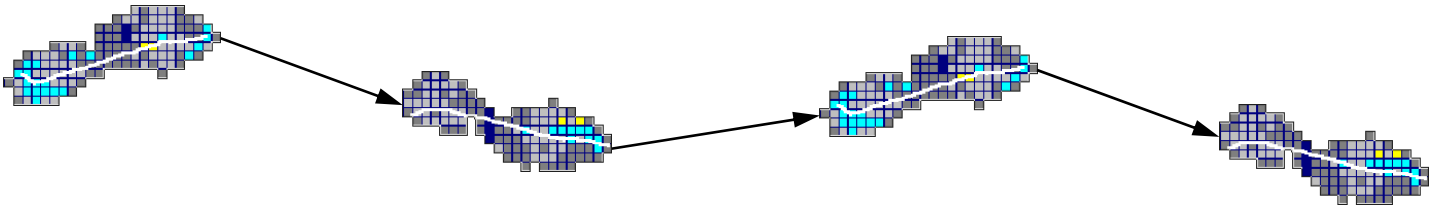
The *GAITRite* Portable Walkway System…
Footprints You Can See,
Measurements You Can Trust!



The *GAITRite* portable gait analysis system effortlessly provides valid and reliable measurements in real-time, such as: cadence, step length, and velocity. It's simple to objectively quantify walking function & fall risk while documenting treatment outcomes.

- **Setup... Test... Report... in Minutes!**
- **Roll it up... Take it with You!**
- **Immediate Pre- and Post-Treatment Feedback**
- **Provides Required Documentation**
- **Generates Outcome Measures**
- **Facilitates Reimbursement**

Why Measure Gait?

"There is a defined need for objective measurement of gait because without it the quality of treatment decisions is reduced because of the subjective and often unreliable nature of the assessment. Objective measures must also be employed if one is to demonstrate the efficacy of a treatment protocol, a function that will become increasingly important as health care resources become more strained and health care providers are held more accountable...Gait assessment is an everyday responsibility for the practicing therapist. Visual assessment, which is almost universally used for this purpose, has been shown to be unreliable at best. Measurement of the temporal and distance factors of gait have been found to be clinically useful."

James C. Wall, Ph.D., Denis Brunt, PT, Ed.D.; Chapter 17, Clinical Gait Analysis: Temporal and Distance Parameters. Assessment in Occupational Therapy and Physical Therapy edited by J.V. Van Deusen, 1996

Why *GAITRite*?

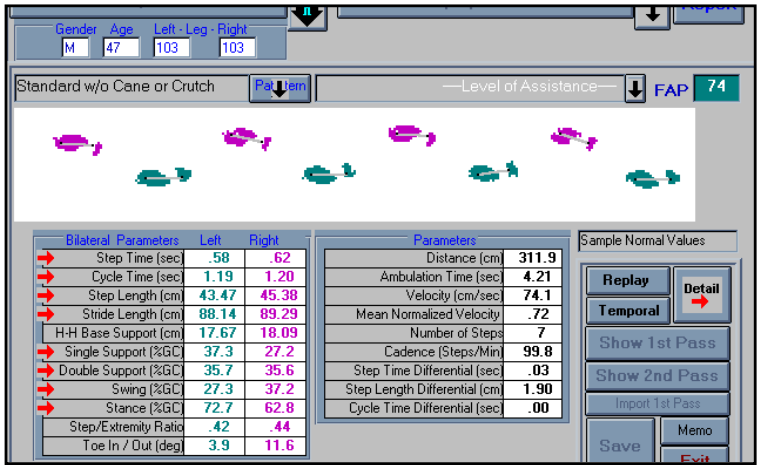
The *GAITRite* electronic walkway system automates measuring spatial and temporal gait parameters. The walkway is portable, can be laid over any flat surface, requires minimal setup and test time and requires no placement of any devices on the patient. As the patient ambulates across the 2' x 12' walkway *(custom sizes are available)*, the system captures the geometry and the relative arrangement of each footfall as a function of time. Parameters are computed along with their coefficient of variation. Individual test reports and progress reports are configurable and easily generated.

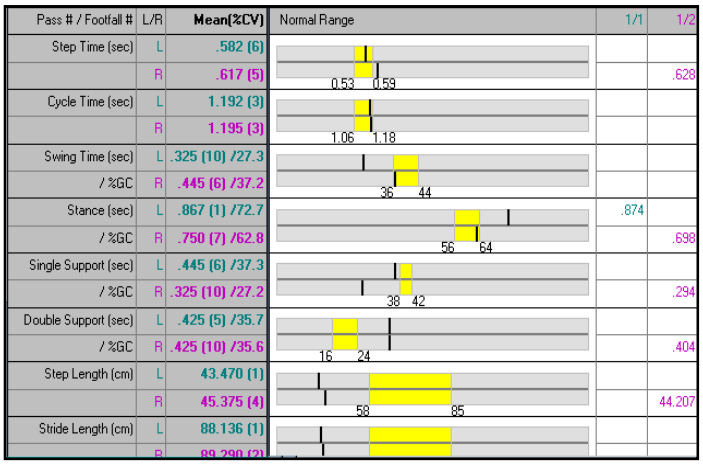
GAITRite... Measuring Function One Step at a Time!

CIR Systems — International Sales & Marketing Office — 610.449.4879

GAITRite...Easy to use, provides immediate feedback, and it's inexpensive.

Example: Knee Injury

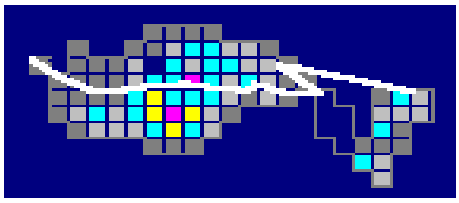




In the example above, a patient was tested on the *GAITRite* prior to right knee surgery. All values outside of the normal range are noted with a **red** arrow. The results are consistent with the patient not applying weight on his right leg due to the pain caused by a torn right meniscus.

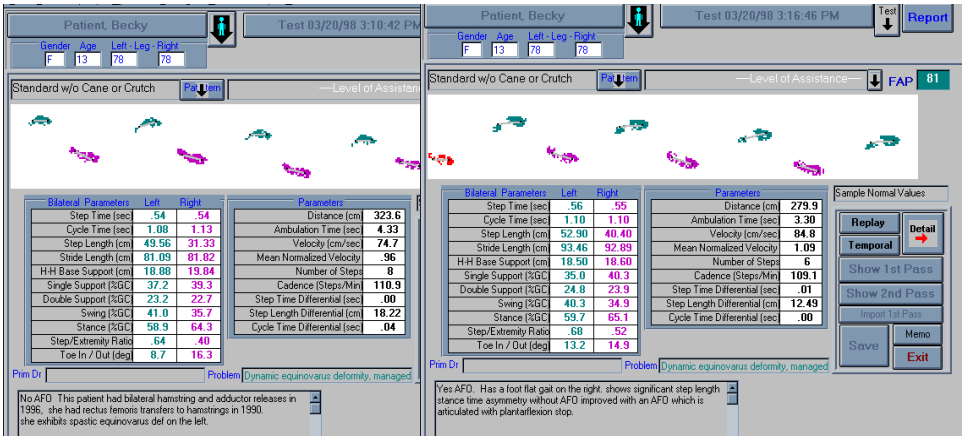
Individual footfall values and coefficient of variation are presented in the above chart. The normal range for the variable is highlighted in yellow, while the actual bilateral value for the variable is identified as a vertical black line.

Direction

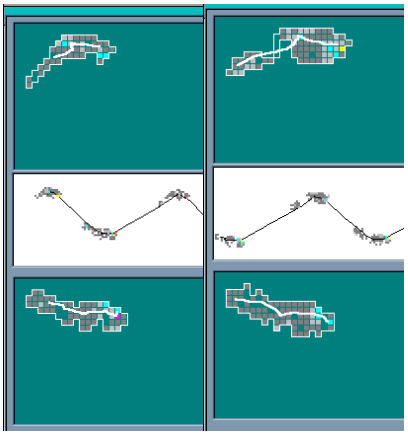


At the footfall level, the footfall transition line illustrates that the patient rocked backwards during his right step, as indicated by the "Z"-like pattern.

Example: Left Spastic Equinovarus Deformity



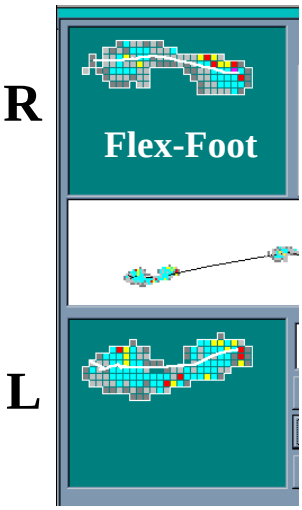
- ✓ 13 Year Old Female
- ✓ Rectus femoris transfers to hamstrings in 1990
- ✓ Bilateral hamstring and adductor releases in 1996



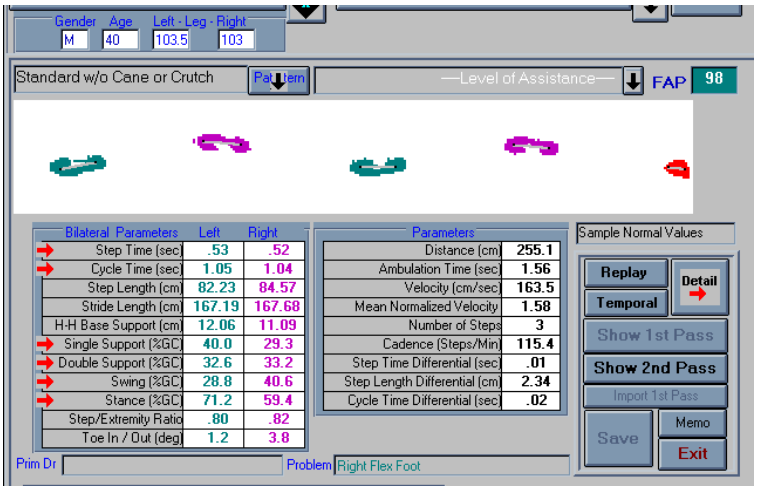
Without AFO	With AFO
Significant step length asymmetry	Reduced asymmetry
Low velocity	Increased velocity by 12%
Poor heel contact	Good heel contact
Excessive stress on knee, hip and lower back	Reduced stress on knee, hip and lower back

The information is practical, functionally relevant and easily interpreted.

Example: Right Transtibial Amputee

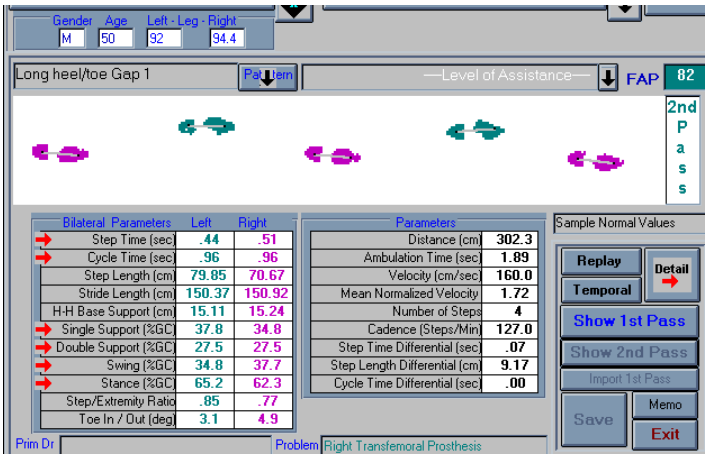


- ✓ Increased stance time and single support time (as a % of the gait cycle) on the sound side
- ✓ Decreased swing time on the prosthetic side
- ✓ Narrow base of support
- ✓ Overall symmetry for many other parameters
- ✓ Efficient footfall transitions for both feet



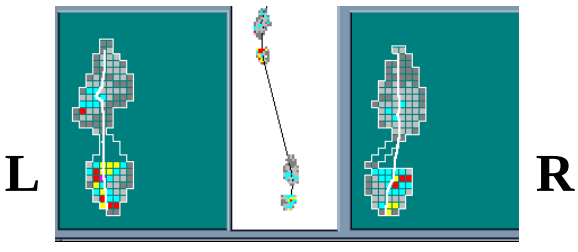
Peer-reviewed scientific literature indicates that muscle weakness, joint instability, acute and/or chronic injuries and numerous pathologies may contribute to gait deviations. Documenting these patterns, measuring current status, quantifying progress, matching objective gait parameters with subjective findings, refining proper joint alignment of prosthetics and braces, selecting the appropriate assistive device and justifying reimbursement for services rendered are powerful reasons to make the *GAITRite* system an indispensable part of your day to day operations.

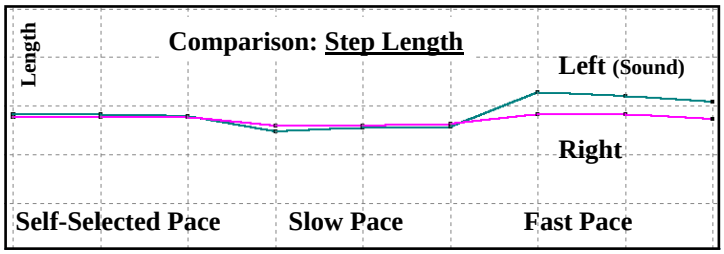
Example: Right Transfemoral Amputee



The subject was asked to walk at a fast pace. Several asymmetries are evident, most notably there was a 9 cm step length differential.

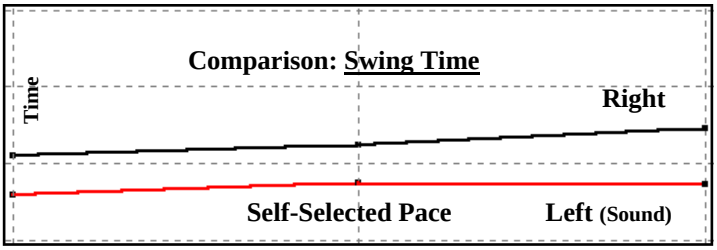
In the footfalls below, notice the differences in heel strike, transition center and toe off transition on the right.





In the graph above, step length for self-selected and slow pace trials were very symmetrical. At the fast pace, there is a 10% difference between the left and the right step lengths; the subject indicated that his prosthesis could not keep up.

In the graph below, the swing time on the prosthetic side was slower than that of the sound side. The average of 6 walks are compared in this example.



Applications & Client Comments

"One of the most powerful features of the GAITRite is its ability to simultaneously measure both step time and step length. Muscle weakness, pain or limb shortening, may lead to reduction in stance time on the affected side. To compensate, patients either reduce their step time which in turn reduces their step length, or they increase their joint angular velocity without reducing their step length. In essence, the patient moves faster in a shorter period of time. Visual inspection of these compensation patterns just isn't accurate. With my GAITRite, I can objectively measure if there is compensation for a gait abnormality."

Anil Bhave, PT —
Gait Laboratory at Sinai Hospital, Baltimore MD

"GAITRite easily, accurately and objectively measures temporal and spatial parameters of gait including velocity, which is a very useful variable, since it has been correlated to function. In addition, other gait variables are known to vary with velocity making its measurement along with other gait measurements critical. Finally, although GAITRite does not substitute for the diagnostic capabilities of a gait laboratory, it provides the user with a valuable clinical assessment tool, a meaningful clinical outcome measurement tool, as well as a potential treatment or research tool."

Lisa Selby-Silverstein, PhD, PT, NCS

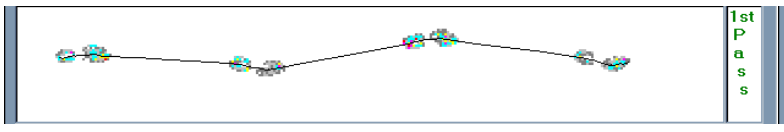
"As a health scientist, I am looking at parameters to evaluate physical therapy treatment that have clinical relevance in regards to restoring or regaining daily functions. One of the daily functions we feel is very important to quantify is the quality of a person's gait. We purchased the GAITRite because it is accurate, easy to use and very portable. Our patients may have disabilities and/or disturbances in their functional gait either due to having limb saving surgery, an orthopaedic problem or a neurological problem. Symmetry in stride length, step length and cyclical parameters of walking may help us identify and classify movement patterns as they relate to certain injuries and illnesses. The GAITRite database allows us to track these patients and their treatments over time and from location to location. Due to the subjectivity and unreliability of visual assessment, along with the costs associated with the physiotherapists' time, it would be impractical for us to objectively measure outcomes without the GAITRite."

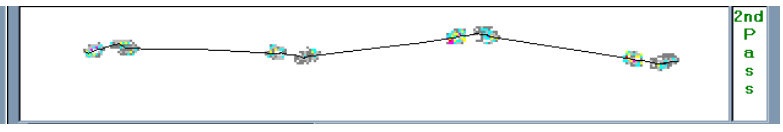
Hans J.K.C. Bloo, Msc, PT - Nijmegen

GAITRite Specifications

Overall Dimensions:	**180 x 35.5 x .25 inches (L x W x H) in 16-foot model**
Active Area:	**228 x 24 inches (L x W) in 12-foot model (lengths up to 26 feet are available)**
Weight:	**60 lbs. for 16-foot model (75 lbs. with wheeled carrying case)**
Sampling Rate:	**60Hz, 120Hz, 240Hz**
Communications:	**USB**
Power Requirements:	**12Vdc**
Number of Sensors:	**18,432 sensors are placed on .5 inch centers arranged in a 48 x 288 grid**
Sensor:	**.4 inches square, dual control**
Walkway Indicators:	**Green light = Power Indicator, Yellow light = Program Status Indicator**
Top cover:	**Vinyl with square thread reinforcement, waterproof and chemical resistant**
Bottom cover:	**Open cell foam rubber**
16-Foot Platinum Price :	**Call for Information (computer not included)**
Warranty:	**2 years walkway and 2 years software maintenance included**
Delivery:	**45-60 days after receipt of purchase order**
Computer Requirements:	**Windows XP ® / Windows Vista® / Windows 7 ®**
	Minimum screen resolution — 1280 x 768 (1440 x 900 preferred)
	CD-ROM/DVD drive, at least 3 or 4 USB ports, external mouse (recommended)
	1GB RAM, more is always better

The GAITRite provides you with consistent and reliable data. In the graphical mock-up below, the footfall patterns of two walks are almost identical; they do however, start and end at different points on the walkway.





Functional Ambulation Performance score (FAP), was developed by Arthur J. Nelson, PhD, PT in 1974 as a single score of gait to objectively measure the efficacy of treatments in hemiparetic training. A scoring system was created using published human locomotion data, and is based on the ratio of step length to leg length to step time. Also factored into the score are bilateral asymmetries.

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