# APT Performer

## Model: DQAPT

OPERATION MANUAL

Richmar®

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**WARNING (USA ONLY):**

THIS DEVICE SHOULD BE USED ONLY UNDER THE CONTINUED SUPERVISION OF A PHYSICIAN, LICENSED PRACTITIONER OR QUALIFIED MEDICAL PERSONNEL IN A CLINICAL ENVIRONMENT AND HAVE THE BASIC PHYSICAL & COGNITIVE PREREQUISITES SUCH AS VISION, HEARING AND LITERACY, AS WELL AS BASIC FUNCTION OF UPPER EXTREMITIES IS EXPECTED.

THIS DEVICE HAS BEEN THOROUGHLY TESTED AND INSPECTED TO ENSURE PROPER PERFORMANCE AND OPERATION. SPECIFICATIONS PUT FORTH IN THIS MANUAL WERE IN EFFECT AT THE TIME OF PUBLICATION. HOWEVER, TO ENSURE CONTINUAL IMPROVEMENT MEASURES, CHANGES TO THESE SPECIFICATIONS MAY BE MADE AT ANY TIME WITHOUT OBLIGATION ON THE PART OF MANUFACTURER.

Richmar

# WARRANTY

Congratulations on the purchase of your Richmar APT Performer. Richmar warrants that your APT Performer is free of defects in material and workmanship. This warranty shall remain in effect for two (2) years from the date of the original end user purchase. If this Product fails to function during the warranty period due to a defect in materials or workmanship, Richmar or the selling dealer will repair or replace the respective product without charge. All product reports must be performed by Richmar.

All product repairs must be performed by Richmar or a company authorized by Richmar to repair the product. Repair or replacement does not extend the life of the warranty. Any modifications or repairs performed by unauthorized centers or groups will void this warranty.

To qualify for warranty coverage, your product must be registered with Richmar within ten (10) days of purchase. To register, fill out the online form at:
**richmarweb.com/warranty-registration**

**RICHMAR SHALL RESERVE THE RIGHT TO REQUEST PROOF OF PURCHASE FROM THE END-USER TO VALIDATE THE WARRANTY PERIOD.**

This warranty does not cover:

1. Replacement parts or labor furnished by anyone other than Richmar, or a certified service technician approved by Richmar.
2. Defects or damage caused by labor furnished by someone other than Richmar, or a certified service technician approved by Richmar.
3. Any malfunction in the product caused by product misuse, including, but no limited to, the failure to provide reasonable and required maintenance or any use that is inconsistent with the product's manual.

**RICHMAR SHALL NOT BE LIABLE IN ANY EVENT FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

Some locations do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusion may not apply to you.

All returns must be approved with a Return Authorization Number. Please contact Customer Service/Tech Support:

**Phone: 1.888.549.4945**
**technicalsupport@richmarweb.com**
**richmarweb.com**

This warranty gives you specific legal rights and you may also have other rights which vary from location to location. Richmar does not authorize any person or representative to create for it any other obligation or liability in connection with the sale of the product.

Any representative or agreement not contained in the warranty shall be void and of no effect.

**Warranty Guidelines and Refurbished Units:**

Richmar's sole obligation in the case of any breach of its warranties set forth in the manual shall be, at Richmar's option, to replace the Product with a new or factory certified reconditioned product without charge to the Purchaser or to refund the purchase price of the Product. For returns, please contact your distributor or Richmar directly at 800-376-7263 to obtain a prepaid shipping label with the authorized RA number (if product is within warranty). Any product sent back without an authorized RA number will be returned to the sender. Richmar will not be responsible for damage due to improper packaging or shipment. If Richmar determines in its sole reasonable discretion that the Product contains defective workmanship or materials, Richmar will refund the purchase price to the original purchaser for the price of the defective product, or replace the product with a new or factory certified refurbished product at Richmar's expense. If Richmar determines in its sole reasonable discretion that the Product does not contain defective workmanship or materials, Richmar will inform the Purchaser and return the product, freight billed to the purchaser.

# FOREWORD

This manual has been written for the users of the Richmar APT Performer. It contains general information on operation, precautionary practices, and maintenance information. In order to maximize its use, efficiency, and the life of the system, please read this manual thoroughly and become familiar with the controls, as well as the accessories before operating the system. It is intended for use in treatment facilities and rehabilitation clinics to offer a variety of exercise options and modes that meet a broad range of physical needs including, but not limited to; strength, endurance, fine motor skills, and symmetry.

# SYMBOLS GLOSSARY

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 are as follows:

### SYMBOLS USED IN DOCUMENTATION AND PRODUCT

| SYMBOL | EXPLANATION |
|---|---|
| CAUTION | Text under a "CAUTION" heading explains possible safety infractions that could have the potential to cause minor to moderate injury and/or damage to equipment. |
| WARNING | Text under a "WARNING" heading explains possible safety infractions that could potentially cause serious injury and/or equipment damage. |
| NOTE | Throughout this manual, **"NOTE"** may be found. These notes include helpful information in regards to the topic or function being described. |
| ATTENTION | Refer to the Instruction Manual/ Booklet |
| Type B Applied Part | The LE pedal and calf support combination, the UE pedals, and the handlebar are considered as one type B applied parts complying with IEC 60601-1. |
| | 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. |
| | This device emits non-ionizing radiation. |
| | 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. |
| | Emergency Stop |

## SYMBOLS USED IN DOCUMENTATION AND PRODUCT (CONT.)

| SYMBOL | EXPLANATION |
|---|---|
|  | Keep out of rain. This product should be stored in a dry environment, protected from direct exposure to rain and moisture. |
|  | Temperature limitation. The product package should be stored at a temperature between -4 and 131 °F (-20 and 55 °C). |
|  | Upper limit of humidity. The product package should be stored at a humidity of less than 93%. |
|  | Atmospheric pressure limitation. The product package should be stored at an atmospheric pressure between 86kPa and 106kPa. |

It is important that you read all of the warnings and precautions included in this manual because they are intended to keep the patient safe, prevent injury, and avoid a situation that could result in damage to the device.

**CAUTION**

- During the process of operation, constantly watch patient and device to ensure no abnormal conditions occur.
- Please be sure to unplug the device before moving and avoid vibrations during movement.
- If the device has not been in use for a period of two weeks or longer, please check and make sure the device and accessories are in good condition before use.
- The APT Performer should be kept out of the reach of children.
- **DO NOT** use this device on infants or people not capable of expressing their intensions, as this 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** place device in direct sunlight.
- **DO NOT** use this device in places with chemicals.
- Please make sure all the electrical cables are connected correctly before use.
- When training lower extremities, adjust the height of the trainer to ensure that the patient's legs do not collide with the handle bars or arm trainer.
- Before training begins, make sure that the supporting module of the handlebar or the arm trainer is tightened and that patient's 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 supports) are tightened and intact. Should they become loose during training, stop the training immediately and tighten the screws.
- Suitable clothing must always be worn. Wide-leg trousers, long towels and scarves that could get caught or tangled in pedal crank must not be worn (especially during leg training). Shoes with laces should not be worn during leg training.
- Before starting leg training, the arm trainer should be swiveled so that the handle bars, not the training handles, are in front of the patient to hold for stability.
- Before each leg training, ensure 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 in the foot pedals.
- **DO NOT** make any mechanical adjustments to the device while the either the training handles or pedals are in operation. **NEVER** try to grab hold of any moving parts.
- Only use the APT Trainer after it has been powered on, and the self-check has been completed.

# PRECAUTIONARY INSTRUCTIONS

- The device performs a self-check when it is turned on or release from an emergency stop. **DO NOT** approach the movement area of the arm and leg trainer of the device while they are in motion.
- Please avoid the excessive vibration of the device.
- Please operate touch screen with gentle presses.
- The training parameters should be set by the clinician or under the clinician's professional guidance.
- **DO NOT** exceed 20 minutes in the first training.
- **DO NOT** clean the main device with organic solvent such as gasoline or diluting agents, otherwise damage will occur to the main device such as deformation and peeling of paint, which will not be covered by the warranty.
- 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.
- Training with the APT Trainer should only occur after the patient has received a proper examination and diagnosis.
- Please stay current with the latest developments and medical publications on Active Passive Training for details concerning contraindications and side effects not known at the time of manufacturing.

**WARNING**

- Improper installation, operation or maintenance of APT Performer may result in malfunctions of this unit or other devices.
- To avoid the risk of electric shock, the APT Performer must be connected to a properly grounded outlet.
- Mains plug is used as the isolation means to isolate from 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. Keep cables and electric components away from water and high humidity. Liquid penetration could damage the device.
- **DO NOT** connect or disconnect the device from plug with wet hands.
- Before plugging in the APT Performer into a main socket, ensure that the voltage of the outlet matches the requirement of the device.
- **DO NOT** press, bend or damage the electric cable.
- To avoid overheating, avoid connecting multiple devices to the same outlet as the APT Performer.
- **DO NOT** use near:
  a. the mixture of the flammable anesthetic gas and air
  b. the mixture of the flammable anesthetic gas and oxygen or nitrous oxide
  c. other flammable agents
- In case of display failure or other obvious defects, switch the device off immediately, then notify the distributor whom the device was purchased from.
- 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, or circulatory weakness, the training should be stopped right away and a doctor should be consulted.
- During training, if the motor is out of control, press the emergency stop button immediately to stop training.
- Stop the device if there are abnormal circumstances during the process of training. If the device smokes, press the EMERGENCY STOP BUTTON and then press the power switch to the OFF position, disconnect the power cord and contact the distributor the device was purchased from as soon as possible.
- No modification of this equipment is allowed.
- If fuse replacement is needed, please contact an authorized certified technician.
- **DO NOT** perform maintenance while device is in use.

# PRECAUTIONARY INSTRUCTIONS

- **DO NOT** remove the device covers. This may cause device damage, malfunction, electrical shock, fire, or personal injury. If a malfunction occurs, discontinue use immediately, disconnect the power cord from the outlet, and contact tech support.
- **NEVER** perform unauthorized service work. All service work must be performed only by service technicians who have been authorized by the manufacturer.
- **DO NOT** use the APT Performer simultaneously with other therapeutic device (such as shortwave), to avoid mis-operation.
- **DO NOT** place or use the APT Performer nearby radio, television, copy machine or fax machine.
- Keep the APT Performer 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 APT Performer 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.
- **DO NOT** perform maintenance or inspect a device problem when the device is in use.
- 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 APT Performer should be used no closer than 30 cm (12 inches) to any part of the APT Performer, 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 APT Performer could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.

# INTENDED USE

The APT Performer is a rehabilitative training that is suitable for the active and passive movement of a person's lower and upper extremities.

## OPERATOR TRAINING

Operators of the APT Performer 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.

## ENVIRONMENT

**Clinic purpose:** Therapeutic and Rehabilitation

**Suitable places:** Clinic and hospital

## INDICATIONS

The APT Performer is a rehabilitative training device that is suitable for a person's upper and lower extremities.

It has 3 Training Modes:

- Arm Training
- Leg Training
- Fine Motor

# INTENDED USE

Arm and Leg Training Modes each have 4 Training Programs:

- Strength
- Endurance
- Symmetry
- ROM

### CONTRAINDICATIONS

Patients with the following conditions should not use the APT Performer:

1. Ligaments, knees or joint ruptures
2. Post-osteoporosis
3. Crippled limbs
4. A person with severe spasticity or stiffness in the limbs
5. Acute thrombosis
6. Pregnancy
7. Patients where vital signs are unstable, such as those with severe pulmonary dysfunction
8. Extremity tumors
9. Internal fixation fracture is unstable
10. Broken limbs
11. Mental disorders
12. Other patients that are not able to express their own feelings or physician feels is not suitable to use this device.

### ADVERSE EFFECTS

Discontinue use if the patient experiences adverse reactions from the device. Possible adverse reactions may include the following:

- increased pain
- muscle tone reduction
- skin injuries

These adverse effects are rare and they can be avoided by using the device properly according to the user manual and under the guidance of a physician.

# DEVICE DESCRIPTION


1. LCD Touch Screen Display
2. Emergency Stop Switch
3. USB Port: Connect with USB flash disk/drive for software update and training data export
4. Upper Extremity (UE) training handles
5. Calf Support
6. Lower Extremity (LE) Pedals
7. Handlebar
8. UE Pivot Adjustment Knob
9. Height Adjustment Knob
10. Transport Wheels
11. Power Switch & Power Socket
12. Leveling Guides
13. Anti-tipper Wheelchair Hooks

## TECHNICAL SPECIFICATIONS FOR DQAPT

| | |
|---|---|
| **GENERAL** | |
| Dimensions (W×L×H) | 28″ × 30″ × 42″ |
| Standard Weight | 102 lbs |
| Interface | 8″ touch screen |
| Expected Useful Life Time | 5 years |
| Software Release Version | A |
| **SAFE WORKING LOAD** | |
| UE Pedals (total) | 11 lbs |
| LE Pedals (total) | 22 lbs |
| **ADJUSTABLE RANGE** | |
| Supporting module | 0″ - 5.90″ |
| Handlebar | 180° |
| Display (max.) | 270°- 360° |
| **ROTATION RADIUS** | |
| UE Pedal | 3.94″ |
| LE Pedal | 2.64″ |
| 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) | T2AL250V (ø5×20mm) |
| **OPERATION AND STORAGE CONDITION** | |
| Environmental Conditions of Operation: | • Temperature: 5 to 40°C<br>• Rel. humidity: ≤80%<br>• Atmosphere Pressure: 86 to 106kPa |
| Environmental Conditions of Transport and Storage: | • Temperature: -20 to 55°C<br>• Rel. humidity: ≤93%<br>• Atmosphere Pressure: 86 to 106 kPa |

# DEVICE DESCRIPTION

## 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 (not included) is via Bluetooth.

## TECHNICAL SPECIFICATIONS (CONTINUED)

| BLUETOOTH | |
|---|---|
| Bluetooth Version | 4.0 |
| Frequency Range | 2.400 GHz - 2.483 GHz |
| Modulation Type | GFSK |
| Effective Radiated Power | 0 dBm |
| **QUALITY OF SERVICE** | |
| Throughput | > 6.4Kb/s |
| Latency | < 500ms |
| Packet Error Rate | <10% |

## SYSTEM SETTING PARAMETERS

| PARAMETERS (MEASUREMENT UNIT) | RANGE | STEP | DEFAULTS |
|---|---|---|---|
| DEFAULT RPM (rotations per minute) | 5-60 | 1 or 10 | 10 |
| DEFAULT DURATION (minutes) | 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 (miles) | 0.1-5.0 | 0.1 or 1 | 0.2 |
| DEFAULT ROTATION | FWD, REV | -- | FWD |
| SCREEN BRIGHTNESS | 1-10 | 1 or 2 | 5 |
| VOLUME | 1-3 | 1 | 2 |

# UNPACKING AND INSPECTION

## UNPACKING THE DEVICE

The APT Performer weighs approximately 102 lbs and will need to be unpacked by at least two people to avoid injury.

Proceed as follows:

- Position the shipping carton so that the arrows are pointing upward.
- Remove the device from packaging pulling upwards.
- Remove the remaining foam material around all accessories.

## INSPECTIONS

Immediately upon unpacking the device, 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 device to make sure it is in good condition. Any scratches on the surface during use will be not covered in the warranty. If visual damage is present upon unpacking, please contact your distributor, or manufacturer immediately with pictures to show damage.
3. Check the remaining external components and accessories for possible damage due to transport.
4. Verify that the packaging contains the following:

| ITEM | NAME | QTY |
|---|---|---|
| DQAPT | APT Performer | 1 |
| DQ8000X | Clinical Grade Power Cord | 1 |
| N/A | LCD Screen | 1 |
| DQAPT-UES | Upper Extremity Straps | 2 |
| DQAPT-WCH | Anti-Tipper Wheelchair Hooks | 1 |
| N/A | Fuses | 4 |
| N/A | Testing Inspection Certificate | 1 |
| N/A | Warranty card | 1 |
| N/A | User manual | 1 |

# INSTALLATION

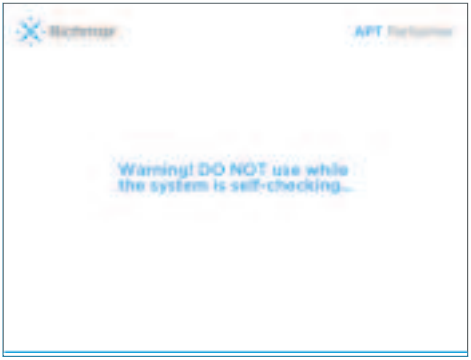
## POWER CONNECTION

**WARNING**

Before you plug the APT Performer 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 APT Performer is earthed by the ground wire in the mains cable.

1. Connect power cord to bottom of the foot pedestal as shown below.

2. Turn power switch to on position. The system will boot into self-inspection mode, as shown below.




**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.

## TOUCHSCREEN DISPLAY - NAVIGATION BAR

| ITEM | DESCRIPTION |
|---|---|
| Bluetooth | Indicates that the device has connected with the Heart Rate Sensor. |
| USB | Indicates that the USB flash disk has been inserted into the device and recognized.<br>See Training Date Export Section for more details. |
| USB Export Ready | Indicates that the USB exported the training data. |
| Information | Shows the relevant application information of the training mode. |

## PREPARATION BEFORE TRAINING

1. Make sure the trainer is in a stable place.
2. Connect the power cord first to the power supply of the device, and then plug the other end into a power outlet.
3. Press the Power switch to start the device.

**Using the Heart Rate Sensor:**

- Wear the Heart Rate Sensor according to its user manual.
- 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 device.

**NOTE**: The heart rate monitoring value is for reference only.

**CAUTION**

Please use the specified heart rate sensor, Heart Rate Monitor Polar H10.

**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 hooks with patients wheels in locked position, to avoid any movement during training.
- If the patient is training from a chair, make sure that the chair is stable and cannot tilt backwards.

**2. Height Adjustment**

- To adjust the height of the trainer, first loosen the knob on the center post as seen below. Position the upper section of the trainer to the desired height, and then tighten the knob to secure it in place.
- 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**

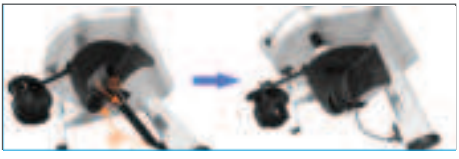
Before Arm training, the arm trainer can be be adjusted to 180° using the knobs next to the handlebar as seen below.

**4. Adjusting calf support (Leg training)**

The calf supports help protect the patients legs. Loosen the knob by turning counterclockwise on the support to adjust its height, and then tighten to secure once it is in the desired position.

**5. Foot and Calf Straps**

- Use the straps to secure the patients feet and calves to the corresponding supports.
- 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.



**⚠CAUTION**

Before each leg training, check the patients feet to ensure they are secure and in the correct position.

**⚠CAUTION**

Only put patient's feet into the pedals while seated. **DO NOT** put patient's feet into the pedals while standing. Hands are not allowed into the pedals.

**6. Arm Straps (if applicable)**

If using the hand straps, refer to the sequence of images below illustrating how to secure the patient's arms in the straps.

## DEFINITIONS OF TRAINING PROGRAMS

**Strength Training Program:**

Strength training is designed to encourage the patient to use more force by introducing periods of increased resistance during training.

**Endurance Training Program:**

Endurance Training is designed to motivate the patient to maintain the state of active movement through the SET mileage (distance) without stopping or switching to Passive Mode.

**Symmetry Training Program:**

Symmetry Training is 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.

**Range of Motion (ROM) Training Program:**

Range of Motion Training uses passive-assist training by engaging the motor to cycle the training handles/pedals while the patient focuses on range of movement and to help prevent contractures.

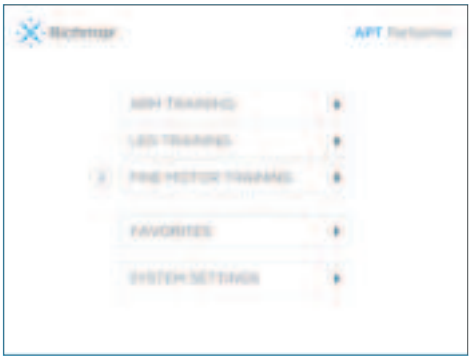
**Fine Motor Skills Training Program:**

Fine Motor Skills training is designed to help the patient with hand/eye coordination to assess the patient's cognitive and functional movements by capturing their reaction times and longevity of sequence.

## NAVIGATION

### Home Screen Display

After Self Checking is complete, it will automatically display the Main Menu as shown below. The Main Menu provides access to all training modes available within the device, with appropriate parameter defaults.



**CAUTION**

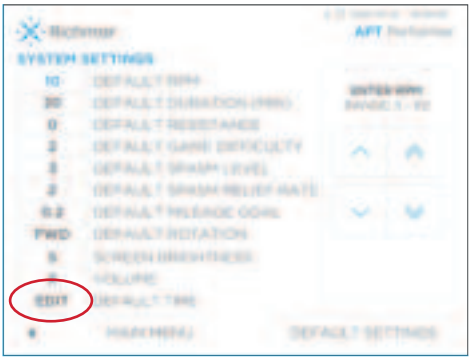
Before entering any training modes, check the default settings first and set the Default Time.

### System Settings

- Press **SYSTEM SETTINGS**. Check the default training parameters and adjust according to clinics preference. System settings defaults are maintained even when the device is turned off.
- To restore the device to default setting, at any time, press DEFAULT SETTING button on screen.

**NOTE:** The Date and Time setup is necessary for the APT Performer to properly export training data. If the date and time are not set correctly, this could cause records to be lost or stored inaccurately.

- Press the EDIT button to set the Date and Time, then press OK button. Set the value according to the local time before first using the device. When finished, press OK and then Main Menu to display the training programs.



### Training Programs Display

- Select the appropriate training modes, Arm Training, Leg Training, Fine Motor Training, or Favorites.
- To navigate from the Main Menu, to the training programs, press desired option. This display is organized in four sections relating each training program selected for intended use.
- Press desired training program to enter this interface. There are four training programs, STRENGTH, ENDURANCE, SYMMETRY and RANGE OF MOTION (ROM).
- Press ("i") button to learn more about each training program and which is the appropriate training session for each patient's treatment. Otherwise, press desired training program to move to the next screen.

## Spasm Control

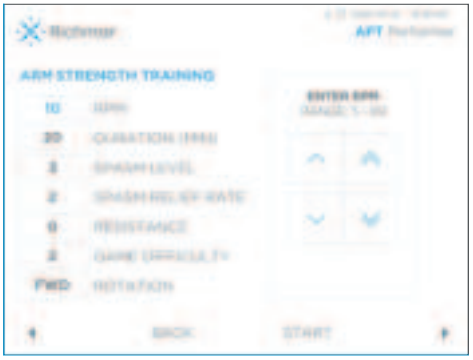
When the patient has a spasm during training, an indication will appear on the screen along with an audible warning sound, signaling spasm protection has activated. When the spasm protection is activated, the speed of the motor slows down to zero and then begins to rotate in the opposite direction, slowly increasing 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.

## Setting Training Parameters

Each training program will have different parameters that are adjustable. Below is an example of one. Press the number next to each parameter, once selected, the number will highlight blue. Use the arrows to adjust up, or down.

Single arrow buttons adjust the parameter by increments of one; the double arrow buttons will adjust the parameter by a larger increment which varies depending on parameter selected.




## Start Training

After the training parameters have been set, press the START button.

If the speed is set to 30 RPMs or above, a prompt will appear on the screen to CONFIRM or CANCEL the set RPMs. If CANCEL is pressed the previous interface will appear on the screen to lower the RPMs below 30.

## GAMEPLAY

Each game interface shows tips about how to play each game. Below is one example.

**Game Status and Operation Bar**


| ITEM | DESCRIPTION |
|---|---|
| Remaining Time | Displays the remaining time of SET duration. |
| Rotate Speed | Rotation speed at or actual speed when greater than set speed. |
| Heart Rate* | Displays real time heart rate |
| Status of Active/ Passive | Displays Active or Passive status during training |
| Change Direction | Press to change the rotation direction<br>FWD REV |
| PAUSE | Press to pause training. Once paused, parameters can be adjusted. To resume, press PLAY. |
| STOP | Press to stop training and display training summary. |

**NOTE:** *The heart rate monitoring value is for reference only. **If the heart rate sensor is not connected, the heart rate value displays 0.

## Active/Passive Activation

Training programs with Active/Passive will start in PASSIVE mode. When the patients speed exceeds the motor speed by 10 RPM's of the set speed, the system will automatically switch to ACTIVE mode with a voice prompt.

When the patients speed is lower than the motor speed by 10 RPM's of the set speed, the system will automatically switch to PASSIVE mode with a voice prompt.

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.

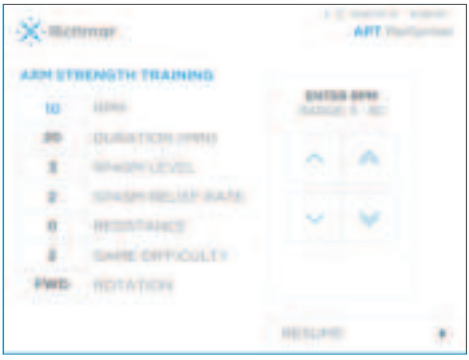
The interfaces of ACTIVE/PASSIVE mode are shown in the following pictures.


PASSIVE MODE


ACTIVE MODE

**Adjusting the Training Parameters during Training**

If you need to change the training parameters during training, please press the **PAUSE** button. Adjust the parameters, then press **RESUME** button to finish training.



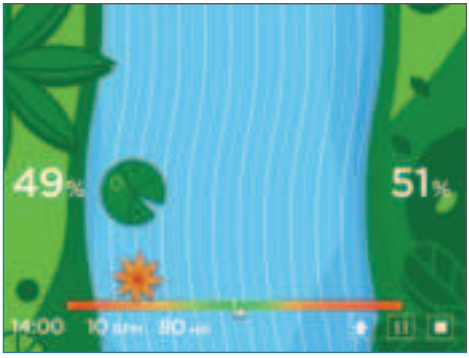

**Strength Training**

The Strength Training is designed to increase resistance when the big fish approaches, to encourage the patient to pedal harder to avoid being eaten. Resistance will increase when the big fish approaches. The patient should cycle the handles/pedals harder to swim up and over the big fish. Once the patient has read how to play the game (or the instructions are read to the patient), press the OK button to start training. Read the game tips and tell the patient how to play, then press OK button to start training.

**Endurance Training**

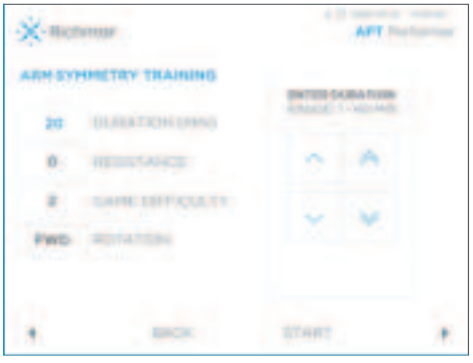
Endurance Training is an Active/Passive program. During Endurance training, the patient is motivated to meet the set mileage. This training program is similar to Strength Training with the exception that resistance will decrease as the big fish approaches, motivating the patient to pedal faster.

In the upper left corner of the screen, the trainer will display the remaining mileage, based on the SET mileage. Once the patient reaches the set mileage, the trainer automatically ends the training.


**Symmetry Training**

Symmetry Training is an Active program designed to encourage the patient to maintain an even balance between their left and right side. The Symmetry training parameters and game are as shown below.




After the training parameters have been set, press the START button.

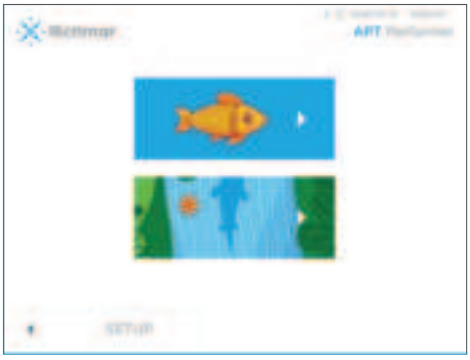
Once the parameters have been set, the game will display a tip on how to play the game, press OK to begin training.

Symmetry training was designed to encourage the patient to use both limbs to cycle harder to keep the fish in the middle of the river bank. If the patient favors one side or the other and hits either side of the bank, the system will display an exclamation point on the weak side of the bank and a beeping sound to encourage the patient to engage that side to return to the middle of the river bank.

## ROM Training

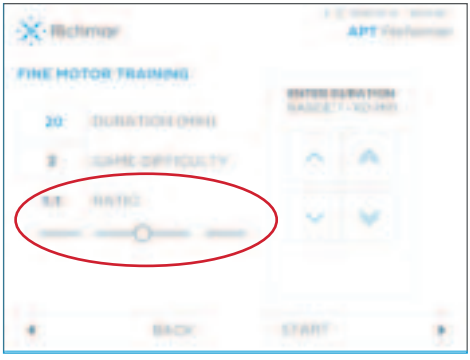
Range of Motion (ROM) Training is a Passive program designed to use the motor of the trainer to help the patient relearn how to maintain a fluid, constant motion increasing their range of movement in their limbs. Once the parameters have been set (example shown below) press START to begin training.

In the ROM training program, there are two games to choose from, as shown below.



## Fine Motor Training

Fine Motor Training program is for UPPER EXTREMITY training only, designed to increase the patients cognitive and functional movements using hand eye coordination.




**NOTE:** RATIO indicates the ratio of the number of bugs that appear on the left and right of the screen.
Press the arrows to move the ratio to the right or left.

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

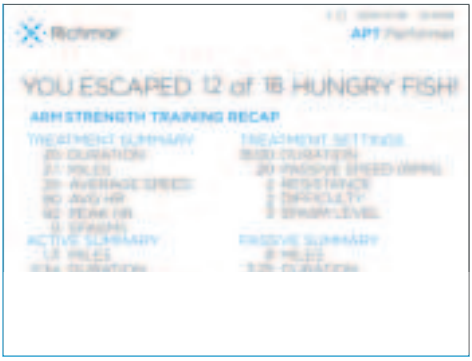

As shown below, an orange hand will appear on the left or right lower side of the screen to encourage the patient to use that hand to catch the bugs. Fine motor training will also capture the reaction time it takes for the patient to catch the bugs.

## Pause and End of Training

If you need to pause during training, press the PAUSE button, if you need to stop the training, 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

Once training ends, the system will automatically display the training summary, as shown in the example below.




DATA ANALYSIS OF ARM STRENGTH TRAINING

This was designed so the trainer can store several training summaries on one USB flash drive and upload to patients file based on when the patient came in for training.

**NOTE:** Entry indicates the day-time stamp of when the training is completed to differentiate between patient records when multiple are downloaded on the USB flash drive for patients chart. See Training Summary Export Section for more details.

## STORING AND RECALLING FAVORITES

### Storing Favorites

To store a training session as a favorite to use for future trainings or on other patients, press FAVORITES button from the Training Summary, then type in the name of the favorite program.

**CAUTION**

Per HIPAA guidelines, **DO NOT** save favorites using patient Protected Health Information (HPI) as defined in the HIPAA guidelines.

### Deleting Favorites

In the Favorites Menu, choose the favorite you want to delete, press DELETE button, a confirmation prompt will appear, press OK button to delete.

### Recalling Favorites for Training

From the Main Menu, select FAVORITES and the system will display as shown below to choose which Stored Favorite program to use for the patient.

### Training Summary Export

Before exiting the Training summary or before starting each training, insert a USB flash drive (FAT32 format) and will appear in the upper right corner of screen. Once the training summary has been exported, the USB icon will change to blue to verify it has been copied (as shown below).

| SYMBOL | Description |
|---|---|
|  | Indicates that the USB flash disk has been inserted into the device and recognized, training data is not copied. |
|  | Indicates that the USB flash disk has been inserted into the device and recognized, training data has been copied. |

### Emergency Stop

The APT Performer is equipped with an Emergency Stop function.

**WARNING**

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 near the 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 releasing the emergency stop. **DO NOT** approach the movement area of the ARM and LEG trainer of the device.

### End of Training

1. At the end of training the trainer will beep and stop after 3 beeps. The APT Performer will automatically display the Training Summary. This Training Summary can be exported to a USB flash drive. Once the training summary is exited, it cannot be recalled or saved to the USB flash drive. To save the Training Summary Data, see Training Summary Export section of this manual.
2. Turn off the power switch
3. Release the hand/foot straps and help the patient remove their hands/feet from the training handles/pedals and help the patient exit the APT Performer safely.

## CLEANING THE DEVICE

- Please turn off and unplug the power cord before cleaning and disinfecting the device.

**Cleaning Device Body**

- Clean surface of the main device using a clean, soft damp cloth or mild disinfecting wipe.

**Cleaning Handles and Pedals**

- Disinfect the handlebar, training handles and training pedals with 70% alcohol.

**Cleaning the Straps**

- Hand Wash with a mild detergent and do not iron. Cleaning and drying temperature should not exceed 80 °C.

**CAUTION**

- **DO NOT** clean the main device with organic solvents such as gasoline or diluting agents, otherwise damage will occur to the main device such as deformation and chipping of 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 has all information related to repairs but service can only be performed by a manufacturer certified technician.
- To preserve the product warranty, functionality, and product safety, we recommend using only parts supplied by the manufacturer.

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

The device accessories must be checked at regular intervals.

| INTERVAL | ROUTINE MAINTENANCE |
|---|---|
| WEEKLY | **OBVIOUS DAMAGE**<br>• Visually inspect components for damage that could cause problems.<br>• Check the power cord to ensure there is no damage. |
| SEMI-ANNUAL | **OPERATION**<br>• Check all functions.<br>**CONSTRUCTION**<br>• All fasteners must be present and fastened securely. |

The device and accessories must be checked at regular intervals.

1. Before you plug the APT Performer into a main socket please check that the voltage of the device stated on the marking corresponds with the voltage of the power supply.
2. Check the power cord to ensure if there is no distortion, fracture, etc. These circumstances may cause fire hazard. Please replace a new power line immediately.
3. It is advised to store the device in a ventilated dry place and place a cover over it, when not used for long periods of time.

**WARNING**

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 device.

## DISPOSAL

For environmental reasons, do not dispose of the device in the household waste at the end of its useful life. Dispose of the device 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

| ERROR | POSSIBLE CAUSE | SOLUTION |
|---|---|---|
| No response after starting the device. | 1. Lack of power.<br>2. Fuse might be burned out. | 1. Check whether the power cord is plugged into the device as well as the wall outlet.<br>2. Contact Manufacturer for an authorized technician to replace the fuse. |
| The training handles are unable to rotate | 1. Leg Training was selected for patient training.<br>2. Patient is applying force opposite to the set direction. | 1. Select the Arm training.<br>2. Rotate in the set direction or reset the direction. |
| The LE pedals are unable to rotate. | 1. Arm Training was selected for patient training.<br>2. Patient is applying force opposite to the set direction. | 1. Select the Leg training;<br>2. Rotate in the set direction or reset the direction. |
| Excessive noise during operation. | 1. The position of the trainer is not stable.<br>2. Pivot adjustment knobs are not completely tightened | 1. Place the trainer in a smooth position for training.<br>2. Tighten the pivot adjustment knobs. |
| The heart rate displays 0 during training. | 1. The heart rate monitor is not connected to device.<br>2. The heart rate monitor was not connected properly. | 1. Check position of the chest strap on heart rate sensor;<br>2. Check whether the electrode area of heart rate sensor is moist;<br>3. After checking the two above, look to see if the Bluetooth icon appears on the top right hand corner of the screen. |

### ASSISTANCE

All defects or repairs on the devices must be performed by the manufacturer or an authorized technician approved by the manufacturers. If unauthorized personnel, perform any repairs or maintenance inside the device or LCD screen, the warranty will be voided. For assistance, please contact the manufacturer at the following address:

**Compass Health Brands, Corp.**
**6753 Engle Road**
**Middleburg Heights, OH 44130**
**Toll Free 1.888.549.4945 or 800-947-1728**
**www.compasshealthbrands.com**

### 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.

- This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

**a.** this device may not cause harmful interference,

**b.** this device must accept any interference received, including interference that may causeundesired operation.

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: 2ANHPDQAPT

### FCC RF Radiation Exposure Statement:

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

2. This equipment complies with RF radiation exposure limits set forth for an uncontrolled environment.

3.This equipment should be installed and operated with minimum distance 20cm between the radiator& your body.

# APPENDIX A - EMC TABLES

### GUIDELINES AND MANUFACTURERS DECLARATION

The APT Performer 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 insure proper performance and operation.

### GUIDANCE AND MANUFACTURER'S DECLARATION – ELECTROMAGNETIC EMISSIONS

The APT Performer is intended for use in the electromagnetic environment specified below. The customer of the user of the APT Performer should assure that it is used in such an environment.

| Emissions test | Compliance | Electromagnetic environment – guidance |
|---|---|---|
| RF emissions CISPR 11 | Group 1 | The APT Performer 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 APT Performer 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 | |

# APPENDIX A - EMC TABLES

## GUIDANCE AND MANUFACTURER'S DECLARATION – ELECTROMAGNETIC IMMUNITY

The APT Performer is intended for use in the electromagnetic environment specified below. The customer or the user of APT Performer 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 interruptions and voltage variations on power supply input lines IEC 61000-4-11 | 0% $U_T$; 0.5 cycle (0°,45°, 90°, 135°, 180°, 225°,270° and 315°)<br>0% $U_T$; 1 cycle and 70% $U_T$; 25/30 cycles Single phase: at 0°<br>0% $U_T$; 250/300 cycles | 0% $U_T$; 0.5 cycle (0°,45°, 90°, 135°, 180°, 225°,270° and 315°)<br>0% $U_T$; 1 cycle and 70% $U_T$; 25/30 cycles Single phase: at 0°<br>0% $U_T$; 250/300 cycles | Mains power quality should be that of a typical commercial or hospital environment. If the user of the APT Performer requires continued operation during power mains interruptions, it is recommended that the APT Performer 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 MANUFACTURER'S DECLARATION – ELECTROMAGNETIC IMMUNITY

The APT Performer is intended for use in the electromagnetic environment specified below. The customer or the user of APT Performer should assure that it is used in such an environment.

| Immunity test | IEC 60601 test level | Compliance level | Electromagnetic environment – guidance |
|---|---|---|---|
| Conducted RF IEC 61000-4-6 | 3 Vrms 150 kHz - 80 MHz<br><br>6 V rms in ISM bands between 150 kHz and 80 MHz<br><br>80 % AM at 1 kHz | 3 Vrms 150 kHz - 80 MHz<br><br>6 V rms in ISM bands between 150 kHz and 80 MHz<br><br>80 % AM at 1 kHz | N/A |
| Radiated RF IEC 61000-4-3 | 3 V/m 80 MHz - 2.7 GHz<br><br>80 % AM at 1 kHz | 3 V/m 80 MHz - 2.7 GHz<br><br>80 % AM at 1 kHz | N/A |
| Proximity fields from RF wireless communications equipment IEC 61000-4-3 | See table: Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless communications equipment. | | N/A |

# APPENDIX A - EMC TABLES

## 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<br>745<br>780 | 704 to 787 | LTE Band 13, 17 | Pulse Modulation b): 217 Hz | 0.2 | 0.3 | 9 |
| 810<br>870<br>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<br>1845<br>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<br>5500<br>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.

Manufactured for

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