

EXACTECH | KNEE

Operative Technique



 GPS | KNEE

TKA Pro Application with Optetrak Logic® Instrumentation



TABLE OF CONTENTS

DETAILED OPERATIVE TECHNIQUE	1
SYSTEM SETUP	2
Femoral Preparation.....	7
Femoral Implant Acquisitions.....	8
Placement of RealTime Guide, Adjustable Cutting Block or Adjustable Module and GTrackers	12
APPENDIX A.....	26
GPS Femoral Instrument Guide Options.....	26
INSTRUMENT LISTING	27

INTRODUCTION

ExactechGPS® is a powerful, yet compact, dedicated surgical technology platform that delivers efficiency and reproducibility in joint replacement. GPS TKA Pro provides surgeons with real-time visual guidance and alignment data in total knee arthroplasty. Customized for surgeon preferences, GPS can be an impactful tool in achieving efficacy and efficiency for total knee arthroplasty.

Prior to using the GPSTKA Pro application, a surgeon profile should be created based on your surgical philosophy, technique and patient indications. The GPS Surgeon Profiler is used to create a template that can be customized for the following:

- Instrumentation and registration options
- Surgical workflow
- Implant preferences
- Sizing and rotation
- Resection depths and angular alignment
- Soft tissue balancing methods
- Pre- and post-op kinematics

In addition to a personalized workflow, The GPS system offers you a variety of femoral instrument guide options to accommodate your preferences and surgical style. Refer to the GPS Femoral Instrument Guide Options section for additional information.

Your Exactech sales representative will be able to help you create your personalized surgeon profile.













You may have one or more profiles. Profiles can be created, modified and transferred via a PC or on the GPS station. See Surgeon Profiler Overview section for instructions on how to set up a profile.

The GPS system can be used with Truliant® and Optetrak Logic® implants.





Screen Layout

Icon		Description
	Screenshot	Take a screen shot of the current screen. The picture is recorded in the operative report.
	Exit	Exit the knee application.
	Go Forward	Go to the next step.
	Go Backward	Go to the previous step.
	Switch OFF	Switch OFF the station.
	Information	A regulatory label is displayed to provide data for labeling and CE Marks.
	Save Profile	Save the current profile.
	Menu	Provides various options throughout the procedure.
	Open Profile	Open an existing profile.
	Increase or Decrease	Increase/Decrease a parameter.
	Increase or Decrease	Increase/Decrease a parameter.
	New Profile	Create a new profile.

SYSTEM SETUP

GPS TKA PRO APPLICATION



Figure 1
Start Application Screen

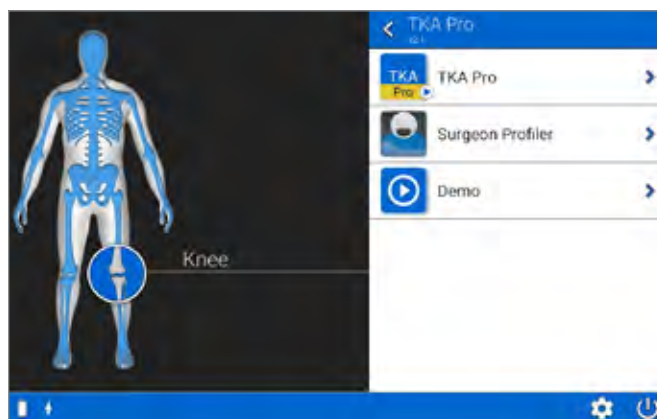


Figure 2
Confirmation Screen

SYSTEM SETUP

Application Screen

Turn on the GPS system. When prompted select the GPS TKA Pro Application (*Figure 1*).

Confirmation Screen

You may select to either begin the TKA Pro Application or create/edit a profile through the Surgeon Profiler (*Figure 2*). Select the TKA Pro icon, and the system will automatically advance to the TKA Pro Welcome Screen.

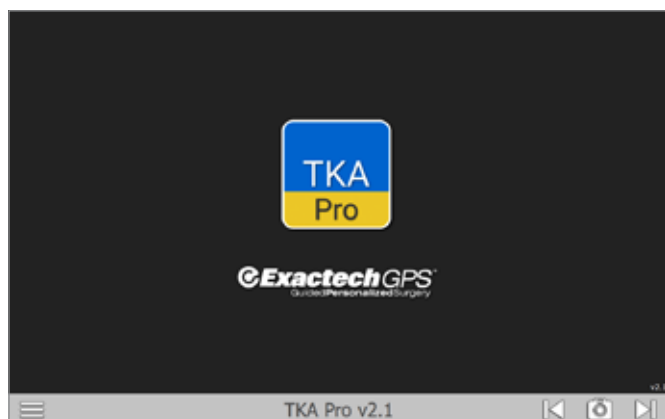


Figure 3
Welcome Screen



Figure 4
Patient Information Screen

Welcome Screen

Select the arrow at the lower right corner of the display to advance to the next screen (*Figure 3*).

Patient Information Screen

Patient identification information may be entered in the fields displayed. You must select either the right or left knee to continue (*Figure 4*).

SYSTEM SETUP

GPS TKA PRO APPLICATION



Figure 5
Surgeon Screen

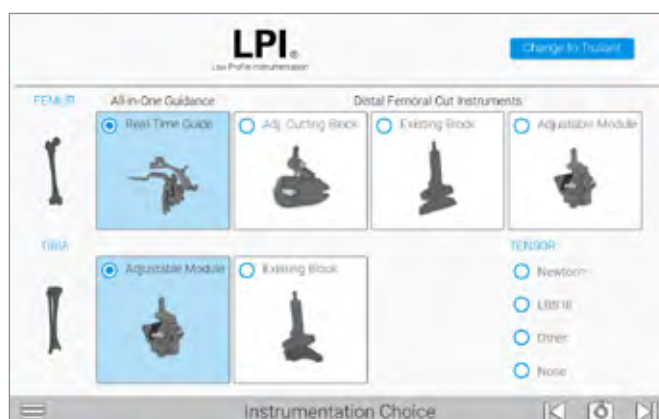





Figure 6
Instrument Choice Screen

Surgeon Information Screen

Surgeons registered on the GPS station will be displayed on the screen (Figure 5). From here, you can create, edit or delete a surgeon. If you are registered on the GPS Station, click on your name and it will advance to the Instrument Choice screen.

- To register a surgeon, click on the ADD SURGEON  icon and complete the requested information. Select the CREATE button. Your profile will now be displayed on the Surgeon Information Screen.
- To EDIT/DELETE registered surgeons, click on the EDIT/DELETE icon . All surgeons will be displayed. Click on the surgeon to be edited and then the edit icon  to make your changes.

Instrument Choice

Select or change your preferred instruments (Figure 6). Please note, you must select both a femoral and tibial instrument. Click the forward arrow to proceed.

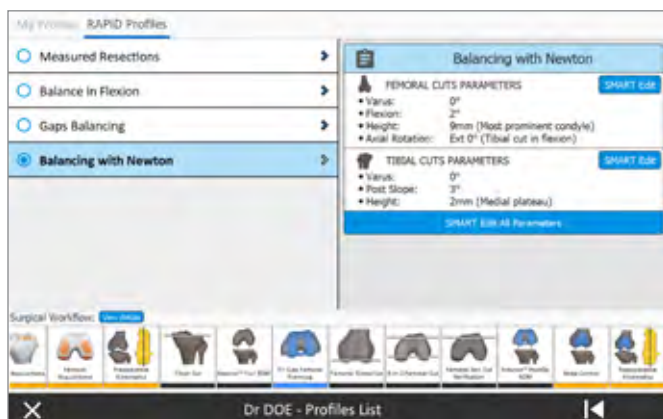


Figure 7
Profile List Screen

Profile List Screen

All RAPID and personalized profiles are displayed (Figure 7). Select your preferred profile. You may independently edit either the femoral or tibial parameters (SMART Edit) or you may modify the entire current profile (SMART Edit All Parameters).

For a comprehensive guide to editing the surgeon profiles, refer to main GPSTKA Pro Operative Technique.

If no changes are desired, click on the START SURGERY icon.

Note: Surgeon profile set up will be default upon log in next time.

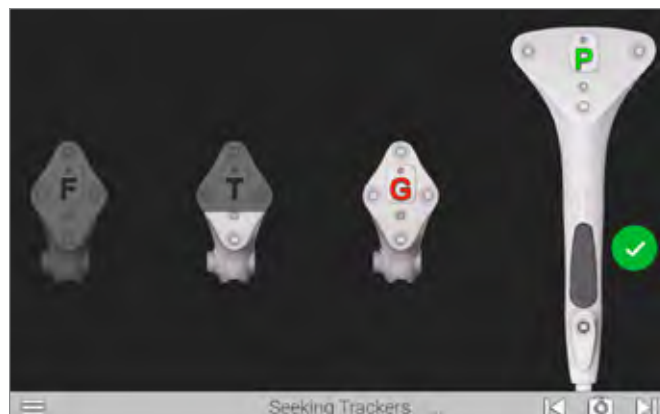


Figure 8
Seeking Trackers Screen



Figure 9
Tracker Battery Position

Select Trackers

Insert batteries (positive end first) into the Probe (P) Tracker, Femoral (F) Tracker, Tibial (T) Tracker and the Guide (G) Tracker (Figure 8).

Caution: Inserting the batteries incorrectly may cause permanent damage to the tracker. Be sure to insert the batteries positive side first (Figure 9).

SYSTEM SETUP

GPS TKA PRO APPLICATION

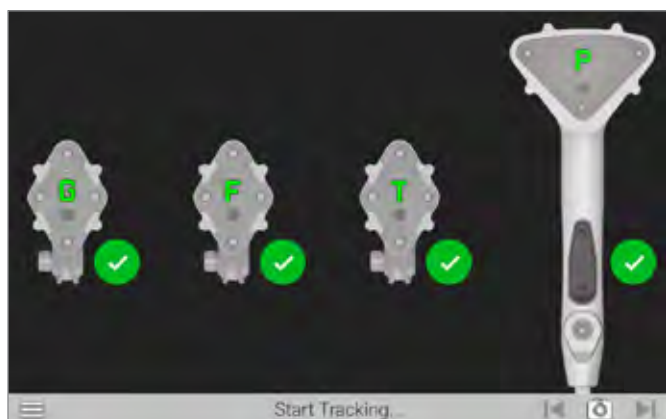


Figure 10
Verify Connection

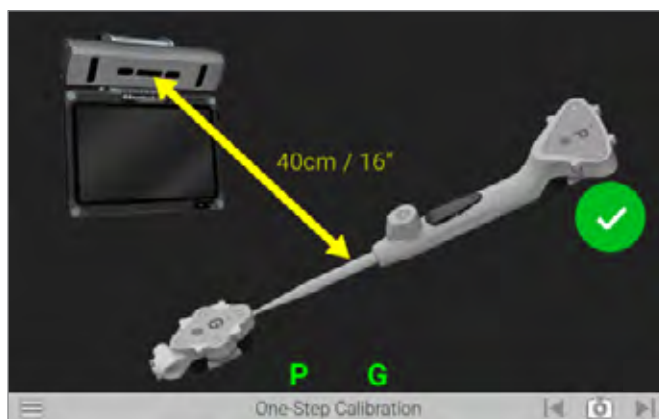


Figure 11
One-Step Calibration

Once the batteries are installed and the trackers are visible to the camera, a status LED on each tracker will illuminate solid red/orange and begin to blink green.

Position the trackers with the LEDs facing the display unit. The trackers will display on the display unit and a green check mark will appear to verify connection (*Figure 10*).

One-Step Calibration

Place the tip of the Probe into the dimple at the top of the G Tracker (*Figure 11*).

Hold both together approximately 16 inches from the display unit ensuring the trackers are facing the camera. When positioned correctly, the "G" and "P" status indicators on the display will appear green.

Press and release the Forward button on the Probe to initiate calibration. The progress circle will fill and once filled, a green check mark appears to indicate a successful calibration.

The system will automatically advance to the next screen.



Figure 12

External Fixator Placement for use with Adjustable Cutting Block

FEMORAL PREPARATION

Placement of the External Fixator (if needed) and Femoral Tracker

Drill the first 3mm Schanz Pin slightly anterior and proximal to the medial epicondyle. This should be done at an angle approximately 20 degrees anterior from the coronal plane. Using either the 0-Degree External Tracker Fixator or the 30-Degree External Fixator, guide the position of the second 3mm Schanz Pin to be pinned proximally to the first.

Next, place Femoral Tracker (F) onto the External Tracker Fixator and lock into place (*Figure 12*).

Make sure the F Tracker is pointing at the camera prior to tightening the External Tracker Fixator. The 3.5mm Hex Screw Driver may be used if additional tightening of the External Tracker Fixator is needed.

Note: Proceed to the next page to begin your Femoral Acquisitions.

DETAILED OPERATIVE TECHNIQUE

FEMORAL IMPLANT ACQUISITIONS



Figure 13
Hip Center Acquisition Screen



Figure 15
Medial Posterior Condyle Acquisition Screen



Figure 14
Knee Center Acquisition Screen



Figure 16
Lateral Posterior Condyle Acquisition Screen

FEMORAL IMPLANT ACQUISITIONS

Hip Center Acquisition

The Hip Center Acquisition screen is displayed (Figure 13). Movement of the bone will initiate the acquisition process (autostart). Move the knee in a 12-inch diameter circular pattern as illustrated on the display. Large diameter, slow circular motion may be more effective than rapid small radii circles. The progress bar will fill, and audible clicks will indicate successful registration of points. An audible tone will indicate registration is complete and the system will automatically advance to the next screen.

Caution: It is important to ensure the display unit and the pelvis remains stable during the hip center acquisition process.

Knee Center Acquisition

The Knee Center Acquisition screen is displayed. Position the tip of the Probe Tracker (P) in the deepest point of the intercondylar notch (Figure 14). Press the Forward button and the system will automatically advance to the next screen.

Note: The hip center and knee center are used to define the mechanical axis of the femur.

Posterior Condyle Acquisition

The Medial Posterior Condyle Acquisition screen is displayed (Figure 15). Position the tip of the Probe Tracker (P) on the medial posterior condyle press the Forward button. Ensure the tip of the probe maintains contact with the condyle and trace a patch that captures the apparent most posterior



Figure 17
Whiteside Line Acquisition Screen (optional)



Figure 19
Medial Distal Condyle Acquisition Screen

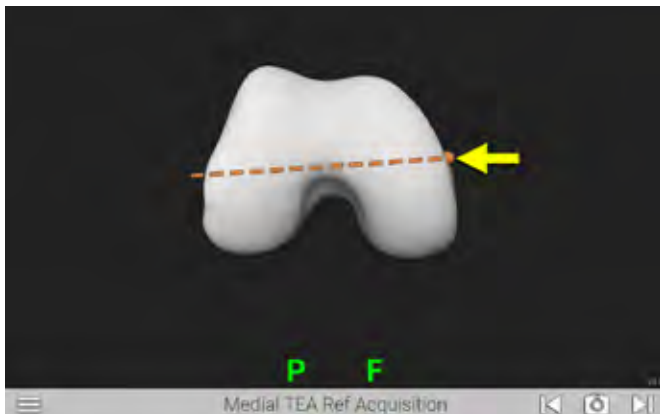


Figure 18
TEA Medial and Lateral Points Acquisition Screen (optional)



Figure 20
Lateral Distal Condyle Acquisition Screen

aspect of the condyle. This is best achieved by moving the probe tip in proximal-distal direction in the sagittal plane.

An audible tone and a green check mark will indicate registration is complete and the system will automatically advance to the Lateral Posterior Condyle Acquisition screen (Figure 16). Repeat to acquire data for the lateral posterior condyle.

Whiteside Line and TEA (Optional Acquisitions)

If you selected either the Whiteside's line (Figure 17) or Trans-Epicondyle Axis (TEA) option in your surgical profile, acquire acquisitions now (Figure 18).

Distal Condyle Acquisition

The Medial Distal Condyle Acquisition screen is displayed (Figure 19). Position the tip of the Probe Tracker (P) on the medial distal condyle and press the Forward button. Ensure the tip of the probe maintains contact with the condyle and trace a patch that captures the most distal aspect of the condyle as well as the medial-lateral and anterior-posterior curve of the distal condyle.

An audible tone and a green check mark will indicate registration is complete and the system will automatically advance to the Lateral Distal Condyle Acquisition screen (Figure 20). Repeat to acquire data on the lateral distal condyle.

DETAILED OPERATIVE TECHNIQUE

FEMORAL IMPLANT ACQUISITIONS

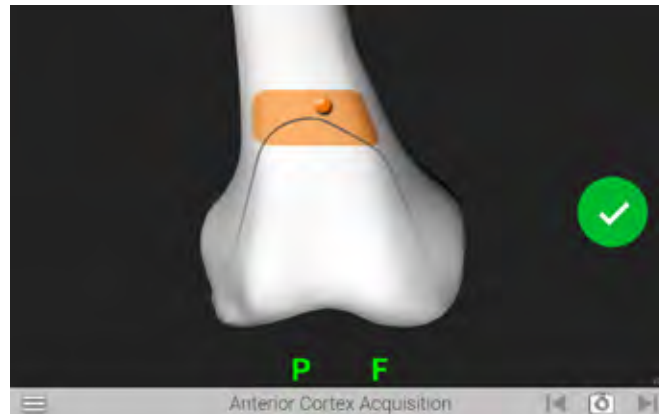


Figure 21
Anterior Cortex Acquisition Screen

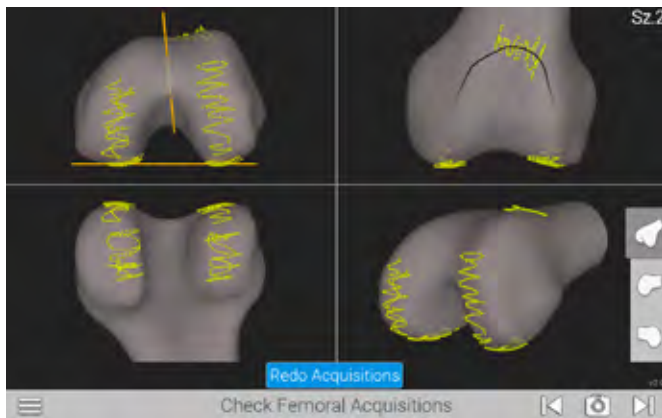


Figure 22
Check Femoral Acquisition Screen

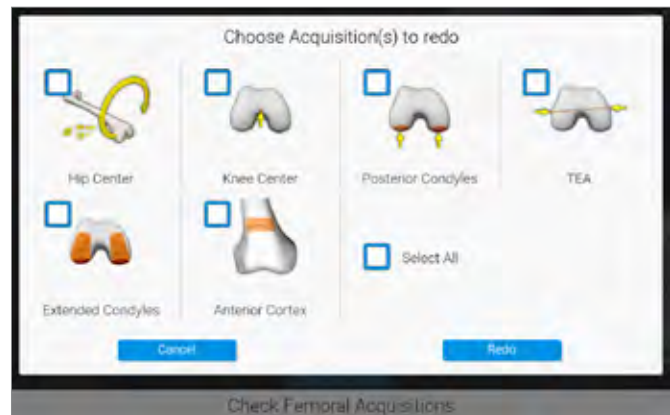


Figure 23
Redo Femoral Acquisition Screen

Anterior Cortex Acquisition

Based on the previous registrations, the system determines the approximate femoral component size and requires registration of points within the patch displayed. The relative location of the tip of the Probe Tracker (P) will be shown as an orange dot on the display. Position the tip of the Probe Tracker (P) so the dot is within the patch displayed and press the Forward button (*Figure 21*). Ensure the tip of the tracker maintains contact with the anterior cortex and trace within the patch in both the medial and lateral sides.

Check Femoral Acquisitions

The Check Femoral Acquisition screen is displayed (*Figure 22*). A graphical representation of the registered points (yellow dots) is displayed. The orange dots represent points that will be used by the system to determine resection levels.

For further review of the registered points, the bottom-right view can be changed by selecting one of the three options located to the right. If it is necessary to redo the registration for any points, select the "REDO ACQUISITIONS" button at the bottom of the Check Femoral Acquisitions Screen. Select the acquisitions to redo (*Figure 23*). Select the redo button and the system will repeat the selected acquisitions. Once completed, a summary screen will appear and if no other changes are desired, advance to the next screen.

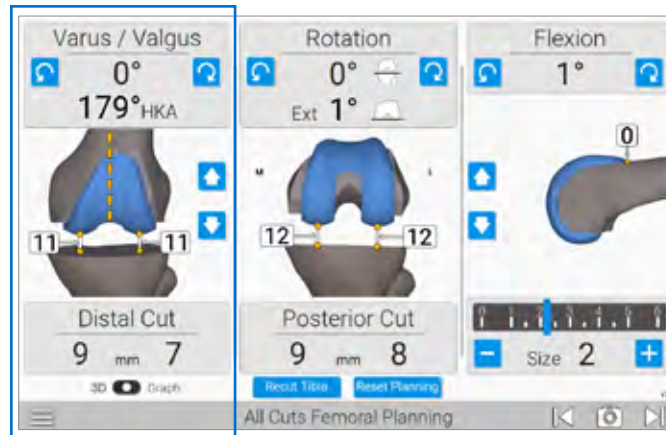


Figure 24a
Varus /Valgus

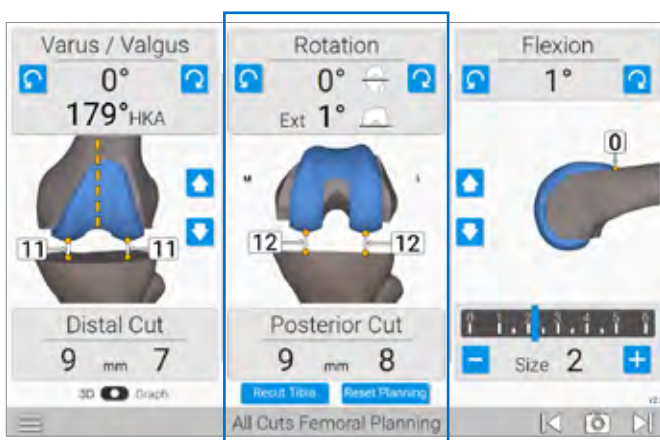


Figure 24b
Rotation

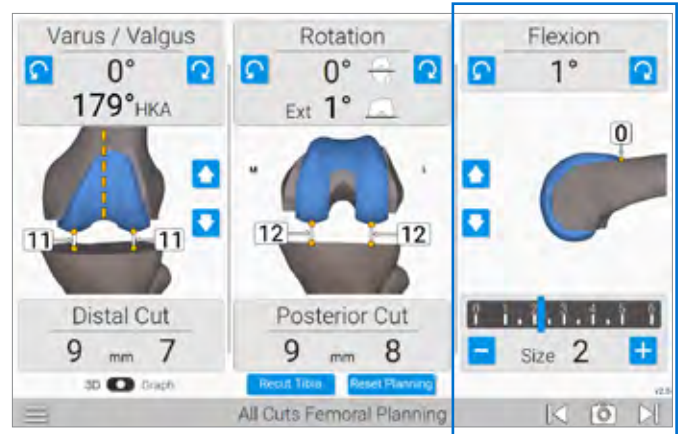


Figure 24c
Flexion

Left Panel displays femoral varus/valgus angle perpendicular to the mechanical axis and the distal resection depth from each condyle.

Varus/Valgus adjustments can be made impacting distal resection, and soft tissue balance in extension.

The arrows in the middle of the panel adjust the distal resection and can be used to open/close soft tissue gaps equally in extension (*Figure 24a*).

Middle Panel displays the femoral rotation relative to the posterior condyles along with the resection depth of the posterior condyles.

Rotational adjustments can be made impacting posterior resections, and soft tissue balance in flexion (*Figure 24b*).

Right Panel displays femoral flexion, anterior flange position and femoral component size. The femoral component rotates about the tip of the anterior flange (orange dot) to generate the desired flexion angle. Flexion angle can be used to close or open the posterior gaps equally.

Note: When the flexion angle is adjusted, the component pivots around the tip of the anterior flange to avoid notching of the anterior femur.

The arrows in the middle of the panel adjust anterior-posterior position impacting the posterior resection and anterior flange position. The orange dot and number indicate the offset of the anterior flange relative to the anterior cortex of the femur.

Additionally, the femoral component size can be adjusted at the bottom of the panel effecting the posterior resection (*Figure 24c*).

DETAILED OPERATIVE TECHNIQUE

PLACEMENT OF REAL TIME GUIDE, ADJUSTABLE CUTTING BLOCK OR ADJUSTABLE MODULE AND G TRACKERS

REAL TIME GUIDE

Placement and Adjustments



Figure 25
Placement of Real Time Guide

PLACEMENT OF REAL TIME GUIDE, ADJUSTABLE CUTTING BLOCK OR ADJUSTABLE MODULE AND G TRACKERS

Prior to this step be sure all screws are set to their middle, "neutral" position. Equal screw thread should show on both sides of the block for all adjustable screws.

● Real Time Guide

Be sure the pin bushings are locked in a high position so they do not contact the anterior cortex.

Attach the Guide Tracker (G) on the Real-Time Guide so that it faces the camera and position onto the distal femur. Pin the guide in place using at least two of the four pin positions (Figure 25).

Note: Proceed to page 14 and begin your Distal Femoral Cut Guidance.

ADJUSTABLE CUTTING BLOCK

Placement and Adjustments

FEMORAL BASE

Placement and Adjustments



Figure 26
Placement of Adjustable Cutting Block

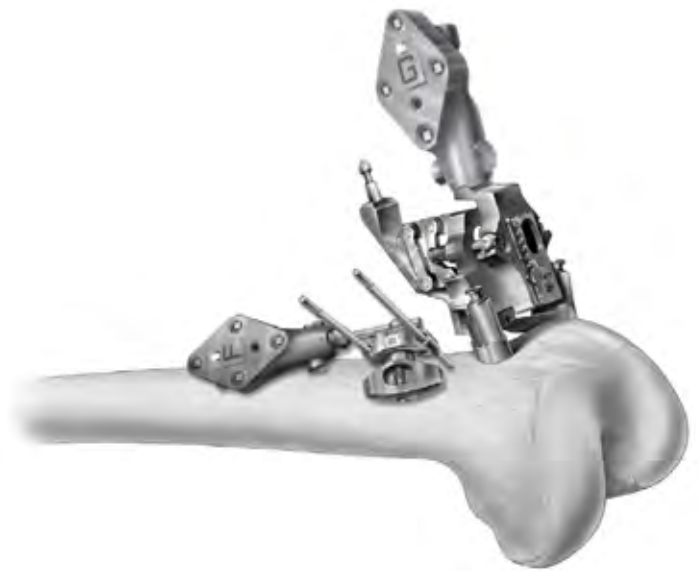


Figure 27
Placement of Femoral Base with
Adjustable Module Attached

Adjustable Cutting Block

Assemble the distal link into the cutting slot of the Adjustable Cutting Block and to IM Valgus Alignment Guide. Place on the anterior femur with the IM Valgus Alignment Guide against the distal condyles (*Figure 26*). Attach the Guide Tracker (G) to the Adjustable Cutting Block so that it faces the camera when the Adjustable Cutting Block is on the distal femur. Pin the Adjustable Cutting Block using the lateral beveled holes.

Note: Proceed to page 15 and begin your Distal Femoral Cut Guidance.

Femoral Base

Press button on Adjustable Module and attach to Femoral Base. Release button and verify Adjustable Module is securely locked onto the base. Attach the Guide Tracker (G) on the Adjustable Module so that it faces camera when the Femoral Base is on the distal femur. Follow the on-screen guidance to place the Femoral Base & Module and secure with pins once an appropriate location is achieved (*Figure 27*).

DETAILED OPERATIVE TECHNIQUE

PLACEMENT OF REAL TIME GUIDE, ADJUSTABLE CUTTING BLOCK OR ADJUSTABLE MODULE AND G TRACKERS

REAL TIME GUIDE

Placement and Adjustments

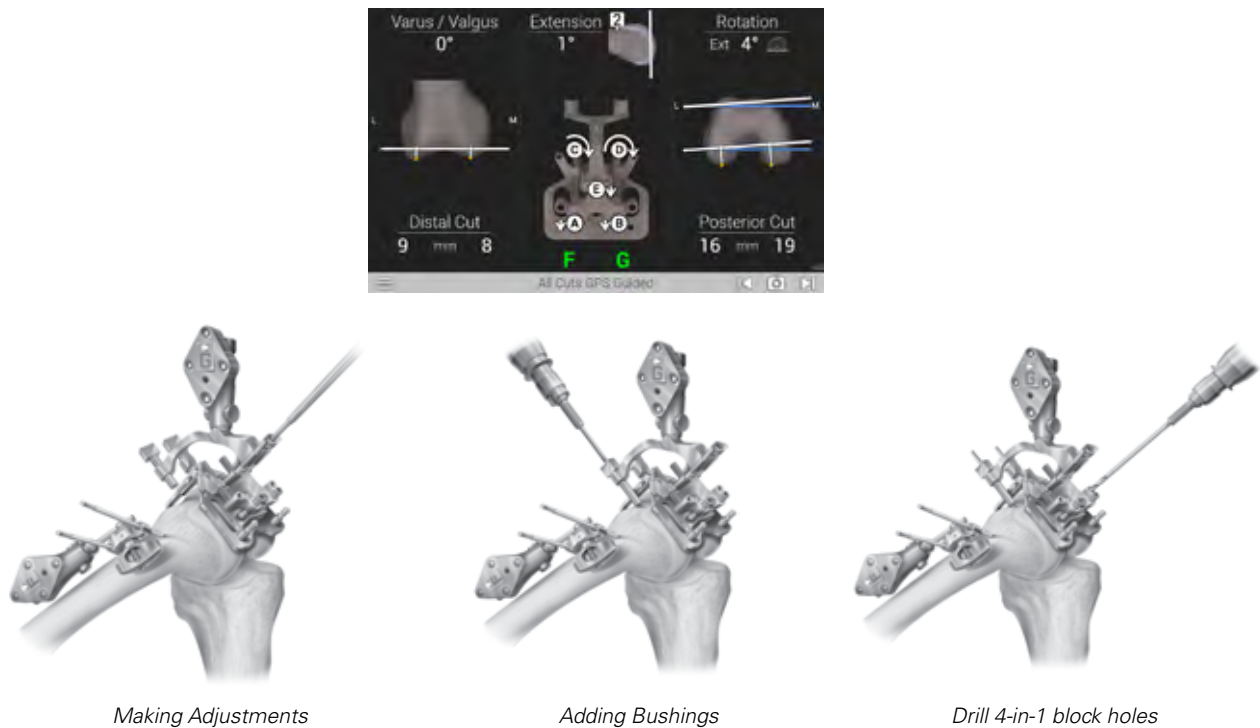


Figure 28

Distal Femoral Cut Guidance Screen with Real Time Guide

Distal Femoral Cut Guidance

RealTime Guide (Figure 28): On the display screen the blue lines indicate the planned distal resection. The white lines represent the resection based on the position of the selected block. The varus/valgus, resection and flexion angle parameters displayed are consistent with the alignment of the white line. When the alignment of the block is within 1mm or 1 degree of the planned resection, the white lines change to green.

Use the 3.5mm Hex Driver to adjust the screws (A, B, C, D, E) according to the arrows displayed. The arrows indicate both magnitude and direction.

Turning the screws in the direction indicated will reduce the magnitude. Adjust the screws until the indication arrows disappear. This will result in a green resection line corresponding to the planned resection.

Note: Real Time Guide additional steps required

- Step 1: Place the bushings on the anterior cortex and rotate to lock. Pin through the bushing for the distal resection holes.
- Step 2: Drill the 4-in-1 block holes using a 3.81 mm drill bit.

Note: Proceed to page 16 and begin your Distal Femoral Resection.

ADJUSTABLE CUTTING BLOCK

Placement and Adjustments

FEMORAL BASE

Placement and Adjustments

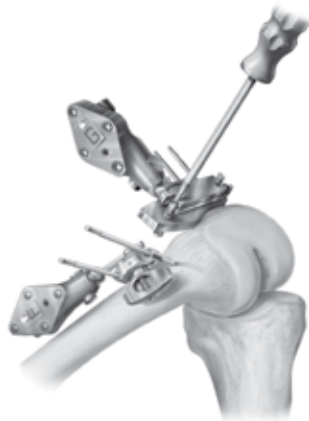


Figure 29

Distal Femoral Cut Guidance Screen
with Adjustable Cutting Block



Figure 30

Distal Femoral Cut Guidance Screen
with Femoral Base

Adjustable Cutting Block (Figure 29): Use the 3.5mm Hex Driver to adjust the screws (A, B, C) according to the arrows displayed. The arrows indicate both magnitude and direction. Turning the screws in the direction indicated will reduce the magnitude. Adjust the screws until the indication arrows disappear. When this alignment of the block is within 1mm or 1 degree of the planned resection, the white line changes to green.

Note: Proceed to page 17 and begin your Distal Femoral Resection.

Femoral Base (Figure 30): Use the 3.5mm Hex Driver to adjust the screws (A, B, C) according to the arrows displayed. The arrows indicate both magnitude and direction. Turning the screws in the direction indicated will reduce the magnitude. Adjust the screws until the indication arrows disappear. When this alignment of the block is within 1mm or 1 degree of the planned resection, the white line changes to green.

Note: Proceed to page 17 and begin your Distal Femoral Resection.

DETAILED OPERATIVE TECHNIQUE

PLACEMENT OF REAL TIME GUIDE, ADJUSTABLE CUTTING BLOCK OR ADJUSTABLE MODULE AND G TRACKERS

REAL TIME GUIDE

Distal Femoral Resection



Figure 31
Distal Resection Block

Attach Femoral Cutting Blocks and Distal Femoral Resection

Real Time Guide (Figure 31): Remove the Real-Time Guide instrumentation leaving pins behind. Attach the LPI Distal Resection Femoral Cutting Block. Using the Blade Drill Guide with the attached G-Tracker, place in the resection cutting slot. Review the display screen to confirm the planned placement of the LPI Distal Femoral Cutting Block.

Perform distal resection.

Note: Proceed to page 18 and begin your Femoral Rotation.

ADJUSTABLE CUTTING BLOCK

Distal Femoral Resection

FEMORAL BASE

Distal Femoral Resection

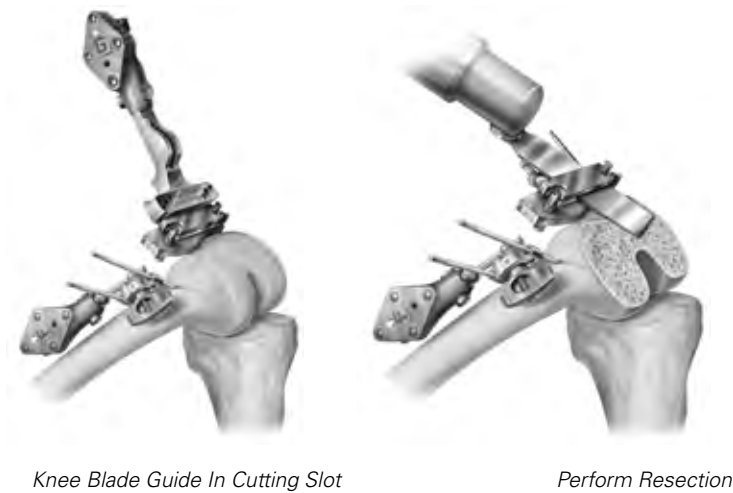


Figure 32
Adjustable Cutting Block Distal Resection

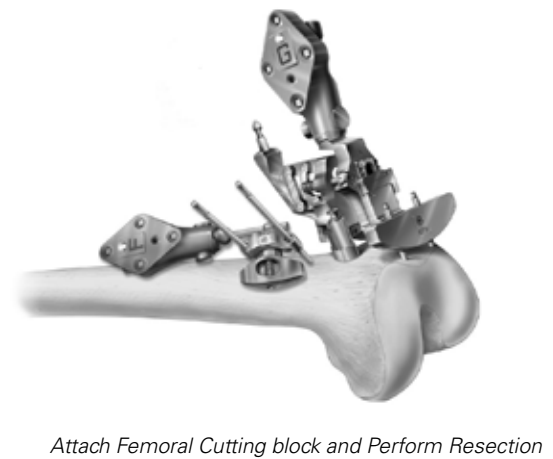


Figure 33
Femoral Base Distal Resection

Adjustable Cutting Block (Figure 32): Using the Blade Drill Guide with the attached G-Tracker, place in the resection cutting slot. Review the display screen to confirm the planned placement of the Adjustable Cutting Block.

Perform distal resection through the Adjustable Cutting Block slot.

Note: Proceed to page 19 and begin your Femoral Rotation.

Femoral Base (Figure 33): Attach the Femoral Cutting Block to the Adjustable Module. Press the button on Femoral Cutting Block and slide block onto the dovetail of the Adjustable Module until the block contacts the anterior femur. Release the button and ensure the block is securely locked in position.

Pin the block using the proximal pin holes. Center cross-pin holes are optional.

Perform the distal femoral resection through the Femoral Cut Slot.

Note: Proceed to page 19 and begin your Femoral Rotation.

DETAILED OPERATIVE TECHNIQUE

PLACEMENT OF REAL TIME GUIDE, ADJUSTABLE CUTTING BLOCK OR ADJUSTABLE MODULE AND G TRACKERS

REAL TIME GUIDE

Rotation

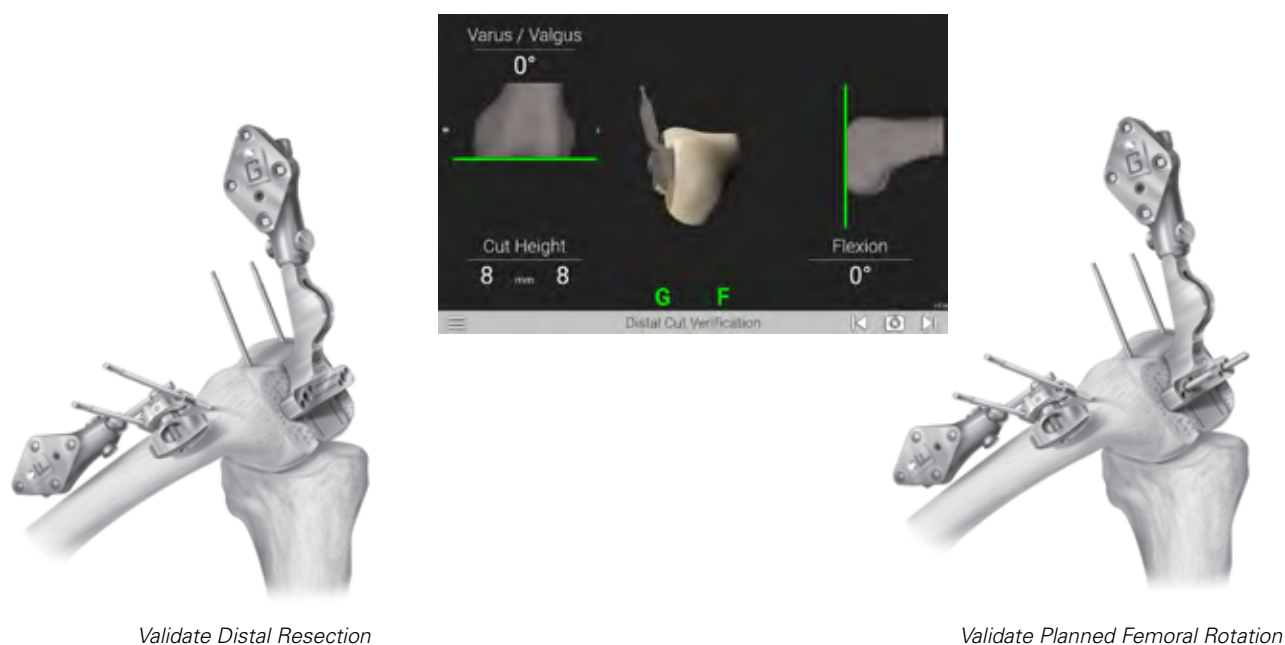


Figure 34
Distal Cut Verification Screen

Distal Cut Verification

With the blade drill guide positioned against the distal femur, view the display screen to review your cuts and press the Forward button on the Probe Tracker (P) to advance to the next screen.

The system will record the actual distal resection and update the femoral planning accordingly (*Figure 34*).

Validate the distal resection using the Knee Blade Drill Guide.

Continue with your femoral preparation according to the protocol found in the Optetrak Logic or Truliant Operative Technique.

ADJUSTABLE CUTTING BLOCK

Rotation

FEMORAL BASE

Rotation

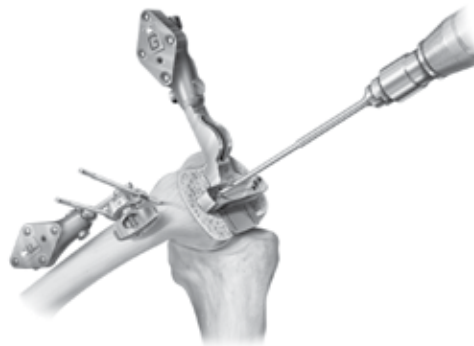


Figure 35
Drill Rotational Hole

4-in-1 cuts Guidance for Adjustable Cutting Block and Femoral Base

The 4-in-1 cuts Planning screen is displayed for the Adjustable Cutting Block (Figure 35) and the Femoral Base. The values indicate the planned position of the femoral component. Using the Blade Drill Guide with the attached G-Tracker, place on the distal femur and shift the position of the Blade Drill Guide until the white and blue line merge. When this alignment of the block is within 1mm or 1 degree of the planned resection, the white line changes to green. Drill each rotation hole using the 3.81mm drill bit.

The anterior-posterior offset, component size and femoral rotation values can be adjusted.

Continue with your femoral preparation according to the protocol found in the Optetrak Logic or Truliant Operative Technique.

DETAILED OPERATIVE TECHNIQUE

TIBIAL PREPARATION AND ACQUISITIONS



Figure 36

Assemble Tibial Positioning Template to Tibial Base



Figure 37

Positioning Template to Tibial Base

Tibia Preparation

Connect the Tibial Positioning Template to either the Left or Right Tibial Base (*Figure 36*) and place on the tibia. Ensure that the base is secure on the template.

Position the stylus on the proximal tibia. The stylus has two lengths; 1mm for the lowest point of the most affected side or 10mm for the lowest point of the least affected side. Position the assembly against the tibia just medial to the tibia tubercle.

Adjust the lower end of the Tibial Positioning Template so the shaft of the template is parallel with the tibia (*Figure 37*). Pin the Tibial Base in position and remove the Tibial Positioning Template.

Attach Trackers to Tibia

Attach the T tracker to the Tibial Base and lock into place. Make sure the tracker is facing toward the camera.

Note: It is important to ensure the tracker does not rotate or move when connected to the instrument. Ensure the tracker is locked in place.

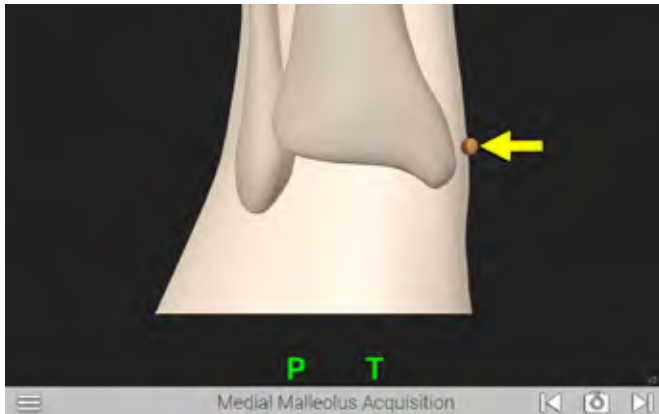


Figure 38
Medial Malleolus Acquisition Screen



Figure 40
Tibia Center Acquisition Screen



Figure 39
Lateral Malleolus Acquisition Screen

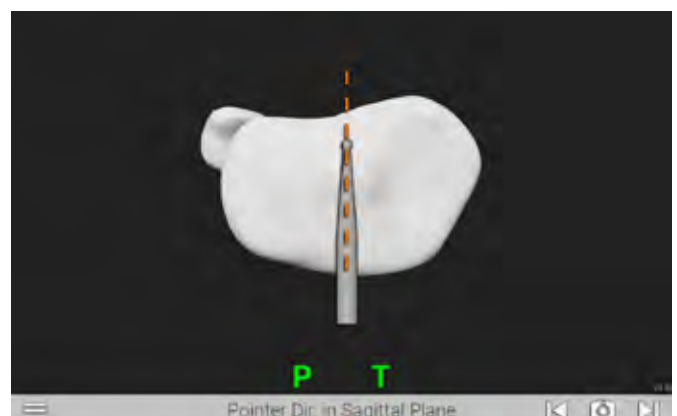


Figure 41
Pointer Direction in Sagittal Plane Acquisition Screen

Tibia Implant Acquisitions

Malleolus Acquisition

Advance to the Medial Malleolus Acquisition screen (Figure 38). Position the tip of the Probe Tracker (P) on the medial malleolus and press the Forward button to register this point. The system automatically advances to the Lateral Malleolus Acquisition screen (Figure 39). Repeat to acquire point for lateral malleolus acquisition.

Note: It may be helpful to position the knee in mid-flexion or full extension to easily acquire the lateral malleolus.

Tibial Center Acquisition

The Tibial Center Acquisition screen is displayed (Figure 40). Position the tip of the Probe Tracker (P) on the center of the

proximal tibia and press the Forward button to register this point. The system will automatically advance to the next screen.

Note: This point is used to determine the mechanical axis of the tibia.

Sagittal Plane Acquisition

The Pointer Direction in Sagittal Plane screen is displayed (Figure 41). Position the tip of the Probe Tracker (P) at the posterior center (PCL insertion) and the shaft of the Probe Tracker (P) on the proximal tibia along a line connecting the center of the tibia and the medial-third of the tibia tubercle. Press the Forward button to register this orientation. The system will automatically advance to the next screen.

DETAILED OPERATIVE TECHNIQUE

TIBIAL PREPARATION AND ACQUISITIONS

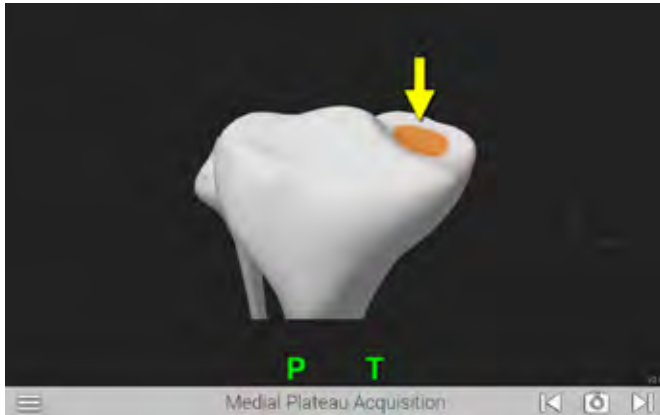


Figure 42
Medial Plateau Acquisition Screen

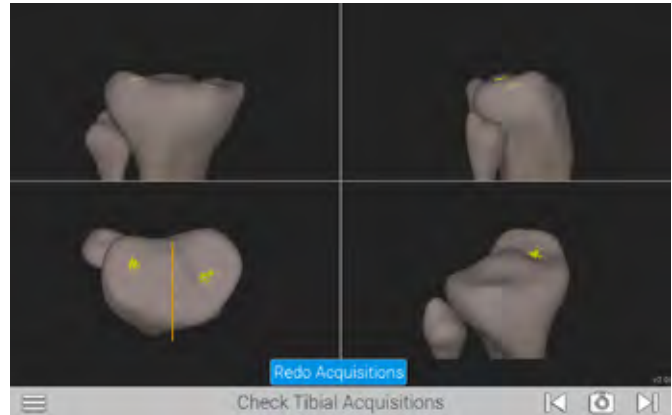


Figure 44
Check Tibial Acquisition Screen



Figure 43
Lateral Plateau Acquisition Screen

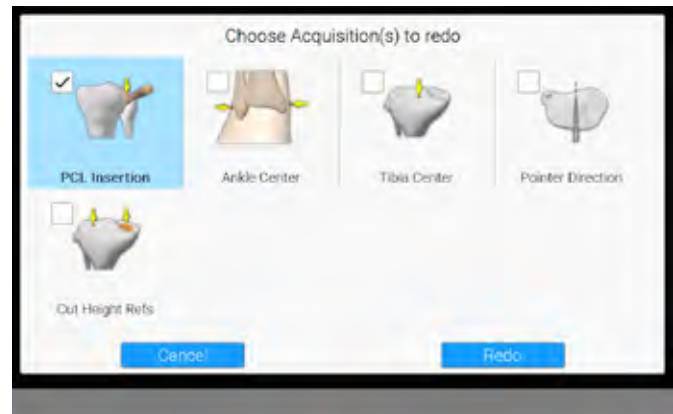


Figure 45
Redo Tibial Acquisition Screen

Medial Plateau Acquisition

The Medial Plateau Acquisition screen is displayed (Figure 42). Position the tip of the Probe Tracker (P) on medial tibial plateau and press the Forward button. Ensure the tip of the tracker maintains contact with the tibial plateau and trace a patch that captures the lowest point on the medial tibial plateau.

An audible tone and a green check mark will indicate registration is complete and the system will automatically advance to the Lateral Plateau Acquisition screen (Figure 43). Repeat to acquire points for lateral plateau acquisition.

Check Tibial Acquisitions

The Check Tibial Acquisitions screen is displayed (Figure 44). A graphical representation of the registered points (yellow dots) is displayed. The orange dots represent points that will be used by the system to determine resection levels. If it is necessary to redo the registrations for any points, select the "REDO ACQUISITIONS" button at the bottom of the Check Tibial Acquisitions Screen. Select the acquisitions to redo (Figure 45). Select the redo button and the system will repeat the selected acquisitions. Once completed, a summary screen will appear and if no other changes are desired, advance to the next screen.



Figure 46

Attach Adjustable Module and G Tracker to Tibial Base

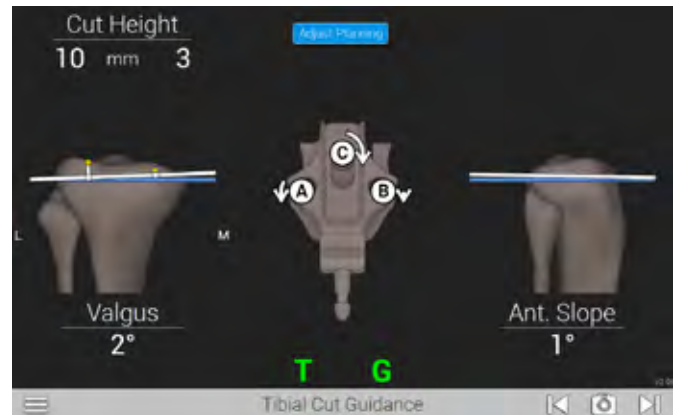


Figure 47

Tibial Cut Guidance Screen



Figure 48

Adjustments made to the Adjustable Module

Attach Adjustable Module and Guide (G)Tracker

Attach the Adjustable Module and Guide Tracker (G) to the Tibial Base (Figure 46). Verify that the Adjustable Module is securely locked onto the base and that the G tracker is securely locked to the module and facing the camera.

Tibial Cut Guidance

The Proximal Tibial Cut Guidance screen (Figure 47) will be displayed.

The blue lines indicate the planned tibial resection. The white lines represent the resection based on the position of the Adjustable Module. The medial and lateral resection depth, varus/valgus and posterior slope parameters displayed are consistent with the alignment of the Adjustable Module.

Use the 3.5mm Hex Driver to turn the A, B and C screws (Figure 48) on the Adjustable Module. The arrows indicate both magnitude and direction each screw needs to be turned for planned alignment.

The A, B and C indicators, the arrows and white lines will change to green when the Adjustable Module is within 1mm or 1 degree of the planned resection. As the position approaches the target, the arrow will disappear. Advance to the next screen when adjustments are complete.

Note: Select "ADJUST PLANNING" to change to Tibial Cut Planning screen where resection depth, varus/valgus angle and tibial slope angle can be modified. Select "RESUME GUIDANCE" to return to the Tibial Cut Guidance screen.

DETAILED OPERATIVE TECHNIQUE

TIBIAL GUIDANCE AND RESECTION



Figure 49

Attach Tibial Cut Block to Adjustable Module

Tibia Cutting Block Attachment

Add the Tibial Cutting Block to the Adjustable Module (*Figure 49*) by pressing the button on the Tibial Cutting Block and sliding the block onto the dovetail track of the Adjustable Module. Ensure the block contacts the tibia and is securely locked in position. Pin the guide using the lowest (distal) pin holes. Center cross-pin holes are optional.

Remove Guide Tracker (G) from Adjustable Module.

Tibia Resection

Perform tibial resection.

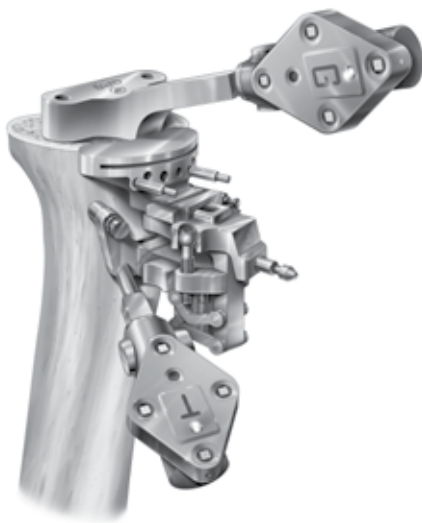
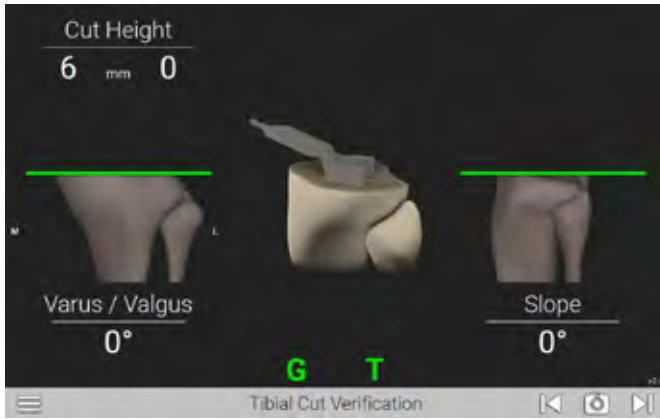


Figure 50
Tibia Cut Verification Screen



Figure 51
Check Tibial Resection & End Screen

Tibia Cut Verification Screen

Advance to the Tibia Cut Verification screen (Figure 50). After the resection has been completed, assemble the Guide Tracker (G) to the Blade Drill Guide.

Verify the tibial resection by placing the blade drill guide against the proximal tibial resection.

Press Forward button on Probe Tracker (P) to advance to the next screen and save your data. This is the end of GPS TKA Pro Application (Figure 51).









The Tibial Resection Guide should now be removed. Continue with your tibial cuts according to the protocol found in the Optetrak Logic or Truliant operative technique.

APPENDIX A

GPS FEMORAL INSTRUMENT GUIDE OPTIONS

Exactech offers you a choice of GPS femoral guides to meet your preferred surgical style for the distal femoral resection.

The table below provides a general overview of three options using GPS instruments for you to consider.

Femoral Block Name	Key Points	External Fixator	Kinematics	GPS Instruments Needed for Distal Femoral Resection	
FEMORAL BASE	<ul style="list-style-type: none"> • 3 adjustments • Real time guidance • Pins within the incision site 	N/A	N/A	Femoral Base	
				Adjustable Cutting Module	
				Femoral Cutting Block	
ADJUSTABLE CUTTING BLOCK	<ul style="list-style-type: none"> • Requires external fixator • 3 adjustments • Real time guidance • Post-operative kinematics with trial or final implants 	Required	Pre and Post	Adjustable Cutting Block	
				External Fixator	
REAL-TIME GUIDE	<ul style="list-style-type: none"> • Position all distal femoral cuts and rotation at one time with same instrument • Requires external fixator • 5 adjustments • Real time guidance • Post-operative kinematics with trial or final implants 	Required	Pre and Post	Real Time Guide	
				External LPI Femoral	
				Fixator Cutting Block	

CATALOG NUMBER PART DESCRIPTION

I00020 GPS System



A10003 (P) GPS Probe Tracker (P)



A10004 (F) GPS Femoral Tracker (F)



A10005 (T) GPS Tibial Tracker (T)



A10006 (G) GPS Guide Tracker (G)



A10012 GPS Disposable Kit



521-40-11 Femoral Base



INSTRUMENT LISTING

CATALOG NUMBER PART DESCRIPTION

213-03-00 Intra-medullary Alignment Guide



521-11-04 Hex Driver (3.5mm)



521-40-12 Femoral Cutting Block



521-11-02 Blade Drill Guide



521-10-00 or 521-10-30 0-degree External Tracker Fixator
30-degree External Tracker Fixator



521-40-08 Femoral Adjustable Cutting Block

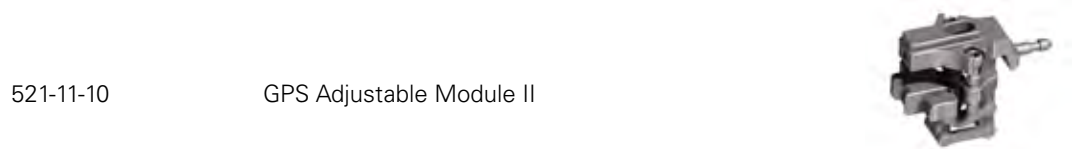
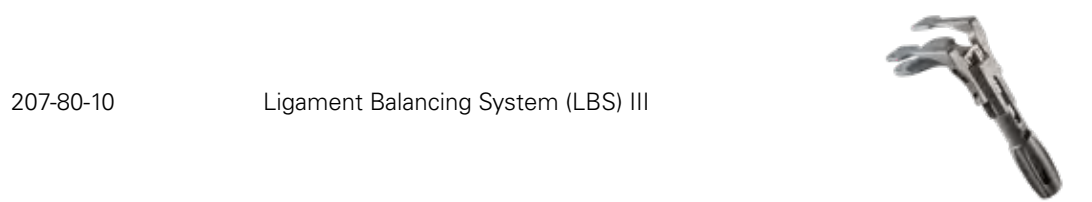
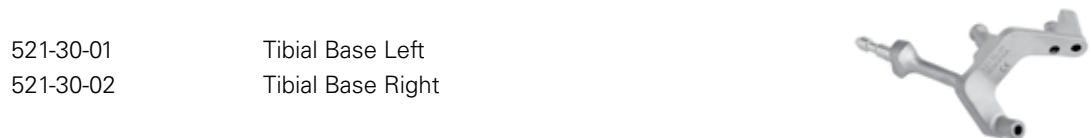
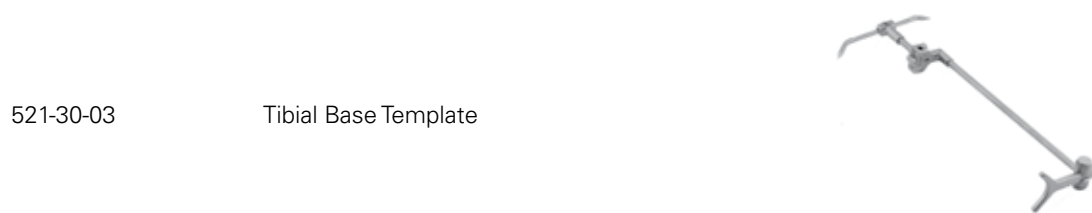
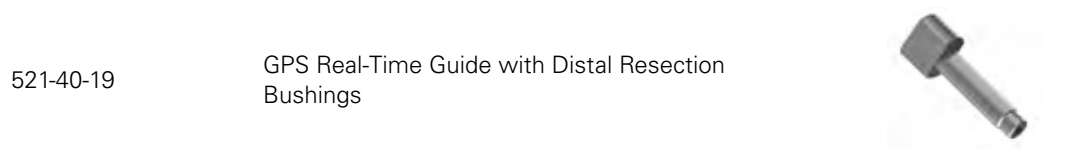
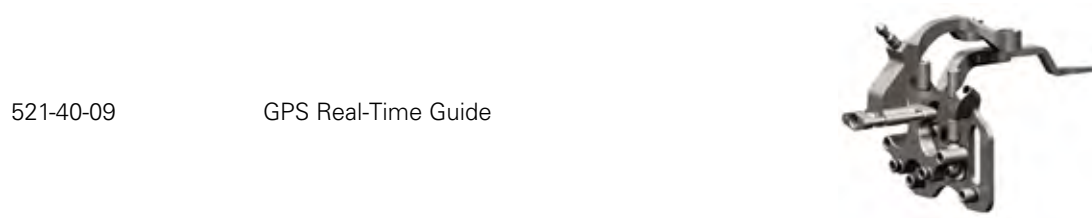


213-83-10 Distal Link










INSTRUMENT LISTING

CATALOG NUMBER PART DESCRIPTION



**Special Order Only*

INSTRUMENT LISTING

CATALOG NUMBER	PART DESCRIPTION	
521-30-06	GPS Modified Tibial Cutting Block	
521-50-08	Augmentable LBS III	
521-78-00	Mini Quick Chuck, Hall End	
521-78-02	3" Trocar Point Pin, Hex, 420 Stainless	
521-78-03	4" Trocar Point Pin, Hex, 420 Stainless	
521-78-04	Trocar, Three Flute Drill, 3.81mm	
521-78-10	Pin Driver Long, Low Profile	
521-78-11	Pin Driver Short, Low Profile	
521-78-2X	Threaded pin Collared (multiple sizes)	
521-78-3X	Threaded pin Collarless (multiple sizes)	

**Special Order Only*

Exactech, Inc. is proud to have offices and distributors around the globe. For more information about Exactech products available in your country, please visit www.exac.com

For additional device information, refer to the Exactech Knee System—Instructions for Use for a device description, indications, contraindications, precautions and warnings. For further product information, please contact Customer Service, Exactech, Inc., 2320 NW 66th Court, Gainesville, Florida 32653-1630, USA. (352) 377-1140, (800) 392-2832 or FAX (352) 378-2617.

Exactech, as the manufacturer of this device, does not practice medicine, and is not responsible for recommending the appropriate surgical technique for use on a particular patient. These guidelines are intended to be solely informational and each surgeon must evaluate the appropriateness of these guidelines based on his or her personal medical training and experience. Prior to use of this system, the surgeon should refer to the product package insert for comprehensive warnings, precautions, indications for use, contraindications and adverse effects.

The products discussed herein may be available under different trademarks in different countries. All copyrights, and pending and registered trademarks, are property of Exactech, Inc. This material is intended for the sole use and benefit of the Exactech sales force and physicians. It should not be redistributed, duplicated or disclosed without the express written consent of Exactech, Inc. ©2023 Exactech, Inc. 712-31-32 Rev. A 0523



CE Mark is not valid unless there is a CE Mark on the product label.



EXACTECH, INC.
2320 NW 66TH COURT
GAINESVILLE, FL 32653 USA

+1 352.377.1140
+1 800.EXACTECH
+1 352.378.2617 (FAX)
www.exac.com