WELCOME TO

INSiGHT™

Powered by **Synapse**

USER MANUAL

Synapse User Manual (295-027, Rev I)

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CLA Inc

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1. Part I – Familiarize: Activating Synapse XLE

This user manual was designed for new and current clients to easily understand the full potential that the INSiGHT has to offer. This user manual itself focuses on how to use Synapse, the software that powers your INSiGHT Scanning Technologies. Basic instrument review is included. If you would like more training on how to scan, interpret, and report, reference the “INSiGHT Academy” or email us at info@insightcla.com.

Note: There are two modes of Synapse. Synapse XLE and Synapse INSiGHT Bridge:

- Synapse XLE mode connects the INSiGHT instruments directly to an iPad. All the latest INSiGHT technologies are designed to operate in the Synapse XLE mode.
- Synapse INSiGHT Bridge mode connects the INSiGHT scanning technologies to an iPad through a microcomputer called the INSiGHT Bridge. Clients with older INSiGHT scanning technologies use Synapse INSiGHT Bridge mode. If your INSiGHT came with an INSiGHT Bridge, there are specific sections for your review included in the user manual. Follow the prompts to get access to specific sections.

1.1. Step 1. Check System Requirements

NOTE: An internet connection is needed for the initial set-up of your INSiGHT technologies. After you complete Part I and Part II of this User Manual, Synapse can operate without internet for limited amounts of time.

Checklist before getting started:

- iPad (Recommended) iOS version 11 or higher; or
- Fast to Very Fast internet connection speed
- INSiGHT Scanning Technologies

1.1.1. Network/Router Configuration

Feel free to share this information with an IT or networking specialist.

Synapse is designed to operate in a secure/password protected 2.4 GHz / 5.0 GHz connection that is not VLAN isolated or subnetted. Your network should operate at 70%+ signal strength on your SSID broadcast, which is considered industry standard.

Most routers will support a WPA-2 password encryption and have 2.4 GHz turned on as a default, which extends internet range and allows for more reliable connections. If you suspect yours may not be broadcasting, consult your router manufacturer or hardware manual for more information on how to turn it on.

All in one modems are not recommended.

NOTE: If you have an INSiGHT Bridge, and operate Synapse INSiGHT Bridge Mode, Synapse INSiGHT Bridge mode will not operate or onboard to hospitality/hotel or guest network configurations. Also, Synapse INSiGHT Bridge mode will not work on a 5.0 GHz network.

1.2. Step 2. Review Connectivity

If you have an INSiGHT Bridge, refer to Synapse INSiGHT Bridge Connectivity section

Synapse XLE connects the INSiGHT instruments directly to an iPad. All the latest INSiGHT technologies are designed to operate in the Synapse XLE mode. Scanning with Synapse XLE is performed exclusively on an iPad allowing for a streamlined, state-of-the-art, chiropractic neuro-spinal examination.

Some Clients use the Synapse INSiGHT Bridge mode. This mode connects the INSiGHT scanning technologies to an iPad through a microcomputer called the INSiGHT Bridge. Clients with older INSiGHT scanning technologies use Synapse INSiGHT Bridge mode. If your INSiGHT came with an INSiGHT Bridge, there are specific sections for your review included in the user manual. Follow the prompts to get access to specific sections.

1.2.1. Synapse XLE Mode

Synapse XLE mode is considered the standard and recommended operating mode for scanning using Synapse. Synapse XLE mode implies you are connected to a stable internet connection described here. As the recommended standard operation mode, your router communicates to the cloud and iPad/Web Browser.

NOTE: A strong internet connection is required for initial onboarding and set-up of your INSiGHT technology.

1.2.2. Synapse XLE Offline Mode

Synapse XLE Offline mode can be used to perform Quick Scans when there is no available internet connection. Synapse XLE Offline mode as designed for offsite screening events. Synapse XLE Offline mode is not compatible to perform exams when in patient files.

When internet connectivity is less than optimal or absent (at event screenings, in hotel or conference settings, or with generally poor internet accessibility including network hardware (router etc.) failures), Synapse XLE Offline Mode can be easily activated to perform Quick Scans. Synapse XLE automatically detects when you lose internet connection. You will be prompted to use Synapse XLE Offline Mode to continue scanning using Quick Scans. When the iPad reconnects to the internet, Synapse XLE mode will reactivate automatically.

You can easily share a Quick Scan to engage with current or potential patients using on the following methods:

- Take a screenshot of the results of the Quick Scan
- AirDrop the Quick Scan pdf (make sure AirDrop is turned on before disconnecting from the internet)
- Share the Quick Scan and send once reconnected to the internet

NOTE: The initial addition and pairing of INSiGHT instruments MUST be done in Synapse XLE mode in an area with stable and active internet connection. Onboarding cannot be done in Synapse XLE Offline mode. Always have your INSIGHT instruments successfully paired before attending an offsite screening event.

1.3. Step 3. Understand Software Usage Options

If you have an INSiGHT Bridge, refer to Synapse INSiGHT Bridge Application Options.

Synapse was designed to be used on an iPad. Synapse XLE connects the INSiGHT instruments directly to an iPad making the setup and integration fast and easy. Scanning with Synapse XLE is performed exclusively on an iPad allowing for a streamlined, state-of-the-art, chiropractic neuro-spinal examination. Synapse XLE also allows users to access and view Patient data and reports through a web browser on a PC or Mac via the Synapse Doctor.

Note: Scanning must be performed on an iPad for Synapse XLE users.

1.3.1. Synapse XLE via iPad

Synapse was built to perform scans on iPads.

To have a seamless scanning experience, be sure to do the following BEFORE using your iPad:

- Verify your iPad can run version iOS 11.0 and higher
- Verify you have an email account set-up on your iPad (If you plan to email scans to patients)
- Verify you have AirDrop turned on and available to **everyone**
- Turn **on** automatic App updates
- Turn **Passcode Off** to avoid screen timeout
- Invest in an iPad charging dock for continual charging when docked; or
- Turn off your iPad off when not in use to preserve battery life
- Turn on TouchID and create fingerprints for all Examiners

NOTE: Using Synapse via an iPad does not allow you to update or modify your billing information, add/edit examiners, and configure your profile information for our INSiGHTChiros.com directory listing. These functions must be completed in the Doctor Portal via Web Browser.

1.3.2. Synapse XLE via Launch App (Web Browser)

Synapse can be operated via web browser through the Doctor Portal using either Chrome or Safari. Chrome is the preferred web browser for Synapse. **You do not download or install anything on your local machine to operate Synapse.**

Visit the Synapse Doctor Portal, or Synapse Doctor Portal if your office is outside of the US, to enter your credentials and login.

After you are logged in, you will be in the Doctor Portal. You will have access to your practice scanning stats, patient data, and account settings. When you are logged into the Doctor Portal as the primary doctor, **you will have the added functionality to update your billing information, add/edit examiners, and configure your profile information for our INSiGHTChiros.com directory listing.**

NOTE: To launch Synapse, click “Launch App”. You cannot perform exams from the web browser Synapse XLE launch app experience. All other Synapse via iPad App functionality is available (i.e., create new patients, reporting).

1.4. Step 4. Account Setup

Immediately after purchasing your INSiGHT Scanning Technology, you should have received an email containing an invitation to create credentials for Synapse.

If you did not receive the email, please email us at info@insightcla.com. **The first time you set-up your account, it will be via web browser. After you create your credentials, you will be introduced to the Synapse Doctor Portal, or Synapse Doctor Portal if your office is outside of the US.**

- The home screen allows you to view key metrics from your office's patients including average CORESCORES, average scan scores, and other select practice statistics. **Note: Quick Scan data will not be included in these metrics as this data is not saved to a patient file.**
- The left navigation bar allows you to access patient information, settings, and launch Synapse for scanning. You must be logged into the Doctor Portal to launch Synapse for scanning via web browser.
- The upper right hand corner allows you to view your account information and change your password.

NOTE: If using Synapse via iPad, download the Synapse App from the App Store by searching for INSiGHT Synapse on your iPad. The Synapse App is not available to download on an iPhone or from the Mac App Store.

Whether you launch Synapse from the web browser or an iPad, the first time you login, you will go through a brief tutorial so you understand the basic navigation. This tutorial is available to repeat from the Help section of Synapse at any time.

1.5. Step 5. Review INSiGHT Essentials

This section describes how to care for and maintain the longevity of your INSiGHT Scanning Technologies.

1.5.1. Charging Your Equipment

NOTE: IMPORTANT NOTE: DO NOT PLUG ANY EQUIPMENT INTO A WALL CHARGER THAT ACCEPTS A USB CABLE. ALL WARRANTIES WILL BE VOIDED IF UNAUTHORIZED CHARGING EQUIPMENT IS USED WITH INSiGHT TECHNOLOGIES.

INSiGHT Scanning Technologies will arrive fully charged and ready for use. All instruments in the wireless INSiGHT Scanning Technology suite have internal batteries that have an average minimum battery life of 90 minutes of continuous use.

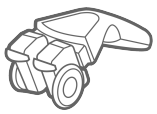
Battery level is viewable at the top of each respective instrument's scan screen.

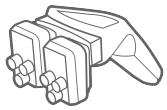
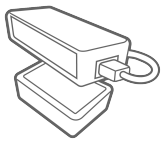
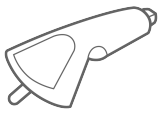
NOTE: You should not let your equipment fully lose charge. Charge your equipment when the battery level falls below 25%.

Each instrument except spineSENSE includes a cable that has a charging jack on one end and a USB connector on the other. Plug the charging jack into the instrument and the USB into a computer that is turned on to charge.

A powered USB hub may be used UNDER STRICT CONDITIONS. Please consider these points:

- Use only the charging cables, provided to you by CLA, when you purchased your wireless technologies (other charging cables or power supplies with similar connectors should never be used)
- If a USB port on a PC/laptop is not available for charging and a USB wall charger or powered USB hub is to be used, it is important that a reputable brand named device (eg. Apple, Anchor) is selected
- Laptops contain better voltage monitoring and provide a safer charging experience for CLA devices with an "Express" charging feature that provide a faster charge for devices such as cell phones and laptops should NOT be used for CLA devices
- If you choose to charge all instruments at the same time, you will need added USB ports and should charge them using a separate laptop or computer with USB ports

Equipment	Equipment Name	Jack Location	Charging Status
	neuroTHERMAL	Bottom of handle	Yellow LED light when charging. Green LED light when fully charged. Onboard screen version displays "Charger Attached" Green bar indicates fully charged.

	neuroCORE	Bottom of handle	“Charger Attached” on the unit’s screen.
	neuroPULSE	Front of unit	Flashing green LED when charging, Solid green LED light when charged.
	spineROM	Base Unit (Unplug from Satellite to charge)	Yellow LED light when charging. Green LED light when fully charged.
	spineSENSE	N/A	The spineSENSE plugs into the neuroPULSE, and therefore, the neuroPULSE must be charged.

1.5.2. Instrument Specifications

Wireless Instrument Specifications

Wireless wEMG (neuroCORE)	
Range	0.6 uV – 225 uV
Bandpass Filter	20 – 500 Hz
Signal Transmission Distance	Minimum 10 feet
Range of Load Impedances	500Ω – 5MΩ

Wireless wRT (neuroTHERMAL)	
Range	Room Temperature – 101 F
Minimum Room Temperature	54.8 F/ 12.7 C
Accuracy at 91 F/32.8 C	+/- 0.5 F/ 1.3 C
Distance at 20” roll	+/- 5%
Signal Transmission Distance	Minimum 10 feet

Wireless wPWP (neuroPULSE)	
HR Detection	+/- 1%
Temperature at 77.8 F/35.4 C	+/- 2 F/ 1.1 C
Signal Transmission Distance	Minimum 10 feet

Dual Inclinometer (spineROM)	
Range	0 – 360 degrees
Tolerance over 90 degrees	+/- 5 degrees
Signal Transmission Distance	Minimum 10 feet

Wired Instrument Specifications

Insight Discovery Console	
Input Voltage	110/220 VAC
Input Frequency	50/60 Hz

EMG	
Range	2 uV – 100 uV
Bandpass Filter	20 – 500 Hz
Range of Load Impedances	500Ω – 5MΩ

Thermal	
Range	Room Temperature – 101 F/38.3 C
Minimum Room Temperature	54.8 F/ 12.7 C
Accuracy at 91 F/32.8 C	+/- 0.5 F/ 0.3 C
Distance at 20” roll	+/- 5%

PWP	
HR Detection	+/- 1%
Temperature at 77.8 F/ 25.4 C	+/- 2 F/ 1.1 C
Range	0 – 150 psi
Tolerance at full range	+/- 10%

Inclinometer	
Range	0 – 360 degrees
Tolerance over 90 degrees	+/- 5 degrees

1.5.3. Caring for your Equipment

General Guidelines

- Treat INSiGHT Scanning Technologies gently and with great care. They are precision instruments. Do not drop, slam, or hit the equipment against any surface.
- The recommended charging method is to use the CLA supplied charging cables plugged into a desktop or laptop computer. Only use the charging cables that are supplied by CLA. Do not plug into wall chargers that accept USB connections or USB hubs.
- Don’t let the battery completely drain on the equipment.
- Instruments cannot operate while being charged, so plan ahead and make sure that your devices have adequate battery charge before scanning.
- When charging devices, make sure that the device being charged is stored such that the charging cable is not bent or twisted. Do not wrap the charging cables tightly when not in use as it may promote shorting of the cables.
- Do not use any external power supplies to charge the CLA equipment. Often these power supplies exceed the voltage requirements for the CLA equipment and can cause damage to the unit(s).

neuroCORE

- When prepping the skin for scanning, use standard isopropyl alcohol.
- The sponge dip tray should be filled with isopropyl alcohol and positioned to dampen the sensors while scanning.
- Do not use water, gel or skin prep sprays of any kind.
- The gold electrodes that contact the skin will need to be replaced after repeated scanning.
- The gold finish will begin to dull which is an indication that the electrode covers need to be replaced. These can be purchased online at the CLA store.

neuroTHERMAL

- Do not lubricate the wheels on the instrument.
- The left wheel is geared and is naturally less mobile.

neuroPULSE

- The gold electrodes that contact the skin can be cleaned with standard isopropyl alcohol. If the gold contacts become dull, they can be replaced by returning the unit to the factory.
- Gently wipe the platform and the sensors with an alcohol swab after each scan.

spineROM

- Use only the cable provided with spineROM to connect the Base and Satellite devices.
- Use caution and do not force the cable connectors into the Base and Satellite devices.

spineSENSE

- Do not store the unit in any way that will cause continuous pressure to be applied to the end of the spineSENSE patient contact rod.

INSiGHT Bridge

- The INSiGHT Bridge should be:
  - Positioned within 20-30 feet of the scanning technologies to maintain Bluetooth range.
  - Elevated to increase connectivity.
  - Positioned at least 6 feet away from WiFi access points such as routers or other network switches.

2. Part II – Initialize: Setting up your INSiGHT Technologies

If you have an INSiGHT Bridge, jump to Step 1: Onboarding INSiGHT Bridge.

This section is considered a quick start guide to setting up your INSiGHT Technology for the first time.

2.1. Step 1. Synapse XLE Onboarding

This section describes how to onboard your INSiGHT Scanning technology to Synapse XLE. An iPad and internet connection is necessary to onboard your INSiGHT Scanning Technologies.

NOTE: The process is the same for each instrument. For the purposes of this manual, we will use neuroCORE as our example for pairing your instruments.

Before you get started, verify that your INSiGHT Scanning Technology is powered on, in range of your iPad, For multiple INSiGHT Technology scenarios, be sure you are pairing the correct technology to the iPad.

For first time set-up:

- Step 1: After logging into Synapse on your iPad you will be taken though a tutorial to set-up your equipment (Fig. 1).
- Step 2: Make sure the iPad is within 6 feet of the INSiGHT Scanning Technology(s)
- Step 3: Choose the INSiGHT Scanning Technology you would like to add (Fig. 2).
- Step 4: Be sure your tech is powered on (Fig. 3)
- Step 5: Synapse will detect available INSiGHT Scanning Technology (Fig. 3).
- Step 6: Select the INSiGHT Scanning Technology from the list that matches the Serial Number of the hardware (Fig. 4).
- Step 7: Your instrument will successfully connect (Fig. 5).
- Step 8: If you have additional instruments to pair, continue to Add more INSiGHT Scanning technology(s) following Step 3 – 7.

Fig.1

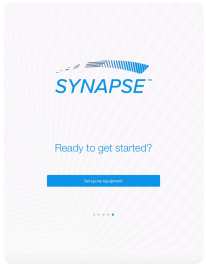


Fig. 2

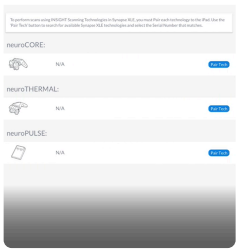


Fig. 3

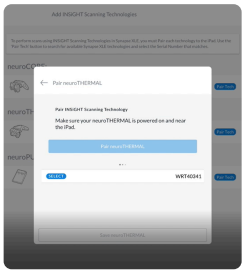


Fig. 4

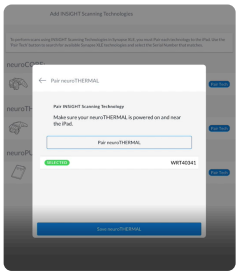
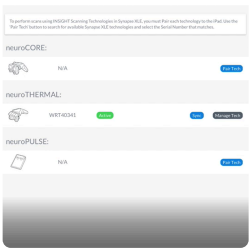


Fig. 5



If you exit this screen or would like to resume pairing later, you can add instruments at a later time by doing the following:

- Step 1: Choose Settings from the home screen (Fig. 6).
- Step 2: Choose Synapse XLE (Fig. 7).
- Step 3: Choose Add New Technologies (Fig. 8).

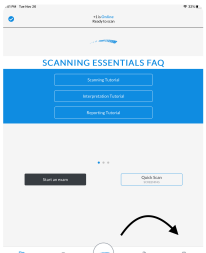


Fig. 6

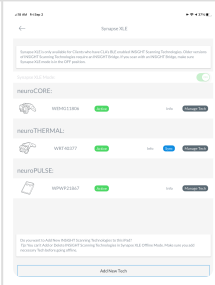


Fig. 7

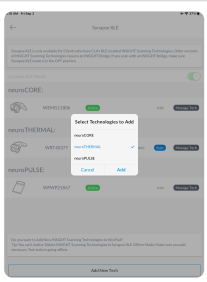


Fig. 8

Once you successfully onboard your INSiGHT Scanning Technology, the iPad will automatically pair to them each time you are within range and the instruments are powered on.

NOTE: You will need an additional iPad for each similar piece of INSiGHT technology that is used simultaneously in the office. Each iPad can only pair one instrument of its kind at once. For every similar piece of technology you own, you will need an additional iPad (Ex: Two wireless neuroTHERMAL instruments in the same office being used at the same time will require two iPads).

2.2. Step 2. Migrate Your Data (Existing Clients Only)

If you are new to CLA, or do not wish to migrate your patient data, jump ahead to Part III: Customize: Manage your Synapse Account.

NOTE: If you are currently using myINSiGHT or 9.2 and need to schedule to have your data migrated, please follow these instructions:

Step 1: Visit this link to schedule a date and time for your data to migrated.

- You will need your myINSiGHT Office ID and Synapse Email address

Step 2: An INSiGHT Account Advisor will migrate your data on the date/time requested

- Do not scan any patients AFTER the day and time selected.
- Your data will be migrated and we will notify you when you can resume scanning. The typical migration can take between 30 minutes to 5 hours depending on the amount of data in your account.
- You do not need to be on the phone or involved in the migration process after your initial appointment is made.

NOTE: CORESCORE Reports will transfer over, but individual and dual reports will not be available for migrated data.

3. Part III – Customize: Manage your Synapse Account

There are multiple settings you can configure to customize your Synapse scanning experience. This section explores which settings are available from the iPad, Doctor Portal, and Launch App.

3.1. Step 1. Doctor Portal Settings

- Access the Doctor portal by visiting https://portal.insightsynapse.com, or https://portal.insightsynapse.ca if your office is outside of the US.

3.1.1. Settings

Under Settings you can:

- Add or update your logo (this will sync with your iPad/Launch App).
- Update your practice name (this will sync with your iPad/Launch App).
- Update your billing information (this will only be available to the primary doctor and is only available in the doctor portal).
- Switch Synapse Software Subscription term from Monthly / Annual.
- Add/Edit practice locations (this will sync with your iPad/Launch App).
- Add/Edit practice examiners (only available in the Doctor Portal).

3.1.2. Account Info

Account info will give you the ability to:

- Update your email.
- Update your phone number.
- Reset your password.

3.2. Step 2. Synapse App Settings

If you have an INSiGHT Bridge, go to Part III: Manage INSiGHT Bridge.

This section reviews which settings are available from the iPad / Launch App using a web browser.

3.2.1. Synapse XLE

Synapse XLE mode is available for Clients who have Bluetooth Low Energy (BLE) enabled INSiGHT Scanning Technologies. To perform scans, Synapse XLE should be toggled on at all times.

From the Synapse XLE Settings, there are several actions you can take: (Fig. 1)

- See what INSiGHT Scanning Tech is Active and Ready to Scan with
- Manage Paired Tech (Replace, Delete)
- Add New Technologies to the iPad for easy access in the future
- Sync your neuroTHERMAL

Note: Synapse XLE mode can be toggled on / off. This is not recommended. Synapse XLE mode should be toggled on at all times to use BLE enabled INSiGHT Scanning Technologies. If Synapse XLE mode get turned off inadvertently, **turn Synapse XLE mode back on**:

- Step 1: Toggle Synapse XLE mode **ON**
- Step 2: Pair Tech you intend to use

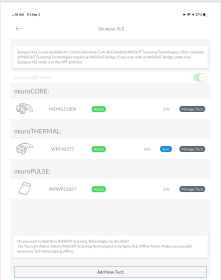


Fig. 1

3.2.1.1. Manage INSiGHT Scanning Tech

Once paired, you can replace or delete the paired tech. You may want to Replace currently paired tech with another tech in your office. The Delete is reserved for technical support use. It is not encouraged to delete paired tech from the iPad.

To manage INSiGHT Scanning Technologies, select Manage Tech. From here, you have the option to Replace or Delete the tech.

To Replace or Delete the tech:

- Step 1: Select the Tech by clicking on serial number row (Fig. 1)
- Step 2: Select desired action (replace, delete) (Fig. 1)

Note: It's important to pair the instruments in a WiFi environment. You cannot pair them when in Synapse XLE Offline mode. Always ensure your instruments are paired and active BEFORE attending an outside screening where WiFI access may be an issue.

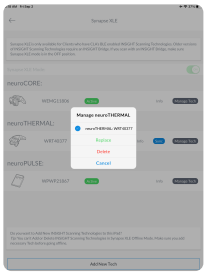


Fig. 1

3.2.1.2. Add New INSiGHT Scanning Tech

New INSiGHT Scanning Technologies can be added to the iPad. New tech added will be saved as a previously connected device.

NOTE: Each iPad can only pair one instrument of its kind at once. The iPad will save previously connected devices for easy reconnection. For every similar piece of technology you own, you will need an additional iPad to perform exams at the same time (Ex: Two wireless neuroTHERMAL instruments in the same office being used at the same time will require two iPads).

To Add New INSiGHT Scanning Technologies:

- Step 1: Select Add New Tech
- Step 2: Select desired tech to add
- Step 3: Pair new Tech if you want to use that Tech to perform an exam

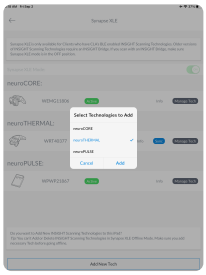


Fig. 1

3.2.1.3. Sync neuroTHERMAL

One-sided thermal scans are rarely caused by a faulty thermal scanner. They are usually due to examiner errors, actual patient readings or changes in scanning environment temperatures. If you detect imbalanced, one sided readings on THREE successive scan exams from different patients, you can check to see if the instrument sensors are synced.

NOTE: You only need to sync if you notice readings are shifting towards one side. Do not use this sync process as a part of regular maintenance.

How to Sync neuroTHERMAL:

- **Step 1:** Select “Sync neuroTHERMAL” (Fig. 1)
- **Step 2:** Select “Begin Sync” (Fig. 2).
- **Step 3**: Make sure your neuroTHERMAL is powered on and in within range of your iPad.

Start with the Left Sensor

- **Step 4**: Locate a small freckle on the inside of your forearm to use as a spot to carry out the sync
- **Step 5**: Point the left sensor ¼-½ inch away from the freckle
- **Step 6**: Do not touch the instrument to the skin
- **Step 7**: Watch the Display box titled Left (Fig. 3)
- **Step 8**: Wait for the Average temperature to match the Reading temperature displayed in red (Fig. 3)
- **Step 9**: Pull the neuroTHERMAL trigger to lock in the left sensor reading (Fig. 3)

Continue with the Right Sensor

- **Step 10**: Locate a small freckle on the inside of your forearm to carry out the sync
- **Step 11**: Point the left sensor ¼-½ inch away from the freckle
- **Step 12**: Do not touch the instrument to the skin
- **Step 13**: Watch the Display box titled Right (Fig. 4)
- **Step 14**: Wait for the Average temperature to match the Reading temperature displayed in blue (Fig. 4)
- **Step 15**: Pull the neuroTHERMAL trigger to lock in the right sensor reading (Fig. 4)

A notice will be appear **confirming that your neuroTHERMAL is In Sync** and that the Sync process is complete* (Fig. 5)
If your neuroTHERMAL was already In Sync, the Sync status will confirm that your neuroTHERMAL was already In Sync and continues to be (Fig. 6).

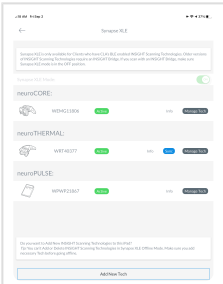


Fig. 1

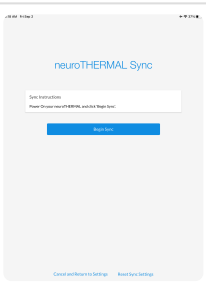


Fig. 2

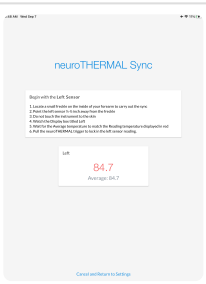


Fig. 3

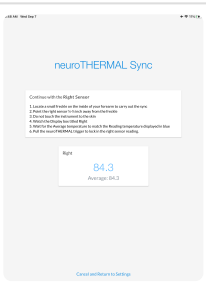


Fig. 4

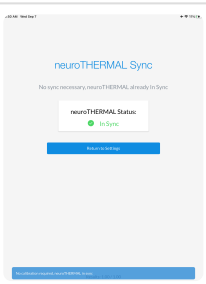


Fig. 5

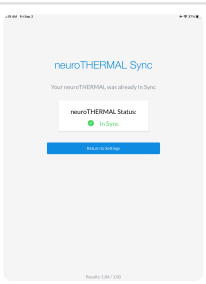


Fig. 6

3.2.2. Manage Practice

The Manage Practice section in Settings allows you to:

- Add/Edit your practice logo (visible on INSiGHTChiros.com)
- Add/Edit your photo
- Update your practice name (visible on INSiGHTChiros.com)
- Specify your practice techniques (visible on INSiGHTChiros.com)
- Manage practice locations (visible on INSiGHTChiros.com)
- Choose your system of measurement
    - Follow the prompt to choose either Imperial or Metric system of measurement
- Choose to enable or disable your thermal shift
    - We recommend using “disabled” when not relying on pattern analysis
    - When “disabled”, the asymmetries are shown exactly as they are collected which can detract from pattern analysis
    - When “enabled”, Synapse automatically corrects for any left or right bias in a scan
    - This allows the viewer to look at patterns along the centerline.
- Choose your Scan Background Image
    - Choose a Blue or Muscle background for the scan images
    - We recommend muscle if you are primarily using the neuroCORE.
- Choose your desired report language
    - Choose from English, Dutch, French, German, Italian, Norwegian and Portuguese reporting.

As a Synapse subscriber, you have an enhanced listing in the INSiGHTchiros.com referral directory. You can choose to include your techniques and your practice details. This information is automatically populated in the directory from your practice information. Make sure your information is up-to-date.

3.2.3. Create Scan Protocols

You can customize the spine locations used in segmental thermal or EMG scanning. Create an unlimited number of preset protocols to make scanning your patients more efficient.

Step 1. Go to Settings
Step 2. Choose Scan Protocols (Fig. 1)
Step 3. Choose Create New Protocol and be sure to identify each new protocol with a unique descriptive name. (Fig. 2)
Step 4. Each segment can be managed by choosing to skip it or scan it bilaterally or unilaterally (most often used in narrow C-spine protocols). Press on the dual arrows beside each segment to choose the best option. (Fig. 3)

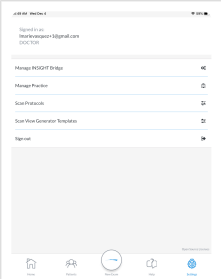


Fig. 1

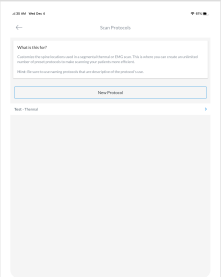


Fig. 2

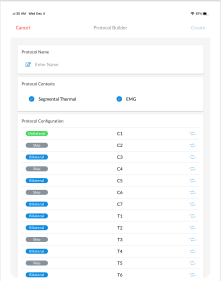


Fig. 3

3.2.4. Create and Edit Scan View Generator Templates

You can customize scan views in an unlimited number of prearranged template layouts. This is for use when showing patients their scan views, and you want to use your own layout. We recommend using your customized scan templates in conjunction with the Synapse Interpretive Reports for a great dialogue with your patients.

To create a custom template follow these steps:
Step 1: In the Synapse App, go to Settings > Scan View Generator Templates (Fig 1).
Step 2: Choose “New Template” (Fig 2.)
Step 3: Enter a name for your template. We recommend naming your template something that describes the type of layout you are using or something that you and your staff will easily recognize later (Fig. 3)
Step 4: If you select your template as a favorite, it will show up at the top of your list choices when you go to use the Scan View Generator tool (Fig. 3).
Step 5: Choose your configuration. The default layout is a 4×4 grid (displayed below the template configuration), but you change your column and row layout. Once you create your grid set-up, the preview automatically changes (Fig. 4 & 5)
Step 6: The grid layout displayed is the same layout that will accommodate your scan views. Choose your scan view by selecting the position, and hitting the dropdown arrow in the grid layout box. Once selected, swipe to see available scan views (Fig. 6).
Step 7: Choose the scan view you want in the grid position selected. This will be the default every time you use this template. Repeat Step 6 & 7 for the remaining boxes in your grid. (Fig. 7).
Step 8: Choose “Create” to finalize your template.

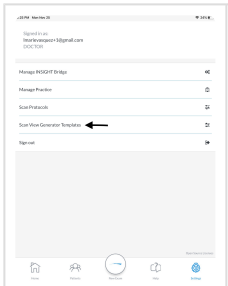


Fig 1.

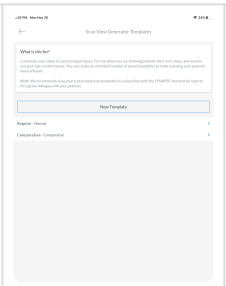


Fig 2.

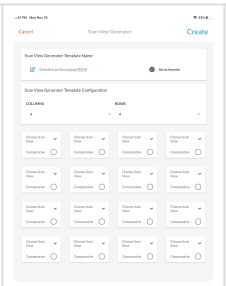


Fig. 3

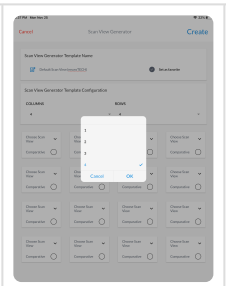


Fig 4.

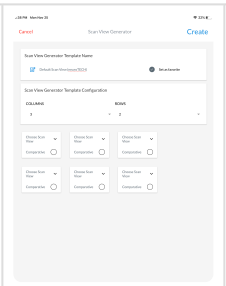


Fig. 5

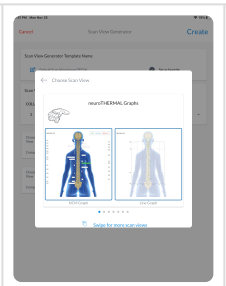


Fig. 6

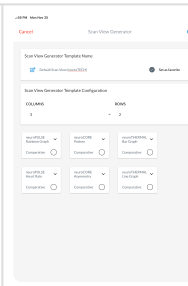


Fig. 7

To create a comparative template follow steps 1-6:
Step 7: Select “Comparative” in the grid box and you will be prompted to select a position for your comparative (Fig. 8). Locking the grid box for the comparative means that when you use this template, you will be prompted to choose the same type of scan view to compare to the original selected (Fig. 9)
Step 8: Repeat Step 6 & 7 for the remaining boxes in your grid.
Step 9: Choose “Create” to finalize your template (Fig. 10).

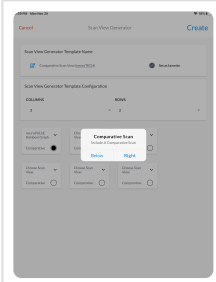


Fig. 8

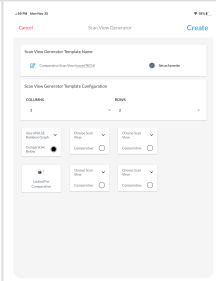


Fig. 9

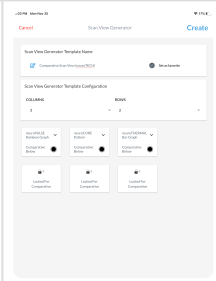


Fig. 10

You can also create or edit scan view generator templates from the patient file. Follow the below steps to create a new template.

Step 1: Navigate to the Patient File

*Step 2:" Choose Scan View Generator (Fig. 11)

Step 3: Select New Template (Fig. 12)

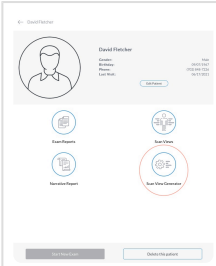


Fig. 11

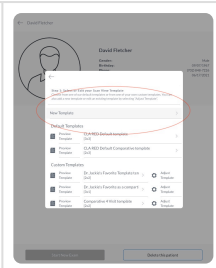


Fig. 12

To edit your template, you can either follow these steps:

Step 1: In the Synapse App, go to Settings > Scan View Generator Templates (Fig 13).

Step 2: Choose your template that you would like to edit

Step 3: Edit your template

Step 4: Choose "Save" to finalize your template (Fig. 14).

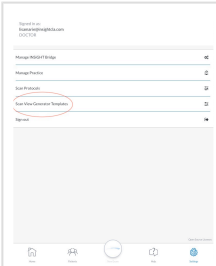


Fig. 13

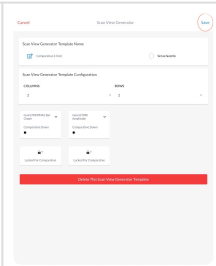


Fig. 14

You can also edit your template by following these steps:

Step 1: Navigate to the Patient File

Step 2: Choose Scan View Generator

Step 3: Choose Adjust Template next to the template you would like to edit (Fig. 15)

Step 4: Edit your template

Step 5: Choose “Save” to finalize your template

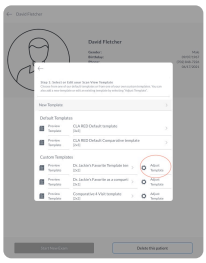


Fig. 15

4. Part IV – Organize: Understanding Scanning and Reporting

To get a deeper understanding of how to scan, interpret, or report, this information and more is also available in the “Help” area of Synapse.

4.1. Step 1. Review Scanning Options

This section includes how to properly prepare your environment and patient for a scan, as well as how to begin a scan, perform a scan, and end a scan.

4.1.1. neuroPULSE

This section outlines how to successfully perform a scan using the neuroPULSE (HRV).

4.1.1.1. Prep the Room

The neuroPULSE measures heart rate variability, and so for accurate readings to be obtained it is essential that the patient remains as undisturbed by external stimuli as possible. Therefore, it is important that:

- The iPad or INSiGHT Bridge is located within 15-30’ of the instrument. The scan be conducted in a stable, calm, quiet room.
- The instrument should be positioned on a flat surface level, centered with the patient’s chest.
- Ideally the LEFT hand should be used in the collection. This does not alter the outcome, but allows consistency when data is used in research.
- In cases of missing fingers or an amputated left arm, use the right hand and set-up the room accordingly.
- A collection using the ear clip or finger sleeve is appropriate for use in children. The ear clip is the most versatile as it can be clipped to the earlobe, fingertip or toe (anywhere a pulse point is accessible). Sensory children may tug at these sensors and so a finger sleeve is available for these children or infants. Neither the ear clip or the finger sleeve should be used regularly in adults.
- An alcohol wipe should be available to wipe down the instrument contact areas after use.
- A countdown timer on a phone or other device can be used by the examiner to alert to when the scan is complete (examiner should leave the room during collection in most cases).

4.1.1.2. Prep the Patient

The neuroPULSE's data collection is extremely sensitive, so it's important to know if there is anything that might interrupt the data or cause abnormal readings. Therefore, follow these steps to ensure data collection is accurate:

- Ask the patient if they have had any significant troubling episodes recently that may have caused anxiety. These may account for higher readings.
- Ensure that any and all distractions are accounted for:
    - Cell phones must not be on or used during the collection.
    - Videos or screensavers should be turned off.
    - Family or social interactions should be minimized for the time of collection.
    - Pacemakers are removed.
    - Pacemakers will affect the collection data and this should be noted.
- The patient should also be in their natural, resting state. This means that:
    - The patient's hand temperature is as close to room temp as possible. In winter climates the hand temperature acclimation should be a priority.
    - The patient has NOT conducted strenuous exercise within 2 hours.
    - The patient should be breathing normally throughout the scan, not in any irregular or forced pattern.
    - The patient is seated with their left hand positioned in the instrument at heart height, facing the scanning screen.
    - The patient does NOT meditate before and during the exam. The goal is to capture a string of heart beats when they are simply at rest in a calm, unaltered state.
    - The patient is to remain relaxed during data collection, which could be helped by focusing on the image presented to them on screen or by focusing on their pulse waves. Regular breathing is advised. Do not mediate or engage in artificial paced breathing.
    - Future re-exams should be conducted around similar times of day.
- In most cases, an adult, adolescent or older child's hand can be placed under the sensor cover with the MIDDLE finger positioned far enough into the sensor so that the fingertip end touches the small bump (temperature sensor) and the two tiny receivers (PPG: heart rate sensors) touch the fatty pad of the fingertip. The 2nd and 4th finger rest on the brass sensors (GSR). For younger children or patients with smaller hands, the ear clip of finger sleeve should be used.

Prepping Children:

- The neuroPULSE has been designed to collect reliable HRV readings in newborns, infants and children. Because of their small hand size and "wiggly" behaviours two additional sensors can be used: an ear clip and a finger sleeve.
- The collection time for a child may be lowered to 2 minutes if there is concern about movement and attention. Ideally 3 minutes is the lower time limit for HRV collection.
- The earclip can be applied to any pulse point with the earlobe being the primary choice. Fingertips and toes are alternatives.
- The finger sleeve is another option available, especially for sensory children who do not like the feel

of an ear clip. It can also be used in infants and newborns by slipping the middle finger into the sleeve.

- Restricting motion is the most important aspect of pulse wave collection. Once the sensor has been applied and the signal check is complete, the child's hand or body position should be gently held in place. Parents can hug/hold infants and children can have the parent in the room to limit anxiety and movements.
- Having the child watch the pulse wave or listen to a parent or examiner talking can make the collection proceed accurately.
- An infant can be positioned to lie on the exam table supported by a pillow during this exam.

4.1.1.3. Begin the Scan

Beginning a scan involves choosing your scan settings and checking the signals. Follow these steps to begin your heart rate variability scan:

- Decide if you are using the neuroPULSE unit, the ear clip, or the finger sleeve option. The latter are used with newborns and infants and should NOT be a regular practice with adults. Using this option stops the collection of finger temperature and anxiety testing (GSR) as the hand is not on the neuroPULSE sensors. Without these biometric markers, the levels of anxiety during testing cannot be confirmed.
- Pull up the neuroPULSE scan screen on your device. There are two ways to do this.
    - You can either click on “Start an Exam” from the home page,
    - Or you can click “New Exam” on the bottom taskbar.
- Next, select the patient you want to scan from the list that appears and click on the “neuroPULSE” icon.

From here, you’ll configure your scan settings (Fig. 1):

- Patient: Confirm you are scanning the correct patient, if not, you may change him/her here.
- Scan Purpose: Select what type of exam you will be performing.
- Resting Duration: Choose the resting duration between 10-120 seconds. The default is 10 seconds which allows the patient to stabilize before collection begins.
- Scan Duration: Choose the length of scan time, which is between one to five minutes.
    - In-practice testing has confirmed that three minute scan times are an adequate time to capture enough heartbeat intervals.
    - Scans for less than three minutes can be used on exams for anxious individuals or active children.
    - However, published research for cardiac assessment recommends a full five minute collection for the most accurate results.

- Ear Clip/Finger Sleeve: Check if you are using either to scan.
- Sounds: You can choose to have a male voice, female voice, or none as your guiding prompts.

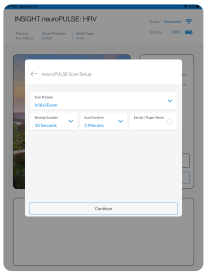


Fig. 1

After the settings are confirmed, click “Continue” to connect to the instrument (Fig. 2). Prompts will guide you to ensure that the neuroPULSE is powered on by holding down the trigger on the back of the unit. You will see the blue flicker on the face of the instrument. Hit “Connect to neuroPULSE”.

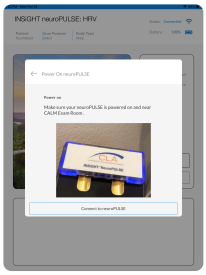


Fig. 2

4.1.1.4. Perform the Scan

All scans are conducted from their respective scan screens, which allow you to control the instrument and see the data that it is picking up in real time.

There are a few things to keep in mind when performing a neuroPULSE scan:

- A countdown timer is on screen allowing the patient to watch their scan's timing.
- Instruct your patient to watch the stream of their pulse profile during the test. Since rogue finger pressure and movements affect the pulse wave, a simple demonstration can be performed **prior to actual collection, during the 10 second pre-collection.** The patient can gently push pressure onto the middle fingertip and watch the pulse wave jump and become irregular. This confirms to the patient that they are to refrain from moving or creating an altered beat pattern by wiggling their finger.
- The scan should be performed uninterrupted, so once the testing sequence has started and the examiner is satisfied with the pulse wave collection, they can leave the room.
- Since your patient will be left unattended, your device will be locked to them.

NOTE: The Pin Code for the examiner to view the scan or leave the screen is 1234. This was instituted so that the unattended patient cannot access any other patient's files or view any patient data.

At this step, assuming that the instrument is active and the patient's hand is in the proper position, the instrument will begin to check the signals prior to the start of data collection. This confirms that the instrument is receiving the signals from the patient before the recording starts.

Click "Check Signal" to begin (Fig. 1)

- The signal check sequence is comprised of three combined biometric tests which are performed to ensure that consistent accurate data will be collected. A green light will indicate that the patient has passed each biometric test (Fig. 2).
    - Skin Temperature: Adequate fingertip temperature must be available. This means that patients with Raynaud's or small vessel disease may need to use the ear clip option.
    - Skin Conductance Response (SCR): Must be within reasonable levels to assure that anxiety is NOT affecting the heart rate collection data.
    - Heart Rate: A stable pulse rate must be available for the test to commence. Arrhythmias and other heart beat pattern will not allow for this green light to turn on.
- Once the three signal check tests are complete and the three green dots appear the patient is ready to be scanned. Click "Start Scan" and the actual test begins automatically.
- A 10-120 second pretest begins. Ten seconds is the default and is adequate. In some cases of extreme "white coat anxiety" a longer duration of resting time can be set. The resting icon is visible and you can view the countdown timer. This short duration of time allows possible "testing anxiety" from the patient to alleviate for more accurate readings. After this 10-120 second interval, the actual collection begins for whichever length of time was selected.
- Remind the patient to remain relaxed during data collection, which could be helped by focusing on the

image presented to them on screen.

- A countdown timer is on screen allowing the patient to watch their scan's timing.
- Regular breathing is advised. Do not mediate or engage in artificial paced breathing.
- Instruct your patient to watch the "live stream" of their pulse profile during the test. Since rogue finger pressure and movements affect the pulse wave, a simple demonstration can be performed **prior to actual collection**, during the 10 second pre-collection. The patient can gently push pressure onto the middle fingertip and watch the pulse wave jump and become irregular. This confirms to the patient that they are to refrain from moving or creating an altered beat pattern by wiggling their finger.
- Advise the patient to remove their hand from the instrument when the blue light on the instrument begins flashing, indicating the end of the test.
- The test is saved automatically when the testing ends.

Fig. 1

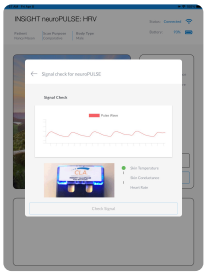


Fig. 2

4.1.1.5. End the Scan

After a scan is completed, you have the opportunity to review the results and continue or delete the scan to start again.

NOTE: A keypad screen pops up at the end of the scan. This feature stops the unattended patient from viewing their results and locks all other access in the app, ensuring HIPAA compliance. When the examiner re-enters the room they can unlock the scan view by entering the PIN 1234 (Fig. 1).

- You can swipe left on the iPad to see additional scan views (Fig. 2).
- After you hit continue, you can choose to View Report or Finish Exam (Fig. 3).
- To perform another HRV scan on the same patient, after you view the report, click “Done” and select the neuroPULSE icon again to start the scanning process over again (Fig. 4). You can preview the previous scans completed in that same day and choose which scan is most appropriate, noted as “active”, and use that one in your final report.

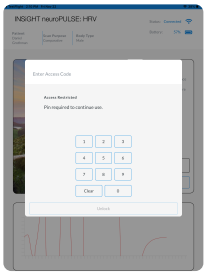


Fig. 1

Fig 2.

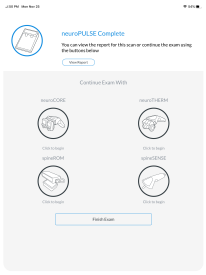


Fig 3.

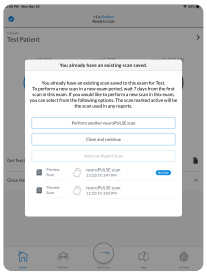


Fig. 4

4.1.1.6. Quick Scan

neuroPULSE Quick Scan automatically sets the time for 1 minute collection. This is not considered a valid collection time and so quick scans should be used for demonstration only. This is a useful “quick” set up option for screenings, corporate health and safety fairs, etc. They should not be saved to a patient’s file as they are too short a duration to be useful.

- All of the neuroPULSE training and setup applies to the Quick Scan feature with a variation on how to launch Quick Scan and a slight difference in scan setup options since **Quick Scans are not associated with a patient or saved to a patient file.**
- To launch, Choose the Quick Scan button on the Home page and click on the neuroPULSE icon.
- After a scan is completed, you have the opportunity to review the results and continue or delete the scan to start again.

4.1.2. neuroCORE

This section outlines how to successfully perform a scan using the neuroCORE (EMG).

4.1.2.1. Prep the Room

Paraspinal electromyographic scanning performs best in a controlled environment. The following is an example of the ideal preparation and set-up:

- The iPad or INSiGHT Bridge is located within 15-30’ of the instrument. Seated Posture and stable positioning are necessary to perform a static EMG scan. Standing EMG can be performed. Prone EMG cannot be performed. A proper patient stool is necessary. Sitting on a soft chair seat, using a chair with a back or arms and sitting on the side of a table is NOT advised.
- The stool should allow the patient to have their feet touch the floor. If this is not possible, children can put their feet on a small footstool.
- An examiner’s stool is necessary as to allow proper positioning and control. The examiner is seated behind the patient with enough space to stand up when scanning the upper thoracic and cervical spines.
- EMG and other scanning instruments CAN be used in an X-Ray room.
- Fluorescent lights and other electrical sources have been known to create electrical “noise” that can affect the scan quality. Try to minimize all manageable electrical noise in scan room. The wireless neuroCORE alleviates much of the interference from electrical outlets.
- Room temperature should be approximately 72F or 21C.
- neuroCORE sensor contacts should be inspected and cleaned with alcohol.
- For table side exams, allow 2-3+ minutes after adjustments or palpation for muscle tone resolution and more accurate readings.
- Ensure that sensor “sponge dip case” is filled with rubbing alcohol and positioned for easy access when scanning. Witch Hazel is not a good conductant and should NOT be used instead of rubbing alcohol.

DO NOT:

- Position the equipment where it can be handled by younger patients.
- Palpate or rest a hand on the spinal skin surface immediately prior to test.

4.1.2.2. Prep the Patient

Part of the success of your scan collection comes from an informed and prepared patient. Follow these guidelines:

- Provide your patient with a backless exam gown.
  - Female patients should remove their bras and any neck jewelry.
  - Male patients can use the gown or remove their shirt, loosen their belt, and expose S1. Remove any neck jewellery.
- The neck should be exposed with hair tied back. Tip: Provide a disposable hair elastic or hair clip if needed.
- Clean the patient's skin with cotton balls dipped in alcohol or alcohol wipe packets, especially in the neck hairline region. This removes dirt and excess oils which can affect conductivity.
- Ensure that:
  - The patient did NOT exercise within 45 minutes of scan.
  - The patient is seated upright on a stool facing away from examiner.
  - Their hip/knee position is 90 degrees.
  - Hands are resting on thighs, palms up.
  - Ask the patient to hold their gaze on a picture or point directly in front of them.
  - ***Hint***: have the scanning screen out of their view as it can distract them.
  - The patient does NOT move and has good, but not rigid posture during exam.
- Be familiar with spinal landmarks: especially S1, L1, T1, T7, C7, C2, C1L and R (fossa).

Prepping Children:

Children can be scanned with the neuroCORE from the ages of 5 and above. Some skilled examiners can accomplish this scan at 3-4 years of age depending on how calmly a patient can sit.

An EMG tests the seated gravitational load and so the patient must sit, without twitching or moving. A scan on a child may be interrupted and restarted if they move unexpectedly. A segment can also be easily rescanned if a poor collection is made.

- A shorter, 9 segment collection is adequate to achieve calculations used in the Children's CORESCORE. Go to settings > Scan Protocols and create this sequence.
- Consider S1, L3, L1, T10, T6, T3, C7, C5, C2, as the levels chosen (you can choose C1 unilateral as an option for C2).
- You may want to choose unilateral beginning at C5 to accommodate narrow spines.
- Set the sensors to collect approximately ½" – ¾" from the spinous process.

Patient checklists are available through INSiGHT Media and are recommended! Click here for more information.

4.1.2.3. Begin the Scan

Beginning a scan involves picking your scan settings and starting the scan. Follow these steps to begin your electromyographic scan:

- Set the width between the two sensors as appropriate for the patient. You will find two knobs underneath the sensors that you can twist to loosen them, at which point you can adjust them as needed. The sensors should be approximately ½” -¾” on either side of the patient’s spine. Don’t forget to tighten the set screws before conducting the scan.
- Setup the configurations for your EMG scan. There are two ways to do this.
    - You can either click on “Start an Exam” from the home page,
    - Or you can click “New Exam” on the bottom taskbar.
- Next, select the patient you want to scan, or you can add a new patient if the one you are looking for is not listed.
- From the list that appears, click on the “neuroCORE” icon. If you don’t see your equipment listed, be sure it is connected and paired.
- **From here, you’ll configure your scan setup (Fig. 1):**
    - Patient: Confirm you are scanning the correct patient, if not, you may change him/her here.
    - Scan Purpose: Select what type of exam you will be performing.
    - Protocol: Choose which protocol is best for the patient. Ideally there will be customized protocols especially for infants, cervical spines, the sacral region and other combinations that you can build out in the Scan Protocols section.
    - Position: Choose if the scan is being conducted in the standing or seated position.
    - Sounds: You can choose to have a male voice, female voice, or none as your guiding prompts.

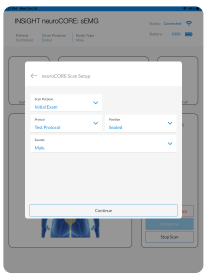


Fig. 1

After the settings are confirmed, click “Continue” to connect the instrument (Fig. 2). Prompts will guide you to ensure that the neuroCORE is powered on by holding down the trigger. You will see the blue bar run back and forth on the instrument’s screen. Click “Connect to neuroCORE”.

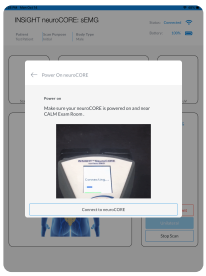


Fig. 2

At this point, you can click “Begin Scan” and you will be taken to the scan screen from which you will conduct the scan itself.

4.1.2.4. Perform the Scan

All scans are conducted from their respective scan screens, which allow you to control the instrument and see the data that it is picking up in real time.

There are a few things to keep in mind when performing an EMG scan:

- Each sensor has three contacts. Much like a three pronged plug, the lowest contact is the ground. When taking a spinal contact, touch the upper two contacts across a spinal muscle belly and then touch the bottom sensor to ground the connection.
- If the scanning range needs to be expanded due to spasticity in the muscle being tested, the normal 25uV range can be expanded up to 100uV. To change this, simply touch on the left or right frequency graphs and choose the desired frequency level. ***Note:*** this does not alter the sensitivity of the collection. It merely gives you a larger window to view the Red and Blue line activity.
- You may grip under the two sensors and squeeze them together to get better angular position when scanning narrow spines in children and adults.
- If a segment reading needs to be rescanned due to an inaccurate collection, a scan can be easily re-done. Click on the “redo last segment” button. The protocol will ask you to confirm the segment on the handheld matches the segment on the screen. You can confirm or restart the scan. (Fig. 1)
- To get an accurate reading at each level:
    - Touch the sensors to the patient’s skin at the current level.The contact should only be strong enough to indent the skin. Any more than this can push the patient forward.
    - Continue to watch the iPad screen at each spinal level to ensure that the red and blue lines reach a parallel position
    - The scan screen should say “Scan Ready” and not “Calculating” before you pull the trigger. This assures that the pace of scanning from segment to segment is controlled.
    - Pull the trigger when the red and blue lines have been parallel for 1-2 seconds and the screen says “Scan Ready”. (Fig. 2)
    - Alternately, you can watch the small screen on the neuroCORE to see the same lines as the one on your device’s screen. You’ll also see green and red lights on the neuroCORE’s screen. When both the lights turn green after the lines have been parallel to each other for a short amount of time, pull the trigger.
- To begin the assessment, start at S1 and follow the above guidelines to get an accurate reading. Then, you will be prompted to move to the next level in the protocol, continuing this sequence up the spine until you get up to the neck.
- The scan screen should say “Scan Ready” and not “Calculating” before you pull the trigger.
- To scan the neck:
    - A special “narrowing” feature is available when scanning the neck.
    - A unilateral sequence begins automatically at the C7 default level (this can be changed easily to whichever is the best level for that patient: narrow necks may require an earlier starting level). It is NOT necessary to use unilateral collection here.
    - Place the LEFT sensor on the LEFT spinal level being prompted. Pull the trigger, adhering to the collection guidelines above. Then you will be prompted to do the same on the RIGHT side using the RIGHT sensor up until C2.

- At C1, unilateral collection is ALWAYS necessary. Place the LEFT sensor over the LEFT lateral C1 position and get the reading, and then do the same on the RIGHT side with the RIGHT sensor.

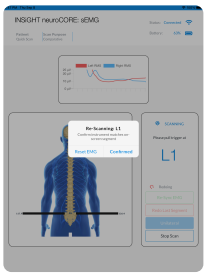


Fig. 1

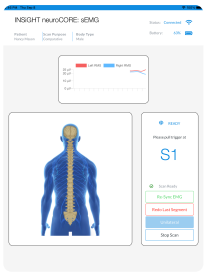


Fig. 2

Dr. Fletcher's Pro Tips:

A note about children, ranging from newborns to age 13:

- An EMG can only be accomplished when the child can sit upright and stay calm for the duration of the test.
- Skilled examiners can do EMG scans accurately from 3 years of age and older.
- Fewer spinal segments are required with a children's EMG scan to calculate the final CORESCORE.

4.1.2.5. End the Scan

After a scan is completed, you have the opportunity to review the results and continue or delete the scan to start again.

- You can swipe left on the iPad to see additional scan views (Fig. 1).
- After you click continue, you can choose to View Report or Finish Exam (Fig. 2).
- To perform another EMG scan on the same patient, after you view the report, click “Done” and select the neuroCORE icon again to start the scanning process over again (Fig. 3). You can preview the previous scans completed in that same day and choose which scan is most appropriate for use in the CORESCORE. Note it as “active”, and use that one in your final report.

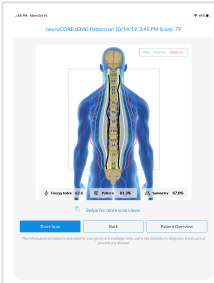


Fig. 1

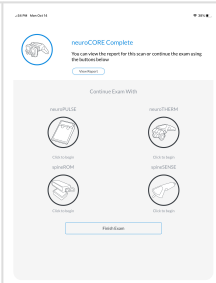


Fig. 2

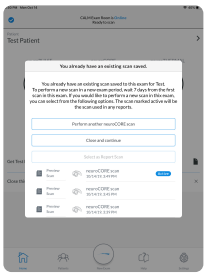


Fig. 3

4.1.2.6. Quick Scan

neuroCORE Quick Scans are designed to be performed tableside, without the intent of saving the scans to the patient's file. They are used to educate the patient and alert the examiner of recent changes.

- Quick Scans are available from the home page (Fig. 1).
- Quick Scans allow you to quickly set up the scan, utilizing your pre-created scanning protocols.
- All of the neuroCORE training and setup applies to the Quick Scan feature with a variation on how to launch Quick Scan and a slight difference in scan setup options since **Quick Scans are not associated with a patient or saved to a patient file.**
- To launch, Choose the Quick Scan button on the Home page and click on the neuroCORE icon.
- After a scan is completed, you have the opportunity to review the results and continue or delete the scan to start again.

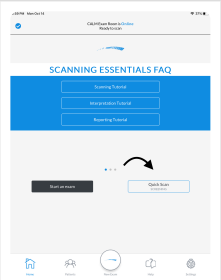


Fig. 1

If you have an INSiGHT Bridge, and want to learn about Enhanced Mode, learn more in Part IV – Enhanced Mode.

4.1.3. neuroTHERMAL

This section outlines how to successfully perform a scan using the neuroTHERMAL (Thermography).

There are two versions of the wireless neuroTHERMAL: with and without an onboard screen. **If you are using an INSiGHT Bridge**, you must ensure that the onboard screen version has been set to the BTC mode. This can be verified by plugging in the charging cord while connected to a PC, INSiGHT Bridge or approved USB charging device and seeing BTC in the upper right corner of the screen. If BLE mode is installed, you are advised to contact Technical Support to change this setting. If you attempt to connect with the device in the wrong mode, connection will fail.

4.1.3.1. Prep the Room

Paraspinal cutaneous thermographic scanning performs best in a controlled environment. The following is an example of the ideal preparation and set-up:

- The iPad or INSiGHT Bridge is located within 15-30’ of the instrument.
- The room should be windowless or have no direct sunlight into scanning area.
- Heating/cooling diffusers should be blocked to stop air from blowing on the patient.
- Your iPad screen should be set-up to face the examiner while scanning.
- Scan can be done seated (preferably) on scan stool, standing, or lying prone. Examiner requires stool for themselves, with room to stand as the scan proceeds.
- For tableside exams, allow 2-3+ minutes after adjustments or palpation for acclimation and more accurate readings.
- Insert the “eyebrows” above the sensors of the instrument. These eyebrows are curved, clear plastic coverings that give the examiner an idea of the distance between the sensors and the skin, and they also lift any hair up so it does not interfere with the scan. The scanner will work without eyebrows, but they are recommended.

DO NOT:

- Position the equipment directly in the path of hot/cold air blowing from vents.
- Place the instrument on a laptop or anything that gives off heat prior to exam.
- Palpate or rest a hand on the spinal skin surface prior to test.

4.1.3.2. Prep the Patient

Part of the success of your scan collection comes from an informed and prepared patient. Follow these guidelines:

- Provide your patient with a backless exam gown.
- Allow the patient to acclimate before the exam for at least 3 minutes. Be sure to expose the entire area that you plan to scan.
- Be sure to expose S1 by rolling down the top of underwear. The neck should be exposed with hair tied back. *Tip: Provide a disposable hair elastic or hair clip if needed.*
- Ensure that:
    - The patient did NOT exercise within 45 minutes of scan.
    - The patient is seated upright on a stool facing away from the examiner.
    - The patient sits still and maintains good posture during exam.
- Be familiar with spinal landmarks: S1, L1, T1, C2, C1L and R (fossa).

Prepping Children:

Thermographic scanning is an excellent functional examination for infants and children. Infants may be held by a parent or laid prone on a pillow or parent's stomach. So long as the spinal region is not touched and can be exposed to allow scanning, an accurate thermal image can be captured. It is best to consider a segmental scan on the smallest patients. As the children grow to 3+ years old, consider a rolling thermal scan.

- Release the set screws and move the sensors close to the midline, tighten the screws.
- Skip the L1 and T1 trigger pulls when using rolling scan.
- Measure C1R and L in the fossa region. Focus the interpretation on the line graph to observe pattern.
- Use the Thermal Balance Graph (NCM) to observe the upper cervical ANS balance.
- The DTG in the Combined Graph can be skewed if the diaper is not lowered to allow acclimation of S1 to room temperature for at least 3 minutes prior to exam.

Patient checklists are available through INSiGHT Media and are recommended! Click here for more information.

4.1.3.3. Begin the Scan

Beginning a scan involves picking your scan settings and starting the scan. Follow these steps to begin your thermal scan:

Set the width between the two sensors on the equipment as appropriate for the patient. You will find two set screws underneath the sensors that you can twist to loosen, at which point you can adjust them as needed. The sensors should be approximately ½" on either side of the patient's spine. Don't forget to tighten them before conducting the scan itself.

Setup the configurations for your thermal scan. There are two ways to do this.

- You can either click on "Start an Exam" from the home page).
- Or you can click "New Exam" on the bottom taskbar.

Next, select the patient you want to scan, or you can add a new patient if the one you are looking for is not listed. From the list that appears, click on the "neuroTHERMAL" icon. If you don't see your equipment listed, be sure it is connected and paired.

Configure your scan setup – Rolling (Fig. 1):

- Patient: Confirm you are scanning the correct patient, if not, you may change him/her here.
- Scan Purpose: Select what type of exam you will be performing.
- Skip L1/T1: For a Rolling Thermal Scan, you may choose to skip T1 and/or L1. If this is selected, only S1 and C2 will prompt you to pull the trigger when you arrive at them during the scan. However, you will get more accurate measurements and data representation when L1 and T1 are included.
- Thermal Scan Method: Choose rolling thermal scan.
- Starting Level: Choose which starting level to begin at and press continue.
- Sounds: You can choose to have a male voice, female voice, or none as your guiding prompts.

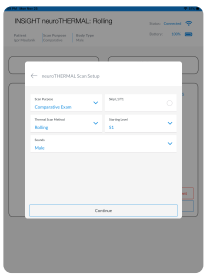


Fig. 1

Configure your scan setup – Segmental (Fig. 2):

- Patient: Confirm you are scanning the correct patient, if not, you may change him/her here.
- Scan Purpose: Select what type of exam you will be performing.
- Thermal Scan Method: Choose Segmental.
- Protocol: Choose which protocol is best for the patient. Ideally there will be customized protocols

especially for infants, cervical spines, the sacral region and other combinations that you can build out in the Scan Protocols section in settings.

- Sounds: You can choose to have a male voice, female voice, or none as your guiding prompts.

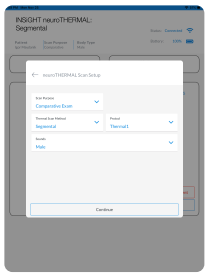


Fig 2.

After the settings are confirmed, click “Continue” to prepare the instrument for the exam. Prompts will guide you to ensure that the neuroTHERMAL is powered on by holding down the trigger. You will see the blue light run back and forth on the face of the instrument. Click “Connect to neuroTHERMAL” (Fig. 3).

Fig. 3

At this point, you can click “Begin Scan” and you will be taken to the scan screen from which you will conduct the scan itself.

4.1.3.4. Perform the Scan

All scans are conducted from their respective scan screens, which allow you to control the instrument and see the data that is being collected in real time.

There are a few things to keep in mind when performing a rolling scan:

- Make sure that the sensors do not make contact with the skin during the scan. The sensors are embedded in the wheel blocks and detect radiant, not contact heat from the skin.
- The angle of collection should be as close to 90 degrees as possible throughout the scan. With scoliotic patients, follow the tilted shape of the spine.
- The system will show “collecting” or “stable” on both left and right sensors. When both sensors are stable a small beep will alert the examiner to pull the trigger. This can be visually prompted as well (See Fig. 1).
- Your scan speed is monitored and you will be alerted if you need to adjust your scanning pace.
- On the onboard screen version, a R and L bar is displayed on the instrument to monitor the speed. It changes from green to yellow and then red to alert the examiner to stay within the green
- You can follow the thermal line on the scanning screen as the data is collected up to C2.
- Position the neuroTHERMAL at S1, perpendicular to the spine. Wait for prompt to “begin test”.
- Roll the scanner slowly up the spine, following the contours of the spine ensuring that the scanner remain perpendicular to all segments and regions.
- Pull the trigger one time at the locations when prompted. After S1 there will be prompts at L1, T1 and C2, unless you have chosen to remove the clicks at L1 and T1.
- At the prompt “C1 Left” position the LEFT sensor at the fossa region. Minimize any hair interruption in this scanning region. Pull trigger once when sensor is positioned correctly. You will be asked to verify your reading to ensure the temperature is in an acceptable range. You may redo the segment or continue scanning (Fig. 2).
- The prompt “C1 Right” will occur after “C1 Left”. Position the RIGHT sensor over the right fossa region. Minimize any hair interruption in this scanning region. Pull trigger once when sensor is positioned correctly. You will be asked to verify your reading to ensure the temperature is in an acceptable range. You may redo the segment or continue scanning (Fig. 2).
- On the onscreen version, a tracking line is displayed as the scan is rolled from S1 upward. The spinal segments S1, L1,T1,C2 and C1 are visible on the onboard screen as the trigger is pulled. The tracking line is a zoom version and can be used to observe shifts and patterns during the scanning process. C1 scanning is completed in the same sequence as the non-screen version of the instrument

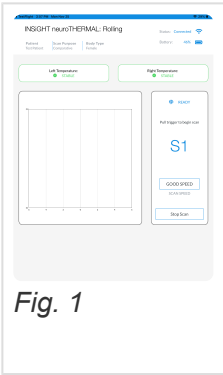


Fig. 1

Fig. 2

There are a few things to keep in mind when performing a segmental scan:

- Place the sensors at the prompted level. DO NOT touch the skin with the sensor. It detects radiant heat energy, not contact heat energy. Use the eyebrows as your distance guide.
- The angle of collection should be as close to 90 degrees as possible throughout the scan.
- The system will show “collecting” or “stable” on both left and right sensors.
- The onboard screen version profiles the segment being scanned. A Left and Right green and red indicator show the signal stability. Two green indicators show bilateral stability and indicate when to pull the trigger. A tracking line also is used to monitor the signal stability and remains horizontal and parallel when the signals are stable.
- The differential in temperature between the Left and Right sensors is published to the warmer of the two sides.
- At any segment, a “Redo Segment” button can be pressed on the iPad screen which will prompt the examiner to re-scan the previous segment.

4.1.3.5. End the Scan

After a scan is completed, you have the opportunity to review the results and continue or delete the scan to start again.

- You can swipe left on the iPad to see additional scan views (Fig. 1).
- After you click continue, you can choose to View Report or Finish Exam (Fig. 2).
- To perform another thermal scan on the same patient, after you view the report, click “Done” and select the neuroTHERMAL icon again to start the scanning process over again. You can preview the previous scans completed in that same day and choose which scan is most appropriate, noted as “active”, and use that one in your final report (Fig. 3).

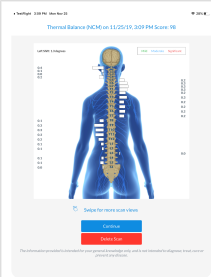


Fig. 1

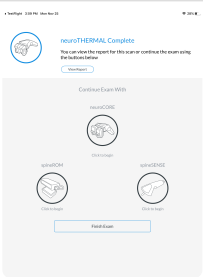


Fig. 2

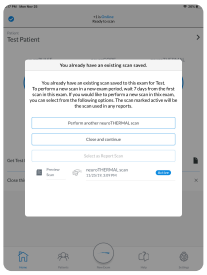


Fig. 3

4.1.3.6. Quick Scan

neuroTHERMAL Rolling and Segmental Quick Scans are designed to be performed tableside, without the intent of saving the scans to the patient's file. They are used to educate the patient and alert the examiner of recent changes.

A Quick Scan is meant to be used pre-adjustment or as a post-adjustment check. Note: If an examination is required, for example if a patient identifies an injury or has a change of health status, a quick scan should not be used.

Quick Scans allow you to quickly set up the scan, utilizing your pre-created scanning protocols.

- All of the neuroTHERMAL training and setup applies to the Quick Scan feature with a variation on how to launch Quick Scan and a slight difference in scan setup options since Quick Scans are not associated with a patient or saved to a patient file.
- To launch, Choose the Quick Scan button on the Homepage and click on the neuroTHERMAL icon.
- After a scan is completed, you have the opportunity to review the results and continue or delete the scan to start again.
- The spinal area to be examined must be exposed. The Cervical region from T4 upwards and the Lumboscaral region from T12 downwards are likely the easiest Quick Scan regions to examine.
- Be familiar with spinal landmarks: S1, L1, T1, C2, C1 L and R (fossa).

4.1.4. spineROM

This section outlines how to successfully perform a scan using the spineROM (Inclinometer).

Note: To perform exams using the spineROM, an INSiGHT Bridge is required. Please contact info@insightcla.com if you do not have an INSiGHT Bridge.

4.1.4.1. Prep for the Scan

The spineROM can be used in practically any setting, but you should still make sure that the following conditions are met to the best of your ability:

- The spineROM is a dual inclinometer and operates using a compass that identifies magnetic north. In certain offices, electrical fields or large metal objects (like X-Ray machines) can distort the signal and make the cervical rotation test difficult to obtain. In these situations, it is better to perform the scan with the patient supine.
- Your laptop or iPad screen should be set-up to face the examiner while scanning.
- Scan can be done seated (preferably) on a scan stool, standing, or lying prone. Enough space must be available for the examiner and the patient to be in a position to do a full forward flexion or extension of the lumbar spine while standing.
- The INSiGHT Bridge is located within 15-30’ of the instrument.
- The spineROM should be well charged, turned on, with the Satellite connected to the Base using the specific inclinometer cable.
- Lights indicate the current state of the spineROM.
    - A slow flashing lighted base indicates the unit is on and ready to be connected.
    - A rapidly flashing Base and Satellite indicate the instruments are in the collection mode.
- A feature of the spineROM is its unique strapping system that allows hands-free examination. The Velcro straps should be readily available and wiped clean using an alcohol wipe, wherever skin or hair contact may have occurred.

4.1.4.2. Prep the Patient

The most essential part of patient prep for the spineROM is making sure that the straps are applied correctly:

- The patient should be seated as the straps are applied.
- Multiple or singular regions of the spine can be examined in an examination session. All straps can be applied at all spinal levels before the exam begins.
- **For Cervical Examinations**
  - The shorter “head” strap should be gently positioned around the patient’s forehead, above the ears and affixed using the velcro attachments.
  - The Satellite MUST be positioned on the patient’s **RIGHT** temple region with the cable on the BOTTOM of the instrument.
  - A second strap is positioned so that the plastic plate rests on the T1-T2 spinal levels and then, with the patient’s arms outstretched, the straps go under the arms and snugly attach to one another using the velcro attachments at approximately the T6 level. The Base unit is then affixed to the plastic plate using the velcro attachments in a LEVEL position.
  - The examination of the cervical spine can be done seated, standing and in special situations, supine (to collect C-rotation).
- **For Thoracic Examinations**
  - An initial strap is applied at the T1-2 level (see above). A second strap is snugly affixed around the body, with the plastic plate at the T12-L1 level.
  - The Base is affixed to the velcro, parallel to the ground, at the T12-L1 level while the Satellite is positioned, parallel to the ground, at the T1-2 level on the plastic plate/velcro.
- **For Lumbar Examinations:**
  - An initial strap is positioned at the T12-L1 level (see above) while a second strap circles the waist to allow the plastic plate/velcro to be positioned at S1.
  - The Base is affixed to the velcro, parallel to the ground, at the S1 level while the Satellite is positioned, parallel to the ground, at the T12-L1 level on the plastic plate/velcro.
- The straps are removed at the end of the entire examination.
- Allow the patient to acclimate before the exam for at least 2-3 minutes. Be sure to expose the entire area that you plan to scan.
- Ensure that:
  - The patient did NOT exercise within 45 minutes of scan.
  - The patient is seated upright on a stool facing away from examiner.
  - The patient does NOT move and has good posture during exam.
- Be familiar with spinal landmarks: S1, L1, T1, C2, C1L and R (fossa).

Patient checklists are available through INSiGHT Media and are recommended! Click here for more information.

4.1.4.3. Begin the Scan

Beginning a scan involves choosing your scan settings and starting the scan to ensure accurate readings. Follow these steps to begin your range of motion scan:

Choose which test you wish to begin the ROM sequence at. For example, the Cervical Flexion-Extension is often a good starting position.
Setup the configurations for your range of motion scan. There are two ways to do this.

You can either click on “Start an Exam” from the home page, or you can click “New Exam” on the bottom taskbar.

Next, select the patient you want to scan from the list that appears and click on the “spineROM” icon.

From here, you’ll configure your scan settings (Fig. 1):

- Patient: Confirm you are scanning the correct patient, if not, you may change him/her here.
- Scan Purpose: Select what type of exam you will be performing.
- Sounds: You can choose to have a male voice, female voice, or none as your guiding prompts.

After the settings are confirmed, click “Continue” to choose your test. Prompts will guide you to ensure that the spineROM is powered on. You will see the blue light flash on the face of the instrument. Click “Connect to spineROM”.

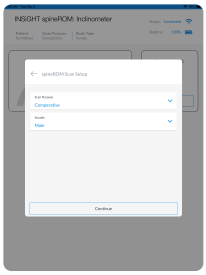


Fig. 1

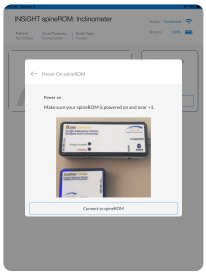


Fig. 2

4.1.4.4. Perform the Scan

The spineROM scan is performed by taking readings from three different tests, in any order. You can cycle between the tests, and re-do them whenever you need. The most recent scan data will be used in the final report.

- To begin, choose one several available tests in the following areas and hit connect to spineROM (Fig. 1) (Fig. 2):
  - Cervical
  - Thoracic
  - Lumbar
- Have the patient hold their normal upright posture of the respective test selected.
- Click the “Save Neutral Position” button (Fig. 3).
- Now, have the patient perform the controlled specified range of motion, gently coming back to neutral, pausing, and then completing the extension and finishing by coming back to neutral.
- After this motion, choose Finish Test (Fig. 4).
- If satisfied, you can click any of the next tests, in any order.
- Otherwise, you can hit “Retake Test” and redo the last completed test. This overwrites the undesirable result (Fig. 5).

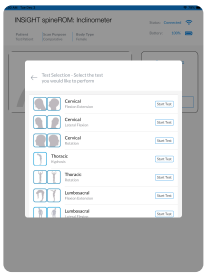


Fig. 1

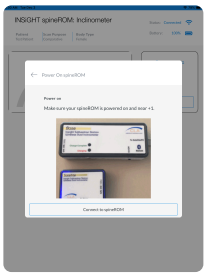


Fig. 2

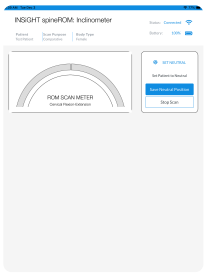


Fig. 3

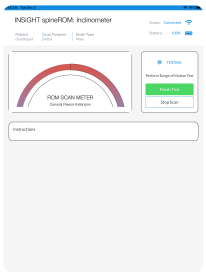


Fig. 4

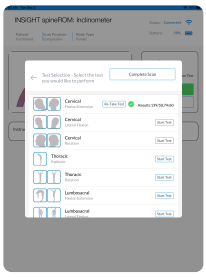


Fig. 5

4.1.4.5. End the Scan

After a scan is completed, you have the opportunity to review the results and continue or delete the scan to start again.

- You can swipe left on the iPad to see additional scan views (Fig. 1).
- After you click continue, you can choose to Finish Exam.
- To perform another range of motion scan on the same patient click “Finish Exam” and select the spineROM icon again to start the scanning process over again. You can preview the previous scans completed in that same day and choose which scan is most appropriate, noted as “active”. spineROM scans are not included in the CORESCORE and do not have single reports. They do have a narrative report which can be accessed from that icon.

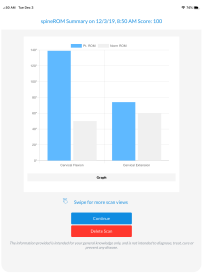


Fig. 1

4.1.5. spineSENSE

This section outlines how to successfully perform a scan using the spineSENSE (Algometry).

Note: To perform exams using the spineSENSE, an INSiGHT Bridge is required. Please contact info@insightcla.com if you do not have an INSiGHT Bridge.

4.1.5.1. Prep the Patient

SpineSENSE is a pressure algometry test used to evaluate sensitivity over a specific point, so it is important to ensure that as little interference is present in the room as possible. The patient's ability to differentiate between pressure and pain is measured and recorded. This subjective test is valuable in quantifying improvements in spinal pain patterns.

- By using the neuroPULSE as a portable base, the spineSENSE becomes a virtual wireless instrument
- Make sure the cord on the base of the spineSENSE is plugged in the rear of the neuroPULSE instrument, into the port labeled Algometer
- The spineSENSE can be used in any space (Exam rooms, tableside or at screening events) so long as the neuroPULSE base is within the 15-30 foot Bluetooth range of the INSiGHT Bridge.
- A spineSENSE exam can be performed seated on a backless stool or prone, on a chiropractic or examination table.

4.1.5.2. Prep the Patient

In this exam, you will be testing your patient’s pain tolerance and sensitivity. As such, it is important to communicate clearly and concisely with them, letting them feel comfortable, and, most importantly, relaxed.

- Provide your patient with a backless exam gown.
- Be sure to expose the entire area that you plan to scan. Identify the painful spinal segments to be tested, noting the spinal region.
- Choose a painless segment for comparison testing in the same spinal region.
- Multiple regions can be tested in one examination.
- The neck should be exposed with hair tied back. Tip: Provide a disposable hair elastic or hair clip if needed.
- Have the patient in a calm resting state for the examination.
- Advise them that an instrument will be pressed onto a point on the spine and they are to alert the examiner immediately when the pressure becomes painful. They are not meant to try and prove their ability to sustain pain. They are to honestly alert the examiner when “the pressure hurts” and to command the examiner to “stop”.
- The results of the reported painful segment is compared to the tolerance level of the non-painful region.

As well, the test results can be used to quantify improvements over time and multiple examination sessions.

4.1.5.3. Begin the Scan

Beginning a scan involves choosing your scan settings and starting the scan. Follow these steps to begin your algometry scan:

Setup the configurations for your algometry scan. There are two ways to do this.

- You can either click on “Start an Exam” from the home page,
- Or you can click “New Exam” on the bottom taskbar.
  Next, select the patient you want to scan from the list that appears and click on the “spineSENSE” icon.

From here, you’ll configure your scan settings.

- Scan Purpose: Select what type of exam you will be performing

- After the settings are confirmed, click “Continue”. Prompts will guide you to ensure that the spineSENSE is powered on. You will see the blue light flash on the face of the neuroPULSE. Click Connect to spineSENSE.
- After the connection is established, exercise the instrument as instructed. Prompts will guide you to ensure that your instrument will collect data properly.
- In the exercise check you will be asked to press the black pressure probe on the front of the spineSENSE onto a hard surface(desktop) until it reaches 120 psi or above.
- This is repeated 3 times to exercise the instrument and assure the collection will be accurate.

4.1.5.4. Perform the Scan

The spineSENSE scan is performed by utilizing pressure algometry. To begin, choose one of the four available tests:

- Cervical
- Upper Thoracic
- Lower Thoracic
- Lumbosacral

After you choose you region:

- Identify the painful spinal segments to be tested, noting the spinal region.
- Multiple regions can be tested in one examination session.
- Choose a painless segment in the chosen region of the spine for comparison testing.
- You will be prompted to choose a side to be examined and a spinal level. The baseline scan should have both Right and Left sided pressure noted.
- Have the patient seated or prone and locate the spineSENSE within a comfortable distance.
- Advise them that an instrument will be pressed onto a point on the spine and they are to alert the examiner immediately when the pressure becomes painful. They are not meant to try and prove their ability to sustain pain. They are to honestly alert the examiner when “the pressure hurts” and to command the examiner to “stop”.
- The trigger is pulled when the Stop command is spoken. This registers the pressure that is tolerated.
- The examiner is then prompted to pressure test the other side of the spine to complete the baseline results.
- Next, the affected spinal segment is similarly tested to determine the limited amount of pressure that can be tolerated due to inflammation and active subluxation.
- The results of the reported painful segment are compared to the tolerance level of the non-painful region and published in the spineSENSE scan view which can be accessed at the end of the scan.

4.1.5.5. End the Scan

- Click Finish scan when the affected segment has been tested.
- The spineSENSE summary graph immediately appears.
- Swiping left shows the Data Table.
- Press Continue to return to the instrument selection page to continue testing.
- Press Delete if you choose not to save this exam data.

4.2. Step 2. Review Patient Management

The Patients sections allows you to add, view, and edit a patient’s record, including all of their previous scan reports and scan views. You can search for patients by using the search bar at the top of the Patient section.

4.2.1. Add Patient

Adding new patients in Synapse is easier than ever.

Add a Patient from the Home Screen
Step 1: Choose “Patients” from the bottom navigation bar (Fig. 1).
Step 2: Choose New Patient (Fig. 2).
Step 3: Fill out the required fields and hit “Done” (Fig. 3).

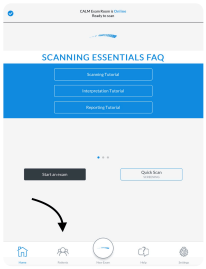


Fig. 1

Fig. 2

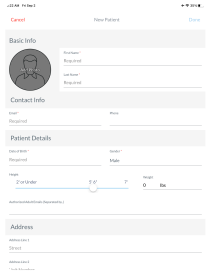


Fig. 3

If you choose to “Start an Exam” from the home screen (Fig. 4), and do not see the patient in your database you wish to scan, you can choose “Add Patient” and follow the above instructions.

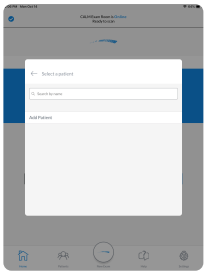


Fig. 4

Personalize the patient’s file by adding a photo:

- Click on the Add Photo icon.
- Follow the to take photo.
- See the photo library or go to Browse.

NOTE: Tip: In Settings > Manage Practice > you can change from Metric to Imperial measurements.

NOTE: Adding a patient is disabled in Synapse XLE Offline mode.

4.2.2. Edit Patient

To edit an existing patient, launch the Patient section. Choose your patient and hit edit patient (Fig. 1). Make your changes and choose save to complete your modifications.

Fig. 1

4.2.3. Adding Authorized Users

Patient confidentiality is of the utmost importance. To add authorized users to a patient record, you can navigate to the “Authorized Adult Emails” section of a patient record (Fig. 1) and add the authorized user(s) email address. Since email addresses are unique identifiers, you can add as many as you’d like and separate them by comma. If an Adult is requesting access to patient files, you must have them verify their email address so you can cross reference it with list of authorized emails on the patient record.

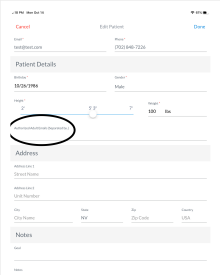


Fig. 1

NOTE: Adding emails does not link accounts. It just serves as a way for you to verify identity.

4.2.4. Delete Patient

To delete a patient, navigate to the Patient Section and select the patient you wish to delete. Click “Delete Patient” (Fig. 1).

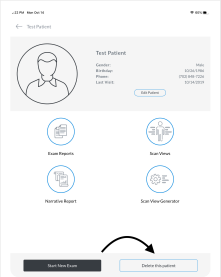


Fig. 1

NOTE: Deleting a patient is disabled in Synapse XLE Offline mode and INSiGHT Bridge Screening Mode.

4.2.5. Reassigning Scans

There are two situations where you might want to reassign scans in Synapse; scanning a patient in the wrong file, and adjusting which scan is being used in a report if more than one was performed within the 7-day exam window.

Adjusting Scans within a report

Step 1: Go to the patient file and choose Exam Reports (Fig. 1).
Step 2: Choose the report you would like to adjust and select “Adjust Scans” (Fig. 2).
Step 3: Select the scan type to change (Fig. 3).
Step 4: Select the scan you wish to use. If you need to preview the scan, select preview to review the results (Fig. 4).
Step 5: Select the report you would like to mark as active and choose “Select as Report Scan” (Fig. 5).
Step 6: After you replace a scan in a report, use the “refresh icon” on the bottom of the report to recalculate the score with your new scan (Fig. 6)

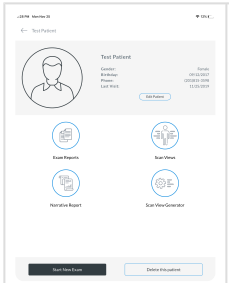


Fig. 1

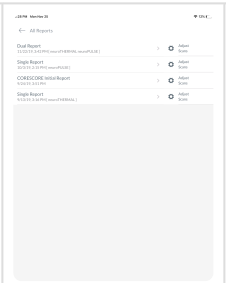


Fig. 2

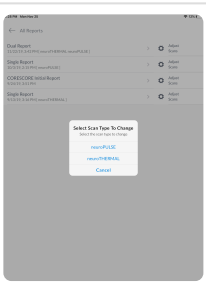


Fig. 3

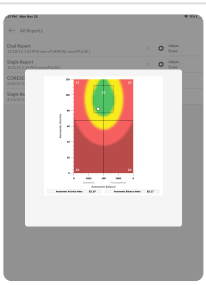


Fig. 4

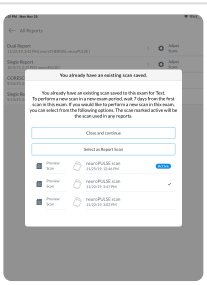


Fig. 5


Fig. 6

Moving a scan

Step 1: Go to the patient file and choose Scan Views (Fig. 1).
Step 2: Locate the date of the scan you would like to move and select the dropdown arrow to expand the scan views performed on that date (Fig. 2)
Step 3: Confirm you would like to re-assign the scan (Fig. 3).
Step 4: Select the patient for which you would like to move the scan (Fig. 4).
Step 5: Visit that patient file and confirm the scan is there. Note: Scan views will not be added to a report unless there is an open exam for the patient to which you moved the file.

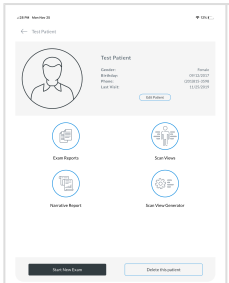


Fig. 1

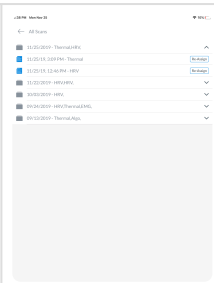


Fig. 2

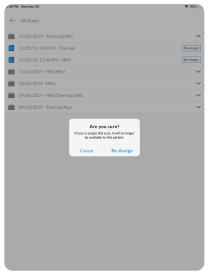


Fig. 3

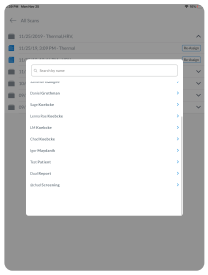


Fig. 4

4.3. Step 3. Review Results & Reporting Options

Once a patient is added to Synapse, you can begin to scan to their file. An individual patient file consists of the ability to edit patient information, their exam reports, scan views, narrative reports, and an option to create a custom scan view layout using our Scan View Generator tool. For more on how to set-up custom scan view templates, click here. (Fig. 1)

Exam Reports: Each time you start a new scan in a patient file, you begin an “Exam”. Exam periods in Synapse are open for 7 days in case a person has to come back in to complete their exam. After 7 days, the exam period closes and the next time you run a scan on that patient, a new exam will begin. The type of scans run during an exam will dictate what Exam Reports are available per patient. For example:

- Performing only a neuroCORE, neuroTHERMAL, **or** neuroPULSE report will yield a SINGLE instrument report
- Performing any combination neuroCORE, neuroTHERMAL, **or** neuroPULSE as a set of two will yield a DUAL instrument report
- Performing all three scans will yield a CORESCORE.

Scan Views: Each scan you complete gets saved and organized by date in the patient file under Scan Views. For more on scan views, click here.

Narrative Reports: A narrative report is produced for the neuroTHERMAL, neuroCORE, spineROM, and spineSENSE, detailing the results of the current scan. For more on narrative reports, click “here”.

Scan View Generator: The Synapse Scan View Generator allows you to customize your reporting. Effortlessly build any number of Scan View Generator Templates and access and generate them directly from the patient file.

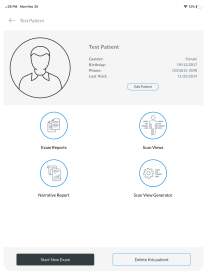


Fig. 1

4.3.1. Exam Reports

There are several types of reports available in Synapse including single, dual, CORESCORE, and narrative reports. To get a deeper understanding of how to leverage reports, view the Reports section in the “Help” area of Synapse.

NOTE: Exam periods in Synapse are open for 7 days in case a person has to come back in to complete their exam. After 7 days, the exam period closes and the next time you run a scan on that patient, a new exam will begin. The type of scans run during an exam will dictate what Exam Reports are available per patient.

4.3.1.1. Single and Dual Reports

After you complete a scan, you will immediately be taken to a screen that shows you the various scan views available based on the instrument you used to scan. After you view the scans you will be able to continue on to the report or continue scanning to add to the exam.

The type of scans run during an exam will dictate what Exam Reports are available per patient. For example:

- Performing only a neuroCORE, neuroTHERMAL, or neuroPULSE report will yield a SINGLE instrument report
- Performing any combination neuroCORE, neuroTHERMAL, or neuroPULSE as a set of two will yield a DUAL instrument report
- Performing all three scans will yield a CORESCORE. For more information on the CORESCORE, click here.

NOTE: Exam periods in Synapse are open for 7 days in case a person has to come back in to complete their exam. After 7 days, the exam period closes and the next time you run a scan on that patient, a new exam will begin.

NOTE: Reports are not available for Quick Scans.

4.3.1.2. CORESCORE Reports

When a patient is scanned with the neuroTHERMAL, neuroCORE and neuroPULSE, a CORESCORE will be produced.

There are four stages of that a CORESCORE report might reflect:

- Initial: The initial CORESCORE acts as a baseline to begin comparing improvements to.
- Progress: A CORESCORE Progress exam and report are typically performed within a month of the initial exam and more likely to be at or after the 12th visit. It can be performed at any time but as a neural efficiency index, the goal is to see if the sequence of adjustments are changing that efficiency. The premise of adjusting and evaluating neural efficiency is to effect change within both structure and neural function simultaneously. The key word for reporting the progress CORESCORE is, “changeability”.
- Comparative: A comparative CORESCORE is typically performed by the 12th week of care or after 24 visits, but Synapse will automatically produce a CORESCORE report after the third exam is performed on the patient.
- Continuation: After the first 4 CORESCORES are performed, the Continuation Report sequence prepares ongoing reports using the most recent exam plus the three previous ones. The CORESCORE Continuation report is designed to be usable for the lifetime of a patient in the practice. It is a continuation from the Initial, Progress and Comparative sequence of CORESCORES. These are specific exams and reports in the initial level of care. The recommended frequency of performing a Continuation CORESCORE is every 3-4 months as a maximum. Reports calculate the most recent exam plus the three previous.

NOTE: Exam periods in Synapse are open for 7 days in case a person has to come back in to complete their exam. After 7 days, the exam period closes and the next time you run a scan on that patient, a new exam will being. The type of scans run during an exam will dictate what Exam Reports are available per patient.

NOTE: Reports are not available for Quick Scans.

Dr. Fletcher’s Pro Tip:

- You can pull up a previous CORESCORE report at anytime to review and compare. The Continuation Report is preset to the most recent and three previous CORESCORES, but you can access all CORECORES at anytime.

To get a deeper understanding of how CORESCORES are calculated, view the reporting section in the “Help” area of Synapse.

4.3.1.3. Narrative Reports

A narrative report is produced for the neuroTHERMAL, neuroCORE, spineROM, and spineSENSE, detailing the results of the current scan. This report includes data from the scan and offers a narrative describing the purpose of scanning and the results. Narrative reports can be used for communicating the complexity of the results to other health practitioners, insurers and lawyers. Scan views can be taken out of context when used to share data with uninformed third parties. Narrative reports help bridge that gap.

NOTE: Reports are not available for Quick Scans.

4.3.2. Scan Views

Scan Views are the different graphic representations of an instrument’s collected data that display it in a meaningful, easy to interpret form. To get a deeper understanding of how to interpret scan views, view the interpretation section in the “Help” area of Synapse.

4.3.2.1. neuroPULSE Scan Views

Scan views are the graphs represented by the data collected during a neuroPULSE scan. The neuroPULSE data is presented in 3 variations and highlights the imbalances between the amplitude and symmetry of various frequencies.

Instantaneous Heart Rate (IHR) graph (Red line/Blue line graph): (Fig. 1)
The pulse wave pattern is shown as the signal check begins and continues through the entire collection period. It should be a rhythmic and well paced string of beats. One of the challenges in collecting good data is having the patient hold their hand still while being tested. During the signal check time you may instruct the patient to gently push down with their middle finger. Watch the pulse wave jump and resettle. Now, instruct the patient to keep an eye on the collection as the test begins and refrain from any “wiggling” that can interrupt the beat pattern. A simple demonstration like this can keep the patient engaged and alert them to stop wiggling!

Fig. 1

Adaptability Reserve (HRV “Rainbow” Graph (Fig. 1)):
The Adaptive Reserve Graph plots the Autonomic Activity Index (AAI) against the Autonomic balance Index (ABI). AAI is calculated from the amount of amplitude that is within the frequencies associated with the sympathetic (S) and parasympathetic (PS) divisions of the CNS. ABI represents the balance between the S(LF) and PS(HF) frequency activity. It is calculated using the LF/HF ratios.

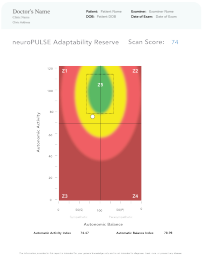


Fig. 2

Data Table:
These zones represent unique interpretations of the HRV data, which are published in the scan and CORESCORE reports. This data and calculations are available in the Table view, accessed by swiping after viewing the Rainbow graph.

4.3.2.2. neuroCORE Scan Views

Scan views are the graphs represented by the data collected during a scan. The neuroCORE data is presented in 5 variations and highlights the deviations from a normal, well adjusted patient database. The comparisons are based on amplitude and symmetry of EMG signals.

Pattern Graph (Fig. 1):
The Pattern Graph plots the activity of neuromuscular (NM) motor signals on either side of the spine from S1 to C1. It is an ideal representation of the efficiency of the distribution of the signals when measuring energy expenditure in a seated posture.

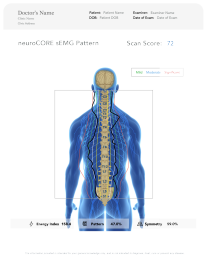


Fig. 1

Postural Tone Graph (Bar Graph: Amplitude) (Fig. 2):
This graph plots the amplitude of the neuromuscular (NM) motor nerve signals on both sides of the spine at each scanned level. The normal range of acceptable activity as measured in a well-adjusted cohort and published forms the basis of comparison at each spinal level.

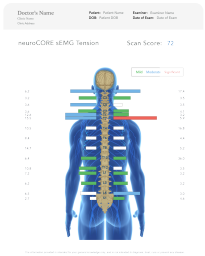


Fig. 2

Postural Balance Graph (Symmetry) – (Fig. 3):
This graph plots the asymmetry of the neuromuscular (NM) motor nerve signals on both sides of the spine, at each scanned level.

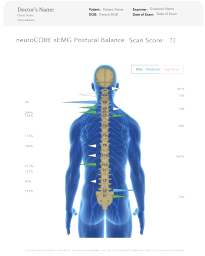


Fig. 3

neuroLINK (Fig. 4):
neuroLINK is a patient education tool embedded in the Synapse software, generated from the Postural Tone and Postural Balance scan views. At the completion of a neuroCORE scan, the various scan views are generated. The examiner can swipe left on the iPad screen to review these presentations. Included in these views is the neuroLINK.

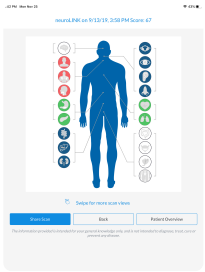


Fig. 4

Data Table:
A Data Table is provided to allow the clinician to review the actual amplitude of the NM signal at each spinal level. This is published in microvolts (uV).

4.3.2.3. neuroTHERMAL Scan Views

Scan views are the graphs represented by the data collected during a scan. Paraspinal cutaneous temperature testing reveals the inability of the sympathetic motor division of the spinal nerves to regulate temperature balance. The neuroTHERMAL data is presented in 5 variations and highlights these imbalances.

Thermal Balance (NCM) Graph (Fig. 1):
This scan view is available for both Rolling and Segmental collections.The Thermal Balance Graph shows which levels of the spinal nerves are reacting out of normative ranges in their ability to regulate the tone of the blood vessels. The inability to evenly regulate temperature of the skin overlying the spinal segments, indicates a shift towards dysautonomia.Vertebral Subluxations (VS) alter the tone of the blood vessels in the skin around the spine. This changes the temperature of the skin and can be used to “map” out where the subluxations are occuring. Because the same sympathetic motor nerves connect to the pre and post ganglionic autonomic neurology, neuroTHERMAL scanning can be a valuable testing protocol to identify dysautonomia and deepening changes in a patient’s health regulation.

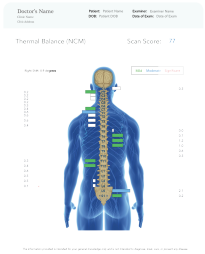


Fig. 1

Pattern Line Graph (Fig. 2):
The Pattern Line graph tracks the actual temperature recorded on either side of the spine at hundreds of points, and plots the DELTA of these temperature variances in an uninterrupted line from S1 to C2, with a separate plot at C1.It is available in the Rolling Thermal and not the Segmental Thermal scan views.

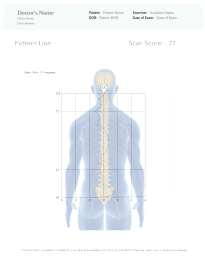


Fig. 2

Combined Summary Graph (Fig. 3):
This graph combines the data and presents it in three formats: Pattern Line Graph, Thermal Balance (NCM), and Dermothermograph (DTG).

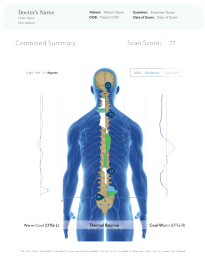


Fig. 3

DermoThermoGraphic (DTG) (Fig 4):
This scan view compares the temperature on each side of the spine, at each scanned level, with the temperature of S1. This allows the examiner to determine if there is a cooling or heating trend at each level compared to the S1 constant. The value of this scan view is to review the NCM findings and see if the imbalance detected on that graph is related to overheating (vasodilation) or cooling (vasoconstriction). A Blue bar represents a cooler than S1 reading while a Red bar represents a warmer than S1 reading. On an NCM scan view, a bilaterally warm or cool segment can show no imbalance and registers as a White bar but in reality the segment could be bilaterally inflamed or cool. NCM detect the basis of dysautonomia which is an inability to balance temperature from side to side while DTG confirms the actual temperature gradients. The temperature posted at each level shows the + or – temperature relationship to S1 on that side of the spine.

This scan view is available for both Rolling and Segmental collections. The Thermal Balance Graph shows which levels of the spinal nerves are reacting out of normative ranges in their ability to regulate the tone of the blood vessels. The inability to evenly regulate temperature of the skin overlying the spinal segments, indicates a shift towards dysautonomia. Vertebral Subluxations (VS) alter the tone of the blood vessels in the skin around the spine. This changes the temperature of the skin and can be used to “map” out where the subluxations are occuring. Because the same sympathetic motor nerves connect to the pre and post ganglionic autonomic neurology, neuroTHERMAL scanning can be a valuable testing protocol to identify dysautonomia and deepening changes in a patient’s health regulation.

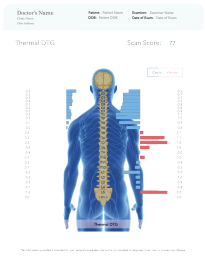


Fig. 4

neuroLINK (Fig. 5):
neuroLINK is a patient education tool embedded in the Synapse software, generated from the Postural Tone and Postural Balance scan views. At the completion of a neuroTHERMAL scan, the various scan views are generated. The examiner can swipe left on the iPad screen to review these presentations. Included in these views is the neuroLINK.

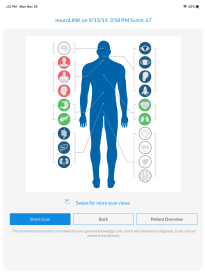


Fig 5.

Data Table:

The Data Table publishes the actual temperatures collected on the Right and Left segmental paraspinal regions.

4.3.2.4. spineROM Scan Views

Scan views are the graphs represented by the data collected during a scan. spineROM data is presented in 2 variations and highlights imbalances.

Summary graph:
The normative data is from the AMA Guides to the Evaluation of Permanent Impairment, Fifth Edition.

Data Table

4.3.3. Scan View Generator Templates

The Scan View Generator allows you to use preset templates to view and print scan results in a patient-friendly format. The Scan View Generator comes loaded with two preset templates:

- CLA Default Template
- CLA Default Comparative Template

For directions on how to set-up or edit your custom templates, click here.

Using Scan View Generator Templates
Once you have created a Scan View template, populating it with data is easy.

- Step 1: Open the patient file
- Step 2: Choose Scan View Generator (Fig. 1)
- Step 3: Choose the template you would like to use (Selecting preview will allow you to see a preview of what your layout will look like) (Fig. 2)
- Step 4: You can choose to select the report you would like to use, or if you are using spineROM or spineSENSE data, choose to bypass selecting your report and generate template from any exam by selecting “Skip to Select Scan Views” (Fig. 3)*
- Step 5: Once you select the report or scan views, your scan report will compile over 2-10 seconds (Fig. 4)
- Step 6: The Scan View report will appear for you to share or print (Fig. 5)

**If you choose a template with comparative views, you will be prompted on subsequent pages to select which scan view you would like in each comparative location.*

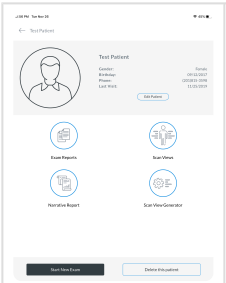


Fig. 1

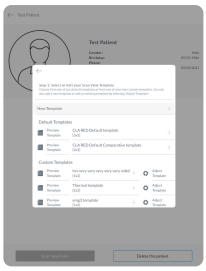


Fig. 2

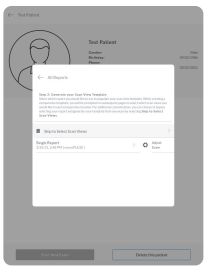


Fig. 3

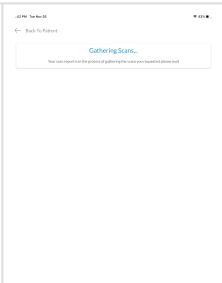


Fig. 4

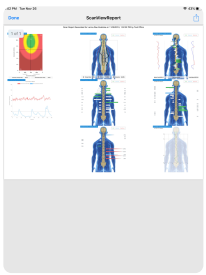


Fig. 5

5. Synapse INSiGHT Bridge mode content

The following sections are designed for Clients who use a version of Synapse that operate with a microcomputer called the INSiGHT Bridge. The Bridge is used with older versions of wireless INSiGHT technologies to allow access Synapse scanning and in offices that require special networking considerations.

If your INSiGHT came with an INSiGHT Bridge, use these sections to supplement Part I – III in the Synapse XLE Section of the User Manual. There prompts throughout the Synapse XLE User Manual to direct you to INSiGHT Bridge specific sections.

5.1. Part 1 – Step 2. Review Synapse INSiGHT Bridge Internet Options

As an INSiGHT Bridge User, Synapse is a cloud-based application that was designed to perform on an iPad or via web browser, and will work with or without an internet connection. Patient data resides in a database on our cloud server and on your INSiGHT Bridge. Data is not stored locally on your computer. When using Synapse without an internet connection, your patient data is stored locally on the INSiGHT Bridge and will automatically sync to the cloud database when your internet connection is restored. There are three operating modes reviewed in this section:

1. Synapse INSiGHT Bridge Online Mode
2. Synapse INSiGHT Bridge Local Online Mode
3. Synapse INSiGHT Bridge Screening Mode

5.1.1. Synapse INSiGHT Bridge Online Mode

Synapse INSiGHT Bridge Online mode is considered the standard operating mode for scanning using Synapse with an INSiGHT Bridge. Online mode implies you are connected to a stable 2.4 GHz internet connection described here. As the recommended standard operation mode, your router communicates to the cloud, iPad/browser, and to the Bridge.

NOTE: Online mode is required for initial onboarding and set-up of your INSiGHT technology.

5.1.2. Synapse INSiGHT Bridge Local Online Mode

Synapse INSiGHT Bridge Local Online Mode is an automatic feature built into Synapse designed to keep your scanning environment stable during occasional internet outages. You do not need to do anything to turn this feature on or to restore itself to standard online mode.

NOTE: During INSiGHT Bridge onboarding or after switching from screening mode, be sure to remove previously connected WiFi networks that are in range of your iPad and INSiGHT Bridge. iPads switch networks automatically based on signal strength and it will interrupt your scanning experience. To forget previous networks on your iPad, go to Settings > WiFi > Choose Network > Forget This Network.

5.1.3. Synapse INSiGHT Bridge Screening Mode

With an INSiGHT Bridge, Synapse can be used **on an iPad** without an internet connection for up to 30 days using the SSID broadcast feature built into every INSiGHT Bridge. Screening mode was designed for offsite events or for when internet connectivity is poor to ensure uninterrupted scanning and reporting. Screening Mode is not compatible for use via “Launch App” on a web browser.

Always make sure your bridge is plugged in to a power source (and the antenna is firmly attached) for at least 60 seconds before you activate Screening Mode.

When internet connectivity is less than optimal or absent (at event screenings, in hotel or conference settings, or with generally poor internet accessibility including network hardware (router etc.) failures), Synapse’s Screening Mode can be easily activated.

NOTE: The initial onboarding of the INSiGHT Bridge to the internet and the pairing of INSiGHT instruments MUST be done in Online mode in an area with stable and active internet accessibility. Onboarding cannot be done in Screening mode. Always have your INSIGHT instruments successfully paired before attending an offsite event.

To activate screening mode, follow these instructions:
Step 1: Make sure your INSiGHT Bridge is plugged in to a power source (and the antenna is firmly attached) for at least 60 seconds before you activate Screening Mode.
Step 2: You will need to “Forget” your existing iPad WiFi network settings. Go to Settings (Fig. 1) in the iPad Systems > Select Wi-Fi (WiFi must be on) (Fig. 2) > Select the active network and choose “Forget Network”. (Fig. 3) Do this for all networks being displayed that you have connected to.
Step 3: Launch the Synapse Application on the iPad and wait for the application to detect no Wi-Fi Connection. A screen will pop up asking to use “Screening Mode” – select “Use Screening Mode” (Fig. 4).
Step 4: Select Launch (Fig. 5).
Step 5: You will be prompted to enter your Bridge ID which can be located on the Bridge itself. You can also find this number by looking back to the iPad’s Wi-Fi settings. Once you enter the number you will be prompted to “Join” or “Cancel” connecting to the INSiGHT Bridge. Choose “Join”. You will then be connected to the INSiGHT Bridge automatically (Fig. 6).
Step 6: A “Log In” page will appear. Use your fingerprint or username/password to access Synapse’s functions (Fig. 7). (NOTE: If the “Log In” page does not appear after 30 seconds, reboot your INSiGHT Bridge and repeat steps again).

Fig. 1

Fig. 2

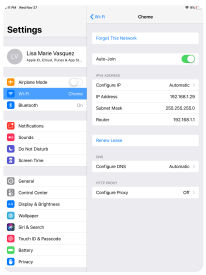


Fig. 3

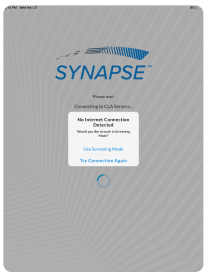


Fig. 4

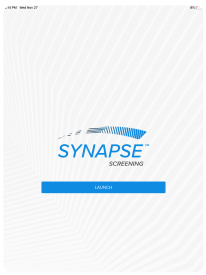


Fig. 5

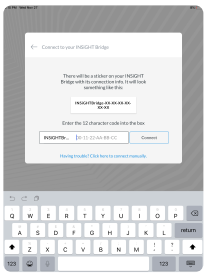


Fig. 6

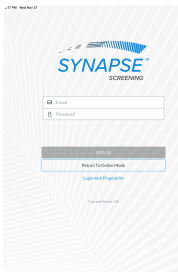


Fig. 7

NOTE: This is not a supported or recommended daily use case. It is intended for screenings and long periods of internet outages.

NOTE: During onboarding or after switching from offline mode, be sure to remove previously connected WiFi networks that are in range of your iPad and INSiGHT Bridge. iPads switch networks automatically based on signal strength and it will interrupt your scanning experience. To forget previous networks on your iPad, go to Settings > WiFi > Choose Network > Forget This Network.

To get out of screening mode:
Step 1: Close app
Step 2: Reconnect iPad to normal office WiFi again
Step 3: Make sure INSiGHT Bridge is powered on for 2 minutes
Step 4: Re-open App
Step 5: Sign back into to Synapse

Continue to Part 1 – Step 3: Synapse INSiGHT Bridge mode Application Options

5.2. Part 1 – Step 3. Synapse INSiGHT Bridge Application Options

As an INSiGHT Bridge user, Synapse was designed to be used with an iPad for optimal performance. Synapse INSiGHT Bridge mode(s) can also be used via a web browser on a PC or Mac via the Synapse Doctor Portal. There are two application options reviewed in this section:

1. Synapse INSiGHT Bridge via iPad
2. Synapse INSiGHT Bridge via Launch App (Web Browser)

5.2.1. Synapse INSiGHT Bridge via iPad

Synapse was built to be used optimally on iPads.

To have a seamless scanning experience, be sure to do the following BEFORE using your iPad:

- Verify your iPad can run version iOS 11.0 and higher
- Verify you have an email account set-up on your iPad (If you plan to email scans to patients)
- Verify you have AirDrop turned on and available to **everyone**
- Turn **on** automatic app updates
- Turn **Passcode Off** to avoid screen timeout
- Invest in an iPad charging dock for continual charging when docked; or
- Turn off your iPad off when not in use to preserve battery life

NOTE: During Synapse INSiGHT Bridge mode onboarding or after switching from Screening mode, be sure to remove previously connected WiFi networks that are in range of your iPad and INSiGHT Bridge. iPads switch networks automatically based on signal strength and it will interrupt your scanning experience. To forget previous networks on your iPad, go to Settings > WiFi > Choose Network > Forget This Network.

NOTE: Using Synapse INSiGHT Bridge via iPad offers the same scanning and patient management functionality that you have using a web browser, with the exception of the ability to update or modify your billing information, add/edit examiners, and configure your profile information for our INSiGHTChiros.com directory listing.

5.2.2. Synapse INSiGHT Bridge via Launch App (Web Browser)

Synapse can be operated via web browser through the Doctor Portal using either Chrome or Safari. **You do not download or install anything on your local machine to operate Synapse.**

Visit the Synapse Doctor Portal, or Synapse Doctor Portal if your office is outside the US, to enter your credentials and login.

After you are logged in, you will be in the Doctor Portal. You will have access to your practice scanning stats, patients, and settings. When you are logged into the Doctor Portal as the primary doctor, **you will have the added functionality to update your billing information, add/edit examiners, and configure your profile information for our INSiGHTChiros.com directory listing.**

NOTE: To launch Synapse INSiGHT Bridge mode for scanning, click “Launch App”.

To have a seamless scanning experience, be sure to do the following BEFORE using your web bowser:

- Turn off any screensavers to avoid screen timeout.

Continue to Part 1 – Step 4: Account Setup to continue activating Synapse.

5.3. Part II – Step 1. Onboarding INSiGHT Bridge

This section describes how to onboard your INSiGHT Bridge and scanning technology either via an iPad, web browser, or through a manual connection.

NOTE: You will need an additional INSiGHT Bridge for each similar piece of INSiGHT technology. Each INSiGHT Bridge can only pair one instrument of its kind. For every similar piece of technology you own, you will need an additional INSiGHT Bridge (Ex: Two wireless neuroTHERMAL instruments in the same office will require two INSiGHT Bridges).

5.3.1. iPad Setup (Recommended)

First, you will need to prepare your INSiGHT Bridge.

- Attach the antennas that comes with the INSiGHT Bridge and place it on the receiving end (Fig 1). Twist the knobs to make ensure it's tightened.
- Plug in your INSiGHT Bridge. A white light indicates that it is on and broadcasting. (Fig. 2). Plug in to a standard wall receptacle. If the INSiGHT Scanning Technologies are being used outside of North America, you must use the adaptor plug which comes with the power supply.

Fig. 1

Fig. 2

An iPad is necessary to onboard your INSiGHT Bridge to your practice for the first time.

For first time set-up:
Step 1: After logging into Synapse on your iPad you will be taken though a tutorial to set-up your equipment (Fig. 3).
Step 2: Make sure you are within 6 feet of the INSiGHT Bridge and your INSiGHT Bridge is plugged in and powered on (you should see the white light).
Step 3: The next prompt will ask that you Establish a Connection by entering the 12-Character Code on your INSiGHT Bridge into the iPad. After you enter the code, hit Connect. (Fig. 4).
Step 4: A pop-up will appear asking you to allow the App to join the Bridge WiFi. Select Join. (Fig 5).
Step 5: The Bridge will connect and indicate it was successful on your iPad.
Step 6: You will now need to reconnect to the WiFi network you will be using to scan.
Step 7: The App will reconnect to your WiFi and a pop-up will appear asking you to allow the App to join your WiFi Network. Select Join.
Step 8: The Bridge will successfully connect and you will prompted to name your Bridge and assign it to the physical location where you will be scanning (Fig. 6).

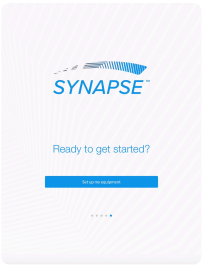


Fig. 3

Fig. 4

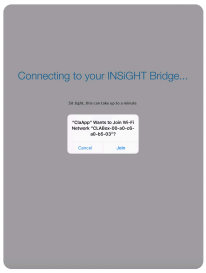


Fig. 5

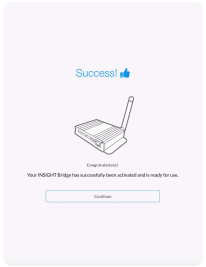


Fig. 6

How the INSiGHT Bridge works:
The INSiGHT Bridge relays its own built-in WiFi signal in which you will need to first connect. For this first time setup you will not be connecting to your local network. Don't worry, you can still use the internet as normal when connected to the INSiGHT Bridge, and unauthorized users like patients will not be able to connect to the INSiGHT Bridge over your WiFi.

Troubleshooting:
If you do not see the WiFi source coming from your INSiGHT Bridge, check the Bridge to make sure the antenna is attached properly, and that it is plugged in and turned on.

If the antenna is connected properly, reboot the Bridge by unplugging it, waiting 10 seconds, and plugging it back in.

If your problem persists, try to connect to the INSiGHT Manually. For those instructions, click here.

NOTE: The INSiGHT Bridge will not come up as a WiFi source if your router does not have a 2.4 GHz connection broadcasting. Most routers have 2.4 GHz turned on as a default, which extends the range and allows for more reliable connections. If you suspect yours may not have it, consult your router manufacturer or hardware manual for more information on how to turn it on.

5.3.2. Web Browser Setup

NOTE: If you do not have an iPad and need to onboard your INSiGHT Bridge using a web browser, you will first need to contact us at development@insightcla.com to set up a time to configure your computer settings.

Once one of our technicians work with you to update your computer settings, you can follow these instructions for first time set-up or set-up directly with your technician on the phone:

First, you will need to prepare your INSiGHT Bridge.

- Attach the antennas that comes with the INSiGHT Bridge and place it on the receiving end (Fig 1). Twist the knobs to make ensure it's tightened.
- Plug in your INSiGHT Bridge. A white light indicates that it is on and broadcasting. (Fig. 2). Plug in to a standard wall receptacle. If the INSiGHT Scanning Technologies are being used outside of North America, you must use the adaptor plug which comes with the power supply.

Fig. 1

Fig. 2

For first time set-up:
Step 1: After logging into Synapse through the Doctor Portal, you will select "Launch App" from the side navigation and login again. You will be taken though a tutorial to set-up your equipment (Fig. 3).
Step 2: Make sure you are within 6 feet of the INSiGHT Bridge and your INSiGHT Bridge is plugged in and powered on (you should see the white light).
Step 3: The next prompt will ask that you Establish a Connection by entering the 12-Character Code on your INSiGHT Bridge into the iPad. After you enter the code, hit Connect (Fig. 4).
Step 4: A pop-up will appear asking you to connect directly to the Bridge WiFi from your computer settings (Fig 5).
Step 5: The Bridge will connect and indicate it was successful.
Step 6: You will now need to reconnect to the WiFi network you will be using to scan.
Step 7: The App will reconnect to your WiFi and a pop-up will appear asking you to allow the App to join your WiFi Network. Select Join.
Step 8: The Bridge will successfully connect and you will prompted to name your Bridge and assign it to the physical location where you will be scanning (Fig. 6).

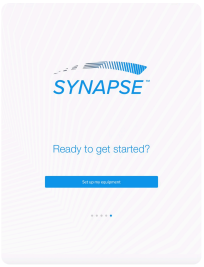


Fig. 3

Fig. 4

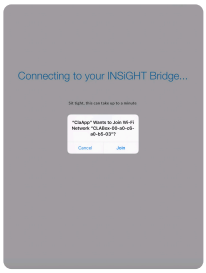


Fig. 5

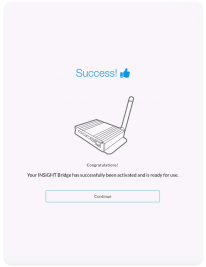


Fig. 6

How the INSiGHT Bridge works:
The INSiGHT Bridge relays its own built-in WiFi signal in which you will need to first connect. For this first time setup you will not be connecting to your local network. Don't worry, you can still use the internet as normal when connected to the INSiGHT Bridge, and unauthorized users like patients will not be able to connect to the INSiGHT Bridge over your WiFi.

Troubleshooting:
If you do not see the WiFi source coming from your INSiGHT Bridge, check the Bridge to make sure the antenna is attached properly, and that it is plugged in and turned on.

If the antenna is connected properly, reboot the Bridge by unplugging it, waiting 10 seconds, and plugging it back in.

If your problem persists, try to connect to the INSiGHT Manually. For those instructions, click here.

NOTE: The INSiGHT Bridge will not come up as a WiFi source if your router does not have a 2.4 GHz connection broadcasting. Most routers have 2.4 GHz turned on as a default, which extends the range and allows for more reliable connections. If you suspect yours may not have it, consult your router manufacturer or hardware manual for more information on how to turn it on.

5.3.3. Manual Connection

If you experience difficulty Onboarding, and your Bridge is not automatically detected, you can follow these steps to connect and onboard manually.

First, you will need to prepare your INSiGHT Bridge.

- Attach the antennas that comes with the INSiGHT Bridge and place it on the receiving end (Fig 1). Twist the knobs to make ensure it's tightened.
- Plug in your INSiGHT Bridge. A white light indicates that it is on and broadcasting. (Fig. 2). Plug in to a standard wall receptacle. If the INSiGHT Scanning Technologies are being used outside of North America, you must use the adaptor plug which comes with the power supply.

Fig. 1

Fig. 2

An iPad is necessary to onboard your INSiGHT Bridge to your practice for the first time.

For first time set-up:
Step 1. Switch your WiFi network to the INSiGHT Bridge in settings of your device (Fig. 3).
Step 2. Press continue after connecting to the INSiGHT Bridge WiFi network (Fig. 4).
Step 3. Synapse will locate your Bridge and connect to it (Fig. 5).
Step 4. Find your location WiFi network where you onboarding your Bridge (Fig. 6).
Step 5. Log into to your WiFi network to connect your Bridge (Fig. 7).
Step 6. Reconnect your device to your location WiFi network to activate your Bridge (Fig. 8).
Step 7. The Bridge will successfully connect and you will prompted to name your Bridge and assign it to the physical location where you will be scanning (Fig. 9).

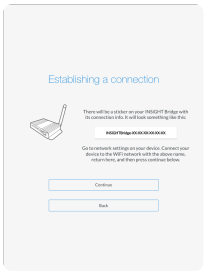


Fig. 3

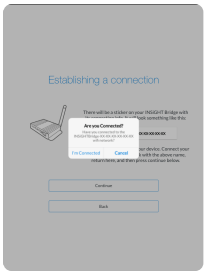


Fig. 4

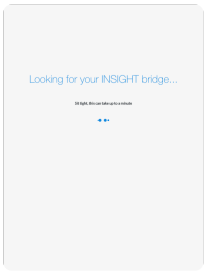


Fig. 5

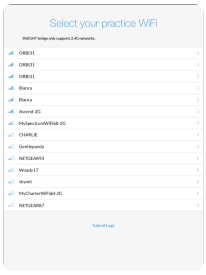


Fig. 6

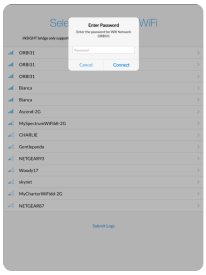


Fig. 7

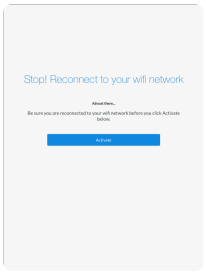


Fig. 8

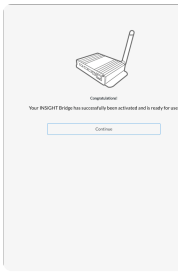


Fig. 9

5.3.4. Multiple INSiGHT Bridges

To add additional INSiGHT Bridges to an office location, follow the instructions below:
Step 1: Login to Synapse (Either through an iPad or Web Browser).
Step 2: Go to Settings (Fig. 1).
Step 3: Go to Manage INSiGHT Bridge (Fig. 2).
Step 4: Go to “Add another INSiGHT Bridge” (Fig 3).

You will then follow the same prompts you did for Onboarding your first INSiGHT Bridge (using either the iPad Set-up or Web Browser Set-up instructions).

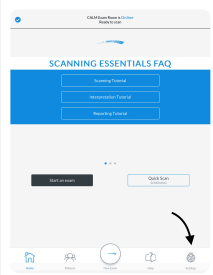


Fig. 1

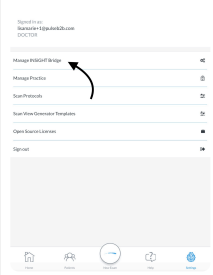


Fig. 2

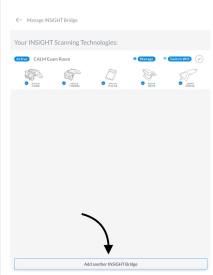


Fig. 3

Continue to Part II – Step 2. Pairing Your INSiGHT Technology.

5.4. Part II – Step 2. Pairing Your INSiGHT Technology

This section describes how to pair your INSiGHT Scanning Technologies to the INSiGHT Bridge. The process is the same for iPad use or web browser use.

NOTE: You will need an additional INSiGHT Bridge for each additional piece of scanning technology you own. For example, the INSiGHT Bridge can only pair one instrument of its kind at a time. For every multiple piece of technology you own, you would need an additional Bridge.

Before you get started, verify that your INSiGHT Bridge is powered on, in range of your INSiGHT Scanning Technology, and you have already onboarded the INSiGHT Bridge to your practice location. For multiple Bridge scenarios, be sure you are pairing your technology to the correct Bridge (you can always switch this later).

NOTE: The process is the same for each instrument. For the purposes of this manual, we will use neuroCORE as our example for pairing your instruments.

5.4.1. Automatic Pairing

If you have never paired your INSiGHT Scanning technologies to Synapse or to a previous INSiGHT software, you will be taken through the automatic pairing process.

For first time set-up:
Step 1: After onboarding your INSiGHT Bridge, you will be taken to a screen to set-up your technology.
Step 2: Choose your instrument (Fig. 1).
Step 3: Be sure your instrument is powered on (Fig. 2).
Step 4: Synapse will detect your instrument (Fig. 3).
Step 5: Your instrument will successfully connect (Fig. 4).
Step 6: If you have additional instruments to pair, choose “Add more instruments” from the screen seen on Fig. 4

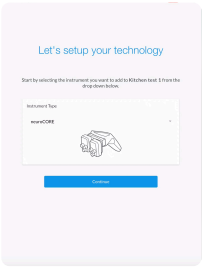


Fig. 1

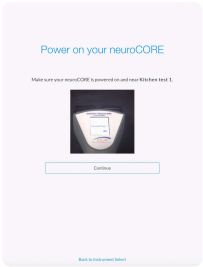


Fig. 2

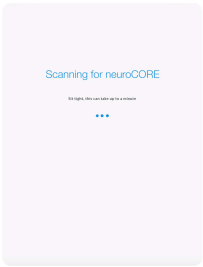


Fig. 3

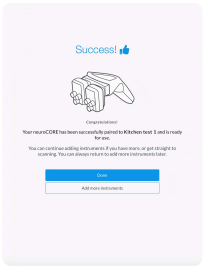


Fig. 4

If you exit this screen or would like to resume pairing later, you can add instruments at a later time by doing the following:
Step 1: Choose Settings from the home screen (Fig. 5).
Step 2: Choose Manage INSiGHT Bridge (Fig. 6).
Step 3: Choose Manage (Fig. 7).
Step 4: Choose Add Instruments (Fig. 8).

Fig. 5

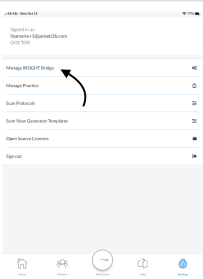


Fig. 6

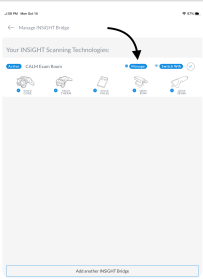


Fig. 7

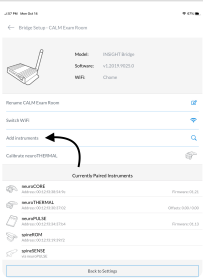


Fig. 8

Once you successfully onboard your INSiGHT Scanning Technology, the Bridge will automatically pair to them each time you are within range and the instruments are powered on.

5.4.2. Manual Pairing

NOTE: If you have previously paired your INSiGHT Scanning technologies to Synapse or to a previous INSiGHT software, you may be taken through the manual pairing process. This happens when your instrument is not automatically detected due to a previously established bluetooth connection within the device.

For first time set-up:
Step 1: After onboarding your INSiGHT Bridge, you will be taken to a screen to set-up your technology.
Step 2: Choose your instrument (Fig. 1).
Step 3: Be sure your instrument is powered on (Fig. 2).
Step 4: Synapse will not detect your instrument and will be given a choice to choose to pair your instrument manually (Fig. 3).
Step 5: Enter the MAC Address located on the back of your instrument and choose “Enter Manually” (Fig. 4).
Step 6: Your instrument will successfully connect (Fig. 5).
Step 7: If you have additional instruments to pair, choose “Add more instruments” from the screen seen on Fig. 5.

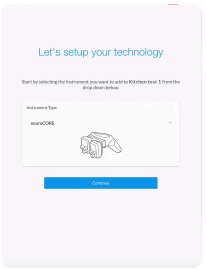


Fig. 1

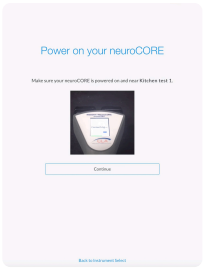


Fig. 2

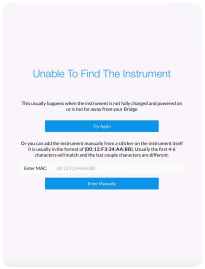


Fig. 3


Fig. 4

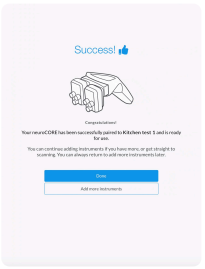


Fig. 5

If you exit this screen or would like to resume pairing later, you can add instruments at a later time by doing the following:
Step 1: Choose Settings from the home screen (Fig. 5).
Step 2: Choose Manage INSiGHT Bridge (Fig. 6).
Step 3: Choose Manage (Fig. 7).
Step 4: Choose Add Instruments (Fig. 8).

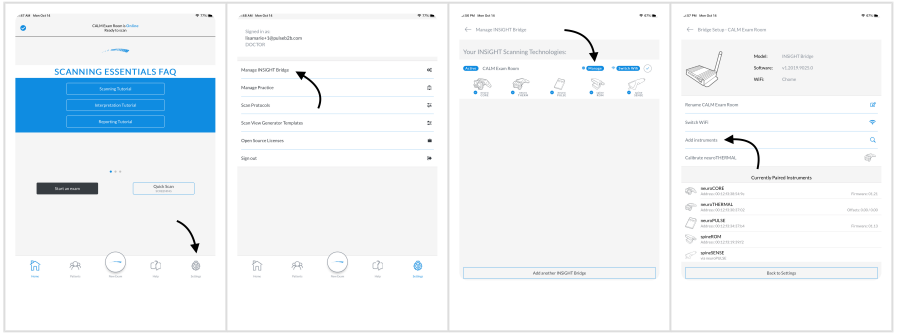


Fig. 5	*Fig. 6*	*Fig. 7*	*Fig. 8*

Once you successfully onboard your INSiGHT Scanning Technology, the Bridge will automatically pair to them each time you are within range and the instruments are powered on.

Continue to Part 2 – Step 2: Migrate Your Data to finish setting up your tech with Synapse.

5.5. Part III: Manage INSiGHT Bridge

Synapse INSiGHT Bridge mode is available for Clients who use a version of Synapse that operate with a microcomputer called the INSiGHT Bridge. The Bridge is used with older versions of wireless INSiGHT technologies to allow access Synapse scanning and in offices that require special networking considerations.

The Manage INSiGHT Bridge Section under Synapse allows you to:

- View the status of your INSiGHT Bridge(s):
  - To view the status of your INSiGHT Bridge(s) An “active” button with the office name beside it, will turn to blue when the Bridge is active and connected (Fig. 1).
- View the status of your available and paired INSiGHT Scanning Technologies
  - To view the status of your available and paired INSiGHT Scanning Technologies, a blue check mark under each instrument icon indicates that the instrument is paired (Fig. 2).
    - Note: An instrument that is not paired will not show up as an option when starting an exam. Any currently paired instruments are listed with their MAC (Media Access Control) addresses.
- Manage your existing INSiGHT Bridge by clicking manage from the main screen (Fig. 3):
  - Rename the Bridge
  - Switch WiFi
  - Add instruments
  - Sync your neuroTHERMAL

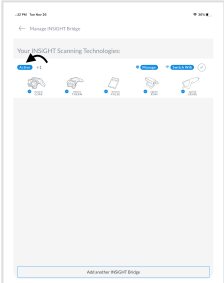


Fig. 1

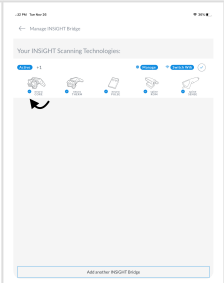


Fig. 2

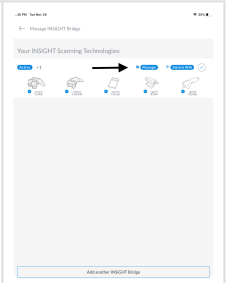


Fig. 3

5.5.1. Rename Bridge

We recommend naming the INSiGHT Bridge the office or exam room where it is being used. In applications where you have multiple Bridges, you will want to be especially careful to distinguish by location.

Step 1: Click the notepad icon next to rename to rename your INSiGHT Bridge (Fig. 1).

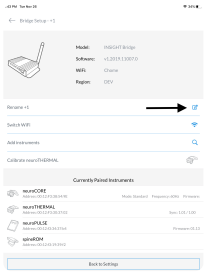


Fig. 1

5.5.2. Switch WiFi

The use of Switch Wi-FI is for applications where you might need take your INSiGHT Bridge from your primary scanning environment to another environment temporarily. The most common example might be switching between your office and home.

Follow these instructions to successfully move locations:
Step 1: Confirm you are in “Online Mode” before you attempt to switch Wi-Fi. Screening/Offline Mode does not allow the ability to Switch WiFi as you are not connecting to the cloud servers.
Step 2: Once your device (iPad/Computer) is on the new locations Wi-Fi network and you have logged into the iOS app or Launch App go to “Settings” (Fig 1).
Step 3: Select Manage INSiGHT Bridge (Fig. 2).
Step 4: Select Manage (Fig. 3).
Step 5: Select Switch WiFi (Fig. 4).
Step 6: Complete the remaining steps as displayed on the application by hitting connect (Fig. 5) (This process mimics the steps you used in Onboarding and the same requirements apply).

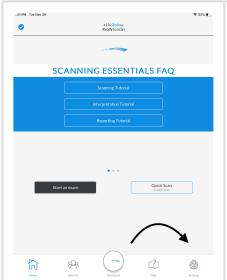


Fig. 1

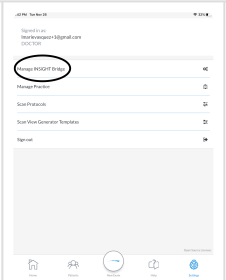


Fig. 2

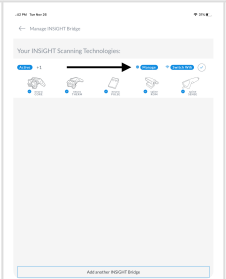


Fig. 3

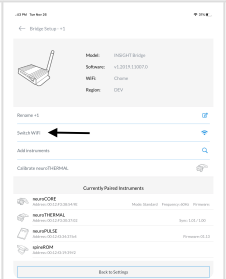


Fig. 4

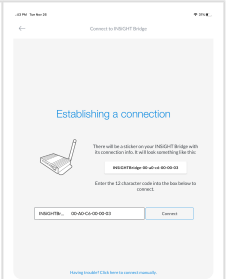


Fig. 5

We recommend verifying you Network/Router configurations before attempting to Switch/ WiFi. Click here to review those with your IT Specialist.

5.5.3. Add Instruments

Adding instruments is the same process as the initial pairing process. Click here for complete instructions.

5.5.4. Sync neuroTHERMAL

One-sided thermal scans are rarely caused by a faulty thermal scanner. They are usually due to examiner errors, actual patient readings or changes in scanning environment temperatures. If you detect imbalanced, one sided readings on THREE successive scan exams from different patients, you can check to see if the instrument sensors are synced.

NOTE: You only need to sync if you notice readings are shifting towards one side. Do not use this sync process as a part of regular maintenance.

How to Sync neuroTHERMAL:

- **Step 1:** Select “Sync neuroTHERMAL” (Fig. 1)
- **Step 2:** Select “Begin Sync” (Fig. 2)
- **Step 3**: Make sure your neuroTHERMAL is powered on and in within range of your iPad

Start with the Left Sensor

- **Step 4**: Locate a small freckle on the inside of your forearm to use as a spot to carry out the sync
- **Step 5**: Point the left sensor ¼-½ inch away from the freckle
- **Step 6**: Do not touch the instrument to the skin
- **Step 7**: Watch the Display box titled Left (Fig. 3)
- **Step 8**: Wait for the Average temperature to match the Reading temperature displayed in red (Fig. 3)
- **Step 9**: Pull the neuroTHERMAL trigger to lock in the left sensor reading (Fig. 3)

Continue with the Right Sensor

- **Step 10**: Locate a small freckle on the inside of your forearm to carry out the sync
- **Step 11**: Point the left sensor ¼-½ inch away from the freckle
- **Step 12**: Do not touch the instrument to the skin
- **Step 13**: Watch the Display box titled Right (Fig. 4)
- **Step 14**: Wait for the Average temperature to match the Reading temperature displayed in blue (Fig. 4)
- **Step 15**: Pull the neuroTHERMAL trigger to lock in the right sensor reading (Fig. 4)

A notice will be appear **confirming that your neuroTHERMAL is In Sync** and that the Sync process is complete* (Fig. 5)
If your neuroTHERMAL was already In Sync, the Sync status will confirm that your neuroTHERMAL was already In Sync and continues to be (Fig. 6).

Go to Part III: Step 2: Manage Practice.

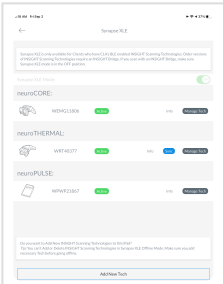


Fig. 1

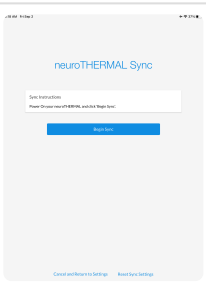


Fig. 2

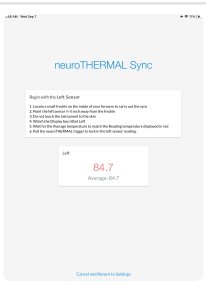


Fig. 3

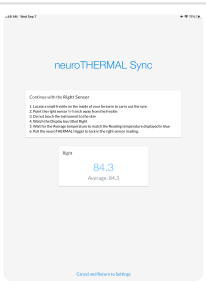


Fig. 4

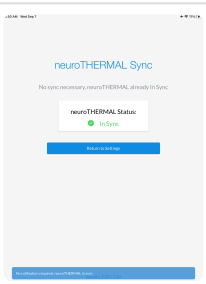


Fig. 5

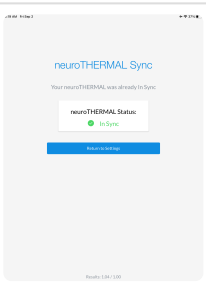


Fig. 6

5.6. Part IV – Step 1.neuroCORE – Enhanced Mode

In the Enhanced mode, sEMG scans measure the amount (amplitude) of muscle energy in the paraspinal muscles as well as the type of energy the muscles are emitting. The type of energy changes with muscle fatigue, changes in active muscle fiber types and various clinical conditions.

The INSiGHT's Enhanced EMG mode detects the type of energy by measuring the frequency of the EMG signal:

- A red and blue signal will move across the active scanning graph, indicating the level of the signal being recorded.
- As the signals move across the graph, you will see some activity in the grids on the left and right.
- These grids display the frequency of the EMG signal.
- The red and blue signals will continue across the graph until a reading is taken.
- Once you take a reading, the red and blue signals will begin again moving from left to right and the voice prompt will state the next level.
- Always wait for the signal to stabilize prior to taking a new reading.
- Dip the EMG sensors in alcohol as needed during the scan.
- The left and right frequency grids display left and right frequency components detected by the sEMG sensors.

Go to Part IV: Step 1: neuroTHERMAL continue understanding scanning and reporting.

6. Additional Resources Synapse

6.1. Glossary Synpase

6.1.1. Symbols Glossary

Symbol	Title	Reference	Description
	BF type applied parts	IEC 60417-5333	Medical electrical equipment in normal use necessarily comes into physical contact with the patient to perform its function
	Refer to instruction manual/ booklet	ISO7010-M002	Refers to instruction manual booklet must be read.
	Prescription Only	N/A	Caution: Federal (USA) law restricts this device to sale by or on the order of a physician.
	Manufacturer	ISO7000-3082	Medical Device Manufacturer
	Consult Instructions for use	ISO7000-1641	This is the electronic instructions for use that will contain all hardware and software related information.
	Non-ionizing electromagnetic radiation	IEC60417-5140	Indicates medical devices that include RF transmitters

	Caution	ISO 7000 Reg# 0434A	Indicates that caution is necessary when operating the device or control close to where the symbol is placed, or that the current situation needs operator awareness or operator action in order to avoid undesirable consequences.
	WEEE Separate Collection	EU Directive 2006/66/EC	Waste Electrical and Electronic Equipment (WEEE)

6.1.2. Terms Glossary

INSiGHT Scanning Technology – The entire suite of all of the scanning instruments provided by CLA, including the neuroTHERMAL, neuroCORE, neuroPULSE, spineSENSE, and spineROM.

neuroTECH – A bundle including CLA's three neuro-scanning instruments, the neuroTHERMAL, neuroCORE, and neuroPULSE.

neuroTHERMAL – The wireless thermal scanner allows you to measure spinal nerve control of organs and glands to help you identify areas with poor autonomic regulation.

neuroCORE – The wireless EMG scanner allows you to measure the tone of muscles along the entirety of the spine, which helps you pinpoint overactive and exhausted neuromuscular areas.

neuroPULSE – The wireless heart rate variability scanner measures heart rate, temperature, and anxiety simultaneously, allowing you to observe overall balance and activity levels of the autonomic nervous system.

spineSENSE – The algometer scanner measures sensitivity of paraspinal issues to map out pressure and pain sensitivity along the body.

spineROM – The spinal range of motion scanner measures the amount of movement that your body is given due to the current state of your muscles.

INSiGHT Bridge – A small yet powerful data storage and computing device. For users without Bluetooth Low Energy (BLE) chip enabled INSiGHT Scanning Technologies, the INSiGHT Bridge connects Synapse to the INSiGHT Scanning technologies.

Synapse – Powers all wireless INSiGHT Scanning Technologies. Synapse provides access to a powerful cloud-based portal to ensure the privacy and security of patient data, analyzes and calculates scan data using proprietary algorithms and converts it into easy to interpret reports for both doctors and patients.

Synapse XLE – The standard and recommended operating mode for INSiGHT Scanning Technologies. XLE requires Bluetooth Low Energy (BLE) chip enabled INSiGHT Scanning Technologies to operate.

Synapse Doctor Portal – The web-based application which serves as the central hub for Synapse. It has all of the features of Synapse with some added administrative functionality. The Doctor Portal also lets you launch the web-based version of Synapse.

Scan Screen – The screen that is present during a scan, which leads you through the scan and allows you to moderate its progress.

Scan View – The different graphic representations of an instrument's collected data that display it in a meaningful, easy to interpret form.

Exam – A visit where a patient is scanned with at least one piece of technology. These are sorted by date in Synapse.

Report – A congregation of data from selected instruments and exams that are analyzed to output a summary of a patient's condition. As more exams are conducted with more instruments, further reports are compiled to give a complete picture of a patient's health based on the data acquired from the scanning instruments.

CORESCORE Initial Report – This report will come up if you have scanned a patient with all three pieces of equipment. It gives an aggregate score of the patient's nervous system.

CORESCORE Progress Report – This is report compares the initial report to the one directly after it. This report is compiled automatically after a patient has two CORESCORE reports completed.

CORESCORE Comparative – This report will give an overview of the patient's initial, middle, and latest report. It is the third report generated in a sequence after the progress report.

CORESCORE Continuation Report – Once a patient has four or more CORESCORES, all reports will now be continuation. You can always select the number of CORESCORE reports to compare, but the first one will always be the latest.

Single Report – This is the report that will come up if you have just scanned with a single insturment. This is different from a simple scan as it formats the data into an easy-to-read report for patients. Each of the instruments in the neuroTECH bundle output a single report.

Dual Tech Report – This report is designed to highlight exams within a 7 day window to show the results of selected scans on one report. This can be generated with any two piece combination of any neuroTECH instruments.

Narrative – A narrative report includes data from the scan and offers a narrative describing the purpose of scanning and the results. Narrative reports can be used for communicating the complexity of the results to other health practitioners, insurers and lawyers. Scan views can be taken out of context when used to share data with uninformed third parties. Narrative reports help bridge that gap. They are available in the reporting section of the app.

Table – The data tables are valuable to review the intricacies of the actual data that has been collected and then used to calculate a variety of scores. These are important tables to share with other health practitioners or research affiliates so that the actual data can be analyzed in this table format.

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