



Two GPS Watches and a Security Camera

(a Learn-in-30)

Lorrin R. Garson

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Electronic Gadgets



Two GPS Watches and a Security Camera System



What Is a GPS Watch?




















- A wrist watch
- A smart watch
- Integrated GPS receiver
- Many connect wirelessly to external sensors (ANT+ protocol)
- Oriented towards sports
 - Running
 - Walking
 - Golfing
 - Cycling
 - Swimming
- Play your music

First GPS Watch Garmin Forerunner 101^a



^a Introduced March 2, 2003.

Major Brands of GPS Watches

Brand	Comments	References
Apple	Numerous apps	 ← Active hypertext link
Fitbit	2 Watches; 6 wristbands	
Garmin	Numerous GPS watches and sport devices	     
JoyGeek	British company	 
Lezyne	Focus on cycling	
Polar	3 GPS watches + other smart devices	
Samsung	Numerous GPS devices	
Suunto	Numerous GPS watches and sport devices	
Timex	Currently only 1 GPS watch	
TomTom	Numerous GPS watches and sport devices	   



28,149 miles in 14 years^a



^a As of June 14, 2018

My wife's view of cycling!

AS ADDICTIVE AS COCAINE



AND TWICE AS EXPENSIVE

Data Collected

Date	Distance (mi)	Cumulative Distance³ (mi)	Riding Time⁴ (hr)	Speed (av, max)⁵ (mi/hr)	Ascent (ft)
2018-06-14	51.81	879.02	4.03	12.9/27.49	6,201
2018-06-12	62.40 ⁷	827.21	5.00	12.5/31.99	7,985

Date	Average Heart Rate³	Max Heart Rate⁴	From Rider (Kcal⁵)	From Motor⁶ (Kcal)	Percent Rider/Motor (%)
2018-06-14	73	131	2,591	301	90/10
2018-06-12	73	121	3,000	320	90/10

$$HR_{\max} = 0.85 (220 - \text{age})$$

$$\text{Age } 78.88: HR_{\max} = 120$$

Replacement Candidates



Apple Watch 3
\$329+



Garmin vivoactive 3
\$270



**Suunto Spartan
Trainer Wrist HR**
\$279+

Two Replacement Watches



Timex Ironman GPS
\$100



Lintelek Smart Band
\$31

Timex Ironman GPS

Sport Modes	Category	Metric	Definition
Run / Bike / Swim / Other	Time	Time ✓	Total active workout time since the start
Run / Bike / Swim / Other	Time	Duration	Total time (including pauses) since the start
Run / Bike / Swim / Other	Time	Lap Time ✓	Time recorded since start or since the last lap was triggered
Run / Bike / Swim / Other	Time	Time Of Day ✓	Time of Day
Run / Bike / Other	Distance	Distance	Total distance recorded
Run / Bike / Other	Distance	Lap Dist ✓	Distance recorded since start or since the last lap was triggered
Run / Bike / Other	Distance	Prev Dist	Distance recorded during the last lap
Run / Other	Pace	Pace	Current moving pace
Run / Other	Pace	Avg Pace	Pace averaged over the entire workout
Run / Other	Pace	Lap Pace	Pace average since start or since the last lap was triggered
Run / Other	Pace	Prev Pace	Average pace recorded during the last lap
Run / Bike / Other	Speed	Speed ✓	Current moving speed
Run / Bike / Other	Speed	Avg Speed ✓	Speed averaged over the entire workout
Run / Bike / Other	Speed	Lap Speed	Speed average since start or since the last lap was triggered
Run / Bike / Other	Speed	Prev Speed	Average speed recorded during the last lap
Run / Bike / Other	Elevation	Elevation	Current GPS based elevation*
Run / Bike / Other	Elevation	Ascent	Total ascent recorded
Run / Bike / Other	Elevation	Descent	Total descent recorded
Run / Bike / Other	Elevation	Lap Ascent	Ascent recorded since start or since the last lap was triggered
Run / Bike / Other	Elevation	Lap Desc	Descent recorded since start or since the last lap was triggered
Run / Bike / Other	Other	Calories ✓	Total calories burned
Run / Bike / Swim / Other	Other	Lap Num	Lap number
		Max Speed ✓	

Lintelek Smart Band

Features & Functions	Description
Charging	Remove half of band and plug watch into USB port
Associated app	VeryFitPro for iPhone and Android phones
Connectivity	Bluetooth
Activities ✓	Walking, Running, Cycling + 11 others HR, Steps, Kcal, Distance, Pace, Avg pace, Time
Heart Rate ✓	Resting, Average, Maximum
Sleep	Total, Deep, Light, Wake
Alarms	Several types
SNS Message Alert	From 8 various social media apps
SMS Alert	Notifications received by paired smart phone
Find Phone	Paired phone will ring or vibrate



New Topic

Security Camera

System

Two Types of Home Security Systems

- **Security services**

- **Monthly or annual fee**

- \$600 to \$1200 installation

- \$15 to \$100/month (average ~\$30/month)

- **Service alerted if incident occurs**

- **Alerts can be reported to police, fire department, EMS**

- **Home security cameras**

- **One-time purchase of equipment**

- **On your own if incident occurs**

Alternative to Security Systems



Arlo Base Station and Cameras



Base station attached to Ethernet Switch



Front Door

Deck Door

Basement Door



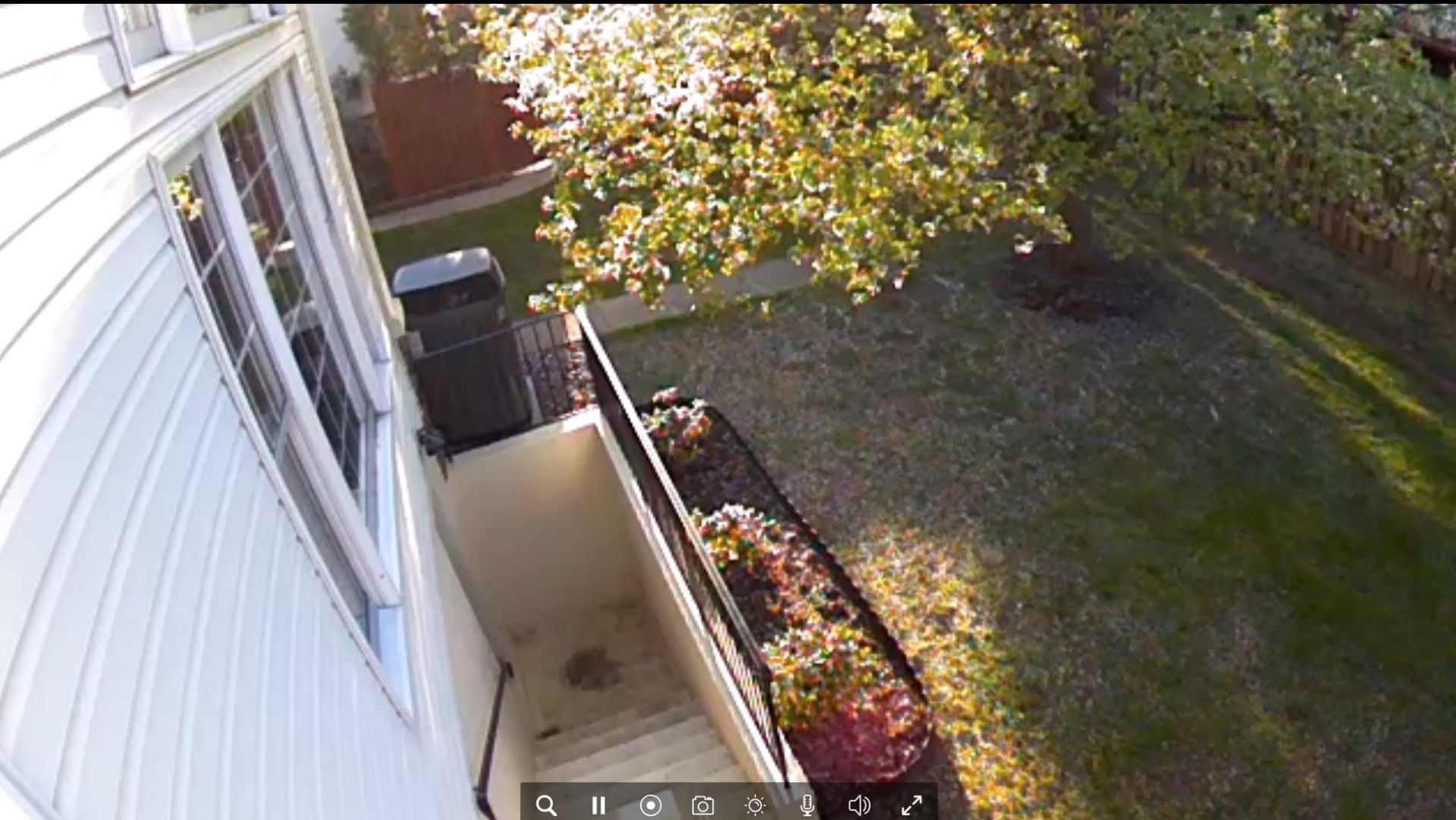
Front Door (1080p HD)




Deck Door (720p HD)



Basement Door (720p HD)



	Arlo Pro 2	→ <u>Arlo Pro</u>	Arlo 
→ HD video	<u>1080p HD</u>	<u>720p HD</u>	720p HD
Cord-free	Yes	Yes	Yes
Weather resistant	Yes	Yes	Yes
Wi-Fi	Yes	Yes	Yes
→ Power source	Solar panel or rechargeable battery	<u>Solar panel or rechargeable battery</u>	4 CR123 batteries
Plug-in option	Yes	Yes	No
→ Storage duration	7 days free	<u>7 days free</u>	7 days free
→ Local storage	Yes, USB drive option	<u>Yes, USB drive option</u>	No
→ Alerts	Motion & audio	<u>Motion & audio</u>	Motion
Activity zones	Yes	No	No
Field of view	130°	130°	110°
Night vision	Yes	Yes	Yes
→ Siren	Yes Set to Off	Yes Set to Off	No
→ Price	\$440 (two-camera kit)	<u>\$403 (two-camera kit)</u>	\$220 (two-camera kit)

Arlo Subscription Plans

For Home

For Business

Basic

\$0

- ✓ 7 Days of Cloud Recordings
- ✓ Up to 5 Cameras
- ✓ Limited Support for 3 Months

Premier

\$99

per year

\$9.99 per month

- ✓ 30 Days of Cloud Recordings
- ✓ Up to 10 Cameras
- ✓ Unlimited Support

Elite


\$149

per year

\$14.99 per month

- ✓ 60 Days of Cloud Recordings
- ✓ Up to 15 Cameras
- ✓ Unlimited Support

Arlo Smart

- **AI software specifically detects a person—not squirrels & birds**
- **Zero in on a specific area within a camera's view**
- **E-mail alerts include a image of what caused the alert**
- **Enables you to contact police and other first responders near your home**
- **Priced at:**
 - **\$2.99 per month per camera and 7 days data storage, or**
 - **\$9.99 per month for all cameras and 30 days data storage, or**
 - **\$14.99 per month for all cameras and 60 days data storage, or**
 - **Other plans...**
- **For more information see** 

Arlo System—Our Experience

- **Recharge camera batteries after 3-6 months, depending on number of video recordings**
- **Cameras very sensitive to motion, picks up:**
 - **People**
 - **Deer & foxes**
 - **Birds & squirrels**
- **Logged one month of activity:**
 - **Average 35 videos/day**
 - **Average size 1.9 MB**
 - **Attached 500 GB drive can hold 19 years of video**

Arlo System—Our Experience (cont.)

- **Use Chrome browser to control cameras—user friendly**
 - **Turn cameras on and off**
 - **View videos stored in the Cloud**
 - **Check camera battery charge level**
 - **Adjust video and audio settings**
 - **Grant access to e-mail notices and videos**
- **Customer service at (408) 638-3750 was okay**

Time's Up

Thank You!

