

Blue Star Training Module 3 Instruction Sheet # 1	EDU-8014 Blue Star Module 3.1- Calibration			Setting:	Rehab and clinical	Doc #:	EDU-8014
				Supervision:	Certified clinical professional	Version:	1,3
		Population:	General (per indications)	Section:	Clinical Tools	Operation:	Calibration of device (upright stance)
-	Connect tablet to keeogo control unit a) Keeogo device → OFF , Control unit LED → Yellow b) Verify connection status is "Connected" and "OK" in keeogo software						
1	Create a starting profile in Step 1: User profile management a) Create an account by clicking on "New user" and fill out the "User ID" field (rest are optional) b) Choose account and create a profile from factory values; b) Modify the factory default values using the recommended conservative parameter values						
2	Calibrate the hip sensors in Step 2: Calibration a) Have the user adopt the 'calibration posture' → Once in position press <i>Calibrate hip sensors</i> b) Check the <u>calibrated hip angles</u>: Difference between Left & Right ≤ 4° IF calibrated hip angles not within 4° → verify hip and knee sensors position						
3	Adjust continual assistance for user deficit in Step 6: Advanced Parameters a) Keeogo device → ON; Assistance level → 1 b) Adjust <i>continual assistance</i> by user deficit or if any potential benefits: Knee spasticity: Start at -1.5 Nm (<u>continual flex</u>) and ↑↓ by 1 until optimal comfort reached Foot clearance: Start at -1.5 Nm (<u>continual flex</u>) and ↑↓ by 1 until optimal comfort reached Knee buckling: Start at +1.5 Nm (<u>continual ext</u>) and ↑↓ by 1 until optimal comfort reached - Tune symmetrically for proprioceptive familiarization; increase slowly until user perceives <i>too much</i> assist - Revert back to best perceived assistance or kinematics observed						
4	Calibrate angle for motor initiation in Step 2: Calibration a) Have the user adopt the 'calibration posture' → Check calibrated knee angles b) <i>Assign angle for motor initiation</i> = we recommend highest value of "calibrated knee angles" + 5°						
5	Save profile to Keeogo - Turn Keeogo OFF , save profile to device.						
6	Familiarize user with wearing Keeogo (no assistance) a) Keeogo device → ON; Assistance level → 1; Ask user to walk a few steps & partial squats b) Take note of their feedback and help them relax into using Keeogo						

Recommended conservative parameter values

Modifications:

STEP 3: Assistance Levels

Swing flexion assistance → 3 Nm

Swing extension assist. → 3 Nm

WB extension assistance → 5 Nm

WB eccentric control → 5 Nm

STEP 5: Stairs Descent

Back leg WB release angle → 40°

Neutral position timeout → 450 ms

STEP 6: Advanced Parameters

Motor ramp up → 1

IF dropfoot / poor foot clearance:

STEP 4: Assisted RoM Swing Flex → 60°

IF poor heelstrike / short stride:

STEP 4: Assisted RoM Swing Ext → 20°

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Revision History			
DATE	REV	Change description	Owner
2019-07-03	1,0	Original Version. Modified from IN-8000 series (A. Mai and M. Brookshaw)	B-Temia Inc.
2019-07-17	1,1	Revised conservative parameter column ordering, wording at step 4 and 5 (A. Mai)	
2020-01-13	1,2	Updated wording, document number and cross-references to match revised structure (M. Brookshaw)	
2020-04-30	1,3	Updated wording, to match revised structure and updated recommended conservative values (A. Mai)	
This document SHALL be print on both side to show the revision history on the back side			

