth icon appears in the upper right corner of the MAIN MENU, indicating that the heart rate sensor has been paired and connected with the unit.*

CAUTION

- ***Please use the specified heart rate sensor (Polar H10, manufactured by Polar Electro Oy).***

Secure Patient Position and Adjust Trainer

1. Securing patient position

The patient should sit in the center of the wheelchair or chair, at a proper distance from the device. The legs should be slightly angled and not stretched. Improper positioning can cause discomfort in the knee or hip.

If the patient is training from a wheelchair, the wheelchair should be secured using the Anti-tipper wheelchair hook and not tilt backwards.

If the patient is training from a chair, make sure that the chair is stable and cannot tilt backwards.

2. Adjusting the Trainer in height

The height of the trainer is adjusted by the big screw knobs on the supporting module, and it is adjusted to the proper position according to the patient's condition so as to be suitable for the training of the patients with different heights. The arms must not be stretched, and the knees should not collide with the handholds during movement. Improper positioning can cause discomfort in the knee, elbow, or shoulder.

3. Adjusting the direction of arm trainer

Before Arm training, the arm trainer can be adjusted to 180 degrees

through the big screw knob beside the handlebar to fit the patient's training.

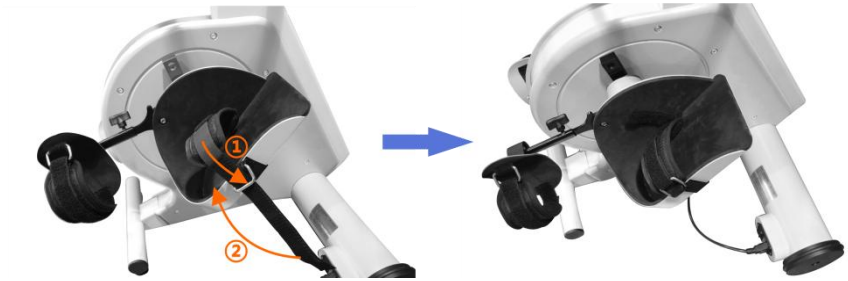
4. Adjusting calf support (Leg training)

The calf support helps the patient to protect his legs. Use the knob to adjust the height of the calf support so that it can fit the calf.

5. Fixing feet and calves (Leg training)

Use the straps to fix the feet and calve to LE pedals or calf supports securely and quickly.

Follow the steps in figure below to secure the feet and adjust the length of the strap so that it can hold the feet securely. The fixation of the calf support is consistent with the foot fixation.



CAUTION

- ***Before each leg training, you must check whether the patient's feet are in the correct position on the LE pedals and have been secured with straps.***

CAUTION

- ***Only put patient's feet into the LE pedals while seated. Do not put patient's feet into the LE pedals while standing. Hands are not allowed into the LE pedals.***

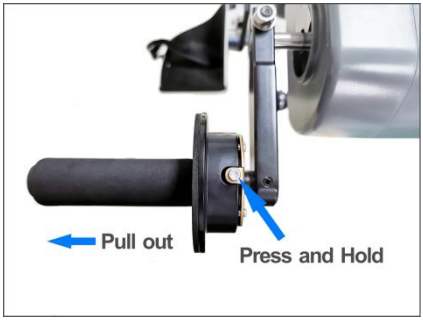
6. Fixing hands (Arm training)

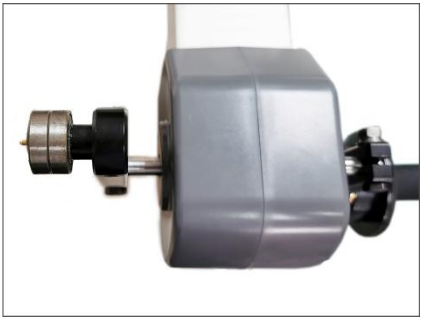
- ***Use hand straps***

Fix the patient's upper limbs with hand straps. The specific operation is shown in figure below.

- ***Use UE pedals with forearm support***

1) *Remove the standard UE pedals;*
2) *Install UE pedals with forearm support;*
3) *Place hands into UE pedals with forearm support, adjust the position of the grip, and fix it with straps.*





Interface Operation and Parameter Settings

See Chapter

Interface Introduce *for details.*

End of Training

1) *At the end of training, there is a buzzer beep, and the sound is automatically stopped after three beeps. The trainer will stop training automatically and display the summary of training data. The*

data will be cleared when exit this interface. If you want to save the data, please refer to ***How to Export Training Data****? as details.*

2) *Turn off the power and unplug the power cord.*

3) *Release the hand / foot straps and remove both hands / feet from the pedals.*

Care and Maintenance

Cleaning

1. *Please turn off and unplug the power plug of the device before the cleaning and disinfection operation.*
2. *Main unit cleaning: Clean the surface of the main unit with a clean, soft damp cloth. You can disinfect the Handlebar / Pedals by wiping down with 75% alcohol.*
3. *Straps cleaning: Hand Wash with a mild detergent and do not iron. Cleaning and drying temperature should not exceed 80 °C.*

- ***Do not clean the main unit with organic solvent such as gasoline or diluents, otherwise damage will be happened to the main unit such as deformation and falling off of the paint.***
- ***Do not use bleach to clean the straps.***
- ***Do not put the straps under high temperature or high pressure to sterilize.***

Routine Maintenance

Read this maintenance instruction thoroughly before doing any maintenance.

Manufacturer will provide circuit diagrams, component part lists, descriptions, calibration instructions to assist to service personnel in parts repair.

To preserve product warranty, functionality and product safety we recommend using only original spare parts.

The unit and accessories must be checked at regular intervals.

Interval		Routine Maintenance
Weekly	Obvious Damage	Visually inspect components for damage that could cause problems Check the power cord to ensure if there is no distortion, fracture
Semi-annual	Operation	Check all functions
	Construction	All fasteners must be present and fastened securely.

- ***Never perform unauthorized service work. All service work must be performed only by service technicians who have been authorized by the manufacturer.***
- ***Do not perform maintenance when the patient uses the unit.***

Fuse Replacement

1) Fuse specification: F2AL250V (Φ5 × 20mm)

2) When replace the fuse, please follow the steps:

a) Turn off the power switch;

b) Unplug the power plug;

c) Use a screwdriver to unscrew the fuse shell;

d) Remove the bad fuse, replace the new fuse (see figure below);

e) The fuse shell loaded back to the original position;

f) Plug the power.

WARNING

- ***Please turn off the power switch and unplug the power when replace the fuse to avoid electric shock. And remove the fuse with the screwdriver.***

Expected Useful Life Time

The expected useful life time of this device is 5 years when subject to correctly use and preventative maintenance as specified in this manual.

Disposal

For environmental reasons, do not dispose of the device in the household waste at the end of its useful life. Dispose of the unit at a suitable local collection or recycling point. Dispose of the device in accordance with EC Directive – WEEE (Waste Electrical and Electronic Equipment). If you have any questions, please contact the local authorities responsible for waste disposal.

Troubleshooting

NOTE: *If the following measures fail to alleviate the problem, please call the distributors.*

Troubles	*Possible causes*	*Solutions*
1. No response after start the device.	*1. Lack of power;* *2. Fuse might be burned out.*	*1. Check whether the power plug and socket of the instrument are plugged or not;* *2. Replace the burned fuse with a new one (Specifications: F2AL250V)*
2. The UE pedals are unable to rotate.	*1. You had select the Leg training;* *2. Opposite to the set direction.*	*1. Select the Arm training;* *2. Rotate in the set direction.*
3. The LE pedals are unable to rotate.	*1. You had select the Arm training;* *2. Opposite to the set direction.*	*1. Select the Leg training;* *2. Rotate in the set direction.*
4. Excessive noise during operation.	*1. The position of the trainer is not stable;* *2. The big screw knob is not tightened.*	*1. Place the trainer in a smooth position for training;* *2. Tighten the big screw knob.*

Troubles	*Possible causes*	*Solutions*
5. The heart rate displays 0 during training.	*1. The heart rate sensor was not connected with unit;* *2. The heart rate sensor was not put on properly.*	*1. Check position of the chest strap of heart rate sensor;* *2. Check whether the electrode area of heart rate sensor is moist;* *3. After above checking are completed, check whether the Bluetooth icon appears on the unit screen.*

Assistance

Every intervention on device must be performed by manufacturer. For any assistance intervention and original spare parts please contact the manufacturer at following address:

Compass Health Brands, Corp.
Add: Toll Free 1.888.549.4945
6753 Engle Road
Middleburg Heights, OH 44130
Tel: 800-947-1728
Website: www.compasshealthbrands.com

Warranty

*The Manufacturer warrants that the **DQAPT** is free of defects in material and workmanship for the main unit. This warranty shall remain in effect for two years (24 months) from the date of original consumer purchase. If this Product fails to function during the two year warranty period due to a defect in material or workmanship, at the Manufacturer's Option, Manufacturer or the authorized dealer will repair this Product without charge.*

The users should fill out the Warranty Card as soon as the product is installed and send a copy to **service@longest.cn** *to have the warranty be valid. Damages due to non-adherence to the User Manual or wear of parts are excluded from warranty.*

This Warranty Does Not Cover:

- *Replacement parts or labor furnished by anyone other than the Manufacturer, the authorized dealer or a certified Company service technician.*
- *Defects or damage caused by labor furnished by someone other than Manufacturer, the authorized dealer or a certified Company service technician.*
- *Any malfunction or failure in the Product caused by product misuse, including, but not limited to, the failure to provide reasonable and necessary maintenance or any use that is inconsistent with the User Manual.*

Compass Health Brands, Corp.

Toll Free 1.888.549.4945

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