

MERIDIAN MAPPING SYSTEM USERS MANUAL



Table Of Contents

I.	INTRODUCTION	1
	MERIDIAN LIMITED WARRANTY AGREEMENT	3
	GENERAL OVERVIEW	4
	About This Manual	4
	Training	4
	VARIANCES: GRAPHICS / SPECIFICATIONS	5
	Specifications Versus Vehicle Measurements	5
	GENERAL SAFETY INFORMATION	6
	Controls	6
	Laser Safety Information	6
	Federal Communications Commission	7
	COPYRIGHT INFORMATION	7
	MERIDIAN Users Manual	7
	MERIDIAN Software	7
	LASER SAFETY	
	MERIDIAN ASSISTANCE	9
II.	MERIDIAN HARDWARE	10
	COMPONENT TERMINOLOGY	10
	COMPONENT OVERVIEWS	11
	Workstation	11
	Cabinet Assembly	12
	Body Scanner and Tray	13
	Targets	16
	Target Base	16
	Attachments / Clips / Extensions	17
	Magnetic Attachments	17
	Bolt Attachments	17
	Hole Attachments	18
	Extensions	18
	Upper Body Bar Assembly	19
	Spacers and 3 Inch Bolts	21
	Chief Specifications Data	21
	Literature	21
	Diskettes and CDs	22
	COMPONENT MAINTENANCE	23
III.	MERIDIAN PLATE RETROFIT KIT (CK140034)	
	Installation Instructions	25
IV.	LL GALILEO BACK PANEL RETROFIT KIT (CK140019)	
	Installation Instructions	28
V.	GALILEO VERIFICATION INSTRUCTIONS	
	Initial Setup: Connecting A Scanner To Genesis Application	35
VI	Initial Setup	
	Connecting a scanner to Genesis Application	41
VII	Replacement Battery	
	(CK720341) Installation and Removal Instructions	48
VIII	How To Retrieve Troubleshooting Information	51

MERIDIAN LIVE MAPPING SYSTEM LIMITED WARRANTY AGREEMENT

Chief Automotive Technologies, Inc. warrants for one year from date of purchase any components of its Meridian Mapping System and 24 months for its Galileo Scanner which do not perform satisfactorily due to defect caused by faulty material or workmanship. THE WARRANTY DESCRIBED HEREIN SHALL BE IN LIEU OF ANY OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY, OF FITNESS FOR A PARTICULAR PURPOSE, OF TITLE, OR OTHERWISE ON THE PART OF CHIEF AUTOMOTIVE TECHNOLOGIES, THE EQUIPMENT, THE SPECIFICATIONS CONTAINED THEREIN OR ANY UNIT THEREOF. Chief's obligation under this warranty is limited to the repair or replacement of components which are defective and which have not been misused, carelessly handled, or defaced by the repair or repairs made or attempted by others. Chief Automotive Technologies does not assume responsibility for any injury or property damage resulting from the operator's misuse of this product. Unless a statement made by any representative of Chief Automotive Technologies is identified as a warranty, any such statements shall not be construed to constitute warranties and do not form part of the basis of the bargain; it being expressly understood that such statements are merely made in the course of the negotiations of the parties. FURTHERMORE, Chief Automotive Technologies specifically excludes or disclaims any warranty, express or implied, based on any sample or model shown by Chief Automotive Technologies to the buyer for demonstration purposes only.

LIMITATION OF REMEDIES. The parties agree that the buyer's sole and exclusive remedy against Chief Automotive Technologies shall be for the repair or replacement of components which are defective and which have not been misused, carelessly handled, or defaced by the repair or repairs made or attempted by others. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available to him. This exclusive remedy shall not be deemed as to have failed of its essential purpose so long as Chief Automotive Technologies is willing and able to repair or replace defective parts in the prescribed manner.

Prior to the return of any merchandise for a warranty claim, contact the Customer Service Department (800-445-9262) for a Returned Goods Authorization Number and instructions. No goods may be returned without a Returned Goods Authorization Number.

The buyer shall be required to deliver the defective part to Chief Automotive Technologies UNLESS (1) the part was destroyed as a result of its defect or of any defect in any part covered in this warranty, AND (2) Chief is reasonably satisfied that the part was defective at the time of its failure.

DISCLAIMER OF WARRANTY

THE GRAPHICS AND DATA SUPPLIED WITH THE MERIDIAN SYSTEM HAVE BEEN COMPILED FROM AUTHORITATIVE SOURCES. EVERY EFFORT HAS BEEN MADE BY CHIEF AUTOMOTIVE TECHNOLOGIES, TO ASSURE ACCURACY; HOWEVER, MANUFACTURING CHANGES, ERRORS OR OMISSIONS MIGHT OCCUR. CHIEF AUTOMOTIVE TECHNOLOGIES DOES NOT ASSUME RESPONSIBILITY NOR CAN IT BE HELD RESPONSIBLE FOR THE LOSS OR DAMAGE RESULTING FROM VEHICLE MANUFACTURER'S CHANGES, ERRORS, OR OMISSIONS IN THIS SYSTEM.

GENERAL OVERVIEW

Whether detecting misalignment in a vehicle's structure or verifying repairs have eliminated the damage, Meridian computerized measuring system can do the job. Meridian integrates the precision of laser scanning with a computerized data base for unmatched accuracy in collision repair and analysis. In addition to showing extent of collision damage, Meridian monitors progress throughout the repair and verifies the vehicle's structure is correctly aligned. Printed reports verify the vehicle's structural condition by showing overhead diagrams that display centerline, datum line and datum height measurements.

The Meridian system measures primarily on the principle of triangulation. The system's electronic Body Scanner projects laser beams toward light-reflective Targets (each bearing a unique code) that are suspended from vehicle's reference points. The Body Scanner houses photo sensors that identify the laser reflections. This information is transferred to the computer which performs the triangulation and Target identification functions.

About This Manual

This manual provides information on basic hardware components. It also provides pertinent information regarding startup/shutdown procedures, examples of on-screen Windows/Dialog Boxes and Vehicle Graphics, Keyboard/Mouse/Pen functions, Special Keys, and information on how to use the Meridian Help Text. Pertinent software functions and parts ordering information appear in the Meridian Basic Training Manual and Meridian Parts Manual.

Chief Automotive Technologies reserves the right to alter product specifications and/or package components without notice. Also, components shown in this manual may vary slightly in appearance from those that are actually supplied with the Meridian Live Mapping system.

Training

Chief Automotive Technologies also offers professional training. For maximum productivity and equipment utilization, each person operating a Meridian Live Mapping system should receive training conducted by Chief Training Department personnel. For information about training locations and dates, contact Chief Automotive Technologies, Tel 800-445-9262 Option 2, Fax 866-275-0173.

Attn: Training Department or contact your local representative.

VARIANCES: GRAPHICS/SPECIFICATIONS

Graphics

The Graphics displayed by the Meridian Mapping system are of high quality and have been checked for accuracy, but may not reflect the vehicle's actual appearance in every detail. Variances may exist as a result of changes made by vehicle manufacturers or details omitted as a result of space limitations.

Specifications Versus Vehicle Measurements

A vehicle's final measurements may vary from specifications listed and still be aligned correctly. Variances between vehicle measurements and specifications result from one or a combination of the following conditions:

- Vehicle specifications are compiled from vehicle manufacturer's engineering drawings and/or the measuring of new (undamaged) vehicles.
- Most vehicle manufacturers control only a small number of reference points on vehicle's lower structure. These reference points are commonly referred to as master control points, class one control points, principle locating points, etc. Each of these control points is usually held to a tolerance of plus or minus 3mm in three dimensions (length, width, height). Other reference points have a larger tolerance, but generally, a tolerance of plus or minus 5mm in three dimensions (length, width, height) is considered 'normal' according to Chief Automotive Technologies experience. In Arrow Display Mode, reference point measurements that exceed tolerance appear in 'red' whereas those falling within tolerance appear in 'blue'.
- Some reference points used for dimensioning the same make and model of vehicle vary from one manufacturing plant to another. Also, periodic manufacturing improvements can affect the location of points used for dimensioning.

Key points to remember when realigning a vehicle:

- Length and width dimensions on each side of vehicle should be within plus or minus 3mm of each other when control or reference points are symmetrical. Frequently, the height at front and rear of vehicle will exceed this tolerance according to Chief Automotive Technologies experience.
- When excessive pressure is needed near end of realignment process, and when area around spot welds begins to deform, 'stop pulling' and 're-evaluate the repair'. This situation usually occurs when a vehicle's components were not placed on specification during manufacture. In this case, continuing to pull in an attempt to achieve an exact specification may actually damage the vehicle.
- When a vehicle's dimensions vary beyond 'normal' tolerances, it is the repair technician's responsibility to determine if dimension all variances will affect suspension and steering alignment, the safe operation and handling of vehicle, and alignment of body panels.

GENERAL SAFETY INFORMATION

CAUTION Use of controls or adjustments or performance of procedures other than those specified in this Users Manual may result in hazardous laser radiation exposure. See CAUTIONS on Workstation and Body Scanner. (See illustration below.)

IMPORTANT DO NOT plug the Meridian system into same line as a welder. The built-in surge protector may not be sufficient to protect against current fluctuations that result from welder use, and it may cause the computer to fail. Also, avoid metal-to metal contact between all components (i.e. Workstation, Body Scanner, Welder, Vehicle Platform).

Controls

"On"/"Off" switch on Workstation — Allows power to Computer and other electrical components.

"On"/"Off" switch on Body Scanner — Allows power to Body Scanner including lasers.

Laser Safety Information

Laser Power Output: <5 mw.

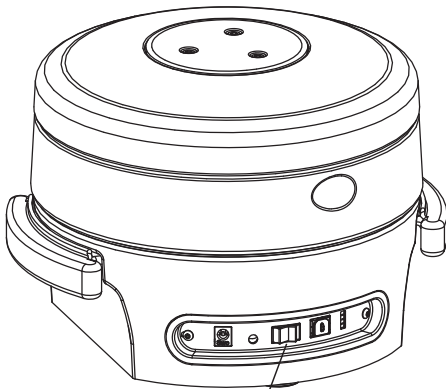
Wavelength: 650 - 670 nm.

NOTE: Meridian System is for indoor use only.

NOTE: Properly licensed / certified electrician needed to install the appropriate power cord plug end on main MERIDIAN power cord set.

CAUTION Avoid exposure! Laser radiation is emitted from Body Scanner apertures.

BODY SCANNER



Always Turn Scanner OFF
Before Disconnecting



WORKSTATION



Federal Communications Commission

The Meridian Mapping system has been tested and found to comply with: 1) Limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. 2) CE standards for emissions and Immunity (EN61326). These limits are designed to provide reasonable protection against harmful interference when equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with users and training manuals provided, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

COPYRIGHT INFORMATION

Meridian Users Manual

Vehicle Service Group © 2010. All Rights Reserved. No part of this work covered by copyrights hereon may be reproduced or copied in any form or by any means including, but not limited to, graphics, electronic, or mechanical, including photocopying, taping, printing or information storage and retrieval systems — without written permission of Vehicle Service Group, Madison, Indiana, U.S.A. All inquiries relating to use of this information should be addressed to Chief Automotive Technologies, Tel 800-445-9262 Option 2, Fax 866-275-0173.

Meridian Software







Vehicle Service Group © 2010. All Rights Reserved. No part of this work covered by copyrights hereon may be reproduced or copied in any form or by any means including, but not limited to, graphics, electronic, or mechanical, including photocopying, taping, printing or information storage and retrieval systems — without written permission of Vehicle Service Group, Madison, Indiana, U.S.A. All inquiries relating to use of this information should be addressed to Chief Automotive Technologies, Tel 800-445-9262 Option 2, Fax 866-275-0173.

Laser Safety

This is a Class IIIa/3R (with Class IIIb embedded) laser product which, during normal operation, does not permit human access to laser radiation in excess of Class IIIa/3R established limits. This product complies with 21CFR1040.10/11 and IEC60825.

This system is fully interlocked to prevent accidental access to laser radiation. Any attempt to defeat the safety interlock elements of this product is a violation of Safety Standards which this product complies with, and the protection provided by the product may be impaired.

CAUTION Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

LABEL	NAME	LOCATION
 <p>LASER RADIATION AVOID DIRECT EYE EXPOSURE CLASS 3R LASER PRODUCT WAVELENGTH: 640nm DURATION: CW POWER: <5mW</p> <p>THIS PRODUCT COMPLIES WITH 21CFR1040.10/11 EXCEPT FOR DEVIATIONS PURSUANT TO LASER NOTICE NO 50, JULY 24, 2007</p> <p>NP1328 Rev.-</p>	<p>Laser Warning Logotype Certification</p>	<p>On Back Panel Near Power</p>
 <p>LASER APERTURE</p> <p>NP1327 Rev.-</p>	<p>Aperture</p>	<p>Top Cover</p>
 <p>CAUTION MISE EN GARDE LASER LE LASER 3R</p> <p>NP1311 Rev.-</p>	<p>3R Caution</p>	<p>On Sides</p>
 <p>CAUTION Laser Radiation When Open Avoid Exposure To Beam</p> <p>NP1332 Rev.-</p>	<p>3B Caution (Internal)</p>	<p>Inside</p>
 <p>CHIEF automotive technologies 996 Industrial Drive Madison, IN 47250 Phone: 800.445.9262 Fax: 866.275.0173 www.chiefautomotive.com</p> <p>NP1329 Rev.-</p>	<p>Manufactures ID</p>	<p>On Bottom</p>
 <p>CHIEF & DOVER COMPANY Date of MFG: 06/06/2017 Model: AAAAAAAAAAAAAA Scanner: 9999999999 Serial#: 9999999999 Country of Origin: AAAAAAAAAA</p> <p>CE MET</p>	<p>Manufactures ID</p>	<p>On Bottom</p>

MERIDIAN ASSISTANCE

Chief Automotive Technologies offers assistance to Meridian program operators. When contacting Chief Automotive Technologies, operators should be prepared to give their name, telephone number (including area code), version of software in use and nature of problem encountered. To identify version of software in use, select 'About' from list of items under Help heading in any Menu Bar. In U.S.A., call toll free 800-445-9262. If outside U.S.A., contact an authorized Chief Automotive Technologies representative.

Computer Program Updates

Updates and changes to computer programs will be issued from time to time via computer DVDs. Explanations of changes and instructions for installing them will accompany the DVDs.

Specification Updates/Corrections

Annually, and as required, updates and additions to vehicle specifications (and instructions for installation) will be made available for purchase.

Keeping Records of Service and Updates

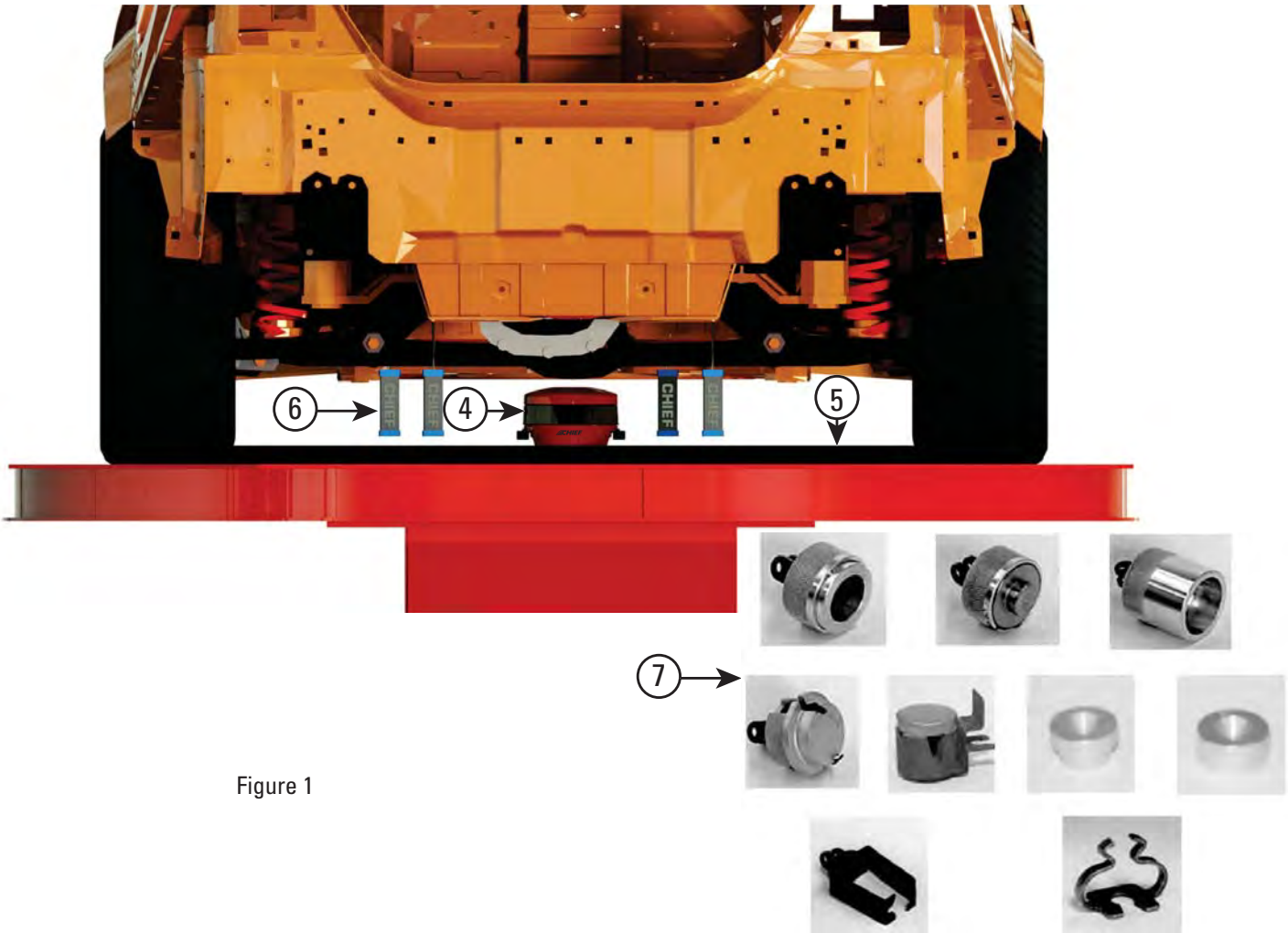
Owners should keep records of services performed and updates provided. These records will be helpful when placing calls to the toll free support number.

II. MERIDIAN HARDWARE

COMPONENT TERMINOLOGY

Equipment in Chief's Meridian Mapping System (see Figure 1) is easy to use and provides accurate readings. Its basic components include:

- Computer *
 - Display Monitor [1]
 - Keyboard *
 - Printer *
 - Workstation [3]
 - Power Supply [*]
 - Body Scanner [4] and Tray [5]
 - Targets [6] and Attachments/Clips [7]
 - Upper Body Bar [*]
 - Anchoring Spacer [*]
 - Literature [*]
- (*Not shown in Figure 1 — see following pages)



CAUTION Use of controls, adjustments or performance of procedures other than those specified in this manual may result in a breach of warranty and could result in hazardous radiation exposure. See CAUTIONS on Workstation and Body Scanner.

COMPONENT OVERVIEWS

Workstation:

The Meridian Workstation (see Figure 2 and 2a) is a steel cabinet that houses a Computer, Display Monitor, Keyboard, Printer, Power Supply (+ 18 volt, 3.33 AMP), and assorted Targets, Attachments, Clips and Scales. The cabinet is supported by casters and features a drawer for the Body Scanner when it is not in use. The operating temperature of both the workstation and scanner are between 40°F and 105°F with a maximum relative humidity of 80%. Maximum altitude of 6000 ft.

Meridian computer system features a 500 GB hard drive, a DVD drive, 4 GB of memory, includes keyboard and mouse devices, display monitors, and a printer (see Figure 2 and 2a).

Connect the Meridian to a 110V/60Hz./6 amp. power source or 220V/50Hz./4 amp. power source. See back panel label for the power source configurations you have been provided, Figure 2a. A single purpose line is recommended. Do not use circuits subject to frequent interruptions or outages. Avoid circuits with power surges such as from welders and some power tools. Built-in surge protector may not be sufficient to protect against current fluctuations and it may cause the Meridian computer to fail. Avoid metal-to-metal contact between components (i.e. Workstation, Body Scanner, Welder, Vehicle Platform), and move the Meridian components away from welding areas to avoid damage from sparks.

IMPORTANT Voltage requirements may vary in some countries.

Figure 2

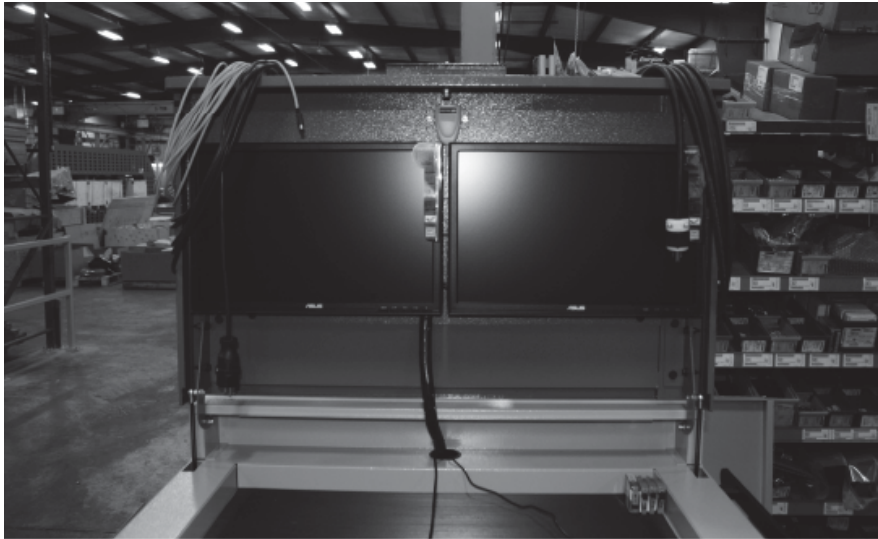


Figure 2a



CABINET ASSEMBLY

1. Unpack cabinet and locate hook as shown, Figure 3.

2. Assemble hook to back of cabinet, Figure 4.

Figure 3



Figure 4



3. If cabinet is equipped with a battery, clip the wire tie holding the battery supply scanner cable, Figure 5, and route scanner cable to scanner location, Figure 6.

Figure 5

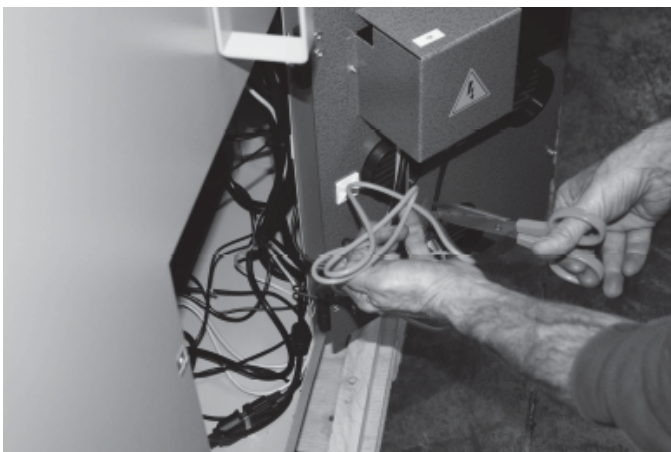


Figure 6



Scanner Power:

Battery/Cable Power:

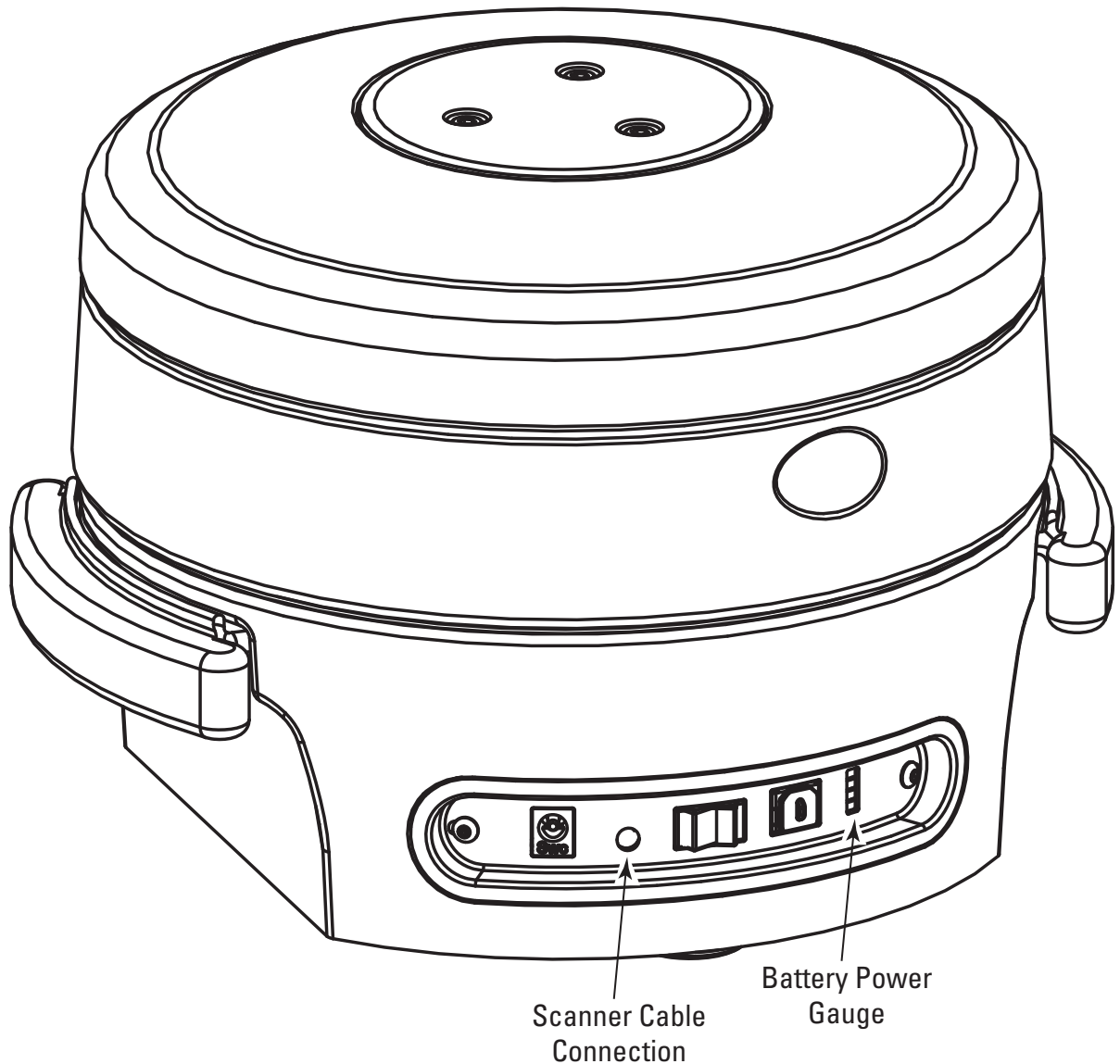
If the scanner is using battery power to operate, the on/off power light (Figure below) flashes. If the scanner is using cable power to operate, the on/off power light will remain on if the power switch.

Battery Charge: (If equipped with a battery)

The battery takes approximately 3 hours to fully charge.

There is a gauge on the front of the scanner that provides the level of battery charge still available on the scanner (See Figure Below). The number of lights that are on identify how much charge is left on the battery. A fully charged battery provides approximately 5 hours of operation. If there are 4 lights on, there is 87%-100% battery charge remaining (4-1/3 to 5 hours). 3 lights, there is 66% to 87% battery charge remaining (3-1/3 to 4-1/3 hours). 2 lights, there is 33% to 66% battery charge remaining (1-2/3 to 3-1/3 hours). 1 light, there is 10% to 33% battery charge remaining (1/2 to 1-2/3 hours). If the 1 light blinks on and off, then the battery is about to run out of charge.

ATTENTION After 8 hours the scanner will shut off automatically to reduce ware on the machine.



Position Workstation near work area and attach Body Scanner Cable. Body Scanner 'on/off' switch is shown in Figure 9. (Inset photo for Figure 7 shows connections for a 220-volt, 5 amp Meridian System.)

IMPORTANT Computer and Body Scanner are precision electronic tools. Movement of components must be done with care. Do not move Workstation during a 'continuous' measurement or during program accessing. Please ensure cabinet is positioned so that full access to the disconnect switch is available at all times.



Figure 7

Scanner Cable



Power Supply Cable, 110V



Power Supply Cable, 220V



IMPORTANT Only use main power supply cords provided with the workstation. Replacement cords must be ordered from the factory. See parts breakdown for part numbers.

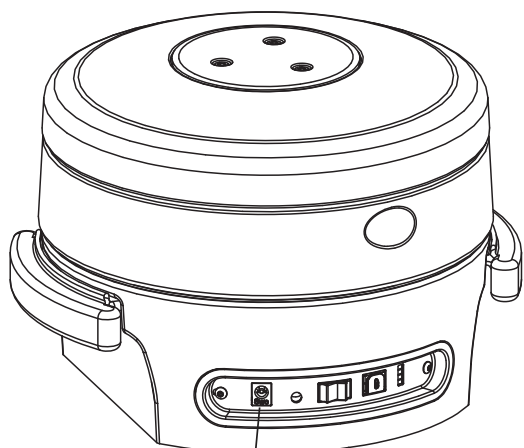


Figure 8

Scanner Cable Connection

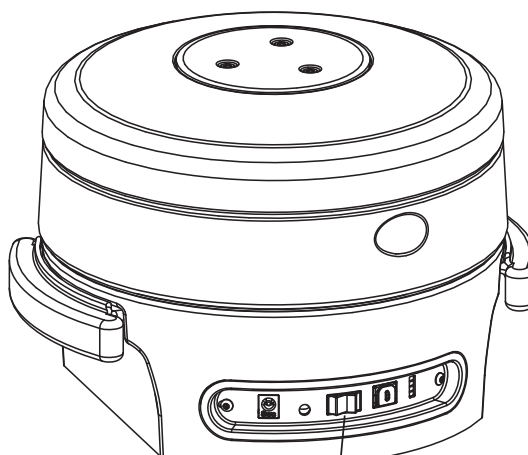


Figure 9

Scanner ON / OFF Switch

Body Scanner and Tray

The Meridian system measures on the principle of triangulation. The Body Scanner houses rotating Laser Lights that project toward light reflective Targets (each bearing a unique code) on vehicle's structure. Body Scanner also houses photo sensors that identify the angle of revolving laser reflections. This information is transferred to computer which performs triangulation and Target identification functions. The Scanner's parabolic design filters out sunlight allowing for greater productivity.

Body Scanner Tray is the base upon which to position Body Scanner. Rubber strips on Tray's inside edges and insulating feet on bottom of Body Scanner help prevent metal-to-metal contact between Tray and Body Scanner.

Insert Body Scanner Tray below vehicle's center section (see Figure 10) and place Body Scanner on Tray (see Figure 11). Cable port must be under left side (driver's side) of vehicle. This positioning allows Body Scanner to be synchronized with computer program.

Body Scanner does not need to be square to vehicle or level. Make sure, however, it remains in Tray and Tray is stable. It is permissible to reposition Tray any time or shift Body Scanner in the Tray. Meridian recalibrates any repositioning in its next measurement cycle.

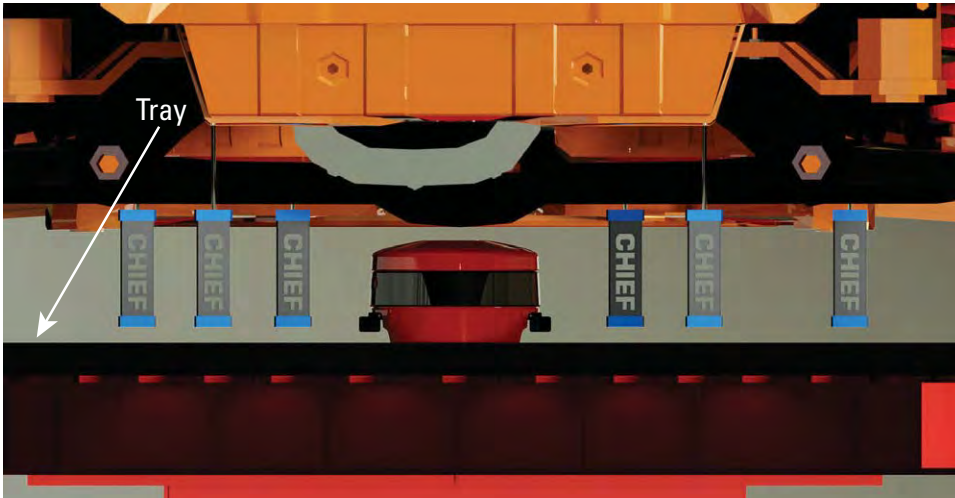


Figure 10

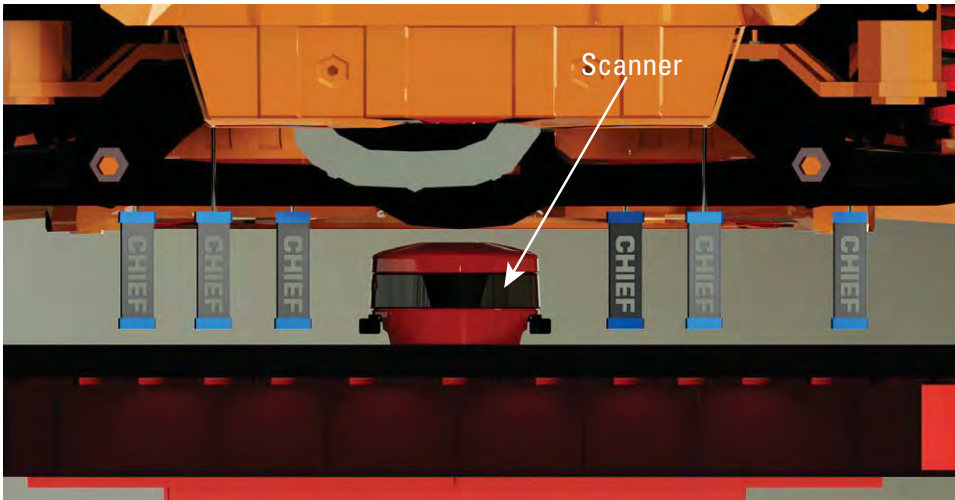


Figure 11



Use Magnet To Help Keep Scanner Cable In Place As Shown

Targets

All Targets are numbered and their reflective faces bear a unique code. (See Figure 12). Most Targets are interchangeable, although some have specific uses. An assortment of clips, extensions and other attachment devices provide flexibility in Target placement. All specifications are provided from reference hole and bolt centers.

Targets 1 - 40 are interchangeable depending on length of pendant needed. Targets 41 and 42 are used with a Target Base when measuring lower control arms. Targets 43, 44, and 45 are used with Upper Body Bar when measuring strut tower and other upper body reference points.

NOTE: 1) Although Targets numbered 1-40 are interchangeable, be consistent when placing them at reference points.

2) With the exception of Targets 41-45, Targets can be used on either side of the vehicle. we recommend placing odd number targets on left side of vehicle for consistency. Targets 41 and 42, which are primarily used to measure ball joint locations, must be used on the left and right side of the vehicle respectively. Targets 43 and 44, which are used to measure strut tower locations, must be installed on the Lower Bar of the Upper Body Bar Assembly directly below their respective Pointers. Target Number 45 must be in the center of the Lower Bar.

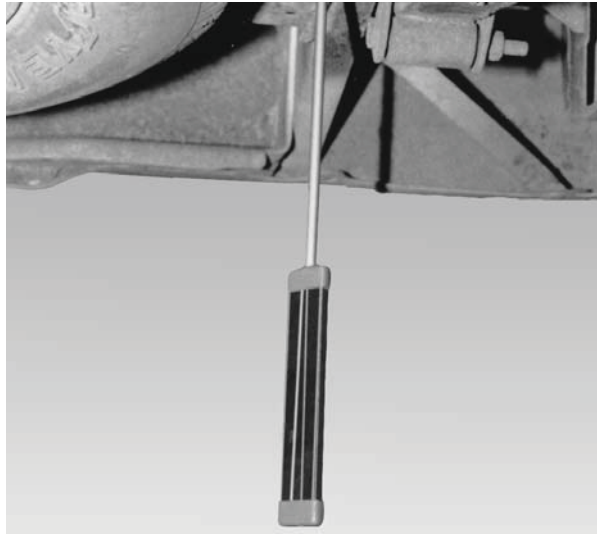


Figure 12

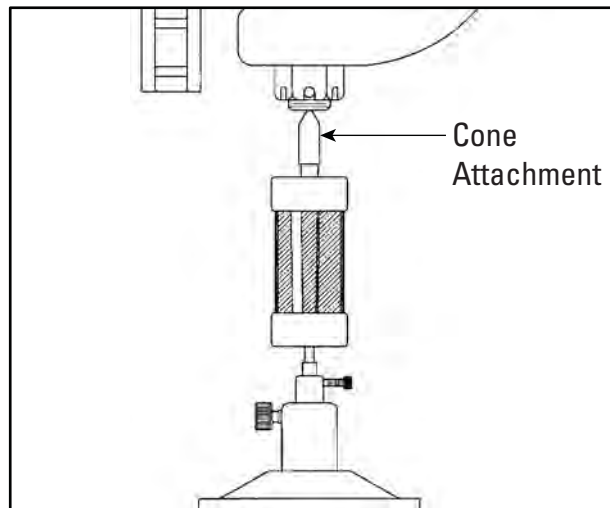


Figure 13

Target Base

Any Target except Targets numbered 43, 44 and 45 can be used with the Target Base. (See Figure 13.) Target Base sits on platform and Target is projected upward from it to a reference point. When using Target Base to project a Target to a specific reference point, the Target Pendant requires the addition of a Cone Attachment (see Figure 9) to compensate for absence of an attachment or clip. Targets 41 and 42 are used with the Target Base to make comparison measurements of ball joint locations.

Attachments, Clips and Extensions

A variety of Attachments, Clips and Extensions allow Targets to be mounted to practically any reference hole or bolt. These include Magnetic Attachments, Bolt Attachments, and Reference Hole Attachments. Extensions are provided allowing Target attachment at hard to reach locations.

Magnetic Structural Attachment

Magnetic Attachments (see Figures 14 and 15) are used on bottom of structural members when reference holes or other mounting locations are not accessible. This attachment, used primarily for comparative measurements, should be positioned so that its vertical surface is flush with vertical surface of structural member it mounts to. The Target can then be mounted in attachment's clip.

The magnet on the attachment is strong and will maintain its holding power if cared for properly. A Magnet Keeper (see Inset — Figure 11) should be positioned on magnet when the attachment is not in use.

IMPORTANT Never use arc welder or heat near Magnetic Attachment as this tends to reduce its holding power.

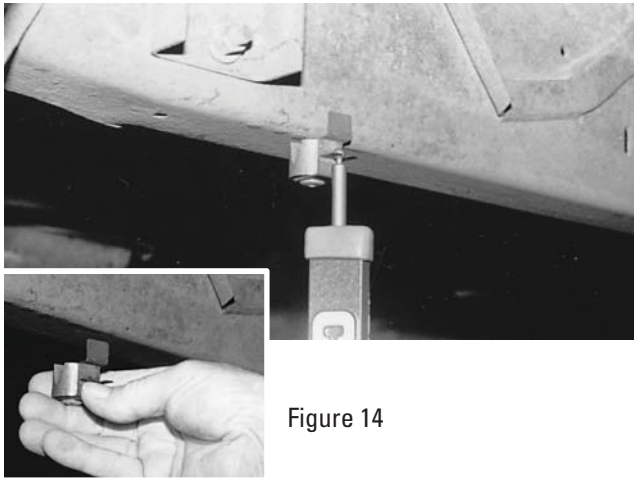


Figure 14

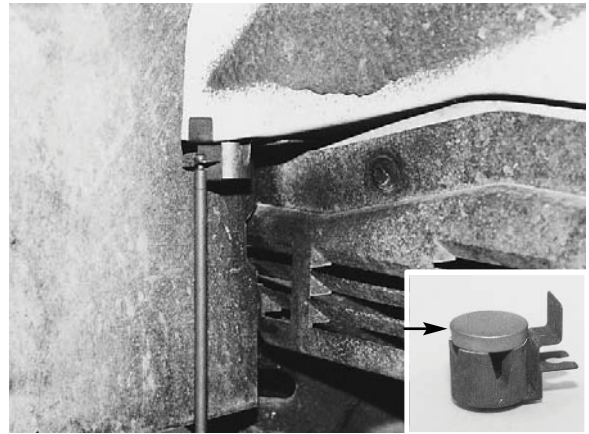


Figure 15

Bolt Attachments

Bolt attachments work equally well on the bottom of a structural component or on the side of a structural component. The nylon base of each attachment swivels to allow for easy Target adjustments.

Magnetic Bolt Head Attachments - have a strong gripping capability and are designed to fit a wide range of bolt heads. (Figure 16 and its inset show an example of a magnetic bolt head attachment.)

Threaded Attachments - allow operator to thread the attachment onto extruding bolt threads. (Figure 17 and its inset show an example of a threaded attachment.)

Metal Clip Style 'Bolt Attachments' have a strong gripping capability and are designed to fit a wide range of bolts (and nuts) used on a vehicle's structure. The small size grasps bolts/nuts with a 10 to 20mm diameter. The medium size grasps bolts/nuts with a 15 to 25mm diameter, and the large size grasps bolts/nuts with a 25 to 35mm diameter. (Figure 14 and its inset show an example of a nylon base bolt attachment.)

IMPORTANT Metal Clip style 'Bolt Attachments' (previously supplied with MERIDIAN systems) can still be used to mount Targets. The current Meridian program, however, assumes Magnetic or Threaded Bolt Attachments are in use until operator inputs correct information in Change Attachment Dialog Box.



Figure 16

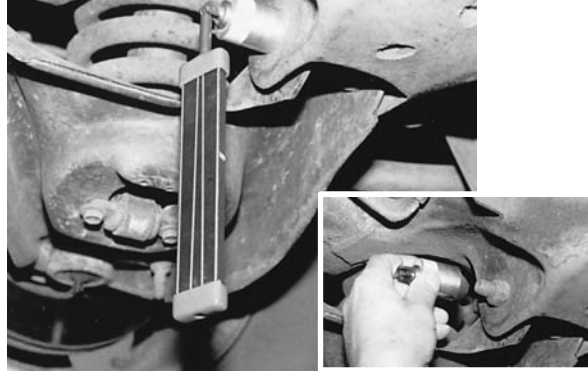


Figure 17

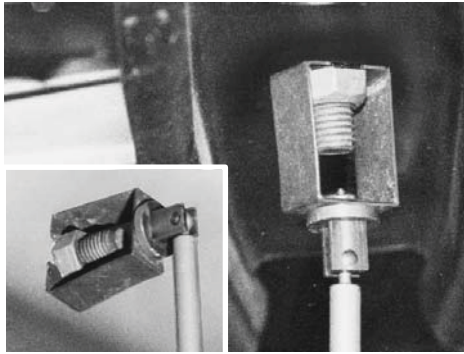


Figure 18

Hole Attachments

Magnetic Hole Attachments snap into all types of reference holes. They work equally well on the bottom of a structural component or on the side of a structural component. The attachments feature a nylon base which swivels to allow for easy Target adjustments.

Magnetic Hole Attachments have a strong gripping capability and are designed to fit a wide range of reference hole sizes. (Figure 19 and its inset show an example of a magnetic hole attachment.)

Aluminum Snap In Attachments snap into all types of reference holes. They are made of aluminum and are provided in varying sizes ranging from 10 to 32mm in diameter. (Figure 16 and its insets show an example of an aluminum snap-in attachment.)

In addition to these attachments, a small metal clip is provided for mounting Targets to reference holes measuring 5 to 10mm in diameter. (See Figure 21.)

IMPORTANT 1) When using Magnetic Hole Attachments (Nylon Base) in elongated (oval) reference holes, refer to Point Information Dialog Box for correct positioning.

2) Large Metal Clip style 'Hole Attachments' (previously supplied with Meridian systems) can still be used to mount Targets. The current Meridian program, however, assumes Magnetic, Snap-In or small Metal Clip Attachments are in use until operator inputs correct information in Change Attachment Dialog Box.

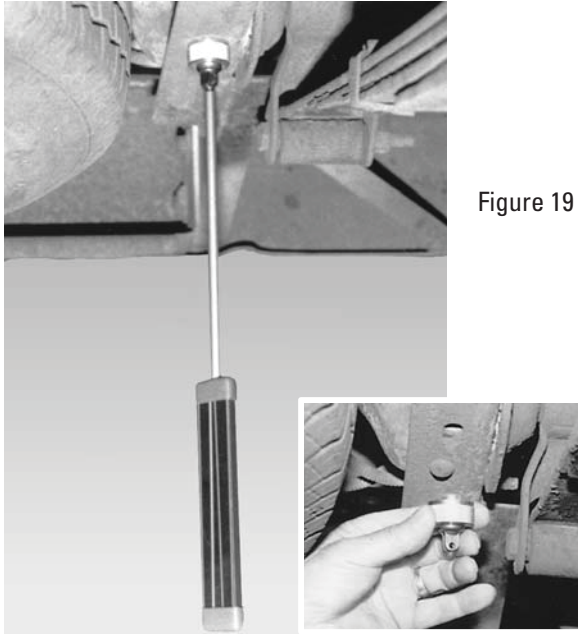


Figure 19

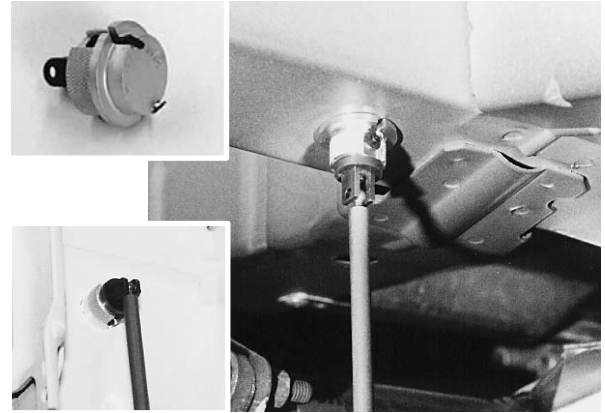


Figure 20



Figure 21

Extensions

Target Extensions are available in lengths of 156mm and 256mm. (See Figure 22.) A third extension is C-shaped for reaching around obstructions. The Extensions allow greater flexibility when extra length is needed and when mounting Targets in locations where obstructions prevent normal installation. (See Figures 23 and 24 and Figure 23 Inset.)

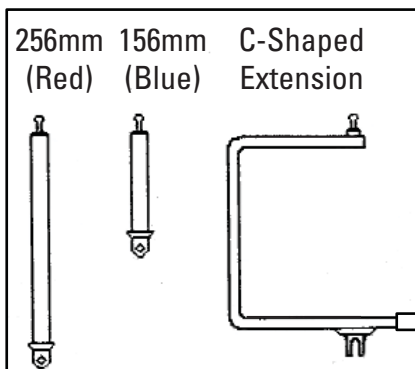


Figure 22

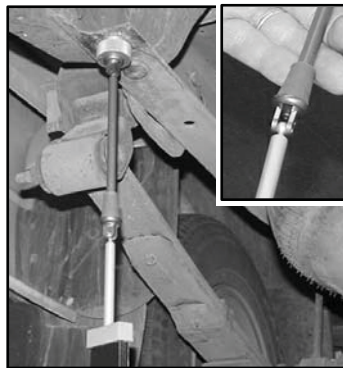


Figure 23



Figure 24

Upper Body Bar Assembly

The Upper Body Bar Assembly consists of two horizontal bars joined by a pair of Vertical Scales. (See Figure 25.) Pointers project from Pointer Housings on Upper Bar to strut tower or other upper body reference points. Pointers are provided in 'cone - shaped' configurations in lengths of 102mm, 178mm, and 432mm. Three Targets (Nos. 43, 44, 45) mounted to Lower Bar measure height, width (centerline), and length of strut tower or other upper body reference points. In addition to components listed, Bolt Hole Caps and Stud Hole Caps (ranging from 5 to 17mm in diameter) allow the assembly to be mounted to open bolt holes or studs. (See Figures 26 and 27.) The configuration of the cap positions the pointer at center of hole or stud.



Figure 25

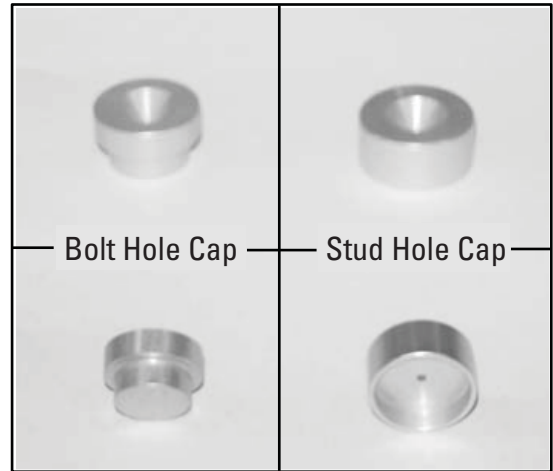


Figure 26

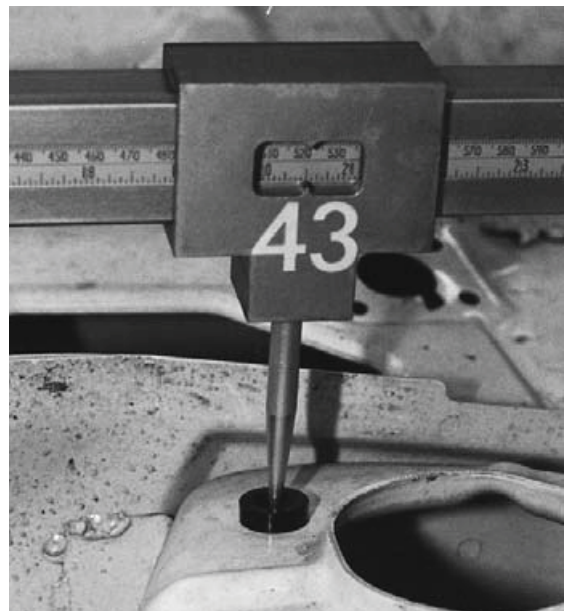


Figure 27

To install Upper Body Bar, attach one of the Vertical Scales to Upper Bar and place assembly's pointers on reference points. (See Figure 28.) Then tighten Pointer Housing (see Figure 29); however, if a reference point appears to be misaligned, do not tighten its Pointer Housing. Next, install Lower Bar (with three Targets installed) and remaining Vertical Scale. If needed, adjust height of Lower Bar to enable Body Scanner to view all three Targets.

IMPORTANT:

- 1) Target Number 45 must be in center of Lower Bar and Target Numbers 43 and 44 must be under their respective Pointers. (See Figure 30.)
- 2) Body Scanner's Lasers should strike near center of Target faces.
- 3) Length of Vertical Scales must be equal, one side of vehicle to the other.



Figure 28

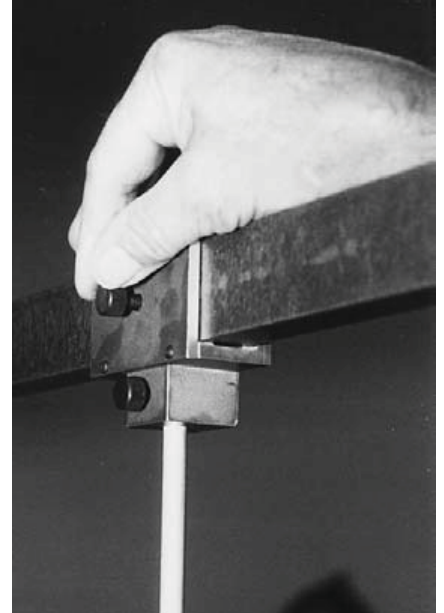


Figure 29



Figure 30

Spacers and 3 Inch Bolts

The Meridian Measuring System works well with all of Chief's anchoring systems; however, a slight modification may be required if using Chief's original Universal Anchoring System. Whenever the anchoring tubes of this system prevent the mounting of Targets in the rear corners of the vehicle's center section, operators should offset the clamp bars using the spacers and 3 inch bolts provided. (See Figure 31.) The spacers and bolts position the rear anchoring stands wider than normal allowing Targets to hang vertically. (Spacers and 3 inch bolts are provided for offsetting clamp bar.)

Chief Specifications Data

Specifications of domestic and foreign vehicles are stored in the Meridian Computer along with provisions for periodic updates.

Literature

Literature provided with Meridian system includes Meridian Users Manual, Meridian Parts Manual, and user manual(s) for Computer, Microsoft Windows®, and Printer.

In addition to this printed literature, the Meridian system features an On-Line Help Text and a Tutorial that is readily accessible whenever using the program. In addition, there is also an On-Line How To Use Help System. (These Help features are addressed in greater detail later in this manual.)

DVDs

When using DVDs, handle them correctly. To insert, slide it carefully into Computer drive (see Figure 31) until it seats in the drive. To remove, select Eject (from menu options on screen). Grasp DVD at label and slide it from drive slot.

Figure 31



Update DVDs

The Computer provided with the Meridian system comes fully loaded with operational software, Vehicle Graphics and vehicle specifications. Periodic updates to these are made available as needed. Updates are sent in DVD format. To make updates, refer to procedures identified in Help Text and any special instructions mailed with the update DVD.

COMPONENT MAINTENANCE

(See also Users Manuals For Computer And Printer)

Other than cleaning, factory maintenance by qualified technicians is required for all components. Be sure system's power is 'off' while cleaning is performed. In dusty, or dirty environments, periodic cleaning is necessary. Specific instructions for cleaning critical components are described below.

Wipe all parts clean using a lint-free, low-abrasion cloth using only an ammonia-based glass cleaner. Never use solvents or alcohol-based cleaners of any kind on any part of the Meridian System.

Component Maintenance

Body Scanner Care

Do not plug or unplug cable from Body Scanner unless it is turned off.

Keep Body Scanner away from areas being undercoated, primed or painted. Keep heat away from Body Scanner when using a torch for thermal stress relieving of structural components.

Clean all Body Scanner parts with a lint-free, low-abrasion cloth and a good quality glass or ammonia cleaner. Never use solvents or alcohol-based cleaners on Body Scanner glass.

Care of Targets

Keep Targets away from areas being undercoated, primed or painted, and away from heat when using a torch for thermal stress relieving of structural components.

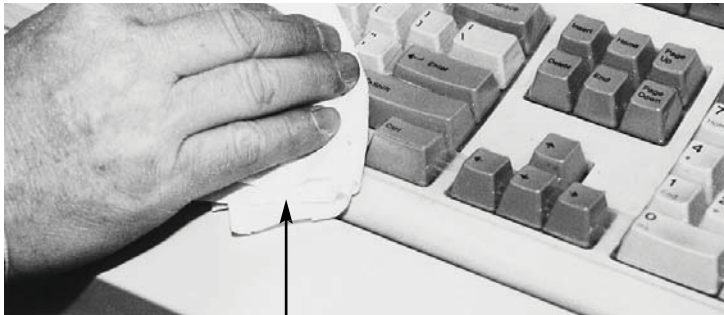
Use a lint-free, low-abrasion cloth and a good quality glass or ammonia cleaner to clean Targets. Do not use solvents.

Avoid scratching or gouging the Target's reflective surface.

Workstation (Keyboard, Monitor, Computer)

Clean Monitor screen and other external parts (Keyboard, Computer, etc.) with a lint-free, low-abrasion cloth, and a good quality glass or ammonia cleaner. Do not use solvents or alcohol-based cleaners on Monitor screen or other computer parts. Be sure system's power is 'off' while cleaning is performed.

Do not remove the clear, plastic skin covering Keyboard. Wipe it clean with a soft cloth. (See Figure 32.)



Lint-free low abrasion cloth

Figure 32

Meridian Plate Retrofit Kit (CK140034) Installation Instructions

1. If there is an internet cable connection from the shop, disconnect it from the Network Jack Assembly – RJ45 (788067) that is located on the Phone Jack Cover (788042) on the Cabinet Back Panel as shown in Figure 33.
2. Remove the Network Jack Assembly – RJ45 (788067) and the RJ11 & RJ45 Jack Plug (788089) from the Phone Jack Cover (788042) as shown in Figure 33. If there is not a network jack assembly (or other configuration), just remove the items to ensure there are through holes at each of these locations.
3. Remove the nuts holding Phone Jack Cover (788067) to the Cabinet Back Panel and attach the Wall Plate with Bristles (CK130081) provided as shown in Figure 34.
4. Install Power Supply Assembly, Velcro Only (CK110140). Do this by removing the two protective plastic strips from bottom of Velcro and adhere to inside of back panel or inside of cabinet itself as shown in Figure 35. Make sure that the AC cord going to the Power Supply is plugged into an outlet within the cabinet.
5. Attach the USB 10M Cable (CK130082) into the computer and thru the Wire Bristle Wall Plate installed in Step 3 above.
6. Attach the Scanner Extension Power Cord (CK130083) to the barrel end of the Power Supply Assembly (CK110140) and thru the wire Bristle Wall Plate installed in Step 3 above.
7. Add adhesive wire tie to mounting squares to back panel. One on the inside of the back panel to provide strain relief for the scanner power cord and one on the outside of the back panel to provide strain relief for usb cable.

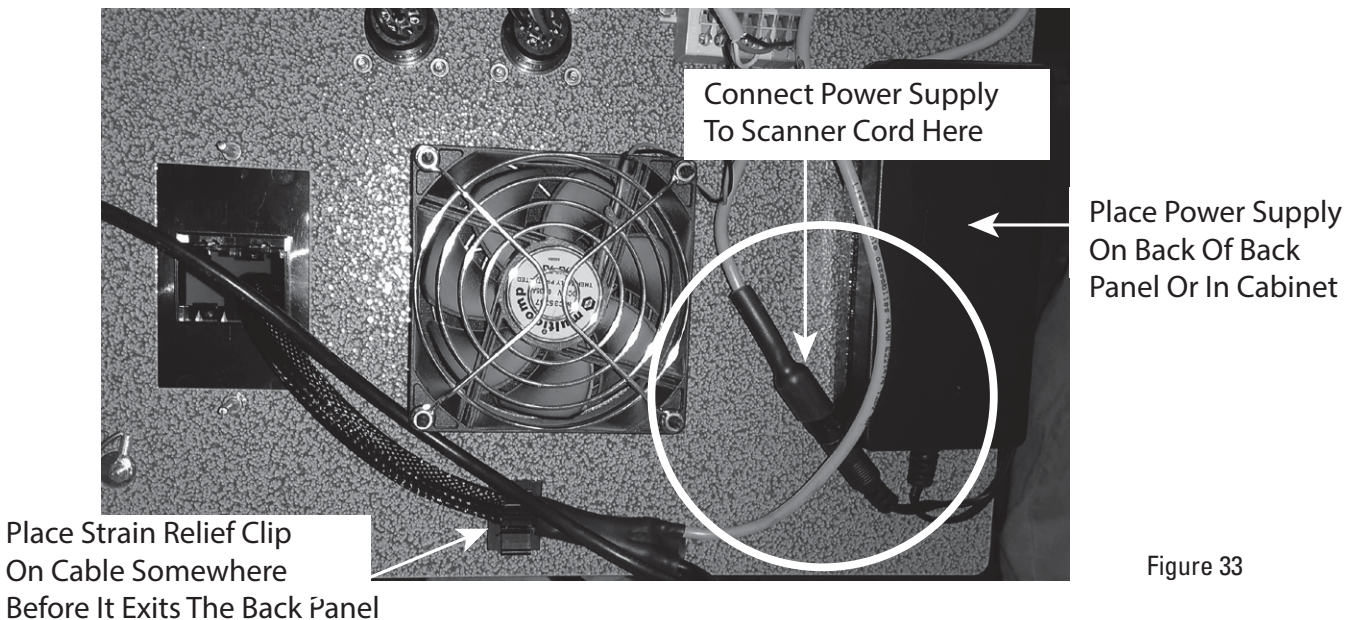
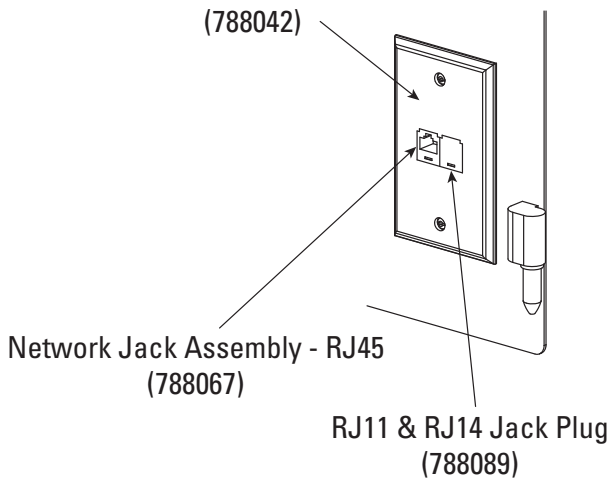


Figure 33

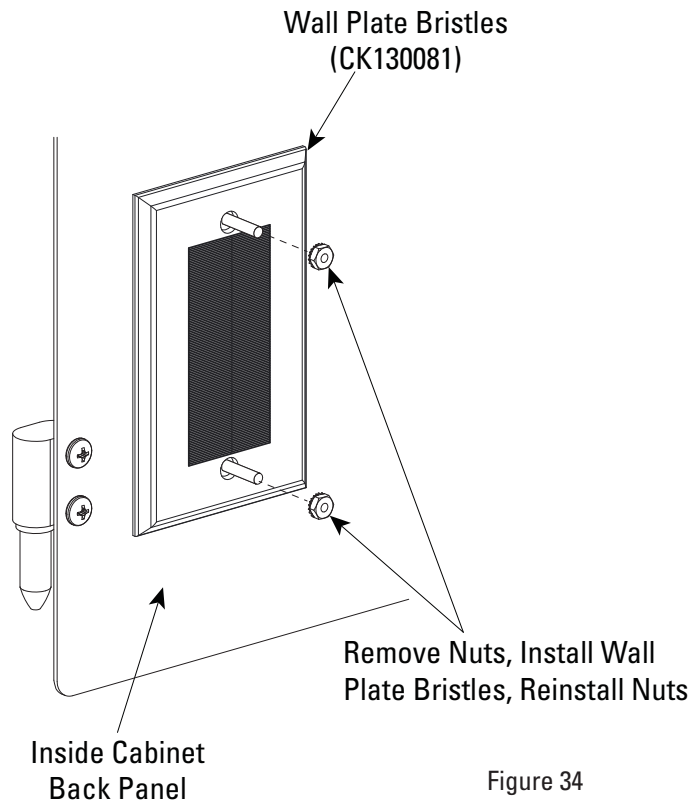


Figure 34

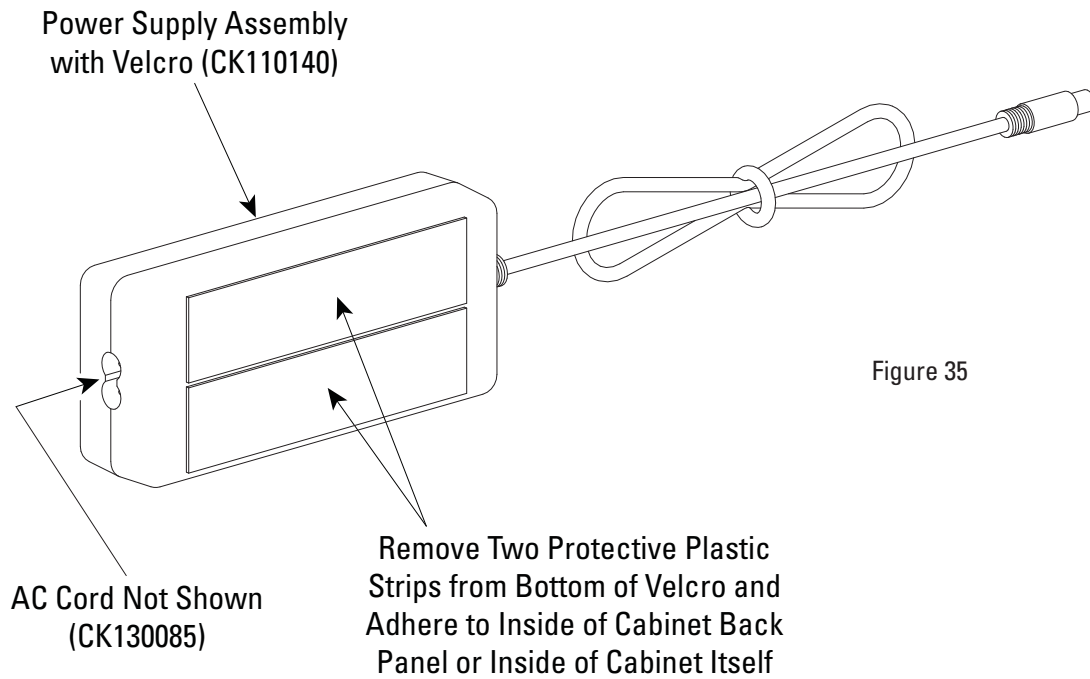
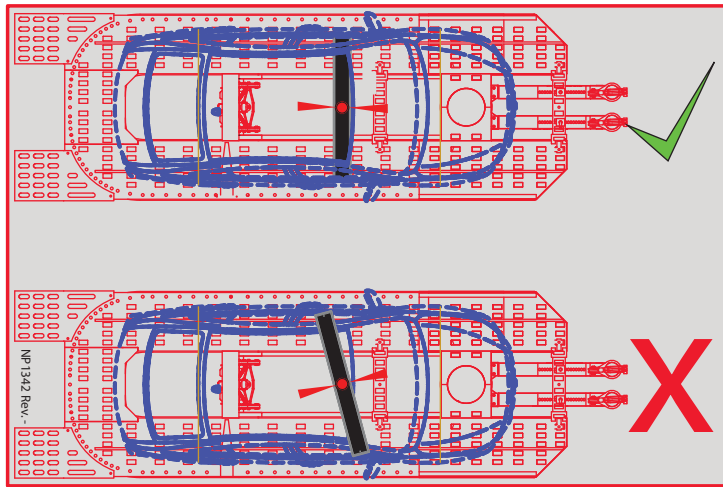
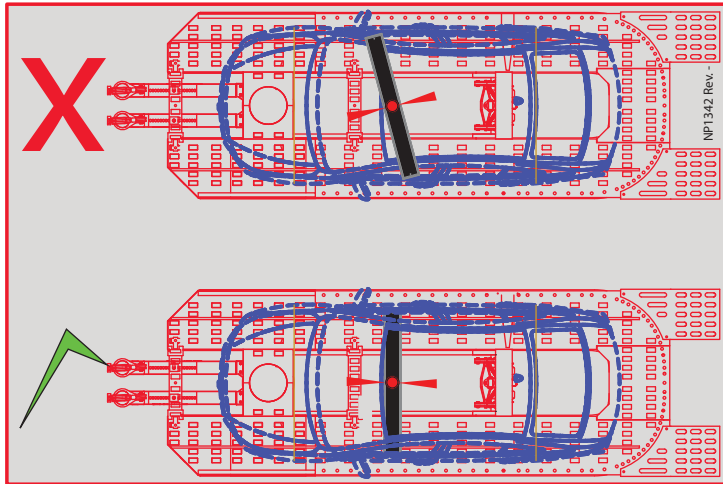


Figure 35



Please Decals onto ends of scanner tray

LL Galileo Back Panel Retrofit Kit (CK140019)

1. Remove Back Panel on back of existing cabinet including all wires connecting Back Panel to Cabinet. The back panel will be discarded so all wires can be cut from back panel.
2. Remove all existing Power Cords that go from monitors, printer, and computer.
3. Attach Powerstrip Bracket Assembly (CK110040) to Cabinet using two #12x1/2 Self Tapping Screws (796556) in accordance with Figure 36. Make sure the Cabinet Door can close after installation.
4. Connect two (CK130041) power cords from both monitors to powerstrip. Wiring schematic shows this configuration.
5. Connect (CK130044) power cord from printer to powerstrip. Wiring schematic shows this configuration.
6. Connect (CK720331) power cord from computer to powerstrip. Wiring schematic shows this configuration.
7. Attach Back Panel Assembly, CSHS (CK110039) to cabinet. See Figures 37 and 38 below for the remaining steps.
8. Attach USB Cable from Back Panel Assembly (CK110039) to computer.
9. Attach AC Power Cord from Back Panel Assembly (CK110039) to powerstrip.
10. Attach Network Jack Assembly – RJ45 (788067) from Back Panel Assembly (CK110039) to computer.
11. Attach Grounding Wire from Back Panel (CK110039) to cabinet for ground.
12. Connect USB 10M Cable (CK130082) to back of Cabinet and wrap on existing cable hanger.
13. Connect Scanner Power Cord (CK110047) to back of Cabinet and wrap on existing cable hanger.
14. Reconnect shop Internet Cable to Network Jack Assembly - RJ45 (788067) on Back Panel (CK110039) if required.
15. Finally, Connect either 110V Power Cord (CK110048) or 220V Power Cord (CK110049) to Back Panel Assembly (CK110039).
16. Clip the wire tie holding the battery supplier scanner cable, see figure below, and route cable to tray that the scanner is stored in the cabinet.



2-1/4" From Front of Cabinet
(Not Including Doors)

13"

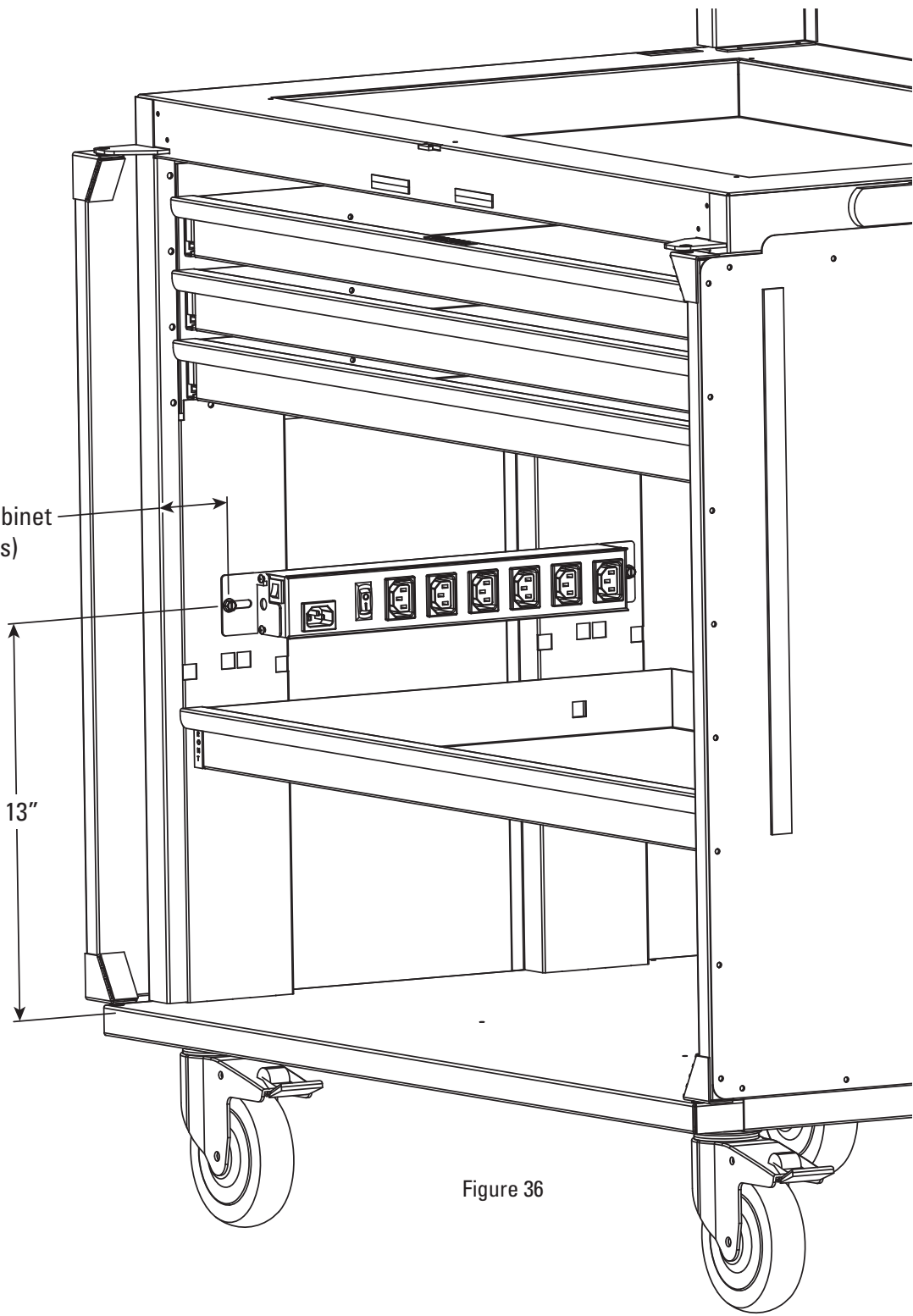
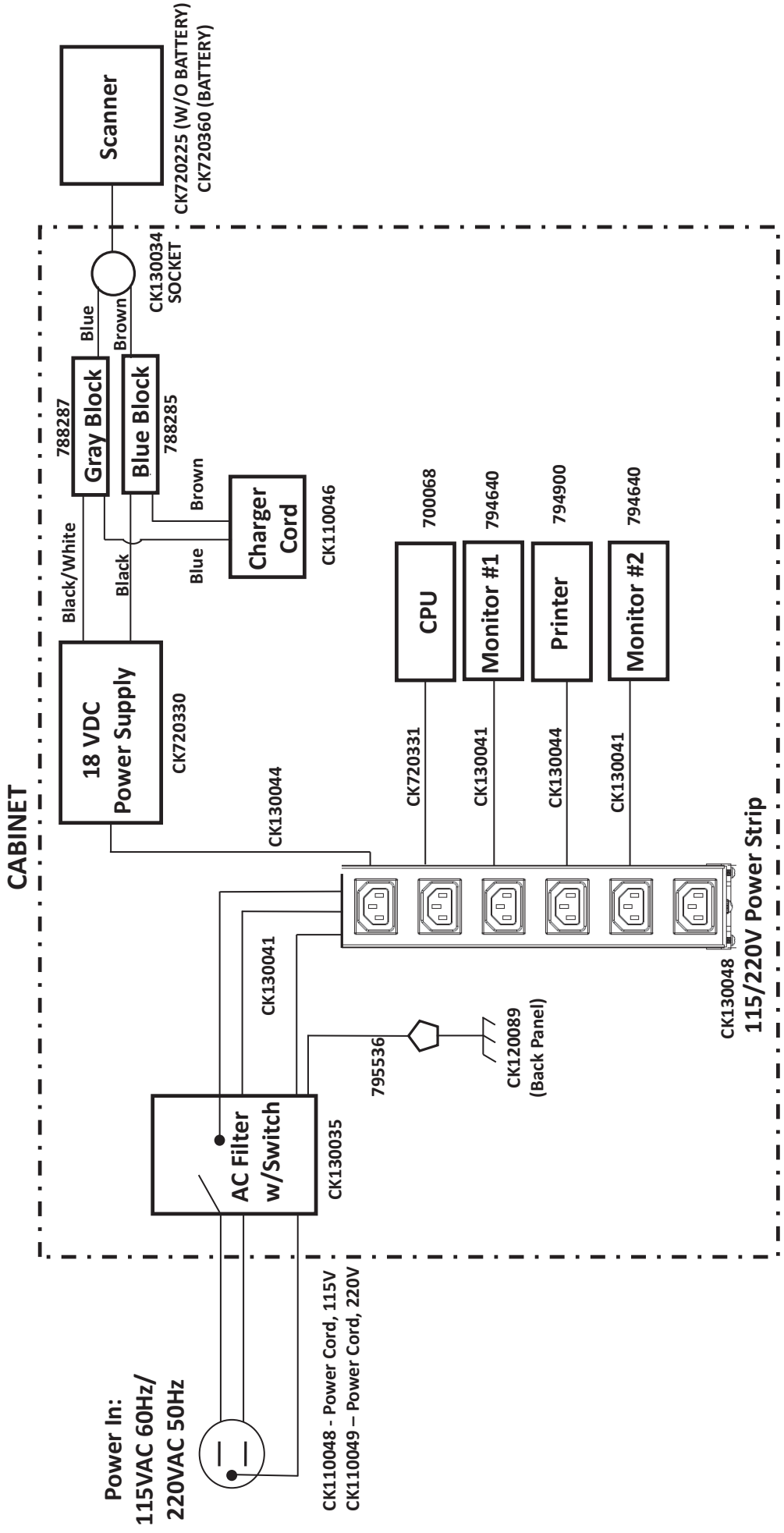


Figure 36

MERIDIAN SCANNER MAPPING SYSTEM BLOCK DIAGRAM/SCHEMATIC



CABINET

Power In:
115VAC 60Hz/
220VAC 50Hz

CK110048 - Power Cord, 115V
CK110049 - Power Cord, 220V

CK130048
115/220V Power Strip

Scanner
CK720225 (W/O BATTERY)
CK720360 (BATTERY)

Gray Block 788287
Blue Block 788285
CK130034 SOCKET

18 VDC Power Supply
CK720330

Charger Cord
CK110046

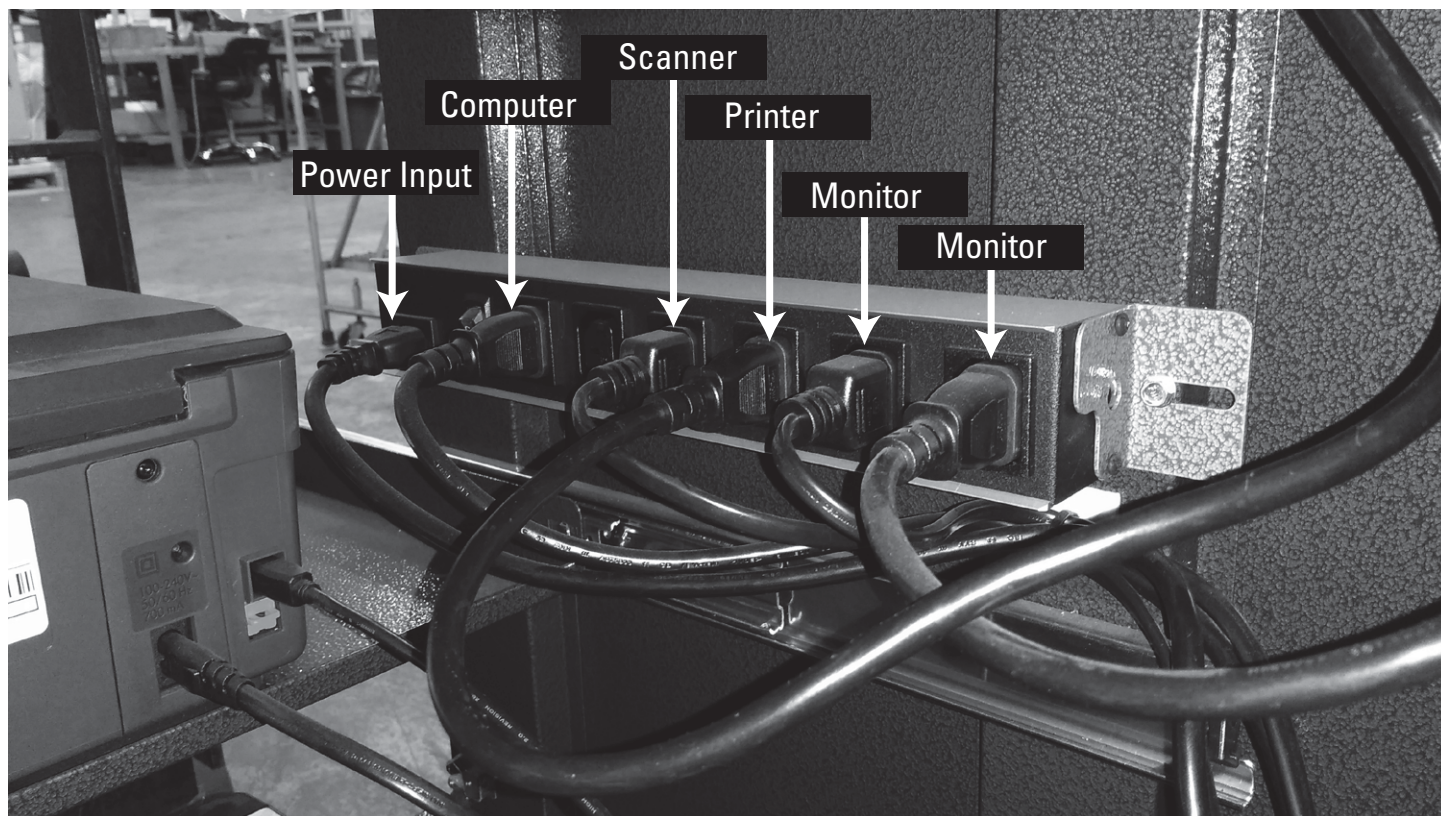
CPU 700068
Monitor #1 794640
Printer 794900
Monitor #2 794640

AC Filter w/Switch
CK130035

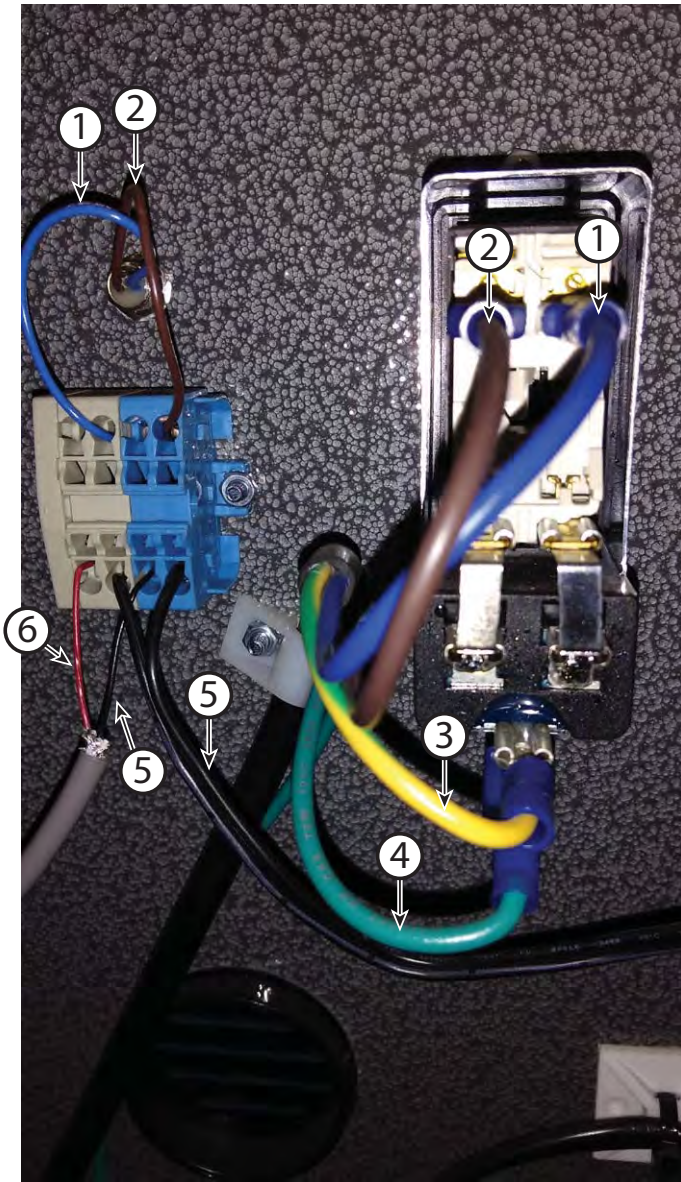
795536
CK130041
CK120089 (Back Panel)

CK720331
CK130041
CK130044
CK130041

Power Strip Connections

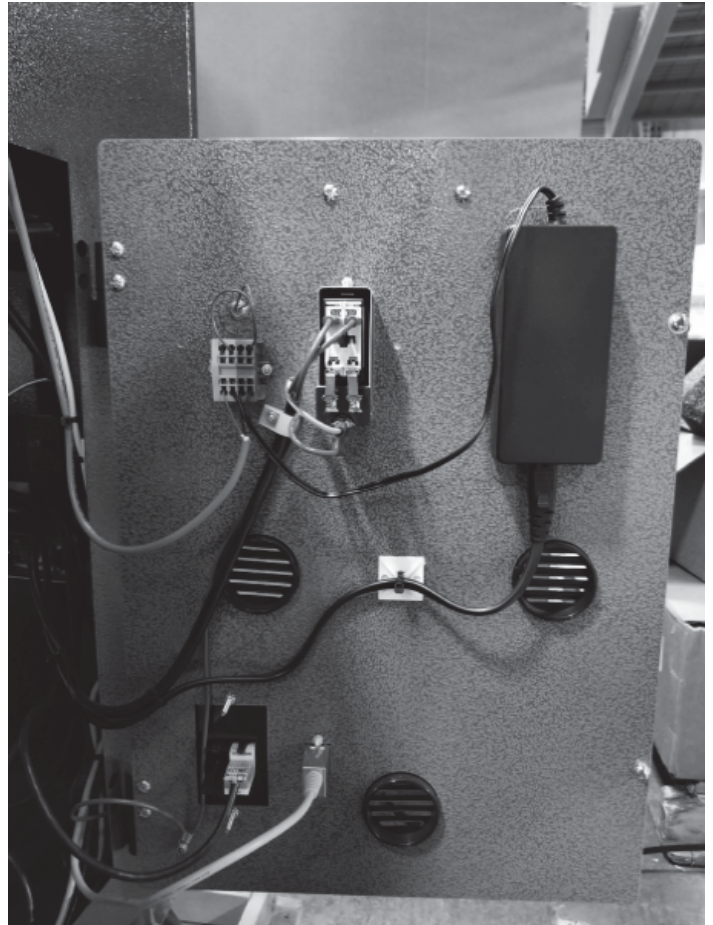
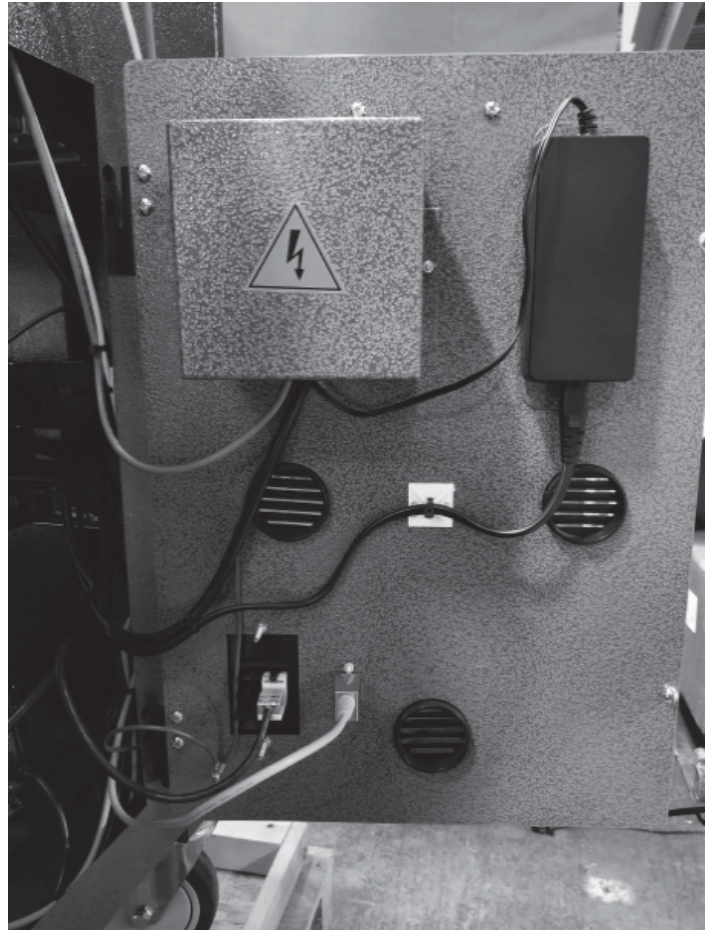


Back Panel Wiring



- ① BLUE
- ② BROWN
- ③ YELLOW/GREEN
- ④ GREEN
- ⑤ BLACK
- ⑥ RED

Back Panel Wiring with Cover Removed



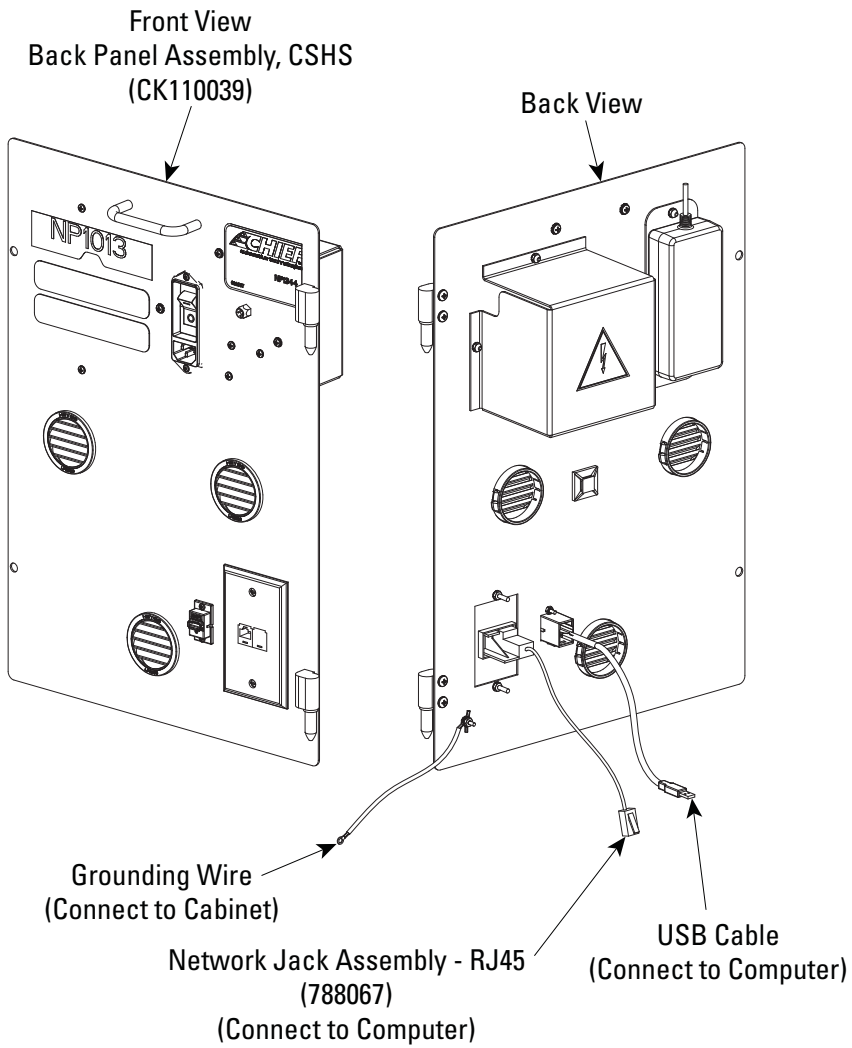


Figure 37

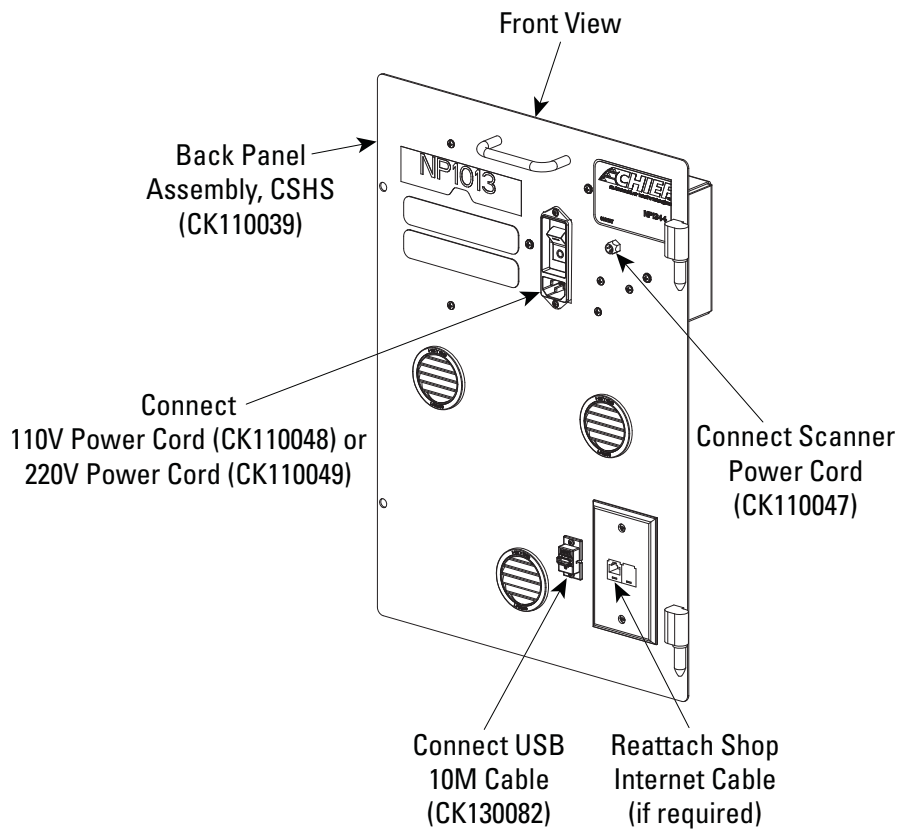
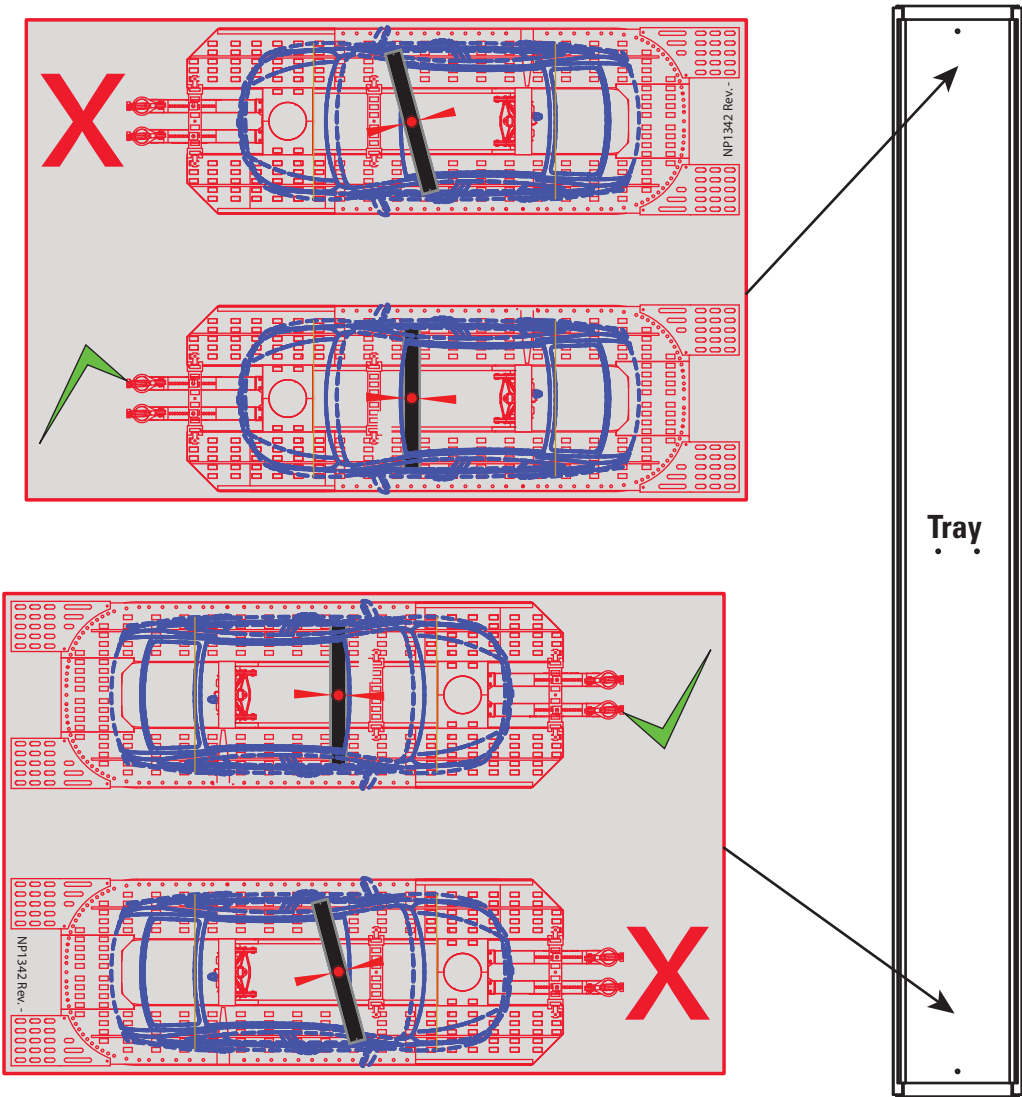


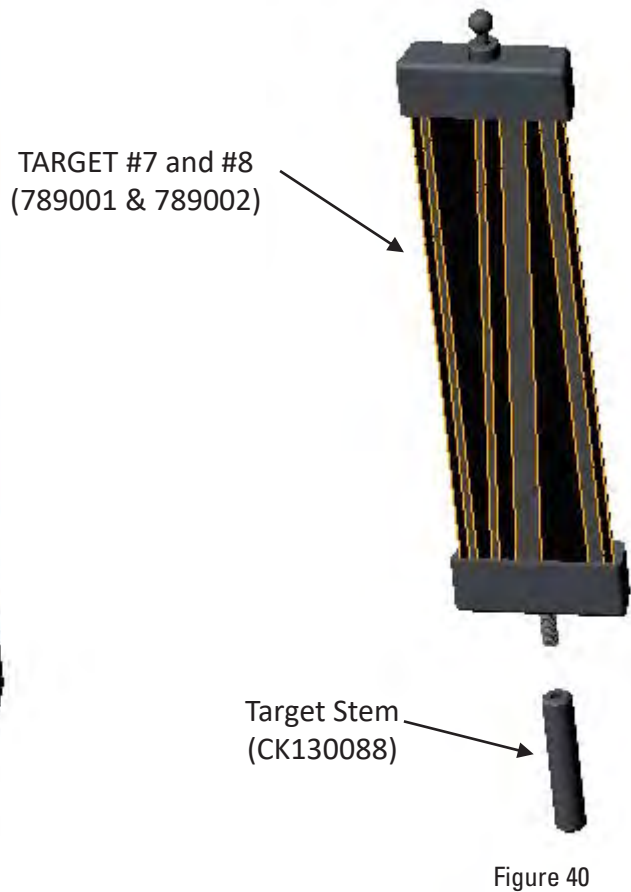
Figure 38



Please Decals onto ends of scanner tray

Galileo Verification Instructions

1. Attach a Set Screw, 8-32NC x .75 Long (796221), to Targets #7 and #8, see figure 39.
2. Attach Target Stems (CK130088) to Targets #7 and #8, see figure 40.
3. Remove both Uni-Strut 4" Pointers (620947) or whatever items are attached to the Upper Bar Assembly Upper Body Bar (799014) as shown in figure below, see figure 41.
4. Place Targets #7 and #8 onto Upper Bar Assembly Upper Body Bar (799014) as shown in figure below, see figure 42.
5. Tighten Set Screws that hold Targets #7 and #8 in place.
6. Slide both Targets #7 and #8 out from center to EXACTLY 1m. THIS NEEDS TO BE AS ACCURATE AS POSSIBLE, see figure 43.
7. Place the Upper Bar Assembly Upper Body Bar (799014) on a flat surface. Place the Scanner 6 feet +/- 3 inches from Bar and centered as shown in Figures below. Angle Target Faces toward scanner. See Figures 44 and 45.



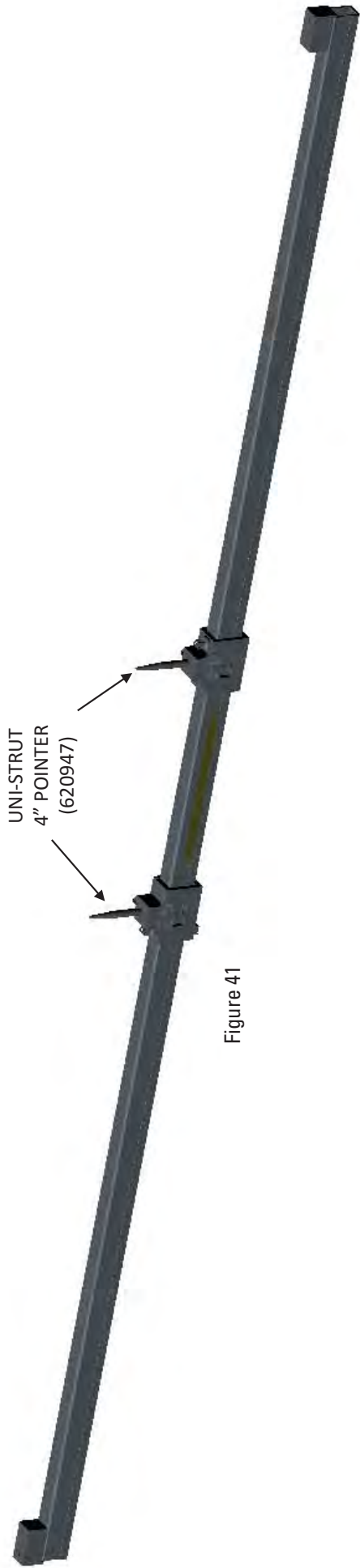


Figure 41

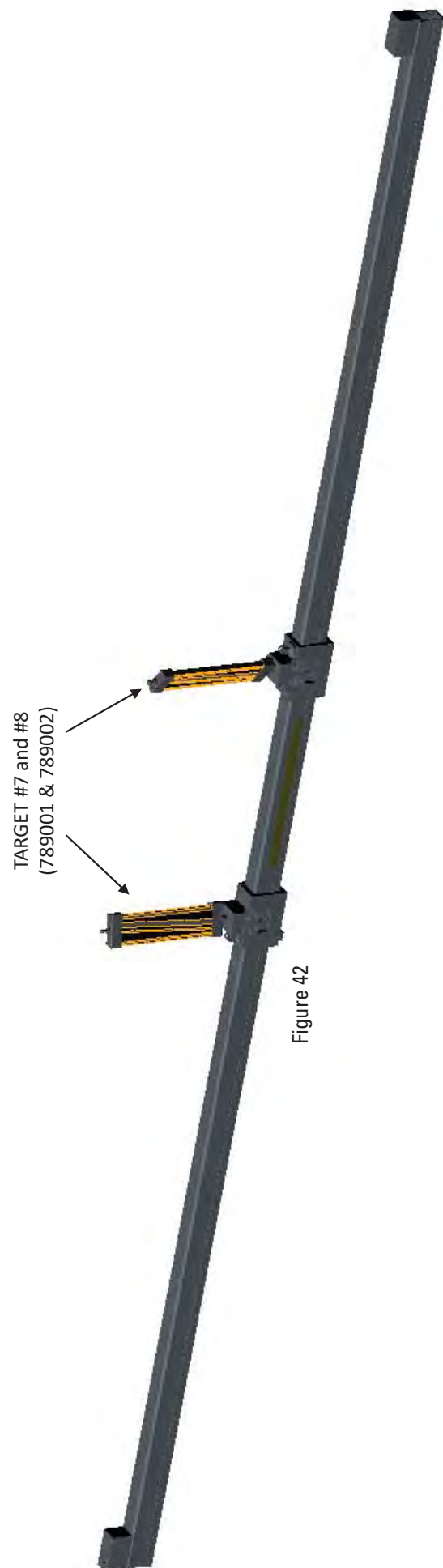
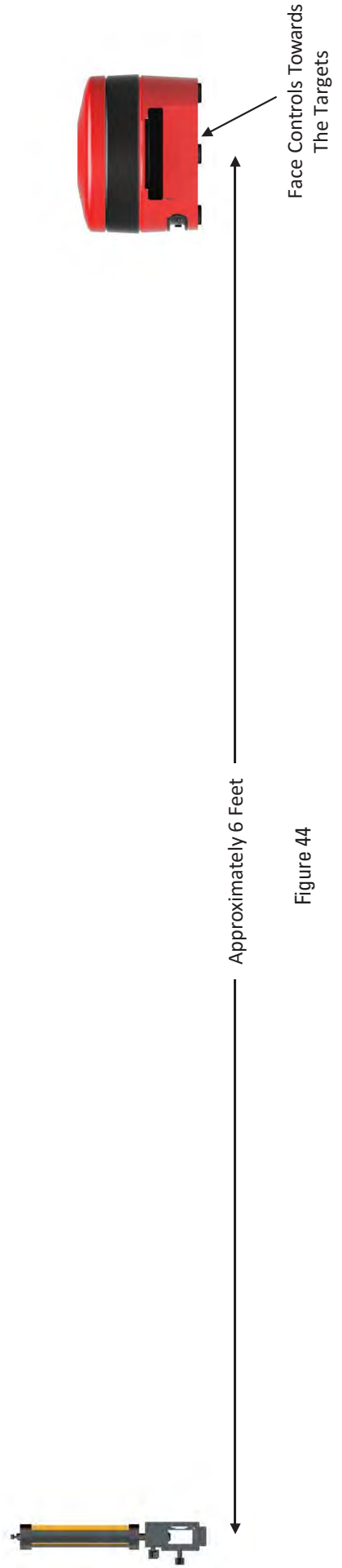
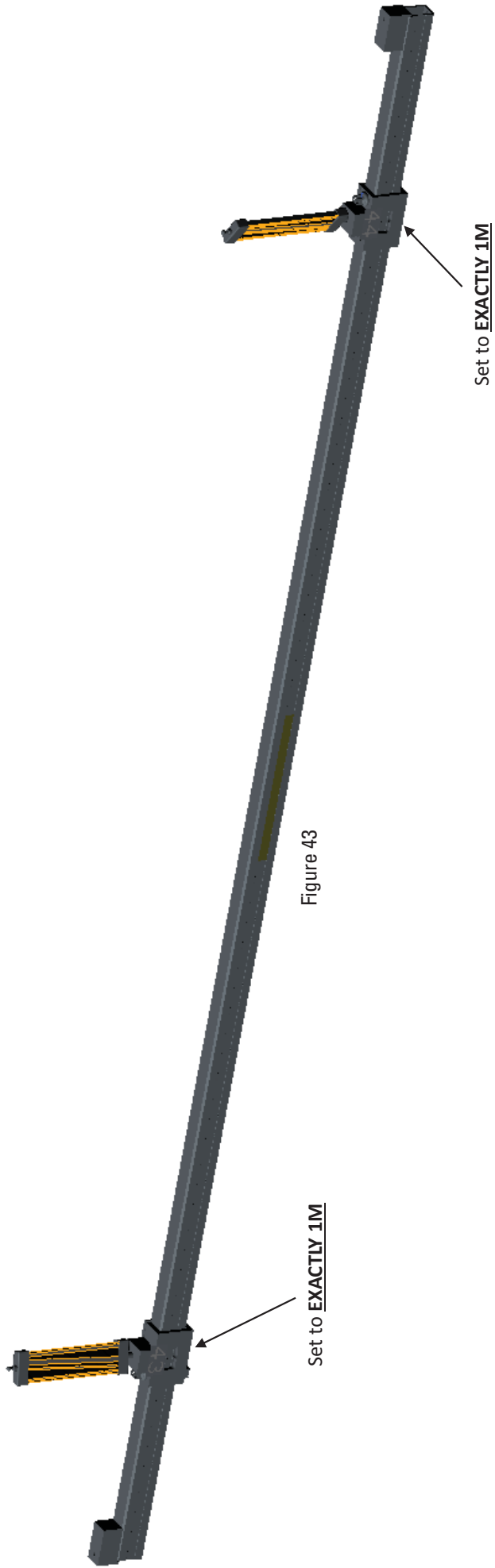


Figure 42



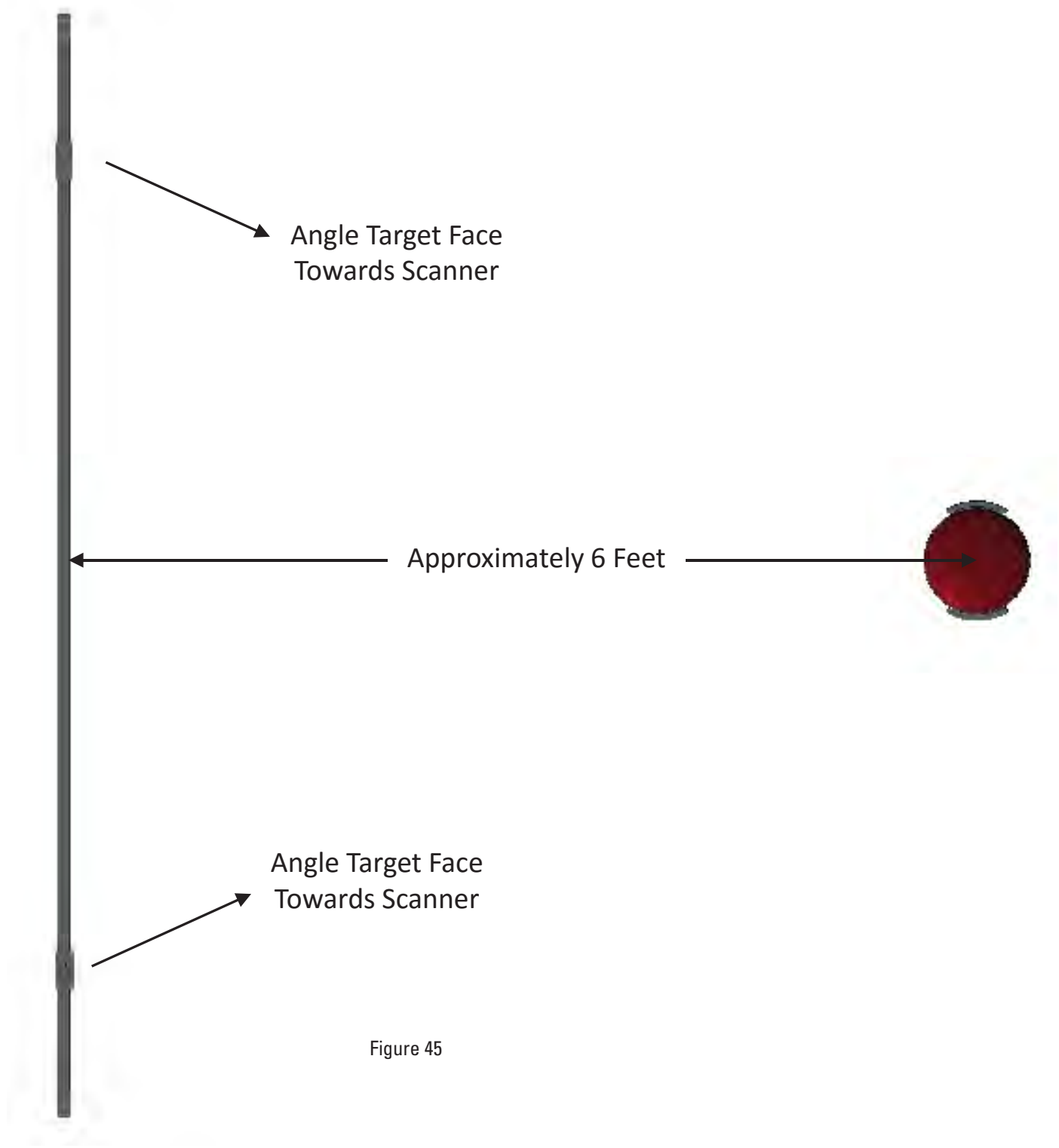
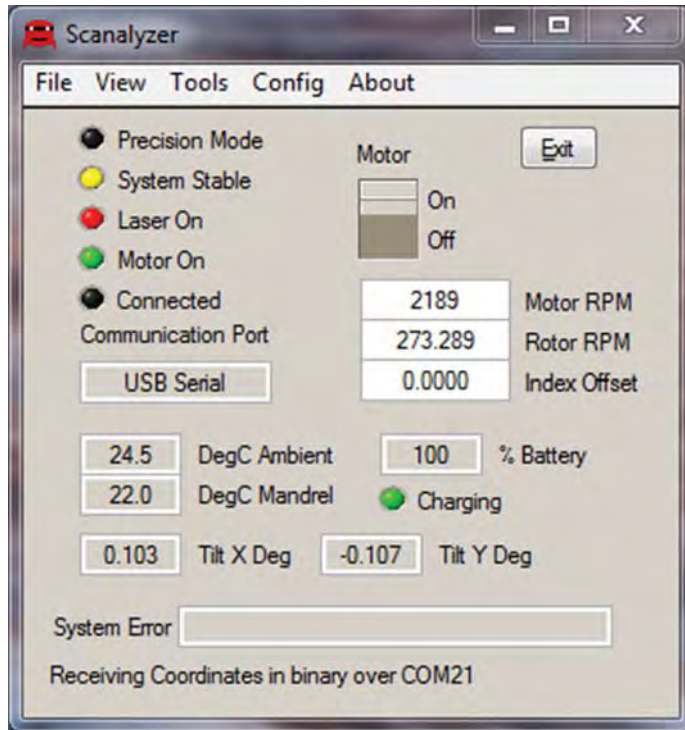
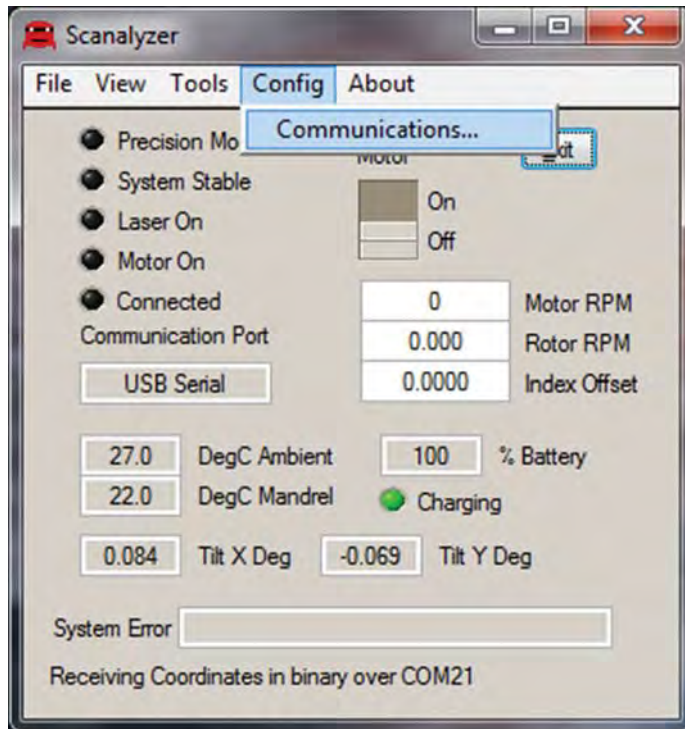


Figure 45

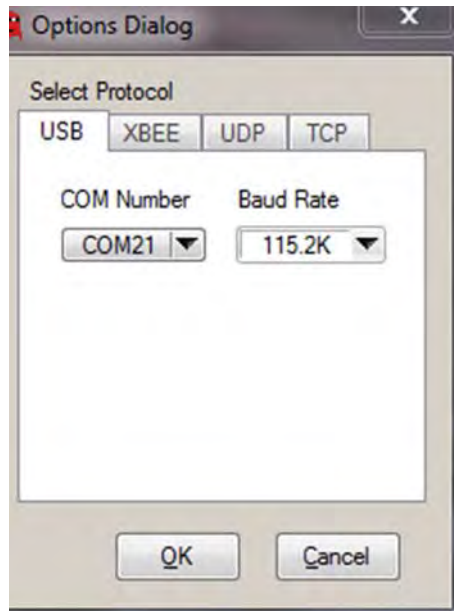
8. Start the Scanalyzer Application from the computer.
9. From the Menu Screen below, select the "Config" option.



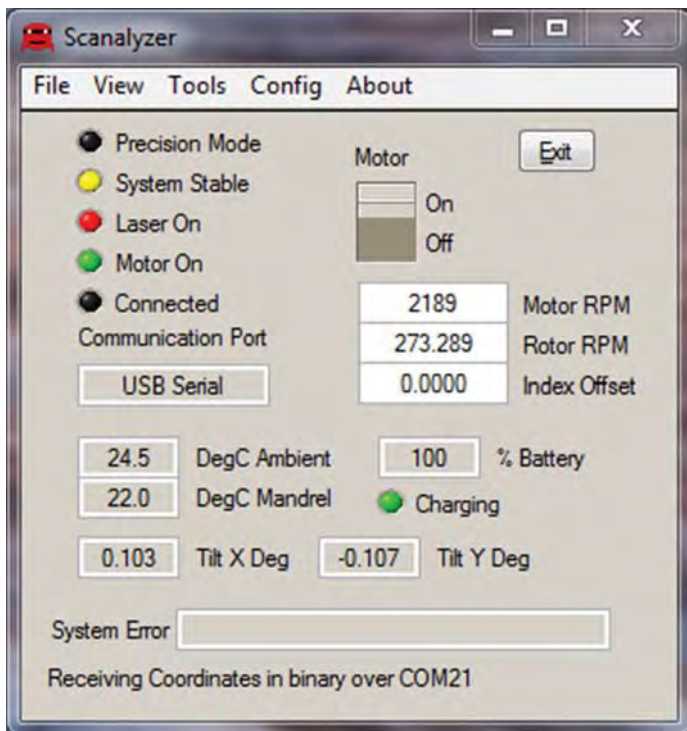
10. Then select "Communications" as shown below.



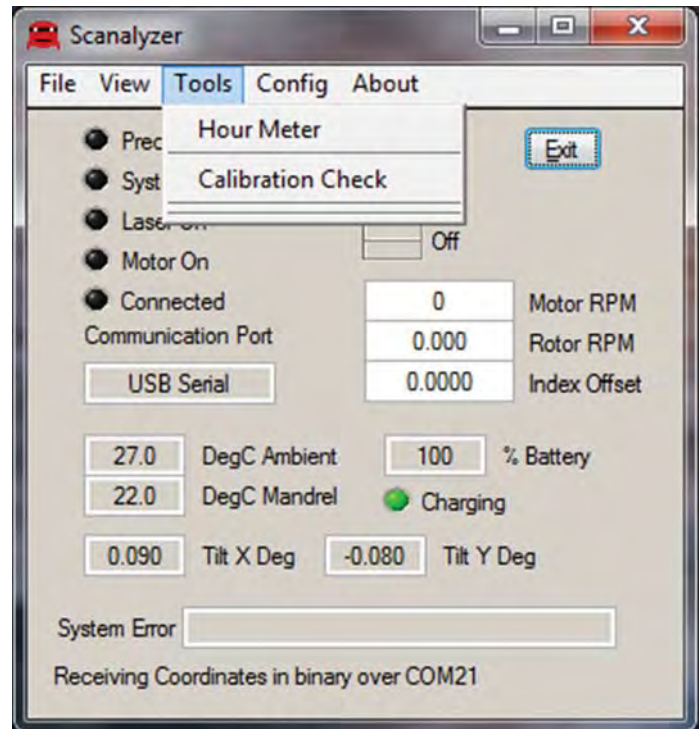
- The select the USB tab shown below, and set the COM Number to the highest number available.



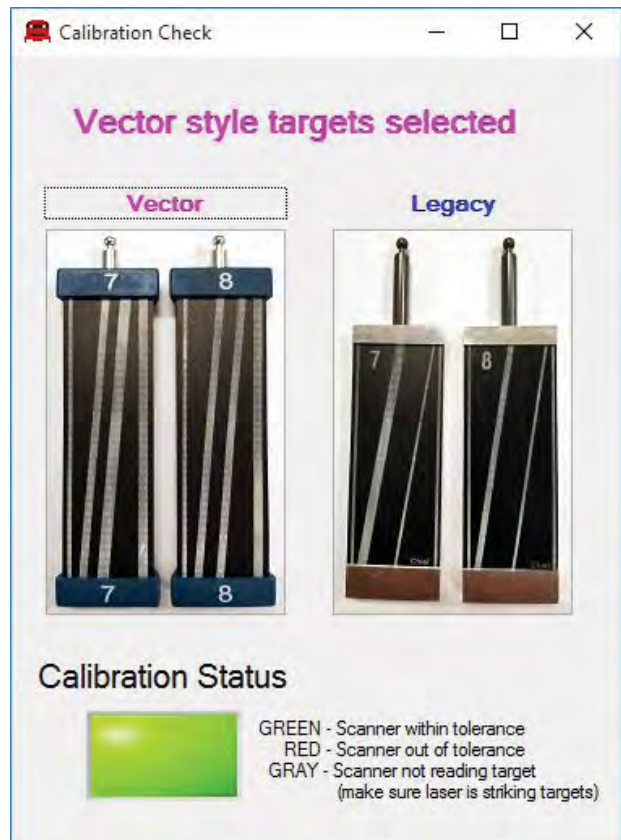
- Turn on scanner motor by selecting motor on button from screen shown below.



- Then go back to the Main Menu and select the "Tools" option and select "Calibration Check" as shown below.

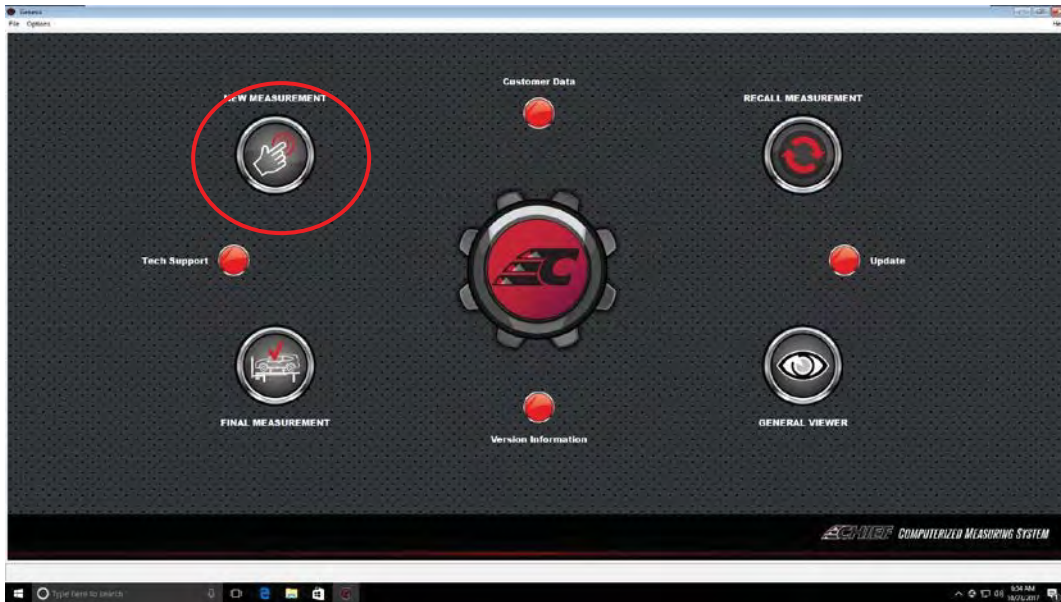


- The calibration should show below. Select the target type you have "Vector" or "Legacy" by clicking on the target picture. Then, if the color box on the bottom of the screen is "Green" then the scanner accuracy is good. If the color is "Red" the scanner accuracy is out of tolerance. The Verification process is now complete.

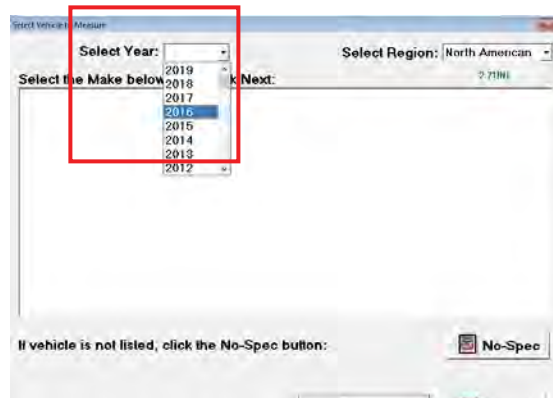


Initial Setup: Connecting a Scanner to Genesis Application

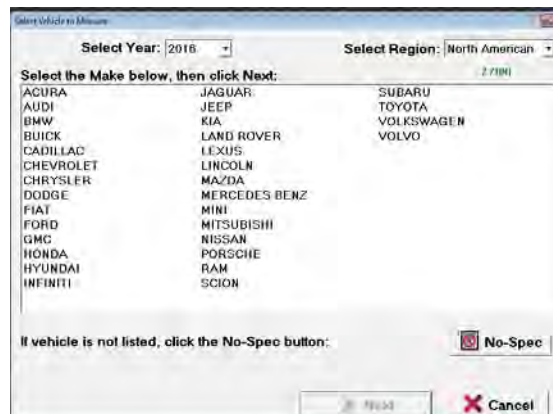
1. Connect scanner to computer with USB cable and turn on.
2. Open Genesis Application
3. Select New Measurement



4. Select the vehicle year from the drop-down menu.

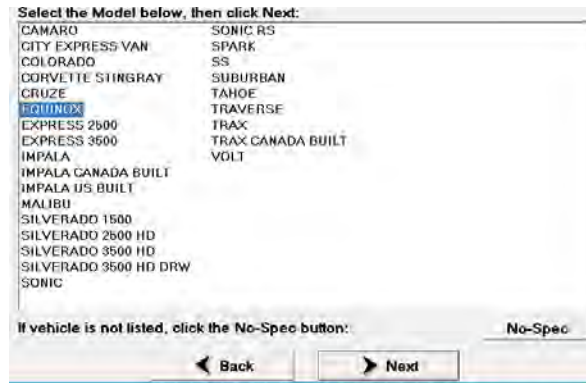


5. Select the vehicle make and click "Next"

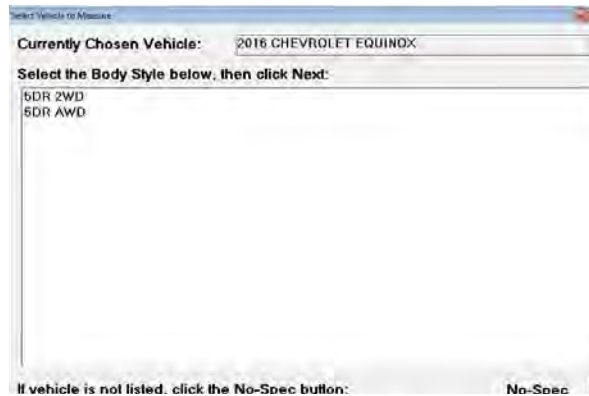


Initial Setup: Connecting a Scanner to Genesis Application

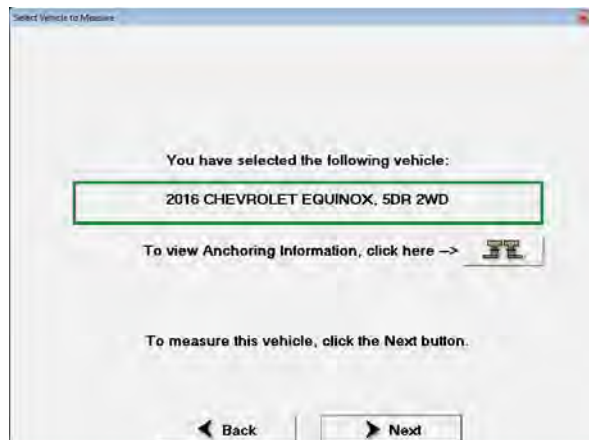
6. Select the vehicle model and click **"Next"**



7. Select the vehicle Body Style and click **"Next"**

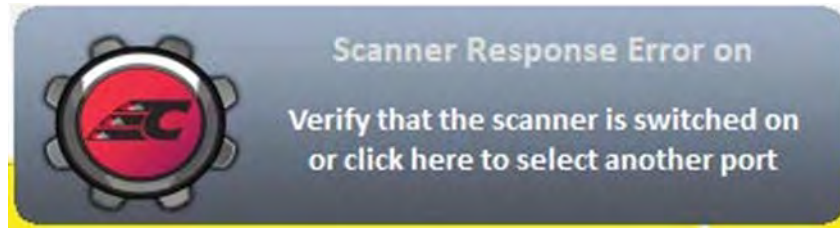


8. On the confirmation screen, select **"Next"**

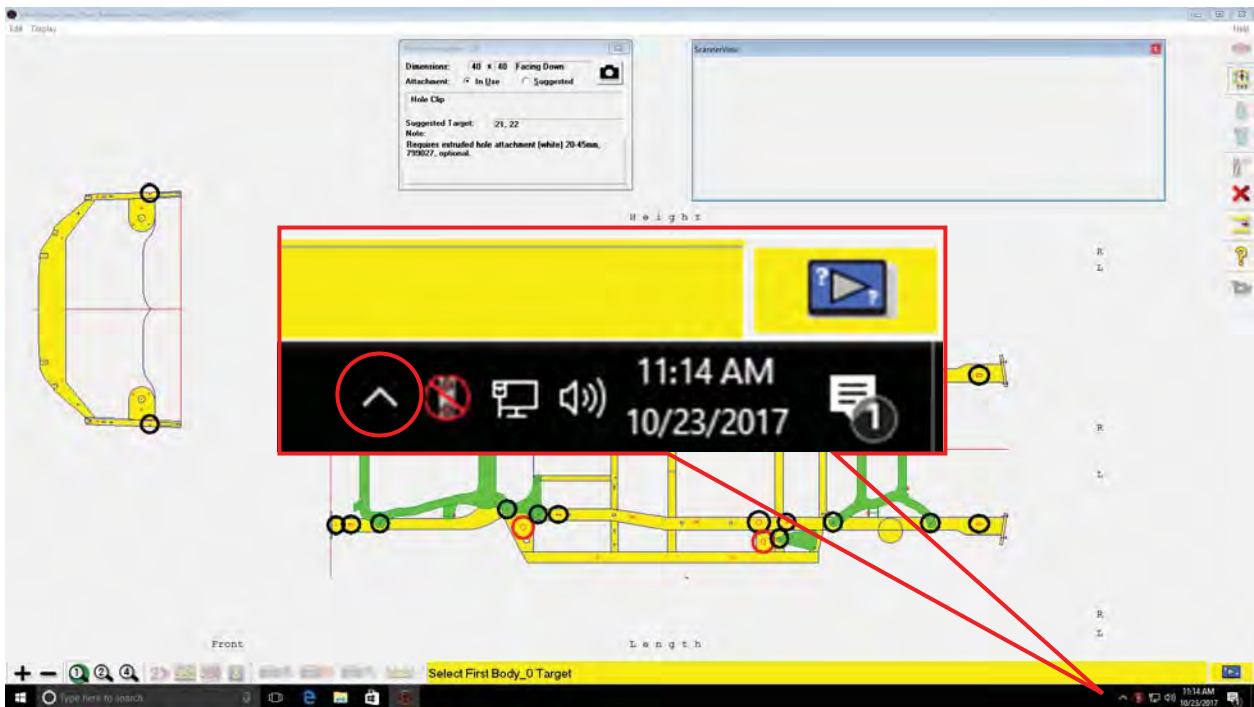


Initial Setup: Connecting a Scanner to Genesis Application

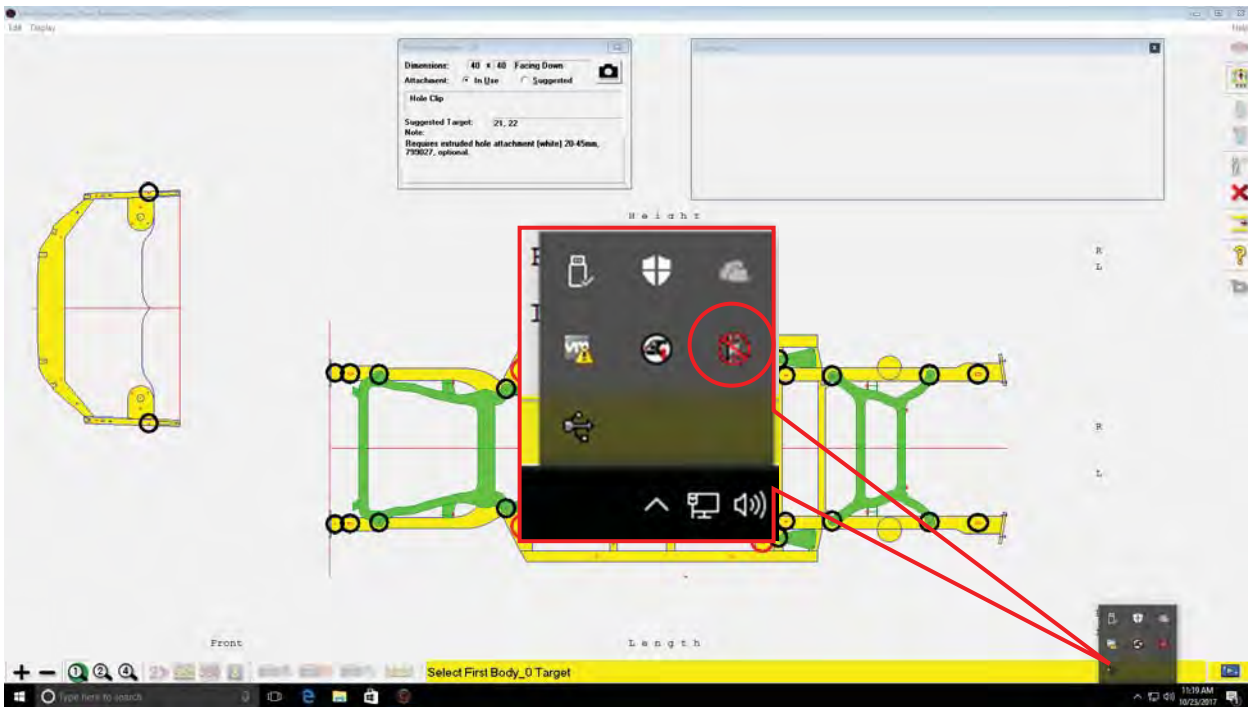
9. Once the measuring window loads, the following popup will appear in the lower right corner of the screen:
Select the popup window and proceed to Step 11. If no popup window appears, or if the popup disappears before it can be selected, continue with Step 10.



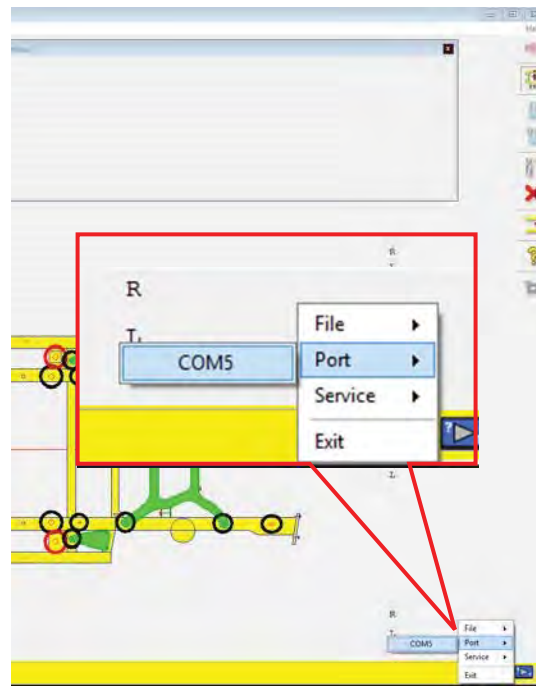
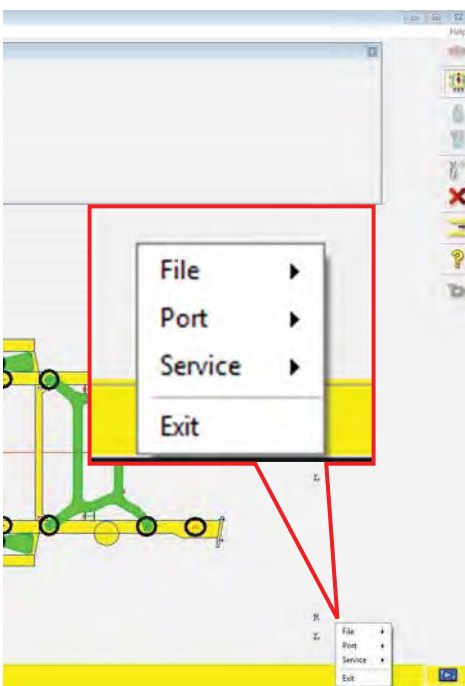
10. On the right side of the Windows taskbar there is a section for notification icons. At the left edge of that section there is an arrow to show all icons. Select the arrow and look for the icon that resembles a Laserlock scanner. Right click the scanner icon, this will open the menu shown in Step 11.



Initial Setup: Connecting a Scanner to Genesis Application



11. After selecting the popup, the following menu will appear in the bottom right hand corner of the screen. Hover over "Port" and select the appropriate communication port from the list. If there are multiple ports listed, hover over each and look for the scanner serial number to appear. Select the port that shows a serial number. If no serial number appears, try the highest port number first. For example, if there is COM1 and COM5 listed, select COM5.



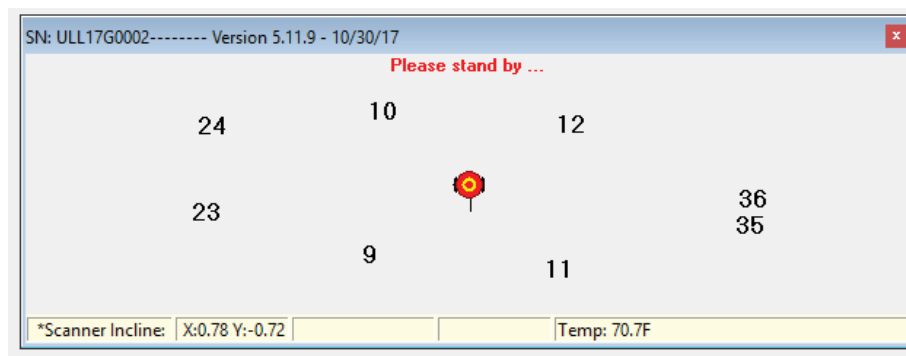
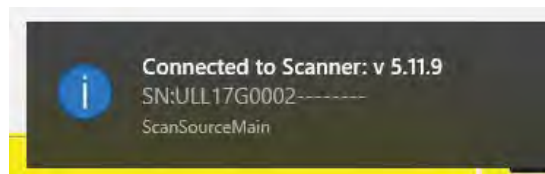
Initial Setup: Connecting a Scanner to Genesis Application

Once the port has been selected, the scanner motor should begin to spin and the laser turn on. If this happens, the scanner has been successfully connected to the computer. If the scanner motor does not turn on, repeat Step 11 in order to select a different port.

Once the scanner has been connected the following popup will appear in the bottom right hand corner showing the scanner as connected. This message box will also display information about the scanner, such as the Serial Number and Firmware Version.

The scanner motor speed has to stabilize in order for Genesis to display consistent accurate measurements. While the motor speed is stabilizing, a message to "Please stand by ..." will appear in the scanner view window. In addition, a thick yellow circle will appear in the center of the scanner. The circle will go to a thin yellow circle, and finally a black circle. While a thick yellow circle and the standby message is displayed, the measure button cannot be selected. Measuring may be done with the scanner showing a thin yellow circle. This message may occasionally display during measuring as well, if the scanner is moved while measuring.

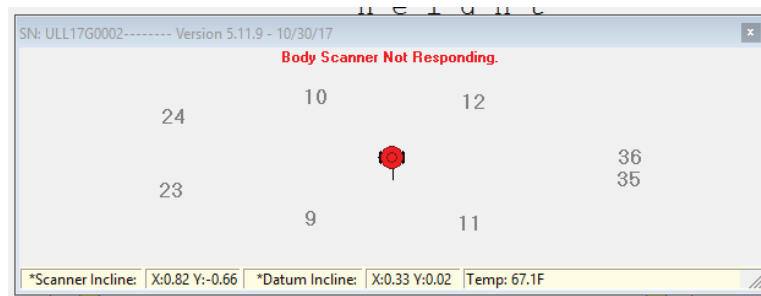
The scanner will remain paired to the computer until a different scanner is connected, or the computer's communication port settings are reset, so this procedure is only required the first time a scanner is connected to the measuring system.



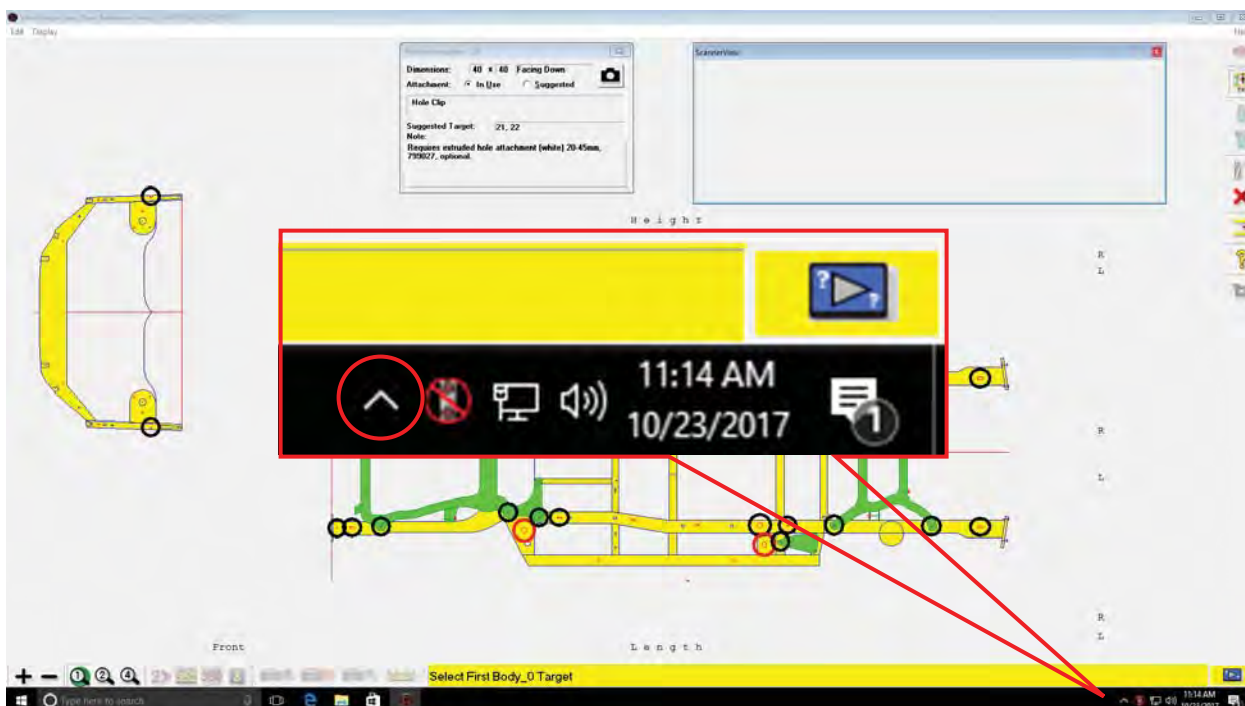
Reconnecting a Scanner to Genesis Application

If for any reason the scanner becomes physically disconnected from the computer during measuring, the following popup will appear in the lower right corner of the screen.

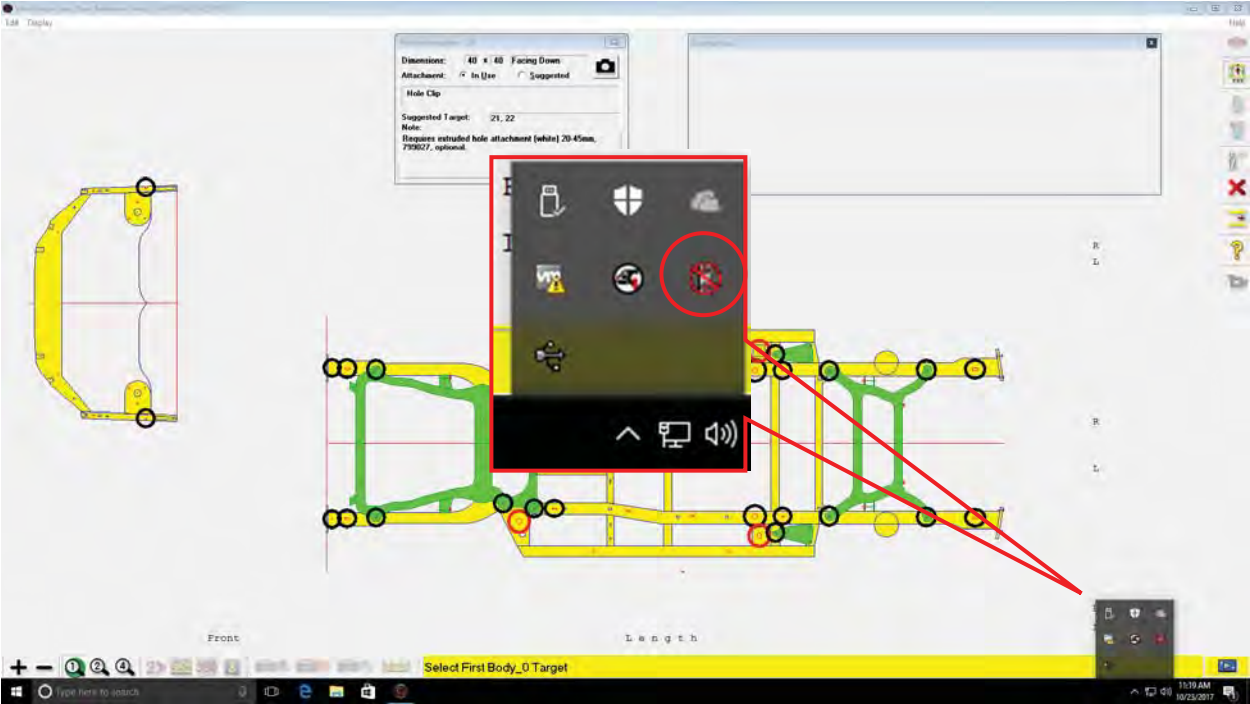
In addition, the scanner view will display a message saying the scanner is not responding.



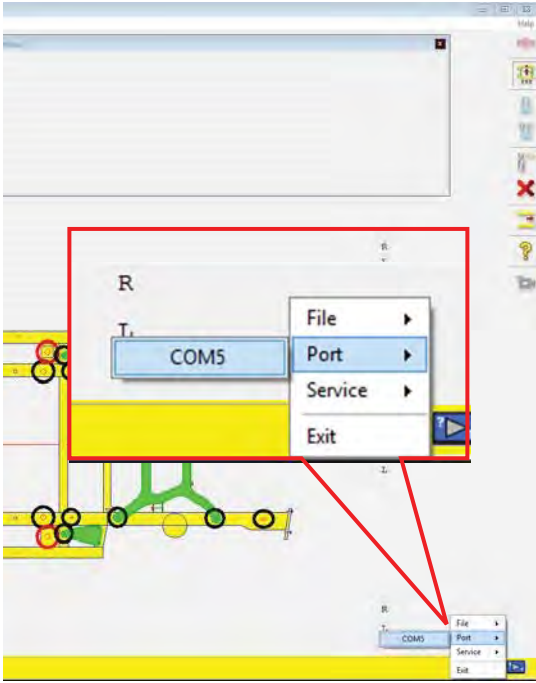
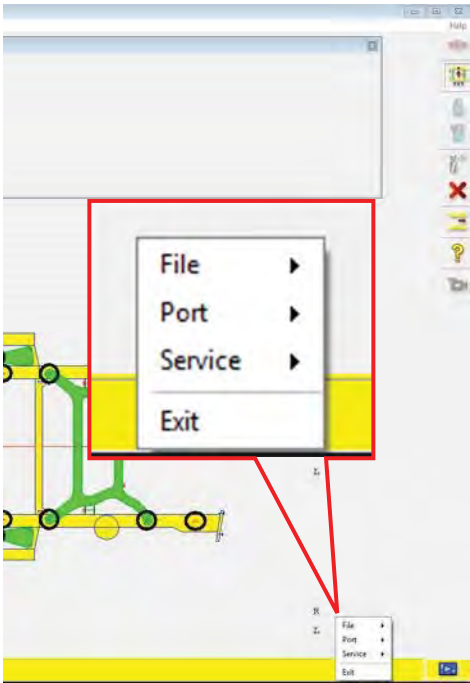
1. Check to ensure the USB cable is still firmly plugged into the scanner.
2. Check to ensure the USB cable is still firmly plugged into the cabinet.
3. Ensure the scanner has power. If the scanner is showing a green light on the connection panel, then it is receiving power.
4. Once the physical connection has been restored, select the Port Disconnect Error popup to dismiss the message.
5. On the right side of the Windows taskbar there is a section for notification icons. At the left edge of that section there is an arrow to show all icons. Select the arrow and look for the icon that resembles a Laserlock scanner. Right click the scanner icon, this will open the menu shown in Step 11.



Reconnecting a Scanner to Genesis Application



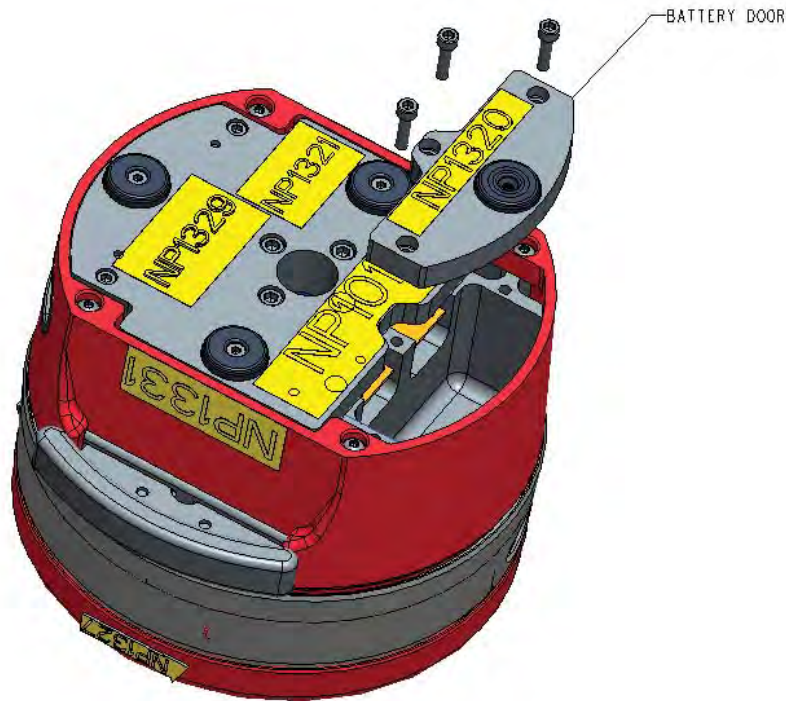
- 6. After selecting the popup, the following menu will appear in the bottom right hand corner of the screen. Hover over "Port" and select the appropriate communication port from the list.



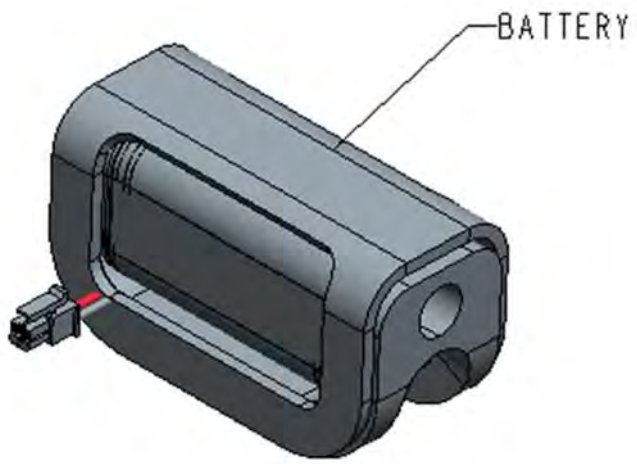
If the scanner is correctly connected to the cabinet and the scanner will not successfully reconnect, please contact Tech Support for further assistance.

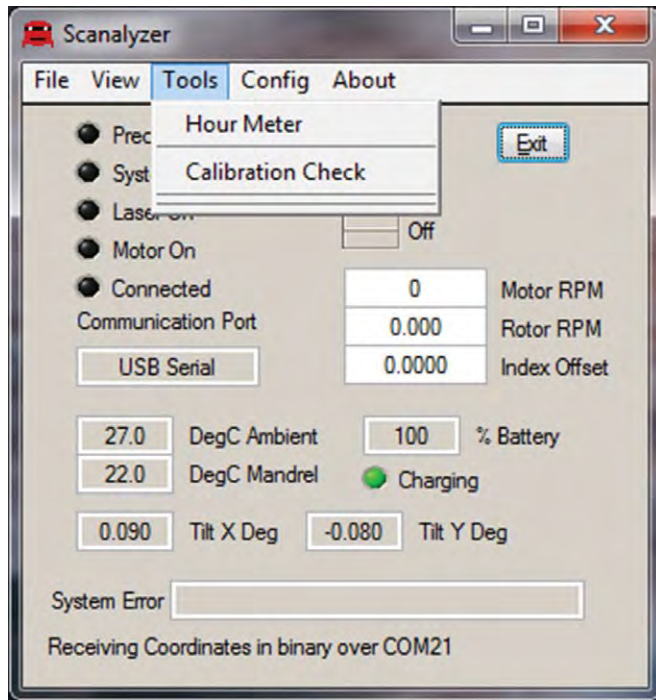
Battery (CK720341) Option Installation and Removal Instructions

1. Remove Battery Door from Bottom of Scanner as shown below.



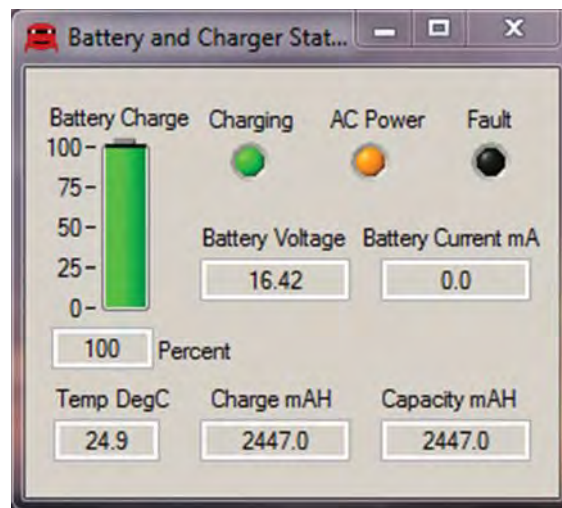
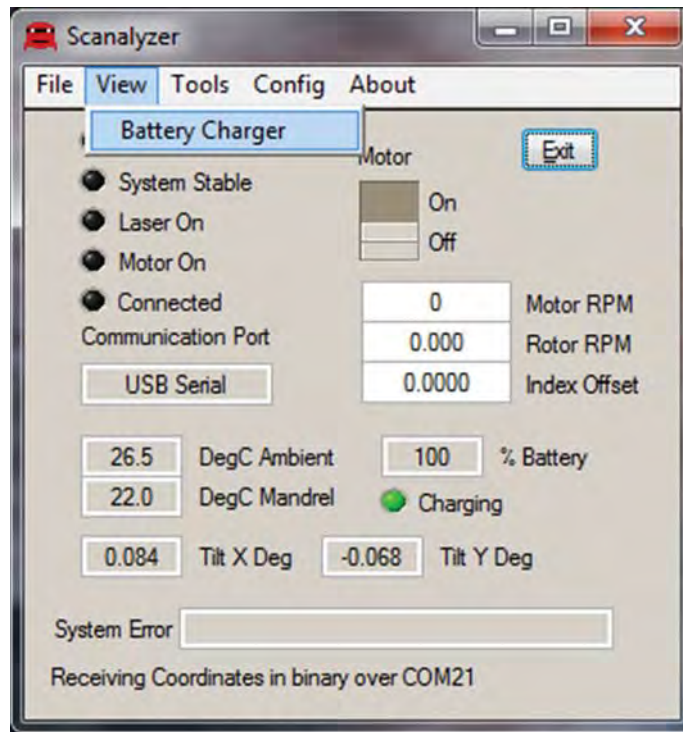
2. Install battery in battery compartment by attaching battery connector to circuit board Harness in scanner. The connector is on the circuit board as shown in pictures below. **It is IMPORTANT to note that the battery connector has a locking tab that must be pressed** as shown in picture below for both installation and removal. Removal of battery is same as installation, just reversed.



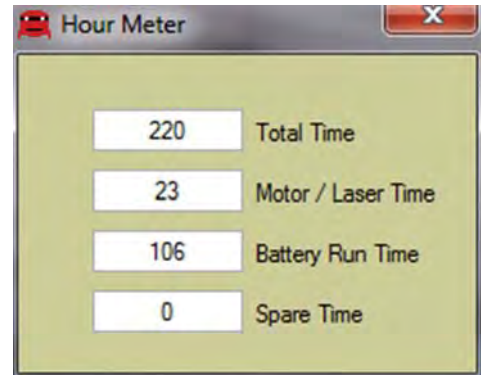
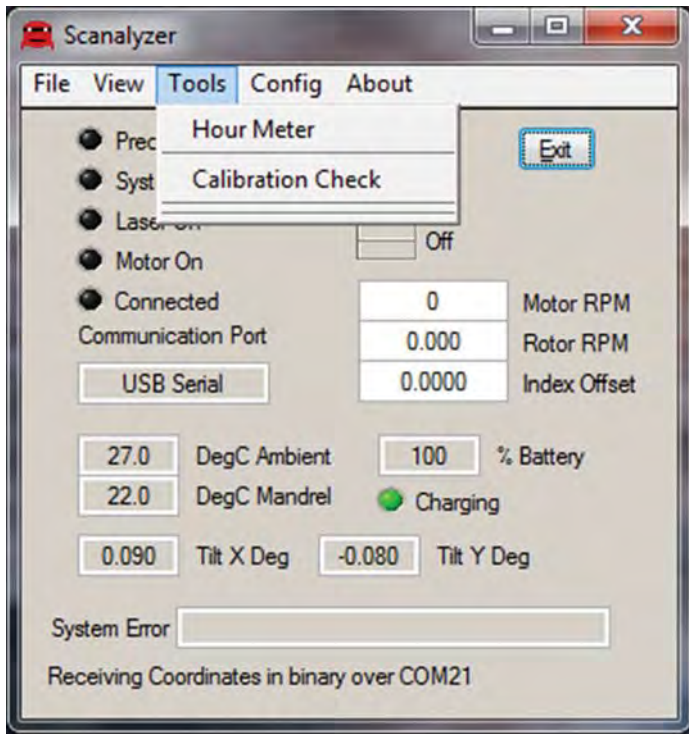


How To Retrieve Troubleshooting Information

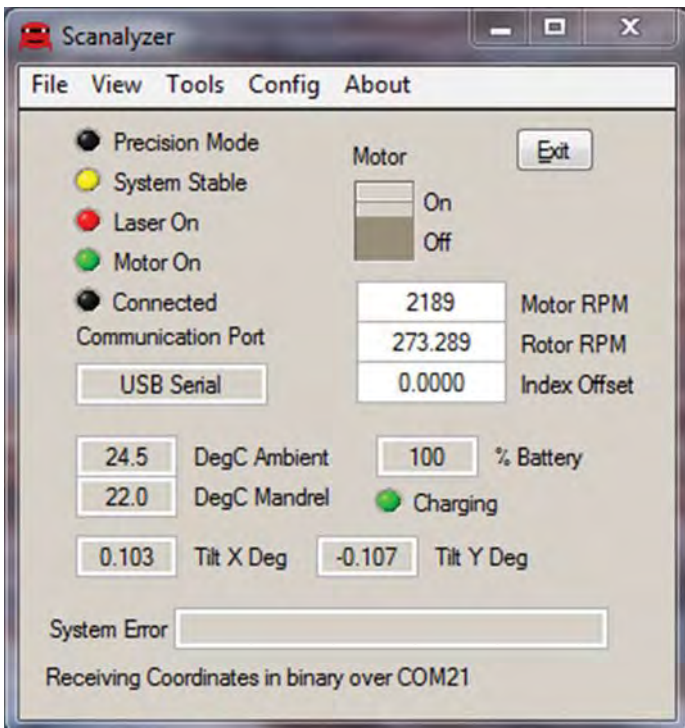
1. The Battery Charger (for battery option) window below can also be accessed with the selection of "View" and will display the following information.



2. The Hour Meter window below can also be accessed with the selection of “Tools” and will display the following information.



3. Finally, the Scanner Version and incorporated Firmware within the scanner can be determined by selecting the “About” option and the following information will appear.





996 Industrial Dr.
Madison, IN 47250
Phone: 800.445.9262
Fax: 866.275.0173

www.chiefautomotive.com