



titronics

"The Power to Engage"

1-800-705-2307 / www.titronics.com



**Tytron Software
User Manual**

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Introduction

Congratulations!

Thank you for your purchase!

This user manual provides a wealth of information for using the Tytron scanner and Tytron software.

With more doctors turning to objective diagnostics and results oriented (outcome based) care, paraspinal thermal imaging is the neurophysiological test of choice in the chiropractic profession. The versatility of the Tytron makes it the perfect instrument to help grow your practice as well. It helps to generate new patients, improve patient education and increase patient referrals.

Today, the Tytron represents the pinnacle of research and technology in the field of paraspinal thermal imaging. No other instrument has the accuracy, sensitivity, repeatability, stability, resolution, and comprehensive thermal interpretation of the Tytron. Intuitively designed, even a new doctor can reproduce a scan performed by an experienced professional. Scanning examinations are quick and accurate – making it extremely practical for daily use, even in the busiest practice.

Your Tytron scanner and Tytron software includes all parts, workmanship, and technical support warranty for one (1) year (If purchasing the software only, previous Tytron hardware purchases do not receive a renewed parts and workmanship warranty period) - See **Warranty and Repair Policy** at the back of this manual for full details.

Feel free to call us and ask any operational or interpretation questions.

For continued support and service after one year, there is a small technical support fee charged on a per instance basis to ensure our continued ability to provide support to all of our customers. There is also a charge for additional or replacement software installment media.

In addition, make sure to check out our website at www.titronics.com. The website is updated frequently with new information and features items to compliment your Tytron.

Objectifying the chiropractic profession's core principle is impressive to say the least. On behalf of Titronics, we would like to thank you for your purchase of the Tytron scanner and Tytron software and welcome you to the world of neurophysiological imaging!

Best Regards
The Team at Titronics Research & Development Company

System Components

Verify Receipt of All System Components

Your Tytron System includes the following if your Tytron serial number begins with a 5xxxx:

- Tytron Scanner (5xxxx)
- 2 USB Cables
- Tytron Scanner Holder
- Tytron Software Installation Media (Includes Calibration File, Drivers, Manual, Clinical Interpretation Book, Articles and Poster)
- User Manual
- Repair Kit

Your Tytron System includes the following if your Tytron serial number begins with a 5x6xx or 6XXXX:

- Tytron Scanner (5x6xx or 6xxxx)
- 2 USB Cables
- 1 Transmitter with 1 USB to Mini Cable
- Tytron Scanner Holder
- Wall Charger with USB Cable (US Only)
- Tytron Software Installation Media (Includes Calibration File, Drivers, Manual, Clinical Interpretation Book, Articles and Poster)
- User Manual
- Repair Kit

Your Tytron System includes the following if your Tytron serial number begins with a 7XXXX:

- Tytron Scanner (7xxxx)
- 2 USB Cables
- Tytron Scanner Holder
- Wall Charger with USB Cable (US Only)
- Bluetooth dongle(Only use if your computer does NOT have a Bluetooth built in)
- Tytron Software Installation Media (Includes Calibration File, Drivers, Manual, Clinical Interpretation Book, Articles and Poster)
- User Manual
- Repair Kit

Read Me First!

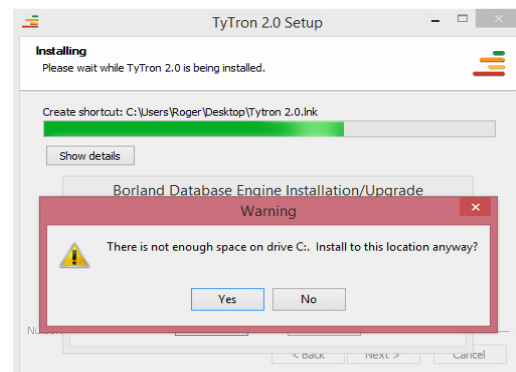
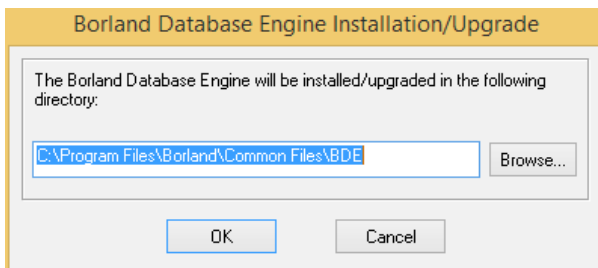
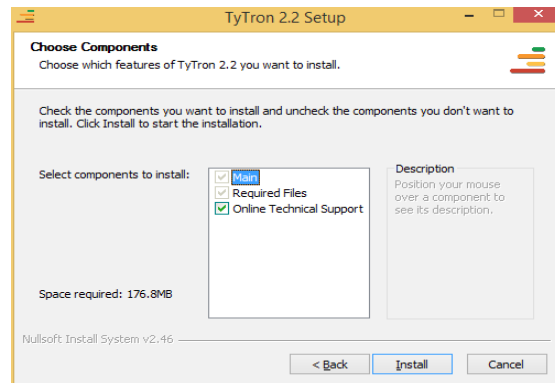
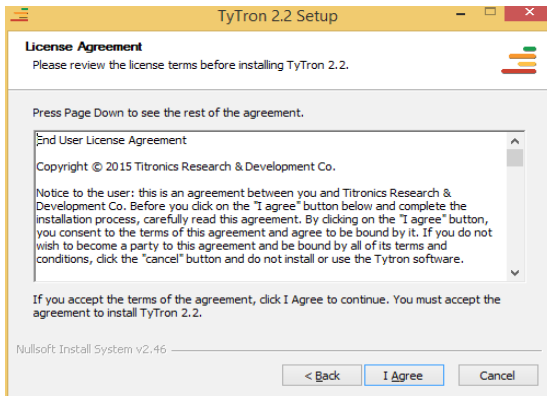
System Requirements: Windows 7/8/10 · Pentium II Processor or Greater · 200MB Free Hard Drive Space · CD-Rom Drive or USB Port for installation and at least 1 USB port for scanner connection.

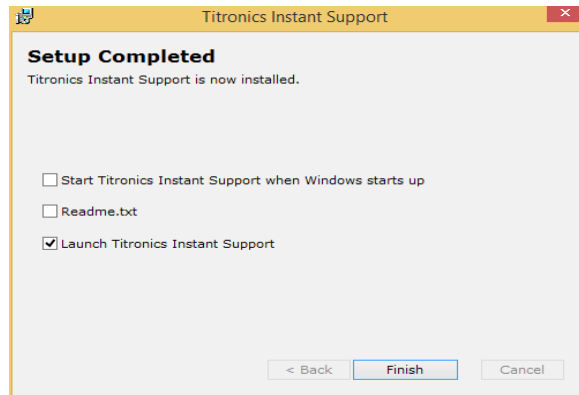
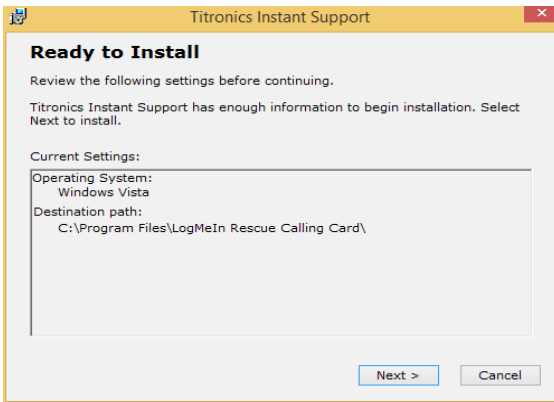
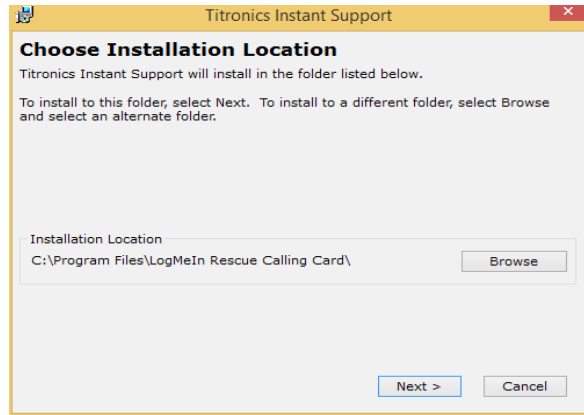
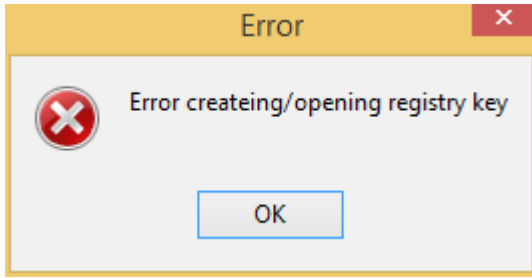
- Use the supplied desktop scanner holder to avoid Tytron drops. Remember to keep the cord out of walking paths. For drops, use the repair kit and instructions. Metal screws and/or adhesives **should not** be used for repairs.
- Perform periodic maintenance on the Tytron. The scanner barrels may accumulate dust and dirt particles over time. For small amounts of debris in the barrels Titronics recommends using canned air (available at most electronics stores). Insert the spray straw approximately 1" into the barrel. Spray for three seconds. Allow the unit to sit for 15 minutes. **Do not insert the straw deeper than 1" into the barrels -- touching the lenses with the straw could alter the calibration of the precision sensors!** For heavy cleaning instructions and additional information on **Periodic Maintenance** refer to **page 38**.
- When C5000 and C6000 scanners triggers are pulled, a white light will show on the handle of scanner to indicate the scanner is receiving power.
- The Tytron uses the left inner wheel for distance measurement. Keep this portion of the wheel in contact with the patient for accurate results. **Do not scan over the patient's clothes.** Ensure the scanner sensors have a direct view of the patient's bare back.
- Discharge static electricity before handling the Tytron. Use an anti-static pad or grounding source to discharge static electricity safely. **High levels of static electricity may damage the circuitry inside the device!**
- The Tytron should be kept in a 72° F - 80° F temperature environment for optimal performance.
- Ensure the Tytron isn't sitting directly next to a computer or other heat source. Titronics recommends providing 10 inches of space between the Tytron and the computer. Ensure the Tytron isn't resting in direct sunlight or next to an open window. Keep the Tytron away from heating and cooling vents.
- **Regularly backup the database.** Titronics recommends weekly backups and storing the backup on a flash drive.
- If a yellow exclamation mark displays in the device manager, then you need to reinstall the driver which is located on the software installation media. Be sure that you have your Tytron Software Installation Media inserted. Unplug your Tytron and plug it back in. Follow the on screen instructions for **Hardware Installation** on **page 8**.

Software Installation

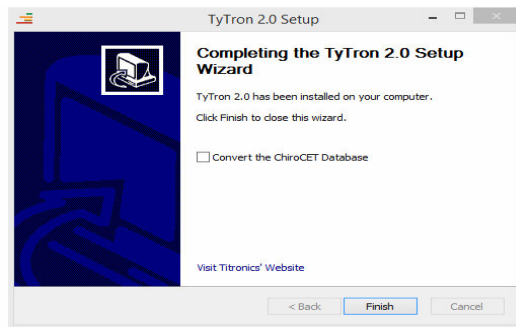
Install Tytron Software

1. Insert the Tytron Software Installation Media into the computer.
2. Select **Install Software**.
3. Click **Next**. At the next screen, click **Install** to proceed through the automated setup procedure.
4. These are some examples of screens that might be displayed during installation. Click on **Next**, **I Agree**, **Install**, **Yes**, or **OK** to complete the installation.





5. Click **Finish** to complete the installation.



Hardware Installation

First, find the Tytron scanner serial number, located on the Tytron handle or cord. Follow the steps that apply to your scanner.



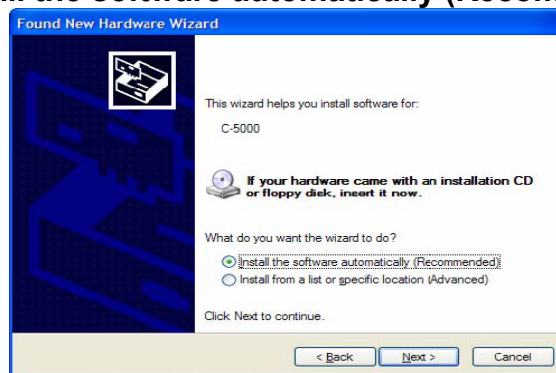
5xxxx, 5x6xx, 6xxxx Instructions

1. Insert the Tytron Software Installation Media into the computer.
2. Plug the Tytron into the computer USB port.
3. When the **Found New Hardware Wizard** (Windows 7, 8, 10) screen appears select **No**, **not this time**. Click **Next**.

**If you are online you may be able to skip this step. Windows does an automatic driver search which may install the driver.*



4. Next, select **Install the software automatically (Recommended)**. Click **Next**.

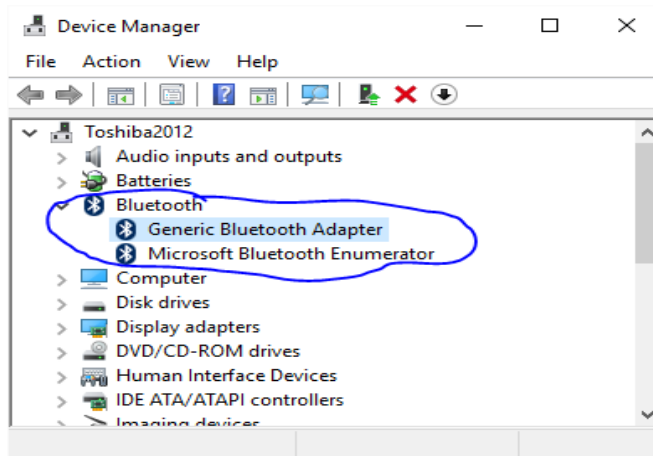


5. Click **Finish** to complete the driver installation.

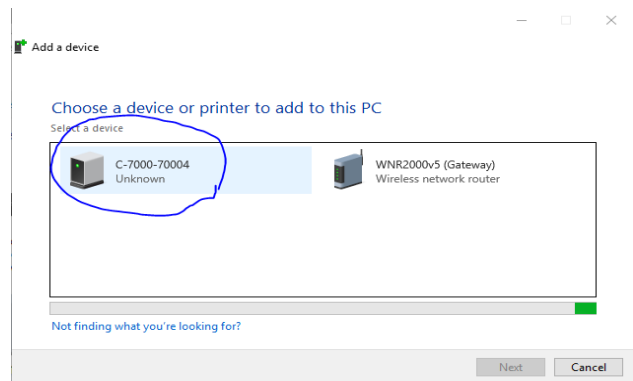
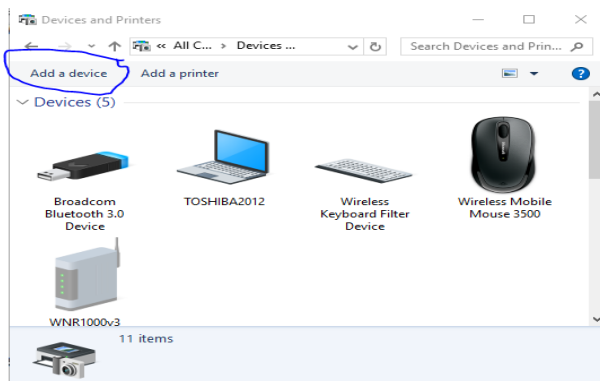


7xxxx Instructions

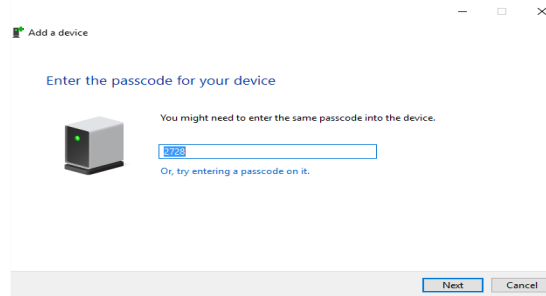
1. Follow the instructions above for 5xxxx/6xxxx to install the drivers for wired operation.
2. Make sure the scanner is charged and **NOT** plugged in.
3. Go to Device Manager to see if your computer has Bluetooth built in.



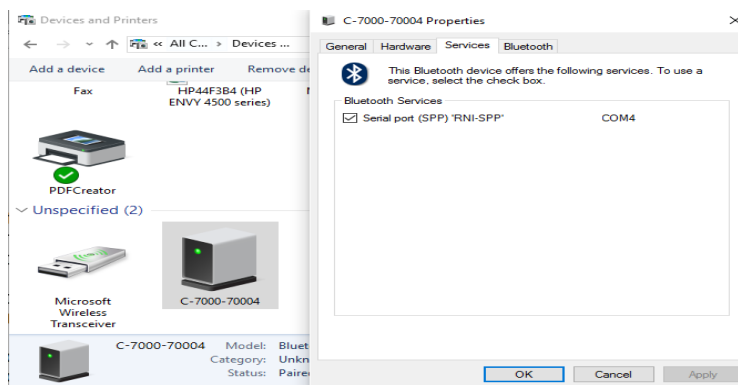
4. If Bluetooth is **not built in** to computer connect Bluetooth dongle, wait for drivers to load
5. Go to Devices and Printers
6. Select Add device, select C7000-7XXXX



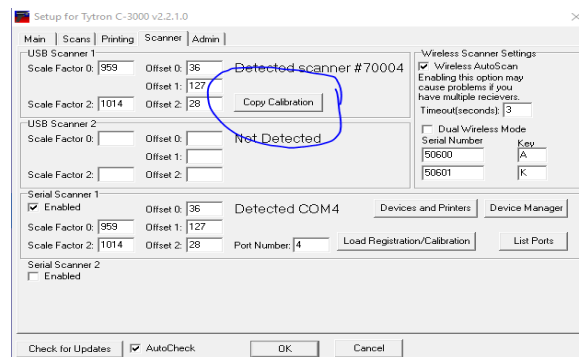
7. Use pairing code 2728



- 8. Wait for drivers to finish installing
- 9. Right click on C7000 and select Properties
- 10. Go to Services tab to see which port it is on



- 11. Go into the Tytron Software and select Setup
- 12. Go to Scanner tab and enable Serial Scanner 1 and enter the port number
- 13. Then plug in the scanner and use the Copy Calibration button to set the calibrations



Your Bluetooth Scanner is now ready to scan.

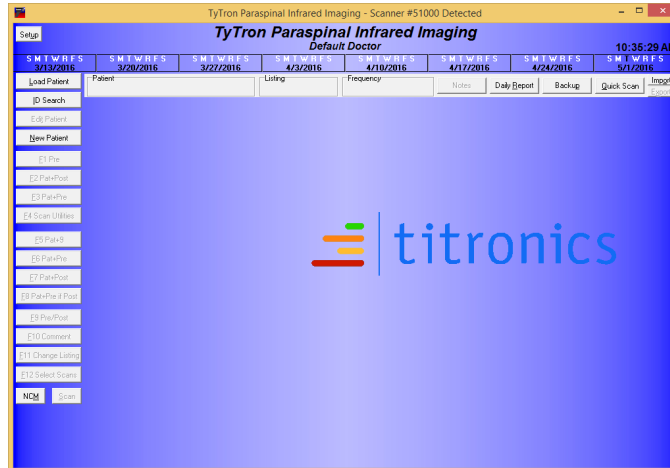
Your Bluetooth Scanner should charge every night. After 3 – 5 years, the scanner will need to be sent in to replace the battery.

To use the Bluetooth on multiple computers

When you load a patient, a connection to the scanner is opened and the scanner is locked into that computer until the patient is unloaded. Once the patient is unloaded, the led on top of the scanner will start blinking indicating the scanner is ready for another computer/patient. A solid LED indicated the scanner is already connected to a computer. Always get out of patient file after scanning to ensure the scanner is ready to used on another computer or patient.

Scanner Detection

For Tytron scanners with serial numbers starting with **5xxxx** or **6xxxx**, the top portion of the home screen displays a message stating **Scanner #XXXXX Detected** when the Tytron is plugged into the USB port. If this message doesn't appear, please reinsert the software installation media. Unplug the Tytron momentarily, then plug it back in. Follow the on screen instructions for Hardware Installation on **page 8**.



Using the Tytron Software

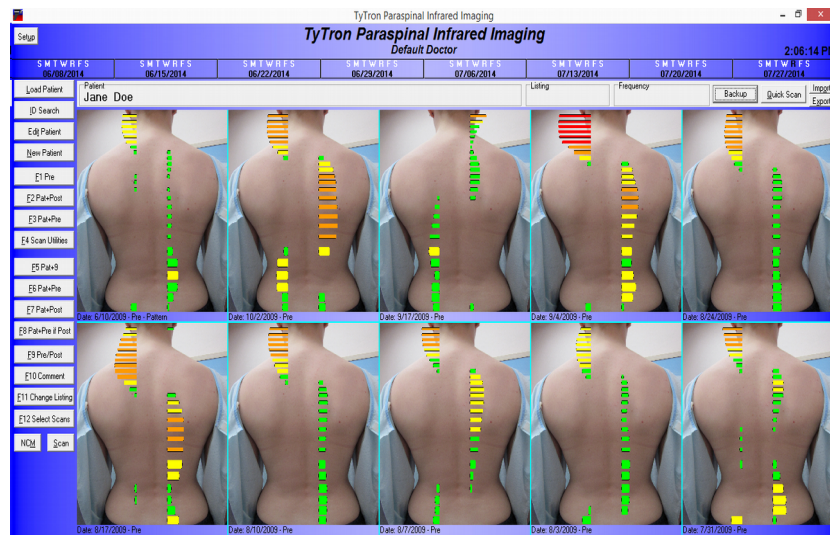
The Tytron Software uses several keyboard functions designed to let you work as efficiently as possible. The Tytron Software follows these simple rules:

1. All buttons/functions can be initiated by clicking on them with the mouse. Any underlined letter denotes that the function can be initiated by using the corresponding keyboard key (i.e. F5, Load Patient, etc.).
2. The **Esc** key goes back one screen at a time.
3. Basic keyboard commands apply to most functions within this program (i.e. **Tab** key moves through fields, **PgUp/PgDwn** moves quickly through lists, etc.).

The following is a quick summary of the single letter command keys that function either in the scan display, scan history, or home screens:

- B** =Toggles between the line graph and **B**argraph views. (scan screen or bar graph screen)
- D** =Toggles between the Delta-T and **DT** views. (bargraph screen)
- A** = Shows **A**utonomic chart with a bargraph. (bargraph screen)
- N** = Displays a **N**ormal scan for comparison. (scan screen)
- F** = Allows **F**ossa temperatures to be taken. (scan screen)
- I** = Allows **I**nfants scans to be taken. (scan screen)
- E** = Allows a **S**egmental scan to be taken. (scan screen)
- L** = Place or reposition Break **L**ines. (scan screen)
- H** = **H**ide or show Break Lines. (scan or history screens)
- PgUp/PgDwn** = Search through additional past scans. (history screens)
- P** or **R** = **P**rint any displayed scan screen. (scan, bargraph or history screens)
- S** = Brings up a blank **S**can Screen. (home screen)
- L** = **L**oad a Patient. (home screen)
- T** = **E**dit a Patient. (home screen)
- M** = **N**CM mode. (home screen)
- X** = **E**xports the screen as a jpeg to a folder called images in the C-3000 folder. (at any screen showing a scan, bargraph or history)
- X** = **E**xport the Patient. (home screen)
- Q** = **Q**uick Scan a patient without saving the scan. (home screen)
- O** = **I**mports a patient. (home screen)
- U** = **L**oad the **S**etup screen. (home screen)
- Z** = **O**pens the notes on most screens.
- Y** = **T**oggles the Delta/DT Hybrid option.

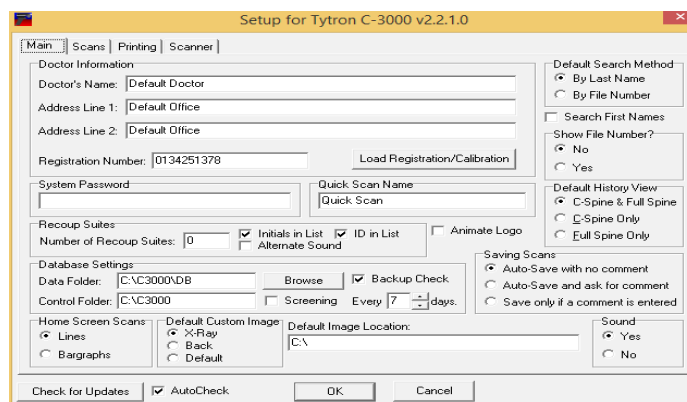
The Home Screen



The Home Screen (shown above with a patient loaded) is the first screen displayed when the program is started and displays the most common functions and data. From this screen you will be able to perform most of your patient file work and scan viewing in an efficient manner.

Your customization information (based on the information you supplied at the time of purchase and registration for clinic name, your name, etc.) displays below the TyTron program label. You may change this information at any time by clicking on the Setup button and changing the information displayed on the Main tab. The change in the information displayed does not occur until you click the **OK** button.

Note: Do not change the registration number. If you do, your software will go into Unregistered Copy mode and you will not be able to change any of the information in your three lines, nor will you be able to take a scan. If this happens, please contact Titronics R&D at 1-800-705-2307.



Patient: Load a patient by clicking on **Load Patient** or **ID Search** or enter a new patient by clicking on **New Patient**. The Patient's name now appears on the home screen.

Listing and Frequency: This optional information may be entered when creating a new patient, or edited when a current patient's listing or frequency changes by going to **Edit Patient**.

8-Week Care History: Displays the currently selected patient’s last eight weeks of care. The current date displays in black. Any date highlighted green denotes the patient was scanned, but that no adjustment was rendered. A red highlighted date signifies a delivered adjustment. The first scan of the day is marked as a pre; all subsequent scans are marked as posts, unless the F9 key is used to toggle the last scan between pre and post.

This 8-week Care History quickly displays how often the patient is being adjusted; and thus whether the current adjusting method is or is not appropriate for the patient.

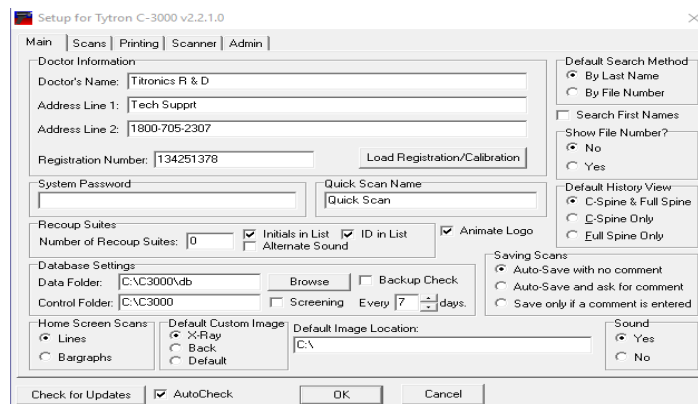
Scan: Once in a selected patient’s file, click the Scan key, or hit **S** on the keyboard, to perform a simple scan without a pre-adjustment or pattern overlay. Immediately taking another scan simply overlays the additional scan over the previous scan. **Once you exit the scan window, only the last scan taken is saved in the patient’s file.** To save any scan you can also press **Enter** before performing another scan.

The Setup Button

The **Setup** button is located in the upper left corner of the home screen. The Setup screen allows for the management of individual preferences in four tabbed areas: **Main**, **Scans**, **Printing**, and **Scanner**.

The **Check for Updates** button will connect over the internet to see if a new version of the software is available. If the **AutoCheck** box is checked it will check for an update when the program starts.

Main Tab: Manages options for Doctor Information, Registration Number, System Password, Default Search Method, Show File Number, Default History View, Recoup Suites, Saving Scans and more.



You should not change the Registration Number.

The System Password section can be set by entering alphanumeric characters. Leave this field blank to disable the password prompts. If a password is entered, please remember this password

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to log into the Tytron software and/or store the password in a safe place.

The Default Search Method section determines the default patient search method, by last name or file number.

The Show File Number section allows the option to display the patient file number next to their name for quick reference.

The Default History View section determines how scans display in the 10 Scan History screen. Display options are: view C-Spine and Full Spine scans together, C-Spine scans alone, or Full Spine scans alone.

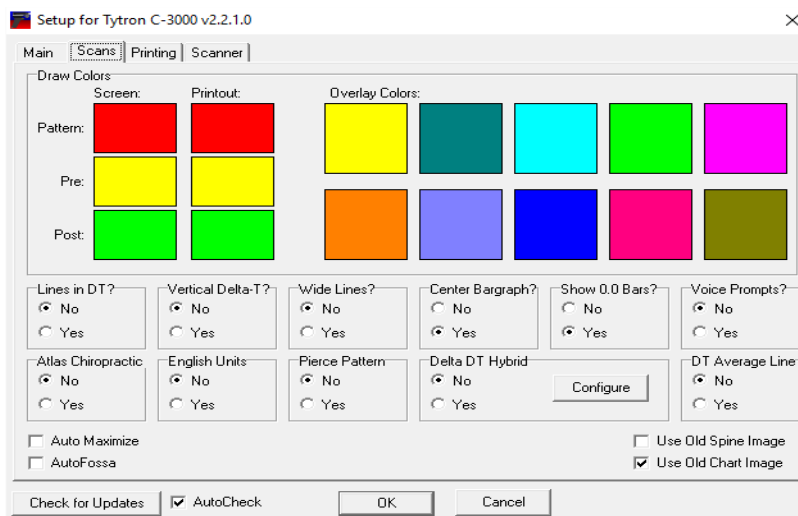
The Recoup Suites section allows the display of up to 300 post-adjustment suites on the Home Screen. Simply enter the number of suites in the office. If post-adjustment recoup suites are not part of your patient care, enter 0 in the field and the recoup suites will not appear on the Home Screen. You have the option to put names, initials, or ID numbers in the recoup space. You can also select between 2 alert tones.

The Saving Scans section determines how the Tytron software handles saving scans. Titronics recommends to always use one of the Auto-Save options.

- **Auto-Save with no comment** saves all scans without prompting for comments.
- **Auto-Save and ask for comment** saves all scans and prompts for comments.
- **Save only if a comment is entered** prompts for comments and only saves the scan if a comment is entered.

Screening Mode points the software database away from a networked database to a local drive.

Scans Tab: Manages options for Draw Colors for Line graphs, Lines in DT, Vertical Delta-T, Wide Lines, Center Bargraph and Voice Prompts.



The Draw Colors section determines the colors used when displaying line graphs. Up to 10 line

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graph scans may be overlaid. Simply click the Other Scans color to select the color for that scan. This option is helpful for colors that might be hard to see on the screen. The Pattern, Pre and Post colors display on screens where the scans are not overlaid.

The Lines in DT section places white vertical background lines on the right and left graphs (similar to those displayed in the Center Delta-T bargraph) for each degree (30°, 31°, etc).

The English Units selection allows the software to use English units.

Pierce Pattern option allows you to select multiple scans as pattern in a patient's file.

The Vertical Delta-T section displays, at the top of the graph, the vertical direct temperature differential for each side calculated as the temperature difference between the lower and upper 2 cm of the graph. An ideal graph would show a gradual increase in temperature from the sacrum to the occiput. Ex: VDT:T 1.25.

The Wide Lines section displays wider/thicker lines for line graph scans.

The Center Bargraph section centers the displayed bars over an implied zero center (vertical blue line in line graph view). This feature is useful when performing scans outside the office.

Temperature gradients across the scanner can alter the zero position of the line graph, presenting a misleading bargraph (all the bars off to one side).

Note: The default is set to disabled; this is the best way to monitor the scanner calibration when in a controlled environment such as your office.

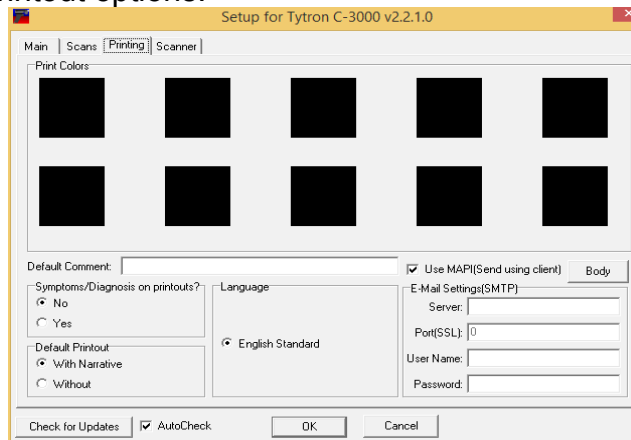
The Show 0.0 Bars option toggles whether bars with a value of 0.0 are displayed on bargraphs.

The Voice Prompts section provides voice prompts to operate the scanner.

Atlas integration allows the software to be used with Atlas Chiropractic Software. Contact Atlas for information about configuring their software to integrate.

Delta DT Hybrid and DT Average Line options allow the display of scans with Delta DT information shown. DT Average Line toggles whether the DT average is shown. The “Y” key toggles the feature on & off while viewing patients' line graphs. The configure feature allows you to change the colors of the Delta DT Hybrid screens.

Printing Tab: Manages printout options.



The Print Colors area determines the colors used when printing up to 10 overlaid Line Graph scans. Simply click the scan color to select a color for that scan.

The Language section defaults to English Standard.

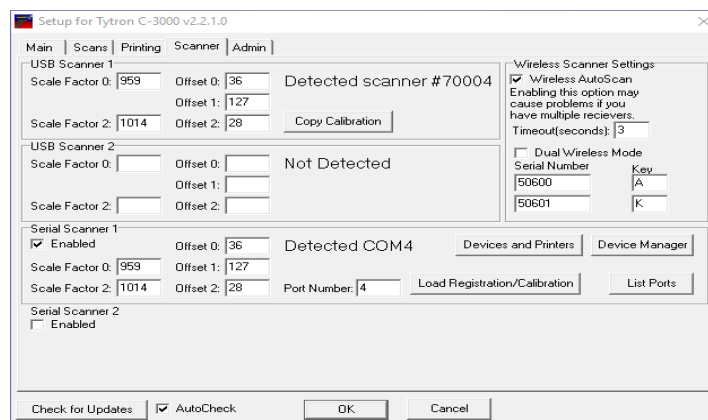
The Symptoms / Diagnosis section allows the addition of a generic symptom and diagnosis to printouts.

Note: Colors can vary from screen to printouts. This tab helps optimize printout colors.

The Use MAIP option will use your Email client (Thunderbird, etc.) to send mail.

The E-Mail Settings(SMTP) area allows you to configure the software to send mail directly through your E-Mail server. Consult with you E-Mail provider for information on these settings.

Scanner Tab: Displays scanner calibration information (Scale Factors and Offsets) and port settings.



The Calibration Settings should not be changed at anytime unless instructed directly by Titronics Technical Support. These values are set at the time of software installation and are unique to each scanner.

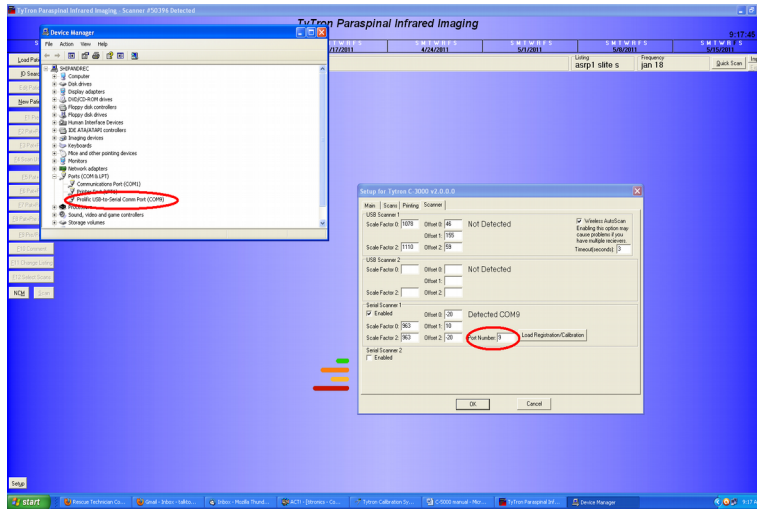
The Wireless Settings area is explained in **Appendix B** on **page 41**.

The List Ports button shows all ports available.

The Show Device Manager button takes you to the computer's Device Manager.

The Device & Printers button takes you to the computer's Device & Printers.

The Scanner Port area (if applicable) allows the selection of a USB port(s) to use in conjunction with a USB adapter. This selection directs the Tytron software in correctly finding the Tytron. This option is selected during installation. **However, if the Tytron is not scanning, it may be registering on a different virtual port than it originally did when you last used it.** To fix this problem, go to the device manager and find the port that the scanner is registering under, then make sure it is the same port as in the software.



Patient Management

Entering a New Patient

To enter a new patient, click the **New Patient** button or hit the **N** key at the home screen. The patient's first and last name must be entered. All other information is optional. To display a patient's Treatment Frequency and Adjustment Listings, fill in those fields in the Patient Settings section.

New Patient

Patient Information:

Last Name: First Name:

File Number:

Address 1:

Address 2 / Email:

City: State: Zip:

Phone:

Patient Settings:

Frequency: Listing:

Symptoms:

Diagnosis:

Re-Evaluation every weeks from

Doctor:

Technician:

To print reports containing the patient's clinical information, fill in the Symptoms, Diagnosis, and Technician areas in the Patient Settings section. This information provides information requested by many insurance companies.

The Re-Evaluation area serves as an automatic reminder function for re-evaluations. The first, drop-down arrow box determines the rate of re-evaluation (1x/week, every 2 weeks, every 4 weeks, etc.). The other field allows for referencing a start date (i.e. re-examination 4 weeks from this date). The current day is automatically entered. If the frequency field is blank, or 0 is entered, the automated re-examination function is turned off. When a re-evaluation date is set, the

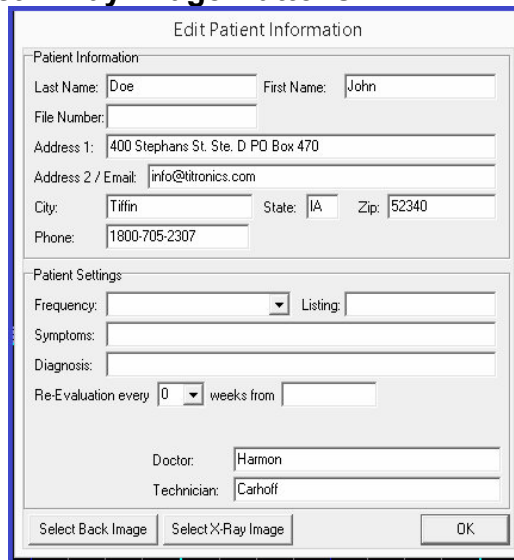
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automatic reminder appears three days before the date of re-evaluation when the patient is loaded on the home screen. To reset this function, use the **Edit Patient** function (described below) and change the frequency and/or date. This removes the Re-Evaluation notice at the patient's home screen.

Editing Patient Information

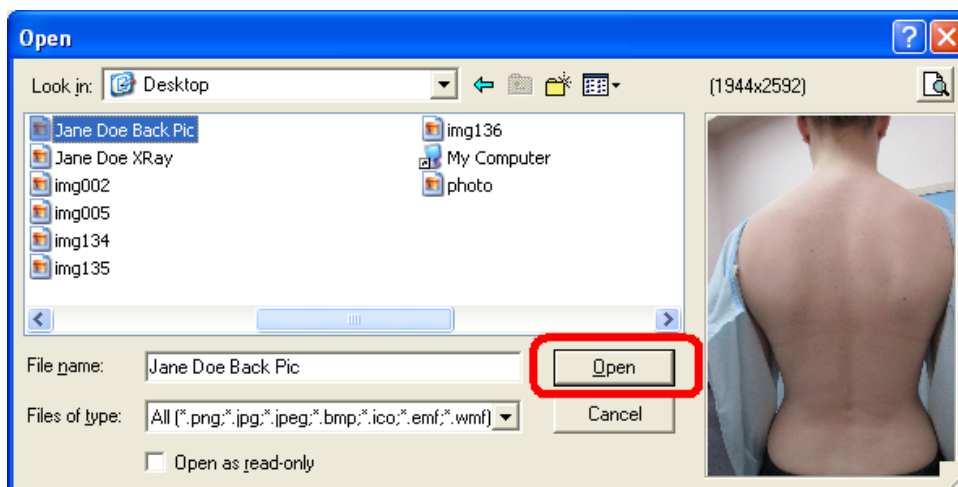
To edit patient information, click the **Edit Patient** button or hit the **T** key while at the selected patient's home screen. The same screen is presented as when entering a new patient. The most frequent use of editing is to change patient treatment frequency and re-examination times. This area is not for deleting scans or a patient (see **Scan Utilities** on page 22 for these options).

Select Back Image and Select X-Ray Image Buttons



The **Select Back Image** button is used to load images of the patient's actual back that you have previously taken. To do this simply press the **Select Back Image** button then follow these steps:

1. Browse to the image in the box that comes up and click **Open**.

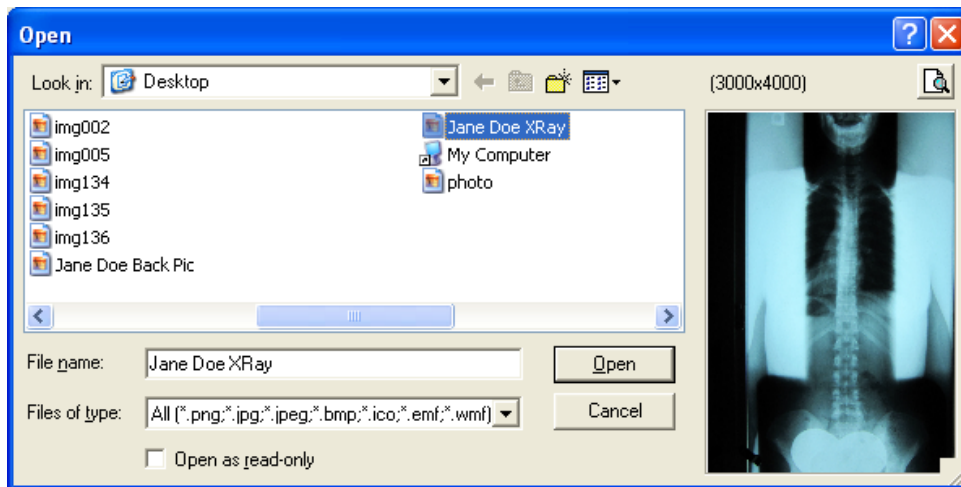
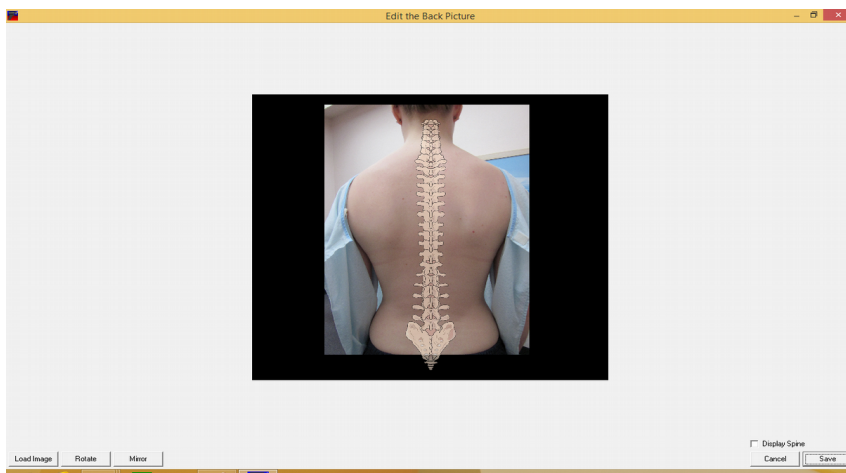


2. On the next screen that appears pull on the corner of the frame around the spine that is super imposed over the patient's picture to lie on top of the patient's actual spine. Note that the sacrum and the coccyx bones can be off of the picture if need be.

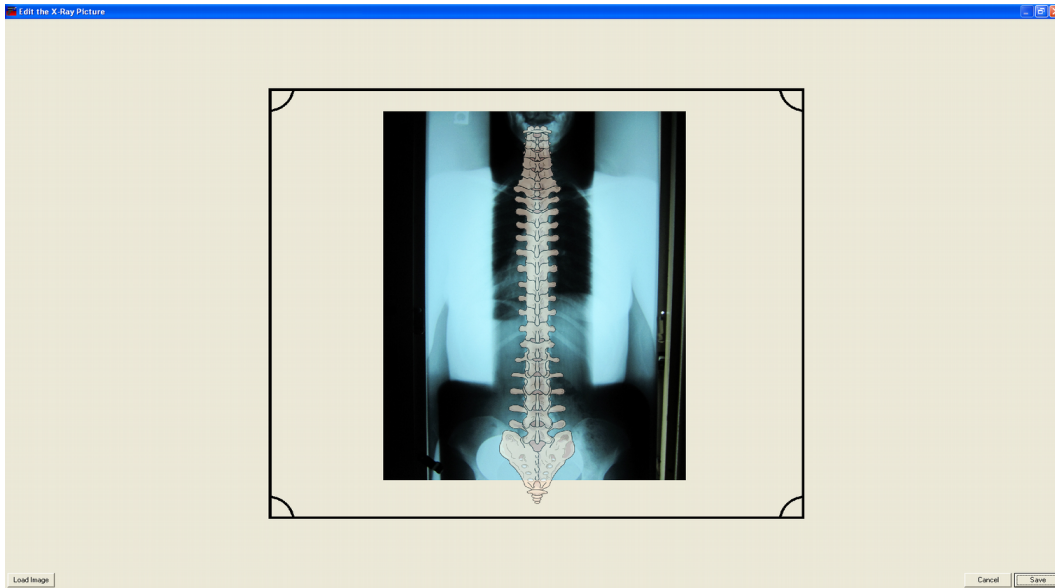
3. Once you have the spine aligned to correctly match the patient's spine, click **Save** or hit the **Enter** key on your keyboard. The picture is now saved as the patient's back image.
4. Go into the **Main Tab** in the **The Setup Button** and make sure that the **Default Custom Image** is set to **Back**. (See **page 14**)
5. Reload the patient to use the new image.

The **Select X-Ray Image** button is used to load images of the patient's X-Ray that you have previously taken. To do this simply press the **Select X-Ray Image** button then follow these steps:

1. Locate the image in the box that came up and click **Open**.



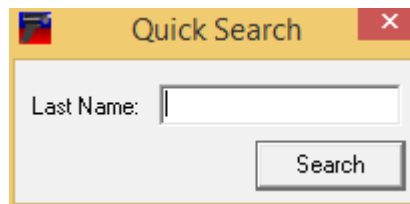
2. On the next screen that appears pull on the corner of the frame around the spine that is super imposed over the patient's X-Ray to lie on top of the patient's actual spine. Note that the sacrum and the coccyx bones can be off of the picture if need be.



3. Once you have the spine aligned to correctly match the patient's spine, click **Save** or hit the **Enter** key on your keyboard. The picture is now saved as the patient's X-Ray image.
4. Go into the **Main Tab** in **The Setup Button** and make sure that the **Default Custom Image** is set to **X-Ray**. (See **page 14**)
5. Reload the patient to use the new image.

Load Patient File

To load a patient file from the Home Screen, click the **Load Patient** button or hit the **L** key. A **Quick Search** pop up appears. Click **Search**, this displays a list of all patients along with a flashing cursor in the patient's last name field (or in their file number field depending on default settings). Enter 1 or more letters of the patient's last name to narrow the search field. Once the patient displays on the screen, highlight their name and click **OK** or hit the **Tab** key to move to the names field and select the alphabetical letter that corresponds to the patient. The patient's name now displays on the home screen.



Scan Manager

The Scan Manager is used to review previous scans.

F1 Pre: Displays the last pre-adjustment scan performed.

F2 Pat + Post: This function serves two purposes. First, a patient's pattern is displayed with the last post-adjustment scan overlaid, allowing the patient to see results of their last adjustment. Second, use the **C** key to look back through post-adjustment scans in detail to determine the effectiveness of adjustments. (See **Scan Utilities** below for how to set a pattern)

F3 Pat + Pre: This function also serves two purposes. First, a patient's pattern is displayed with the last pre-adjustment scan overlaid, to objectively present data supporting your decision along with other findings to adjust or not adjust at visit. Second, use the **C** key to look back through pre-adjustment scans in detail.

F4 Scan Utilities: The Scan Utilities screen has 9 basic functions. Click the **Scan Utilities** button or hit the **F4** key while at the Home Screen to perform scan utilities. First, a scan must be selected to perform a scan utility function (either click on it or select the corresponding letter) -- the exception to this in the Any 2 Scans function.

1 View: Views the selected scan. This can also be performed by double clicking the scan or hitting the **Enter** key.

2 Any 2 Scans: Displays an overlay of 2 selected scans. Select the scans after hitting this button by clicking on the desired scans or pressing the corresponding letters.

3 View /w Pat: Displays the selected scan overlaid with the patient's selected pattern.

4 Pre/Post: Changes the selected scan from a pre-adjustment scan to a post and vice versa.

5 Edit Scan: Edits the Note, Listing, Comment, Pre/Post designation, Pattern fields and options for a scan. The Note field allows notes up to 4 characters long (i.e. MVA). Editing the Listing changes the listing for the currently selected scan only. The Comment field allows up to 255 characters of information (i.e. SOAP notes).

6 Make Pat: Marks the selected scan as the patient's pattern.

7 Delete Scan: Permanently deletes the scan from the selected patient's database.

Delete Patient: Permanently erases the patient and all their scans. This cannot be undone!

Export to CSV: Exports the scan list to a .CSV (comma separated values) file.

Key	Date / Time	Pat	Note	Listing	Full	Pre	Comment
A	5/20/2011 10:53:53 A				Full	Post	
B	5/20/2011 10:51:01 A				Full	Post	
C	5/20/2011 10:50:11 A				Full	Post	
D	5/20/2011 10:49:57 A				Full	Post	
E	5/20/2011 10:49:45 A				Full	Post	
F	5/20/2011 10:46:34 A				Full	Post	
G	5/20/2011 10:46:17 A				Full	Post	
H	5/20/2011 10:46:05 A				Full	Post	
I	5/20/2011 10:45:53 A				Full	Post	
J	5/20/2011 10:45:41 A				Full	Pre	

F5-F8: The History Manager allows for quickly monitoring the details and results of care. Hitting the **Page Up and Page Down** keys while viewing a patient that has more scans than displayed on the screen allows for the viewing the additional scans from the patient's history. The History Manager functions are discussed in more detail in the **History Screen** section on **page 28**.

F5 Pat + 9: Displays the patient's chosen pattern in the upper left hand corner along with the last 9 scans in the database. This allows the ability to review the progress of care and evaluate both the chosen pre-adjustment scan and the effects of the adjustment on the post scan.

F6 Pat + Pre: Displays the patient's chosen pattern in the upper left hand corner along with the last 9 pre-adjustment scans in the database to quickly evaluate if a new pattern is forming.

F7 Pat + Post: Displays the patient's chosen pattern in the upper left hand corner along with the last 9 post-adjustment scans in the database to quickly evaluate if rendered adjustments are effective.

F8 Pat + Pre when Post: Displays the patient's chosen pattern in the upper left hand corner along with the last 9 pre-adjustment scans when a post adjustment scan is performed. This allows the ability to evaluate if the pre-adjustment scans match the pattern or if over-adjustments are performed.

F9 Pre/Post: Quickly toggles the last scan taken between a Pre and a Post Adjustment.

F10 Comment: Displays the comment field for the last scan taken. The comment field allows up to 255 characters of information, for comments such as SOAP notes.

F11 Change Listing: Changes the listing for the last scan taken. This differs from the editing function in the **Scans Utilities** area. This function updates the displayed home screen listing and all subsequent scans performed.

F12 Select Scans: Allows the selection of up to 10 scans for individual history viewing. Once the scans have been selected, click **OK** or hit the **Enter** key to view the scans. Hit the **Esc** key to return to the **Select Scans** screen. Click the **Clear** button to clear previously selected scans or **Esc** again to return to the home screen.

NCM: Loads the **NCM Screen**. See **page 29** for more details.

Scan: Hitting the **S** key allows for a simple scan to be taken without a pre-adjustment or pattern overlay. Multiple scans may be performed in this manner, however only the last scan taken will be saved in the patient's file upon exit. To save multiple scans press the **Enter** key after taking each scan.

Scanning

Before starting the scanning process, please review the preparation involved to perform accurate thermal imaging.

The Tytron Scanner must be run on bare skin, not through clothing.

The Tytron Scanner must be run from the bottom of the spine to the top.

Environmental Controls

- The office temperature should be held between 72°-80°F. (22° - 27° C)
- No direct cooling or heating vent drafts should bear on the scanner or patient.
- The scanner should not be placed in direct sunlight.
- Place the scanner holder away from the computer to avoid heat being emitted from the PC.
- When outside the office, enable the **Center Bargraph** feature (in the **The Setup Button** screen) to center the displayed bars over an implied zero center. This feature is useful when performing scans outside the office to neutralize any effects of temperature gradients across the scanner, which might present a misleading Bargraph (all the bars off to one side).

Note: The default is set to disabled; this is the best way to monitor the calibration of the scanner when in a controlled environment such as an office.

- For scanners without power for **more** than 30 minutes, allow a 20 minute temperature stabilization period. Example: Going from outside to inside.
- For scanners without power for **less** than 30 minutes, allow a 10 minute temperature stabilization period. Example: Going from room to room.
- For C-5000 units, ensure the computer is powered on (and doesn't go into hibernate mode after being left idle). If the computer is turned off and on frequently Titronics recommends purchasing a powered USB hub (available at most electronics stores) to maintain power to the scanner.

Patient Preparation

- 15 minutes of office acclimation time must occur before scanning the patient.
- The patient needs to remove any neck ties and necklaces.
- The patient should also remove thick clothing such as a winter coat while acclimating.
- The patient must remain free from direct heating or cooling drafts.
- No direct sunlight should bear on the patient while in the office.
- No EMS, TENS, US, hot or cold packs, or acupuncture before scanning.
- The patient must be free from sunburn.
- A patient may be scanned while sitting, standing or lying face down.
- Although highly recommended, it is not necessary for a patient to completely disrobe. Segmental scans may be performed. See **page 25**.

Performing a Scan

Once a patient is selected via the **Load Patient File** function (see **page 21**), the scanning process itself is fully automated.

1. Pick up the scanner by its handle. **Do not touch any part of the scanner head.** (This is the area above the handle that is separated by a white or black thermal shield). Touching the scanner head can temporarily affect scan accuracy.
2. Place the wheels on the patient while maintaining the probe tips just above the surface of the skin. Evenly space the probes over the center of the spine. When performing full spine scans, carefully palpate for the first sacral segment and place the probes one centimeter below this level. If only scanning the cervical spine, carefully palpate for the first thoracic segment and begin the scan here. **Use only spinous process palpation to locate starting points. Any palpation over the paraspinal surfaces will alter true thermal data collection.**
3. Pull the trigger, but **do not begin scanning immediately!** A tone sounds (if sound is enabled), along with a screen prompt reading **Initializing Sensors**. A second tone sounds to signal to begin the scan, along with a screen prompt reading **Scanning**. A voice prompt may also be selected by going to the **Scans Tab** under **The Setup Button** (see **page 15**).
4. Begin scanning from the lower back towards the head with an even cadence while maintaining the probe tips just off the skin. When the hairline is encountered, gently press the probes down onto the skin to displace the hair. Stop the scan when the occiput is encountered and release the trigger before lifting the scanner off the spine. A proper scan cadence will yield approximately 20 seconds for a full spine and 8 seconds for a cervical spine scan.

Once the scan finishes it will immediately display on the line graph screen. If the patient's pattern or a previous scan has been performed on the same day, the current scan is automatically overlaid. To perform a scan without a pre scan or pattern overlay, simply hit the **S** key while at the home screen. Hitting the **Esc** key, or clicking the **X** in the upper right area of the screen or hitting **Enter** saves the last scan performed.

The exceptionally high repeatability of the Tytron is dependent upon the scanner's left wheel encoder maintaining rolling contact with the patient through the termination point of the scan. It is recommended that the patient be in the same position/posture for each scan to ensure repeatability. The reference point of each scan is the termination point (with the exception of scanning infants). Thus, the termination point of the scan is established when the scanner's probes reach the occiput.

Segmental Scanning

The segmental mode allows performing a lumbar and a cervical scan, while omitting the thoracic region (to avoid clothing). Simply lift the back covering to expose the lumbar and lower the back covering to expose the cervical. To do this, click **Scan** on the home screen to display a blank scan screen. Click the **Segment** button, located at the top right corner of the screen. To record all data properly, place the scanner probes $\frac{3}{4}$ " lower than the desired starting point. To start, pull the trigger and scan the lumbar region, then release the trigger. Next, place the scanner just below T1, pull the trigger again and complete the cervical scan, then release the trigger. The full spine line or bargraph displays with no lines/bars in the mid spine area.

Scanning Infants

Scanning infants adheres to the same rules as adults. However, the fixed probe width being wider than an infant's neck necessitates a special protocol. Use only one barrel to scan both sides of the spine, one side at a time. Once a patient has been selected via the **Load Patient File** function (see **page 21**), follow these steps:

1. Bring up the scanning screen by hitting the **S** key or clicking the **Scan** button on the home screen. A blank screen displays.
2. Before starting to scan, mark a starting reference point for the scans. Using a washable marker, draw a horizontal line across the spine as a starting point (remember to carefully palpate for cervical or full spine starting point before drawing the line).
3. Select the Infant Mode by hitting the **I** key or clicking on the **Infant** button at the upper right corner of the screen. On the scanning screen instructions will be displayed.
4. **Always start with the right paraspinal surface first.** Place the wheels of the **left** barrel on the **right** paraspinal surface while maintaining the probe tip just above the skin and exactly on the drawn horizontal starting line.
5. Pull the trigger, but **do not begin scanning immediately!** First, a tone sounds (if sound is enabled) and the software displays a screen prompt reading **Initializing Sensors**. Next, a second tone sounds and the software displays a screen prompt reading **Scanning**, signaling to begin the scan.
6. Scan upward towards the head with an even cadence while maintaining the left probe tip just off the skin. When the hairline is encountered, gently press the probe down onto the skin to displace the hair. Stop the scan when the occiput is encountered and release the trigger before lifting the scanner off the spine. A screen prompt displays, reading **Ready to Scan**.
7. Now, place the wheels of the **left** barrel on the **left** paraspinal surface while maintaining the probe tip just above the skin and exactly on the drawn horizontal starting line.
8. Again, pull the trigger and wait for the set of tones or prompts indicating to begin the scan. However, this time **do not stop at the occiput!** Scan just past the termination point of the right paraspinal scan and release the trigger (the computer references the distance of the scan to the starting line and only saves the exact same amount of infrared signals as the right paraspinal scan).

Once the left side scan is complete, a thermal plotted graph immediately displays on the screen. Hit the **Esc** key to save the scan.

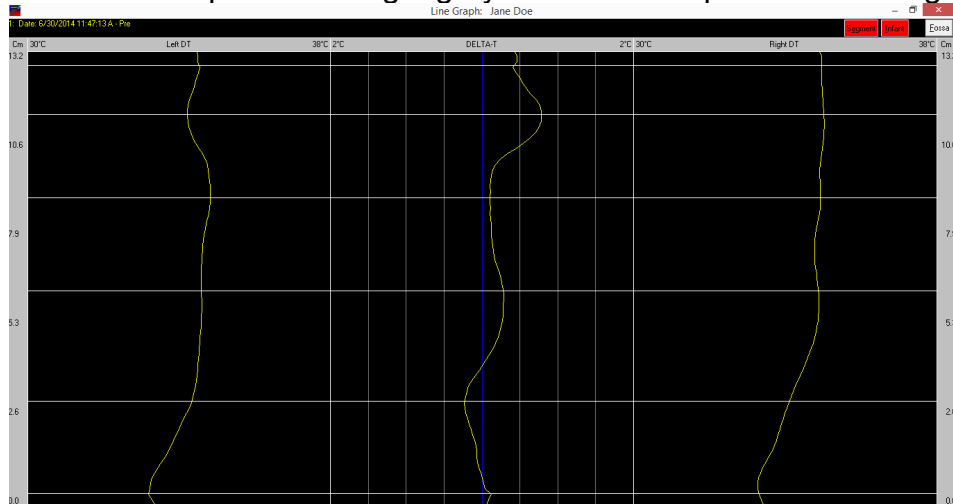
Unlike scanning adults, infant scan repeatability is dependent upon the scanner's wheel encoder and the **starting point** of the scan. The reference point of each scan is the drawn horizontal starting line. Consequently, the only error involved is the ability to **start** the scan at the same point each time.

Scan Display Screens

These 4 scan display screens are used to view the patient's thermal scans:

Line Graph Screen

This is the most accurate thermal interpretation display. The center line represents the Delta-T (or difference) in temperature from each side of the spine. Any lateral deviation of this line is toward the hotter side of the spine. Each light gray vertical line represents 0.5 degrees C.



The left and right lines represent the DTs or direct (actual) temperatures over the paraspinal skin. Any deviation of these lines to the right represents a hot area over the spine, while left deviations indicate cold areas.

To establish a patient's pathological thermal pattern, at least 2 matching scans must be taken 15 minutes apart during the first office visit. Every deviation of the Delta-T and DT lines must match in location along with Delta-T deviations greater than 0.3 degrees C. Once the thermal pattern is established, each future office visit's scans can be compared to determine the presence of neuropathophysiology. For more information on establishing patterns and interpreting graphs, please reference Dr. William Amalu's book located in the Literature folder on your installation media.

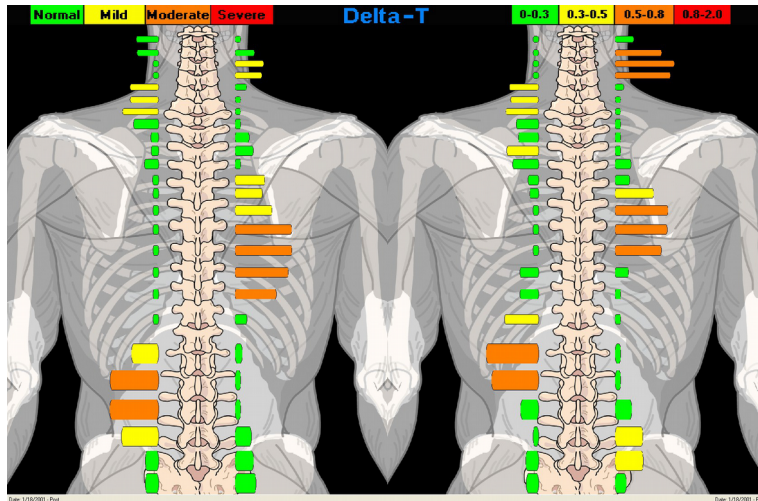
Press the **N** key while in a patient's line graph and a **Normal** line graph will appear. Next, press the **B** key to show their bargraph beside a **Normal** bargraph.

Break Lines may be placed by pressing the **L** key and clicking on the graph. You may place up to 20 Break Lines. Press **L** again to stop placing the lines. Use the **H** key to toggle the display of the lines. Lines may be removed by pressing **L** twice.

Spine Bargraph Screen

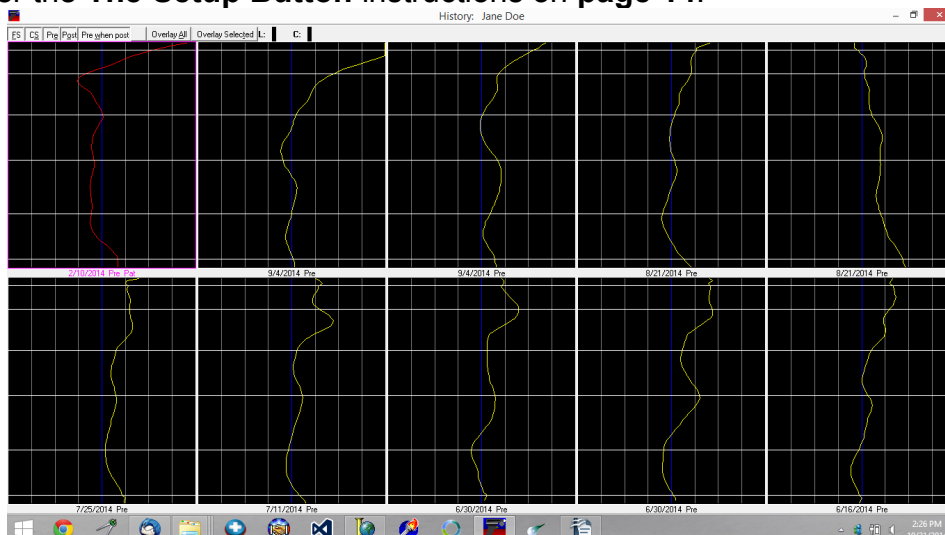
At the line graph screen, hit the **B** key to toggle between the Line graph screen and the Delta-T spine bargraph screen. This screen simplifies the data in a way that makes it easy for patients to understand. It is not meant to be used as anything other than patient education. To see the DTs (direct or actual temperatures) in this view simply hit the **D** key to toggle between the Delta-T and DT spine bargraph screens. The **A** key shows the bargraph with an autonomic chart. If you only see red bars on one side you may need to check Center Bargraph on the **Scans Tab** in **The Setup Button** (see page 15).

If two scans are chosen for viewing, the scans will appear side by side on the screen as shown below.



History Screen

The history screen views the patient's pattern, if selected, in the upper left corner along with the next 9 scans in the patient's file. Depending on the settings, the screen displays both full spine and cervical spine, full spine only, or cervical spine only. To temporarily change the display options while at this screen, select the corresponding filtering buttons located in the upper left corner of the screen (FS, CS, Pre, etc). Instructions for permanently changing the display options is covered under the **The Setup Button** instructions on page 14.

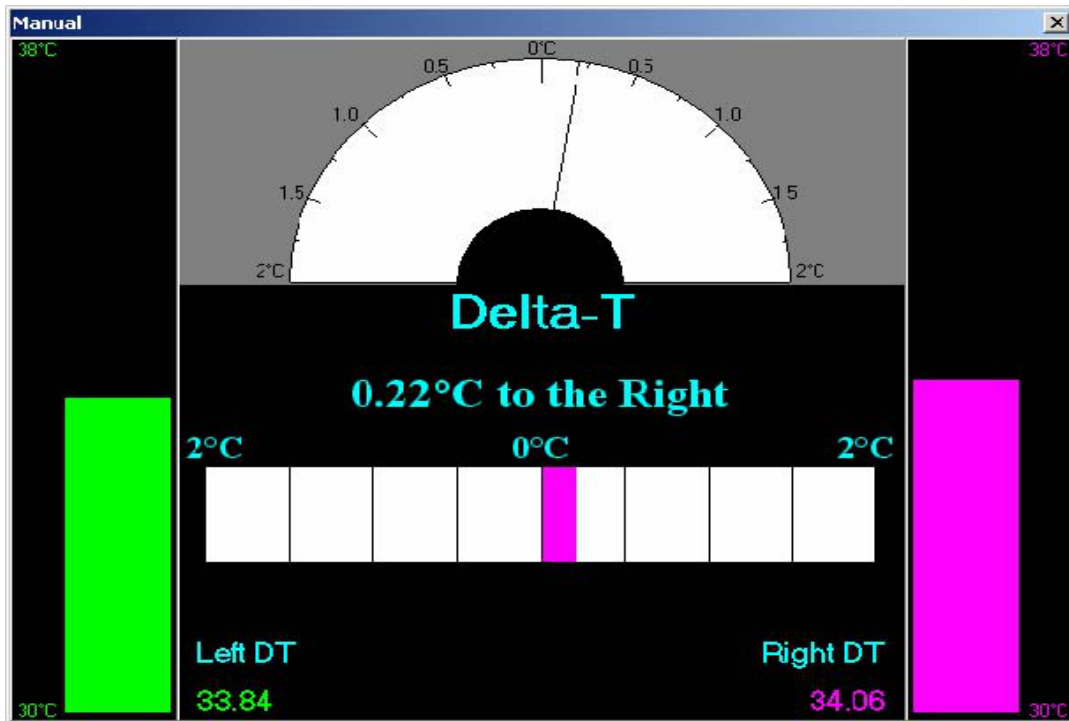


The following functions manage how the scans display on the screen:

1. The Arrow buttons (↑,↓,←,→) move between scans. The selected scan is highlighted with a border.
2. To view a single scan in detail, double click the scan with the mouse or highlight the scan using the arrow keys and hit the **Enter** key.
3. To select more than one scan to view, hit the **Spacebar** key for each scan to view. Once finished selecting the scans to view, hit the **T** key or click the **Overlay Selected** button to view the scans. To view all displayed scans, hit the **A** key or click the **Overlay All** button.
4. To view more past scans in the patient's database, hit the **Page Up** and **Page Down** button.

NCM Screen

The NCM (neurocalometer) screen is set up to emulate an NCM, Thermeter, or Go-Scope type instrument. The scanner performs in a similar fashion as explained earlier. However, no initiating tones sound. Simply place the scanner wheels on the skin, spacing the probes equally over the center of the spine. Pull the trigger and scan from the lower back towards the head. The computer beeps (if sound is enabled) whenever a spot on the spine reaches 0.5 degrees C Delta-T or more. This pinpoints the exact area on the spine by moving up and down over the area while listening for a set of continuous beeps. At this point, look at the screen to evaluate the exact magnitude of the Delta-T from either the meter or digital displays.



Mastoid Fossa / Chirometer Readings

Mastoid Fossa or Chirometer readings are always made in the **Line Graph Screen** (see **page 27**) using the **RIGHT SIDE PROBE ONLY**. Fossa readings are taken after a spinal scan.

1. After a spinal scan is performed, hit the **F** key, or click the **Fossa** button in the upper right of the screen. To take a Fossa reading alone, point the scanner into the air, pull the trigger, turn the **left** probe wheel a few clicks with your hand, and release the trigger. After doing that, press the **F** key for the Fossa portion of the scan.

2. The NCM screen now displays. Place the **RIGHT PROBE** in the **Right** Mastoid Fossa and pull the trigger. Once a steady clicking is heard, release the trigger. (The clicking sound means that the sensors have reached a state of thermal equilibrium and are ready to take a reading).

3.) Now place the **RIGHT PROBE** in the **Left** Mastoid Fossa and pull the trigger. Again, at the steady clicking sound release the trigger. The Delta-T reading displays, referencing the hotter Fossa (i.e. 0.5 °C to the right means the right Fossa is hotter than the left by 0.5 °C).

4. Hit the **Esc** key on the keyboard or pull the trigger to return to the line graph screen. The Fossa reading displays in the upper left corner of the screen with an L or R denoting to which side the reading was hotter.

Printing Reports

Hitting the **P** key presents you with a pop-up menu for you to select the type of report you want to print:

Lines: This report is a simple printout of the line graphs on the screen

Lines History: This report will produce a simple printout up to 10 line graphs as presented on the screen.

Lines with Narrative: This report is very detailed with regard to the displayed line graph. This level of report can only be printed with a single graph displayed.

Bargraph with Narrative: This report will yield the same results as the lines with narrative selection, but the printout will show a single bargraph instead of a line graph.

Bargraph: This report is a simple printout of a single scan as a bargraph.

2 Bargraphs: This report is a simple printout that will display two bargraphs side-by-side.

10 Bargraphs: This report will produce a simple printout up to 10 bargraphs as presented on the screen.

Utilization: This report printout gives you a one page utilization review of thermography and the Tytron system. This report may also be used as a medical necessity report.

Info Report: This printout is a very useful general information page that is designed to give patients an understanding of what paraspinal thermography is and how chiropractic works.

The amount of data printed out on the reports will depend on the information you typed into the screen you used to enter the patient into the system. The narrative reports contain the highest detail, but will contain more information if the fields are filled in on the patient data screen. Simply click on the **Edit Patient** button and fill out the Patient Settings area if you want this information printed out on the reports.

Notes

The Notes feature allows you to create, edit, and manage notes of any length. You may also attach files to the notes (x rays, photos, documents, etc.) Notes are stored in the database linked to the individual patient files. The “**Z**” key opens the notes screen from most areas of the program.

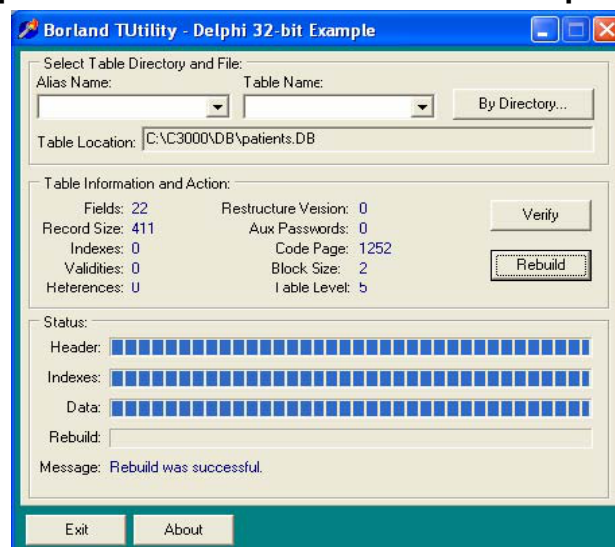


Database Maintenance

Database Maintenance is an important step in keeping the Tytron software running smoothly. To load a patient file, the computer must look through the database to find all applicable patient information. Over time the database may become fragmented and slow down as a result of growth from adding new scans and patients. The Tytron uses a very stable and secure database for storing this information. Running the database maintenance reorganizes the information to maintain high reliability and speed.

1. Close out of the Tytron Software program
2. Click on the **Windows** button
3. Type in **Database Maintenance**
4. Click the **By Directory** button
5. Double click the **C3000** folder
6. Double click the **DB** folder
7. Click the **patients.DB** file and click **OK**
8. Click the **Rebuild** button and wait for the message **“Rebuild was successful”**
9. Click the **By Directory** button
10. Double click the **C3000** folder
11. Double click the **DB** folder
12. Click the **Recoup.DB** file and click **OK**
13. Click the **Rebuild** button and wait for the message **“Rebuild was successful”**
14. Click the **By Directory** button
15. Double click the **C3000** folder
16. Double click the **DB** folder
17. Highlight **Scans.DB** file and click **OK**
18. Click on **Rebuild** button and wait for the message **“Rebuild was successful”**
19. Click **Exit**
20. The Database Maintenance is complete

For optimal scanner performance, complete Database Maintenance on a monthly basis. Complete database maintenance BEFORE performing a database backup to help ensure a successful backup and restoration process. The Database Maintenance process also repairs potential corruption errors that can occur if the computer “locks up”.



Database Back-Up

The database backup popup option opens when you close the software. Titronics recommends backing up the software to a removable flash drive at least once a week.

To perform a backup, follow these steps:

1. Close the Tytron Program on all computers on the network.
2. On the server, run the Tytron Program and click on the **Backup** button.
3. A pop up box will initiate the back up - click **Yes**
4. The **Tytron Backup Wizard** will ask you where you would like the data saved to
5. Click on **Browse** and locate your **Flash Drive**. Then click on **OK**.
6. Click **Go**.

Database Restoration

If the computer malfunctions, causing damage to the patient database, the Database Restoration process will restore the database back to the point of the last backup.

The Database Restoration process only works if the patient database has been previously backed up!

To perform a restoration, follow these steps on a Windows 8 program:

1. Close the Tytron Program on all computers on the network
2. Insert the drive that contains the database backup files
3. Open the drive containing the backup
4. Double click the backup zip (TytronBackupMM-DD-YYYY.zip)
5. Go to **Home**, **Select All**
6. Go to **Home**, **Copy to**, **Choose location...**
7. Locate **Drive C** and open the **C3000** folder and then the **DB** folder
8. Click on the **Copy** button
9. Select **Replace the files in the Destination**
10. Database Restoration is complete
11. **Run the Tytron Program to verify successful restoration by loading a patient**

Recoup Suite Management

Many offices use post-adjustment Recoup Suites. After an adjustment is delivered, the patient is placed supine on a table for a short time period before a post-adjustment scan is taken. When taking post-adjustment scans on a same-day office visit, a 15 minute time period between pre and post scans is required to follow with strict infrared imaging protocol. The patient needs this minimum acclimation period in order to eliminate any artifacts left over from the adjustment procedure. Please note that if any type of physical therapy is performed, it is **after** the post-adjustment scan is taken.

To activate the Recoup Suite function, click the **Setup** button at the home screen and select the **Main** tab. At the **Recoup Suite** area, enter a value (1-300) to display up to 300 recoup suites on the home screen. Entering 0 in this field removes the recoup suite area from the home screen. The recoup suite functionality now displays at the bottom of the home screen.

Once the patient is adjusted, select the patient recoup time and suite. To select the recoup time, click the **15**, **20**, **30**, or **45 Min** buttons, or use the corresponding keyboard number as denoted by the underlined number. A pop-up box appears and prompts to choose the suite number. The program automatically selects the next available suite by default, this can be manually changed if it is incorrect. This pop-up box also allows the manual designation of custom recoup times (i.e. 40 minutes). Once the recoup time and suite are selected, hit the **Enter** key or click the **OK** button to complete the process.

The patient's name (or initials), suite location, remaining recoup time now appears in the recoup suite area. Once the patient is ready to be removed from recoup, a tone sounds and the suite box to the right flashes. To quickly display this patient for scanning, hit the letter key that corresponds to the patient's name on the list or double click on the patients name. The patient now displays at the home screen and is ready for scanning. Once the scan is performed, the patient's name is automatically removed from the recoup list.

To remove a patient from the recoup suite list, select the patient using their corresponding letter, then click on the **0 Min** button.

The Recoup Suite management system gives the busiest of offices the ability to closely monitor every patient while improving patient flow and overtime problems.

Resolving Recoup Suite Issues

It may be necessary to repair the recoup file if the computer encounters an error related to recoup suites. To repair the recoup file, complete the following steps:

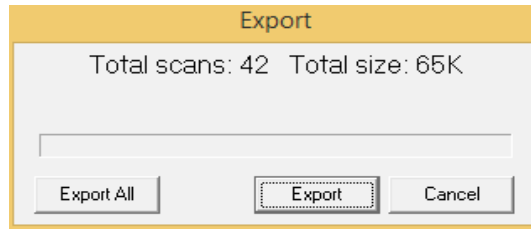
1. Close the Tytron Program on all of the computers on the network
2. On the Windows taskbar select **File Explorer >This PC >Disk C >C3000 >Fix Recoup**
3. A few screens display momentarily on the screen, then the process is complete.

Export / Import

The import and export functions allow for the transfer of patients between computers. Once exported, a patient's file can be sent on disk or e-mailed to another computer.

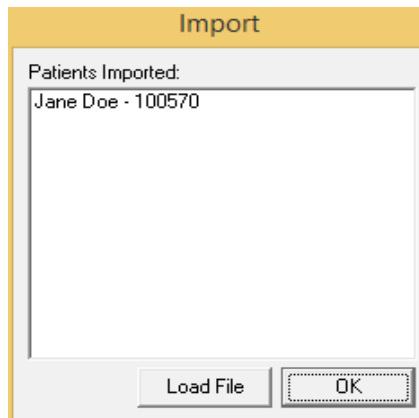
Export

With a patient loaded, clicking **Export** displays the dialog box shown below, indicating the number of scans and disk space the export process requires. Click the **Export** button to display the **Save File** screen. Choose the file save location and click the **Save** button.



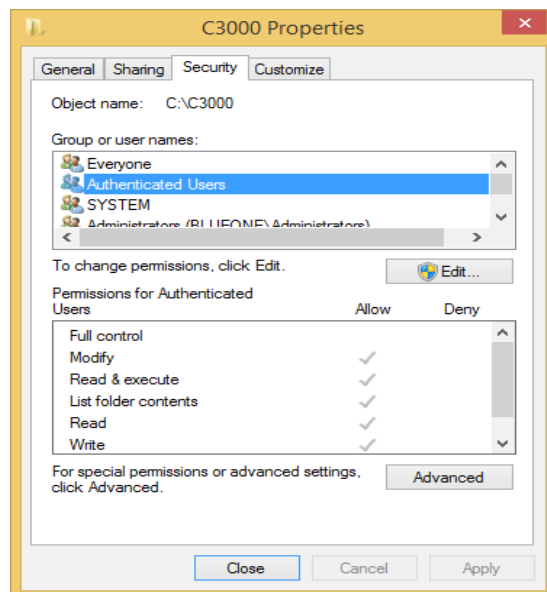
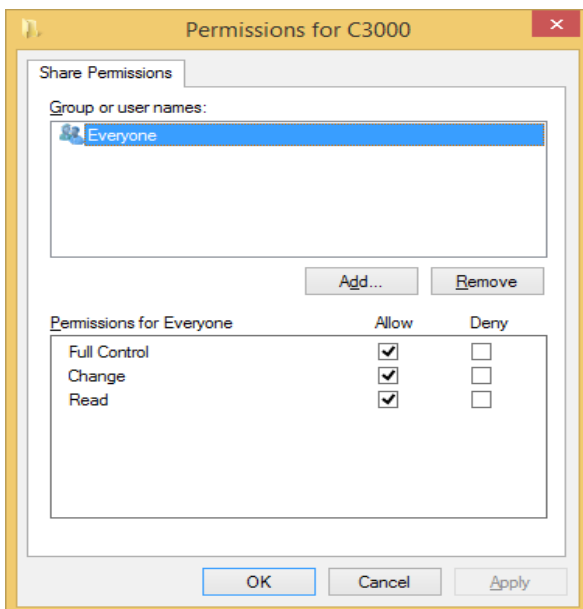
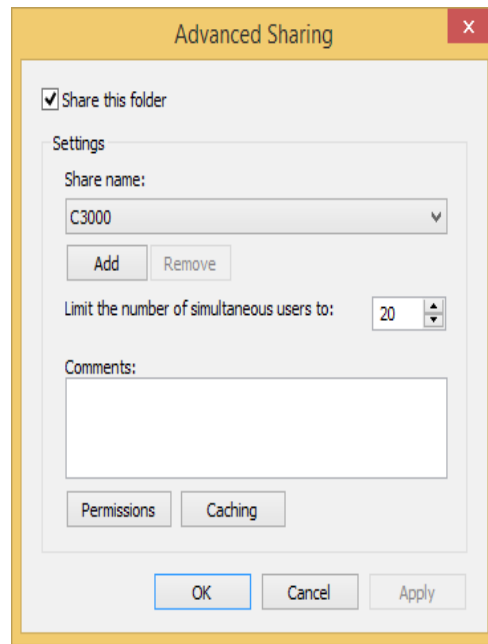
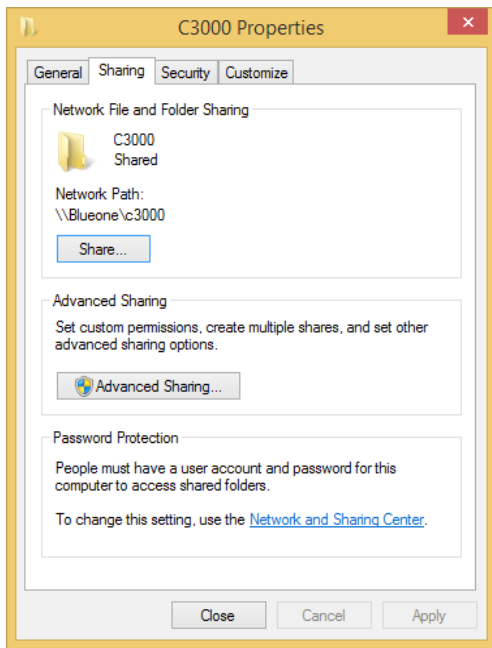
Import

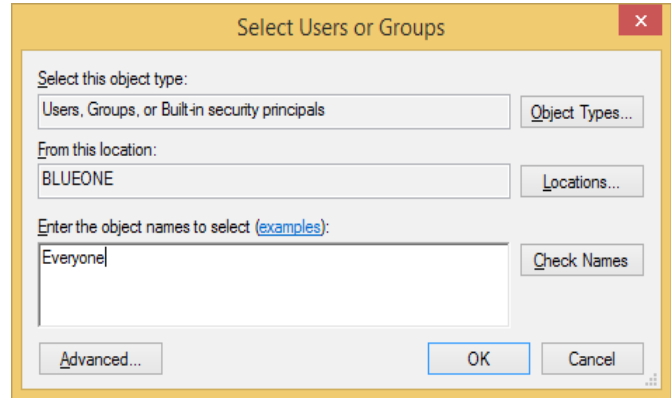
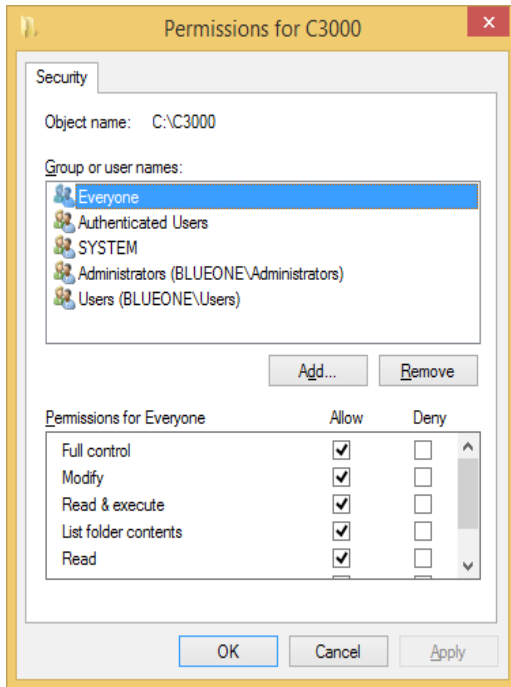
Click **Import** to display the **Open File** screen. Select the file to import and click **Open**. The dialog below appears, indicating the patients that have been imported to the database. Click **Load File** to select another file, or click on **OK** to return to the main screen.



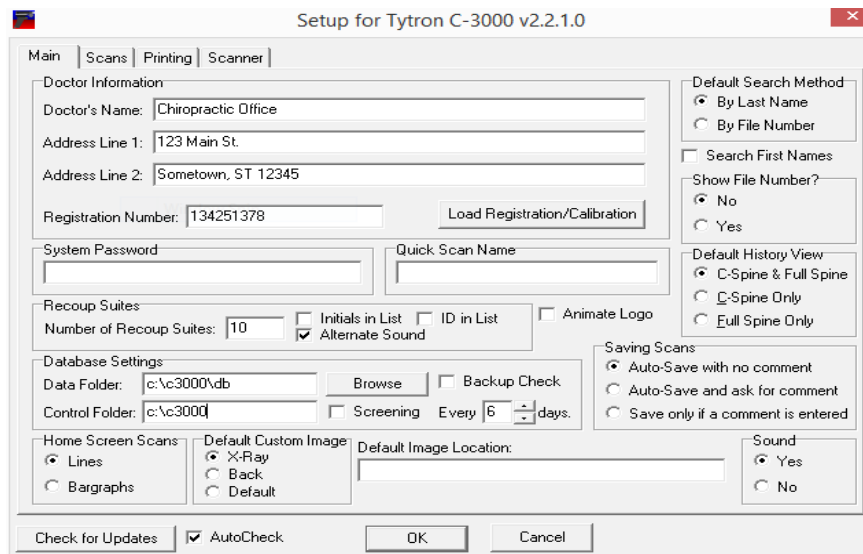
Network Setup Instructions

1. Install the Tytron Software on each computer to be networked.
2. Select a computer to be the server (main computer). Perform the following tasks:
 - Open **My Computer**, then open **Drive C**. Right click on the **C3000** folder and select **Properties**.
 - On the **Sharing** tab select **Advanced Sharing** and make sure **Share this folder** is selected.
 - Click on **Permissions** and add **Everyone** with **Full Control**. Click on **OK** to get back to **C3000 Properties**.
 - Click on the **Security** tab and click on **Edit...** Add **Everyone** and give them **Full Control**.





- On the client computers, run the Tyron Program and click the **Setup** button. At the **Main** tab, change the **Data Folder** to reflect the location specified as the server. (In this example, \\ServerName\C3000\DB). Note that the **Control Folder** will automatically fill in as you type the path into the **Data Folder**.



Test the network configuration to ensure it is successfully installed.

Periodic Maintenance (Field Cleaning Procedure)

Titronics recommends periodic maintenance of the Tytron to ensure proper functioning. The scanning barrels collect debris over time that needs to be removed. Debris may cause the Tytron to read incorrectly.

The following are signs that the Tytron may need periodic maintenance:

- The graph shifts to the side.
- The graph swings to the side.
- Unable to reproduce normal graph results.

The following are solutions to ensure the Tytron functions properly:

Light Cleaning

- For small amounts of debris in the barrels, Titronics recommends using canned air (available at most electronics stores). Insert the spray straw approximately 1" into the barrel tip. Spray for three seconds. Allow the unit to sit for 15 minutes.

Heavy Cleaning

- For large amounts of debris in the barrels, Titronics recommends using a cotton swab lightly moistened with water. Insert the moistened cotton swab approximately 1" into the barrel tip. **Do not touch the lenses!** Trap debris along the wall of the barrel and pull debris out. Follow up with the canned air process for any small debris left. Allow the unit to sit for 15 minutes.
- **NO** cleaning chemicals or liquids should be used on the Tytron. This may result in damage to the barrels and lenses.
- Titronics recommends sending in the Tytron for a cleaning and calibration once every three years or when periodic maintenance doesn't resolve the problem.
- Soapy water may be used to clean the exterior of the scanner(handle and wheels). Using alcohol or other solvents may damage the scanner. Do not submerge the scanner.

Hardware Troubleshooting

Before calling Titronics Technical Support please review the following information. When calling technical support, please have the scanner serial number ready.

If your scanner serial number begins with a '5' or a '6' check to make sure there is a light on the handle when the scanner is plugged in to the computer, or when the trigger is being pulled.

If the recommendations are not working, try the Tytron on another computer. Be sure to install the Tytron Program and driver on the alternate computer. Please see the **Hardware Installation** and **Error: Reference source not found** Instructions, **pages 8** and **Error: Reference source not found**.

Appendix

Appendix A – FCC Transmitter Regulations

For Transmitter:

Contains Transmitter Module FCC ID: OUR-XBEE



XBee Pro

FCC ID: OUR_XBEEPRO

IC: 4214A - XBEE PRO

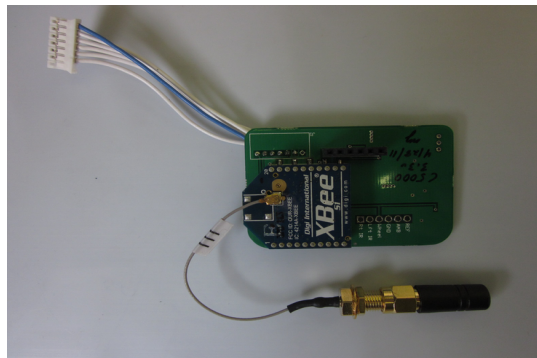
Model: XBEE PRO

FCC Rule Parts: 15C

Frequency Range (MHZ): 2405.0 - 2480.0

For Scanner:

Contains Transmitter Module FCC ID: OUR-XBEE



Xbee

FCC ID: OUR-XBEE

IC: 4214A – XBEE

Model: XBEE

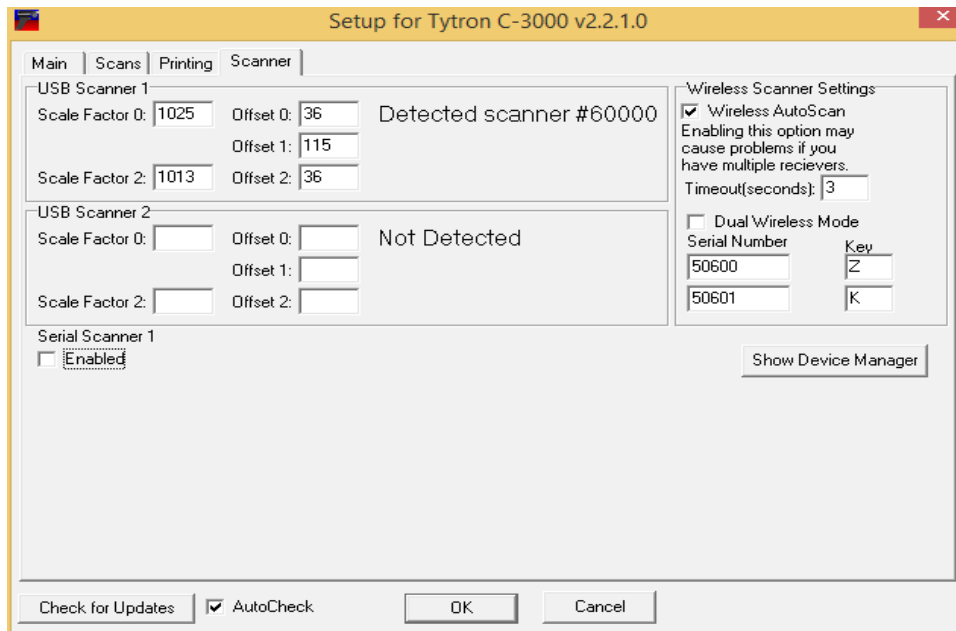
FCC Rule Parts: 15C

Frequency Range (MHZ): 2405.0 - 2480.0

Appendix B – C6000 Wireless Operation and Settings

The Tytron C6000 operates wirelessly making scanning even easier. When scanning with a C6000 the battery's charge level is displayed in the upper right corner of the scan progress screen. Fully charged the voltage should be between 4.15 and 4.20 volts. If your scanner does not charge to this level you may need to send it in for battery replacement. This may have to be done every 2-4 years. The scanner will operate normally down to a level of 3.7 volts. At that level the scanner should be charged. While the scanner is charging the transmitter is disabled and the data is sent through the USB cable. Therefore if you wish to continue using the scanner while it is charging you should use the PC's USB port to charge instead of the wall charger's or transmitter's USB charge ports. While charging, the light on the handle will be red. When fully charged, the light will be green.

There are 3 different modes to use the C6000. The first way is **Standard Mode**. In this mode the computer will prompt you to press any key on the computer that is to take the scan. This mode is useful if you have multiple receivers. The second mode is **Wireless Auto Scan Mode**. In this mode the computer will not prompt you to press a key, it will simply take the scan. This mode is best for single receivers. The last mode is **Dual Wireless Mode**. This mode is best if you have one or two scanners and multiple receivers. In this mode you must press a predefined key to take a scan from a specific scanner on the computer. Unlike **Standard Mode** you can press the key up to 15 seconds before pulling the trigger to take a scan. This provides enough time to press the key and then pick up the scanner and begin the scan.

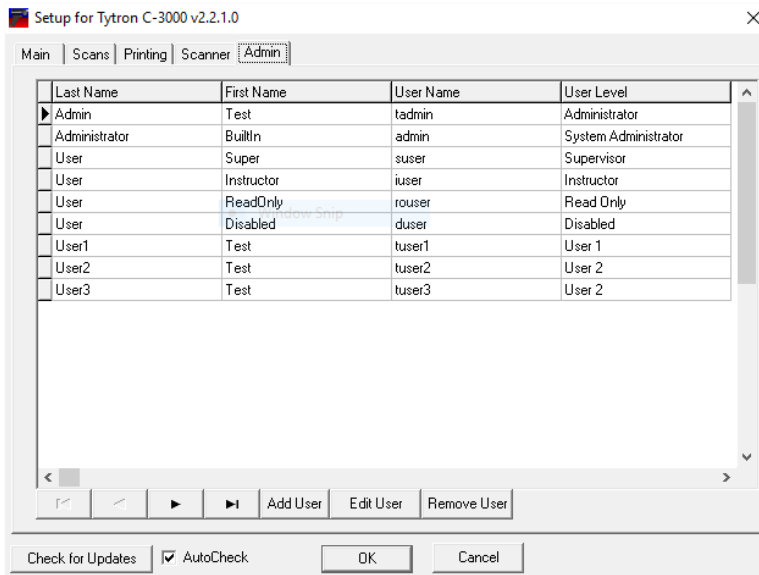


Appendix C - User Security Management

Administrator Feature is located in Setup. Admin allows and restricts users use of the software for security reasons.

Security levels are as follows:

- System Administrator – no restrictions
- Administrator - can't add other admins
- Supervisor – can't access admin in Setup tab, but can still edit anything else in the software
- Instructor – can't access setup or perform backups, but can add/edit patient information as well as import or export patients
- User 1 – can't delete scans or patients
- User 2 - can't delete scans or patients
- User 3 - can't delete scans or patients
- Read Only – can't scan or modify, but can view software and patient scans
- Disabled – is in the system, but is locked out of software by Administrators



Contact Information

Office Hours:

Monday – Friday 9 AM – 5 PM CST

Phone:

1.319.545.7377

Toll Free:

1.800.705.2307

Fax:

1.319.545.7380

Website:

www.titronics.com

Email:

info@titronics.com

Address:

400 Stephans St Ste D
PO Box 470
Tiffin, IA 52340



"The Power to Engage"

1-800-705-2307 / www.titronics.com

Warranty and Repair Policy

This Warranty and Repair Policy is provided by Titronics Research & Development Company, 400 Stephans Street Suite D, PO Box 470, Tiffin, IA 52340 (hereafter referred to as Titronics) and the original owner of the Tytron.

Return Policy

The purchase of the Tytron includes a 30 day refund policy. For payment by credit card, any applicable credit card fees charged to Titronics are subtracted from the refund amount. Titronics pays for return shipping. If you are not satisfied with the accuracy, reproducibility, or stability of the unit you must contact Titronics to request a refund. The following conditions apply:

1. Titronics must issue you a return authorization number.
2. The Tytron, accessories, and package materials must be returned in their original condition.

Limited Warranty

Titronics provides technical support (via phone and/or email) for Tytron hardware and software at no charge for a period of 90 days from the date of original delivery. Additionally, Titronics warrants parts and workmanship against manufacturer defects for a period of one (1) year from date of original delivery. The following conditions apply:

1. A Return Authorization # (RA#) must be issued for returns for manufacturer warranty repairs.
2. The RA# is to be prominently displayed on the shipping label or paperwork inside the return case.
3. The return is sent back in the original case and foam packaging materials. If the return is sent back with alternative packaging materials, the packaging must provide four (4) inches of support to protect against damage during shipping. (Titronics is not responsible for damage to incoming returns).
4. The shipping cost of incoming repairs rests solely with the sender.
5. Titronics returns completed manufacturer defect repairs to the sender by the same shipping method the repair is received (ie. ground, 2nd day, etc.). Titronics pays the return shipping costs to the sender. The sender has the option to expedite the return shipping method at their own expense. Titronics reserves the right, at our sole option, to install engineering upgrades while warranty repairs are being performed.

No Lemon Policy

For an individual Tytron unit that requires more than three (3) manufacturing defect repairs during the warranty policy, upon the fourth (4th) required manufacturing defect repair, Titronics will replace the defective unit under the following conditions:

1. Repair technicians have determined the repair(s) is/are manufacturer defect repair(s).
2. A single manufacturer defect repair may include related parts. The repair may be considered a single manufacturer defect repair at the discretion of the repair technician.
3. Unrelated manufacturer repairs (engineering upgrades) performed at the discretion of the repair technicians while the unit is being serviced do not count towards the No Lemon Policy.
4. Technological advances may result in a replacement product with a lower selling price than the original product.

Exclusions from Coverage

Titronics performs a technical analysis of all returned units. This limited warranty does not cover any loss or replacement necessitated by accidental, consequential, incidental or intentional damage, dropped scanner damage, spilled liquids, insect infestation, neglect, misuse, abuse, cosmetic damage, or damage caused by non-authorized repair personnel. This warranty does not cover loss or damage to stored data, repairs related to installed software, computer viruses, or restoration of software to your computer equipment. This Plan does not cover "no problem found" diagnosis. Titronics is not liable for loss of income or any other financial loss suffered as a result of equipment malfunction.

Non-Warranty Repairs

Titronics is not responsible for the cost of non-warranty repairs. The estimated cost, if it exceeds \$300.00, for all non-warranty repairs will be provided and approved by the owner prior to any work being completed. For any unit sent in for repair and found to be free of defects, maintenance and calibration may be preformed for a minimum fee of \$165.00.

Compliance Statement

Device Name: TyTron

Model Number: C-3000

The responsible party for the compliance of this device is:

Titronics Research & Development Co.
400 Stephans Street, Suite D
PO Box 470
Tiffin, IA, 52340-0470
USA
(319) 545-7377

FDA:	K974208
Trade Name:	TyTron C-3000
Regulatory	Class: II
Product Code:	HCS
Dated:	October 28, 1997
Received:	November 10, 1997



CAUTION:

Failure to comply with the user guide instructions can result in personal injury, fire, or other Consequences.

FCC Digital Emissions Compliance

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency and if not installed and used in accordance with the instructions, may cause harmful interference of radio communications. However there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the equipment.
- Connect the equipment into an outlet on a circuit different from that of the affected equipment.
- Consult the manufacturer for help.

Operation is subject to the following conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation.

Canadian Digital Apparatus Compliance

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.



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