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Rx Only



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BITS[®]

Bioness | Integrated | Therapy | System

CLINICIAN'S GUIDE

BITS Clinician's Guide Copyright

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BITS Balance only available for sale in the United States.

Environmental Policy



Service personnel are advised that when changing any part of the BITS System, care should be taken to dispose of those parts in the correct manner; where applicable, parts should be recycled. For more detailed information regarding these recommended procedures, please contact Bioness Inc. Bioness Inc. is committed to continuously seeking and implementing the best possible manufacturing procedures and servicing routines.



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List of Symbols

	Caution
	Warning
	Class II Equipment (Double Insulated)
	Type BF Applied Part(s)
	Non-Ionizing Radiation
	Date of Manufacture
	Manufacturer
	This Product Must Not Be Disposed of with Other Household Waste
	Refer to Instruction Manual/Booklet
	FCC ID: RYYEYSHSN
	Re-Order Number
	Lot Number
	Serial Number
	Warning Electricity
	Medical Device
	MR Unsafe
	Quantity 48
	Single Use Only
	European Authorized Representative
	Storage Temperature
	Humidity Limitation
	Atmospheric Pressure Limitation
IP68	Protection Against Ingress of Water
	Keep Dry
	Fragile
Rx Only	Prescription Only
	Complies with the European Union Medical Device Directive

Table of Contents

Chapter 1: Introduction	1
Chapter 2: Safety Information	3
Indications for Use.....	3
Contraindications.....	3
Precautions.....	3
Warnings	4
Incident Reporting	5
Chapter 3: The BITS System	7
Adjusting the BITS Touchscreen Display Monitor.....	7
Moving the BITS Stand.....	7
Moving the Balance Platform.....	8
Charging the Sensors.....	9
Turning the System On.....	9
Launching the Software.....	10
Log Out.....	11
Exit Program.....	12
Windows Operating System	12
Chapter 4: Introduction to BITS Software Navigation	15
Start Therapy	15
Client Directory	15
Reports	15
System Settings.....	15
Help	15
Discipline Menu	16
Physical Therapy	16
Speech Therapy	16
Occupational Therapy.....	17
All Programs	17
Balance Therapy.....	17
Therapy Categories and Therapy Programs	17
Pairing the Sensor.....	20
Switching between Sensors	21
Disconnecting the Sensor.....	21

Sensor Settings	22
Sensor Battery Level	22
Identify Active Sensor	22
Recent Sessions List	23
Chapter 5: Client Directory	25
Creating a New Client Record	25
Accessing an Existing Client Record	28
Updating an Existing Client Record	29
Custom Image Library and Custom Word List	30
Adding Custom Images	30
Removing Custom Images	30
Adding Custom Words	31
Removing Custom Words	32
Archiving a Client	33
Activating an Archived Client	34
Chapter 6: Start Therapy	35
Preparing the Client	36
Preparing the Client for Balance Therapy	36
Wearing the Motion Sensor	36
Setting up the Wearable Sensor	37
Setting up the Platform Sensor	39
Adjusting Platform Tilt	40
Parameter Screen	41
Parameter Profile	41
Custom Parameter Profiles	42
In-Therapy Side Menu and In-Therapy Parameters	43
Accessing the In-Therapy Menu	43
In-Therapy Screen Scale Feature	44
Results Screen	45
Screen Navigation	45
Navigation Bar	46
Back Arrow	46
Breadcrumbs	46
Keyboard Icon	46
Recent Sessions Icon	46

Bluetooth Icon.....	46
Chapter 7: BITS Parameters	47
Stimuli Parameters	47
Display Parameters	56
Balance Parameters	60
Chapter 8: Therapy Categories	63
Visual Scanning.....	63
Visual Pursuit.....	63
Cognitive.....	63
Visual Motor.....	63
Charts	64
Static Balance.....	64
Dynamic Balance.....	64
Optokinetic Static and Optokinetic Dynamic.....	64
Vestibular.....	65
Assessments	65
Chapter 9: Single Target/Balance Reaction Program	67
Reaction Time Program.....	67
User Paced Program	67
Time Paced Program.....	67
Static Postural Sway Program.....	67
Dynamic Postural Sway Program.....	67
Weight Shift Program	67
Chapter 10: Array/Complex Array Programs	69
Sequence Program.....	69
Verbal Program.....	69
Competition Program.....	69
Chapter 11: Rotator Programs	71
Single Color	71
Multi-Color	71
Sequence	71
Gap Sequence.....	71
Chapter 12: Pursuit/Smooth Pursuit Programs.....	73
Smooth Pursuit.....	73
Pattern.....	73

Adjustable Pattern	73
Chapter 13: Cognitive Programs.....	75
Memory.....	75
Rhythm	75
Chapter 14: Geoboards and Drawing Programs	77
Geoboard.....	77
Symmetry Program.....	77
Trace Program.....	77
Replicate Program.....	77
Between the Lines Program	77
Chapter 15: Charts Programs.....	79
Letter Charts Program Group	79
Static Program.....	79
Motion Program	79
Multiple Program	79
Puzzle Program	79
Peripheral Letter Charts Program Group.....	80
Sequence Program.....	80
Match Program	80
Chapter 16: Vestibular Programs.....	81
Ocular Motor Program	81
Visual Acuity Program	81
Chapter 17: Assessments.....	83
Trail Making Program Group	83
Bell Cancellation Task	83
Maze Test	84
Visual Scanning and Motor Reaction	84
Berg Balance Scale.....	85
Postural Sway.....	85
Static Postural Sway.....	85
Dynamic Postural Sway.....	85
Sensory	85
Sensory Integration Test.....	85
Romberg.....	85
Functional Reach.....	85

Chapter 18: Results	87
Chapter 19: Reports	91
Selecting a Client.....	91
Navigating in the Reports Module	92
Printing a Report.....	94
Graphing.....	95
Change Variables	97
Add Session Labels.....	97
Graph Quadrant Results.....	97
Graph Area/Ring Results.....	98
Adjust the Date Range	98
Printing a Graph	98
Graphable Result Variables.....	100
Single Target/Balance Reaction Program Group.....	100
Array/Complex Array Program Group.....	101
Rotator Program Group	102
Pursuit Program Group.....	103
Cognitive Program Group.....	103
Drawing Program Group.....	104
Letter Charts Program Group	104
Peripheral Letter Charts Program Group.....	104
Assessments	104
Trail Making Program	104
Bell Cancellation Program	104
Maze Program	105
Dynamic Postural Sway Program.....	105
Static Postural Sway Program.....	105
Functional Reach Program.....	105
Romberg Program	105
Sensory Integration Test Program	105
Visual Scan and Motor Reaction Program.....	105
Baseline Comparison Results	106
Creating a Baseline Profile	107
Overwriting a Baseline Session.....	108
Chapter 20: System Settings	111

Accessing the User Management Feature	111
Adding a New User.....	112
Editing a User Account	113
Administrator Resetting a User Password.....	114
Disable a User Account	115
Reactivate a User Account	115
Language Settings.....	115
Format Settings	116
Date, Time & Number Format Preference Setting.....	116
Screen Size Setting	116
Clinic Information.....	116
Contact Info Setting	116
Report Header Setting.....	117
Chapter 21: Help	119
Chapter 22: Maintenance and Cleaning	121
Maintenance	121
Cleaning	121
Touchscreen Display Monitor	121
BITS Bedside & Mobile.....	122
Cleaning the BITS Bedside & Mobile Hardware.....	122
Sensor	122
Straps	122
Chapter 23: Technical Specifications	123
55" Display Technical Specifications	123
Motion Sensor Technical Specifications	124
Radio Communication Information	124
Radio Equipment Directive (RED) Declaration of Conformity Statement.....	125
Electromagnetic Emissions	125
Chest Strap Technical Specifications	125
Balance Platform Technical Specifications	126
Patch Technical Specifications	126
Software	127
Product Code Testing Summary.....	127
Chapter 24: Network Safety, Security, and Privacy	129
Data Security.....	129

Introduction

The Bioness Integrated Therapy System (BITS) is a hardware and software platform using touchscreen technology that allows for patient interaction with different software therapy and assessment programs. BITS is intended to challenge and assess vision, motor, cognitive and balance abilities of individuals, including those with deficits resulting from traumatic injuries and movement disorders as well as competitive athletes.

The Bioness Integrated Therapy System consists of a touchscreen display monitor, portable stand, wireless keyboard, and a computer with the BITS software applications.



Figure 1-1: Bioness Integrated Therapy System

For Balance Training, BITS includes Motion Sensor which can be used with the Chest Strap or a Balance Platform. Adhesive Patches are also available for single-use applications.

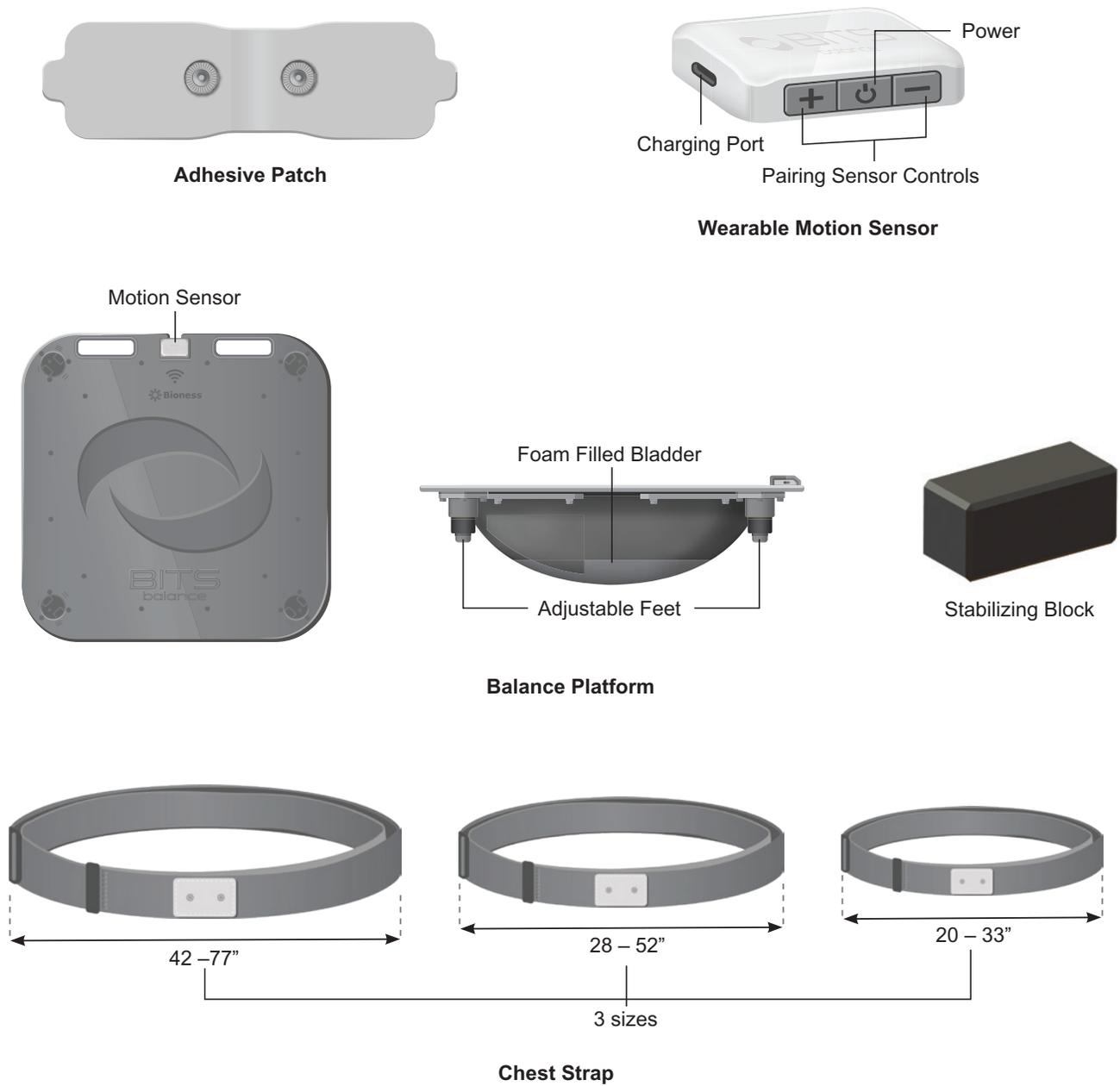


Figure 1-2: BITS Balance Accessories

Be sure to review this guide, including all safety information, before using the Bioness Integrated Therapy System. If you have questions or need technical support, contact the Bioness Product Support Department at 800.211.9136, Option 3. You can also visit the Bioness website at: www.bioness.com.

⚠ Caution: Do not use the Bioness Integrated Therapy System until you have been properly trained by a Bioness Representative.

Safety Information

Indications for Use

The Bioness Integrated Therapy System (BITS) is intended to challenge and assess the visual, auditory, cognitive, motor, and balance abilities of individuals, including those with deficits resulting from traumatic injuries and movement disorders as well as competitive athletes.

Examples of these abilities include:

- Visuomotor Coordination
- Reaction Time
- Visuospatial Perception
- Visual & Auditory Processing
- Working Memory
- Physical & Cognitive Endurance
- Balance Control
- Postural Stability

Contraindications

The Sensor included with Bioness Integrated Therapy System (BITS) is contraindicated for the MRI environment. Therefore, the Sensor must be removed before the patient is allowed into the MRI environment.

Precautions

- Unauthorized modifications to the Bioness Integrated Therapy System, such as installing or uninstalling software, will void the warranty.
- Accessing the internet or local intranet with the Bioness Integrated Therapy System will void the warranty.
- Do not alter the Windows 10 Operating System settings by adding Windows user accounts or adjusting the screen saver and sleep timer as this may interfere with the functioning of the software.
- Contact Bioness Product Support Department if any component of the system is malfunctioning. Attempts to modify the hardware will void the warranty.
- Make sure to follow the correct procedures when moving the portable stand, adjusting the height of the display screen, moving or adjusting the Balance Platform, using or storing the Sensor and using or storing the Chest Strap.
- Supervision and assistance for the patient should be provided during use of the Balance Platform.
- Ensure Balance Platform is on level ground prior to instructing clients to step on Platform.

- Keep area around the Balance Platform clear of other objects. Do not stack objects on the Balance Platform.
- Keep Balance Platform at a safe distance from portable stand and display screen when in use.
- Utilize Stabilizing Blocks to assist clients in getting on and off the Balance Platform.
- For clients with limited mobility, exercise precaution and remain within a safe distance when client is performing balance exercises.
- Always lock the wheel casters on the stand when the system is in a stationary position.
- Ensure the wheels on the portable stand are in the locked position before starting a therapy session with a client. Do not unlock wheel casters during therapy.
- Supervision should be provided during use of the system.
- Clients should not use an object that may damage, or is unsafe when interacting with the touchscreen.
- Use caution with clients diagnosed with, or suspected to have, epilepsy.
- Adhesive Patches provided are single use only and should not be transferred between patients.
- Do not use any chemical solvents that are acidic or alkaline cleaning agents.
- Always exercise universal precautions and wear gloves when cleaning any component of the system.

Warnings

- Do not move the Bioness Integrated Therapy System over obstacles on the floor or over uneven or soft surfaces. Doing so could cause the equipment to fall causing damage and/or injury.
- Ensure Sensors are charged prior to performing Balance Therapy.
- Do not charge the Sensors while it is in use by client or user.
- Sensors must be charged using the charging block and cable provided by Bioness.
- Do not use the Bioness Integrated Therapy System near strong electromagnetic fields (e.g. MRI).
- To avoid the potential of electrical shock do not use the Bioness Integrated Therapy System near water.
- Users of the Bioness Integrated Therapy System should exercise caution to prevent tripping hazards during the course of therapy. Sources of such tripping hazards include power cables and the legs of the Portable Stand. Please note that some additional falling hazards may result from use of the larger touchscreen display monitor, as clients may be required to stretch farther to complete exercises.
- **Stored Energy Hazard:** The lift mechanism in the Stand Tower is under tension and will move rapidly, on its own, as soon as attached equipment is removed. For this reason, do not remove equipment or make adjustments to lift tension unless the touchscreen display monitor has been moved to the highest position on the stand tower. Failure to follow these instructions may result in personal injury and/or equipment damage.
- The equipment must only be connected to an earthed MAINS socket-outlet (i.e. Only plug the Bioness Integrated Therapy System into 3 pronged grounded wall outlets.). Not doing so may result in an increased risk of electric shock.

- Misuse of the system could cause the unit to fall and result in injury and/or damage.
- Do not climb, sit, or lean on any part of the portable stand, doing so could cause the equipment to fall causing damage and/or injury.
- Remove the Sensor before undergoing any diagnostic or therapeutic medical procedure such as X-ray examination, ultrasound, MRI, etc.
- Users of the Balance Platform should exercise caution when stepping on or off the Balance Platform to prevent tipping hazards during the course of the therapy. Please note that some additional tipping hazards may result when performing Static Balance activities while on Platform as reaching could result in platform tipping, loss of balance and subsequent fall hazard.
- The Bioness Integrated Therapy System software programs utilize moving and rotating graphics that may cause dizziness, vertigo, or nausea in sensitive patients. Individuals experiencing dizziness, vertigo, or nausea while using BITS should discontinue use immediately.
- The BITS Balance Adhesive Patch can be attached to patient's clothing or directly applied to the skin. It is normal for the skin under the Adhesive Patch to become red. The redness should disappear in approximately one hour once the patch is removed. However, some patients may experience skin irritation, an allergic reaction, or hypersensitivity to the the gel pads on the back of the Adhesive Patch. Persistent redness, lesions or blisters are signs of irritation. Use of the Adhesive Patch should be temporarily halted until the irritation is resolved. Patients should consult their physician if irritation persists.
- Do not apply the Adhesive Patch over skin folds, scarred tissue, irritated skin, uneven skin surfaces, or broken skin.
- Always inspect the gel pads on the back of the Adhesive Patch before use. Do not apply the Adhesive Patch if the gel pads appear dried out, worn, dirty, or irregular.
- Make sure the Adhesive Patch liner is removed before adhering to the clothing or skin.
- Do not use the Adhesive Patch with an expired "Use by" date.
- Do not use unapproved devices/hardware with the Bioness Integrated Therapy System.
- Do not use unapproved accessories with the Bioness Integrated Therapy System.
- Improper shut-down of the BITS software may result in the loss of client data. Please follow proper instructions for the shut down process.
- Refer to the manufacturer's instructions provided with the touchscreen display for additional warnings and safety information.
- Bioness Integrated Therapy System is not intended to act as a diagnostic device and does not identify the presence or absence of clinical diagnoses.
- Make sure the computer is shut down and turned off before moving the stand.
- Make sure the Balance Platform is placed in a secured location when not in use to avoid tripping hazards.

Incident Reporting

Any serious incident that has occurred in relation to the device should be reported to the manufacturer and the competent authority of the Member State in which the user and/or patient is established if within the European Union.

The BITS System

Adjusting the BITS Touchscreen Display Monitor

The touchscreen display monitor can be tilted (20 degrees forward) and can be moved up and down.

To adjust the height of the monitor:

1. Push the touchscreen from the top or bottom vertically with two hands.
2. Move the display monitor to the desired position.

Moving the BITS Stand

During the installation process, the Bioness Integrated Therapy System should be set-up and positioned in the location designated for therapy sessions. If needed, the BITS portable stand can be moved.

⚠ Warning: Make sure the computer is shut down and turned off before moving the stand.

To move the portable stand:

1. Verify that the computer is shut-down and turned off. Disconnect the power cord from the wall socket and make sure the cord is not on the floor.
2. Carefully push the touchscreen display monitor down to the lowest position on the tower of the portable stand. See Figure 3-1.

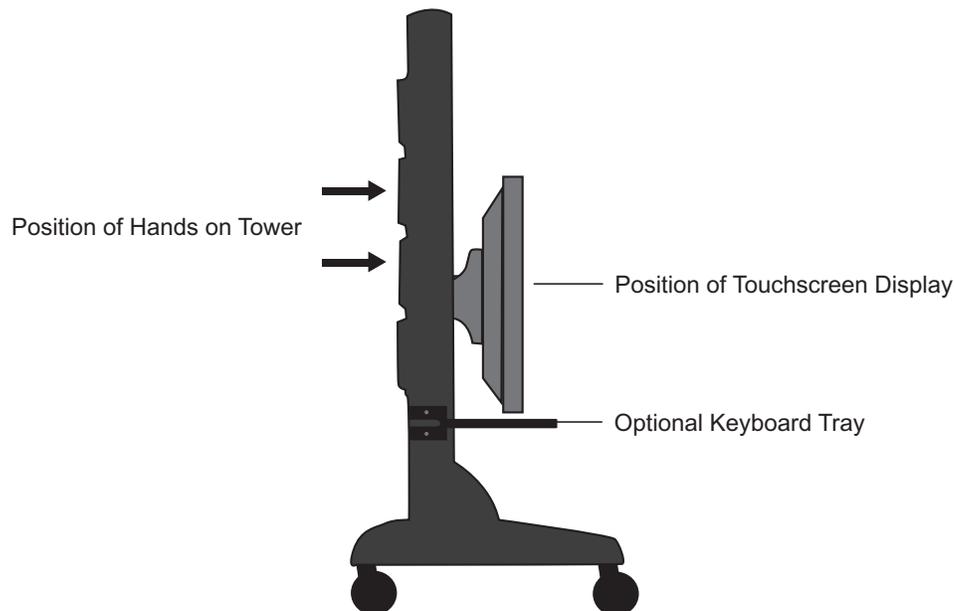


Figure 3-1: Correct Position for Moving Portable Stand

3. Unlock the wheel casters and point the wheels in the direction of travel.

4. Push the portable stand from the side with both hands on the tower. See Figure 3-1.
5. Move the stand to the new location and lock the wheel casters.
6. Reposition the display screen to the desired height.
7. Reconnect the power cord to the wall socket.

Moving the Balance Platform

 **Warning:** Make sure the Balance Platform is placed in a secured location when not in use to avoid tripping hazards.

To move the Platform:

1. Ensure Platform feet are retracted all the way up and are not in an extended position. See Figure 3-2.

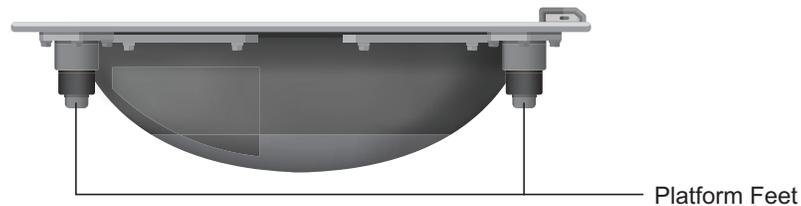


Figure 3-2: Platform feet position

2. Lift the Platform using the handles provided. See Figure 3-3.



Figure 3-3: Handles for lifting the Platform

3. Place the Platform in the desired location.

Charging the Sensors

 **Warning:** Sensor should not be in use while charging.

To charge the Sensor:

1. Plug charging block and cable provided by Bioness into a wall outlet.
2. Connect charging cable with Sensor. See Figure 3-4.



Figure 3-4: Charging the Sensor

Turning the System On

1. Press the On/Off Button on the back of the touchscreen display. See Figure 3-5.
2. Press the On/Off Button on the computer. The computer is mounted on the back of the touchscreen display. See Figure 3-5.

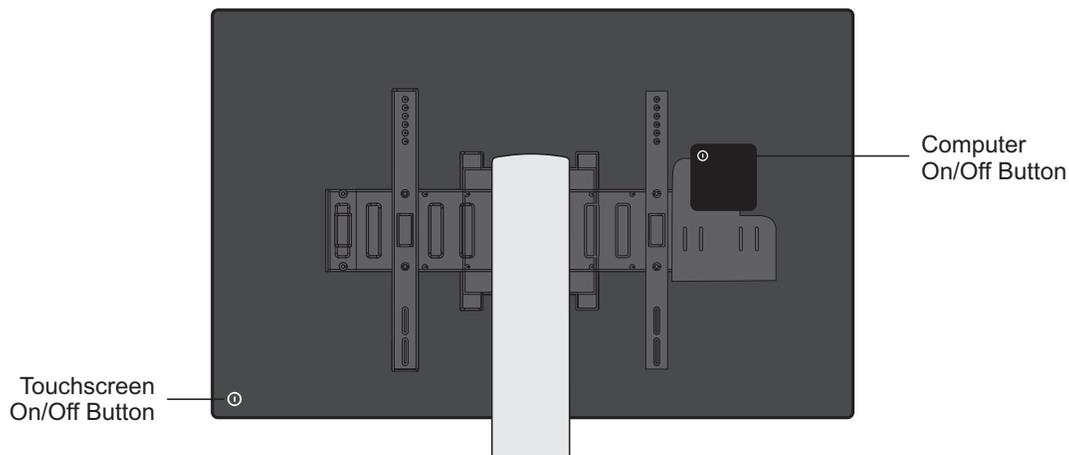


Figure 3-5: Location of On/Off Buttons (Example Shown for Reference Only)

3. After Windows has loaded and the Start Screen appears, touch the middle of the display screen and slide up with finger to reveal the Windows Login Screen. See Figure 3-6.
4. Use the keyboard to enter your password. Press the Enter Arrow Button. See Figure 3-6. Password will be supplied by the administrator.
5. Press the desktop icon on the touchscreen display.

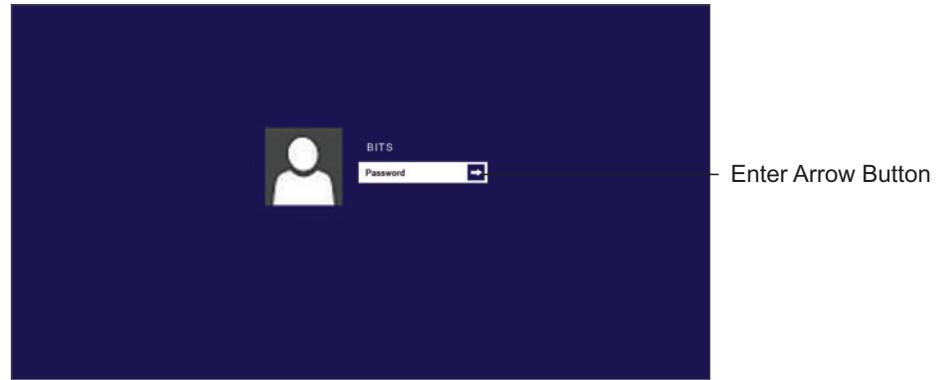


Figure 3-6: Windows Login Screen

Launching the Software

1. Double tap the BITS Icon located on the desktop. See Figure 3-7.



Figure 3-7: BITS Icon on Desktop

2. The BITS Login Screen will open. To open the on-screen keyboard, press the Keyboard Icon located at the bottom right of the screen. See Figure 3-8.
3. Type your username and password into the text fields. Login username /password will be set up when the administrator creates new user accounts.
4. Press the Login Button to complete the login process.

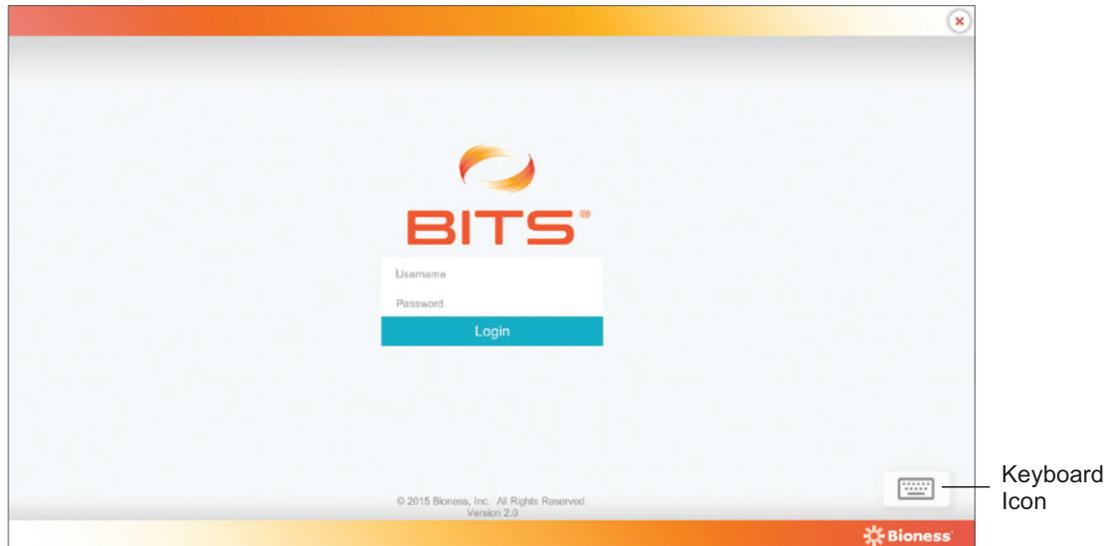


Figure 3-8: BITS Login Screen

Log Out

To log out of the BITS software application, press the "X" Button. The "X" Button is located in the upper right corner of the display screen in the BITS software, see Figure 3-9. Pressing the Logout Button will bring the user back to the Login Screen.



Figure 3-9: Location of "X" Button (Home Screen)

It is recommended to press the "X" Button to logout of the BITS software after a clinician has completed a therapy session with a client. When the BITS is not in use, it is recommended to exit from the BITS software application and shut down the Windows operating system. It is not recommended to turn off the touchscreen monitor as this will turn off on it's own after the Windows Operating System is shut down.

Exit Program

To exit the BITS software application, press the "X" Button located in the upper right corner of the display screen. See Figure 3-10. In the Login Screen the "X" Button functions as an exit button. The display screen will return to the Windows desktop.

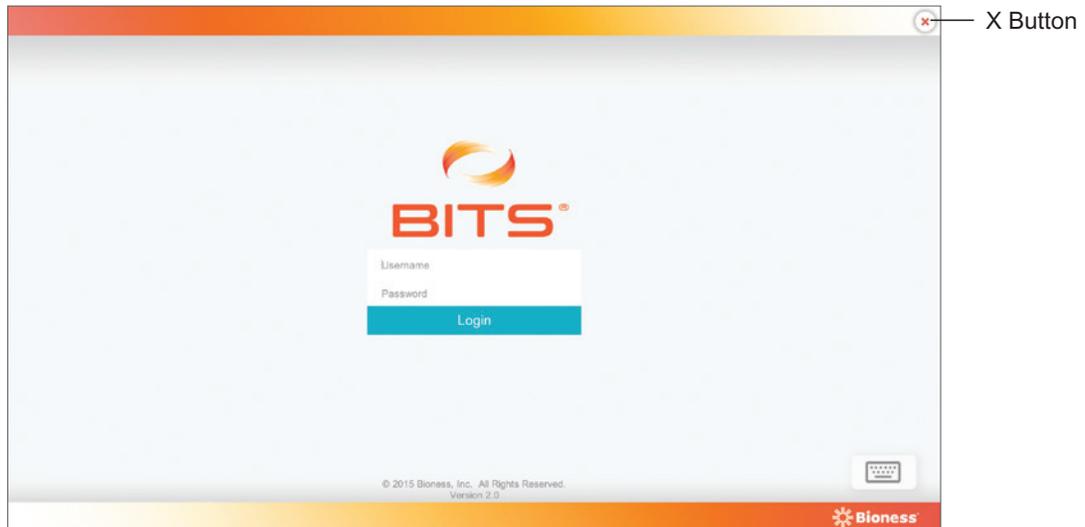


Figure 3-10: Location of "X" Button (Login Screen)

Windows Operating System

To shut down from the Windows Operating System:

1. Press the Start Icon located in the lower left corner of the display screen. See Figure 3-11.



Figure 3-11: Start Icon

2. From the Windows Start Menu, press the Power Icon. Select "Shut down" from the list. See Figure 3-12.

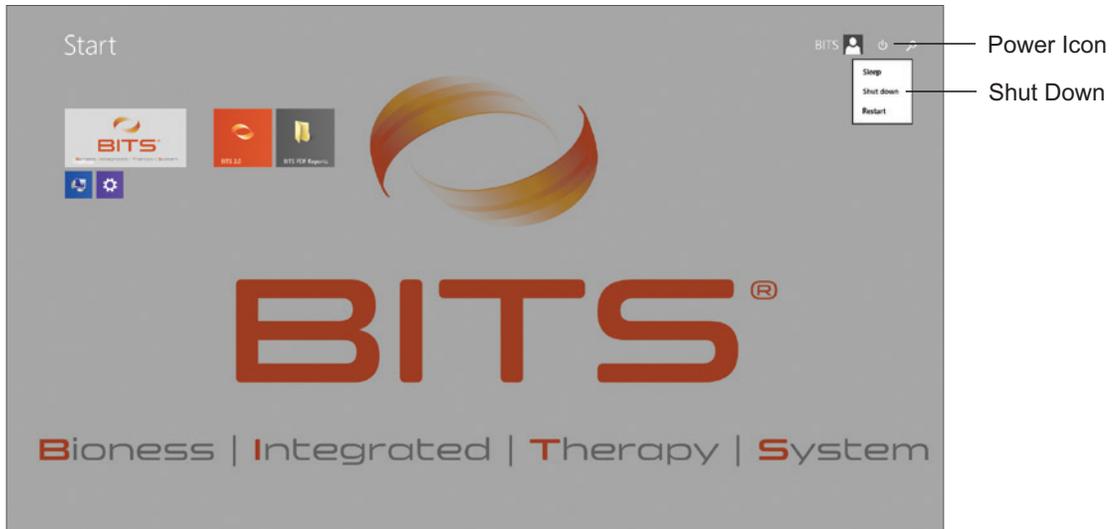


Figure 3-12: Windows Shut Down

Introduction to BITS Software Navigation

The Home Screen is the first screen that will appear when launching the BITS software application. The Home Screen consists of five menu options, which appear as icon buttons.

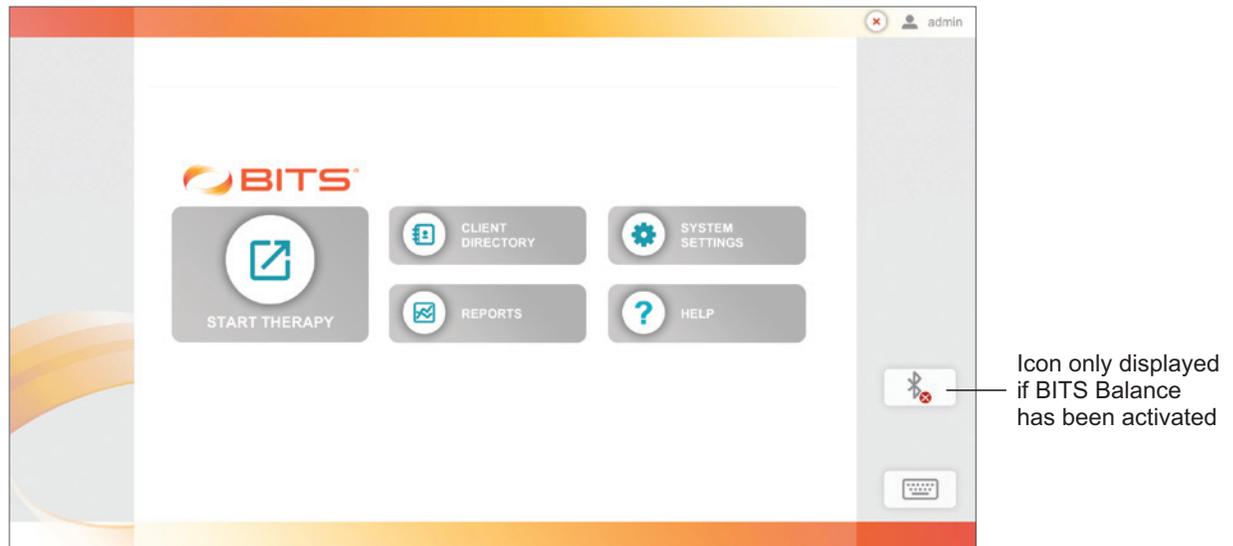


Figure 4-1: Home Screen

Start Therapy

The Start Therapy Module allows the user to select a client and therapy program, and launch a therapy session. See Figure 4-1. For more information see the "Start Therapy" section of this guide.

Client Directory

The Client Directory allows the user to access the client directory, view client information, add a new client, select an existing client, and archive a client. See Figure 4-1. For more information see the "Client Directory" section of this guide.

Reports

The Reports Module allows the user to view a client's therapy session results, graph session results over a period of time, and print out PDF reports. See Figure 4-1. For more information see the "Reports" section of this guide.

System Settings

The System Settings Module allows a user with administrator privileges to change language settings, format settings, enter facility information, and to create, edit and archive user (clinician) accounts. See Figure 4-1. For more information see the "System Settings" section of this guide.

Help

Pressing the Help Button opens a link to the BITS Clinician's Guide. See Figure 4-1. For more information, see the "Help" section of this guide.

Discipline Menu

Within the Start Therapy Module, the Discipline Menu divides the BITS Therapy Programs into groups for a particular application (Discipline). See Figure 4-2. Selecting a Discipline Menu Button opens a screen displaying the available therapy categories found in the selected discipline.

The Discipline Menu can be accessed after the Start Therapy Button has been pressed and a client has been selected from the Client List. Refer to the "Client Directory" and "Start Therapy" sections of this guide for more information.

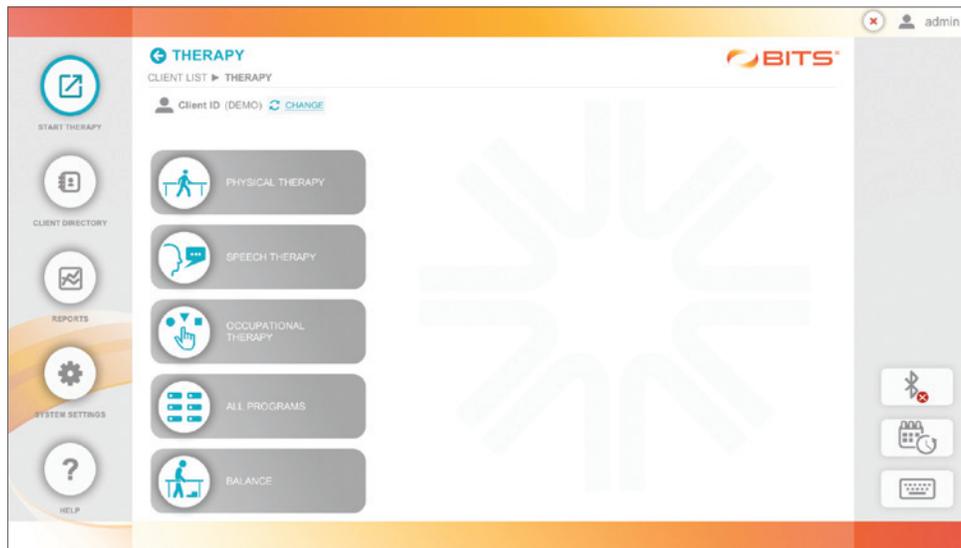


Figure 4-2: Discipline Menu Screen

Physical Therapy

The Physical Therapy Discipline, features the therapy categories listed below. To access the Physical Therapy Discipline, press the Physical Therapy Button. See Figure 4-2.

- Visual Scanning
- Cognitive
- Visual Motor
- Assessments

Speech Therapy

The Speech Therapy Discipline, features the therapy categories listed below. To access the Speech Therapy Discipline, press the Speech Therapy Button. See Figure 4-2.

- Visual Scanning
- Cognitive
- Visual Motor
- Charts
- Assessments



Occupational Therapy

The Occupational Therapy Discipline, features the therapy categories listed below. To access the Occupational Therapy Discipline, press the Occupational Therapy Button. See Figure 4-2.

- Visual Scanning
- Visual Pursuit
- Cognitive
- Visual Motor
- Charts
- Assessments



All Programs

The All Programs Discipline, features all therapy categories that are found in the BITS software application (excluding Balance Therapy categories). To access the All Programs Discipline, press the All Programs Button. See Figure 4-2.

- Visual Scanning
- Visual Pursuit
- Cognitive
- Visual Motor
- Charts
- Assessments



Balance Therapy

The Balance Therapy Module features the therapy categories listed below. To access the Balance Therapy Module, press the Balance Button. See Figure 4-2.

- Static Balance
- Dynamic Balance
- Optokinetic Static
- Optokinetic Dynamic
- Vestibular
- Assessments

Therapy Categories and Therapy Programs

The BITS software application consists of 12 therapy categories, which are divided into over 60 different Therapy Programs. The therapy programs are client interactive and provide visual and/or auditory feedback. The therapy programs also generate records on patient performance for each session. Refer to BITS Therapies Table on the next page to view a matrix of all BITS Therapy Categories and Programs.

BITS THERAPIES

		ALL PROGRAMS					BALANCE				
Program Category	Programs	Visual Scanning	Visual Pursuit	Cognitive	Charts	Visual Motor	Static Balance	Dynamic Balance	Optokinetic Static	Optokinetic Dynamic	Vestibular
Single Target/ Balance Reaction	User Paced	X					X	X	X	X	
	Time Paced	X					X	X	X	X	
	Reaction Time	X									
	Static Postural Sway						X		X		
Dynamic Postural Sway								X		X	
	Weight Shift							X		X	
Array/ Complex Array	Sequence Array	X					X	X	X	X	
	Verbal Array	X					X	X	X	X	
	Competition	X									
Pursuit/ Smooth Pursuit	Smooth Pursuit		X								
	Pattern							X		X	
	Adjustable Pattern							X		X	
	Single Color Rotator		X				X	X	X	X	
Rotator	Multi Color Rotator		X				X		X		
	Sequence Rotator		X				X		X		
	Gap Sequence Rotator		X				X		X		
Cognitive	Memory			X			X	X	X	X	
	Rhythm			X			X		X		
	Static Chart				X						
Charts	Motion Chart				X						
	Multiple Chart				X						
	Puzzle Chart				X						
	Sequence Chart				X						
	Match Chart				X						
Geoboards	Geoboards				X	X					
	Symmetry					X					
	Trace					X					
Drawing	Replicate					X					
	Between the Lines					X					
Vestibular	Ocular Motor Training										X
	Visual Acuity										X

To access the Therapy Categories and Therapy Programs:

Note: A Sensor must be paired to access Balance Therapy Programs. Refer to Pairing a Sensor section in this chapter.

1. From the Discipline Menu, select the appropriate discipline. See Figure 4-2.
2. The Therapy Category Menu will open displaying the available therapy categories found in the selected discipline. See Figure 4-3.
3. Press a Therapy Category Button to display the program groups and therapy programs found in the selected category. See Figure 4-4.

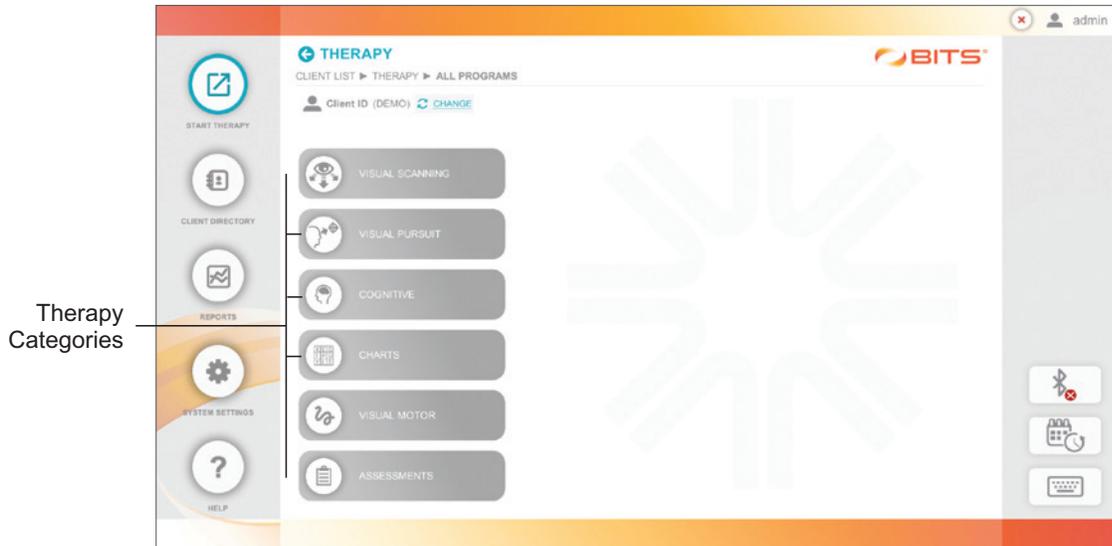


Figure 4-3: Therapy Category Menu

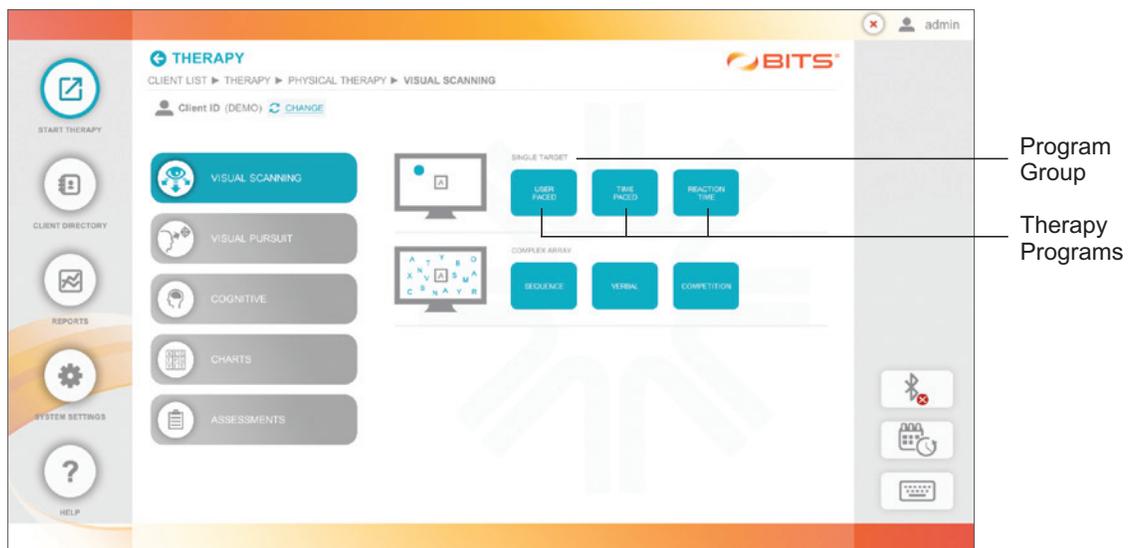


Figure 4-4: Visual Scanning Therapy Category with Program Groups and Therapy Programs

4. To select a therapy program, press one of the blue program buttons. See Figure 4-4.

Pairing a Sensor

1. Turn the Sensor on by holding the Power Button  for two seconds until an audible sound is heard and power button is flashing green.
2. Select the Bluetooth Icon on screen 
3. Select the Pair Icon in Device Settings menu 
4. Press and hold the + and - buttons on Sensor, simultaneously (A blue flashing light will appear on the Sensor) 
5. Enter a Name for the Sensor and select whether this Sensor will be used with the wearable Chest Strap or attached to the Platform. See Figure 4-5.

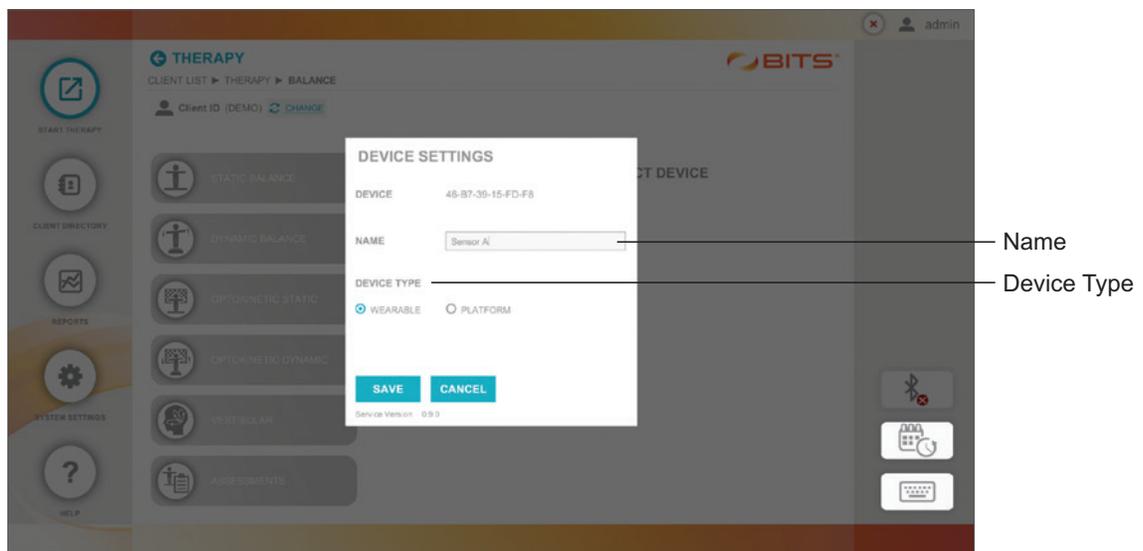


Figure 4-5: Pairing the Sensor

6. Select Save.
7. Follow steps 1-6 to pair additional Sensors. User can pair all available Sensors, however only one Sensor can be active at a time.

Switching between Sensors

1. Select the Bluetooth Icon on screen 
2. In the Device Settings menu, select Disconnect for the active Sensor. See Figure 4-6.
3. Select the Sensor name for the Sensor user wants to activate. See Figure 4-6.

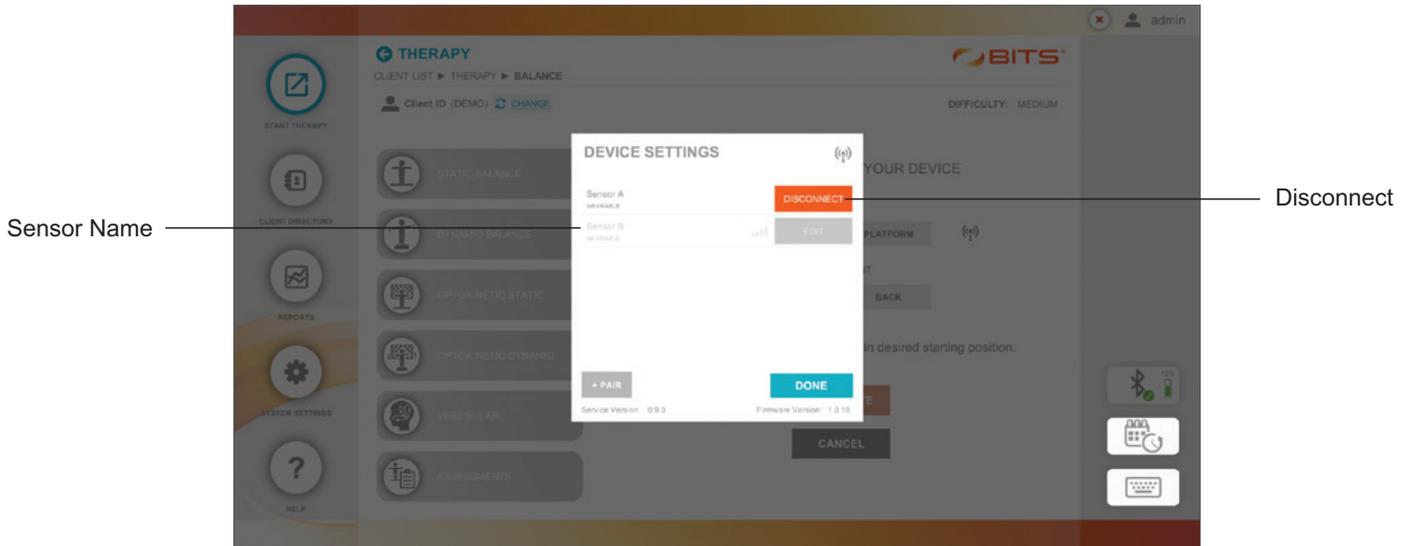


Figure 4-6: Switching between Sensors

Disconnecting the Sensor

1. Select the Bluetooth Icon on screen 
2. In the Device Settings menu, select Disconnect for the active Sensor. See Figure 4-6.
3. Turn the Sensor off by holding the Power Button  for two seconds until an audible sounds is heard and power button is no longer flashing green.

Sensor Settings

To quickly view all Sensors paired with BITS, press the Bluetooth icon. See Figure 4-7.

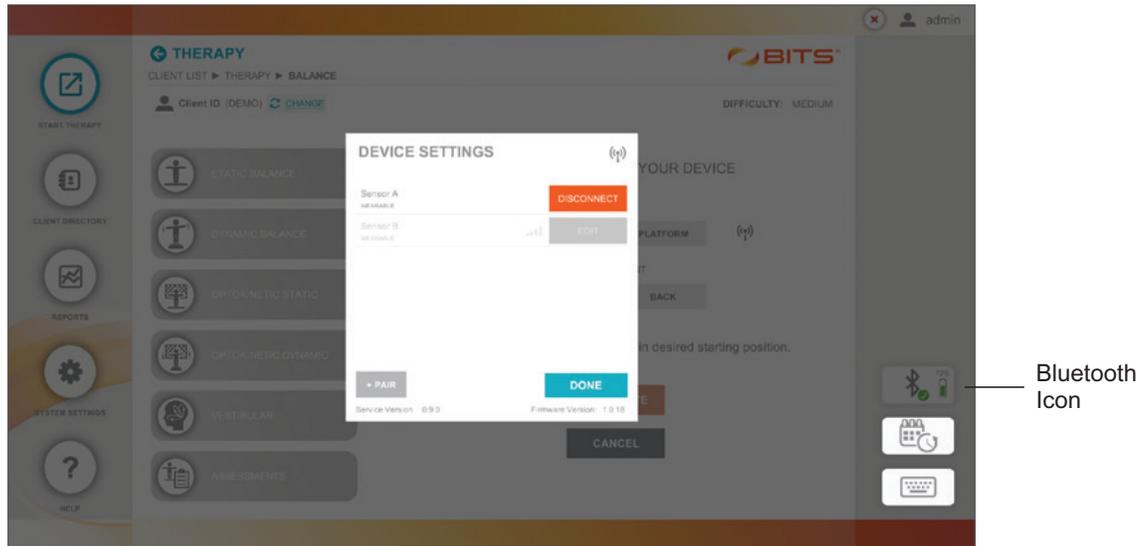


Figure 4-7: Sensor Device Settings

The Sensor Device Setting Menu displays the paired Sensors, the active Sensor and the signal strength. user can also disconnect a Sensor, delete a Sensor, pair a new Sensor (wearable or Platform) and rename a Sensor in this menu. To update Balance Therapy Difficulty Level for a client refer to the "Client Directory" section of this guide.

Sensor Battery Level

The battery level for the active, in use Sensor is indicated on the Bluetooth Icon. Battery level above 25% is indicated in green, battery level between 25% - 1% is indicated in yellow, and battery level below 1% is indicated in red and considered critically low battery.



Identify Active Sensor

To identify which Sensor is currently active, open the Sensor Device Setting Menu and click the  icon. The system will generate an audible sound for the Sensor that is currently active.

Recent Sessions List

To quickly review all recently completed Therapy Sessions that a client has performed, press the Recent Sessions icon. See Figure 4-8.

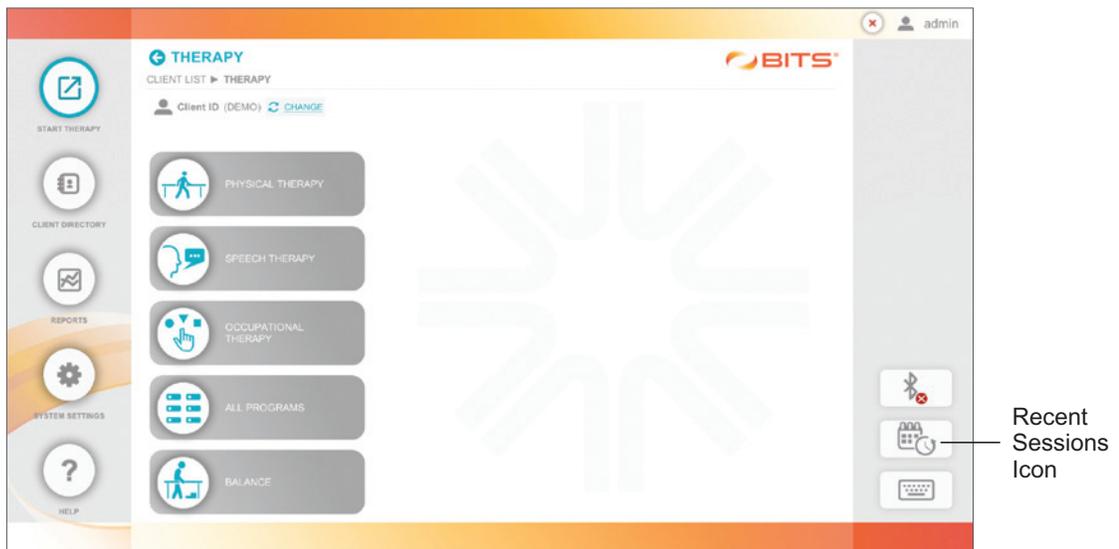


Figure 4-8: Recent Sessions Icon

The Recent Sessions list allows the user to review therapy results obtained during the client's previous therapy sessions. The user can also launch a new therapy session with the program parameters of a recent therapy session preselected.

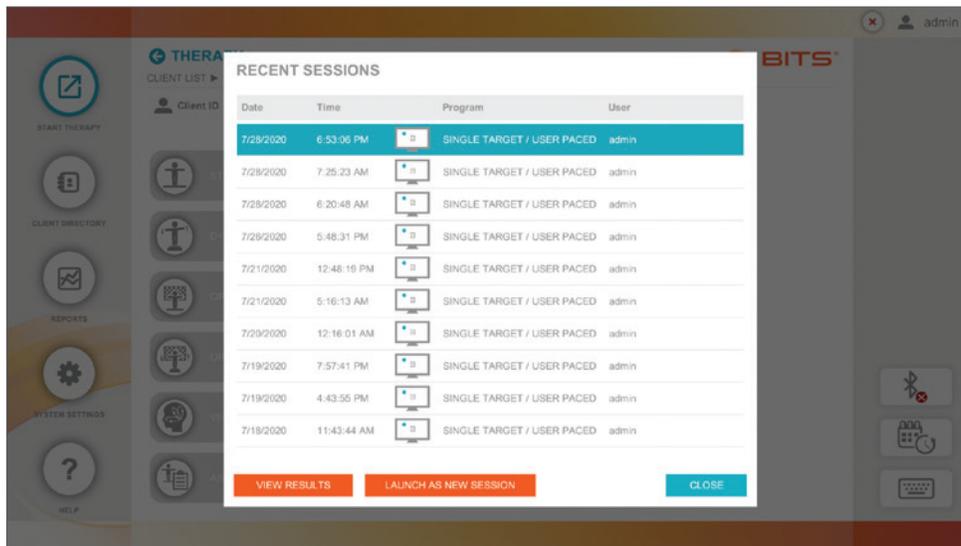


Figure 4-9: Recent Sessions List

Client Directory

The Client Directory button allows the user to access the Client Directory, view client details, add a new client, select an existing client, and archive a client. The client detail screen also allows the user to access a client's therapy session history.

Creating a New Client Record

1. From the Home Screen, press the Client Directory Button. See Figure 5-1.

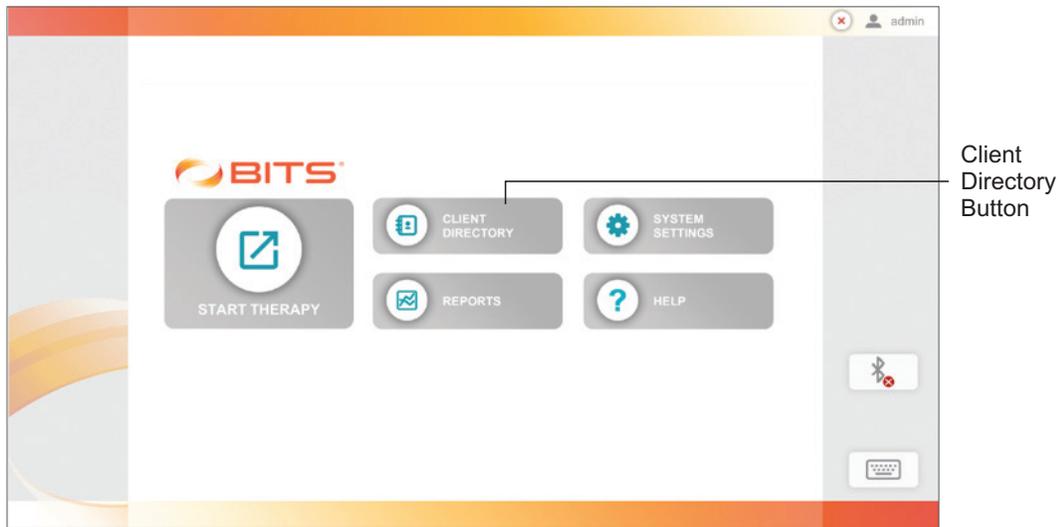
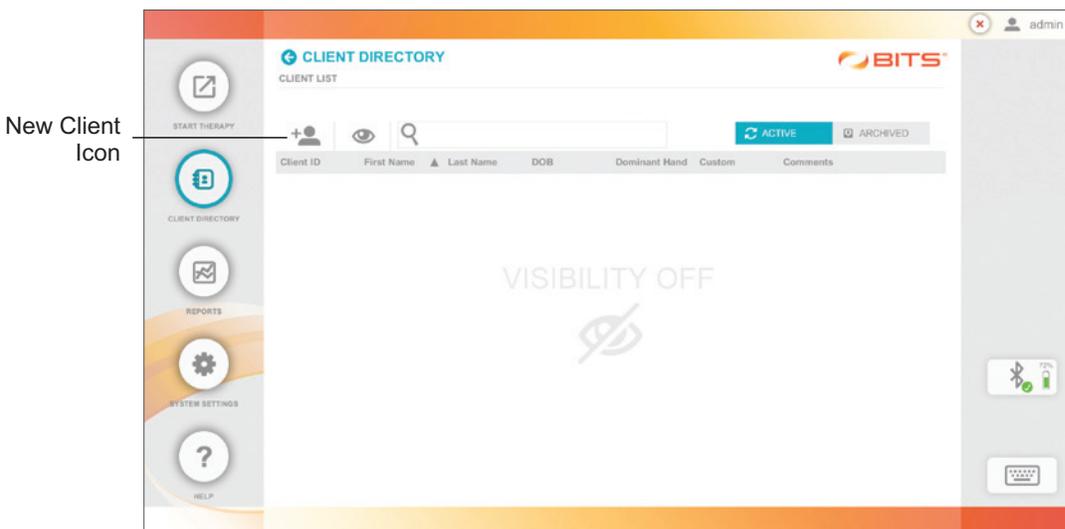


Figure 5-1: Home Screen

2. The Client List Screen will open. Press the New Client Icon, see Figure 5-2.



5-2: Client List Screen

3. The New Client Screen will open. Enter the required information into the data fields using the touchscreen and keyboard. Verify that all information has been correctly entered and press the Save Button. See Figure 5-3.

4. Gender is required for Functional Reach Assessment normative results.

Note: Pressing the Save & Start Button will create a new client record and take the user to the Discipline Menu Screen to select a therapy program.

5. Weight is required for using the Balance Platform. Ensure the weight entered is as close as possible to the client's actual weight.

6. Ambulation Category is an optional field. Definition of each category is outlined below.

FAC	Ambulation Category	Definition
0	Nonfunctional	Subject cannot ambulate, ambulates in parallel bars only, or requires supervision or physical assistance from more than one person to ambulate safely outside of parallel bars.
1	Dependent, Level II	Subject requires manual contacts of no more than one person during ambulation on level surfaces to prevent falling. Manual contacts are continuous and necessary to support body weight as well as maintain balance and/or assist coordination.
2	Dependent, Level I	Subject requires manual contact of no more than one person during ambulation on level surfaces to prevent falling. Manual contact consists of continuous or intermittent light touch to assist balance or coordination.
3	Dependent, Supervision	Subject can physically ambulate on level surfaces without manual contact of another person but for safety requires standby guarding on no more than one person because of poor judgment, questionable cardiac status, or the need for verbal cuing to complete the task.
4	Independent, Level Surfaces	Subject can ambulate independently on level surfaces but requires supervision or physical assistance to negotiate any of the following: stairs, inclines, or non-level surfaces.
5	Independent	Subject can ambulate independently on nonlevel and level surfaces, stairs, and inclines.

Ambulatory Category Definitions

7. Wearable Balance Therapy Difficulty allows user to update the difficulty level of the wearable Sensor and the Platform Balance Therapy Difficulty allows user to update the difficulty level of the Platform Sensor.

7a: Wearable Balance Therapy Difficulty Definitions:

Wearable Difficulty		
Difficulty Level	Static Balance	Dynamic Balance
Easy	Requires a significant amount of movement by client to move outside of the Balance Point making it easier to eliminate stimuli while maintaining balance in the Balance Point.	Requires a minimal amount of movement by client to reach target stimuli.
Medium	Requires a medium amount of movement by client to move outside of the Balance Point.	Requires a medium amount of movement by client to reach target stimuli.
Hard	Requires a minimal amount of movement by client to move outside of the Balance Point making it difficult to eliminate stimuli while maintaining balance in the Balance Point.	Requires a significant amount of movement by client to reach target stimuli.

7b: Platform Balance Therapy Difficulty Definitions:

Platform Difficulty			
Difficulty Level	Tilt Levels		
	Low: Maximum Feet Extension ≡	Medium: Medium Feet Extension =	High: No Feet Extension —
Easy	X	X	X
Medium		X	X
Hard			X

Note: Difficulty level definitions (Easy/Medium/Hard) for Platform are the same as wearable difficulty levels noted in table above.

8. The new client's information will now appear in the Client List.

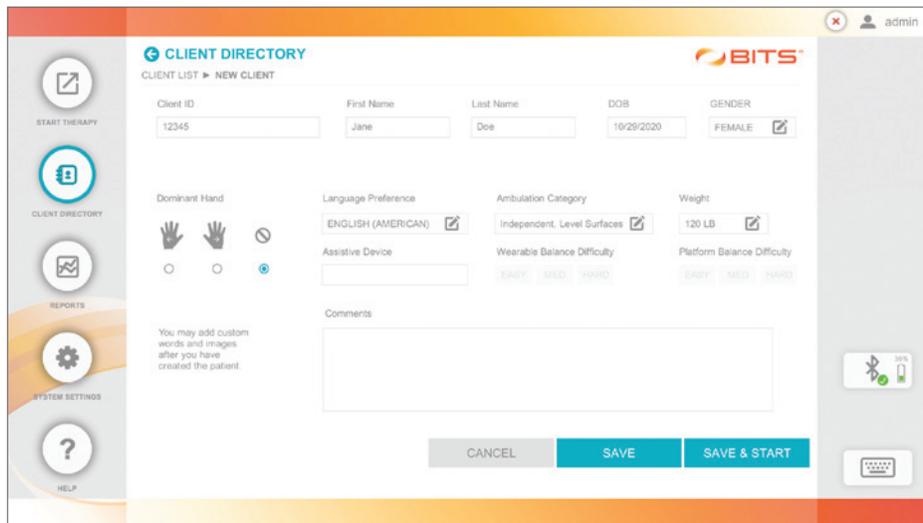


Figure 5-3: New Client Screen

Accessing an Existing Client Record

1. From the Home Screen or Navigation Bar, press the Client Directory Button.
2. The Client List Screen will open. Press the Visibility Icon, see Figure 5-4, to make the Client List visible on the display screen.

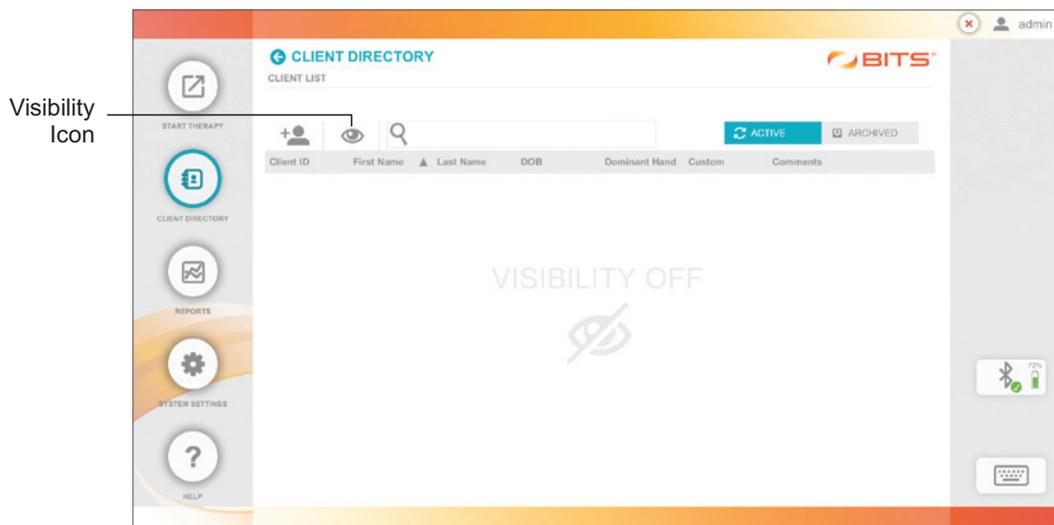


Figure 5-4 Visibility Feature Turned Off

Select the desired client from the Client List by pressing the row with the client's name.

Note: To search the Client List, type the client's first name, last name, date of birth, or client ID into the text field next to the Search Icon. See Figure 5-5.

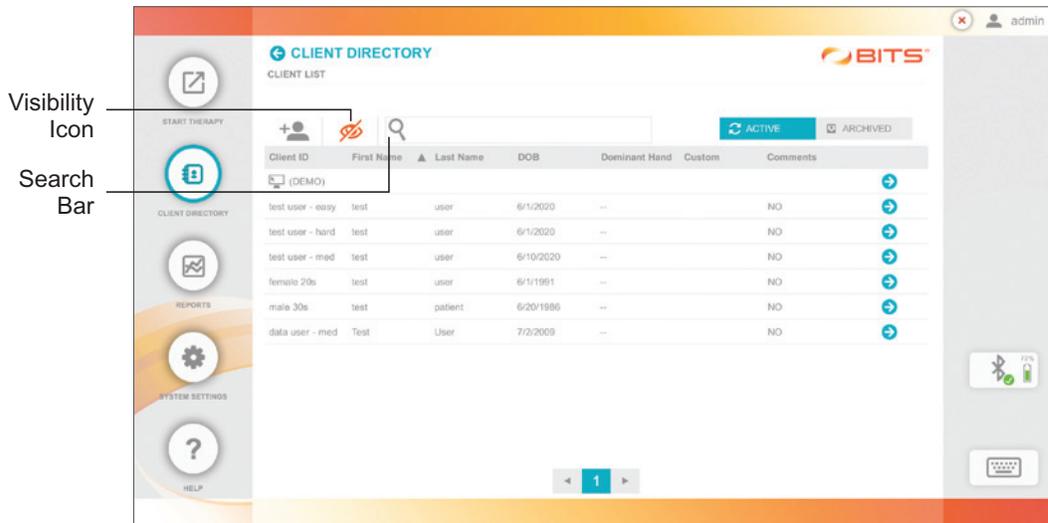


Figure 5-5: Visibility Feature Turned On

Updating an Existing Client Record

1. From the Client List Screen, select the desired client by pressing on the row with the client's name.
2. The Client Detail Screen will open, see Figure 5-6. Make desired changes to the data fields. Custom images and words can also be added to a client record.

Note: Balance Therapy Difficulty Levels can only be updated in the Client Profile once it has been selected in the main Balance Therapy Category menu.

3. Press the Save or Save & Start Button to save changes to the client record.

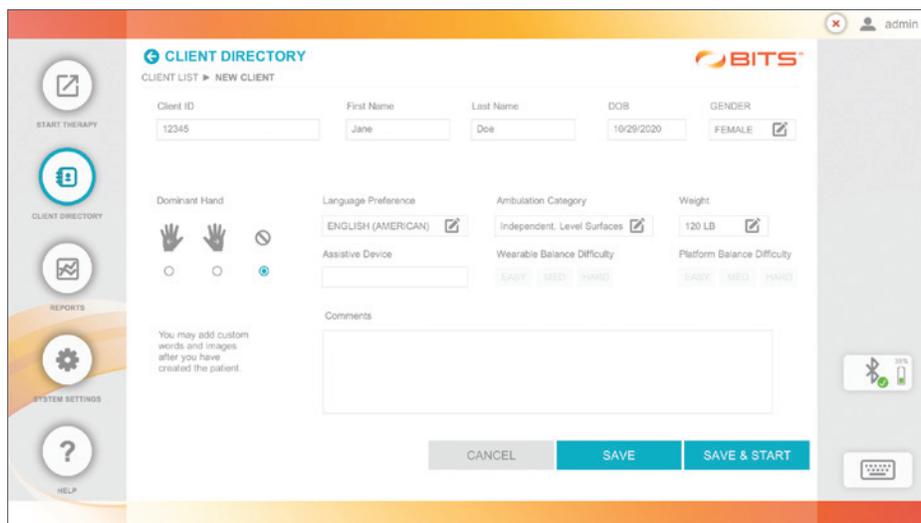


Figure 5-6: Client Detail Screen

Custom Image Library and Custom Word List

Custom images and text can be added to create a library for individual clients. The custom images and text can be used in a number of programs to create custom, tailored stimuli.

Adding Custom Images

1. From the Client Detail Screen, press the Image Icon Box next to the Custom Image Icon  0 Added  to add images. See Figure 5-6.
2. The Custom Image Library Window will open. Press the Add Button, see Figure 5-7.
3. The Add Images Window will open. Press the Next Button, see Figure 5-7.
4. The Select Images to Add Window will open. Select the drive icon and corresponding folder that contains the custom image. Select the desired image file(s). A check mark will appear when selected. Press the Add Selected Button. See Figure 5-7.
5. The Custom Image Library Window will open, displaying the custom images. Press the Done Button to close the Custom Image Library Pop-up Window and return to the client Detail Screen. See Figure 5-7.

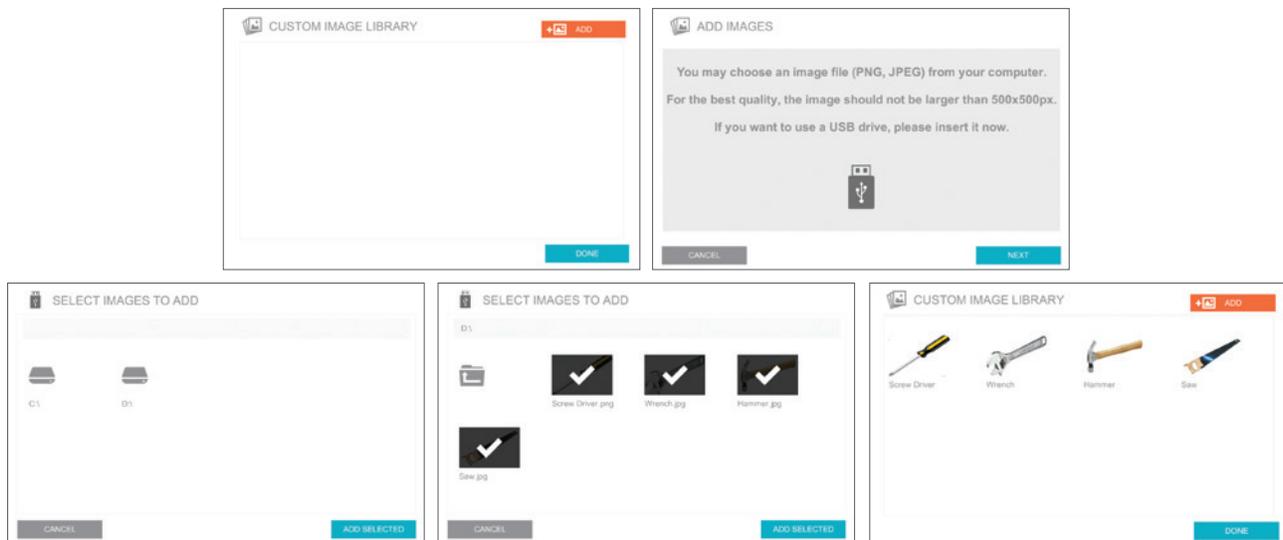


Figure 5-7: Adding Custom Images, Windows

6. Press the Save or Save & Start Button to save changes to the client record. See Figure 5-6.

Removing Custom Images

1. From the Client Detail Screen, press the Image Icon Box next to the Custom Image Icon  0 Added  to remove images. See Figure 5-6.
2. The Custom Image Library Window will open. Press the thumbnail of the image that you want to remove from the library, see Figure 5-8.
3. A window displaying the image will open. Press the red Trash Icon , see Figure 5-8.
4. A dialog window will open to confirm that the user wants to delete the image from the Custom Image Library. Press the Yes Button, see Figure 5-8.

- The Custom Image Library Window will open, reflecting the change to the library. Press the Done Button to close the window. See Figure 5-8.

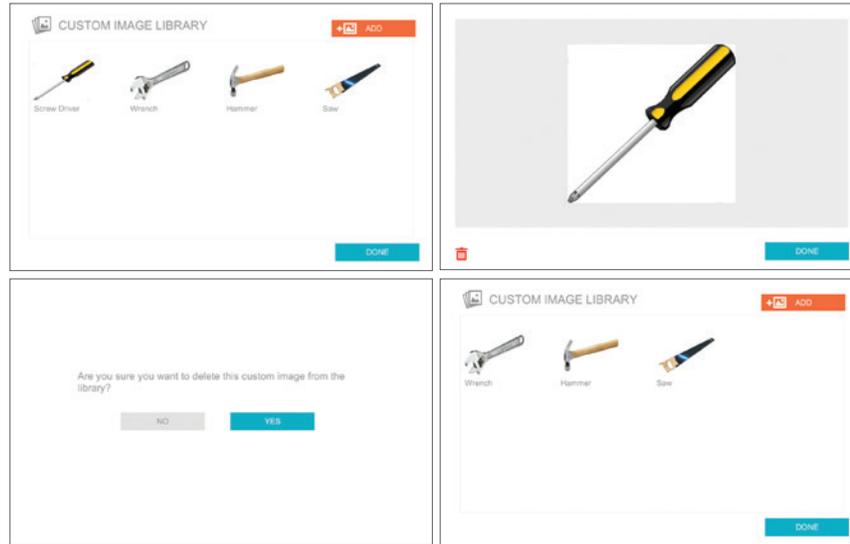


Figure 5-8: Removing Custom Images, Windows

- The Client Detail Screen will open. Press the Save or Save & Start Button to save changes to the client record.

Adding Custom Words

- From the Client Detail Screen, press the Custom Word Icon Box next to the Custom Word Icon  0 Added  to add words. See Figure 5-6.
- The Custom Word List Window will open. Use the on-screen keyboard to type the custom word into the "Enter New" text box and then press the Add Button. See Figure 5-9.
- The custom word will now appear in the word list. Press the Done Button when the list is complete. See Figure 5-9.

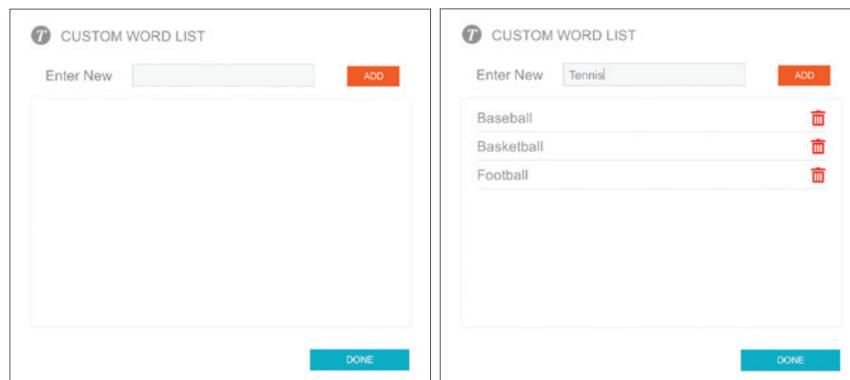


Figure 5-9: Adding Custom Words, Windows

- The Client Detail Screen will open. Press the Save or Save & Start Button to save changes to the client record.

Removing Custom Words

1. From the Client Detail Screen, press the Custom Word Icon Box next to the Custom Word Icon  0 Added  to remove words. See Figure 5-6.
2. The Custom Word List Window will open. Press the red Trash Icon  next to the word you want to remove from the word list. See Figure 5-10.
3. A dialog window will open to confirm that the user wants to delete the image from the Custom Image Library. Press the Yes Button, see Figure 5-10.
4. The Custom Word List Window will open, reflecting the change to the word list. Press the Done Button. See Figure 5-10.

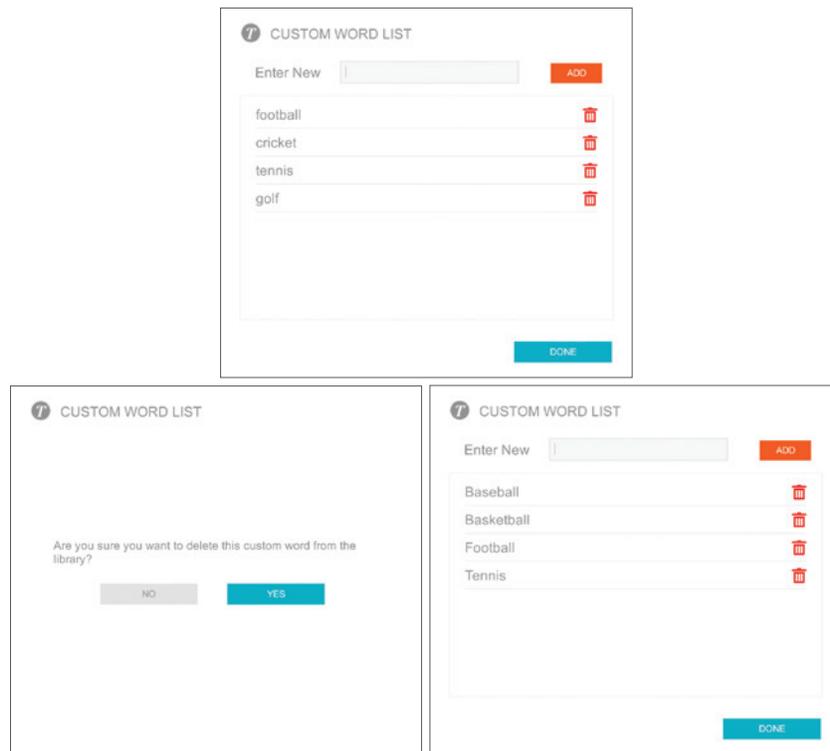


Figure 5-10: Removing Custom Words, Windows

5. The Client Detail Screen will open. Press the Save or Save & Start Button to save changes to the client record.

Archiving a Client

1. From the Client List Screen, select the desired client by pressing the row with the client's name. See Figure 5-11.

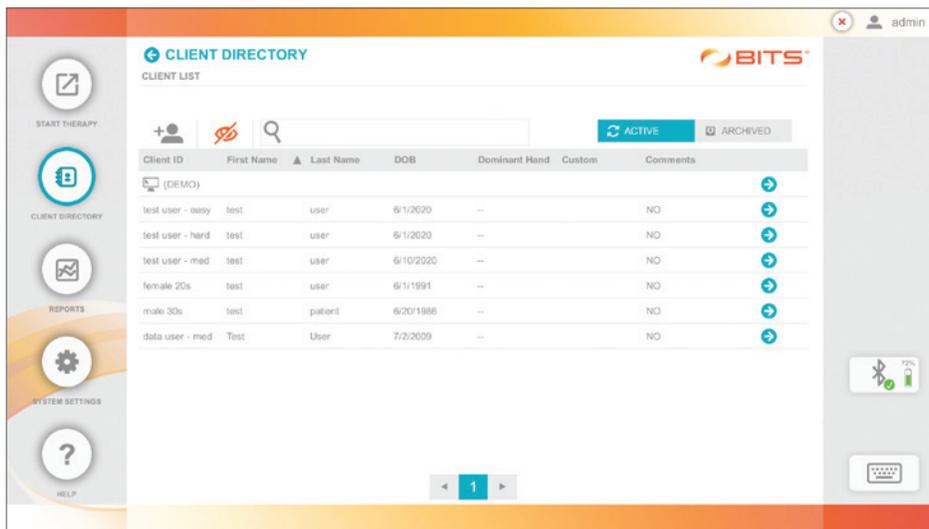


Figure 5-11: Client List Screen

2. The Client Detail Screen will open. Press the Archive client Button. See Figure 5-12.

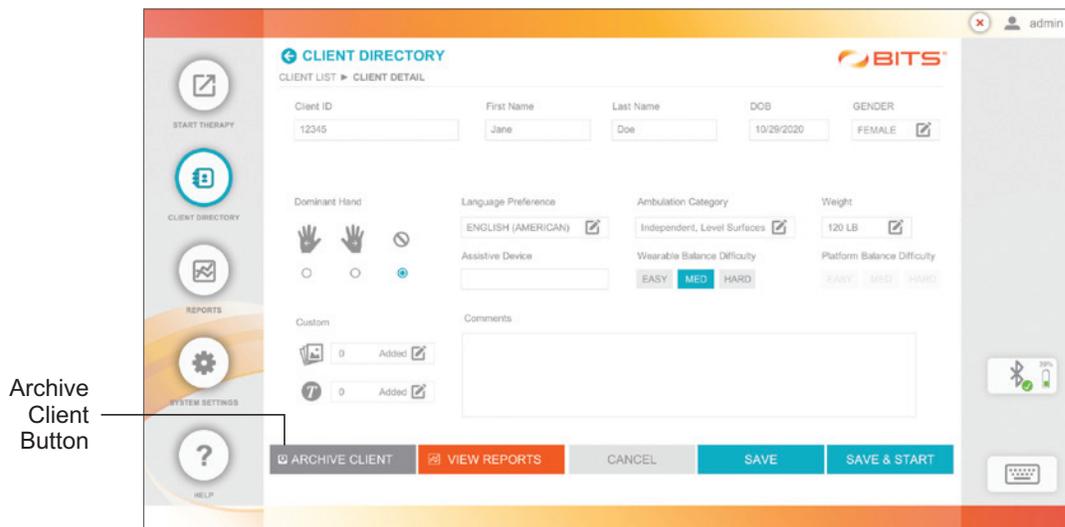


Figure 5-12: Changing Client Status using client Detail Screen

Activating an Archived Client

1. From the Client List Screen, press the Archived Tab. See Figure 5-13.

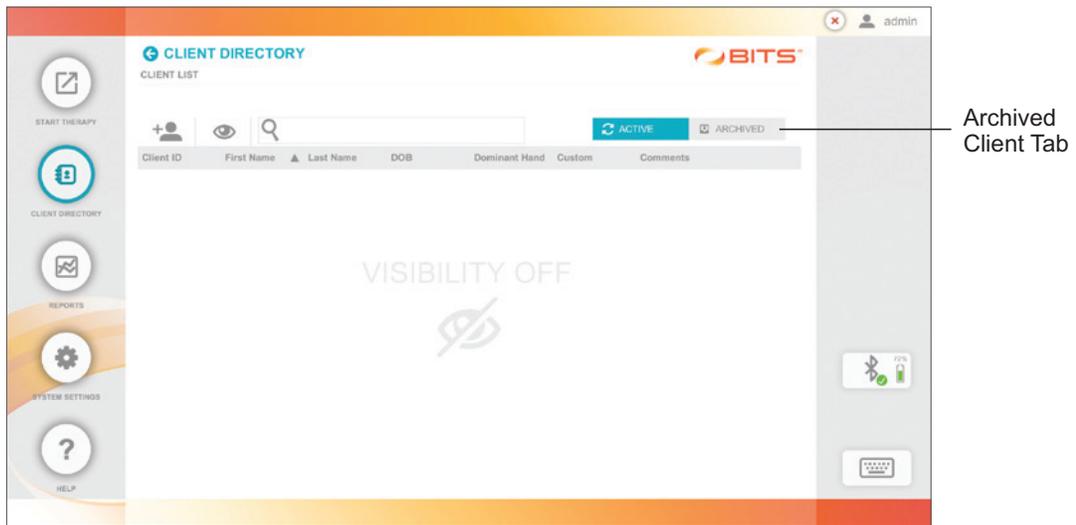


Figure 5-13: Archived Client List

2. The archived Client List will appear. Select the desired client by pressing the row with the client's name.
3. The Client Detail Screen will open. Press the Activate Client Button, see Figure 5-14.

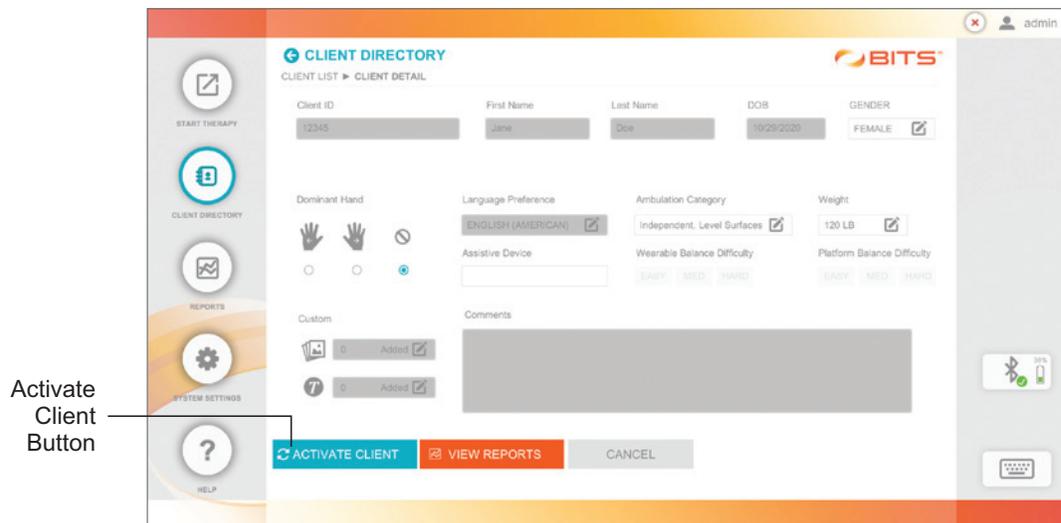


Figure 5-14: Client Detail Screen, Activating Client

4. The Client Detail Screen will refresh. Press the Save or Save & Start Button.

Start Therapy

Preparing the Client

Have the client stand (or sit) at a comfortable distance in front of the touchscreen display monitor. It is recommended, if the client is standing, to have the client stand in a balanced posture with equal weight on both legs and at the Harmon distance from the display screen. The Harmon distance is the distance from the elbow to the first knuckle (metacarpophalangeal joint). The client should be able to comfortably reach the display monitor including areas on the side. If the client can not reach comfortably, adjust the height of the display monitor or the client's distance from the screen. During dynamic balance training, the client is not required to stand close to the display monitor/portable stand as dynamic balance exercises do not require touch screen input. To avoid trip hazards/injury, it is recommended that the client stands or sits at least two feet away from the portable stand for dynamic balance activities.

Before starting a therapy program:

1. From the Home Screen, press the Start Therapy Button. See Figure 6-1.



Figure 6-1: Home Screen

2. From the Client List Screen, select the desired client by pressing the client's name. See Figure 6-2.
3. Position the client in front of the touchscreen display monitor with the center of the display at eye level to the client.
4. If necessary, adjust the height of the touchscreen display monitor.
5. If necessary, adjust the tilt of the touchscreen display monitor.
6. Instruct the client that when interacting with the software, it is important to press the center of the target stimulus in order for the software to count the response as correct.
7. From the Discipline Menu, select one of the Discipline Menu Buttons. See Figure 6-3.

The next several chapters in this guide discuss in detail each of the Parameters and Therapy Programs found in the BITS software.

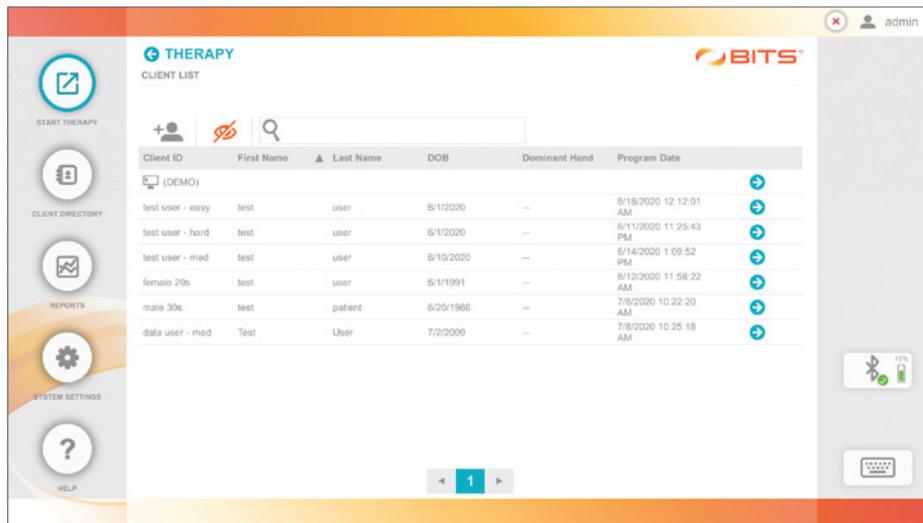


Figure 6-2: Client List Screen

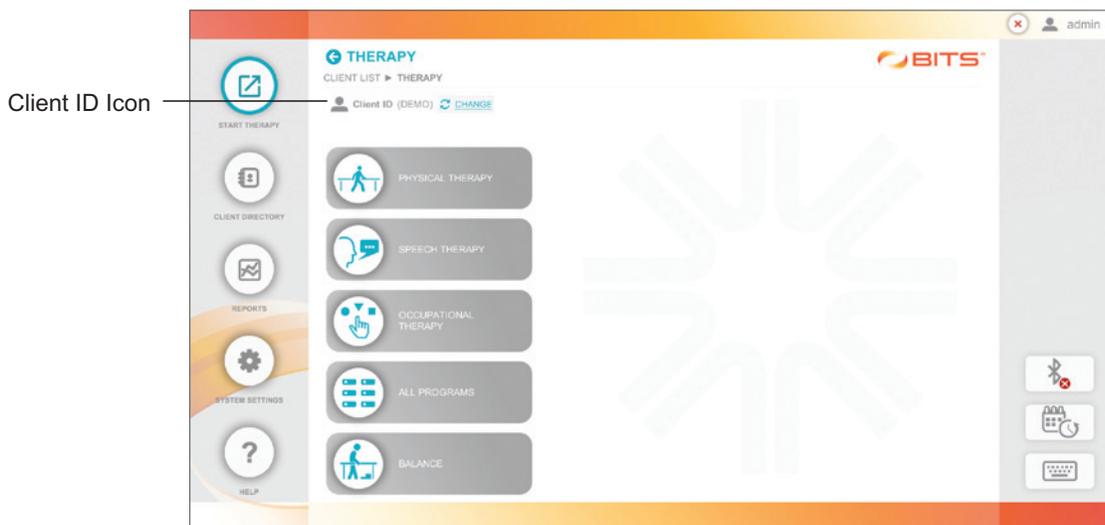


Figure 6-3: Discipline Menu Screen

Once a client has been selected, their Client ID will appear in the top portion of the display screen next to the Client ID Icon CLIENT ID: . See Figure 6-3. If needed, the user can change client by selecting the Change Icon CHANGE . This will open the Client List Screen, refer to Chapter 5 in this guide for more information.

Preparing the Client for Balance Therapy

Wearing the Motion Sensor

Wrap the chest Strap with the Sensor attached around the client's chest, ensuring a snug but comfortable fit. Sensor can be placed around the chest in a front or back orientation with the buttons facing down. See Figure 6-4. The Sensor can also be attached to the single-use Adhesive Patch provided. Once Sensor has been attached to the patch, simply peel the clear plastic from the back and stick the patch with Sensor on the client's clothing. Patch can be placed on the front or back.

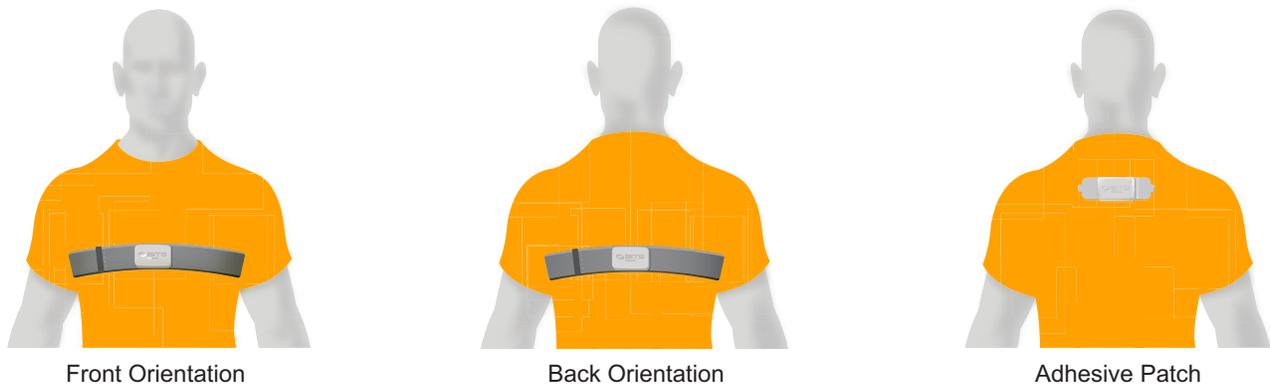


Figure 6-4: Sensor Placement – Chest Strap and Adhesive Patch

Setting up the Wearable Sensor

To calibrate the wearable Sensor, instruct the client to stand or sit in the position in which the client will rehabilitate in front of the screen and follow the steps below:

1. From the Home Screen, press the Start Therapy Button. See Figure 6-1.
2. Press the Visibility Icon, see Figure 5-5, to make the Client List visible on the display screen.
3. Select the correct client from the list. See Figure 6-2
4. Select the Balance Therapy Category button (if a Sensor is not connected/paired, refer to Sensor Device Settings section in Chapter 4).
5. Select 'Wearable' from the Type options, then select Placement (Front or Back) and then press 'Calibrate'. Ensure client is in the desired stance for rehabilitation. See Figure 6-5.
6. Select the Wearable Balance Therapy Difficulty level for the client depending on the client's functional level. To change the difficulty level, go to the client's profile in Client Directory. Refer to Chapter 5 for detailed steps. See Figure 6-6.

Wearable Difficulty		
Difficulty Level	Static Balance	Dynamic Balance
Easy	Requires a significant amount of movement by client to move outside of the Balance Point making it easier to eliminate stimuli while maintaining balance in the Balance Point.	Requires a minimal amount of movement by client to reach target stimuli.
Medium	Requires a medium amount of movement by client to move outside of the Balance Point.	Requires a medium amount of movement by client to reach target stimuli.
Hard	Requires a minimal amount of movement by client to move outside of the Balance Point making it difficult to eliminate stimuli while maintaining balance in the Balance Point.	Requires a significant amount of movement by client to reach target stimuli.

- User will then be prompted to perform an assessment for the client. This is optional, user can select Yes, which will then open the Assessment Therapy Category. If user does not want to perform an assessment, then click Cancel.

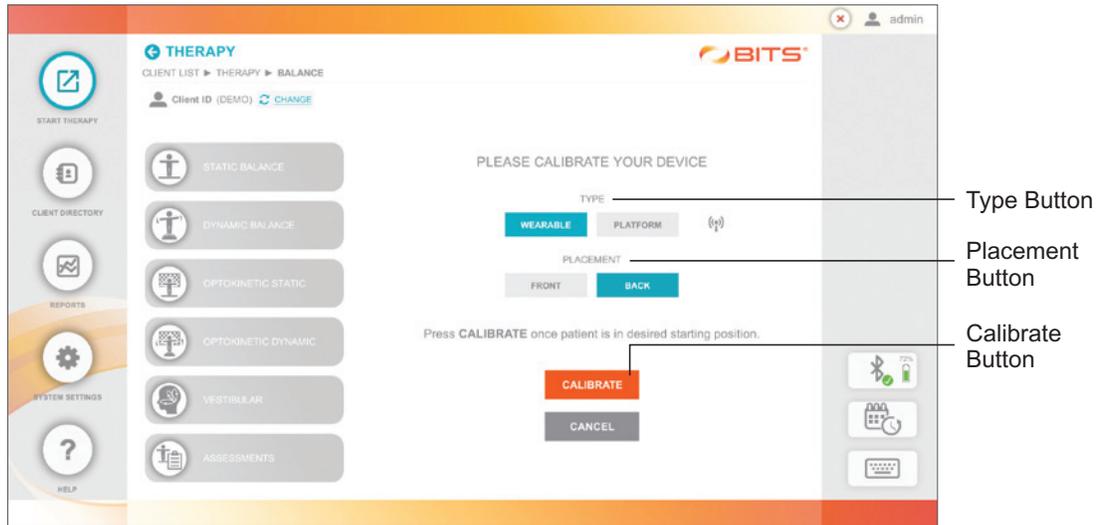


Figure 6-5: Sensor Calibration for Wearable

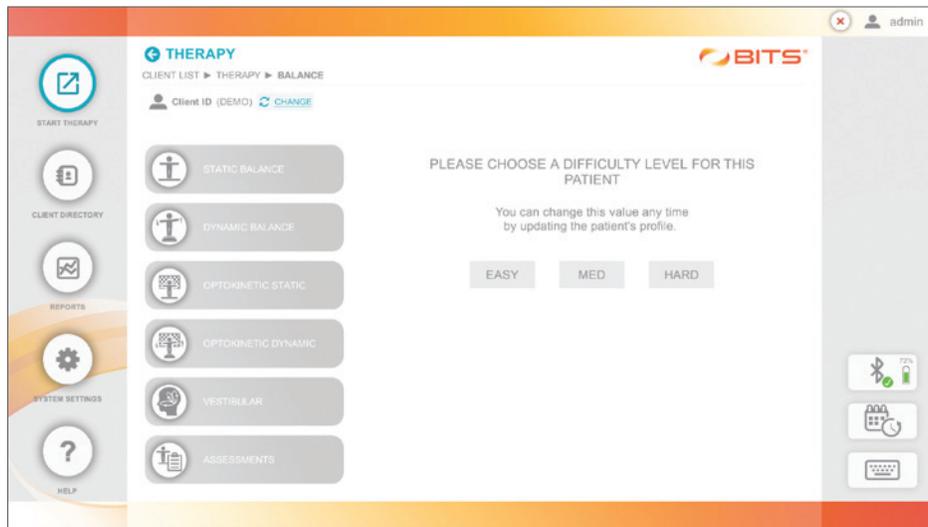


Figure 6-6: Select Difficulty Level

Setting up the Platform Sensor

To calibrate the Sensor on the Platform, position the Platform in front of the display screen in the desired location.

1. Attach the Sensor to the Platform with the Sensor buttons facing the screen. See Figure 6-7.

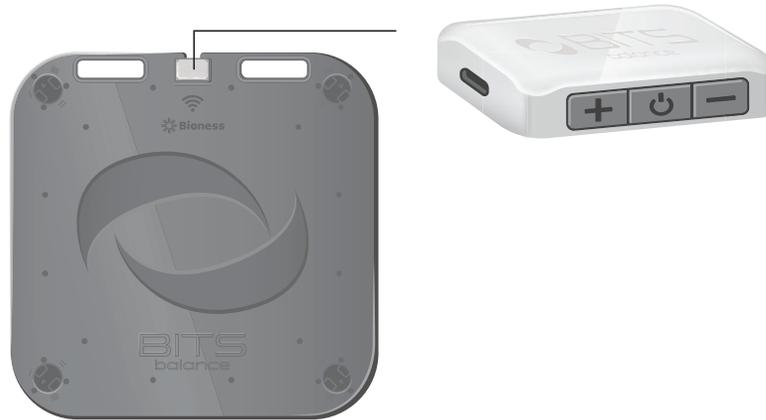


Figure 6-7: Sensor Placement - Platform

2. Ensure Platform is unloaded and on level ground.
3. From the Home Screen, press the Start Therapy Button. See Figure 6-1.
4. Press the Visibility Icon, see Figure 5-5, to make the client list visible on the display screen.
5. Select the correct client from the list. See Figure 6-2.
6. Select the Balance Therapy Category button (if a Sensor is not connected/paired, refer to Sensor Device Settings section in Chapter 4.)
7. Select 'Platform' from the Type options, then select the appropriate tilt level. See Figure 6-8.

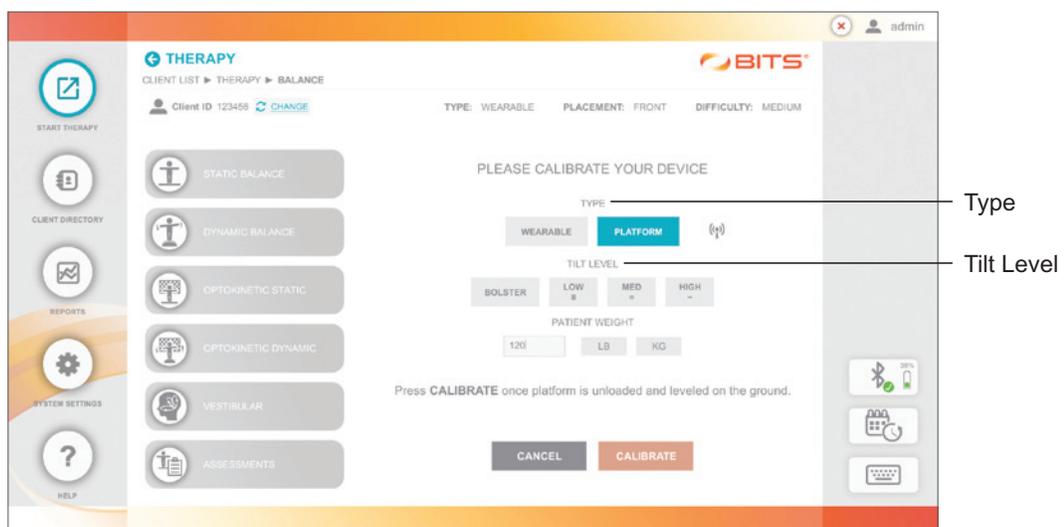


Figure 6-8: Sensor Calibration for Platform

7a: If Tilt Level Low, Medium or High is selected, ensure the tilt level corresponds to the position of the feet on the Platform

7b: Depending on the tilt selected, user can select Platform Balance Therapy Difficulty Level.

Platform Difficulty			
Difficulty Level	Tilt Levels		
	Low: Maximum Feet Extension ≡	Medium: Medium Feet Extension =	High: No Feet Extension —
Easy	X	X	X
Medium		X	X
Hard			X

Adjusting Platform Tilt

The Platform feet can be manually adjusted by user to increase or decrease the level of tilt available on the Platform.

To extend the feet, place fingers around the adjustment knob, pull up and rotate the knob to the right until the knob is placed into the next opening. Repeat this step to fully extend the feet. With feet fully extended, the Platform will allow the least amount of tilt. See Figure 6-9.

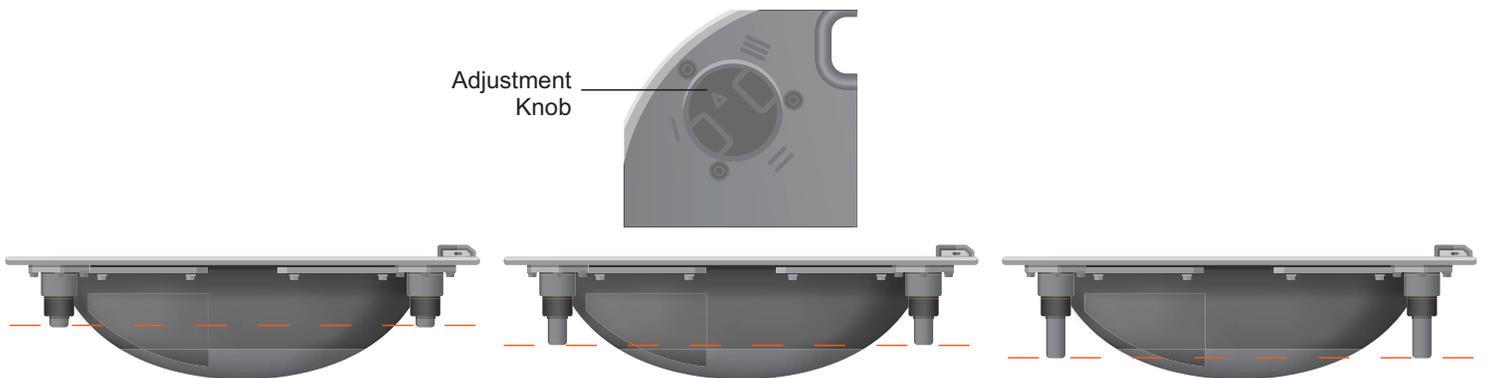


Figure 6-9: Adjust Platform Tilt

To retract the feet, place fingers around the adjustment knob, pull up and rotate the knob to the left until the knob is placed into the next opening. Repeat this step to fully retract the feet. With feet fully retracted, the Platform will allow the maximum amount of tilt.

To stabilize the Platform when client is stepping on:

1. Place Stabilizer Block(s) under the Balance Platform in preferred location between the Platform feet.
2. Assist patient in stepping on the Platform.
3. Once client is stabilized on the Platform, remove the stabilizing block(s).

Parameter Screen

The Parameter Screen is the first screen that appears after a Therapy Program has been selected. The therapy program parameters control how each program will display content and how the client will interact with the active program. The Parameter Screen contains the available parameter settings for each therapy program.

The Parameter Screen is divided into three tabs: Stimuli Tab, Display Tab and Balance Tab. The Balance Tab is only available in the Balance Therapy Category. The Program Preview window displays how the selected stimuli will appear on the display screen. See Figure 6-10. Refer to Chapter 7 for definitions of individual parameters. Each Parameter Screen includes an information icon which provides quick information about the therapy program.

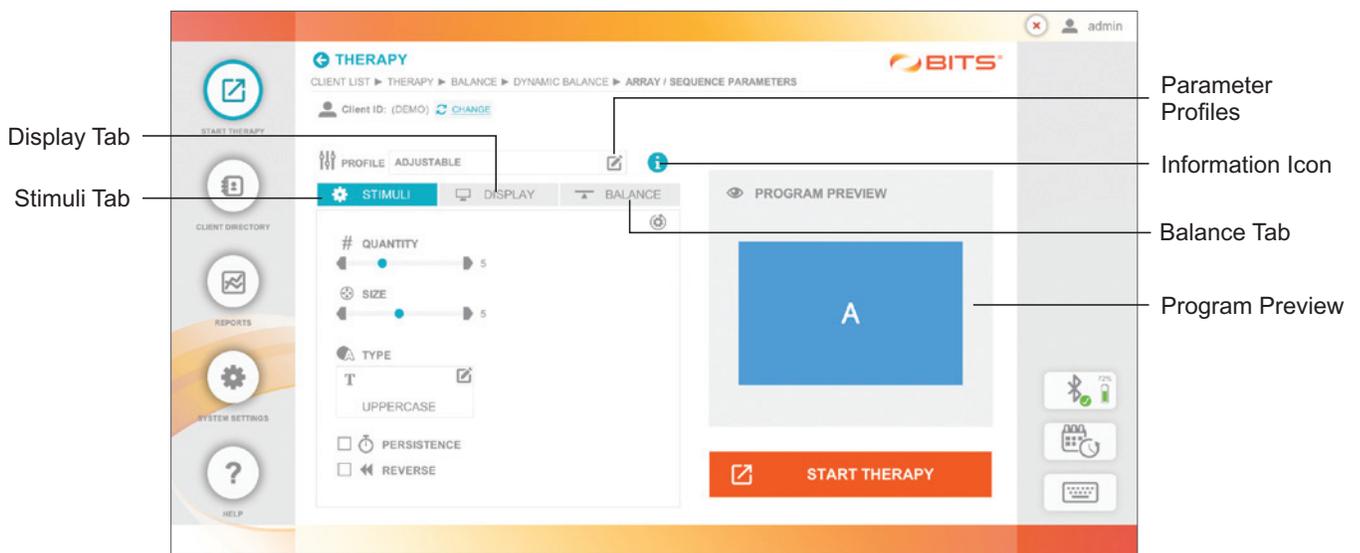


Figure 6-10: Example of Parameter Screen

Parameter Profile

Program Parameters can be adjusted and customized to suit the unique needs of each client; however, using a predefined Parameter Profile is a quick way to start using the program. Parameter Profiles include parameter sets with increasing levels of difficulty: Level 1 (easy), Level 2 (medium), and Level 3 (hard). In the Adjustable Parameter Profile, parameter settings are unlocked  allowing the user to adjust all parameters. In Level 1, Level 2, and Level 3 Parameter Profiles parameter settings are locked  and cannot be adjusted within that Parameter Profile. To unlock the parameter settings in Level 1, Level 2, or Level 3, press the Lock Icon. This will change the Parameter Profile to Adjustable and allow the user to adjust the parameters.

The first time a Therapy Program is opened with a new client, it will open the Parameter Screen with default adjustable parameter settings. If a therapy program has been run previously with a client, the Parameter Screen will always open with the last used Adjustable Parameter Profile settings.

To adjust the Parameter Profile:

1. Press the Profile Icon Box  PROFILE ADJUSTABLE 
2. The Parameter Profile pop-up window will appear, see Figure 6-11.
3. Select the desired Parameter Profile and then press the Done Button to close the window. See Figure 6-11.

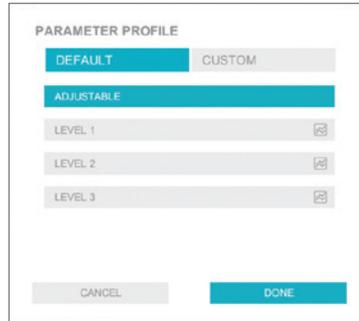


Figure 6-11: Parameter Profile Pop-up Window

Custom Parameter Profiles

A Custom Parameter Profile can be created to facilitate the use of the Graphing and Baseline features.

To create a Custom Parameter Profile:

1. Press the Profile Icon Box  PROFILE ADJUSTABLE 
2. The Parameter Profile Pop-up Window will appear. Press the Custom Tab. See Figure 6-12.

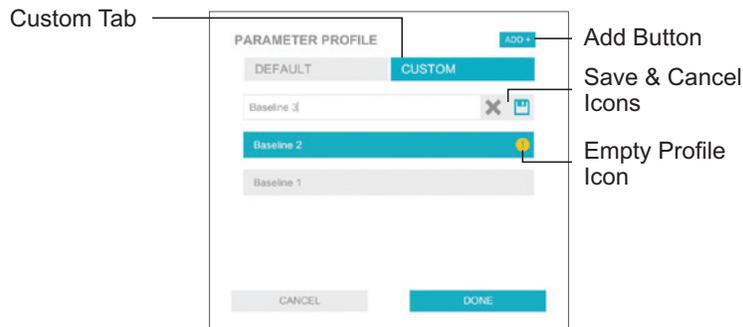


Figure 6-12: Custom Parameter Profile Pop-up Window

3. Press the Add button. 
4. A text field will appear. Enter the desired name of the Custom Parameter Profile.
5. Press the Save Icon. 
6. Press the Done Button. 

Note: A Custom Parameter Profile will not contain parameters until after it has been used to run a therapy program. The Empty Profile Icon  will indicate a Custom Profile without parameters.

In-Therapy Side Menu and In-Therapy Parameters

Some of the therapy programs found in the BITS software have additional parameter settings that are accessed directly in the therapy program after the program has been launched. These parameters are found in the In-Therapy Side Menu and are referred to as In-Therapy Parameters. Refer to Chapter 7 for detailed information on all Parameters.

Accessing the In-Therapy Side Menu

To access the In-Therapy Side Menu:

1. In an active therapy program screen, press the small starburst icon  located at the bottom left corner of the screen. See Figure 6-13.
2. The In-Therapy Side Menu will open, see Figure 6-14.

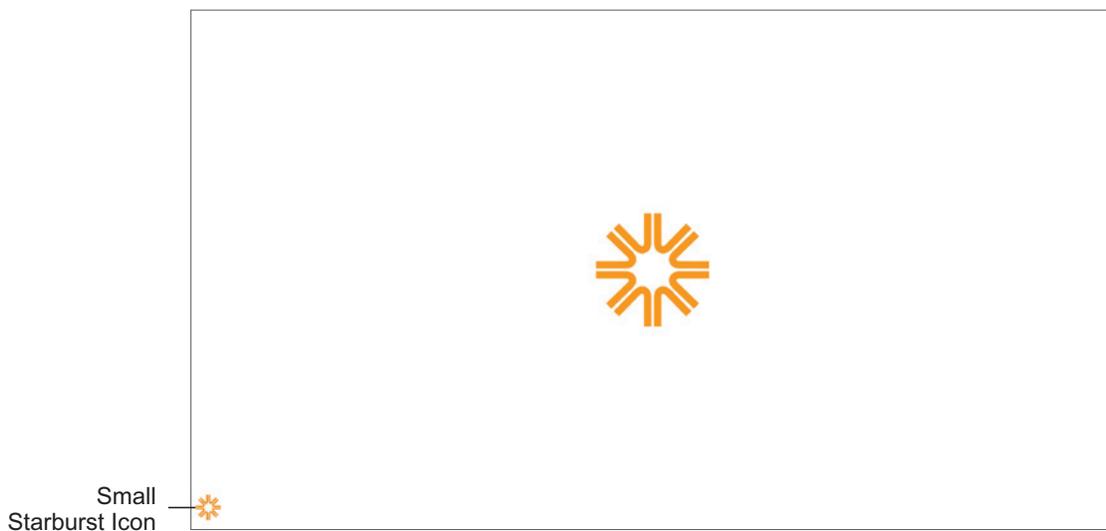


Figure 6-13: Small Starburst Icon

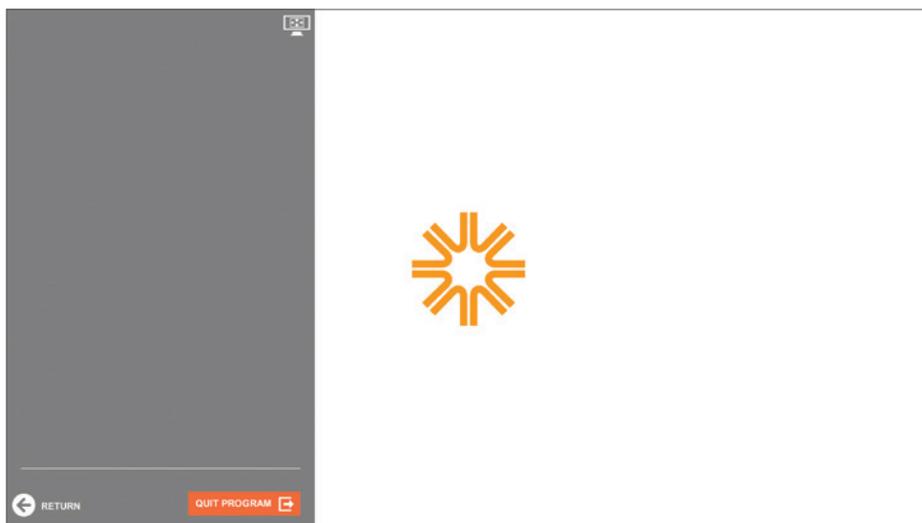


Figure 6-14: In-Therapy Side Menu

In-Therapy Screen Scale Feature



The Screen Scale Feature adjusts the size of the visual field of the therapy program. This feature is available in most BITS Therapy Programs to accommodate each client's physical abilities.

Press the gray arrows or drag the blue indicator to change the value.

Note: The Screen Scale Feature is not available in all programs. .

To adjust the In-Therapy Screen Scale Parameter:

1. In an active therapy program screen press the small starburst icon  located at the bottom left corner of the screen. See Figure 6-13.
2. The In-Therapy Side Menu will open, see Figure 6-14. Press the Screen Scale Icon located at the top right corner of the In-Therapy Side Menu. The Screen Scale Feature controls will be displayed in the top right corner of the display screen. See Figure 6-15.

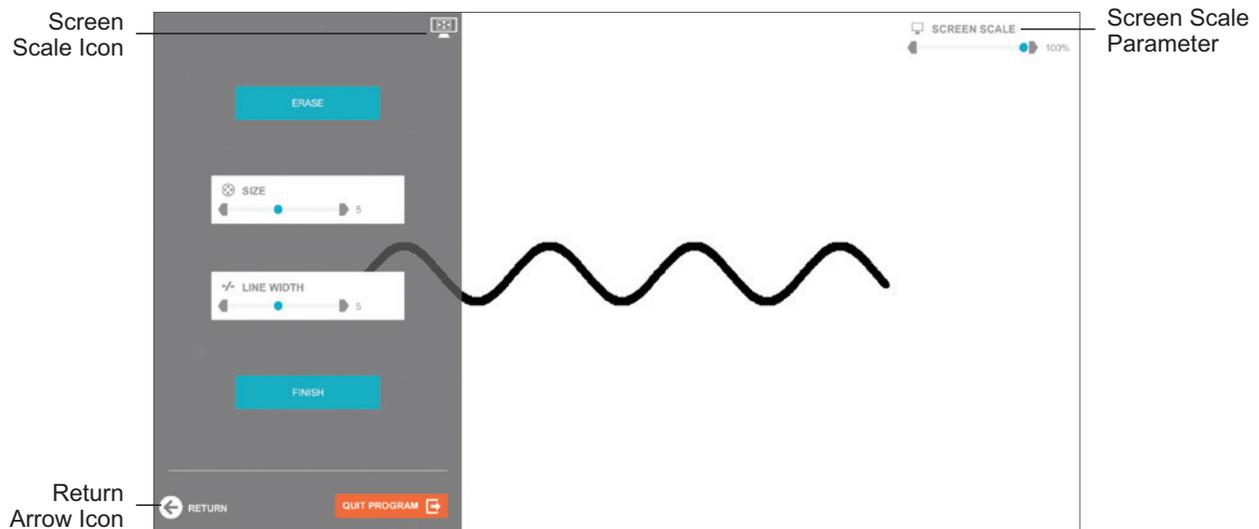


Figure 6-15: In-Therapy Side Menu and Screen Scale Feature Controls

3. Make the display screen adjustments using the Screen Scale Feature Controls. Press the Return Arrow Icon to return to the launched therapy program. See Figure 6-15.

Results Screen

The Results Screen will appear at the end of each therapy program session. The Results Screen captures performance results from the therapy program session and displays this information as both a summary and detailed report. This information is stored to the client's file in the Reports Module and can be accessed at a later time.

For most therapy programs the Results Screen has five tabs, see Figure 6-16. Refer to Chapter 18 in this guide for details on Results.

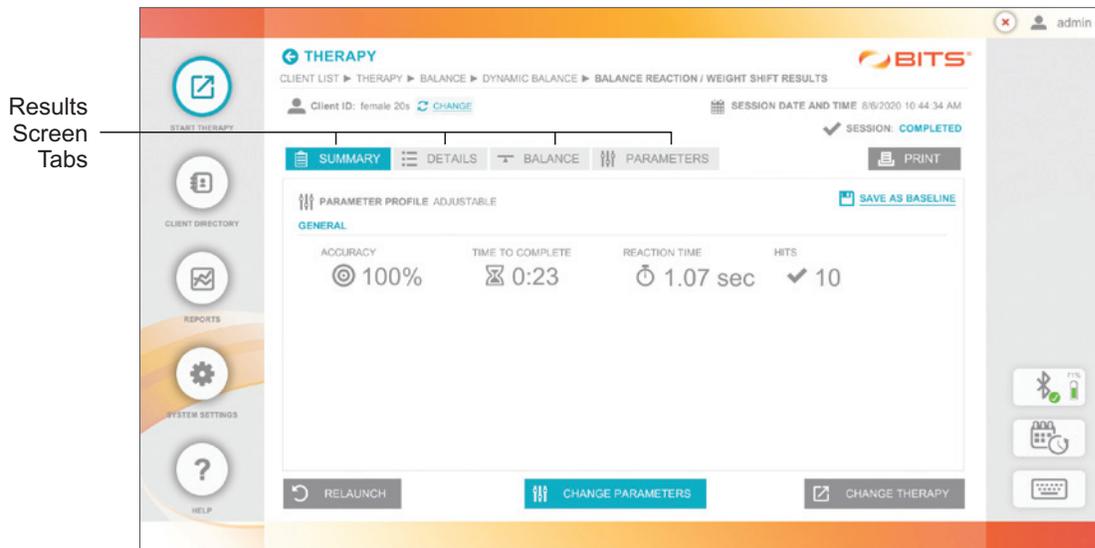


Figure 6-16: Example of a Results Screen

Screen Navigation

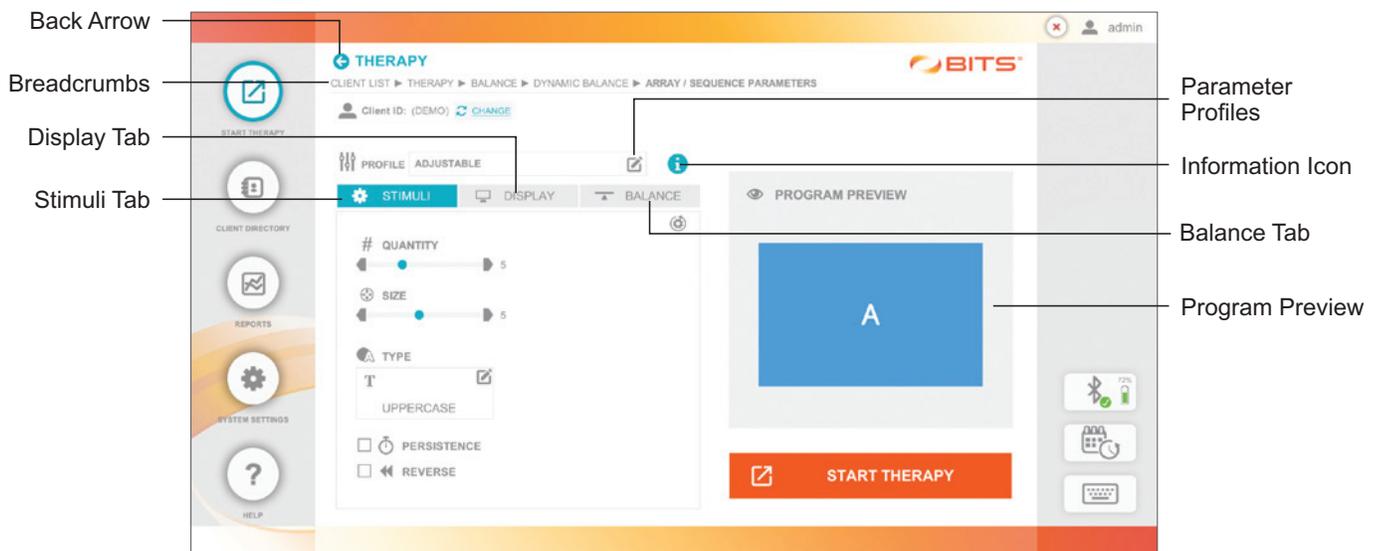
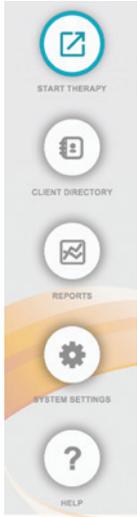


Figure 6-17: Sample of Screen Navigation



Navigation Bar

The five menu options that appear on the BITS software application Home Screen are also found as icon buttons on the Navigation Bar. The Navigation Bar appears on the left side of the screen throughout the BITS software application.

The Navigation Bar is used to navigate to the following BITS modules:

- Start Therapy
- Client Directory
- Reports
- System Settings
- Help

Back Arrow

When pressed, the Back Arrow Icon returns the user to the previous screen. See Figure 6-17.

Note: When the user presses the Back Arrow Icon from the therapy program Results Screen, the user will be taken back to the Parameter Screen not back to the therapy program.

Breadcrumbs

CLIENT LIST ► DISCIPLINE ► ALL PROGRAMS ► VISUAL SCANNING ► SINGLE TARGET / USER PACED RESULTS

The Breadcrumbs located in the top portion of the screen is a navigational aid to help users keep track of their location in the software and the path to get to the current screen. To get back to a previous screen quickly, touch the desired selection within the Breadcrumb. See Figure 6-17.



Keyboard Icon

The Keyboard Icon located in the bottom right section of the screen (see Figure 6-17) is used to open the on-screen keyboard. Note: The on-screen keyboard and physical keyboard provided with the BITS System can be used interchangeably.



Recent Sessions Icon

The Recent Sessions Icon located at the bottom right of the screen (see Figure 6-17) is used to open the Recent Sessions list. This list displays the past ten most recently run sessions for the Active Client.



Bluetooth Icon

The Bluetooth Icon located in the bottom right section of the screen (see Figure 6-17) is used to open Sensor Device Settings. This displays the paired Sensors and the active Sensor. It is also used to disconnect a Sensor, delete a Sensor, pair a new Sensor (wearable or Platform) and rename a Sensor. This icon only appears if Balance Module has been activated.

BITS Parameters

Parameters can be adjusted, or in some cases, enabled or disabled depending on the program and profile settings chosen. This Chapter defines all parameters available in BITS.

Stimuli Parameters

#Flashes



The Flashes Parameter controls the quantity of 'E' optotypes that are flashed and presented on screen in the Ocular Motor Program.

Active Chart



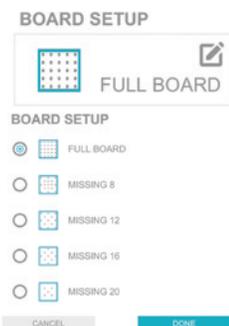
The Active Chart Parameter controls whether user interaction is enabled or disabled during the therapy session. This parameter is only found in the Chart Sequence Program.

Adjustable



The Adjustable Parameter allows the location of Central Fixation stimulus to be moved on the display screen. Central Fixation must be enabled to make this parameter visible and selectable in the therapy programs. The Reaction Time Program is an exception to this rule.

Board Setup



The Board Setup Parameter controls the type of matrix that will appear on the Geoboard during the therapy session.

To change the type of matrix, press the Board Setup Parameter Icon. A pop up window will open displaying the options. Press the radio button next to the desired option to enable it. Press the Done Button to close the window.

Buffer



The Buffer Parameter controls the buffer area around the pattern being traced. The size of the buffer ranges from 0 to 10. The 0 setting allows for no amount of deviation off the line being traced before the error sound emits. Press the gray arrows or drag the blue indicator to change the value. This parameter is only found in the Trace Program.

Duration



The Duration Parameter controls the length of time the therapy program will run. Press the gray arrows or drag the blue indicator to change the value.

Note: if Duration is enabled , the Quantity Parameter is deactivated .

Center Active



The Center Active Parameter controls the presentation of the letter "E" that is located in center of the chart on the display screen. When the setting is off, the center letter "E" will not change orientation. When the setting is turned on the center letter "E" will change in orientation. The timing of the change is controlled by the Center Active Delay Parameter. This parameter is intended to provide a distraction during the therapy session. This parameter is only available in the Sequence Program.

Center Active Delay



The Center Active Delay Parameter controls the length of time between changes to the letter displayed in the center of the chart. Press the gray arrows or drag the blue indicator to change the value. In the Chart Sequence Program this parameter is only accessible when the Center Active Delay Parameter is turned on.

Central Fixation



The Central Fixation Parameter activates a divided attention exercise in which a Central Fixation Point is presented in the center of the screen. The letter in the center of the Central Fixation Point will change randomly during the therapy session. When the Central Fixation Parameter is active, the clinician should instruct the client to attend to the Central Fixation Point by hitting it before hitting another stimulus when the letter changes. To turn the Central Fixation Parameter off, press the blue check mark box. The box will turn white, and the check mark will disappear.

Central Flashing



The Central Flashing Parameter works with the Central Fixation Parameter. When turned on, the Central Fixation Point flashes every time it changes. Central Fixation must be enabled to make this parameter visible and selectable. To turn the Central Flashing Parameter off, press the blue checkmark box. The box will turn white, and the checkmark will disappear.

Chart Mode



The Chart Mode Parameter controls the number of charts and how the charts are presented on the display screen. This parameter is only found in the Multiple Program. The Chart Mode Parameter options are: Vertical, Horizontal, 4 Charts, and Saccadic Strips.

To select an option, press the Chart Mode Parameter Icon. A pop up window will open displaying the options. Press the radio button  next to the desired option to enable it. Press the Done Button to close the window.

Chart Type



The Chart Type Parameter controls how the chart will be formatted on the display screen. The Chart Type Parameter options are: 10x10, 5x5 Spaced, 5x5. This parameter is not found in the Puzzle Program.

To select an option, press the Chart Type Parameter Icon. A pop up window will open displaying the options. Press the radio button  next to the desired option to enable it. Press the Done Button to close the window.

Circled



For Chart Programs, the Circled Parameter controls the appearance of circles around each stimuli displayed in the chart.

Computer Guided



The Computer Guided Parameter allows the system to randomly generate where the next target stimuli will appear in the Dynamic Postural Sway Program.

Difficulty



The Difficulty Parameter controls the allowed response time to the stimulus. There are three levels of difficulty in Rhythm program: 1, 2, and 3. Press the gray arrows or drag the blue indicator to change the value.

Level 1: This is the beginner level. The client has to respond to stimuli within 3/10 of a second, from the stimulus presentation, in order for the response to be recorded as accurate.

Level 2: This is the intermediate level. The client has to respond to stimuli within 2/10 of a second, from the stimulus presentation, in order for the response to be recorded as accurate.

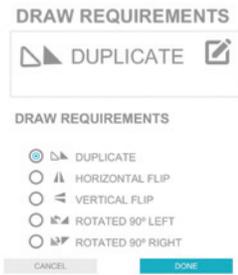
Level 3: This is the advanced level. The client has to respond to stimuli within 1/10 of a second, from the stimulus presentation, in order for the response to be recorded as accurate.

Distractors



The Distractors Parameter adds up to three extra stimulus appear to create a distraction from target stimulus. It is only available in the Ocular Motor Program.

Draw Requirement



The Draw Requirement Parameter controls how the client will need to draw the stimulus pattern. The Draw Requirements Parameter options are: Duplicate, Horizontal Flip, Vertical Flip, Rotated 90° Left, and Rotated 90° Right.

To change this parameter, press the Draw Requirements Parameter Icon. A pop up window will open displaying the options. Press the radio button  next to the desired option to enable it. Press the Done Button to close the window.

Duration



The Duration Parameter controls the length of time the therapy program will run. Press the gray arrows or drag the blue indicator to change the value.

Note: If enabled, the radio button will appear as . If deactivated, the radio button will appear as .

Flash Time



The Flash Time Parameter controls the length of time the target stimuli will appear on the display screen before disappearing. Press the gray arrows or drag the blue indicator to change the value.

Frequency



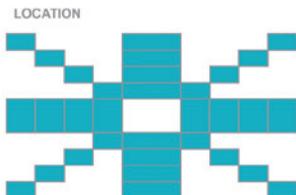
The Frequency Parameter adjusts the rate at which the Central Fixation Point changes. The options for this parameter are Low, Medium, and High.

Line Width



The Line Width Parameter controls the width of the line displayed by the system on the display screen during the therapy session. Press the gray arrows or drag the blue indicator to change the value. This parameter is not found in the Symmetry Program.

Location



The Location Parameter allows the user to choose the areas where target stimuli will appear in the Dynamic Postural Sway Program. When an area is enabled, it appears blue. Press on an area to deselect it, the area will change to white. This parameter is only available when Computer Guided Parameter is enabled.

Memory



The Memory Parameter determines whether the Stimulus Pattern will persist or flash for a period of time. When it is inactive, the target stimuli sequence will remain on the display screen. To activate the Memory Parameter press the white box. The box will turn blue with a checkmark and the Flash Time Parameter will appear.

Mode

MODE



MODE

- INTERACTIVE
- GUIDED
- INDEPENDENT

CANCEL

DONE

The Mode Parameter controls the level of activity that the client will experience while performing the therapy program. The Mode Parameter options are Interactive, Guided, and Independent. To change the setting, press the Mode Parameter Icon. A pop up window will open displaying the options. Press the radio button  next to the desired option to enable it. Press the Done Button to close the window.

Interactive

Interactive Mode is the most active option, and it is the default setting for the Mode Parameter. Interactive Mode allows the client to select a the target that they are following to provide visual and auditory feedback. To turn the user Interactive Parameter off press the blue check mark box. The box will turn white and the check mark will disappear.

Guided

Guided Mode presents one circular target stimulus among all of the other square stimuli. The client should be instructed to follow the circular stimulus as it moves into the neglected hemisphere.

Independent

Independent Mode is the most passive option. The client should be instructed to choose one stimulus and simply follow it with their eyes as it moves from one side of the screen to the other.

↔ MOVEMENT



↔ MOVEMENT

- RIGHT TO LEFT
- LEFT TO RIGHT

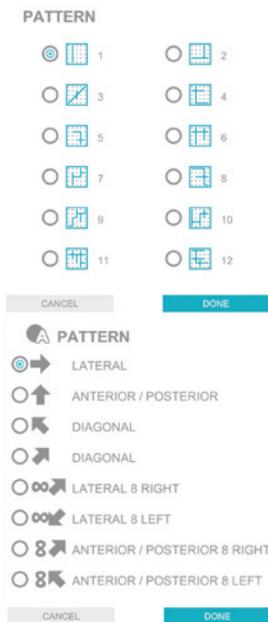
CANCEL

DONE

Movement

The Movement Parameter controls the direction the stimuli move during the therapy session. The Movement Parameter options are Left to Right and Right to Left. For Chart Motion Program, the Movement Parameter controls how the chart will move on the display screen. Options include: Up/Down, Left/Right, and Rotations. To change the setting, press the Movement Parameter Icon. A pop up window will open displaying the options. Press the radio button  next to the desired option to enable it. Press the Done Button to close the window.

Pattern



The Pattern Parameter controls the appearance of the stimulus pattern displayed on the Geoboard. For the Pursuit Pattern Programs, it controls the path of movement of the target stimuli.

To change the stimulus pattern, press the Pattern Parameter Icon. A pop up window will open displaying the options. Press the radio button  next to the desired option to enable it. Press the Done Button to close the window.

Pen Width



The Pen Width Parameter controls the thickness of the lines drawn by the user on the display screen. Press the gray arrows or drag the blue indicator to change the value.

Persist Prompt



The Persist Prompt Parameter controls whether the row and column coordinates displayed visually during the Puzzle Program will persist until the letter is touched or whether the coordinates will be flashed for a limited amount of time. This parameter is only found in the Puzzle Program.

Persistence



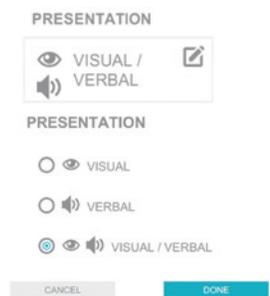
The Persistence Parameter controls whether the target stimulus will disappear from the screen when touched or remain visible on the display screen even after the target has been hit. Selecting this parameter will provide a consistent level of difficulty throughout the entire duration of the therapy program.

Place Guide



For Chart Programs, the Place Guide Parameter controls the appearance of row and column labels along the edges of the chart. When this setting is enabled, each column will be assigned a letter (e.g. A-J), and each row will be assigned a number (e.g. 1-10). This parameter is not found in the Puzzle Program.

Presentation



The Presentation Parameter determines how the target is presented during the therapy session. The Presentation Parameter options are: Visual, Verbal and Visual/Verbal

To change this setting, press the Presentation Parameter Icon. The Presentation pop up window will open displaying the options. Press the radio button  next to the desired option to enable it. Press the Done Button to close the window.

Quantity



The Quantity Parameter controls the amount of target stimuli displayed during the therapy session. Press the gray arrows or drag the blue indicator to change the value.

Note: If enabled, the radio button will appear as . If deactivated, the radio button will appear as .

Random



In the Smooth Pursuit Program, the Random Parameter sets the Quantity, Size, Speed, and Colors Parameters to a random value which change every 1-3 minutes.

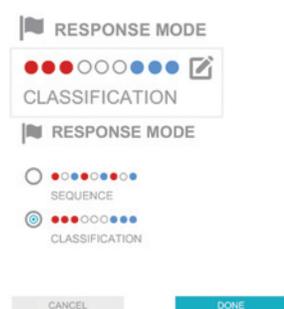
When the Random Parameter is not selected, the Quantity, Size, and Speed Parameters are displayed in the Stimuli Tab. In the Trail Making Assessment, the Random Parameter controls the orientation of the stimuli. It randomizes the placement of the stimuli in the assessment to reduce the effect of learning error when a client has performed the assessment more than once.

Random Controls



The Random Controls Parameter randomizes the keypad controls in Ocular Motor and Visual Acuity Programs. The controls to select the optotype direction will be presented randomly each time when Random Controls is enabled.

Response Mode



The Response Mode Parameter controls how the client will need to respond to the target stimuli. This parameter is only found in the Rotator Multi Color Program. The Response Mode Parameter options are: Sequence and Classification.

To change the setting, press the Response Mode Parameter Icon. A pop up window will open displaying the options. Press the radio button  next

Reticle Visible



The Reticle Visible Parameter controls whether the reticle will be visible on screen during the therapy session.

Reverse



When selected, the Reverse Parameter changes the direction of the sequence order. For example, letters must be selected in the sequence Z, Y, X, etc.

Rhythm



The Rhythm Parameter controls the speed of the Rhythm during the therapy session. Press the gray arrows or drag the blue indicator to change the value.

Rings Visible



The Rings Visible Parameter controls whether the rings will be displayed on screen during therapy session.

Rotation



The Rotation Parameter controls the direction the rotator will rotate. The Rotation Parameter options are: Counterclockwise (CCW), Clockwise (CW), and alternating from Counterclockwise to Clockwise (CCW/CW).

To change the setting, press the Rotation Parameter Icon. The Rotation pop up window will open displaying the options. Press the radio button  next to the desired option to enable it. Press the Done Button to close the window.

Rotator Speed



The Rotator Speed Parameter controls how fast the rotator will rotate on the display screen. Press the gray arrows or drag the blue indicator to change the value.

Sequence Length



The Sequence Length Parameter controls the maximum number of target stimuli that are presented on the display screen during any given trial in the Memory Programs. Press the gray arrows or drag the blue indicator to change the value.

Sequence Type



In the Memory Program, the Sequence Type Parameter determines how the target stimuli will be presented. The Sequence Type Parameter options are: Increasing, Increasing Random, and Fixed QTY.

To change this setting, press the Sequence Type Parameter Icon. The Sequence Type pop up window will open displaying the options. Press the radio button  next to the desired option to enable it. Press the Done Button to close the window.

When this option is selected, the initial trial will display two stimuli, which must be hit in the correct sequence. If the stimuli are not hit in the correct sequence, the sequence length will be decreased by one on the next trial until the minimum sequence length of 2 is reached. Following each successful trial, the sequence displayed will be increased by one additional stimulus until the maximum sequence length is reached. The item or characters sequence will be identical until the maximum sequence length is reached and the sequence is reset.

Increasing Random: When this option is selected, the sequence length will change as it does when the Increasing Option is selected; however each new trial will be presented with a new item or character sequence.

Fixed QTY: When this option is selected, the Sequence Length Parameter controls the consistent sequence length for each trial. The item or character sequence is random with every trial.

Size



The Size Parameter is used to change the size of the target stimuli. Press the gray arrows or drag the blue indicator to change the value.

Speed



The Speed Parameter controls how fast the target stimuli move from one side of the visual field to the other. Press the gray arrows or drag the blue indicator to change the value.

Starting Size



The Starting Size Parameter controls the starting font size of the 'E' optotype in the Visual Acuity Program.

Target Time



The Target Time Parameter controls the length of the time the target stimulus will remain in one location, before disappearing and reappearing in a new location on the display screen. Press the gray arrows or drag the blue indicator to change the value.

Note: Only the Time Paced Program has this Parameter.

Therapist Guided



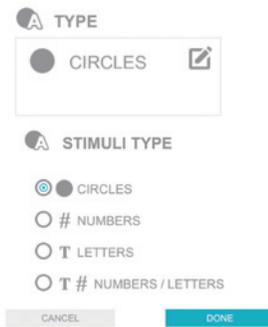
The Therapist Guided Parameter allows the user to choose the target stimuli on screen that the client must move towards using body movement in the anterior, posterior or lateral directions in Dynamic Postural Sway Program.

Trials



The Trial Parameter controls the number of words sequences that will be presented in the Chart Puzzle Program. For the Chart Sequence Program, it controls the number of chart sequences that will be presented. Press the gray arrows or drag the blue indicator to change the value.

Type



The Type Parameter is used to change the type of target stimuli displayed during the therapy session. The Type Parameter options vary by program and can include: Circles, Numbers, Letters, Numbers/Letters, Uppercase Letter, Lowercase Letters, Upper/Lowercase Letters, Images, Words, Shapes, Cardinal, Oblique, Cardinal/Oblique, bdpq, and Numbers/Letters/Arrows.

To change the type of target stimuli displayed, press the Type Parameter Icon. The Stimuli Type pop up window will open displaying the target stimuli display options. Press the radio button next to the desired option to enable it. Press the Done Button to close the window.

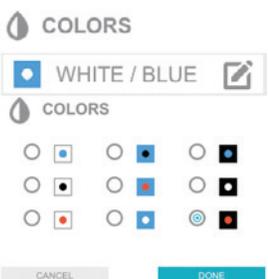
Display Parameters

Background



The Background Parameter controls the color of the background in the therapy program.

Colors



The Colors Parameter is used to change the target stimuli and background color displayed during the therapy program session.

To change this setting, press the Colors Parameter Icon. A pop up window will open displaying the target stimuli and background color options.

Press the radio button next to the desired option to enable it. Press the Done Button to close the window.

Contrast



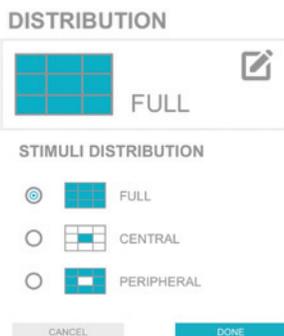
The Contrast Parameter is used to increase or decrease the contrast saturation of the target stimuli. The Contrast Parameter ranges from 5% to 100%. Press the gray arrows or drag the blue indicator to change the value.

Direction



The Direction Parameter controls the direction of movement for the optokinetic visual display. Options include left, right, up, down, random, upper right corner, bottom right corner, upper left corner, bottom left corner and dynamic. Dynamic option activates the system to require movement of the optokinetic screen to be opposite to the movement of the Sensor. To change the setting, press the Direction Parameter Icon. The Direction pop up window will open displaying the direction options. Press the radio button  next to the desired option to enable it. Press the Done Button to close the window.

Distribution



The Distribution Parameter allows the user to exclude the target stimuli from appearing in specific locations within the visual field. The Distribution Parameter options are: Full, Central, Peripheral. The default setting is Full. When the Central option is selected, target stimuli only appear in the center of the visual field excluding the periphery. Similarly, when the Peripheral option is selected, stimuli only appear in the periphery of the visual field excluding the center.

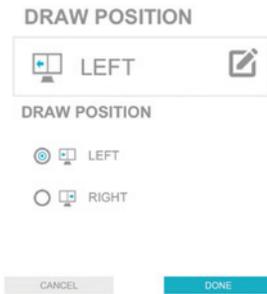
To change the setting, press the Distribution Parameter Icon. The Stimuli Distribution pop up window will open displaying the distribution options. Press the radio button  next to the desired option to enable it. Press the Done Button to close the window.

DISTRIBUTION



In Dynamic Balance and Optokinetic Dynamic Category the Distribution Parameter options are: All, Inner, Middle or Outer Rings. When the Inner option is selected, target stimuli only appear in the center of the Rings excluding the periphery. Similarly, when the Middle option is selected, stimuli only appear in the second/middle Ring, excluding the Center and Outer Rings. When the Ring is blue, it means stimuli will appear within the selected area. Conversely, when the Ring is white, the stimuli will not appear in that Ring.

Draw Position



The Draw Position Parameter controls which side of the display screen the user will draw the pattern on. The default setting is left.

To change this setting, press the Draw Position Parameter Icon. A pop up window will open displaying Left or Right options. Press the radio button  next to the desired option to enable it. Press the Done Button to close the window.

Grid



When enabled the Grid Parameter places a grid on the display screen during the therapy program session. To turn the Grid Parameter on press the white box. The box will turn blue and a checkmark will appear.

Line Persistence



The Line Persistence Parameter controls the appearance of the center line separating the left and right hand sides of the display screen.

Location

The Location Parameter allows the user to bias the appearance of the target stimuli within an Area or Axis and is related to specific movement in the anterior, posterior and lateral directions. Adjusting the Area or Axis Parameter changes the where the stimuli appear.

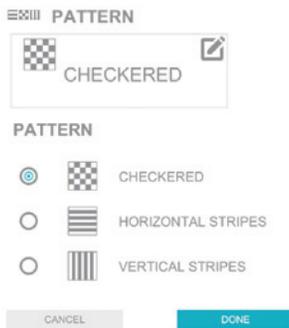


Area Parameter bias the appearance of the target stimuli in a 90° pie slice for anterior, posterior, left and right movements. The target stimuli can be equally displayed for all directions or focused on a specific direction, such as anterior movement. To change the Area parameter, select the slice for the area where stimuli should appear. When the slice is blue, it means stimuli will appear within the selected area. Conversely, when the slice is white, the stimuli will not appear in that area.



Axis Parameter limits the target stimuli to appear only within the limited straight-line axis for anterior, posterior, left and right movements. To adjust stimuli location to Axis only, click the radio button for Axis and then select the appropriate line for anterior, posterior, left, right or all axis.

Pattern



The Pattern Parameter in Optokinetic Static and Optokinetic Dynamic Therapy Category controls the type of pattern available for optokinetic stimulation. Options include checkered, horizontal stripes and vertical stripes. To change the setting, press the Pattern Parameter Icon. The Pattern pop up window will open displaying the pattern options. Press the radio button  appropriate box for next to the desired option to enable it. Press the Done Button to close the window.

Presentation

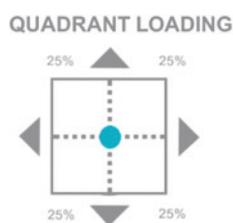


For Visual Pursuit Programs, the Presentation Parameter controls the way that the program is displayed during the therapy session. The Presentation Parameter options are Fullscreen and Square. To change the setting, press the Movement Parameter Icon. A pop up window will open displaying the options. Press the radio button  next to the desired option to enable it. Press the Done Button to close the window.

For Cognitive Programs, the Presentation Parameter determines how the target is presented during the therapy session. The Presentation Parameter options are: Visual, Verbal and Visual/Verbal.

To change this setting, press the Presentation Parameter Icon. The Presentation pop up window will open displaying the options. Press the radio button  next to the desired option to enable it. Press the Done Button to close the window.

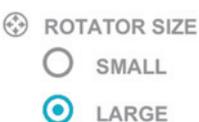
Quadrant Loading



The Quadrant Loading Parameter allows the user to bias the appearance of the target stimuli toward specific quadrants in the visual field. By default, the target stimuli appear within the visual field with equal probability. Adjusting the Quadrant Loading Parameter changes the probability with which the stimuli appear within each quadrant of the visual field. The target stimuli can be equally displayed throughout the display screen or focused in a specific quadrant.

To change the Quadrant Loading Parameter drag the blue indicator to the preferred position or press any of the 4 gray triangles.

Rotator Size



The Rotator Size Parameter controls the size of the rotator that will appear on the display screen. The parameter options are: Small or Large. Press the radio button  next to the desired option to enable it.

Speed



The Speed Parameter controls how fast the optokinetic screen will move. Press the gray arrows or drag the blue indicator to change the value. The Speed Parameter ranges from None (0) to Slow, Medium and Fast.

Balance Parameters

Adjustable Balance Point



The Adjustable Balance Point Parameter allows the location of the Balance Point to be moved on the display screen. Adjustable Balance Point must be enabled to make this parameter visible and selectable in the therapy programs. When enabled, user can touch and slide the Balance Point on screen and move the image anywhere within the Rings before starting the therapy session. Click Place when Balance Point is in desired location.

Adjustable Rings



The Adjustable Rings Parameter allows the location of Rings to be moved on the display screen. Adjustable Rings must be enabled to make this parameter visible and selectable in the therapy programs. When enabled, user can touch and slide the Rings on screen and move the image anywhere on the screen before starting the therapy session. Click Place when Rings are in desired location.

Balance Point Visible



The Balance Point Visible Parameter controls whether the Balance Point will be displayed on screen during therapy session. Balance Point is independent of the Rings.

Flashing



The Flashing Parameter applies to the Balance Point which flashes every time the client is outside the Balance Point between each target hit. In Dynamic Balance Programs, Recovery must be enabled to make this parameter visible and selectable. To turn the Flashing Parameter on, press the white checkmark box. The box will turn blue, and the checkmark will appear.

Left Difficulty



The Left Difficulty Parameter is available only in the Weight Shift Program. Increasing the difficulty increases the threshold in the left direction the client must go above in order to eliminate the target stimuli.

Maintain Balance Point

-  MAINTAIN BALANCE POINT The Maintain Balance Point Parameter activates the system to require the client to maintain balance within the Balance Point in order to touch the target. If the system detects that the client is not within the Balance Point, target will remain visible and the clinician should instruct the client to return to the Balance Point.

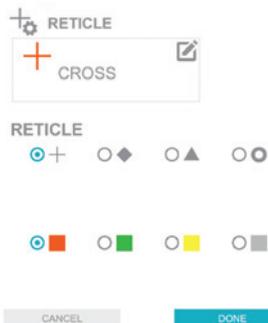
Mode

- MODE
-  STATIC
 -  DYNAMIC
- Static and Dynamic Mode are only available in Weight Shift Program. In static mode, client is required to touch the target stimuli on screen. In Dynamic Mode, the client is required to move body and align reticle on screen with the target stimulus in order to eliminate it.

Recovery

-  RECOVERY The Recovery Parameter activates the system to require the client to return to the Balance Point between each target hit. If the system detects that the client has not returned to the Balance Point, a new target will not appear, and the clinician should instruct the client to return to the Balance Point.

Reticle



- The Reticle Customization Parameter is available only for Balance Therapy Program. Change the color and/or shape for the reticle on screen.

Right Difficulty

-  RIGHT DIFFICULTY  The Right Difficulty Parameter is available only in the Weight Shift Programs. Increasing the difficulty increases the threshold in the right direction the client must go above in order to eliminate the target stimuli.

Rings Visible

-  RINGS VISIBLE The Rings Visible Parameter controls whether the Rings will be displayed on screen during therapy session.

Show Path

-  SHOW PATH The Show Path Parameter is only available for Pattern and Adjustable Pattern Therapy Programs. When enabled, it displays the movement path of the target stimulus.

Therapy Categories



Visual Scanning

The programs in the Visual Scanning Therapy Category are designed to challenge and assess visuomotor coordination, visual attention, peripheral awareness, hand speed, reaction time, and cognitive training. The Visual Scanning Therapy Category is divided into two Therapy Program Groups, Single Target and Complex Array, each with three therapy programs.



Visual Pursuit

The programs in the Visual Pursuit Therapy Category are designed to challenge and assess visuomotor coordination, peripheral awareness, reaction time, and cognitive training. The Visual Pursuit Therapy Category is divided into two Program Groups: Smooth Pursuit and Rotator. The Rotator Program Group is divided into four therapy programs.

Warning: The programs found in the Visual Pursuit Therapy Category utilize moving and rotating graphics that may cause dizziness, vertigo, or nausea in sensitive patients. Individuals experiencing dizziness, vertigo, or nausea while using BITS should discontinue use immediately.



Cognitive

The programs in the Cognitive Therapy Category are designed to challenge and assess visual memory, auditory memory, visual/auditory motor planning, and cognitive training. The Cognitive Therapy Category is divided into two Program Groups: Memory and Rhythm.



Visual Motor

The programs in the Visual Therapy Category are designed to challenge and assess visual-motor integration, visual form perception, and peripheral awareness. The Visual Motor Therapy Category is divided into two Program Groups: Geoboards and Drawing. The Drawing Program Group is divided into four therapy programs.



Charts

The programs in the Charts Therapy Category are designed to challenge and assess visual search skills, accuracy, speed of response, and visual and auditory processing. The Charts Therapy Category is divided into two Program Groups: Letter Charts and Peripheral Letter Charts. The Letter Charts Program Group is divided into four therapy programs. The Peripheral Letter Charts Program Group is divided into two therapy programs.



Static Balance

The programs in the Static Balance Therapy Category are designed to challenge and assess postural stability, postural orientation and trunk control while body is at rest. Balance exercises are combined with cognitive and visuomotor activities. The Static Balance Therapy Category is divided into four Therapy Program Groups: Single Target, Complex Array, Rotator and Cognitive, each with multiple therapy programs. **For all Static Balance Training, user is instructed to maintain balance within the Balance Point while correctly touching the stimuli on screen.**



Dynamic Balance

The programs in the Dynamic Balance Therapy category are designed to challenge and assess weight shifting, postural control and limits of stability while the body is in motion. Challenge dual-tasking capability by combining vision, motor and cognitive activities with balance training. The Dynamic Balance Therapy Category is divided into four Therapy Program Groups: Balance Reaction, Array, Pursuit and Cognitive, each with multiple therapy programs. For all Dynamic Balance Training, users are instructed to visually scan and adjust balance to align the reticle on screen with the target stimulus. The objective is to correctly eliminate stimuli using body movement. With the Recovery parameter enabled, user must return to a neutral position before the next target stimulus is presented.



Optokinetic Static and Optokinetic Dynamic

Optokinetic programs are split into static and dynamic trainings and layer visual distortion with static and dynamic balance therapy exercises. Challenge the smooth and saccadic eye movements, assess image stabilization and track the vestibulo-ocular reflex with optokinetic stimulation. The Therapy Program Groups for Optokinetic Static are the same as Static Balance and for Optokinetic Dynamic, Program Groups are the same as Dynamic Balance.



Warning: The programs found in the Optokinetic Static and Optokinetic Dynamic Therapy Categories utilize moving and rotating graphics that may cause dizziness, vertigo, or nausea in sensitive patients. Individuals experiencing dizziness, vertigo, or nausea while using BITS should discontinue use immediately.



Vestibular

The programs in the Vestibular Therapy Category are designed to challenge and assess gaze stabilization and habituation, with or without head movements. Therapy Programs in Vestibular Program Category include Ocular Motor and Visual Acuity.

 **Warning:** The programs found in the Vestibular Therapy Category utilize moving and rotating graphics that may cause dizziness, vertigo, or nausea in sensitive patients. Individuals experiencing dizziness, vertigo, or nausea while using BITS should discontinue use immediately.



Assessments

The programs in the Assessments Therapy Category are digitized standard tests. Digital assessments allow for quick evaluation and immediate result analysis. Assessments can be launched in full screen or scale down to replicate traditional paper sized tests. There are twelve assessment programs, with seven focusing on balance assessments. Refer to Chapter 17 for details on Assessment Programs.



Single Target/Balance Reaction Programs

The Single Target Program Group is a category within the Visual Scanning, Static Balance and Optokinetic Static Therapy Categories. Balance Reaction Program Group is a category within the Dynamic Balance and Optokinetic Dynamic Therapy Categories.

The programs found in the Single Target/Balance Reaction Program Groups are Reaction Time, User Paced, Time Paced, Static Postural Sway, Dynamic Postural Sway and Weight Shift.

For Programs in the Static Balance and Optokinetic Static Therapy Categories, client is instructed to keep Reticle within the Balance Point and touch the display screen to eliminate the stimuli. For Programs in the Dynamic Balance and Optokinetic Dynamic Therapy Categories, no touchscreen input is required. Client is instructed to move body or platform to align the reticle on screen with the stimuli in order to eliminate it.

Reaction Time Program

In the Reaction Time Program clients keep their hand on the Center Stimulus until a target stimulus appears on the display screen. The client will then move their hand as quickly as possible to touch the target stimulus and return to press and hold the Center Stimulus. This program measures hand speed and latency.

User Paced Program

Stimuli targets appear on the screen one at a time. client is instructed to visually scan the screen and eliminate each stimulus as it appears at their own pace. Each stimulus will remain on the screen until it is eliminated. The objective is to correctly eliminate as many stimuli as possible.

Time Paced Program

Stimuli targets appear on the screen one at a time. client is instructed to visually scan the screen to identify the stimulus and eliminate it before it disappears. The objective is to correctly eliminate as many stimuli as possible before it disappears. A late response is measured to indicate performance that was accurate but too slow.

Static Postural Sway Program

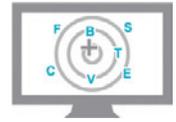
Client is instructed to maintain static balance within the Balance Point for specified duration.

Dynamic Postural Sway Program

Target stimuli appear one at a time, and the client must reach the target stimuli as fast as possible and return to center for the next stimuli to appear.

Weight Shift Program

Target stimuli appear one at a time on left and right side of the screen. In Static Mode, the client is instructed to shift weight past the threshold in order to touch the stimuli on screen. In Dynamic Mode, the client is instructed to shift weight past the threshold and align the reticle on screen with the target stimulus.



Array/Complex Array Programs

The Array/Complex Array Program Group consists of three therapy programs: Sequence, Verbal, and Competition. These programs are designed to challenge a client's ability to visually scan and process a complex environment with multiple stimuli.

The Complex Array Program Group is a category within the Visual Scanning, Static Balance and Optokinetic Static Therapy Categories. Array Program Group is a category within the Dynamic Balance and Optokinetic Dynamic Therapy Categories.

For Programs in the Static Balance and Optokinetic Static Therapy Categories, client is instructed to keep Reticle within the Balance Point and touch the display screen to eliminate the stimuli. For Programs in the Dynamic Balance and Optokinetic Dynamic Therapy Categories, no touchscreen input is required. Client is instructed to move body or platform to align the reticle on screen with the stimuli in order to eliminate it.

Sequence Program

All target stimuli will appear on the display screen at one time and must be eliminated in the correct sequence.

Verbal Program

The target stimuli are announced one at a time via an auditory output. The client must visually identify the matching stimulus on the display and accurately identify and eliminate the correct stimulus.

Competition Program

The Competition Program is a two-person program. The display screen is divided into a left and right side. The same set of target stimuli will appear on each side of the screen, but in different locations. The target stimuli are announced one at a time via an auditory output. The client must visually identify the matching stimulus on the display and accurately touch it before his/her competitor. The first client to correctly locate and touch the stimulus receives a point. The program keeps track of the points and displays them on the Results Screen.



Rotator Programs

The Rotator Program Group consists of four therapy programs: Single Color, Multi Color, Sequence, and Gap Sequence. These programs are designed to challenge the client's ability to visually follow moving objects and plan and coordinate motor movements.

The Rotator Program Category is a category within Visual Scanning, Static Balance and Optokinetic Static Therapy Categories. Single Color Rotator Program is also available in Dynamic Balance and Optokinetic Dynamic Program Category.

For Programs in the Static Balance and Optokinetic Static Therapy Categories, client is instructed to keep Reticle within the Balance Point and touch the display screen to eliminate the stimuli. For Programs in the Dynamic Balance and Optokinetic Dynamic Therapy Categories, no touchscreen input is required. Client is instructed to move body or platform to align the reticle on screen with the stimuli in order to eliminate it.

Single Color

A rotating wheel appears on the display screen with multiple target stimuli in the same color. clients are instructed to visually track the stimuli and accurately eliminate them one by one.

Multi-Color

A rotating wheel appears on the display screen. Multiple target stimuli appear on the rotator. clients are instructed to visually track the stimuli and accurately eliminate them in the correct color sequence. The target stimuli will need to be eliminated either by classification (all red stimulus, then all white, then all blue) or in a repeated sequence (red, white, blue, red, white, blue). The target stimulus will remain visible on the rotator until the client has identified the correct target stimulus using the classification or sequence mode. The mode is controlled by the Response Mode Parameter.

Sequence

A rotating wheel appears on the display screen. Multiple target stimuli appear on the rotator. clients are instructed to visually track the stimuli and accurately eliminate them in the correct sequence. In the Sequence Program, the target stimuli can appear as letters (upper and/or lower case), numbers, or a combination of letters/numbers. The client will need to eliminate the target stimuli in the sequence of the numbers and/or letters. For example, A through Z or 1 through 10.

Gap Sequence

A rotating wheel appears on the display screen. Multiple target stimuli appear on the rotator. clients are instructed to visually track the stimuli and accurately eliminate them in the correct sequence by identifying gaps in the sequence. Target stimuli can appear as letters (upper and/or lower case), numbers, or a combination of letters/numbers. In this program the letters and/or numbers will not always begin with A or 1.



Pursuit/Smooth Pursuit Programs

The Pursuit Program Group consists of four therapy programs: Smooth Pursuit, Pattern and Adjustable Pattern. These programs are designed to challenge the client's ability to visually follow moving objects and plan and coordinate motor movements.

The Smooth Pursuit Program is a category within Visual Pursuit Therapy Category. Pattern, Adjustable Pattern and Rotator Programs are available in Dynamic Balance and Optokinetic Dynamic Therapy Categories.

Smooth Pursuit

Guides clients to follow moving stimuli with their eyes toward the neglected hemispace. Smooth pursuit eye movement training (SPT) uses optokinetic stimulation and may reduce visual, auditory, and haptic neglect. The optional user Interaction Parameters requires physical engagement and provides a measure of success.

Pattern

Guides clients to follow a moving stimulus in a pre-defined pattern. Client is instructed to maintain reticle on the target stimulus through body movement.

Adjustable Pattern

Guides clients to follow a moving stimulus in a custom created pattern. Draw the desired pattern of movement on screen and instruct client to maintain reticle on the target stimulus through body movement.



Cognitive Programs

The Cognitive Program Group consists of two therapy programs: Memory and Rhythm. These programs are designed to challenge and assess visual memory, auditory memory, visual/auditory motor planning, and cognitive training.

The Memory Program is available in Cognitive, Static Balance, Optokinetic Static, Dynamic Balance and Optokinetic Dynamic Therapy Category. The Rhythm Program is available in Cognitive, Static Balance and Optokinetic Static Therapy Category.

For Programs in the Static Balance and Optokinetic Static Therapy Categories, client is instructed to keep Reticle within the Balance Point and touch the display screen to eliminate the stimuli. For Programs in the Dynamic Balance and Optokinetic Dynamic Therapy Categories, no touchscreen input is required. Client is instructed to move body or platform to align the reticle on screen with the stimuli in order to eliminate it.

Memory

Target stimuli are presented verbally and/or visually on the display screen. The client must remember the presented sequence, locate the correct images, letters, numbers, or words and eliminate them according to the correct sequence.

Rhythm

The client is instructed to touch either of the two targets on screen at the selected rhythm in beats per minute.



Geoboards and Drawing Programs

The Geoboards Program Group consists of one therapy program: Geoboards. This program is designed to challenge a client's visual spatial processing skills, memory and motor coordination.

The Drawing Program Group consists of four therapy programs: Symmetry, Trace, Replicate, and Between the Lines. Each program requires the client to interact with the program by drawing various shapes with their finger or a stylus. These programs are designed to challenge and assess visual motor integration, visual form perception, and peripheral awareness.

It is recommended, while using the Draw Menu, to have the client stand in a balanced posture with equal weight on both legs and at the Harmon distance from the display screen. While interacting with the display screen the client will need to use the tip of their finger or a stylus. The client will need to keep their wrist in a straight position so that the heel of their hand does not touch the display screen.

Geoboards and Drawing Program Groups are available in the Visual Motor Therapy Category.

Geoboard

Two geoboards appear on the display screen. One board will display a stimulus pattern on it. The client is instructed to recreate this pattern by drawing on the blank board.

Symmetry Program

The client is instructed to simultaneously draw on both sides of the screen. The clinician will have the client go through various drawing exercises and evaluate the symmetry of the drawings. The goal is for the client to have symmetrical and coordinated bilateral movement on each side of the body. When using the Symmetry Program, it is important that the client does not stop drawing with one hand (or lift the hand from the screen) while continuing to draw with the other hand.

Trace Program

A shape/pattern will appear on the display screen and the client will need to carefully trace directly over the shape/pattern. The program will emit an error sound when the tracing goes off the shape/pattern and will display the traced line.

Replicate Program

A stimulus shape will appear on one side of the screen. The client will need to recreate this shape by drawing with the tip of their finger or a stylus, on the other side of the screen. The goal is to replicate the stimulus shape as closely as possible.

Between the Lines Program

A stimulus shape will appear on one side of the screen. The client will need to recreate this shape by drawing with the tip of their finger or a stylus, on the other side of the screen. The goal is to replicate the stimulus shape as closely as possible.



Charts Programs

The programs in the Charts Therapy Category are designed to challenge and assess visual search skills, accuracy, speed of response, and visual and auditory processing. The Charts Therapy Category is divided into two Program Groups: Letter Charts and Peripheral Letter Charts. The Letter Charts Program Group is divided into four therapy programs. The Peripheral Letter Charts Program Group is divided into two therapy programs.

Letter Charts Program Group

The Letter Charts Program Group consists of four therapy programs: Static, Motion, Multiple, and Puzzle.

Static Program

A chart displays the selected stimuli type on the display screen. The clinician will instruct the client to read and verbally say the selected stimuli from the chart. If the Rhythm Parameter is turned on, the client will need to read the stimuli out loud in time with the auditory beat.

Motion Program

A chart displaying the selected stimuli type will appear and continuously move on the display screen. The clinician will instruct the client to read and verbally say the selected stimuli from the chart. If the Rhythm Parameter is turned on, the client will need to read the stimuli out loud in time with the auditory beat. This program should only be used after the client has demonstrated a high level of competence with the Static Program.

Multiple Program

Multiple charts displaying the selected stimuli type will appear on the display screen. The clinician will instruct the client to read and verbally say the selected stimuli from two or more charts. If the Rhythm parameter is turned on, the client will need to read the stimuli out loud in time with the auditory beat.

Puzzle Program

A letter chart with guides appears on the display screen and the word to guess is represented by a row of dashes on the bottom of the screen. Row and column coordinates are provided. The client is asked to locate the stimulus in the chart and touch the corresponding letter until a word is built. An early Solve Button is available.

Peripheral Letter Charts Program

The Peripheral Letter Charts Program Group consists of two therapy programs: Sequence and Match.

Sequence Program

A chart displaying different size letters will appear on the display screen. The peripheral letter chart will have the letter "E" as the central focus point. The client will need to locate and touch the letters in the chart in alphabetical order.

Match Program

A chart displaying different size letters will appear on the display screen. In the center of the chart, a letter will appear as the central focus point and will change periodically. The client will need to focus on the center letter, locate, and touch the matching letter in the display chart before it changes. If the correct letter is touched the center letter will change to a new letter for the client to match. If the correct letter is not touched within the time set in the Center Active Delay Parameter, then the center letter will change automatically, and the program will count it as an incorrect response.



Vestibular Programs

The Vestibular Therapy Category consists of two therapy programs: Ocular Motor and Visual Acuity. These programs are designed to challenge and assess visual scanning, peripheral awareness, visual memory, visual/auditory motor planning, and cognitive training.

Ocular Motor Program

Client is instructed to follow the correct moving stimuli with the eyes while keeping the head stationary. An optotype “E” will flash for the duration specified in the moving stimuli. Client is required to identify the way the ‘E’ is facing and choose the correct orientation from the keypad control on screen.

Visual Acuity Program

Client is instructed to turn head side to side at the rhythm selected in beats per minute (bpm) while keeping eyes focused on the blue outlined circle on screen. An optotype “E” will flash in the circle and Client is required to identify the way the ‘E’ is facing and choose the correct orientation from the keypad control on screen.

Assessments

The programs in the Assessments Therapy Category are standardized tests. The Assessments Therapy Category is divided into four Program Groups: Trail Making, Bell Cancellation Task, Maze Test, and Visual Scanning and Motor Reaction. The Trail Making Program Group is divided into two therapy programs.

The Balance Assessment Therapy Category is divided into five Program Groups: Berg Balance Scale, Postural Sway, Sensory and Functional Reach. The Postural Sway and Sensory Program Groups are divided into two therapy programs.

Trail Making Program Group

The Trail Making Program Group consists of two therapy programs: Part A and Part B. These programs are designed to provide information about visual search speed, scanning, speed of processing, mental flexibility, as well as executive functioning.

In Part A, the client is instructed to connect a set of 25 numbered circles as fast as possible while maintaining accuracy. The client should draw lines connecting the dots in ascending order (1,2,3, etc.).

In Part B, the client is instructed to connect a set of 24 numbered and lettered circles as fast as possible while still maintaining accuracy. The client should draw lines connecting an alternating pattern of numbers and letters in ascending order (1,A,2,B,3,C, etc.).

The client is instructed to connect the circles as quickly as possible, without lifting their finger or stylus from the display screen. The client is timed as they connect the "trail". If the client makes an error, it is pointed out immediately via auditory feedback and stimuli color change.

The client will need to understand how to complete the assessment before a timed test is recorded. Sample practice exercises are provided for familiarization, for both Parts A and B, and should be used prior to the client taking the actual tests. To access the practice exercises, press the Sample Button in the parameter screen.

Bell Cancellation Task

This program allows for a quantitative and qualitative assessment of visual neglect in the near extra personal space. The user is asked to identify and touch all 35 bell images embedded within 280 distractors (houses, horses, etc.). The client will need to understand how to complete the assessment before a timed test is recorded. A sample practice exercise is provided for familiarization and should be used prior to the client taking the actual test.

The task consists of seven columns presented on the display screen, each containing five bells and 40 distractors. There are a balanced number of bell targets in each of the quadrants. Note: the client should not be informed about the location and number of bells and distractors prior to beginning the therapy session.

Maze Test

This program assesses attention, visuoconstructional ability and executive functions of planning and foresight. Performance is scored according to time to complete the test and total number of errors. Errors are determined by counting the number of times the user entered a dead-end alley or failed to stay within the lines.

Visual Scanning and Motor Reaction

This four-part trial assesses eye hand coordination, peripheral awareness, hand speed, reaction time and endurance. Targets appear on the screen one at a time. users are instructed to visually scan the screen and touch each stimulus as it appears. The objective is to correctly touch as many stimuli as possible, as quickly as possible. This assessment is based on the Single Target User Paced and Time Paced Programs. For more information about these programs, see Chapter 9 of this guide.

The Visual Scanning & Motor Reaction Assessment consists of 4 Levels, and each level is progressively more difficult than the previous levels. The client must pass Level 1 to proceed to Level 2 and so on. The client is expected to complete all four levels in a single therapy session, but rest periods between each level are allowed.

Level 1

- Program: Single Target - User Paced
- Requirements: 50 Hits / 60 sec
- Description: Each stimulus will remain on the screen until it is touched.

Level 2

- Program: Single Target - Time Paced
- Requirements: 40 Hits / 60 sec
- Description: Each stimulus will disappear if not touched within a 1.5 sec Flash Time.

Level 3

- Program: Single Target - Time Paced
- Requirements: 30 Hits / 60 sec
- Description: A divided attention exercise will be active in which a Central Fixation Point is presented in the center of the screen. The letter in the center of the Central Fixation Point will change and flash randomly during the therapy session. The client should be instructed to attend to the Central Fixation Point by touching it before touching another stimulus when the letter changes and begins flashing.

Level 4

- Program: Single Target - User Paced
- Requirements: 195 Hits / 240 sec
- Description: Level 4 is a 4 min endurance trial.

Berg Balance Scale

The Berg Balance Scale is used to objectively determine a client's ability (or inability) to safely balance during a series of predetermined tasks. It is a 14-item question assessment with an ascending score range from 0 to 4 for each question and takes approximately 20 minutes to complete.

Postural Sway

The Postural Sway Program Group consists of Static and Dynamic Postural Sway Programs. These programs are designed to challenge, assess and track client's sway envelope and balance control. Sway Envelope is the area in which a patient can move their center of gravity within their base of support.

Static Postural Sway

Client is required to maintain static balance within the Balance Point for 60 seconds.

Dynamic Postural Sway

Client is instructed to maintain postural control while moving in order to align the reticle on screen with the target stimuli over a period of 60 seconds. Select the locations client must move towards during the activity.

Sensory

The Sensory Program Group consists of Sensory Integration Test and Romberg. These programs allow multi-trial attempts and consist of six conditions in each program.

Sensory Integration Test

Assess Sensory contributions to postural control and involves measuring client's attempt to maintain balance under various Sensory conditions for 30 seconds per condition. Multi-trial allows the client to attempt the same condition up to 2 more times if client fails in the first trial.

Romberg

Test client's neurological function for balance. It challenges and assesses all senses used in balance including proprioception, vestibular function and vision. The client is instructed to maintain balance under various condition for 60 seconds per condition. Multi-trial allows the client to attempt the same condition up to 3 more times if client fails in the first trial.

Functional Reach

Assess a client's stability and fall risk by measuring the maximum distance that a client can reach forward while standing or sitting in a fixed position. Client is instructed to stand or sit on either side of the screen, flex the shoulder at 90 degrees and extend the arm parallel to the screen with elbow extended to mark the starting position. Once the starting position has been marked by the Clinician on screen, the client is instructed to lean forward as far as safely possible and the Clinician marks the ending position. The system allows for three readings and presents an average distance reached by the client. Measurements can be recorded in imperial (inches) or Metric (cm).

Results

Results Screen has five tabs: Summary, Details, Balance, Parameters and Baseline. See Figure 6-16. The Summary Tab displays a snapshot of the session results. The Details Tab provides more information on the breakdown of these results including a quadrant, area or axis breakdown where applicable. The Parameters Tab provides a list of parameter settings that were used for the therapy program session. If a Baseline has been established an additional tab (Baseline Tab) will appear on the Results Screen. Refer to Chapter 19 in this guide for more information on Baseline Results. The Balance Tab provides information related to Balance Therapy such as Sway Envelope.

General:

- Accuracy: The accuracy is a measure of how precisely a target stimuli was eliminated
- Attempts: Total number of attempts made to eliminate target stimuli
- Collisions: Instances of where the client has drawn outside the lines (Between the Lines Program)
- Correct: Number of correct Solve Attempts
- Coverage: Percent of coverage on target (Trace Program)
- Distractors Hit: Number of stimuli selected that are not bells
- Early Hits: Number of early hits
- Errors: Number of times a stimulus is hit out of sequence. Number of times the client crosses a line at least 50%. Number of times the client enters a path that leads to a dead end
- Exited: Selected stimuli hit within the left 20% of the screen (Smooth Pursuit Program)
- Hand Speed: Time period between the moment the client lifts their finger from the Central Target and the moment the Target Stimulus is hit
- Hits: Number of on target screen interactions
- Incorrect: Number of incorrect solve attempts
- Interruptions: Number of times the client lifted their finger or stylus from the screen
- Late Accuracy: Late Hits / Attempts
- Late Hits: On Target Hits made within 3 seconds after the stimulus has disappeared
- Latency: Time period between the appearance of the Target Stimulus and the moment the client lifts their finger from the Central Target
- Left Points: Correct Hits by Left Opponent (only for Competition Program)
- Misses: Number of off target screen interactions
- On Time Hits: Number of hits on time and on target
- Percent Early: Percentage of early hits

- Percent Late: Percentage of late hits
- Percent Missed: Percentage of missed beats
- Percent On Time: Percentage of on time hits
- Points: Left Points + Right Points (only for Competition Program)
- Reaction Time: The time period between the initial appearance of the stimulus and the moment the stimulus is hit
- Response Time: Average time between the initial appearance of the row and column coordinates and the moment the client touches the correct letter (Puzzle Program)
- Right Points: Correct Hits by Right Opponent (only for Competition Program)
- Selected: Stimuli hit within the right 50% of the screen
- Solve Accuracy: Correct / Solve Attempts
- Solve Attempts: Number of attempts made to solve a word puzzle
- Stimuli: Total number of stimuli displayed during the therapy program
- Successful: Completing a program without errors
- Time to Complete: Time period used to complete the program beginning when the client touches the Starburst icon
- Trials Accuracy: Successful trials / Total number of trials
- Trials: Successful trials + Unsuccessful trials
- Unsuccessful: Completing a program with at least one error
- Winner: Side (LEFT, RIGHT, or TIE) that has the most points (only for Competition Program)

Fixation Results:

- Accuracy: Attended / Changes
- Attended: Central Fixation Point successfully hit before hitting other targets
- Changes: Number of Central Fixation stimuli letter changes
- Unattended: Central Fixation Point not successfully hit before hitting other targets

Balance Results:

- Accuracy: Hits / Attempts
- Average Reaction Time per Area: average reaction time for anterior, posterior, left, right, anterior-left, anterior-right, posterior-left, posterior-right positions
- Left Threshold Totals: Accuracy, Attempts, Above and Below for stimuli presented on the left side
- Overall Reaction Time: average reaction time during the activity

- Percent in Center: total percent of time client remained within the center of the Rings
- Percent off Center: percent of time client spent outside of the center Ring
- Percentage in Balance Point (only appears if Balance Point is adjusted): percent of time client spent within the Balance Point if Balance Point was adjusted to another area within the Rings
- Percentage of time in each Area: percent of time client spent in anterior, posterior, left, right, center
- Percentage of time in each Ring: percent of time client spent in each Ring, including Center, First Ring, Second Ring and Third Ring
- Percentage off Balance Point: percent of time client spent outside the Balance Point if Balance Point was adjusted to another area within the Rings
- Percentage Outside: percent of time client spent outside of the Balance Point
- Right Threshold Totals: Accuracy, Attempts, Above and Below for stimuli presented on the right side
- Stimuli: Total number of stimuli displayed during the therapy program
- Sway Envelope: visual representation of client's sway movements
- Threshold Totals: Accuracy, Attempts, Above and Below for overall program
- Time in Balance Point (only appears if Balance Point is adjusted): time client spent within the Balance Point if Balance Point was adjusted to another area within the Rings
- Time in Center: total time client remained within the center of the Rings
- Time in each Area: the amount of time client spent in anterior, posterior, left, right, center
- Time in each Ring: the amount of time client spent in each Ring, including Center, First Ring, Second Ring and Third Ring
- Time off Balance Point (only appears if Balance Point is adjusted): time client spent outside the Balance Point if Balance Point was adjusted to another area within the Rings
- Time off Center: total time client spent outside of the center Ring
- Time Outside: the amount of time client spent outside of the Rings
- Time To Complete: Time period used to complete the program beginning when the client touches the Starburst Icon
- Total number of targets per area: total number of target stimuli that appeared in anterior, posterior, left, right, anterior-left, anterior-right, posterior-left, posterior-right positions
- Total number of targets: total number of target stimuli that appeared

Reports

The Reports feature allows the user to view a client's therapy session results, create and print PDF reports, and graph session results over a period of time.

Selecting a Client

1. From the Home Screen or Navigation Bar, press the Reports button. See Figure 19-1.



Figure 19-1: Reports Button Home Screen (Left), Navigation Bar (Right)

2. The Client List Screen will open. Press the Visibility Icon, Figure 19-2, to make the Client List visible on the display screen.

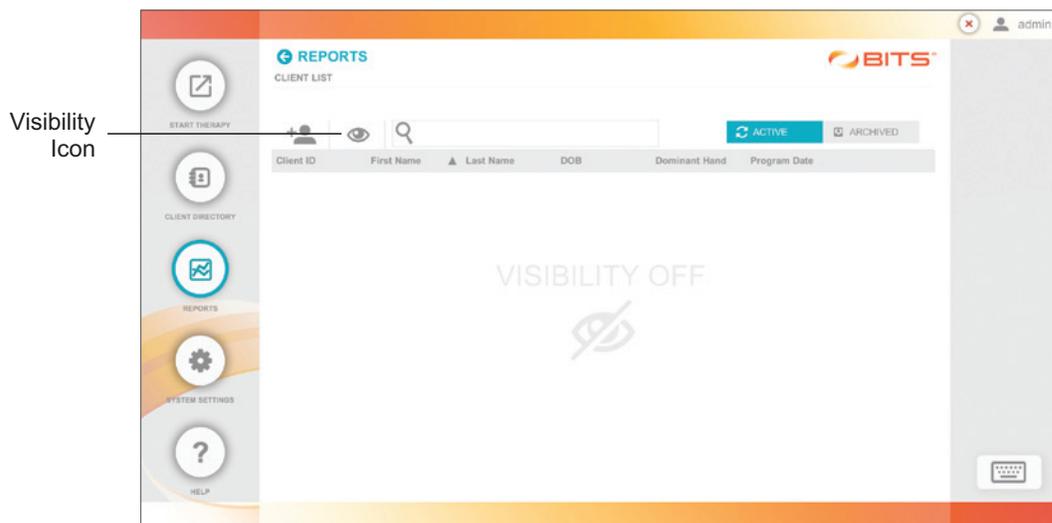


Figure 19-2: Client List Screen, Visibility Feature Turned Off

3. Select the desired client from the Client List by pressing the row with the client's name. See Figure 19-3.

Note: To search the Client List, type the client's first name, last name, date of birth, or client ID into the text field next to the Search Icon. See Figure 19-3.

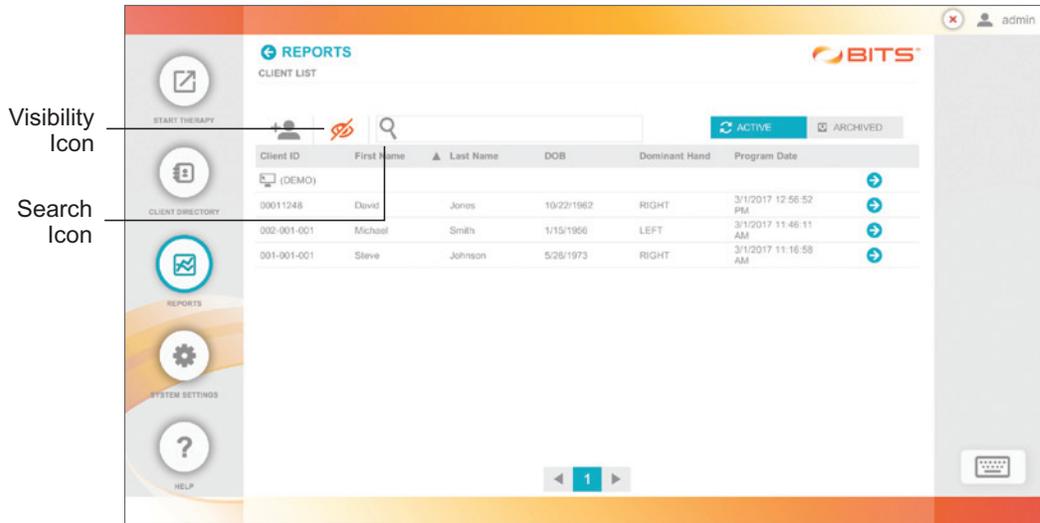


Figure 19-3: Client List Screen, Visibility Feature Turned On

Navigating in the Reports Module

Similar to Programs in the Therapy Module, Session Results in the Reports Module are organized by Therapy Categories, similar to Discipline Menu. .

1. From the Navigation bar, press the Reports Button. See Figure 19-4.



Figure 19-4: Reports Screen, from Navigation Bar

2. The Therapy Category Menu will be displayed. Therapy Category buttons that are dark in color contain results for sessions previously performed. Light colored buttons do not contain results and are not active. See Figure 19-4.

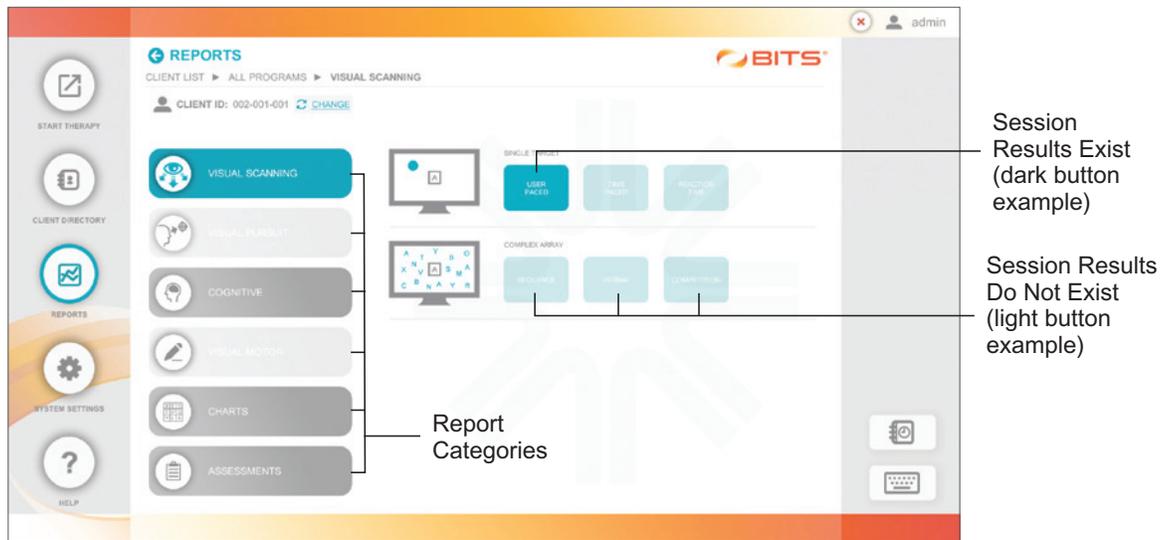


Figure 19-5: Reports Category Screen, Example

3. Press a Therapy Category Button to display the therapy groups and therapy programs found in the selected category. See Figure 19-5. The buttons for each Therapy Program containing Session Results will also be darker in color than Therapy Programs without Session Results
4. Press the desired Therapy Program Button to view the Session Results.
5. The Sessions Results List Screen will open displaying the Therapy Sessions performed, see Figure 19-6. Select a Therapy Session by pressing the row containing the date and time for the desired Therapy Session.

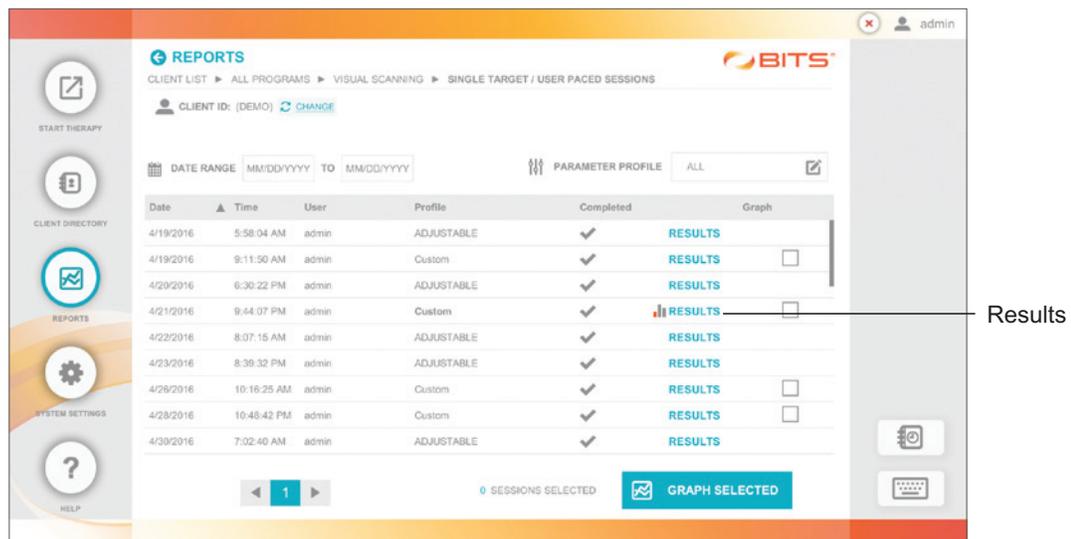


Figure 19-6: Example of the Sessions Results List Screen

6. The Session Results Screen will open. See Figure 19-7.

The Session Results Screen contains five tabs labeled: Summary, Details, Balance Parameters, and sometimes Baseline. See Figure 19-7. This screen is similar to the Results Screen that appears at the end of a therapy session. The content of each of these tabs differs depending on the Therapy Program for which the session was performed. Definitions of the content found on the Results Screen for each of the therapy programs are defined in Chapter 18 of this guide.

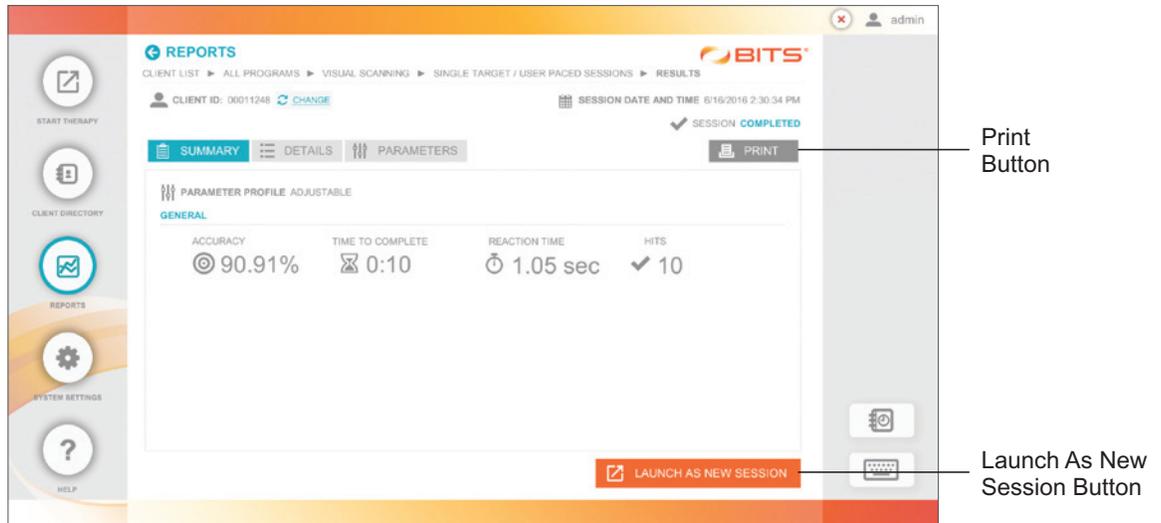


Figure 19-7: Example of a Results Screen in the Reports Module

Printing a Report

Therapy results displayed on the Results Screens in the Reports Module and at the end of each therapy session can be printed to a PDF Report.

1. From The Results Screen, press the Print Button. See Figure 19-7.
2. The Generate PDF pop-up window will open. See Figure 19-8. Comments can be added to the report by selecting the Include Comments Box and typing them into the text box provided. Press the Done Button to generate the PDF Report.

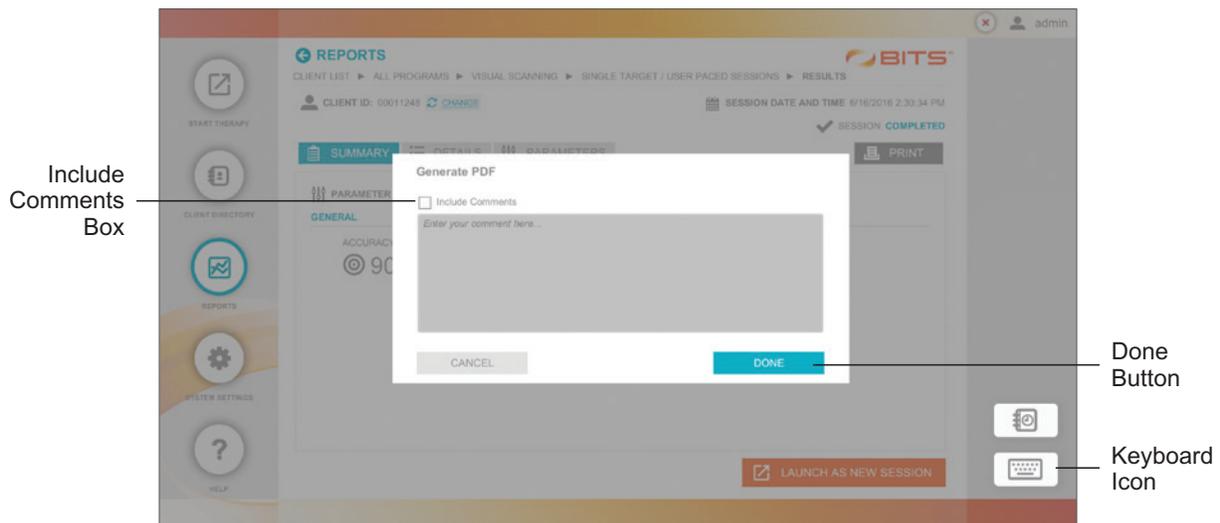


Figure 19-8: Generate PDF Pop Up Window

- The Adobe Reader Program will launch and a pop up window will open displaying the PDF Report. See Figure 19-9. The report is automatically saved to the folder C:\Users\BITS\Documents\BITS PDF Reports\Results. The file name will include the name of the Therapy Program, the Client Name, and the date and time at which the therapy session was performed. The PDF Report can be printed to a hard copy using a USB connected printer.

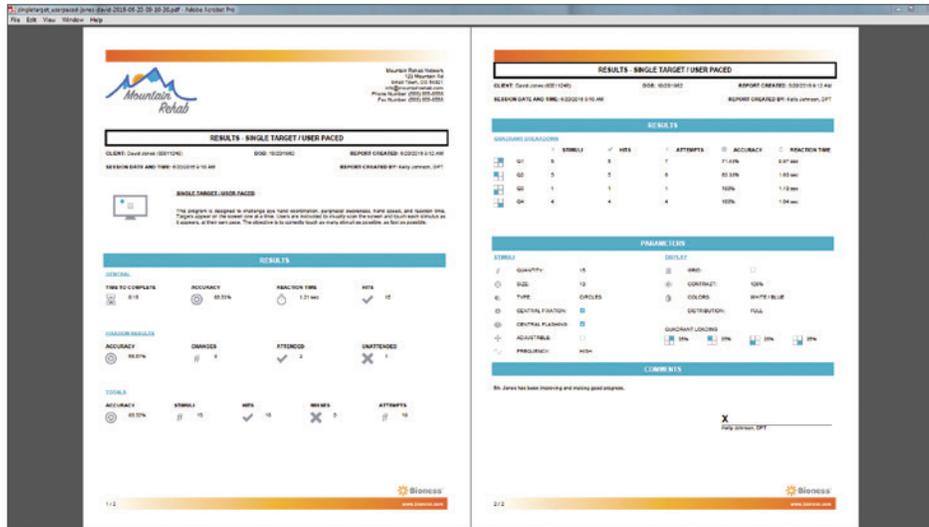


Figure 19-9: Print Preview Screen, Example

Graphing

When a client has completed two or more Therapy Sessions over a period of time, the results can be projected on a graph with certain results Variables displayed on the y-axis and the date displayed on the x-axis.

Only therapy sessions performed using the same parameter profiles can be graphed together. This includes the predefined parameter profiles (e.g. Level 1, Level 2, and Level 3), and all Custom Parameter Profiles. This restriction ensures that the therapy results displayed and compared on the same graph are relevant to each other. The Graph Icon  displayed next to each of the Predefined Parameter Profiles indicates that sessions performed with these profiles are graphable.

Note: Refer to the Graphable Result Variables section of this chapter to identify Variables specific to each therapy program.

To create a graph:

Note: The number of Sessions selected will be indicated at the bottom of the Sessions List Screen.

- From the Sessions Results List Screen, identify the therapy sessions that should be displayed on the graph, and select one of them by touching the Check Box in the rightmost column. Selecting one session to be displayed on the graph will automatically eliminate the Check Boxes for all sessions that are not comparable to the selected session.
- The Select all of the other sessions that should be displayed on the graph. This can be done one at a time, or all comparable sessions can be selected by touching the box at the top of the column in the header row. See Figure 19-10.

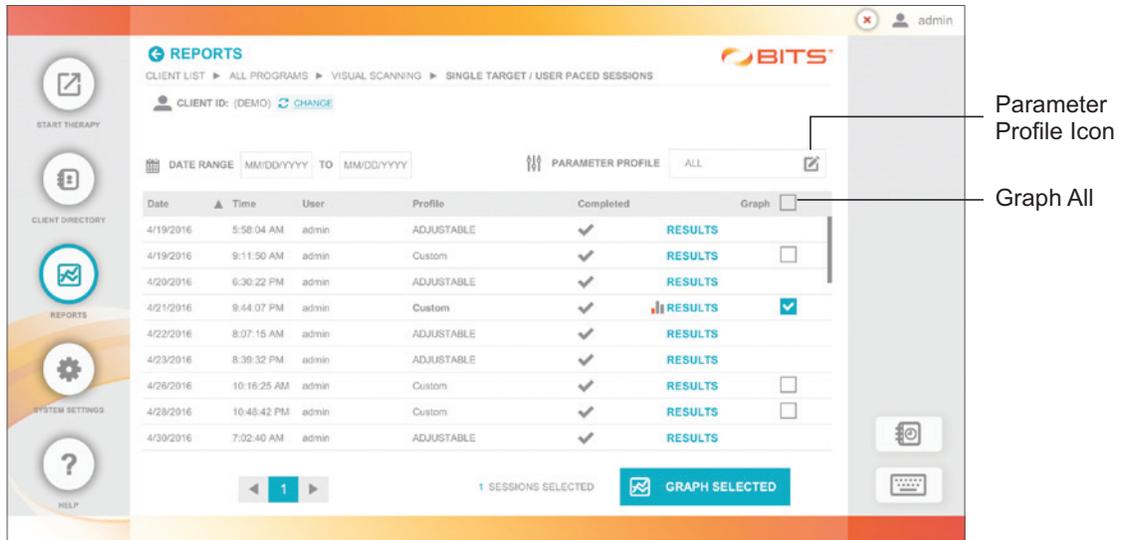


Figure 19-10: Reports, Session Results List Screen

Note: The Sessions Results List can also be filtered by Default or Custom Parameter Profiles by pressing the Parameter Profile Icon. See Figure 19-11.

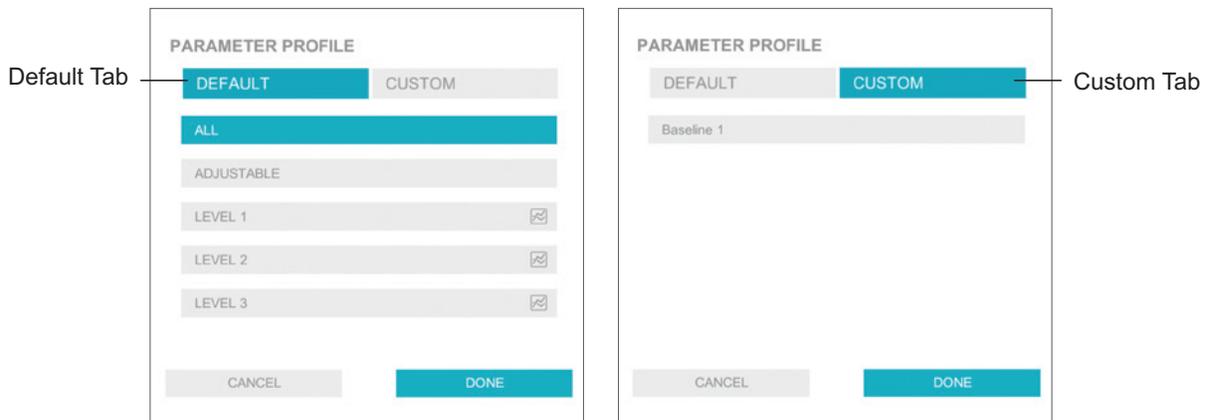


Figure 19-11: Parameter Profile Pop Up Window

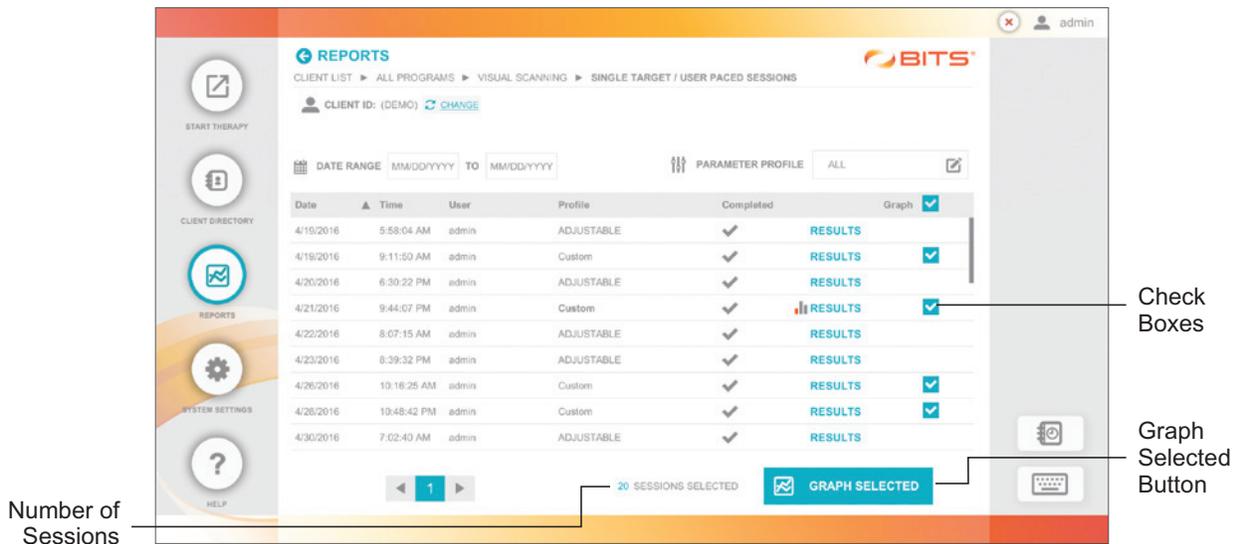


Figure 19-12: Reports, Filtered Session Results List Screen

3. Press the Graph Selected Button. See Figure 19-12.
4. The Graph Screen will open and display a default result Variable displayed on the y-axis. See Figure 19-13.



Figure 19-13: Reports, Graph Screen

Change Variables

1. The Variable displayed on the graph can be changed dynamically by pressing the Variable Icon. See Figure 19-13.
2. The Variable pop-up window will open. Select the desired Variable to be displayed on the graph, and press the Done Button. See Figure 19-14.

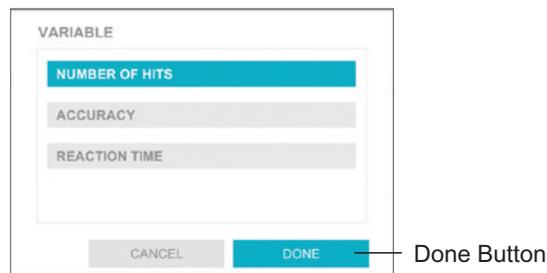


Figure 19-14: Variable Pop Up Window

Add Session Labels

1. To display Session Labels above the graph, select the Session Labels Box. See Figure 19-13.
2. To see the details for each data point identified by Session Label, press the Details tab to view the Values corresponding to the Variables for each data point. See Figure 19-13.

Graph Quadrant Results

1. Some Therapy Programs provide results regarding the client's performance in each of the four spatial quadrants displayed on the touchscreen. To graph these results on one graph, select the Quadrant Results radio button . See Figure 19-13.
2. Refer to the Quadrant Results legend to identify the data for each quadrant.

Graph Area/Ring Results

1. Some Therapy Programs in Balance Therapy Category provide results regarding the client's performance in each area/ring displayed in the touchscreen.
2. Area results correspond to client's movement in posterior, anterior, left and right movements. Rings results correspond to center, first, second and fourth rings presented on screen.
3. To graph these results on one graph, select the Area or Ring Results Radio Button.

Adjust the Date Range

1. The date range of the graph can also be dynamically adjusted. Select the text box for the beginning or ending date. See Figure 19-13.
2. Select the date range for the graph in the Date Range Window. See Figure 19-15.
3. Enter the date in the appropriate format. The graphs will change dynamically.

Note: When multiple Sessions are performed on the same day, the data points representing the Variable for the Sessions will be displayed in purple. The average of these values will be displayed in red, and the graph will intersect with the average.

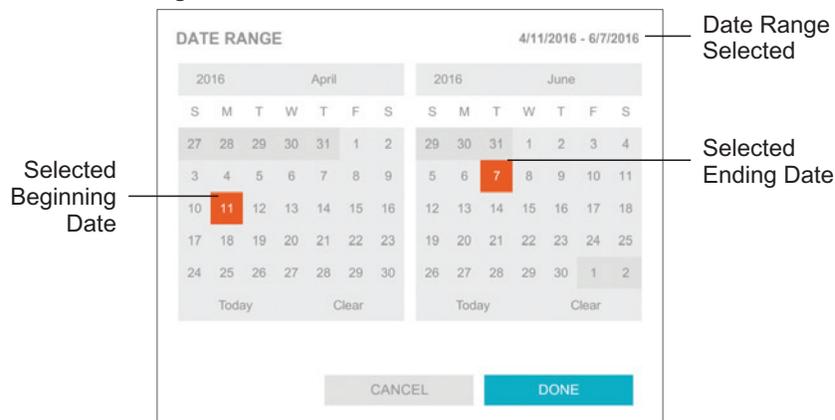


Figure 19-15: Date Range Window

Printing a Graph

A PDF Report including a graph displaying the Results from multiple Therapy Sessions can be created. The printed Report will include only the Variable actively displayed on the Graph Screen.

1. From The Graph Screen press the Print Button. See Figure 19-12.
2. The Generate PDF pop up window will open. See Figure 19-16. Comments can be added to the report by selecting the Include Comments Box and typing them into the text box provided. Press the Done Button to generate the PDF Report.

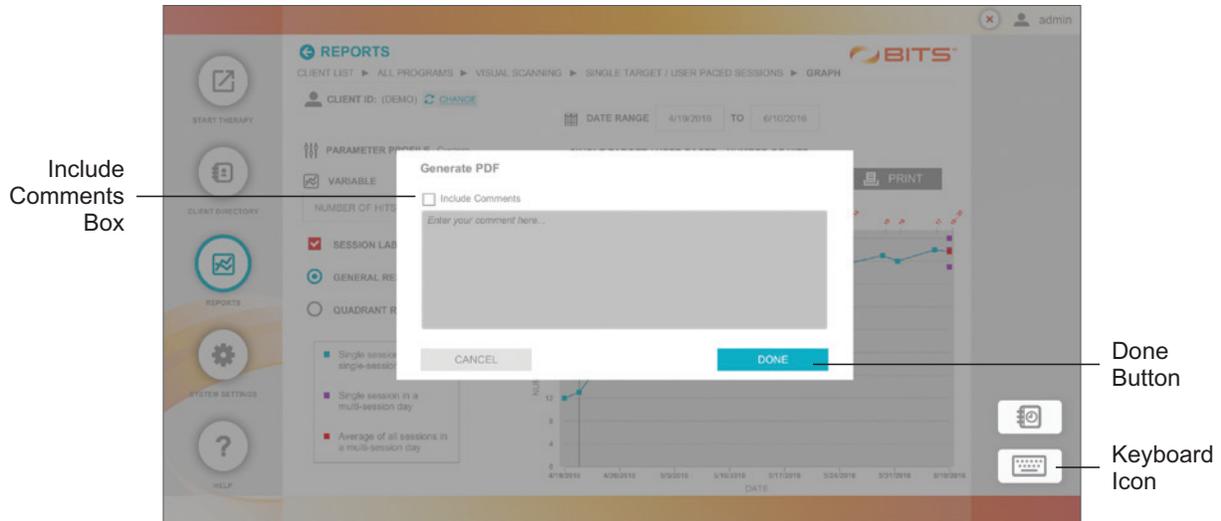


Figure 19-16: Generate PDF Pop Up Window

3. The Adobe Reader Program will launch and a pop up window will open displaying the PDF Report. See Figure 19-17. The report is automatically saved to the folder “C:\users\BITS\Documents\BITS PDF Reports\Graphs”. The file name will include the name of the Therapy Program, the Client Name, and the date and time at which the Therapy Session was performed. The PDF Report can be printed to a hard copy using a USB connected printer.

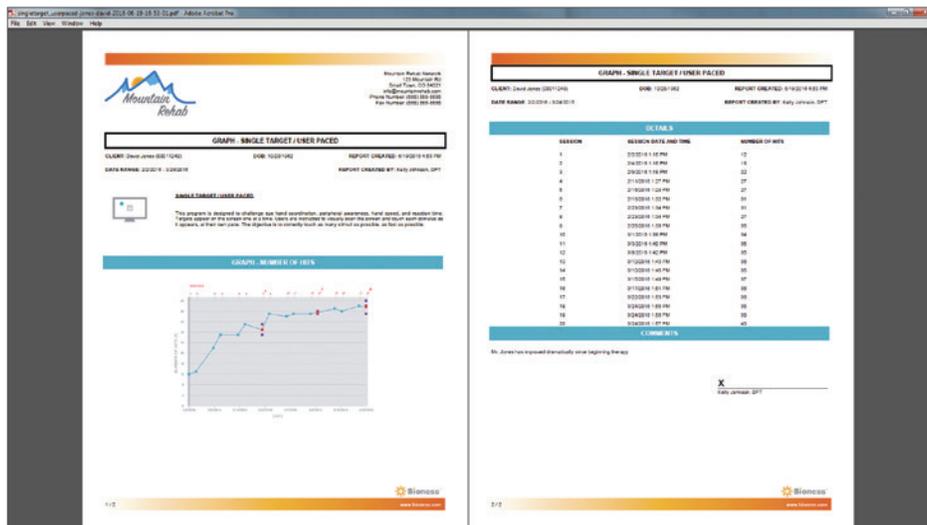


Figure 19-17: Graph Print Preview Screen, Example

Graphable Result Variables

Most of the Therapy Programs in BITS are capable of producing Graphs for Therapy Session Results, and some Therapy Programs are capable of producing Graphs for Therapy Session Results for multiple Variable options. The Therapy Programs that are capable of producing Graphs for Therapy Session Results are listed below with their graphable Variables options.



Single Target/Balance Reaction Program Group

Dynamic Postural Sway Program

- Reaction Time
- Reaction Time by Area

Static Postural Sway Program

- Percent in Center
- Time in Center
- Time in each Area
- Time in each Ring

Time Paced Program

- Accuracy
- Accuracy by Area
- Accuracy by Rings
- Hits by Area
- Hits by Rings
- Number of Hits
- Percent in Balance Point*
- Percent in Center
- Reaction Time
- Reaction Time by Area
- Reaction Time by Rings
- Reaction Time by Rings
- Time in Balance Point*
- Time in Center
- Time in each Area
- Time in each Ring
- Time to Complete

**(only if Balance Point was adjusted)*

User Paced Program

- Accuracy
- Hits by Area
- Hits by Rings
- Number of Hits
- Percent in Balance Point*
- Percent in Center
- Reaction Time
- Reaction Time by Area
- Reaction Time by Rings
- Time in Balance Point*
- Time in Center
- Time in each Area
- Time in each Ring
- Time to Complete

**(only if Balance Point was adjusted)*

Weight Shift Program

- Accuracy
- Hits
- Left Threshold Accuracy & Reaction Time
- Right Threshold Accuracy & Reaction Time
- Threshold Total Accuracy

Reaction Time Program

- Accuracy
- Hand Speed
- Reaction Latency
- Reaction Time
- Time to Complete



Array/Complex Array Program Group

Sequence Program

- Accuracy
 - Accuracy by Area
 - Accuracy by Rings
 - Hits by Area
 - Hits by Rings
 - Percent in Balance Point*
 - Percent in Center
 - Reaction Time by Area
 - Reaction Time by Rings
 - Reaction Time Total
 - Time in Balance Point*
 - Time in each Area
 - Time in each Ring
 - Time to Complete
- *(only if Balance Point was adjusted)*

Verbal Program

- Accuracy
 - Accuracy by Area
 - Accuracy by Rings
 - Hits by Area
 - Hits by Rings
 - Percent in Balance Point*
 - Percent in Center
 - Reaction Time by Area
 - Reaction Time by Rings
 - Reaction Time Total
 - Time in Balance Point*
 - Time in Center
 - Time in each Area
 - Time in each Ring
 - Time to Complete
- *(only if Balance Point was adjusted)*



Rotator Program Group

Gap Sequence Program

- Accuracy
- Percent in Balance Point*
- Percent in Center
- Time in Balance Point*
- Time in Center
- Time in each Area
- Time in each Ring

**(only if Balance Point was adjusted)*

Multi-Color Program

- Accuracy
- Percent in Balance Point*
- Percent in Center
- Time in Balance Point*
- Time in Center
- Time in each Area
- Time in each Ring

**(only if Balance Point was adjusted)*

Sequence Program

- Accuracy
- Percent in Balance Point*
- Percent in Center
- Time in Balance Point*
- Time in Center
- Time in each Area
- Time in each Ring

**(only if Balance Point was adjusted)*

Single Color Program

- Accuracy
- Percent in Balance Point*
- Percent in Center
- Time in Balance Point*
- Time in Center
- Time in each Area
- Time in each Ring

**(only if Balance Point was adjusted)*



Pursuit Program Group

Adjustable Pattern Program

- Accuracy
- Longest Consecutive Time on Stimulus
- Time to Complete
- Total Time On

Pattern Program

- Accuracy
- Longest Consecutive Time on Stimulus
- Time to Complete
- Total Time On

Pursuit Rotator Program

- Hits
- Hits by Area
- Hits by Ring
- Reaction Time
- Reaction Time by Area
- Reaction Time by Rings
- Time to Complete

Smooth Pursuit Program

- Accuracy



Cognitive Program Group

Memory Program

- Accuracy
- Accuracy by Area
- Accuracy by Rings
- Hits
- Percent in Balance Point*
- Percent in Center
- Time in Balance Point*
- Time in Center
- Time in each Area
- Time in each Ring
- Trials Accuracy

**(only if Balance Point was adjusted)*

Rhythm Program

- Accuracy
- Percent in Balance Point*
- Percent in Center
- Time in Balance Point*
- Time in Center
- Time in each Area
- Time in each Ring



Drawing Program Group

**(only if Balance Point was adjusted)*

Between the Lines Program Replicate Program

- Time to Complete
- Collisions
- Time to Complete

Symmetry Program

- Time to Complete

Trace Program

- Time to Complete
- Coverage



Letter Charts Program Group

Puzzle Program

- Accuracy
- Average Response Time



Peripheral Letter Charts Program Group

Match Program

- Number of Hits
- Time to Complete
- Accuracy

Sequence Program

- Number of Hits
- Time to Complete
- Accuracy

Assessments



Trail Making Program

Part A Program

- Time to Complete
- Errors

Part B Program

- Time to Complete
- Errors



Bell Cancellation Program

- Omissions
- Time to Complete



Maze Program

- Time to Complete
- Errors



Dynamic Postural Sway Program

- Reaction Time
- Reaction Time per Area



Static Postural Sway Program

- Percent in Center
- Time in Center



Functional Reach Program

- Average Distance



Romberg Program

- Romberg Score



Sensory Integration Test Program

- Percent in Center
- Time in Center



Visual Scan and Motor Reaction Program

- Number of Hits

Baseline Comparison Results

The Baseline Comparison feature allows the user to designate a Therapy Session as a Baseline to which all future Therapy Sessions can be compared. The Baseline Therapy Session consists of two parts: the Results generated during the Baseline Therapy Session, and the Parameter Options used to generate the Results. After a Baseline Therapy Session has been saved, the baseline icon  will be used to identify it in the Results Sessions List. See Figure 19-18. All future Therapy Sessions that are to be compared with the Baseline Therapy Session must be performed using that Baseline Parameter Profile.

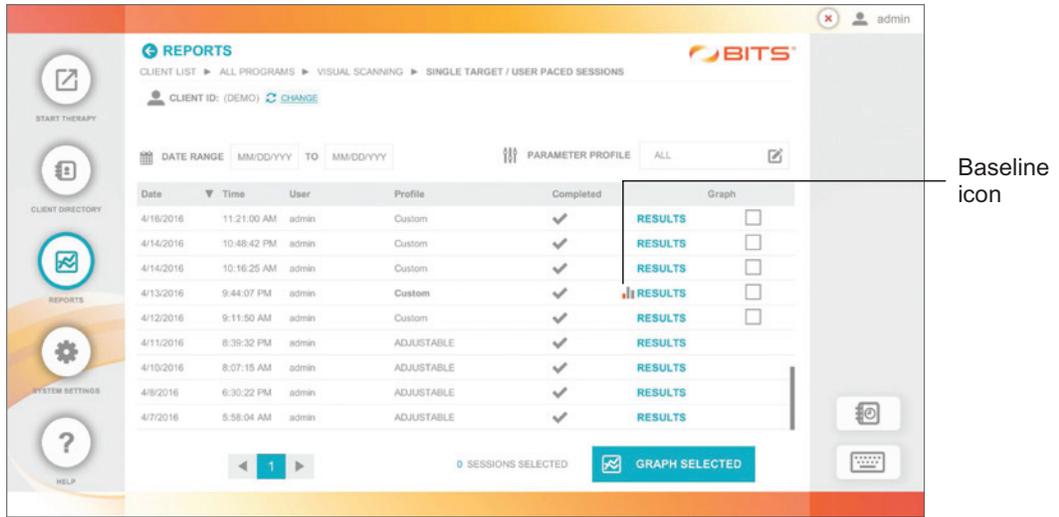


Figure 19-18: Baseline Icon in Results Sessions List

Baseline Comparison Results are displayed in the Baseline Tab in the Results Screen. The Results include both General and, where applicable, Quadrant Results. For each Result displayed, the value of both the Baseline Session and the Current Session are provided. The changes between the Current Session Results and the Baseline Session Results are displayed with a green up or down arrow for an improved result, or with a red up or down arrow for a less desirable result. See Figure 19-19.

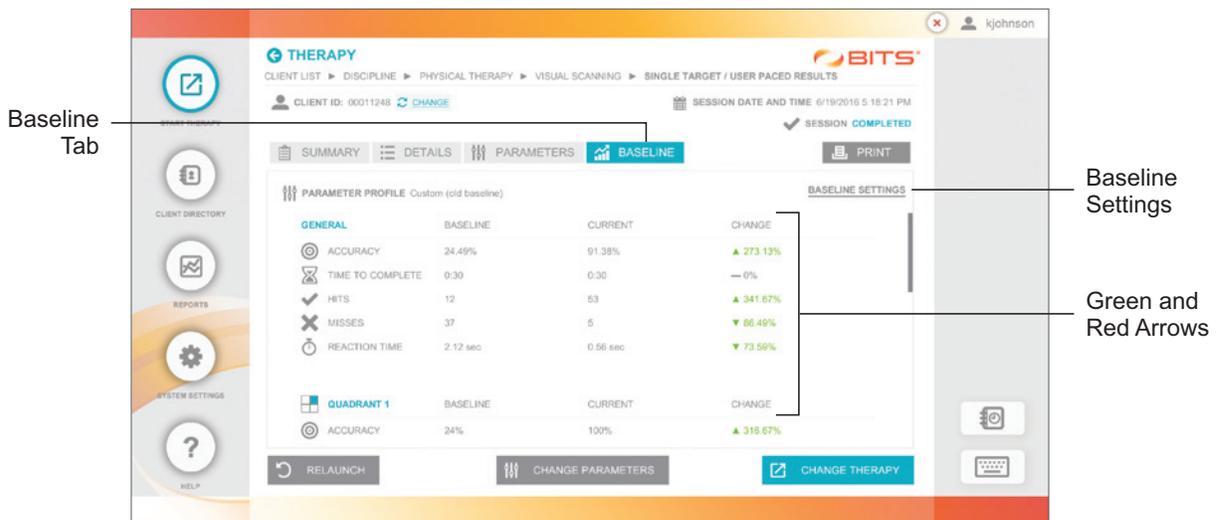


Figure 19-19: Results Screen, Baseline Tab

Therapy Categories	Program Groups	Therapy Programs
Charts	Letter Charts	• Static
		• Motion
		• Multiple
Assessments	Visual Scanning & Motor Reaction	

Table 19-1: Programs without the Baseline Comparison Feature

Creating a Baseline Profile

Baselines Sessions are saved following the completion of a Therapy Session. Only Completed Therapy Sessions may be saved as a Baseline. Upon arriving at the Results Screen, the Save As Baseline Icon will be displayed, see Figure 19-20.

To Create a Baseline Profile:

1. From the Therapy Program Results Screen, press the Save As Baseline Icon  [SAVE AS BASELINE](#). See Figure 19-20.

Note: If this icon is not visible in the Results Screen, the Therapy Program is not capable of Saving a Baseline Session.

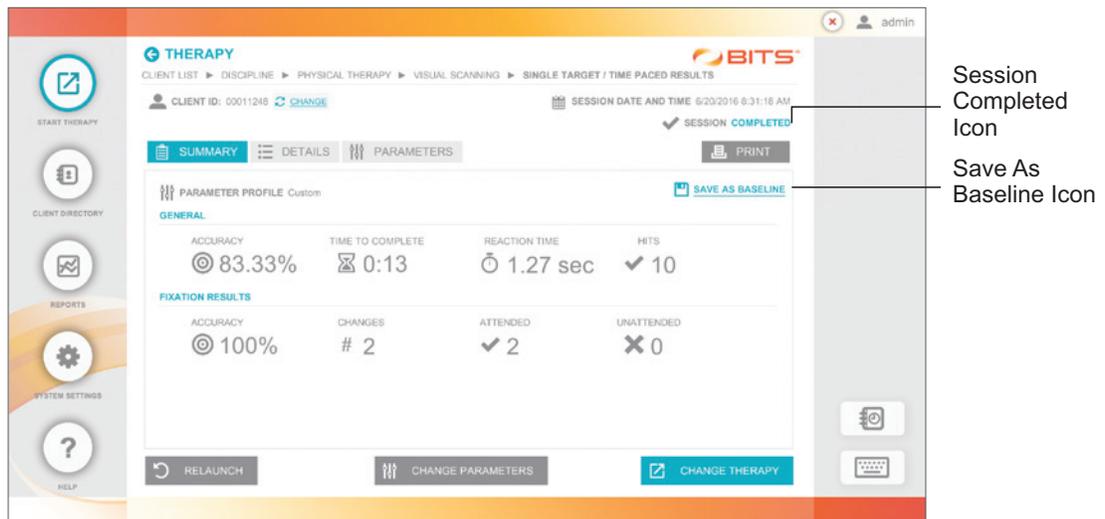


Figure 19-20: Therapy Program Results Screen

- The Save As Baseline dialog window will open displaying the text, "Save this parameter set and these results as the new baseline". Press the Proceed Button. See Figure 19-21.

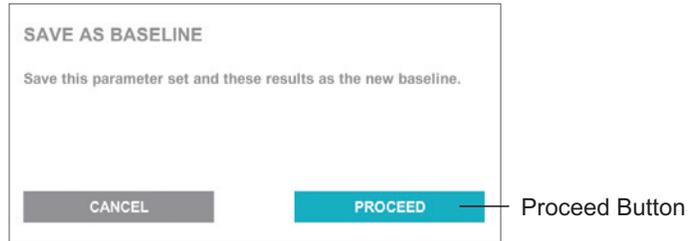


Figure 19-21: Save As Baseline Pop Up Window

Overwriting a Baseline Session

After a Baseline Profile has been created, the user may want to Save a new Therapy Session as the Baseline Profile for that Parameter and overwrite the current one. This situation may occur when the clinician determines that the Session Results are not a true representation of the client's baseline condition or performance.

To Overwrite a Baseline Session:

- From the Therapy Program Results Screen, select the Baseline Tab to view the Baseline Results. Figure 19-22.
- Press the text "Baseline Settings". See Figure 19-22.

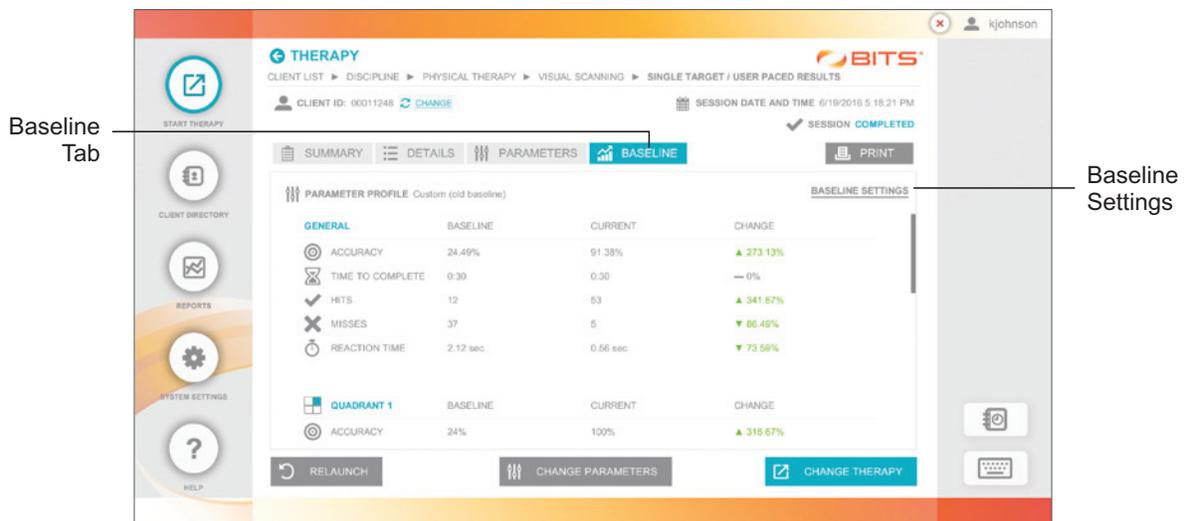


Figure 19-22: Results Screen, Baseline Tab and Baseline Settings

3. The Save As Baseline dialog window will open. Select the check box next to the statement, “Save these results as the new baseline.” Press the Proceed Button. See Figure 19-23.

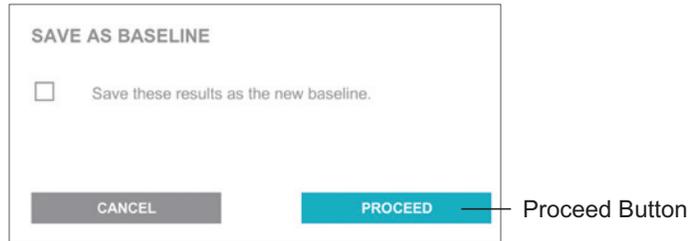


Figure 19-23: Baseline Overwrite Dialog Window

4. The dialog window will display the following statement, “Are you sure? Overwriting the Baseline results will establish these session results as your new Baseline Profile. Previously saved Baseline session results will no longer be comparable for this program.” See Figure 19-24. To overwrite the baseline, press the Proceed Button.

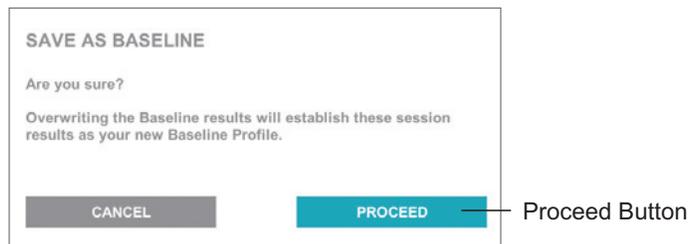


Figure 19-24: Baseline Overwrite Confirmation Dialog Window

System Settings

The System Settings Module allows the administrator to customize the default software settings. These settings include language, format preference, header logo, clinic contact information, and screen size.

There are two main user roles within the BITS Software, each have different access to the System Settings Module:

Administrator User Account Privileges:

- Manages system general settings (see the general setting section below)
- Manages User Accounts (creates, closes, and reactivates accounts for clinicians/therapists)
- Resets Passwords (maintains system security)

Therapist User Account Privileges:

- Reset their Password, username, and name (can be overwritten by administrator)

Accessing the user Management Feature

1. From the Home Screen or Navigation Bar, press the System Settings Button. See Figure 20-1.

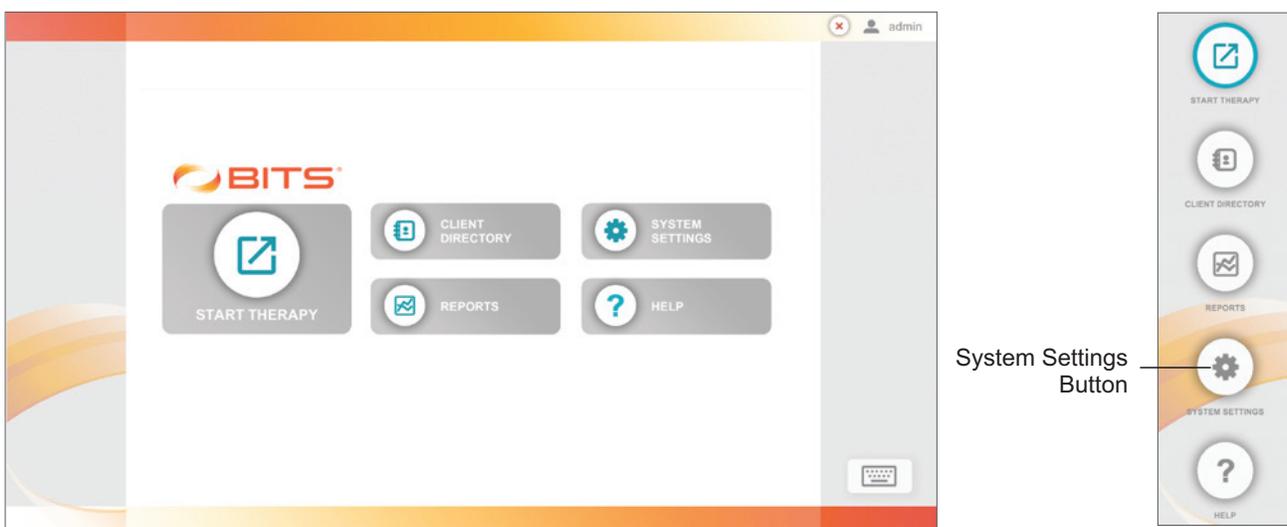


Figure 20-1: System Settings Button Home Screen (Left), Navigation Bar (Right)

2. The Systems Settings Screen will open. See Figure 20-2.

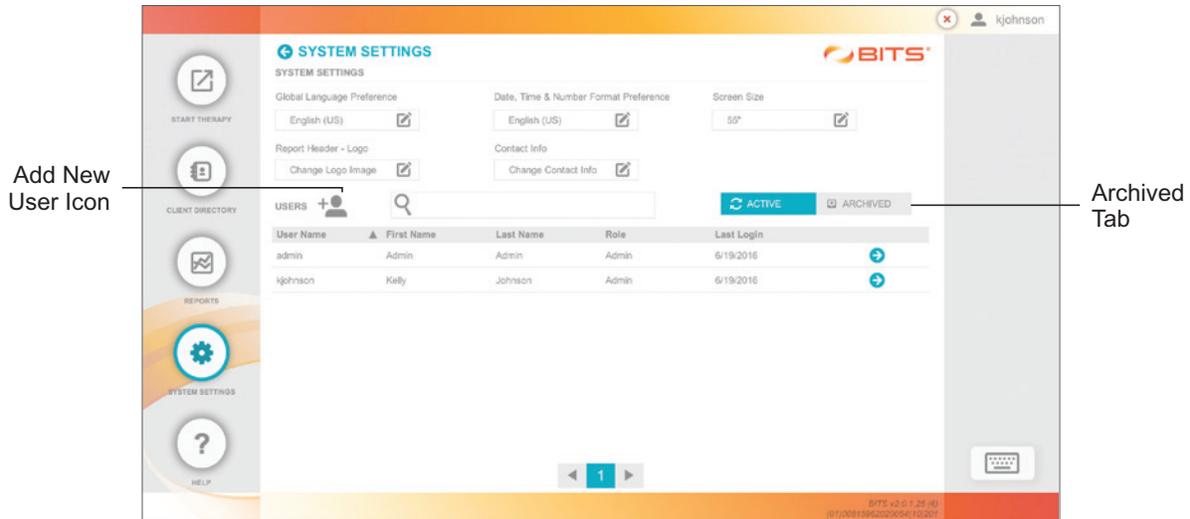


Figure 20-2: System Settings Screen

Adding a New User

1. From the System Settings Screen, press the Add User Icon , see Figure 20-2.
2. From the New User Screen, fill in all text fields (User Name, First Name, Last Name, Credential, and Password). See Figure 20-3.
3. The default setting for the User Role setting is Therapist. If a new Admin Account is being created, press the User Role Icon. See Figure 20-3. The Change User Role pop up window will open, select Admin and press the Done Button. See Figure 20-4.
4. Confirm the information has been entered in correctly and press the Save Button. See Figure 20-3.

Note: Give the assigned User Name and Password Log In information to the new user.

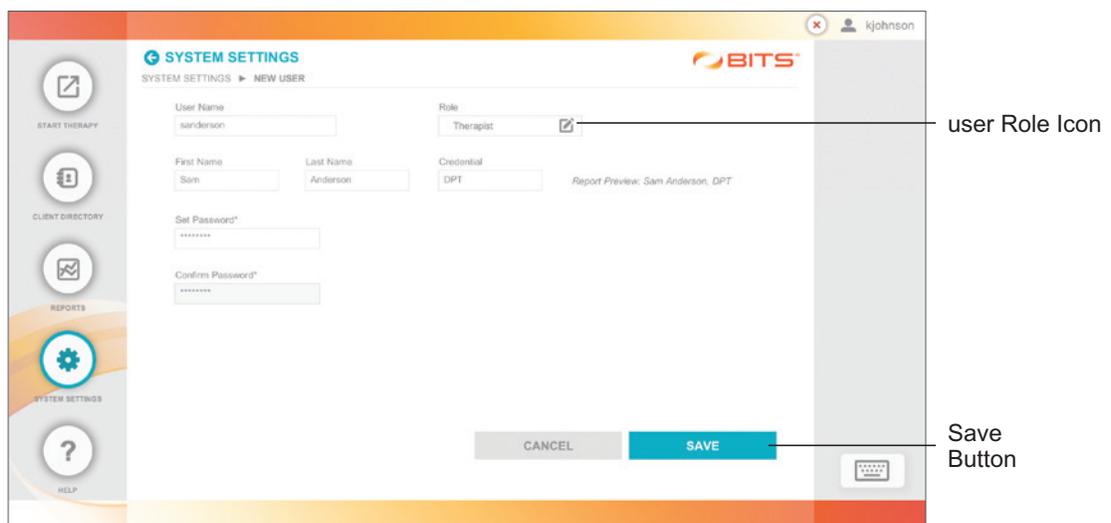


Figure 20-3: New User Screen

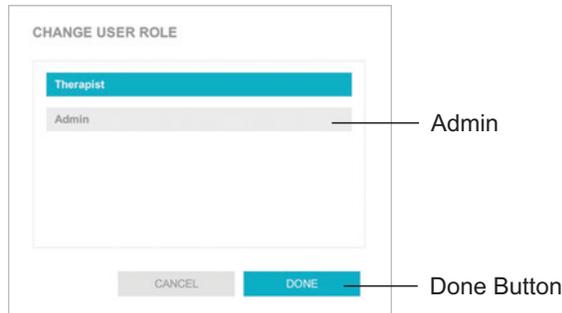


Figure 20-4: Change User Role Pop Up Window

Editing a User Account

A user may make changes to their User Name, First Name, Last Name, and Credential. Users may also change their own password.

1. From the System Settings Screen, select the desired user account from the User List by pressing the row with their name.
2. The User Detail Screen will open. See Figure 20-5.
3. Enter the desired revisions into the text fields.
4. To change a preassigned password, press the Change Password Button. See Figure 20-5.

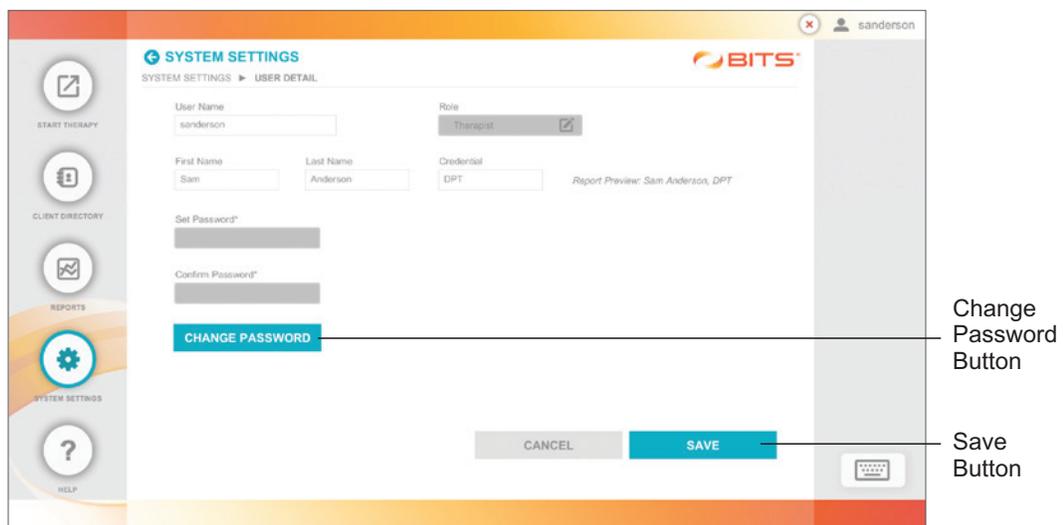


Figure 20-5: User Detail Screen

5. The Change Password pop up window will open. Enter a new password, confirm the password, and Press the Done Button. Figure 20-6.

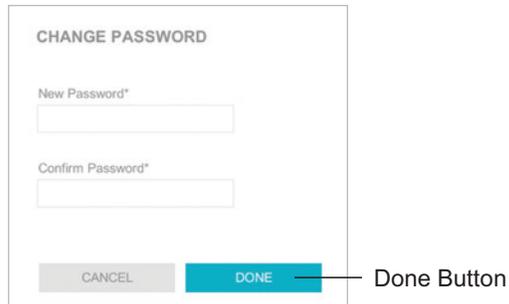


Figure 20-6: Change Password Pop Up Window

6. From the User Detail Screen, press the Save Button. See Figure 20-5.

Note: In the User Detail Screen, fields which are grayed out are not accessible. Depending on whether one is logged in as therapist or administrator, there are differences in access privilege.

Administrator Resetting a User Password

1. From the System Settings Screen, select the desired user account from the User List by pressing the row with their name.
2. The User Detail Screen will open. Press the Reset Password Button and the text "Password Changed" will appear. See Figure 20-7. The password now is the same as the Admin password.
3. The Administrator now can exit BITS.
4. The Administrator will log back into the BITS software using the therapist's username and the Admin Password.
5. From the System Setting Screen, press the appropriate user account.
6. The User Detail Screen will open, press the Change Password Button. See Figure 20-5.
7. The Change Password pop up window will open. Enter a new password, confirm the password, and Press the Done Button. Figure 20-6.

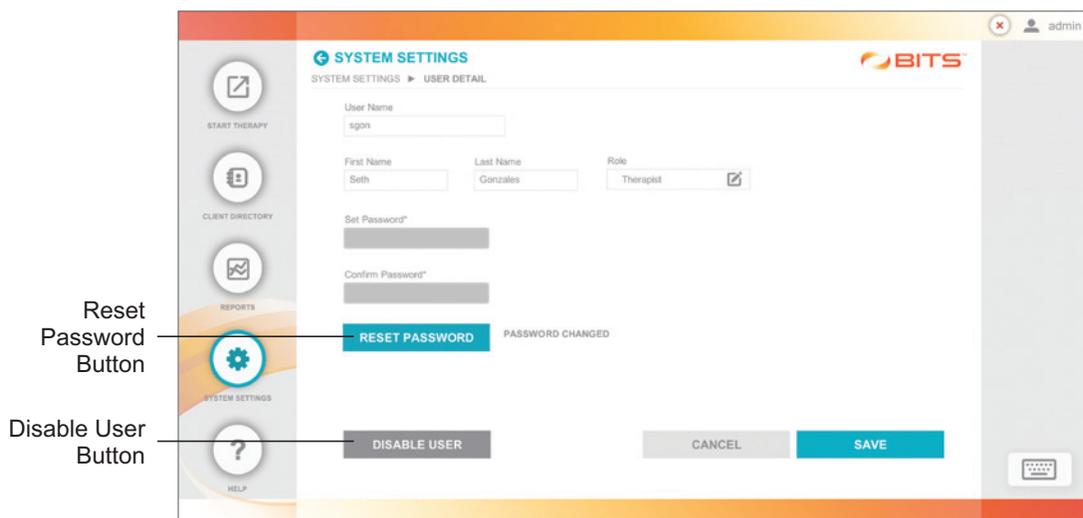


Figure 20-7: Reset Password Button

8. From the User Detail window, press the Save Button. Figure 20-5.
9. Give the revised password to the therapist.

Disable a User Account

The disable a user account feature will prevent that user from accessing the BITS Software, while maintaining the user's history. This can only be performed by an Admin user.

1. From the System Settings Screen, select the user to be archived from the User List by pressing the row with their name.
2. From the User Detail Screen, press the Disable User Button. Figure 20-7.
3. A confirmation dialog pop up window will open. Press the Confirm Button to disable the user's account. See Figure 20-8. The user account is now archived in the BITS software application.



Figure 20-8: Disable User Account Pop Up Window

Reactivate a User Account

1. From the System Settings Screen, press the Archived Tab. See Figure 20-2.
2. Select the user account to reactivate by pressing the row with their name.
3. From the User Detail Screen, press the Reactivate User Button.

Language Settings

The Global Language Preference setting controls the language shown in the BITS software.

To change the Language Settings:

1. From the System Settings Screen, press the Global Language Preference Icon .
2. The Change Language Preference pop up window will open. Press the desired selection and then press the Done Button. Figure 20-9.

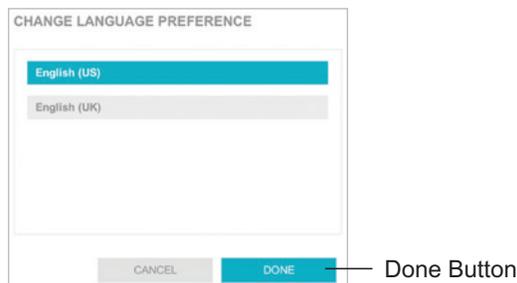


Figure 20-9: Change Language Preference Window

Format Settings

Date, Time & Number Format Preference Setting

To change the Format Settings:

1. From the System Settings Screen, press the Preference Icon.  Date, Time & Number Format
2. The Date & Number Format Preference pop up window will open. Press the desired selection and then press the Done Button. Figure 20-10.

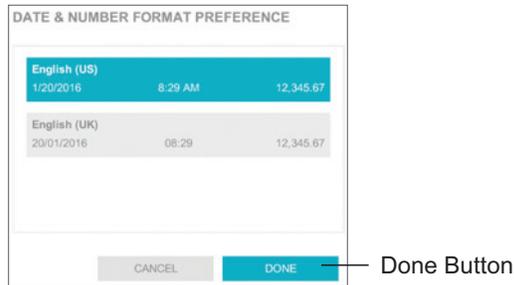


Figure 20-10: Date & Number Format Preference Window

Screen Size Setting

The Screen Size setting is used to match software with touch screen LCD monitor display. The Installation Guide for the BITS system will cover this. If adjustment is needed, follow this procedure:

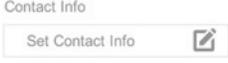
1. From the System Settings Screen, press the Screen Size Icon 
2. The Screen Size pop up window will open. Select the desired screen size and then press the Done Button.

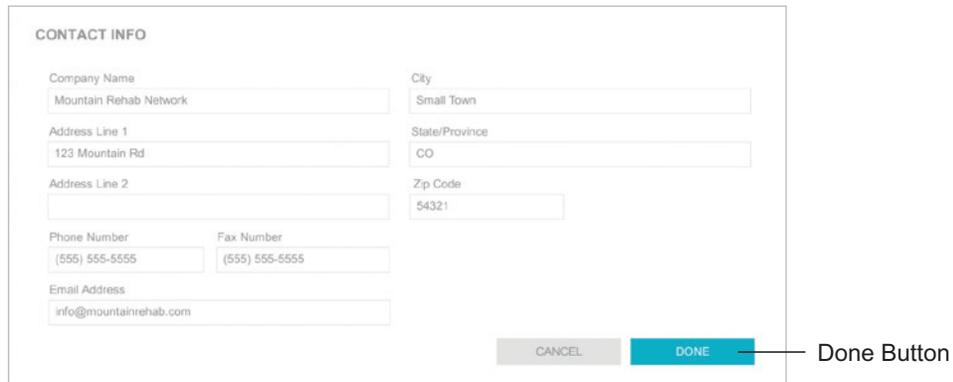
Clinic Information

The Clinic can customize printing by adding their contact information and logo to printed reports.

Contact Info Setting

The Contact Info Setting allows the clinic to add or change the information printed on reports including address, telephone, and other contact data.

1. From the System Settings Screen, press the Contact Info Icon 
2. The Contact Info pop window will open, fill in the desired clinic information. Figure 20-11.
3. Press the Done Button to save the information and close the window.



CONTACT INFO

Company Name: Mountain Rehab Network
 City: Small Town
 Address Line 1: 123 Mountain Rd
 State/Province: CO
 Address Line 2:
 Zip Code: 54321
 Phone Number: (555) 555-5555
 Fax Number: (555) 555-5555
 Email Address: info@mountainrehab.com

CANCEL DONE Done Button

Figure 20-11: Contact Info Pop Up Window

Report Header Setting

The Report Header - Logo Setting adds the Clinic's logo to printed reports.

1. From the System Settings Screen, press the Report Header - Logo  
2. The Report Header - Logo Window will open. Press the Add Button. See Figure 20-12.
3. The Add Images Window will open. Press the Next Button, see Figure 20-12.
4. The Select Images to Add Window will open. Select the drive icon and corresponding folder that contains the logo image. Select the desired file. A check mark will appear when selected. Press the Add Selected Button. See Figure 20-12.
5. The Report Header - Logo Window will open, displaying the logo image. Press the Done Button. See Figure 20-12.

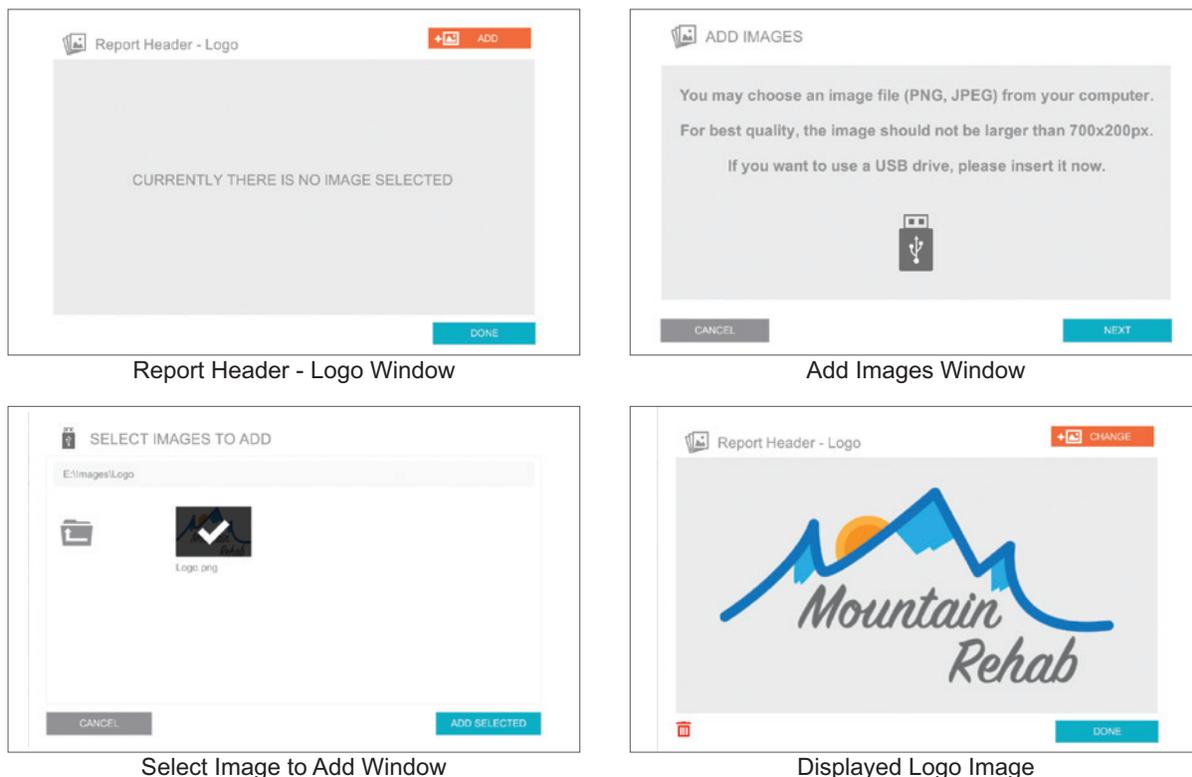


Figure 20-12: Report Header Logo Windows

Help

The Help Module navigates the user to the BITS Clinician's Guide in the BITS software application.

To access the Help Module:

1. From the Home Screen or Navigation Bar, press the Help Button. See Figure 21-1.

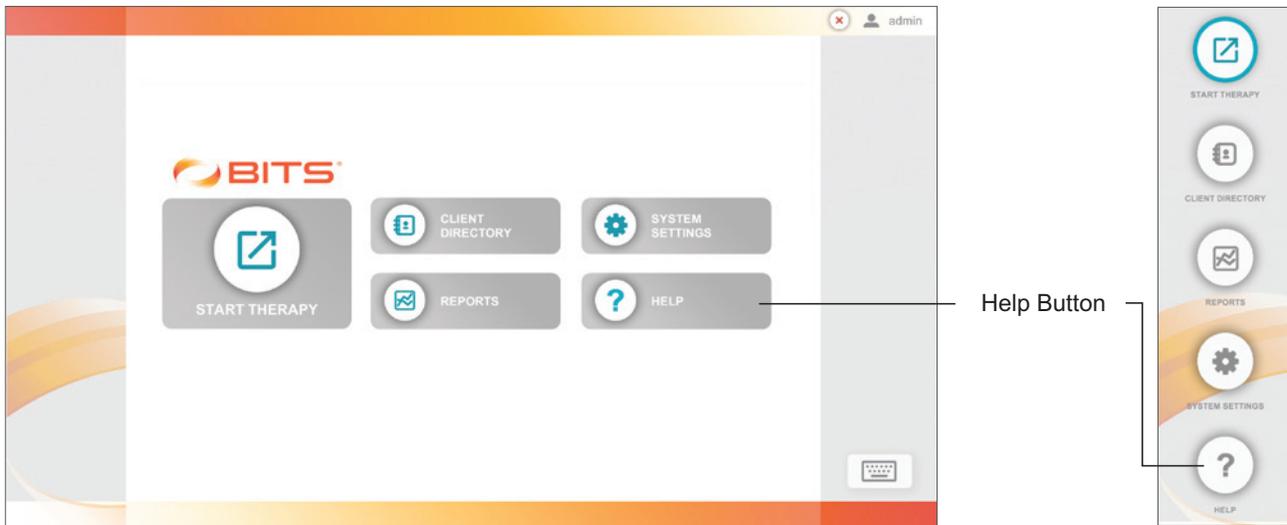


Figure 21-1: Location of Help Button Home Screen (left), Navigation Bar (Right)

2. The Adobe Reader Program will launch and a pop up window will open displaying the BITS Clinician's Guide.

Maintenance and Cleaning

Maintenance

The display monitor should be able to move smoothly and easily on the tower of the portable stand and stay in place. If movement is difficult or the display monitor does not stay in the desired position, then adjustment to the tension in the tower is needed.

To adjust the tower tension:

1. Make sure the touchscreen display monitor has been moved to the highest position on the stand tower.
2. Remove the cover on the top of the portable stand tower.
3. To tighten the tension, use a 14 mm wrench to turn the nut clockwise.
4. To loosen the tension, use a 14 mm wrench to turn the nut counter-clockwise. Depending on the adjustment, it may take several turns to notice a difference in the tension.
5. Put the cover back on the portable stand tower.

Cleaning

Touchscreen Display Monitor

It is important to keep the touchscreen display monitor clean for proper operation and longevity of the product.

To clean the touchscreen display monitor:

1. Turn the Bioness Integrated Therapy System off and unplug the device from the socket-outlet.
2. Use the provided Touchscreen Cleaning Kit or a non-abrasive (alcohol and ammonia free) glass cleaner solution to clean the touchscreen.
(Product Number: 20-0011. To order the Touchscreen Cleaning solution, contact your local Bioness Representative)
3. Spray the solution onto a clean microfiber cloth.
4. Wipe the surface of the touchscreen display monitor. Use circular motions to clean to avoid smudges and streaks.



Caution: Do not use any chemical solvents that are acidic or alkaline cleaning agents.



Caution: Always exercise universal precautions and wear gloves when cleaning the touch screen.

BITS Bedside & Mobile

BITS Bedside & Mobile touchscreens are medical grade and have antimicrobial housings. The entire systems can be wiped down and cleaned with sanitizing agents that are commonly used in hospitals.

Keyboard and other accessories can be wiped with facility approved disinfectant wipes.

Cleaning the BITS Bedside & Mobile Hardware

1. Turn the BITS Touchscreen PC off by closing all software programs and shutting down the Windows 10 Operating System.
2. Unplug the device from the wall socket.
3. Follow the protocol for your facility to determine which cleaning solution should be used.
4. The components of the BITS Bedside & Mobile configurations are safe to use with most common hospital cleaning solutions.
5. Unless a pre-moistened wipe is used, apply cleaning solution onto a clean microfiber cloth.
6. Wipe the surface of the touchscreen display monitor. Use circular motions to clean to avoid smudges and streaks.
7. Wipe down all surfaces of the Touchscreen PC and stand.

Sensor

To clean the Sensor:

1. Ensure Sensor is powered off.
2. Using a low-level disinfecting wipe, wipe the outside of the Sensor. Do not allow liquid to enter the charging port.

Note: Sensor electronic components are not waterproof; do not immerse them in water.

 **Caution:** Always exercise universal precautions and wear gloves when cleaning the Sensor.

Straps

To clean the straps:

1. Spray the straps with Clorox® Hydrogen Peroxide Disinfecting Cleaner.
2. Wipe the straps thoroughly with a cloth to clean and remove any remaining residue of the solution.

 **Caution:** Always exercise universal precautions and wear gloves when cleaning the straps.

Technical Specifications

55" Display Technical Specifications

Stand Specifications	
Lift Range	20" (50.8cm)
Tilt Range	20 degrees
Display Rotation	90 degrees
Mobility	Four (4) low friction casters, Two (2) lockable
Keyboard Shelf	Supplied
Cord Management	Supplied
Shipping Dimension	66" (167.6cm) (l) x 20" (50.8cm) (h) x 14" (35.6 cm) (d)
Shipping Weight	122 lbs. (55kg)
Assembly	Pre-Assembled

Computer Specifications	
Operating System	Windows 10
Type	Intel NUC®
USB Ports	Four (4) with expansion hub
Keyboard	Wireless Bluetooth with integrated mouse

Display Specifications	
Touchscreen	Integrated 5-point touchscreen
Size	55" (139.7cm)
Calibration	Recommended upon initial set-up
Material	Glass with aluminum border
Cleaning	Use the provided Touchscreen Cleaning Kit, or, non-abrasive disinfectant (alcohol & ammonia free) followed by glass cleaner on a soft cloth

Motion Sensor Technical Specifications

Motion Sensor Specifications	
Dimensions	Length 57.404 mm (2.26 in.), Width 37.084 mm (1.46 in.), Height 11.5 mm (0.45 in)
Weight	28 grams (0.704 oz.)
Service Life	2 years
Charging	USB-C charging port
Classification	Type BF applied part
Operating Voltage	Rechargeable Lithium Polymer 3.7 volt battery, 310 mAh capacity
Connection	Wireless, Bluetooth Low Energy 5.0 (BLE)
Cleaning	Ensure sensor is powered off. Using a low-level disinfecting wipe, wipe the outside of the sensor. Do not allow liquid to enter the charging port.
BLE Communication	2.4 GHz
Wireless Link Specification	Bluetooth Low Energy (BLE) Transmission Power: Complies with FCC 15.249 (for U.S.)
Environmental Conditions	Transport & Storage Temperature: -20°C (-4°F) to 55°C (+131°F) Operating Temperature: 5°C (41°F) to 55°C (+131°F) Relative Humidity: 25% to 85% Atmospheric Pressure: 50 kPa to 106 kPa Protection Against Ingress of Water: IP68 per IEC 60529
Conformity Certification	The BITS Sensor 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

Radio Communication Information

Several components of the Bioness Integrated Therapy System use radio communication. They have been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 (Radio Frequency Devices) of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in an environment. This equipment generates, uses, and can radiate radio frequency energy. If not used as instructed, this equipment may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular environment. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the clinician is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna
- Move the equipment farther from the receiver.
- Consult the manufacture, dealer, or an experience radio/television technician for assistance.

Radio Equipment Directive (RED) Declaration of Conformity Statement

Hereby, Bioness, Inc. declares that the radio equipment is in compliance with Directive 2014/53/EU. This product operates at 2402-2480 MHz with the maximum RF output power not to exceed 4dBm.

Electromagnetic Emissions

The Bioness Integrated Therapy System is medical electrical equipment and applicable components were tested for electromagnetic compatibility (EMC) in accordance with International Electrotechnical Committee (IEC) 60601-1-2. The Bioness Integrated Therapy System should be configured and used in accordance with the instructions provided in this guide.

Chest Strap Technical Specifications

Chest Strap Specifications	
Sizes	XSmall – Small 20 to 33 in. (50.0 - 83.8cm) Medium – XLarge 28 to 52 in. (71.1 - 132.1cm) XXLarge – XXXLarge 42 to 77 in. (106.7 - 195.6cm)
Material	65% Polyamide, 35% Spandex
Environmental Conditions	Transport & Storage Temperature: -20°C (-4°F) to 55°C (+131°F) Operating Temperature: 5°C (41°F) to 55°C (+131°F) Relative Humidity: 25% to 85% Atmospheric Pressure: 50 kPA to 106 kPA Protection Against Ingress of Water: IP68 per IEC 60529
Cleaning	Spray the straps with Clorox® Hydrogen Peroxide Disinfecting Cleaner. Wipe the straps thoroughly with a cloth to clean and remove any remaining residue of the solution.

Balance Platform Technical Specifications

Balance Platform Specifications	
Dimensions	24" (61cm) x 24" (61cm) x 6.125" (15.6cm)
Tilt Range	5°-20° range (Range limiting feet can extend and have three settings: 2.5" (6.3cm) (not extended), 3.25" (8.3cm) (medium extension) and 4" (10.2cm) (fully extended))
Weight	30 lbs. (13.6kg)
Material	Aluminum plate, rubber bladder filled with foam
Environmental Conditions	Transport and Storage Temperature: -20°C (-4°F) to +60°C (+140°F) Operational Temperature: +5°C (+41°F) to +60°C (+140°F) Relative humidity: 25% to 85% Atmospheric Pressure: 50 kPa to 106 kPa
Cleaning	Wipe down the top plate with water on a cloth or towel.

Patch Technical Specifications

Patch Specifications	
Size	1.6 in ² (10.3 cm ²) per patch
Material	Hydrogel, polyethylene foam
Environmental Conditions	Transport and Storage Temperature: +5°C (+41°F) to +27°C (+81°F) Operational Temperature: +15°C (+59°F) to +40°C (+104°F) Relative humidity: 25% to 85% Atmospheric Pressure: 50 kPa to 106 kPa
Cleaning	Single Use Only

Software

Software Specifications	
Indications for Use	<p>The Bioness Integrated Therapy System (BITS) is intended to challenge and assess the visual, auditory, cognitive, motor, and balance abilities of individuals, including those with deficits resulting from traumatic injuries and movement disorders as well as competitive athletes.</p> <p>Examples of these abilities include:</p> <ul style="list-style-type: none"> • Visuomotor Coordination • Reaction Time • Visuospatial Perception • Visual & Auditory Processing • Working Memory • Physical & Cognitive Endurance • Balance Control • Postural Stability
Encrypted	The database file uses AES-256 Encryption
Privileges	Admin and user log-in privileges

The system consists of mechanical and electronic components. Inadequate handling of those components may cause health hazards. Disposal of the system must comply with local regulations.

Product Code Testing Summary

- Expected or observed adverse events and/or complications: None Known
- Performance measurements do not apply to BITS Balance
- Repeatability of measurements are not applicable to BITS Balance
- Construct validity does not apply to BITS Balance

Network Safety, Security, and Privacy

The security of Bioness products is an important factor in protecting information and systems from external and internal threats. Therefore, customers must take responsibility for maintaining a secure IT environment that is compliant with general IT standards. Bioness encourages customers to implement the following industry-standard practices:

- Physical Security (e.g. do not allow unauthorized individuals to use the Bioness Integrated Therapy System (BITS))
- Operational Security (e.g. do not leave sensitive information, such as exported report files open on BITS, and do not leave a logged-in BITS unattended, do not connect the system to the Internet and be careful inserting flash drives to BITS, do not alter the BITS software and install unauthorized software on it including Virus scan software.)
- Procedural Security (e.g. create awareness of the dangers of social engineering, create separate login credentials for each user for the BITS application, and disable unused accounts)
- Risk Management
- Security Policies
- Contingency Planning

The implementation of security practices may vary by site and include many other technologies, such as firewalls, virus scanning, and anti-spyware software, etc. Although online functionality is disabled on the BITS, a remote possibility remains that the system can be hacked or altered. If such an occurrence is suspected, contact Bioness Product Support at 800.211.9136, Option 3 (USA & Canada) or your local distributor. Additional information related to security, privacy, and available software upgrade to the system can also be requested from this department.

Data Security

BITS is designed to only accept radio frequency (RF) communications from recognized and linked devices.