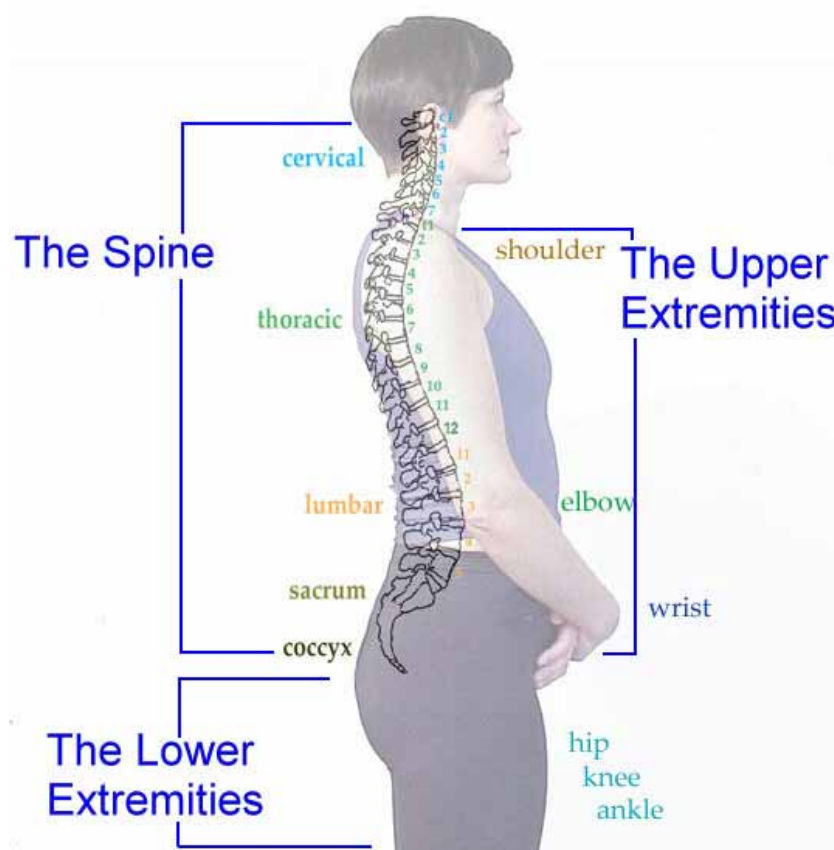


# Acumar™

## Range of Motion

## Measurement Illustrations



ACUMAR  
By



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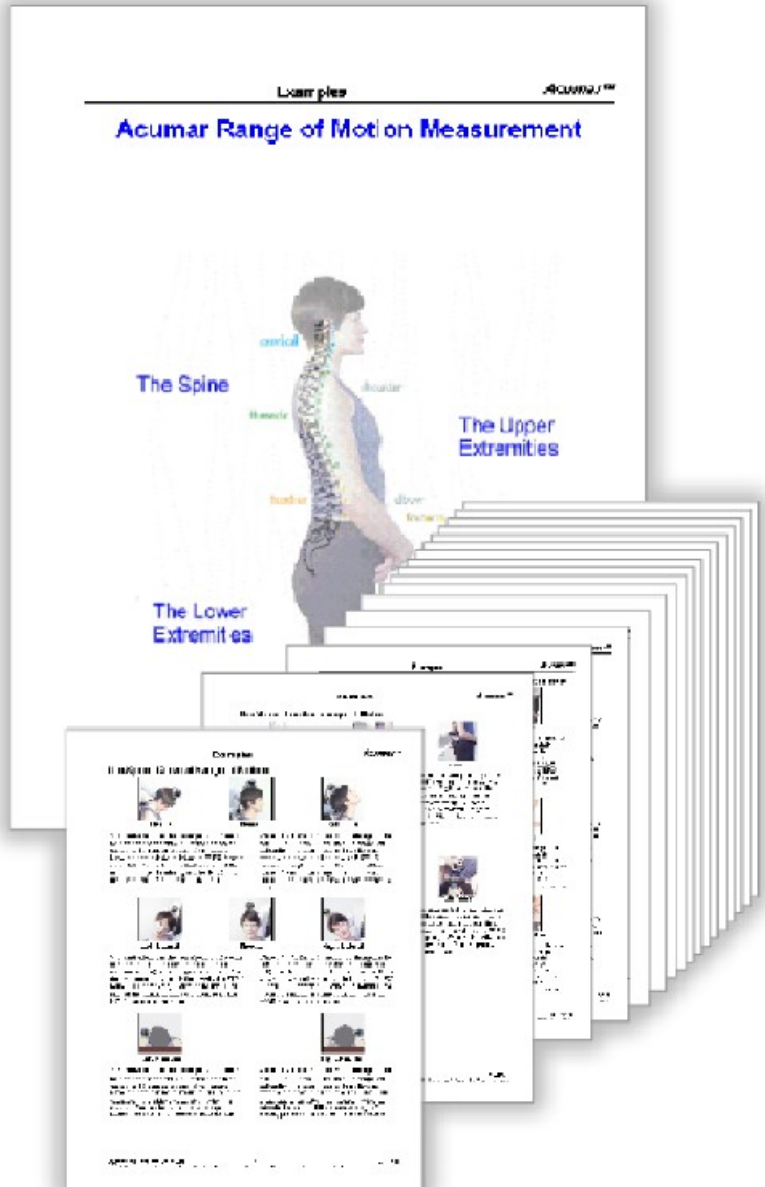
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### ***Disclaimer***










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## The Spine: Cervical Range of Motion

		
<b>Flexion</b>	<b>Neutral</b>	<b>Extension</b>
While individual is in the neutral position place the main unit on the top of the head and then the companion unit on the T1 spinous process. Press the ZERO button and then ask the individual to FLEX forward completely. When the individual has reached the maximum range of motion, press the HOLD button to store the data. Repeat two to five times.		Record data, then proceed to the next test. To start the next sequence of tests, press START (off), press START (on) to clear memory. With individual in neutral position, press ZERO. Then ask the individual to EXTEND backward completely. When the individual has reached the maximum range of motion, press the HOLD button to store the data. Repeat two to five times
		
<b>Left Lateral</b>	<b>Neutral</b>	<b>Right Lateral</b>
While individual is in the neutral position place the main unit on the top of the head and then the companion unit (hidden) on the T1 spinous process. Press the ZERO button and then ask the individual to FLEX to the LEFT completely. When the individual has reached the maximum range of motion, press the HOLD button to store the data.		While individual is in the neutral position place the main unit on the top of the head and then the companion unit (hidden) on the T1 spinous process. Press the ZERO button and then ask the individual to FLEX to the RIGHT completely. When the individual has reached the maximum range of motion, press the HOLD button to store the data.
		
<b>Left Rotation</b>	<b>Neutral Position</b>	<b>Right Rotation</b>
While individual is in the neutral <b><u>supine position on a flat exam table</u></b> , place the main unit on the occiput. Press the ZERO button and then ask the individual to ROTATE his or her head to the LEFT completely. When the individual has reached the maximum range of motion, press the HOLD button to store the data. <i>Measuring cervical rotation requires stabilization of the trunk in the supine position with the shoulders on the table.</i>		While individual is in the neutral <b><u>supine position on a flat exam table</u></b> , place the main unit on the occiput. Press the ZERO button and then ask the individual to ROTATE his or her head to the RIGHT completely. When the individual has reached the maximum range of motion, press the HOLD button to store the data. <i>Measuring cervical rotation requires stabilization of the trunk in the supine position with the shoulders on the table.</i>

## The Spine: Thoracic Range of Motion

					
<b>Flexion</b>		<b>Neutral</b>		<b>Extension</b>	
While individual is in the neutral position place the main unit on the T1 spinous process and then the companion unit on the T12 spinous process. Press the ZERO button and then ask the individual to FLEX forward completely. When the individual has reached the maximum range of motion, press the HOLD button to store the data. Repeat two to five times.			While individual is in the neutral position place the main unit on the T1 spinous process and then the companion unit on the T12 spinous process. Press the ZERO button and then ask the individual to EXTEND backward completely. When the individual has reached the maximum range of motion, press the HOLD button to store the data. Repeat two to five times.		
					
<b>Left Lateral</b>				<b>Right Lateral</b>	
While individual is in the neutral position place the main unit on the T1 spinous process and then the companion unit on the T12 spinous process. Press the ZERO button and then ask the individual to FLEX to the LEFT completely. When the individual has reached the maximum range of motion, press the HOLD button to store the data.			While individual is in the neutral position place the main unit on the T1 spinous process and then the companion unit on the T12 spinous process. Press the ZERO button and then ask the individual to FLEX to the RIGHT completely. When the individual has reached the maximum range of motion, press the HOLD button to store the data.		
					
<b>Left Rotation</b>				<b>Right Rotation</b>	
While individual is seated or standing and in a forward flexed position with the thoracic spine horizontal, in the neutral position place the main unit on the T1 spinous process and then the companion unit on the T12 spinous process. Press the ZERO button and then ask the individual to ROTATE to the LEFT completely. When the individual has reached the maximum range of motion, press the HOLD button to store the data.			While individual is seated or standing and in a forward flexed position with the thoracic spine horizontal,in the neutral position place the main unit on the T1 spinous process and then the companion unit on the T12 spinous process. Press the ZERO button and then ask the individual to ROTATE to the RIGHT completely. When the individual has reached the maximum range of motion, press the HOLD button to store the data.		










## The Spine: Lumbar Range of Motion

		
<b>Flexion</b>	<b>Neutral</b>	<b>Extension</b>
<p>While individual is in the neutral position place the main unit on the T12 spinous process and then the companion unit on the S1 spinous process. Press the ZERO button and then ask the individual to FLEX forward completely. When the individual has reached the maximum range of motion, press the HOLD button to store the data. Repeat two to five times.</p>		<p>While individual is in the neutral position place the main unit on the T12 spinous process and then the companion unit on the S1 spinous process. Press the ZERO button and then ask the individual to EXTEND backward completely. When the individual has reached the maximum range of motion, press the HOLD button to store the data. Repeat two to five times.</p>
		
<b>Left Lateral</b>	<b>Neutral</b>	<b>Right Lateral</b>
<p>While individual is in the neutral position place the main unit on the T12 spinous process and then the companion unit on the S1 spinous process. Press the ZERO button and then ask the individual to FLEX to the LEFT completely. When the individual has reached the maximum range of motion, press the HOLD button to store the data.</p>		<p>While individual is in the neutral position place the main unit on the T12 spinous process and then the companion unit on the S1 spinous process. Press the ZERO button and then ask the individual to FLEX to the RIGHT completely. When the individual has reached the maximum range of motion, press the HOLD button to store the data.</p>

















## Upper Extremities: Shoulder Range of Motion: LEFT SHOULDER

					
<b>Flexion</b>		<b>Neutral</b>		<b>Extension</b>	
While individual is in the neutral position place the main unit on the LEFT humerus. For single inclinometry stabilize movement across the shoulders, for dual inclinometry, place the companion unit on the clavicle. Press the ZERO button and then ask the individual to FLEX their LEFT SHOULDER completely. Press the HOLD button to store the data. Repeat two to five times				While individual is in the neutral position place the main unit on the LEFT humerus. For single inclinometry stabilize movement across the shoulders, for dual inclinometry, place the companion unit on the clavicle. Press the ZERO button and then ask the individual to EXTEND their LEFT SHOULDER completely. Press the HOLD button to store the data. Repeat two to five times.	
					
<b>Abduction</b>		<b>Neutral</b>		<b>Adduction</b>	
While individual is in the neutral position place the main unit on the LEFT humerus. For single inclinometry stabilize movement across the shoulders, for dual inclinometry, place the companion unit on the clavicle. Press the ZERO button and then ask the individual to ABDUCT their LEFT SHOULDER completely. Press the HOLD button to store the data.				While individual is in the neutral position place the main unit on the LEFT humerus. For single inclinometry stabilize movement across the shoulders, for dual inclinometry, place the companion unit on the clavicle. Press the ZERO button and then ask the individual to ADDUCT their LEFT SHOULDER completely. Press the HOLD button to store the data.	
					
<b>External Rotation</b>		<b>Neutral</b>		<b>Internal Rotation</b>	
While individual is in the neutral position place the main unit on the LEFT humerus. For single inclinometry stabilize movement across the shoulders, for dual inclinometry, place the companion unit on the clavicle. Press the ZERO button and then ask the individual to ROTATE their LEFT SHOULDER EXTERNALLY completely. Press the HOLD button to store the data.				While individual is in the neutral position place the main unit on the LEFT humerus. For single inclinometry stabilize movement across the shoulders, for dual inclinometry, place the companion unit on the clavicle. Press the ZERO button and then ask the individual to ROTATE their LEFT SHOULDER INTERNALLY completely. Press the HOLD button to store the data.	




## Upper Extremities: Shoulder Range of Motion: RIGHT SHOULDER

		
<b>Flexion</b>	<b>Neutral</b>	<b>Extension</b>
<p>While individual is in the neutral position place the main unit on the RIGHT humerus. For single inclinometry stabilize movement across the shoulders, for dual inclinometry, place the companion unit on the clavicle. Press the ZERO button and then ask the individual to FLEX their RIGHT SHOULDER completely. Press the HOLD button to store the data. Repeat two to five times</p>		<p>While individual is in the neutral position place the main unit on the RIGHT humerus. For single inclinometry stabilize movement across the shoulders, for dual inclinometry, place the companion unit on the clavicle. Press the ZERO button and then ask the individual to EXTEND their RIGHT SHOULDER completely. Press the HOLD button to store the data. Repeat two to five times.</p>
		
<b>Abduction</b>	<b>Neutral</b>	<b>Adduction</b>
<p>While individual is in the neutral position place the main unit on the RIGHT humerus. For single inclinometry stabilize movement across the shoulders, for dual inclinometry, place the companion unit on the clavicle. Press the ZERO button and then ask the individual to ABDUCT their RIGHT SHOULDER completely. Press the HOLD button to store the data.</p>		<p>While individual is in the neutral position place the main unit on the RIGHT humerus. For single inclinometry stabilize movement across the shoulders, for dual inclinometry, place the companion unit on the clavicle. Press the ZERO button and then ask the individual to ADDUCT their RIGHT SHOULDER completely. Press the HOLD button to store the data.</p>
		
<b>External Rotation</b>	<b>Neutral</b>	<b>Internal Rotation</b>
<p>While individual is in the neutral position place the main unit on the RIGHT humerus. For single inclinometry stabilize movement across the shoulders, for dual inclinometry, place the companion unit on the clavicle. Press the ZERO button and then ask the individual to ROTATE their RIGHT SHOULDER EXTERNALLY completely. Press the HOLD button to store the data.</p>		<p>While individual is in the neutral position place the main unit on the RIGHT humerus. For single inclinometry stabilize movement across the shoulders, for dual inclinometry, place the companion unit on the clavicle. Press the ZERO button and then ask the individual to ROTATE their RIGHT SHOULDER INTERNALLY completely. Press the HOLD button to store the data.</p>







## Upper Extremities: Elbow Range of Motion: LEFT ELBOW

		
<b>Flexion</b>	<b>Neutral</b>	<b>Extension</b>
<p>While individual is in the neutral position place the main unit on the LEFT ulna or radius. For single inclinometry stabilize movement in the humerus, for dual inclinometry, place the companion unit on the humerus. Press the ZERO button and then ask the individual to FLEX the LEFT ELBOW completely. Press the HOLD button to store the data. Repeat two to five times.</p>		<p>While individual is in the neutral position place the main unit on the LEFT ulna or radius. For single inclinometry stabilize movement in the humerus, for dual inclinometry, place the companion unit on the humerus. Press the ZERO button and then ask the individual to EXTEND the LEFT ELBOW completely. Press the HOLD button to store the data. Repeat two to five times.</p>







## Upper Extremities: Elbow Range of Motion: RIGHT ELBOW

		
<b>Flexion</b>	<b>Neutral</b>	<b>Extension</b>
<p>While individual is in the neutral position place the main unit on the RIGHT ulna or radius. For single inclinometry stabilize movement in the humerus, for dual inclinometry, place the companion unit on the humerus. Press the ZERO button and then ask the individual to FLEX the RIGHT ELBOW completely. Press the HOLD button to store the data.</p>		<p>While individual is in the neutral position place the main unit on the RIGHT ulna or radius. For single inclinometry stabilize movement in the humerus, for dual inclinometry, place the companion unit on the humerus. Press the ZERO button and then ask the individual to EXTEND the RIGHT ELBOW completely. Press the HOLD button to store the data.</p>

## Upper Extremities: Wrist Range of Motion: LEFT WRIST










		
<b>Flexion</b>	<b>Neutral</b>	<b>Extension</b>
<p>While individual is in the neutral position place the main unit on their LEFT phalanges. For single inclinometry stabilize movement in the forearm, for dual inclinometry, place the companion unit on the ulna or radius Press the ZERO button and then ask the individual to FLEX the LEFT WRIST completely. Press the HOLD button to store the data. Repeat two to five times.</p>		<p>While individual is in the neutral position place the main unit on their LEFT phalanges. For single inclinometry stabilize movement in the forearm, for dual inclinometry, place the companion unit on the ulna or radius Press the ZERO button and then ask the individual to EXTEND the LEFT WRIST completely. Press the HOLD button to store the data. Repeat two to five times.</p>
		
<b>Radial Deviation</b>	<b>Neutral</b>	<b>Ulnar Deviation</b>
<p>While individual is in the neutral position place the main unit on their LEFT phalanges. For single inclinometry stabilize movement in the forearm, for dual inclinometry, place the companion unit on the ulna or radius Press the ZERO button and then ask the individual to DEVIATE the LEFT RADIUS completely. Press the HOLD button to store the data.</p>		<p>While individual is in the neutral position place the main unit on their LEFT phalanges. For single inclinometry stabilize movement in the forearm, for dual inclinometry, place the companion unit on the ulna or radius Press the ZERO button and then ask the individual to DEVIATE the LEFT ULNA completely. Press the HOLD button to store the data.</p>

## Upper Extremities: Wrist Range of Motion: RIGHT WRIST

		
<b>Flexion</b>	<b>Neutral</b>	<b>Extension</b>
<p>While individual is in the neutral position place the main unit on their RIGHT phalanges. For single inclinometry stabilize movement in the forearm, for dual inclinometry, place the companion unit on the ulna or radius Press the ZERO button and then ask the individual to FLEX the RIGHT WRIST completely. Press the HOLD button to store the data. Repeat two to five times.</p>		<p>While individual is in the neutral position place the main unit on their RIGHT phalanges. For single inclinometry stabilize movement in the forearm, for dual inclinometry, place the companion unit on the ulna or radius Press the ZERO button and then ask the individual to EXTEND the RIGHT WRIST completely. Press the HOLD button to store the data. Repeat two to five times.</p>
		
<b>Radial Deviation</b>	<b>Neutral</b>	<b>Ulnar Deviation</b>
<p>While individual is in the neutral position place the main unit on their RIGHT phalanges. For single inclinometry stabilize movement in the forearm, for dual inclinometry, place the companion unit on the ulna or radius Press the ZERO button and then ask the individual to DEVIATE the RIGHT RADIUS completely. Press the HOLD button to store the data.</p>		<p>While individual is in the neutral position place the main unit on their RIGHT phalanges. For single inclinometry stabilize movement in the forearm, for dual inclinometry, place the companion unit on the ulna or radius Press the ZERO button and then ask the individual to DEVIATE the RIGHT ULNA completely. Press the HOLD button to store the data.</p>












## Lower Extremities: Hip: LEFT HIP

		
<b>Flexion</b>	<b>Neutral</b>	<b>Extension</b>
While individual is in the neutral position place the main unit on the LEFT femur. Stabilize movement across the pelvis. Press the ZERO button and then ask the individual to FLEX their LEFT HIP completely. Press the HOLD button to store the data. Repeat two to five times.		While individual is in the neutral position place the main unit on the LEFT femur. Stabilize movement across the pelvis. Press the ZERO button and then ask the individual to EXTEND their LEFT HIP completely. Press the HOLD button to store the data. Repeat two to five times.
		
<b>Abduction</b>	<b>Neutral</b>	<b>Adduction</b>
While individual is in the neutral position place the main unit on the LEFT femur. Stabilize movement across the pelvis. Press the ZERO button and then ask the individual to ABDUCT their LEFT HIP completely. Press the HOLD button to store the data.		While individual is in the neutral position place the main unit on the LEFT femur. Stabilize movement across the pelvis. Press the ZERO button and then ask the individual to ADDUCT their LEFT HIP completely. Press the HOLD button to store the data.
		
<b>External Rotation</b>	<b>Neutral</b>	<b>Internal Rotation</b>
While individual is in the neutral position place the main unit on the LEFT femur. Stabilize movement across the pelvis. Press the ZERO button and then ask the individual to EXTERNALLY ROTATE their LEFT HIP completely. Press the HOLD button to store the data. Repeat two to five times. When you are ready to send data to the computer, press the send button while holding the main unit backside to the IR receiver.		While individual is in the neutral position place the main unit on the LEFT femur. Stabilize movement across the pelvis. Press the ZERO button and then ask the individual to INTERNALLY ROTATE their LEFT HIP completely. Press the HOLD button to store the data. Repeat two to five times. When you are ready to send data to the computer, press the send button while holding the main unit backside to the IR receiver.






## Lower Extremities: Hip: RIGHT HIP




		
<b>Flexion</b>	<b>Neutral</b>	<b>Extension</b>
While individual is in the neutral position place the main unit on the RIGHT femur. Stabilize movement across the pelvis. Press the ZERO button and then ask the individual to FLEX their RIGHT HIP completely. Press the HOLD button to store the data. Repeat two to five times.		While individual is in the neutral position place the main unit on the RIGHT femur. Stabilize movement across the pelvis. Press the ZERO button and then ask the individual to EXTEND their RIGHT HIP completely. Press the HOLD button to store the data. Repeat two to five times.
		
<b>Abduction</b>	<b>Neutral</b>	<b>Adduction</b>
While individual is in the neutral position place the main unit on the RIGHT femur. Stabilize movement across the pelvis. Press the ZERO button and then ask the individual to ABDUCT their RIGHT HIP completely. Press the HOLD button to store the data.		While individual is in the neutral position place the main unit on the RIGHT femur. Stabilize movement across the pelvis. Press the ZERO button and then ask the individual to ADDUCT their RIGHT HIP completely. Press the HOLD button to store the data.
		
<b>External Rotation</b>	<b>Neutral</b>	<b>Internal Rotation</b>
While individual is in the neutral position place the main unit on the RIGHT femur. Stabilize movement across the pelvis. Press the ZERO button and then ask the individual to EXTERNALLY ROTATE their RIGHT HIP completely. Press the HOLD button to store the data.		While individual is in the neutral position place the main unit on the RIGHT femur. Stabilize movement across the pelvis. Press the ZERO button and then ask the individual to INTERNALLY ROTATE their RIGHT HIP completely. Press the HOLD button to store the data.









## Lower Extremities: Hip: LEFT KNEE

		
<b>Flexion</b>	<b>Neutral</b>	<b>Extension</b>
<p>While individual is in the neutral position place the main unit on their LEFT TIBIA. For single inclinometry stabilize movement in the upper leg, for dual inclinometry, place the companion unit on the femur. Press the ZERO button and then ask the individual to FLEX the LEFT KNEE completely. Press the HOLD button to store the data. Repeat two to five times.</p>		<p>While individual is in the neutral position place the main unit on their LEFT TIBIA. For single inclinometry stabilize movement in the upper leg, for dual inclinometry, place the companion unit on the femur. Press the ZERO button and then ask the individual to EXTEND the LEFT KNEE completely. Press the HOLD button to store the data. Repeat two to five times.</p>







## Lower Extremities: Hip: RIGHT KNEE

		
<b>Flexion</b>	<b>Neutral</b>	<b>Extension</b>
<p>While individual is in the neutral position place the main unit on their RIGHT TIBIA. For single inclinometry stabilize movement in the upper leg, for dual inclinometry, place the companion unit on the femur. Press the ZERO button and then ask the individual to FLEX the RIGHT KNEE completely. Press the HOLD button to store the data. Repeat two to five times. When you are ready to send data to the computer, press the send button while holding the main unit backside to the IR receiver.</p>		<p>While individual is in the neutral position place the main unit on their RIGHT TIBIA. For single inclinometry stabilize movement in the upper leg, for dual inclinometry, place the companion unit on the femur. Press the ZERO button and then ask the individual to EXTEND the RIGHT KNEE completely. Press the HOLD button to store the data. Repeat two to five times. When you are ready to send data to the computer, press the send button while holding the main unit backside to the IR receiver.</p>

**Lower Extremities: Ankle: LEFT ANKLE**

					
<b>Flexion</b>		<b>Neutral</b>		<b>Extension</b>	
<p>While individual is in the neutral position place the main unit on the bottom of their LEFT FOOT. For single inclinometry stabilize movement in the lower leg, for dual inclinometry, place the companion unit on the tibia Press the ZERO button and then ask the individual to FLEX the LEFT ANKLE completely. Press the HOLD button to store the data. Repeat two to five times.</p>				<p>While individual is in the neutral position place the main unit on the bottom of their LEFT FOOT. For single inclinometry stabilize movement in the lower leg, for dual inclinometry, place the companion unit on the tibia Press the ZERO button and then ask the individual to EXTEND the LEFT ANKLE completely. Press the HOLD button to store the data.</p>	
					
<b>Inversion</b>		<b>Neutral</b>		<b>Eversion</b>	
<p>While individual is in the neutral position place the main unit on the bottom of their LEFT FOOT. For single inclinometry stabilize movement in the lower leg, for dual inclinometry, place the companion unit on the tibia Press the ZERO button and then ask the individual to INVERT the LEFT ANKLE completely. Press the HOLD button to store the data.</p>				<p>While individual is in the neutral position place the main unit on the bottom of their LEFT FOOT. For single inclinometry stabilize movement in the lower leg, for dual inclinometry, place the companion unit on the tibia Press the ZERO button and then ask the individual to EVERT the LEFT ANKLE completely. Press the HOLD button to store the data.</p>	

**Lower Extremities: Ankle: RIGHT ANKLE**

					
<b>Flexion</b>		<b>Neutral</b>		<b>Extension</b>	
<p>While individual is in the neutral position place the main unit on the bottom of their RIGHT FOOT. For single inclinometry stabilize movement in the lower leg, for dual inclinometry, place the companion unit on the tibia Press the ZERO button and then ask the individual to FLEX the RIGHT ANKLE completely. Press the HOLD button to store the data. Repeat two to five times.</p>				<p>While individual is in the neutral position place the main unit on the bottom of their RIGHT FOOT. For single inclinometry stabilize movement in the lower leg, for dual inclinometry, place the companion unit on the tibia Press the ZERO button and then ask the individual to EXTEND the RIGHT ANKLE completely. Press the HOLD button to store the data. Repeat two to five times.</p>	
					
<b>Inversion</b>		<b>Neutral</b>		<b>Eversion</b>	
<p>While individual is in the neutral position place the main unit on the bottom of their RIGHT FOOT. For single inclinometry stabilize movement in the lower leg, for dual inclinometry, place the companion unit on the tibia Press the ZERO button and then ask the individual to INVERT the RIGHT ANKLE completely. Press the HOLD button to store the data.</p>				<p>While individual is in the neutral position place the main unit on the bottom of their RIGHT FOOT. For single inclinometry stabilize movement in the lower leg, for dual inclinometry, place the companion unit on the tibia Press the ZERO button and then ask the individual to EVERT the RIGHT ANKLE completely. Press the HOLD button to store the data.</p>	