

Moving
Rehabilitation
Forward



User Manual

Model 4759
TX® Traction Unit



ISO 13485 CERTIFIED



TOC





TABLE OF CONTENTS

FOREWORD	1
▶ Product Description	1
ABOUT TRACTION THERAPY	2-7
▶ Precautionary Instructions	2
▶ Cautions	3
▶ Warnings	4
▶ Dangers	5
▶ Overview of Traction Therapy	6
▶ Common Terms	6
▶ Indications	7
▶ Contraindications	7
NOMENCLATURE	8-13
▶ Base Unit - Front View	8-9
▶ Base Unit - Rear View	10-11
▶ LCD Base	12
▶ Symbol Definitions	13
SPECIFICATIONS	14-19
▶ Description of Device Markings	14
▶ Unit Dimensions and Specifications	15
▶ Electromagnetic Compatibility Tables	16-19
SETUP	20-24
▶ Contents of Carton	20
▶ Mounting Unit on Table	21
▶ Initial Unit Setup	22-23
▶ Attaching The Patient Switch Hook	24
OPERATION	25-38
▶ Patient Preparation	25-26
▶ Operating Controls - Home Screen	27-30
▶ Adjusting Traction During Treatment	31-32

▶ Saving Treatment to a Patient Data Card	33-35
▶ Retrieving Data from Existing Patient Data Card	36
▶ Erasing Patient Data Card	37
▶ User Protocols	38
ACCESSORIES	39
TROUBLESHOOTING	40-43
▶ Troubleshooting	40-41
▶ Error Messages	42-43
MAINTENANCE	44-45
▶ Cleaning	44
▶ Calibration Requirements	44
▶ Service	45
WARRANTY	46





FOREWORD

This manual has been written for the operators of the TX traction unit. It contains general instructions for operation, precautionary instructions, and maintenance recommendations. In order to obtain maximum life and efficiency from your TX traction unit, and to assist in the proper operation of the unit, read and understand this manual thoroughly.

The specifications put forth in this manual were in effect at the time of publication. However, owing to Chattanooga Group's policy of continuous improvement, changes to these specifications may be made at any time without obligation on the part of Chattanooga Group. Before administering any treatment to a patient, you should become acquainted with the operating procedures, as well as the indications, contraindications, cautions, warnings, and dangers. Consult other resources for additional information regarding the application of traction therapy.

Product Description

The TX traction unit is a simple to use digital touch screen user interface traction unit that offers static, intermittent, and cyclic traction with user definable hold, rest, and treatment times. Patient Pain Profiles are recorded before and after treatment with a Numeric Pain Scale, VAS (Visual Analog Scale), and Pain Map for each patient. Once treatment parameters are customized for a patient, clinicians can store them as either the default user protocol or as one of ten user defined protocols. The TX traction unit contains a Patient Data Card port, that allows the unit to store the above session parameters on Patient Data Cards.

This equipment is to be used only under the prescription and supervision of a licensed practitioner.



ABOUT TRACTION THERAPY

PRECAUTIONARY INSTRUCTIONS

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



CAUTION

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



WARNING

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



DANGER

Text with a “DANGER” indicator will explain possible safety infractions that are imminently hazardous situations that would result in death or serious injury.

NOTE:

Throughout this manual “NOTE” may be found. These Notes are helpful information to aid in the particular area or function being described.



Explosion Hazard

Text with an “Explosion Hazard” indicator will explain possible safety infractions if this equipment is used in the presence of flammable anesthetics.



ABOUT TRACTION THERAPY



CAUTION

- Read, understand, and practice the precautionary and operating instructions. Know the limitations and hazards associated with using any electrical traction device. Observe the precautionary and operational decals placed on the unit.
- DO NOT operate this unit in an environment where other devices are being used that intentionally radiates electromagnetic energy in an unshielded manner. Portable and mobile RF communications equipment can affect Medical Electrical Equipment.
- This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to other devices in the vicinity. However, there is no guarantee that interference will not occur in a particular installation. Harmful interference to other devices can be determined by turning this equipment on and off. Try to correct the interference using one or more of the following: reorient or relocate the receiving device, increase the separation between the equipment, connect the equipment to an outlet on a different circuit from that which the other device(s) are connected and consult the Chattanooga Group Service Department for help.
- The unit should be routinely checked before each use to determine all controls function normally.
- This unit should be operated, transported, and stored in temperatures between -18 C and 60° C (0° F and 140° F).
- Handle the unit with care. Inappropriate handling of the unit may adversely affect its characteristics.
- Before each use, inspect the Traction Cord for wear. Prolonged wear on the cord will cause it to break, which may cause sudden release of traction pressure on a patient.
- Do not use the Clevis as a handle to pick up or carry the unit.
- Always test the Patient Interrupt Switch cable before each use for proper operation.
- Do not use sharp objects such as a pencil point or ballpoint pen to operate the buttons on the LCD base as damage may result.
- Do not disassemble, modify, or remodel the unit or accessories. This may cause unit damage, malfunction, electrical shock, fire, or personal injury.



CAUTION

- Do not operate the unit when connected to any unit other than Chattanooga Group devices. Do not use devices manufactured by other companies on Chattanooga Group equipment. Chattanooga Group is not responsible for any consequence resulting from using products manufactured by other companies.
- Do not remove the cover. This may cause unit damage, malfunction, electrical shock, fire, or personal injury. There are no user-serviceable parts inside the unit. If a malfunction occurs, discontinue use immediately, disconnect the Mains Power Cord from the outlet, and consult the dealer for repair service. Not adhering to this guideline may cause damage to the unit, malfunction, electrical shock, fire, or personal injury.
- Do not permit any foreign materials or liquids to enter the unit. Take care to prevent any foreign materials including, but not limited to, inflammables, water, and metallic objects from entering the unit. These may cause unit damage, malfunction, electrical shock, fire, or personal injury.
- Do not use the traction unit near devices such as X-ray units or diathermy units. These units may emit high frequency noise that may affect the operation of the unit.
- If you have difficulty operating the unit after carefully reviewing this operator's guide, contact your Chattanooga Group dealer for assistance.
- Failure to use and maintain the traction unit and its accessories in accordance with the instructions outlined in this manual will invalidate your warranty.
- The Patient Interrupt Switch is essential for the functioning of the unit. If it is not connected, or if it is malfunctioning, the unit will not work.
- A licensed practitioner with traction therapy must be familiar with all instructions contained in this manual before administering traction therapy. Do not attempt to become familiar with the TX traction unit while administering traction therapy on a patient.
- In the event of a loss of power to the unit or when quick release is needed, traction tension should only be released by having the patient move towards the traction head to release head to release the tension on the rope. Once the tension on the rope has been released, loosen the patient harness adjustment straps.



ABOUT TRACTION THERAPY



WARNING

- This device should only be used under the continued supervision of a licensed practitioner.
- Care must be taken when operating this unit adjacent to or stacked with other equipment. Potential electromagnetic or other interference could occur to this or other equipment. Try to minimize this interference by not using other equipment (i.e. cell phones, etc.) in conjunction with it.
- Use of controls or adjustments or performance of procedures other than those specified herein may result in a hazardous traction related injury.
- Before connecting the unit to an electrical outlet, make certain the unit is electronically grounded by connecting only to a grounded electrical service receptacle conforming to the applicable national and local electrical codes.
- Do not use a damaged Mains Power Cord. Using a damaged Mains Power Cord may cause unit damage, malfunction, electrical shock, fire, or personal injury. If the Mains Power Cord becomes damaged, discontinue use immediately and contact the dealer for replacement of the Mains Power Cord.
- This device should be kept out of the reach of children.
- Always hand tighten the Lock Knob securely to avoid any slippage.
- The Patient Interrupt Switch must be in the patient's grasp throughout the traction therapy.
- To prevent accidental disengagement, this unit must be securely attached to the mounting surface of the pedestal or traction stand. It is the responsibility of the user to verify the adequacy of the installation before use in therapy.



WARNING

- Use only tables, stands, power cords and accessories that are specially designed for the TX traction unit. Do not use accessories manufactured by other companies on the TX traction unit. Chattanooga Group is not responsible for any consequence resulting from using products manufactured by other companies. The use of other accessories or cables may result in increased emissions or decreased immunity of the TX traction unit.
- Do not use other accessories other than those supplied with the system or recommended by Chattanooga Group. The safety of other products has not been established, and their use could result in injury to the patient.
- The traction unit should only be used by a qualified licensed practitioner in a position of supervision during traction therapy. For that reason, do not attempt to put yourself in traction with this unit.
- In the event of a loss of power to the unit, traction tension should only be released by gradually lengthening the patient harness adjustment straps.
- Dispose of all products in accordance with local and national regulations and codes.
- In the event that an Error message or Warning appears beginning with a 2 or 3, immediately stop all use of the system and contact the dealer or Chattanooga Group for service. Errors and Warnings in these categories indicate an internal problem with the unit that must be tested by Chattanooga Group or a Field Service Technician certified by Chattanooga Group before any further operation or use of the unit. Use of a unit that indicates an Error or Warning in these categories may pose a risk of injury to the patient, user or extensive internal damage to the unit.

ABOUT TRACTION THERAPY



DANGER

- Do not connect the unit to an electrical supply without first verifying that the power supply is the correct voltage. Incorrect voltage may cause unit damage, malfunction, electrical shock, fire, or personal injury. Your unit was constructed to operate only on the electrical voltage specified on the Voltage Rating and Serial Number plate. Contact your Chattanooga Group dealer if the unit is not properly rated.
- Should Traction Cord fray or damage to the Traction Cord or knot be apparent from visual inspection, immediately stop use of the unit and contact the Dealer or Chattanooga Group for service.
- Do not attempt to repair the Traction Cord.
- An improperly tied knot may result in injury. Do not attempt to re-tie the knot unless properly trained.
- Not for use in the presence of flammable anesthetics.





ABOUT TRACTION THERAPY

OVERVIEW OF TRACTION THERAPY

Effects of Traction Therapy

The TX traction unit provides a treatment in static, intermittent, and cyclic distraction forces to relieve pressures on structures that may be causing pain of skeletal or muscular origin (cervical, thoracic, lumbar, hip, wrist, shoulder). Therapeutic distraction can be applied in a variety of programmable patterns, cycles, and functions.

COMMON TERMS

Progressive Traction

Progressive traction refers to a traction phase during the treatment when the tension gradually increases.

Regressive Traction

Regressive traction refers to a traction phase during the treatment when the tension gradually decreases.

TX (Traction)

TX (Traction) refers to the type of traction used during a treatment. There are three modes to choose from: Static, Intermittent, or Cyclic Traction Mode.

Steps

The term “step” refers to the increment in which the traction tension is either increased or decreased during therapy.

Static Traction Therapy

This term denotes that a steady amount of traction is applied for periods from a few minutes up to 99 minutes. The shorter duration is usually coupled with more weight. Static lumbar traction is most effective if a split table is utilized to reduce friction. It is important that it is the type that maintains constant tension. This way, any slack developed as the patient relaxes during the traction therapy is automatically taken up and the desired amount of traction is maintained. Static traction is sometimes referred to as sustained traction.

Intermittent Traction Therapy

This form of traction alternates traction tension between tension levels - Maximum and Minimum - every few seconds throughout the timed treatment. It is also most effective if a split table is used to reduce friction when giving lumbar traction. In the progressive and regressive phases, the unit pulls to the calculated tension, holds for the set hold time, then drops to 50% of this tension, holds the set rest time, and then repeats this step for the number of steps selected. However, once the minimum level is reached, the unit uses the minimum level for the rest time.

Cyclic Traction

Cyclic traction refers to progressive (gradually increasing traction tension) and regressive (gradually decreasing traction tension) phases of the traction program being repeated continuously throughout the entire course of the treatment.





ABOUT TRACTION THERAPY

INDICATIONS

The TX traction unit provides traction and mobilization of skeletal structures and skeletal muscles.

The TX traction unit may be used to relieve peripheral radiation/sciatica and pain associated with:

- Protruding discs
- Bulging discs
- Herniated discs
- Degenerative disc disease
- Posterior facet syndrome
- Acute facet problems
- Radicular pain
- Prolapsed discs
- Spinal root impingement
- Hypomobility
- Degenerative joint disease
- Facet syndrome
- Compressions fracture
- Joint pain
- Discogenic pain

The TX traction unit achieves these effects through decompression of intervertebral discs, that is, unloading due to distraction and positioning.

CONTRAINDICATIONS

Traction is contraindicated for the following:

- Structural disease secondary to tumor or infection
- Patients with vascular compromise
- Any condition for which movement is contraindicated
- Patients with acute strains, sprains, and inflammation which would be aggravated by traction therapy
- Patients with joint instability of the spine
- Pregnancy
- Osteoporosis
- Hiatus hernia
- Claustrophobia
- Cardiac or pulmonary problems



NOMENCLATURE

TX® Traction

BASE UNIT- FRONT VIEW

Touch Screen
User Interface

Traction Cord

Clevis
Attachment Slots

Patient
Interrupt
Switch
Receptacle



The Base Unit serves to house the mechanical and electrical components that provide the actual traction tension for the TX traction unit under the electronic control and supervision of the Controller.



Traction Cord

To prevent wear and fraying, the unit should be mounted facing toward the desired direction of pull so that the Traction Cord does not contact the side of the slot from which it extends.

 **DANGER**

- Should Traction Cord fray or damage to the Traction Cord or knot be apparent from visual inspection, immediately stop use of the unit and contact the Dealer or Chattanooga Group for service.
- Do not attempt to repair the Traction Cord.
- An improperly tied knot may result in injury. Do not attempt to re-tie the knot unless properly trained.



TOC



NOMENCLATURE

BASE UNIT- FRONT VIEW (CONTINUED)



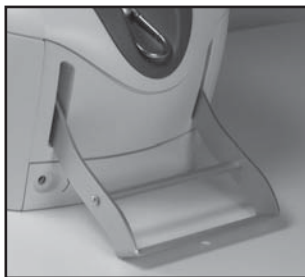
Accessory Clip

The Accessory Clip allows you to attach the desired accessory (i.e., Spreader Bar or traction harnesses) to the unit.



Patient Interrupt Switch Receptacle

The Patient Interrupt Switch Receptacle is located on the front of the unit.



Clevis Attachment Slots

The Clevis Attachment Slots serve as a connection point for other traction apparatus (not included), such as cervical or wrist.



CAUTION

- The Patient Interrupt Switch is essential for the functioning of the unit. If it is not connected, or if it is malfunctioning, the unit will not work.

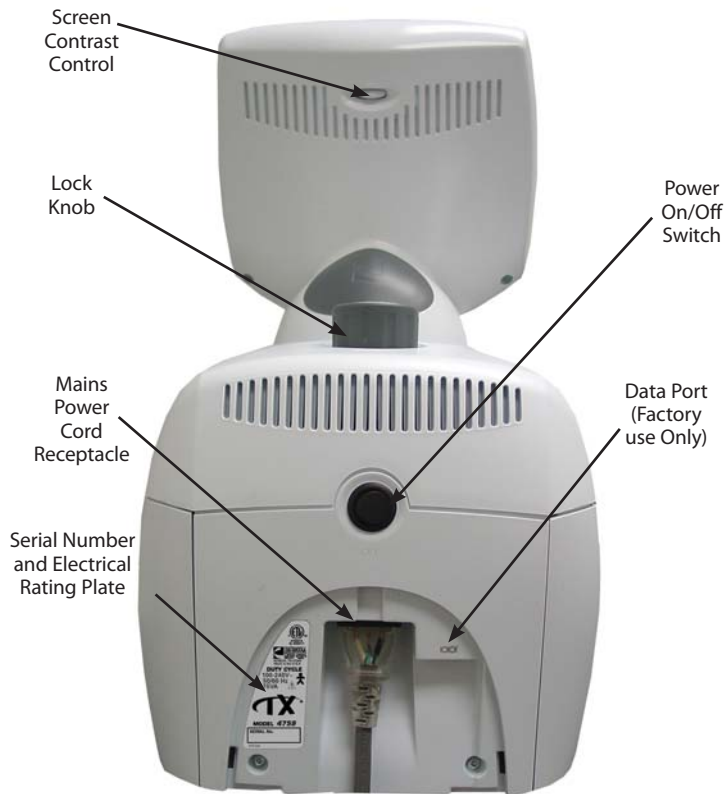


CAUTION

- Do not use the Clevis as a handle to pick up or carry the unit.

NOMENCLATURE

BASE UNIT- REAR VIEW



The rear view of the base unit is the site of electric current control and surge protection, and serves as a connection point for both the traction controls and safety features of the TX traction unit.



Power On/Off Switch

The Power On/Off Switch is a toggle switch located on the back of the unit. This switch controls the flow of electricity from the outlet to the unit.



Mains Power Cord Receptacle

The Mains Power Cord Receptacle accepts the Mains Power Cord (female end).



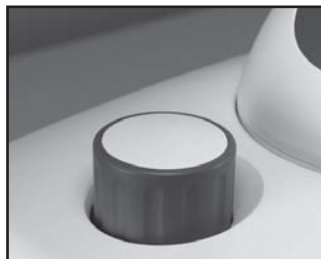
Screen Contrast Control

The Screen Contrast Control is used to set a comfortable viewing of brightness of the Touch Screen User Interface.



NOMENCLATURE

BASE UNIT- REAR VIEW (CONTINUED)



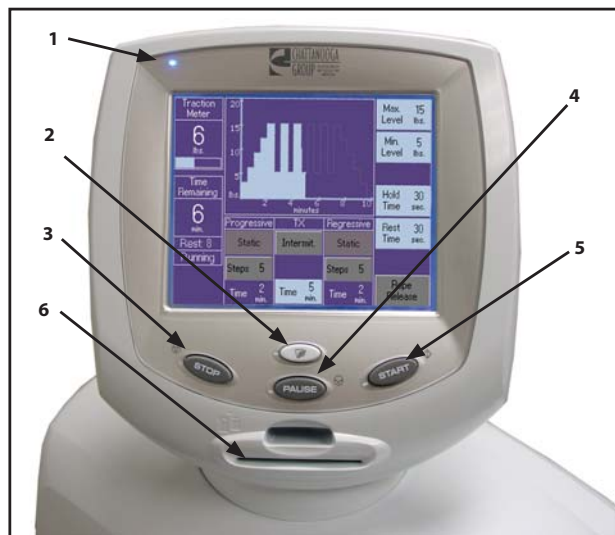
Lock Knob

The Lock Knob is used to clamp the unit to the base (i.e. pedestal, traction stand).

NOMENCLATURE

LCD BASE

The LCD Base serves as a programming terminal during the selection of the traction parameters, as well as a display showing all the factors affecting the traction during therapy. Traction parameters are selected with the buttons on the LCD Base and the Touch Screen User Interface. The Touch Screen and beeper make various audio and visual indications that warns the operator when unsuitable parameters are chosen.



(1) LED Indicator (Power On/Off)

This indicator will illuminate when the unit is powered on.

NOTE: The LED indicator will blink when the unit goes in screen saver mode (the screen will go blank after twenty minutes of inactivity). Simply touch the screen to reactivate.

(2) Clinical Resources

This button allows you to change the following features of the traction unit:

Patient Card

Name
Edit Treatment Being Setup
Erase Patient Card

User Protocols

Retrieve Protocol
Save Protocol
Reset Default Protocol

Utilities

Unit Settings

(3) Stop

This button will stop the treatment program. Traction tension slowly decreases to zero.

(4) Pause

This button will pause the treatment program. Traction tension slowly decreases to zero. Press the Pause button again to resume treatment program and traction tension.

(5) Start

Press this button to start the treatment program.

(6) Patient Data Card Port

Access port to insert a Patient Data Card to save and retrieve patient treatments.



NOMENCLATURE

SYMBOL DEFINITIONS

Below are the definitions for all of the symbols used on the TX traction unit hardware and software. Study and learn these symbols before any operation of the unit.

System Hardware Symbols



Contrast Control



On/Off Switch



Data Port
(Factory Use Only)



Lock/Unlock
Lock Knob



Stop
Treatment



Pause Treatment



Start Treatment



Patient Interrupt Switch



Clinical Resources



Patient Card/ Multi-Media
Card (MMC)

System Software Symbols



Move UP



Move DOWN



Accept and Return



Cancel



Back



Forward



Home



SPECIFICATIONS

DESCRIPTION OF DEVICE MARKINGS

The markings on the TX traction unit are your assurance of its conformity to the highest applicable standards of medical equipment safety and electromagnetic compatibility. One or more of the following markings may appear on the device:



Certified to CAN/CSA
Standard C22.2 No. 601.1-M90w/A2
Conforms to ANSI/UL STD 60601-1



Council Directive 2002/96/EC concerning Waste Electrical and Electronic (WEEE). Indicates a requirement not to dispose of WEEE as municipal waste. Contact your local distributor for information regarding disposal of the unit and accessories.



Refer to instruction manual/booklet



Type B Equipment



Type BF Equipment



Protective Earth

SPECIFICATIONS

UNIT DIMENSIONS AND SPECIFICATIONS

Width	9.5 in (24 cm)
Depth	17.5 in (45 cm)
Height	17.5 in (45 cm)

Weight

Standard Weight	30 lbs (14 kg/134 N)
Shipping Weight	40 lbs (18 kg/178 N)

Power

Voltage	100 V-240 V (50/60 Hz)
Duty Cycle	Continuous
Power Consumption	75 VA
Current Consumption	3.2 Amps Max
Electrical Class	Class I
Electrical Type	Type B 

Traction Modes: Static, Intermittent, Cyclic, and their combinations.

Traction Type: Mechanical

LCD Display: High contrast monochrome Touch Screen

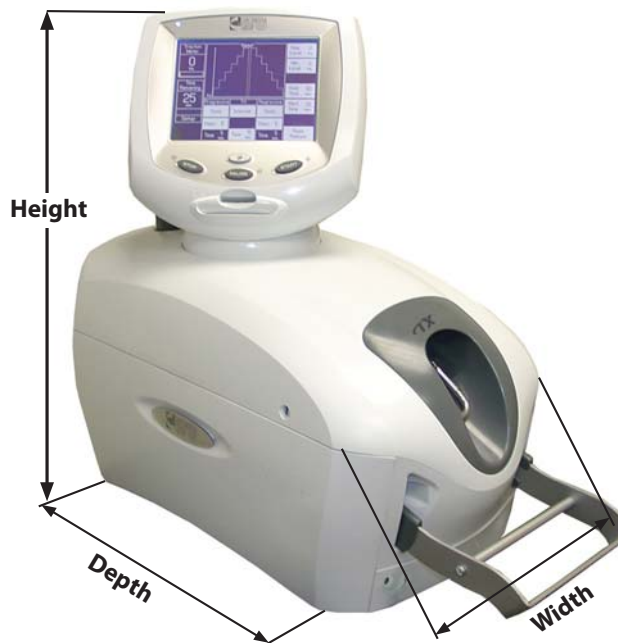
Traction Tension

Parameters	Minimum	Maximum	Increments
Traction Period	1 minute	99 minutes	1 minute
Hold Period	0 seconds	99 seconds	1 second
Rest Period	0 seconds	99 seconds	1 second
Traction Tension	0 lb (0 kg/0 N)	200 lb (90 kg/890 N)	1 lb (1 kg/5 N)
Progressive and Regressive Steps	1 step	9 steps	1 step



Certified to CAN/CSA
Standard C22.2 No. 601.1-M90w/A2

Conforms to ANSI/UL STD 60601-1





ELECTROMAGNETIC COMPATIBILITY TABLES

Guidance and manufacturer's declaration - electromagnetic emissions		
The TX Traction unit is intended for use in the electromagnetic environment specified in the table below. The user of the TX Traction unit should assure that it is used in such an environment.		
Emission Tests	Compliance	Electromagnetic Environment - Guidance
RF emissions CISPR 11	Group 1	The TX traction unit uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment The TX traction unit is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
RF emissions CISPR 11	Class A	
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations IEC 61000-3-3	Complies	



ELECTROMAGNETIC COMPATIBILITY TABLES (CONTINUED)

Guidance and manufacturer's declaration - electromagnetic immunity			
The TX traction unit is intended for use in the electromagnetic environment specified in the table below. The customer or user of the TX traction unit should assure that it is used in such an environment..			
Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment - Guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±6 kV contact ±8 kV air	±6 kV contact ±8 kV air	Floors should be wood, concrete, or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%
Electrical fast transient/burst IEC 61000-4-4	±2 kV for power supply lines ±1 kV for input/output lines	±2 kV for power supply lines ±1 kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±1 kV differential mode ±2 kV common mode	±1 kV differential mode ±2 kV common mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5% U_T (>95% dip in U_T) for 0.5 cycle 40% U_T (60% dip in U_T) for 5 cycles 70% U_T (30% dip in U_T) for 25 cycles <5% U_T (>95% dip in U_T) for 5 sec	<5% U_T (>95% dip in U_T) for 0.5 cycle 40% U_T (60% dip in U_T) for 5 cycles 70% U_T (30% dip in U_T) for 25 cycles <5% U_T (>95% dip in U_T) for 5 sec	Mains power quality should be that of a typical commercial or hospital environment. If the user of the TX traction unit requires continued operation during power mains interruptions, it is recommended that the TX traction unit be powered from an uninterrupted power supply or a battery.
Power frequency (50/60Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE: U_T is the a.c. mains voltage prior to application of the test level.			





ELECTROMAGNETIC COMPATIBILITY TABLES (CONTINUED)

Guidance and manufacturer's declaration - electromagnetic immunity

The TX traction unit is intended for use in the electromagnetic environment specified in the table below. The user of the TX traction unit should assure that it is used in such an environment.

Immunity Test	IEC 60601 Test Level	Compliance Level	Electromagnetic Environment - Guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 V	Portable and mobile RF communications equipment should be used no closer to any part of the TX traction unit, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter Recommended separation distance $d = \frac{[3.5]}{V_1} \sqrt{P}$ $d = \frac{[3.5]}{E_1} \sqrt{P}$ 80 MHz to 800 MHz
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2.5 GHz	3 V/m	$d = \frac{[7]}{E_1} \sqrt{P}$ 800 MHz to 2.5 GHz where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey ^a , should be less than the compliance level in each frequency range ^b . Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

^a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the TX traction is used exceeds the applicable RF compliance level above, the TX traction should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the TX traction.

^b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than $[V_1]$ V/m.





ELECTROMAGNETIC COMPATIBILITY TABLES (CONTINUED)

Recommended separation distances between portable and mobile RF communications equipment and the TX traction unit.			
The TX traction unit is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the TX traction unit can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the TX traction unit as recommended below, according to the maximum output power of the communications equipment.			
Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter		
	m		
	150 kHz to 80 MHz $d = [3.5]\sqrt{P}$ V_1	80 MHz to 800 MHz $d = [3.5]\sqrt{P}$ E_1	800 MHz to 800 MHz $d = [7]\sqrt{P}$ E_1
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3,8	3,8	7,3
100	12	12	23
For transmitters rated at a maximum output power not listed above, the recommended separation distance d in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.			
NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.			
NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects, and people.			





CONTENTS OF CARTON

Remove the TX traction unit and all accessories from the shipping cartons. Visually inspect for damage. Report any damage to the carrier immediately.

Contents of Cartons:

- TX Traction Unit
- Patient Data Cards (5)
- Patient Interrupt Switch - 9 ft (2.75 m) in cable length, shielded, 26 AWG
- Patient Interrupt Switch Hook Kit
- Securing Bracket - P/N 48117
- Mains Power Cord - 80 in (203 cm) in cable length, shielded, 18 AWG
- User Manual

NOTE: When shipping the unit back to the dealer or factory, make certain the original packaging is used. If the original packaging is not available, contact Chattanooga Group to obtain the following packaging materials for shipment:

- 48059 Inner Pack Box Top
- 48093 Left Inner Pack
- 48094 Right Inner Pack
- 48092 Shipping Box
- 48095 Shipping Bag

Any damage sustained from improper packaging may render the warranty null and void.





MOUNTING UNIT ON TABLE

The TX traction unit was designed to be utilized with Chattanooga Group traction tables.



CAUTION

- Do not operate the unit when connected to any unit other than Chattanooga Group devices. Do not use devices manufactured by other companies on Chattanooga Group equipment. Chattanooga Group is not responsible for any consequence resulting from using products manufactured by other companies.



WARNING

- To prevent accidental disengagement, this unit must be securely attached to the mounting surface of the pedestal or traction stand. It is the responsibility of the user to verify the adequacy of the installation before use in patient therapy.

NOTE: The TX traction unit should be mounted facing the direction of pull so the Traction Cord does not contact the side of the slot from which it extends.



1. To secure the traction unit to the mounting surface, first loosen the Clamp Knob by turning to the left. Fit the unit to the mounting surface, then turn the Clamp Knob to the right, tightening the clamp and securing the unit in place.
2. Remove the cover on the back of the unit and connect the Mains Power Cord (female end) to the Mains Power Cord Receptacle.
3. Verify that there is a good connection between the Mains Power Cord and the Mains Power Cord Receptacle. Always make certain that the Mains Power Cord is properly plugged into the unit.
4. Check the voltage rating on the serial plate located on the back of the unit. Plug the Mains Power Cord into a 100 V-24 V AC outlet, as required. Replace the cover on the back of the unit.

TOC



INITIAL UNIT SETUP

Accessing User Utilities

Turn the unit On.

Press the Clinical Resources button.

Press the Unit Settings button under the Utilities section.

The screenshot shows a black screen with white text and buttons. At the top, it says "Unit Setup: Control Ver 0.1 Motor Ver 0.1". Below this, there are several buttons arranged in a grid:

Clinic Name Chattanooga Group	Set Date and Time 1/4/05 1:55 PM
Volume Medium	Reset Unit Settings
Units of Measure Pounds	Language English
Reset Default Protocols	

At the bottom left, there are two icons: a left-pointing arrow and a house icon.

Clinic Name

Press the Clinic Name button. Enter the Clinic Name on the keyboard. To save the Clinic Name as entered, press the Return Arrow button. To discard the Clinic Name, press the Cancel (X) button.

NOTE: The default of the Clinic Name is set as *Chattanooga Group*.

Unit Volume

Press the Volume button until the desired unit volume is achieved. There are six settings: Off, X-Low, Low, Med, High and X-High. Each time the Volume button is pressed, the setting displayed will also give three audible tones of that level.

NOTE: The default of the unit volume is set at Medium.

Unit of Measure

There are three units of measure to choose from: pounds (lbs), kilograms (kg), and newtons (N). Press the Unit of Measure button to toggle to the desired unit of measure and the setting will automatically save.

NOTE: The default of the unit of measure is set in pounds (lbs).

Set Date and Time

Press the Set Date and Time button. Press the Move Up or Down Arrow button for the respective area (Year, Month, Day, Hour, and Minute) until the desired change is displayed.

NOTE: The time is set in a 24-hour format.





INITIAL UNIT SETUP (CONTINUED)

Reset Unit Settings

Press the Reset Unit Settings button to restore the unit defaults (Clinic Name, Volume, Unit of Measure, and Language). This control will not change the Date and Time, nor will it affect any of the User Protocols stored in the unit.

Select Language

To change the language displayed on the unit, press the Language button until the desired language is displayed. The setting will automatically save.

The available languages are:

- English (Default)
- French
- Spanish

NOTE: The default Language is English.

Reset Default Protocols

Press the Reset Default Protocols to restore all protocols to factory settings.

NOTE: All User Protocols will be removed.

To return to the unit Home Screen, press the Home button.





ATTACHING THE PATIENT INTERRUPT SWITCH HOOK

The Patient Interrupt Switch Hook may be placed on either the left or right side of the unit to hook the Patient Interrupt Switch.



A Screw Hole Cap with the Chattanooga Group logo is located on both sides of the unit.

Using a screwdriver, pop the Screw Hole Cap off.



Place the Patient Interrupt Switch Hook over the Screw Hole and tighten the Hook Screw in place.



Insert the Patient Interrupt Switch Hook Cover to cover the Hook Screw Hole.



The Patient Interrupt Switch can now be placed on the Patient Interrupt Switch Hook.





PATIENT PREPARATION

Traction therapy may be given by or on order of a qualified licensed practitioner. The person administering the treatment must be familiar with the principles of traction therapy and be able to choose the correct mode of traction, traction forces, and treatment times. Any settings or types of traction mentioned in this manual are for illustrative and expository purposes only. Each patient should be individually assessed by a licensed practitioner to determine the appropriateness of the parameter settings prior to use.



CAUTION

- A licensed practitioner experienced with traction therapy must be familiar with all instructions contained in this manual before administering traction therapy. Do not attempt to become familiar with the TX traction unit while administering traction therapy on a patient.

To prepare the patient for traction therapy, do the following:



1. Attach the Patient Interrupt Switch by inserting the male end of the cable into the Patient Interrupt Switch Receptacle located on the front of the unit.
2. Turn the unit on from the Power On/Off Switch located on the back of the unit. Wait five seconds for the unit to go through initialization before attempting any further patient preparation procedures.

3. Verify that there is a good connection between the Patient Interrupt Switch and the Patient Interrupt Switch Receptacle.

NOTE: The Patient Interrupt Switch must be plugged in for the unit to operate.

4. Test the Patient Interrupt Switch by pressing the red button. A warning message will be displayed saying *The Patient Interrupt Switch has been pressed. Touch the screen to continue.*



CAUTION

- Always test the Patient Interrupt Switch cable before each use for proper operation.

5. Give the Patient Interrupt Switch to the patient, instructing that pressing the red button will stop the treatment.



WARNING

- The Patient Interrupt Switch must be in the patient's grasp throughout the traction therapy.

TOC



OPERATION



PATIENT PREPARATION (CONTINUED)

6. Position the patient on the appropriate Chattanooga Group Traction table in accordance with the instructions supplied with the table.



CAUTION

- Use this unit only with tables, stands, power cord, and accessories specifically designed and manufactured by Chattanooga Group. Not adhering to this guideline may cause damage to the unit, malfunction, electrical shock, fire, or personal injury.

7. Fit the appropriate traction harness on the patient by following the fitting instructions supplied with the type of harness to be used.
8. Tighten any slack in the harness that may have occurred during positioning so that it fits the patient according to the manufacturer's instructions.

NOTE: It is usually easier to align the harness on patients while they are standing, and then tighten the harness after positioning them on the table.

9. Push and hold the Rope Release button on the touch screen and slowly pull the end of the Traction Cord out from the traction unit.
10. Attach the Accessory Clip to the connection point of the traction harness, according to the manufacturer's instructions.



CAUTION

- In the event of a loss of power to the unit or when quick release is needed, traction tension should only be released by having the patient move towards the traction head to release the tension on the rope. Once the tension on the rope has been released, loosen the patient harness adjustment straps.



OPERATING CONTROLS - HOME SCREEN



The Touch Screen User Interface allows the operator to access and set up for therapy in the following areas of the Home Screen:

NOTE: Should you make a mistake while entering data, you may correct by re-pressing the appropriate key and re-entering the data.

NOTE: On the user interface touch screen, any parameters surrounded in white boxes are active and can be changed at any time. Any parameters surrounded in gray boxes are inactive and cannot be changed.

(1) Traction Meter

Displays the amount of tension being delivered to a patient (in pounds, kilograms, or newtons).

(2) Time Remaining

Displays the approximate number of minutes that remain in the current traction therapy session.

(3) Time Remaining During Hold/Rest Cycles

Displays an amount of time when a Hold or Rest cycle is occurring during treatment as well as show the number of minutes that remain in that cycle.

(4) Treatment Status

Displays one of the following to show the current status of the treatment being performed: Setup, Running, Paused, and Completed.



OPERATING CONTROLS - HOME SCREEN (CONTINUED)

(5) Progressive

There are two buttons to use in the Progressive section. The first button allows you to choose from Static or Intermittent Traction Mode to use during the Progressive phase of the traction therapy session. The second button allows you to enter the step number (1-9) desired in the Progressive phase of the traction therapy session.

NOTE: The third box in the Progressive section is an inactive button that displays the approximate amount of time (in minutes) selected for the progressive phase of the traction program.

(6) TX (Traction)

There are two buttons to use under the TX section. The first button allows you to choose from Static, Intermittent, or Cyclic Traction Mode to use during the traction phase of the traction therapy session. The second button allows you to enter the amount of time in minutes (1-99) desired for the traction phase of the traction therapy session.

NOTE: The TX Time can be changed during treatment. Press the TX Time button and use the Up or Down Arrow button to change the time in one minute increments. Press the Return Arrow to accept changes.

(7) Regressive

There are two buttons to use under the Regressive section. The first button allows you to choose from Static or Intermittent Traction Mode to use during the Regressive phase of the traction therapy session. The second button allows you to enter the step number (1-9) desired in the Regressive phase of the traction therapy session.

NOTE: The third box in the Regressive section is an inactive button that displays the approximate amount of time (in minutes) selected for the regressive phase of the traction program.

(8) Rope Release

Releases the Traction Cord in order to pull out of the unit freely for setup. To release the cord, either pull on the Traction Cord and it will slowly feed out, or hold the Rope Release button down and pull the Traction Cord out.

NOTE: If there is more than 5 lbs (2kg or 19N) of tension, the Rope Release button is disabled.



CAUTION

• In the event of a loss of power to the unit or when quick release is needed, traction tension should only be released by having the patient move towards the traction head to release the tension on the rope. Once the tension on the rope has been released, loosen the patient harness adjustment straps.

(9) Rest Time

Displays the amount of rest time (0-99 seconds) entered during setup. To enter the rest time, press the Rest Time button, then enter the desired rest time using the number keypad. Press the Return Arrow button to accept.

NOTE: The Rest Time can be changed during the traction therapy session by pressing the Rest Time button, then use the Up or Down Arrow buttons to make any changes. Press the Return Arrow button to accept.





OPERATING CONTROLS - HOME SCREEN (CONTINUED)

(10) Hold Time

Displays the amount of hold time (0-99 seconds) entered during setup. To enter the hold time, press the Hold Time button, then enter the desired Hold Time using the number keypad. Press the Return Arrow button to accept.

NOTE: The Hold Time can be changed during the traction therapy session by pressing the Hold Time button, then use the Up or Down Arrow buttons to make any changes. Press the Return Arrow button to accept.

(11) Minimum Level

Displays the minimum traction tension entered during setup. To enter the minimum traction tension, press the Min Level button, then enter the desired minimum setting using the number keypad. Press the Return Arrow button to accept.

NOTE: The Minimum Traction Tension can be changed during the traction therapy session by pressing the Min Level button, then use the Up or Down Arrow buttons to make changes in 1 lb (1 kg or 1 N) increments. Press the Return Arrow button to accept.

(12) Maximum Level

Displays the maximum traction tension entered during setup. To enter the maximum traction tension, press the Max Level button, then enter the desired maximum setting using the number keypad. Press the Return Arrow button to accept.

If the Maximum Level of traction tension is greater than 39 lbs (17 kg or 166 N), a message will be displayed saying "***Cervical traction should not be performed with a tension greater than 39 lbs (17 kg or 166 N); indicate the type of traction to be performed***". The Lumbar button must be pressed to start treatment, otherwise press the Cervical button and re-enter the Maximum Level of traction tension to be equal to or lower than 39 lbs (17 kg or 166 N).

NOTE: The Maximum Traction Tension can be changed during the traction therapy session by pressing the Max Level button, then use the Up or Down Arrow buttons to make changes in 1 lb (1 kg or 1 N) increments. Press the Return Arrow button to accept.

(13) Clinical Resources

This button offers the following features of the traction unit: **(See Patient Data Card and User Protocols in the Operation Section for more information)**

• Patient Card

- Patient Card (Patient Name)
- Edit Treatment Being Setup
- Erase Patient Card

• Protocols

- Retrieve Protocol
- Save Protocol

• Utilities

- Unit Settings (see Pages 22 - 23 for more information)



OPERATING CONTROLS - HOME SCREEN (CONTINUED)

(14) Stop

Stops the treatment program. Traction tension slowly decreases to zero.

(15) Pause

Pauses the treatment program. Traction tension slowly decreases to zero. Press the Pause button again to resume treatment program and traction tension.

(16) Start

Starts the treatment program.



ADJUSTING TRACTION DURING TREATMENT

NOTE: Read and follow steps of the Patient Preparation section on **Pages 25 - 26** as well as learn Operating Controls of the Home Screen to set up traction treatment.

When the Start button is pressed:

- the audible tone sounds
- the Traction Cord tightens
- traction therapy begins
- the Touch Screen displays the maximum traction tension, the minimum traction tension, the hold time, the rest time, the current tension, the time remaining in the traction therapy, and the running status
- the Touch Screen graph of the traction therapy becomes shaded as it progresses through treatment

NOTE: Monitor the traction therapy closely.

When the Pause button is pressed:

- the audible tone sounds
- traction therapy is paused
- the Traction Cord will release
- the tension slowly decreases to zero

NOTE: The Pause button may be used to adjust the patient's harness or position during treatment.

Resume the traction therapy by pressing the Pause button again.

Traction therapy can be stopped at any time by pressing the Stop button or by pressing the red button of the Patient Interrupt Switch.

When the Stop button is pressed:

- traction tension will decrease gradually
- the Traction Cord will release
- the audible tone sounds
- the Home Screen will return to Setup Mode

If necessary, check the patient's harness and position on the table, and change the traction parameters. Restart traction therapy by pressing the Start button.

When the red button of the Patient Interrupt Switch is pressed:

- the audible tone sounds
- the motor is stopped
- a warning will display saying *The Patient Switch has been pressed. The treatment has been terminated.* Touch the screen to acknowledge the warning and the tension will decrease to zero
- the Traction Cord will release

If the unit loses power:

- the motor stops



CAUTION

- In the event of a loss of power to the unit or when quick release is needed, traction tension should only be released by having the patient move towards the traction head to release the tension on the rope. Once the tension on the rope has been released, loosen the patient harness adjustment straps.

TOC





ADJUSTING TRACTION DURING TREATMENT (CONTINUED)

When the traction therapy is finished, the audible tone sounds, the traction tension will decrease gradually, the Traction Cord will release, and a message will display saying *treatment has been completed*. Touch the screen to acknowledge the message.

NOTE: The beeper will beep every 30 seconds until the screen is touched to acknowledge the message.

NOTE: Wait until all tension has released automatically before attempting to remove the harness from the patient. Release the patient from the traction harness according to the manufacturer's instructions.

SAVING TREATMENT TO A PATIENT DATA CARD

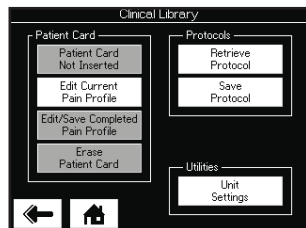
The TX traction unit incorporates a Patient Data Card interface that allows transfer of patient therapy data from the unit to the Patient Data Card. The unit allows storage and recall of the following patient session data onto the Patient Data Card: all therapy session parameters, before and after Patient Pain Profiles, and Session Notes. Each Patient Data Card can store multiple sessions and each session can be recalled within the unit.

New Patient Data Card Setup



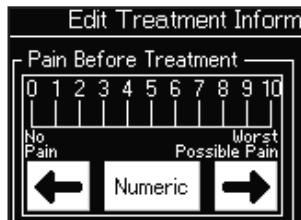
Insert a new Patient Data Card (with the gold chip facing up) into the Patient Data Card port located on the front of the traction unit.

NOTE: Insert the Patient Data Card before treatment.



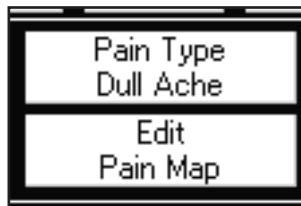
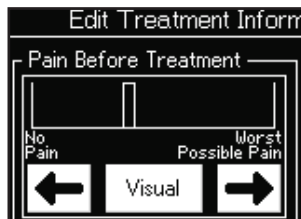
Press the Clinical Resources button on the front of the traction unit. Press the Edit Current Pain Profile button located in the Patient Card section of the menu.

Enter the following information under the Pain Before Treatment column:



Pain Scale - There are eleven pain scale settings to choose from a numeric scale of 0 to 10. Press the arrows left to right from what the patient describes pain as being No Pain (0) to Worst Pain Possible (10).

NOTE: If the patient is unsure of rating pain from a numeric scale, a visual pain scale is available. Toggle the middle button between the left and right arrows to choose between a Numeric or a Visual Analog Scale. Press the arrows left to right to move the visual bar from what the patient describes pain as being No Pain to Worst Pain Possible.

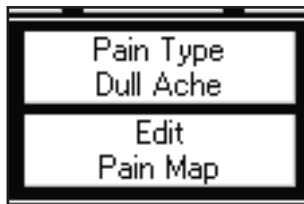


Pain Type - There are eleven pain types to choose from based on how the patient describes pain: Numbing, Dull Ache, Throbbing, Pulsing, Tingling, Nagging, Pinching, Burning, Shooting, Stabbing, Radiating, or None Selected.

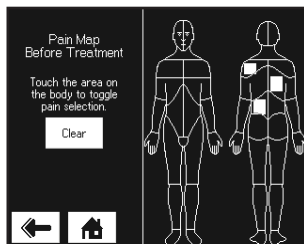




SAVING TREATMENT TO A NEW PATIENT DATA CARD (CONTINUED)

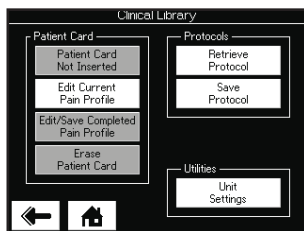


Pain Map - Press the Edit Pain Map button. Press the area of the body to highlight where the patient describes pain. Each time an area of the body diagram is pressed, a highlighted square is produced. Press the area again to remove the highlighted square.

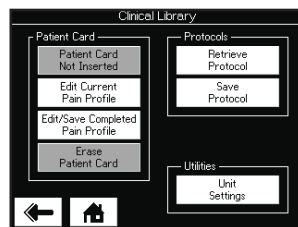


NOTE: The Clear button clears all highlighted areas of the body diagram.

Press the Back button or Home button to begin set up and to perform the patient therapy session.



NOTE: All pain information can be edited during a patient therapy session by pressing the Clinical Resources button and Edit Current Pain Profile button. However, it is recommended to enter all pre-treatment pain information **before** the patient therapy session.



Once a therapy session has been completed, press the Clinical Resources button. Press the Edit/Save Completed Pain Profile button to enter all post-treatment pain information **after** the therapy session.

(See previous instructions for Pain Scale, Pain Type, and Pain Map and enter information under the Pain After column) to show any progress made from the treatment.

NOTE: Once pain information is entered, review all information to ensure accuracy. **Once saved, pain information cannot be changed.**

Press the Save to Patient Card button to save patient therapy session. This will save all session parameters and pain information.



OPERATION

SAVING TREATMENT TO A NEW PATIENT DATA CARD (CONTINUED)

After the Save to Patient Card button is pressed, a keyboard will be displayed to enter the patient's name if the card is blank. Once the patient's name is entered, press the Return Arrow to accept.

A message will be displayed saying *treatment has been saved to the Patient Card for (patient's name)*. Touch the screen to acknowledge. This will return you to the Home Screen.

Remove the Patient Data Card for filing with patient records.

NOTE: Ten or more treatments can be saved on a Patient Data Card. Use one card per patient. The Patient Data Card can also be used with the optional Patient Data Management System.

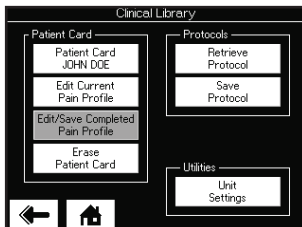


RETRIEVING DATA FROM EXISTING PATIENT DATA CARD



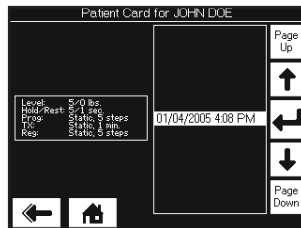
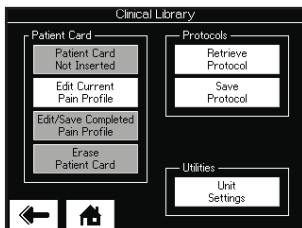
Existing Patient Data Card Use

Insert the Patient Data Card (with the gold chip facing up) into Patient Data Card port located on the front of the traction unit.



Press the Clinical Resources button on the front of the traction unit. Press the Patient Card (Patient's Name) button located in the Patient Card section of the menu.

NOTE: If the Patient Data Card is not inserted, this button is deactivated.



The treatment list is located on the right side. Press the Up or Down Arrow button to select the desired treatment. Press the Return Arrow to accept. This will show the following information: Before and After Treatment Pain Information (Pain Map, Pain Scale and Pain Type) and Session Notes.

NOTE: The box located on the left side of the treatment list is a review of treatment parameters of the selected treatment. The review of the treatment shows the following information:
Patient's Name, Date, Start Treatment Time, End Treatment Time, and Treatment Parameters.

Press the Run This Treatment button. Press the Start button to begin treatment.

TOC





ERASING PATIENT DATA CARD

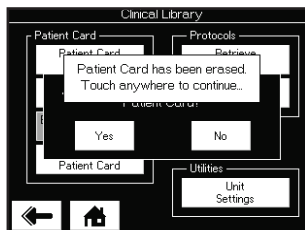
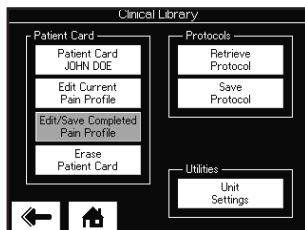


Insert the Patient Data Card (with the gold chip facing up) to be erased into the Patient Data Card port located on the front of the traction unit.

Press the Clinical Resources button on the front of the traction unit.

Press the Erase Patient Card button located in the Patient Card section of the menu.

When the Patient Data Card is erased, a message will be displayed. Touch the screen to acknowledge the message and it will return to the Clinical Resources Screen.



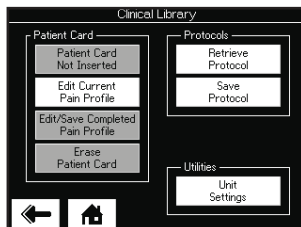


USER PROTOCOLS

This library is a series of protocols created by the user and stored in the unit memory. The following information gives general instructions as to setup, saving, and access of User Protocols. Should the Restore Default Protocol button be pressed through the Utilities section of the Clinical Resources Screen, all User Protocols will be permanently removed from the unit.

NOTE: Ten User Protocols can be saved as well as a Default Protocol.

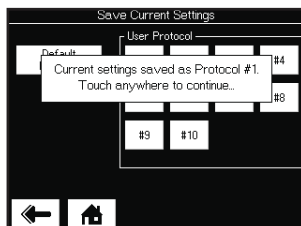
Setup and Saving User Protocols



Select and edit the parameters of the desired treatment from the Home Screen.

Press the Clinical Resources button on the front of the traction unit.

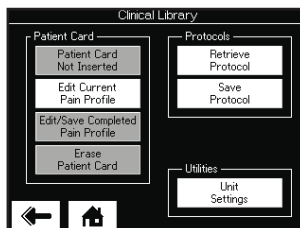
Press the Save Protocol button located in the Protocols section of the menu.



Select the number of User Protocol to save the desired treatment to or select the Default Protocol button to save treatment as the default.

A message will be displayed saying **Current Settings saved as Protocol #**. Touch the screen to continue.

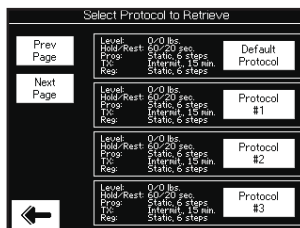
Accessing User Protocols



Press the Clinical Resources button on the front of the traction unit.

Press the Retrieve Protocol button located in the Protocols section of the menu.

The list of the User Protocols is located on the right side and the Default Protocol is located on the left side. Press the Page Up or Page Down buttons to review the User Protocols.



Select the desired User Protocol by pressing the number of the User Protocol button.



ACCESSORIES

TX® Traction

The following provides the users of the TX traction unit the necessary information to order the replacement accessories most commonly used with the system. These replacement accessories are designed for use with Chattanooga Group traction devices. When ordering, provide the respective part number, description, and quantity desired.

Ref.	Description
7040	Saunders Cervical Traction Device
1450	Carpal-Trac
12540	Carpal-Trac Replacement Wrist Strap
48039	Traction Clevis
48082	Patient Interrupt Switch
48018	Patient Switch Hook Kit
48031	Replacement Traction Cord
27465	Patient Data Cards (25/pack)
2768	Patient Data Management System
1440	TXA-1 Accessory Package Includes: 1 Adjustable Cervical Traction Halter, 1 Heavy Duty Pelvic Traction Set, 2 TX Pillows and Covers, and 1 17 in (43 cm) Spreader Bar.
60044	12 in (31 cm) Stainless Steel Spreader Bar
60030	17 in (43 cm) Stainless Steel Spreader Bar
1401	Universal Traction Halter
1403	Cervical Traction Halter- Medium

Ref.	Description
1404	Cervical Traction Halter- Large
1405	Cervical Traction Halter- Adjustable
1431	Universal Thoracic Restraint
1421	Universal Single Pull Pelvic Belt
1412	Double Pull Pelvic Belt- Medium
1413	Double Pull Pelvic Belt- Large
1414	Double Pull Pelvic Belt- X-Large
1433	Heavy Duty Pelvic Traction
1432	Two Straps (Thoracic Restraint)
1434	Heavy Duty Pelvic Belt
1435	Heavy Duty Thoracic Belt
11261	Replacement Strap with Buckle
1301	TX Cervical Pillow without Cover
1341	TX White Cotton Pillow Cover





The TX traction unit is designed with patient safety in mind. An error can be caused by both external and internal disturbances. Errors can be caused by disruptions in the power supply (such as a voltage break) and excess or inadequate voltage. Errors may also be caused by patient movement during the traction therapy.

All traction unit errors and warnings are categorized by three numerical digits. Messages beginning with a 1 are general errors, a 2 symbolizes internal warnings and errors, and a 3 signifies a critical error where the problem has locked up the unit. **(See Warning on Page 43 for more information)**

Before calling for service, carefully review this user manual. In the event you are still unable to correct the problem, contact your Chattanooga Group dealer for all repair service. Be certain to specify your model number, serial number, and a detailed description of the issue you encountered.

Problem	Possible Remedy
The Power On/Off Switch is in the “ON” position - nothing happens.	• Verify the Mains Power Cord is properly connected to the power supply outlet. • Return to Chattanooga Group for replacement.
The LED Indicator (Power On/Off) Light glows, but there is nothing displayed on the LCD, or the LCD displays confusing wording.	• Verify the voltage from the power supply of the electrical outlet is the same as that listed on your Voltage Rating and Serial Number Plate. • The LCD contrast may need to be adjusted. Use the Adjustment knob on the back of LCD Display.
The LED Indicator (Power On/Off) blinks - nothing is displayed on the screen.	• The unit is in Screen Saver Mode. Touch the screen or any button to reactivate the unit.
The Patient Interrupt Switch is not working.	• Make sure the Patient Interrupt Switch is properly connected to the Patient Interrupt Switch Receptacle.
The Rope Release will not work.	• Release all tension on the Traction Cord. • If patient is attached, have patient move towards the traction head to release tension. • Shake the Traction Cord while holding down the Rope Release button. • Turn unit off and return to Chattanooga Group for repair.





Problem	Possible Remedy
Unable to properly read Patient Data Card.	• Properly insert a Patient Data Card. • Use a known good Patient Data Card. • If problem persists, contact Chattanooga Group for service.
Attempted to use an Invalid Patient Data Card.	• Properly insert a Patient Data Card. • Use a known good Patient Data Card. • If problem persists, contact Chattanooga Group for service.
No Session Data is available on the inserted Patient Data Card.	• Save session data to Patient Data Card. • Use a known good Patient Data Card. • If problem persists, contact Chattanooga Group for service.
Patient Data Card is full.	• Purchase additional Patient Data Cards from an authorized Chattanooga Group dealer. • Save to the Patient Data Management System (PDMS).





ERROR MESSAGES

ERROR CODE	ERROR TYPE	DEFINITION	PROBABLE CAUSES	POSSIBLE REMEDY
100	WARNING	Treatment has been running for 8 seconds, but no tension is detected on the rope.	Too much slack in Traction Cord.	Remove Traction Cord slack.
101	WARNING	Patient pressed Patient Interrupt Switch.	Patient Interrupt Switch button pressed.	Touch the Touch Screen.
102	WARNING	Patient Interrupt Switch is unplugged.	Patient Interrupt Switch not properly connected to unit.	Properly connect Patient Interrupt Switch and touch the Touch Screen to clear message.
104	WARNING	User selected Patient Card button on Utilities Screen, but no traction treatments were found on the card.	Wrong or bad Patient Data Card inserted into unit.	Insert correct Patient Data Card.
105	WARNING	User selected Save To Card, but no card is inserted into the unit.	No Patient Data Card is inserted.	Properly insert correct Patient Data Card into unit.
106	WARNING	User selected Save To Card, but the card currently inserted is not a Patient Card.	Wrong or bad Patient Data Card inserted into unit.	Insert correct Patient Data Card.
107	WARNING	User selected Save To Card, but the card currently inserted is full.	Memory full on Patient Data Card used.	Save Data to PDMS and erase Patient Data Card.
108	WARNING	User typed in a blank Patient Name.	No Patient ID assigned.	Enter Patient ID.
112	WARNING	Error upgrading Control Board Software.	Unknown	Contact Dealer or Chattanooga Group for Service.
113	WARNING	Error upgrading Motor Board Software.	Unknown	Contact Dealer or Chattanooga Group for Service.
114	WARNING	User pressed START, but has not yet set the Max Level value to a value greater than zero.	User has not completed Treatment Setup.	Complete Treatment Setup prior to pressing Start.
115	WARNING	User pressed HOME button from treatment review screen while a treatment was running.	Home button has been pressed.	Press Stop To End Treatment prior to pressing Home.

TOC



TROUBLESHOOTING

ERROR MESSAGES (CONTINUED)



WARNING

- In the event that an Error message or Warning appears beginning with a 2 or 3, immediately stop all use of the system and contact the dealer or Chattanooga Group for service. Errors and Warnings in these categories indicate an internal problem with the unit that must be tested by Chattanooga Group or a Field Service Technician certified by Chattanooga Group before any further operation or use of the unit. Use of a unit that indicates an Error or Warning in these categories may pose a risk of injury to the patient, user, or extensive internal damage to the unit.

MAINTENANCE

CLEANING

NOTE: Before cleaning, disconnect the unit from the power source. Periodically, clean the system with a clean, lint free cloth moistened with water and mild antibacterial soap. If a more sterile cleaning is needed, use a cloth moistened with an antimicrobial cleaner.

Do not submerge the system in water. Should the unit accidentally become submersed, contact the dealer or Chattanooga Group Service Department immediately. Do not allow cleaning solutions or water to enter the ventilation holes in the unit. This could permanently damage the unit. Do not attempt to use a unit that has been wet inside until inspected and tested by a Field Service Technicians certified by Chattanooga Group.

Touch Screen Cleaning

Clean unit display lens using a soft damp cloth, moistened with warm water and soap if necessary. DO NOT USE alcohol or chlorine based solvents as this may damage the display.

PREVENTIVE MAINTENANCE SCHEDULE

It is highly recommended that the TX traction unit be placed on a quarterly Preventive Maintenance Schedule to ensure long life, proper adjustment, and functioning of the unit. Preventive Maintenance should be performed only by Field Technicians certified by Chattanooga Group.

CALIBRATION REQUIREMENTS

Annual factory calibration is required for TX traction units. The unit should be sent to the factory or a Field Service Technician certified by Chattanooga Group for this procedure.

The TX traction unit purchased by your facility is calibrated during the manufacturing process. The device is ready to be placed into service upon delivery.



MAINTENANCE

SERVICE

Should the TX traction unit require service, contact the selling dealer or Chattanooga Group Service Department.

All returned units to the factory for service must include the following:

WARRANTY REPAIR/OUT OF WARRANTY REPAIR

1. Written statement containing the following information:

- RA Number - Obtain from Factory
- Unit Model Number
- Unit Serial Number
- Contact person with Phone and Fax Numbers
- Billing Address (for Out of Warranty Repair)
- Shipping Address (Where to Ship Unit after Repair)
- Detailed Description of Problem or Symptoms

2. Copy of original invoice issued at purchase of the unit.

3. Ship unit to Factory in the original container with all accessories and information as required in item one (1) above to:

Chattanooga Group
4717 Adams Road
Hixson, TN 37343 USA
Phone: 1-423-870-2281
Fax: 1-423-875-5497

When shipping the unit to the dealer or factory, make certain the original packaging is used. If the original packaging is not available, contact Chattanooga Group to obtain the packaging materials listed on **Page 20** for shipment. Any damage sustained from improper packaging may render the warranty null and void.

Service to these units should be performed only by a Field Service Technician certified by Chattanooga Group.

The TX traction unit Service Manual is available for purchase and can be requested from the selling dealer or Chattanooga Group Service Department. The Service Manual contains safety precautions, nomenclature, specifications, troubleshooting, removal and replacement instructions, general maintenance, calibration instructions, parts lists, schematics, warranty and other information which would assist a certified service technician to repair the unit.





WARRANTY

TX® Traction

Chattanooga Group, a division of Encore Medical, L.P., ("Company") warrants that the TX Traction Unit ("Product") is free of defects in material and workmanship. This warranty shall remain in effect for one year (12 months) from the date of original consumer purchase. If this Product fails to function during the one year warranty period due to a defect in material or workmanship, at the Company's option, the Company or the selling dealer will repair or replace this Product without charge within a period of thirty days from the date on which the Product is returned to the Company or the dealer.

All repairs to the Product must be performed by a service center authorized by the Company. Any modifications or repairs performed by unauthorized centers or groups will void this warranty.

The warranty period for the accessories shipped with the unit is ninety days. Accessories consist of the materials shipped with the unit.

To participate in warranty coverage, this Product's warranty registration card (included with Product) must be filled out and returned to the Company by the original owner within ten business days of purchase.

This Warranty Does Not Cover:

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

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

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

To obtain service from Company or the selling dealer under this warranty:

1. A written claim must be made within the warranty period to the Company or the selling dealer. Written claims made to the Company should be sent to:

4717 Adams Road
 P.O. Box 489
 Hixson, TN 37343 U.S.A.
 1-800-592-7329 U.S.A.
 1-423-870-2281
 1-423-875-5497 FAX
 1-800-361-6661 CANADA
 chattgroup.com

2. The Product must be returned to the Company or the selling dealer by the owner.

This warranty gives you specific legal rights and you may also have other rights which vary from location to location.

The Company does not authorize any person or representative to create for it any other obligation or liability in connection with the sale of the Product. Any representation or agreement not contained in the warranty shall be void and of no effect.

THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED,





Moving Rehabilitation Forward



ISO 13485 CERTIFIED

4717 Adams Road

P.O. Box 489

Hixson, TN 37343 U.S.A.

1-423-870-2281

1-800-592-7329 U.S.A.

1-423-875-5497 FAX U.S.A.

1-800-361-6661 CANADA

+1-423-870-7200 OUTSIDE USA

chattgroup.com

©2008 Encore Medical, L.P.

48036B

TOC

