

Scales 1-5, (5 being highest)

Category	Need	Importance	Difficulty	Attributes	Engineering Specification
Safety	The ST makes running on treadmill safer	5	5	Tripping Safety	Falling on the ST is as safe for a blind person as falling without it is for a sighted person
	Running with ST inspires confidence	5	3	Users of the ST will not feel in danger of falling or injury while using the product	90% of users feel confident and safe
	The ST can't be used improperly	4	3	Features communicate proper setup.	99% of blind users can tell if setup done properly
Feedback	The ST provides appropriate back to front feedback	5	4	Has appropriate displacement force curve	To be determined by test
	The ST provides appropriate side to side feedback	5	4	Has appropriate displacement force curve	To be determined by test
	The ST keeps users on treadmill	5	2	The ST physically prevents users from running off the treadmill	The ST can give a guidance force of 500 N of force side to side and back to front to keep
Usability	The ST doesn't interfere with treadmill use	5	3	The ST allows user normal running/walking motions ie, arms, lateral, vertical	free arm motion for 10-90% of population
					unhindered vertical motion of 3" total at hips
					unhindered lateral motion of 3" total in at hips
	The ST is nice to touch	5	3	No pinch points, sharp edges, nice material	Corner Radii TBD, Max Pressure TBD
	The user can control treadmill while using ST	5	3	The user can control treadmill while using ST	User has access to start/stop/faster and slower button
	ST is compatible with existing treadmills	4	3	Can be attached	Fits 80% of widths and decks
				No side rail interference	Doesn't interfere with 80% of hand rails
	ST easy to get into	4	3	ST has simple attachment and adjustment points	90% of Blind users can get into installed device in 3 mins without assistance
	The ST remains comfortable after extended use	4	2	The ST does not raise skin temperature	2 F increase in temperature at skin (optimum)
				The ST does not chafe	No noticeable abrasion after 1hr
				Hygenic	Machine washable
The ST does not draw attention to the user	4	2	Fits in environment	Same color scheme and appearance as other exercise equipment	
The ST adjusts to user size	4	2	Adjusts to different user height	5' 2" to 6' 3" height	
			Adjusts to different user waist	24.2 to 60.2 in circumference	
Market	New Users can easily learn about ST	4	3	Instruction	For 90 % of users amount of Instruction < 1 minute