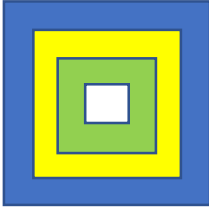


Introduction to Home Security

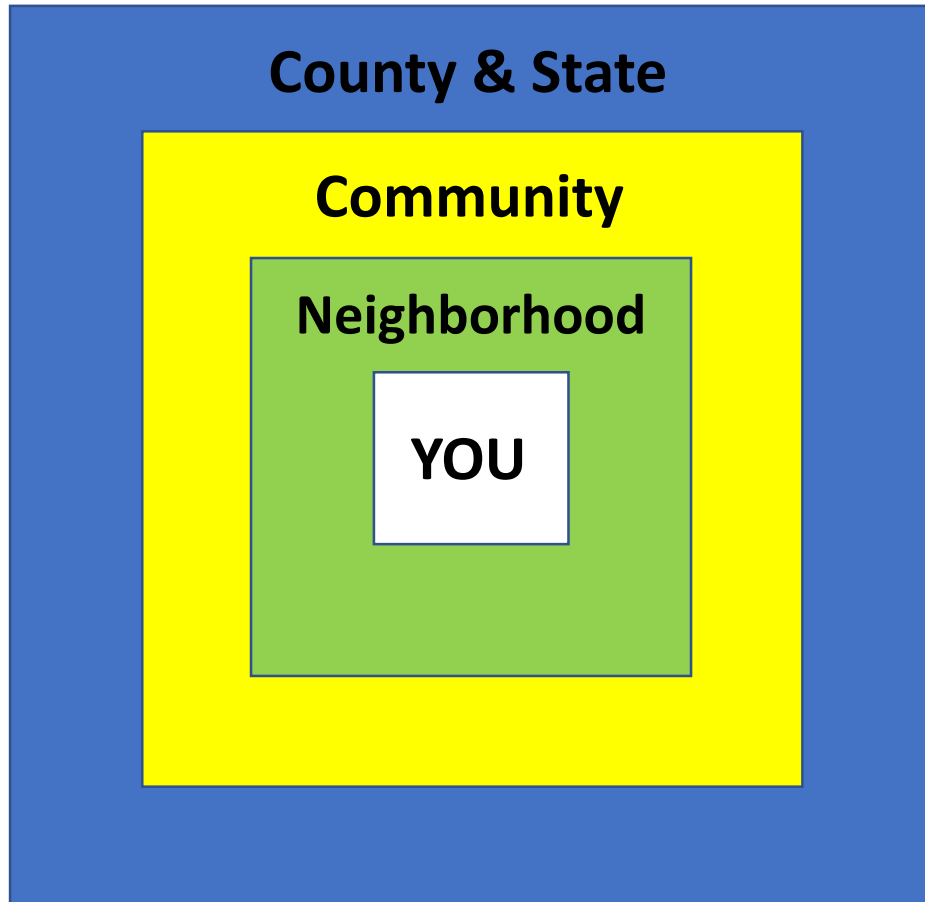
Presented by the Trilogy Security and Preparedness Committee (TSPC)

2/9/2019

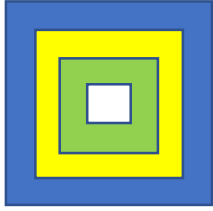
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Security & Preparedness Starts With You

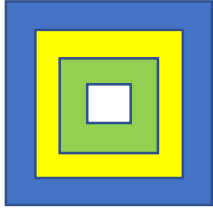


- **YOU**
 - Make security & preparedness personal
 - Inform yourself about security/preparedness options
 - Take action to avoid being a victim
 - Have a plan and practice it
- **Neighborhood**
 - Know your neighbors
 - Look out for each other
 - Form a Neighborhood Watch
- **Community (Trilogy)**
 - Be involved
 - Support preparedness activities
- **County & State**
 - Use sheriff's, fire and emergency agency information sources
 - Know how to get help and what to expect from these agencies in an emergency



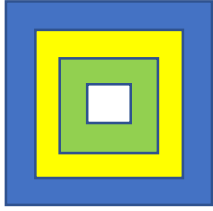
TSPC Security Activities

- Home security workshops and fair
- Neighborhood Watch
- Voluntary security patrols
 - **Email:** TSPC.MD@cox.net **Subject:** Voluntary Patrol
- Snap and Send (Interest survey)
 - **Email:** TSPC.MD@cox.net **Subject:** Snap
- Email registration for TSPC notices and alerts
 - **Email:** TSPC.MD@cox.net **Subject:** Notices
- Smart911 registration (On-line at: www.smart911.com)
- Camera registration (On-line at: <https://goo.gl/forms/QSNG09Ea3iclxmTB3>)
- Paid security patrols
- Vehicle license plate reader (LPR) cameras



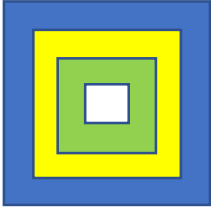
Develop a Security Mindset

- Implement personal and home security measures
 - Get a home security audit from the SLO sheriff's department crime prevention unit (805-781-4483)
 - Minimize how vulnerable you appear to a criminal
- Avoid or leave potentially dangerous situations
- Have an exit plan at home and wherever you go
- Make provisions to defend yourself if you can't withdraw from a confrontation
- Remember – Nothing you own is more important than your life



Elements of Home Security

- Inside
 - Get a burglary and fire rated safe
 - Close and lock your windows and doors (Even when you're home)
 - Make your home look occupied at all times
 - Install and use a burglar alarm system and interface it to smart home controls
- Outside
 - Minimize bushes and unlit/hidden entryways to your home
 - Lock your gates
 - Lock your car
 - Don't leave your garage door opener in the car when on your driveway or the street
 - Install and use a video surveillance system and interface it to smart home controls

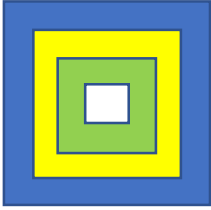


Home Safe (Example)

- AMSEC Model BF-1716
- Weight 412 pounds
- Outside Dim 23”H x 22”W x 22”D
- Inside Dim 17”H x 16.5”W x 16”D
- Storage space 4,488 cubic inches
- U.L. Listed Residential Security Container burglary rating
- U.L. Listed 1-Hr. 350°F fire rating
- Anchor bolt hole to secure safe to floor
- Price ~\$1,500



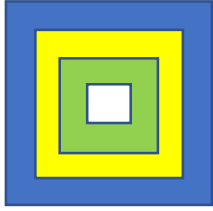
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Small Home Safe (Example)

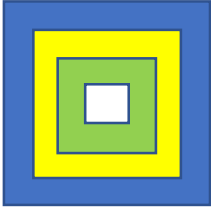
- AMSEC Model B-1414
- Weight 64 pounds
- Outside Dim 14”H x 14”W x 14”D
- Inside Dim 13”H x 11”W x 11”D
- Storage Space 1,573 cubic inches
- Mounting holes to secure safe to floor
- Price ~\$300





Safe Manufacturers & Local Installers

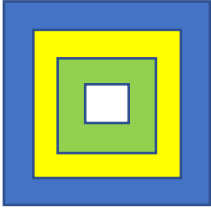
- Manufacturers
 - American Security (<http://www.amsecusa.com>)
 - Liberty (<https://www.libertysafe.com>)
- Local safe vendors/installers
 - Armstrong Lock & Key (805-925-1050)
 - Bee Safe Lock & Key (805-929-5300)
 - Paso Robles Safe & Lock (805-238-7115)



Light Control Timer (Example)

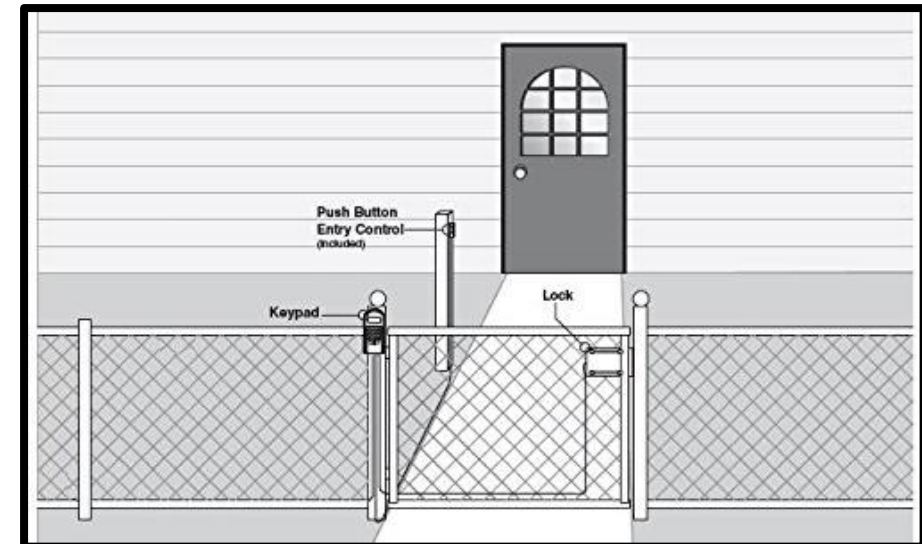
- Model Entner WiFi Smart Plug
- Voice Control
 - Alexa/Google Assistant
- Smart Phone Control
 - Daily timers
 - On/Off schedules
 - Sunrise/sunset function
- Size
 - Occupies only one socket
- Current 15A max
- Amazon Prime Price – \$12.59 w/tax

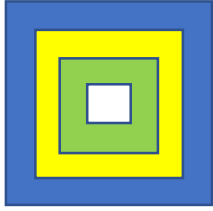




Gate lock (Example)

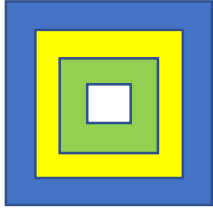
- Suitable for DIY installation
- Battery powered
- Key pad entry with temporary codes for service and landscape maintenance personnel
- Quick exit push button gate lock release in case of fire or other emergency
- Amazon Prime price \$99





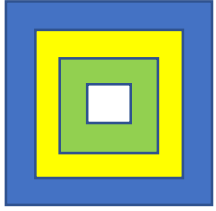
Burglar Alarm System Features

- Acts as a deterrent
 - Detects intruders inside your home
 - Automatically triggers an audible alarm
 - May be remotely monitored for law enforcement notification
- System elements
 - Control unit
 - Contains the brains of the system and the alarm (may also be connected to external alarm)
 - Sensors
 - Door/Window sensor – Senses if door or window is open or closed
 - Glass break sensor – Detects if glass break occurs within a room
 - Motion detector – Detects movement within sight of sensor



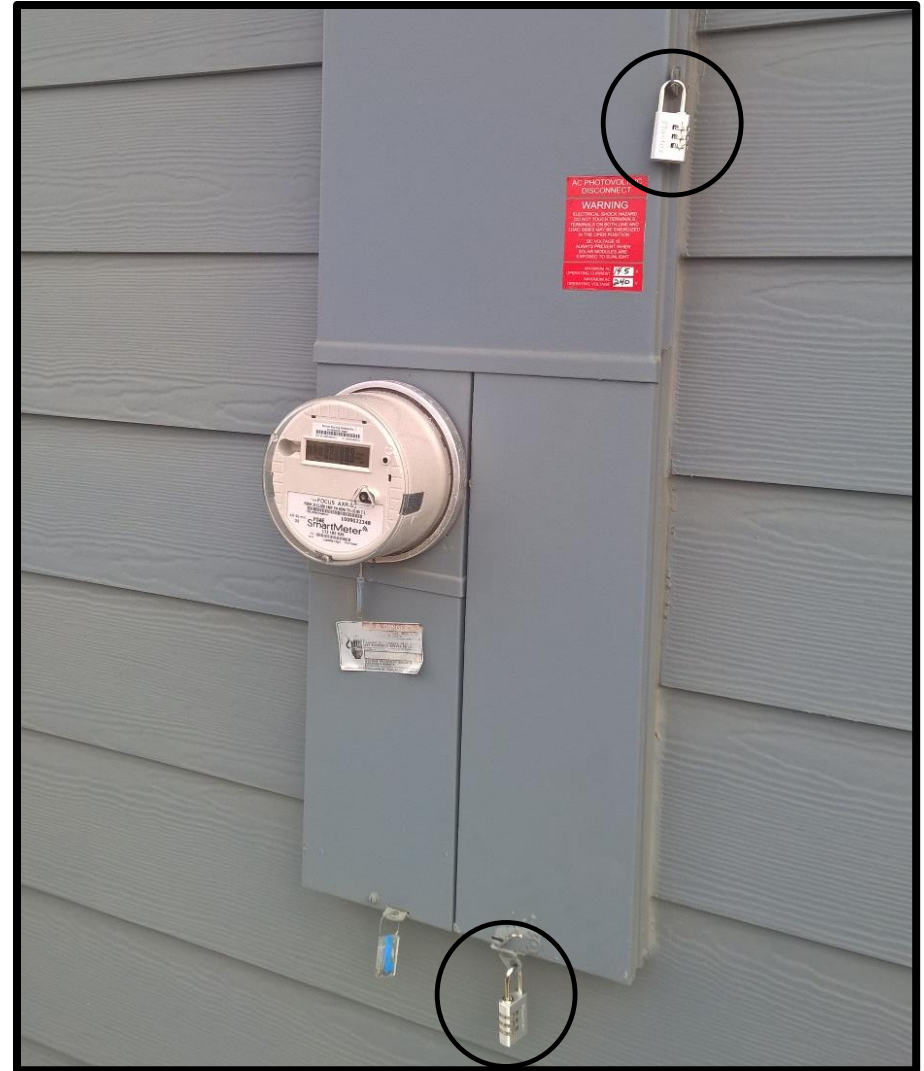
Burglar Alarm Design Considerations

- Select sensors that alarm upon initial home entry
- Include motion sensors should someone get inside your home undetected
- Protect your control unit from being disabled prior to alarming
- Link your burglar alarm to smart home lighting controls (Z-wave, Insteon, Lutron, Leviton)
- Protect your security system and communication links from power loss
 - Lock the circuit breaker panel on the outside of your home
 - Use a battery backup for your Wi-Fi router and modem
- Post signs advertising the use of a burglar alarm system

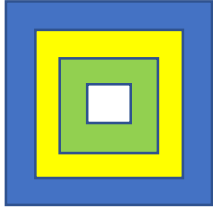


Electrical Panel Lock (Example)

- Model Master Lock 630D
- Home Depot Price ~\$6



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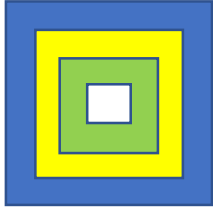


Battery Backup (Example)

- Model CyberPower 1350 VA
- CostCo Price ~\$100



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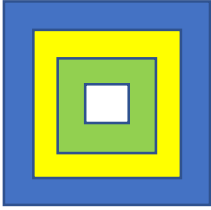


CCMA CC&Rs Section 10.5 Signs

10.5.4 – One (1) sign for a Lot or Condominium advising of the existence of security services protecting a Lot or Condominium which complies with committee rules

10.5.5

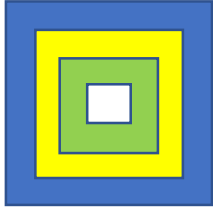
- a) The sign is not larger than 18" x 30" in size
- b) The sign is attached to the ground by a single vertical stake which does not exceed 2" x 3" (i.e. posts, pillars, frames, or similar arrangements are prohibited)
- c) The top of the sign is not more than 3' in height above the ground
- d) The sign is of a color and style authorized by the committee



Burglar Alarm System Comparison (4 Doors/12 Windows/8 Rooms)

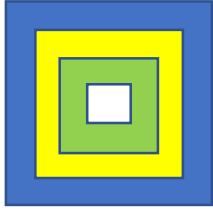
Vendor	Install	Mounting	Remarks	Cost (\$)
Arlo			No product	
Nest	DIY	Wire-Free WiFi	Requires Hub station, 24 Detect sensors (16 contact/8 motion), <u>No glass break sensors</u> , Alexa/Google compatible, Monitoring \$29/mo or \$19/mo w/36 mo contract	~1500
Ring	DIY	Wire-Free WiFi	Requires Hub station, 16 Contact sensors, 8 Motion sensors, <u>No glass break sensors</u> , Alexa/Z-Wave compatible, Monitoring \$10/mo	~900
ADT	Pro	Wire-Free WiFi	1 base station, 16 Contact sensors, 8 Glass break sensors, 8 Motion sensors, Alexa/Google/Z-Wave compatible, Monitoring \$40-55/mo	Custom
Nortek/ GoControl	Pro	Wire-Free WiFi	Requires 2GIG base station, 16 Contact sensors, 8 Glass break sensors, 8 Motion sensors, Alexa/Google/Z-Wave compatible, Monitoring \$30/mo	Custom
Vivint	Pro	Wire-Free WiFi	Requires base station, 16 Contact sensors, 8 Glass break sensors, 8 Motion sensors, Alexa/Google/Z-Wave compatible, Monitoring \$40/mo (w/equipment prepaid)	2900

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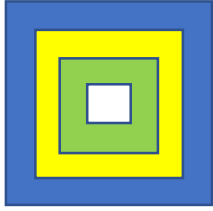
Video Camera System Features

- Acts as a deterrent
 - Provides arrest and prosecution evidence
 - Can be linked to home lighting controls as well as integral flood lights to alert burglars that they have been detected prior to home entry
- System elements
 - Video recorder
 - Local – Network Video Recorder
 - Remote – Cloud storage via internet
 - Cameras
 - Wire-Free, Wireless, Wired, Power over Ethernet (POE)
 - Smart phone linked 2-way audio capable cameras available



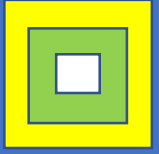
DRC Guidelines Section 6.2.12 Security Lights

Security Lighting on a Lot or Condominium Unit that is attached to the exterior of a Dwelling Unit or other structure shall be limited to lighting that is triggered by motion on the Lot or Condominium Unit (but not by motion on neighboring properties and Common Area) and reasonably illuminates the area of the Lot or Condominium Unit immediately surrounding the Dwelling Unit. Such lighting shall not be directed at any neighboring properties and shall be mounted no higher than 10 feet above ground. Any security light intended to operate after 10:00 p.m. must be operated by a motion detector. The motion detector shall be programmed to shut off the light(s) no longer than 5 minutes after motion is detected and the light has been illuminated.



Video Camera System Design Considerations

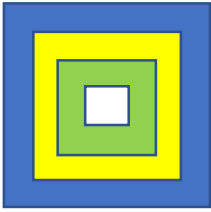
- Design your system to sense intruders at the limits of your property
- False detects are an issue
 - Excessive false alarm rates for motion activated cameras can lead to “smart phone alert fatigue”
 - Systems that record continuously avoid excessive real time alarms while retaining critical visual information for later use
- Good facial imaging is important as evidence for arrest and prosecution
 - Better results at smaller camera angles (<30 deg) to the subject
 - Consider loss of a camera the cost of getting good facial recognition data
 - Image resolution is a function of array size, field of view, distance and lighting
 - More pixels is better
 - More sensitivity under low light conditions is better



Video Camera Installation Assessment

Type	PRO	CON
Wire-Free <ul style="list-style-type: none">• Power – Battery• Data – Home Wi-Fi network	<ul style="list-style-type: none">• No cables to install• No home video recorder• Lowest installed price	<ul style="list-style-type: none">• Battery recharge every 3-6 months• Cloud storage fees• Event recording uses Wi-Fi bandwidth
Wireless <ul style="list-style-type: none">• Power – 110 VAC wiring• Data – Home Wi-Fi network	<ul style="list-style-type: none">• No battery recharging• No home video recorder	<ul style="list-style-type: none">• Requires AC power at camera• Cloud storage fees• Event recording uses Wi-Fi bandwidth
Wired <ul style="list-style-type: none">• Power – 110 VAC wiring• Data – Video or Cat5 cable	<ul style="list-style-type: none">• No battery recharging• Local video recording• No cloud storage fees	<ul style="list-style-type: none">• Requires AC power at camera• Requires data cable from camera to network video recorder (NVR)• Requires NVR purchase
Power over Ethernet (PoE) <ul style="list-style-type: none">• Power and Data – Single Cat5 cable	<ul style="list-style-type: none">• No battery recharging• Local video recording• No cloud storage fees	<ul style="list-style-type: none">• Requires Cat5 cable between camera and network video recorder (NVR)• Requires NVR purchase

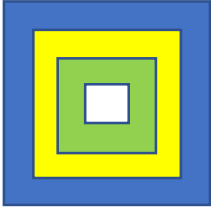
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Video Camera Description Information

Display Names	Array Dimensions (Pixels)	Array Size (Pixels)	Trade Name
720p/HD	1280 H x 720 V	921,600	1 Megapixel
1080p/FHD	1920 H x 1080 V	2,073,600	2 Megapixel
	2048 H x 1536 V	3,145,728	3 Megapixel
	2592 H x 1520 V	3,939,840	4 Megapixel
	2594 H x 1944 V	5,042,736	5 Megapixel
UHD/4K	3840 H x 2160 V	8,294,400	8 Megapixel
8K	7680 H x 4320 V	33,177,600	32 Megapixel

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Video Doorbell 2 MP Image – (160 deg FOV)



5 ft



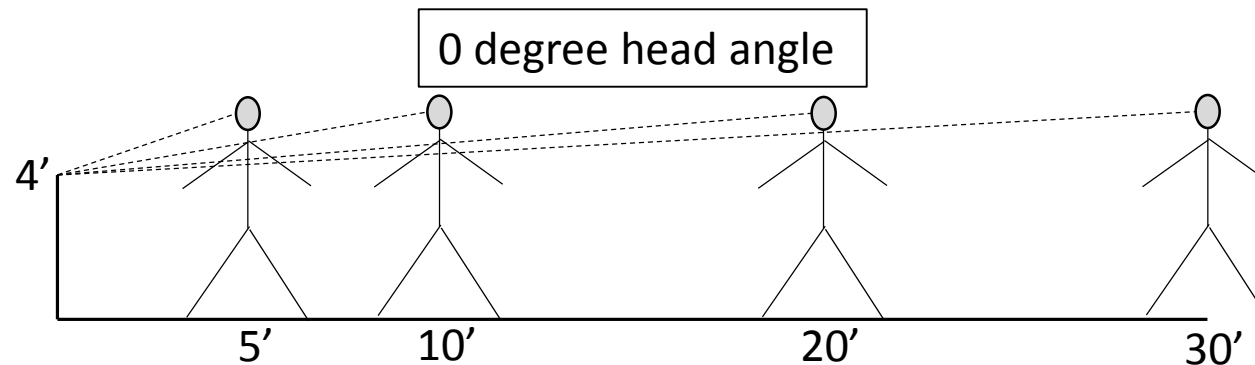
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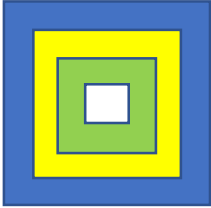
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30 ft



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Video Camera 5 MP Image – (140 deg FOV)



5 ft



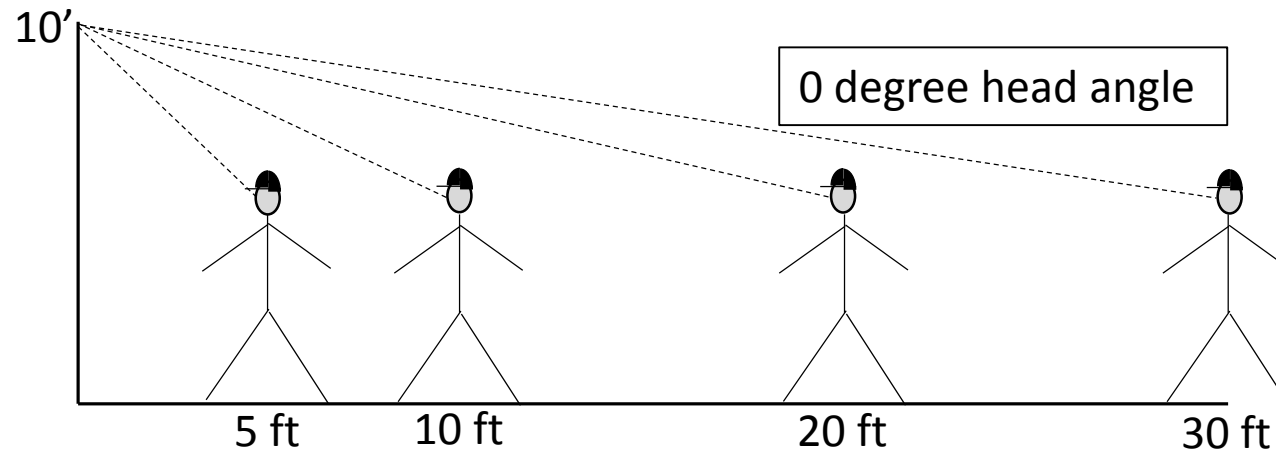
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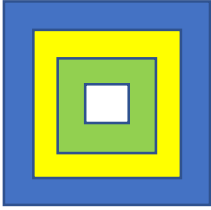
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30 ft



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Video Camera 5 MP Image – (140 deg FOV)



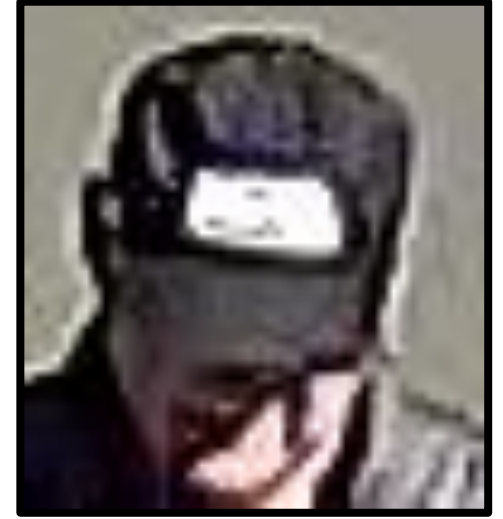
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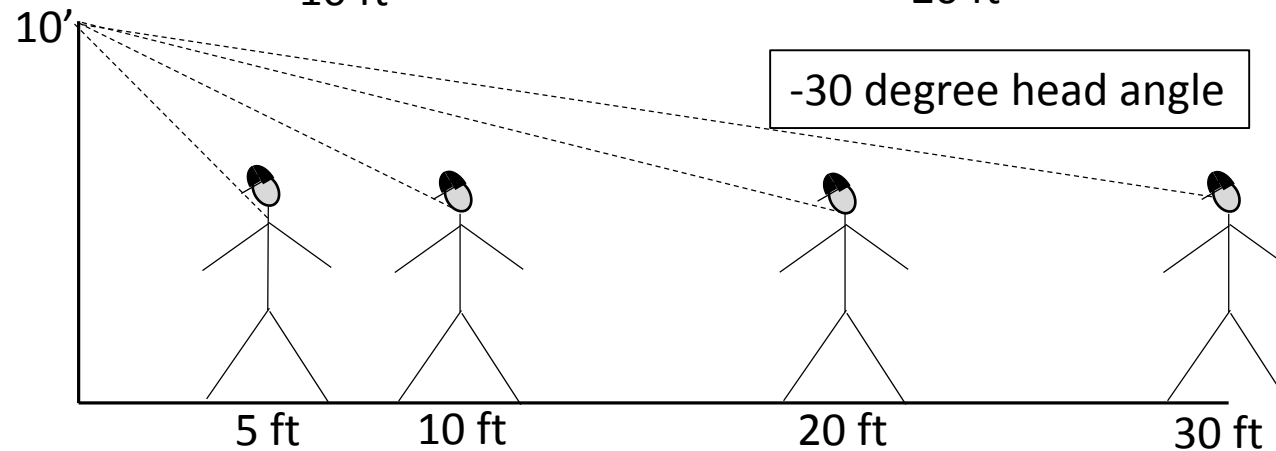
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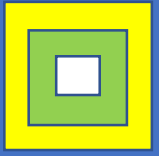
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30 ft



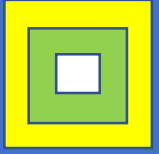
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Video Doorbell System Comparison

Vendor	Install	Mounting	Resolution	Remarks	Cost
Arlo	DIY	Wire – Free WiFi	2 MP	Motion activated, 110 deg FOV, cloud storage \$3/mo (7d) - \$15/mo (60d)	\$160
Nest	DIY Pro	Wired WiFi	3 MP	Motion activated, 160 deg FOV, cloud storage \$50/yr (5d) - Prepaid	\$229 \$379
Ring	DIY	Wired WiFi	2 MP	Motion activated, 160 deg FOV, cloud storage \$3/mo (60d)	\$249
SimpliSafe	DIY	Wired WiFi	2 MP	Motion activated, 162 deg FOV, cloud storage \$5/mo (30d)	\$169
ADT	Pro	Wired WiFi	1 MP	Motion activated, 180 deg FOV, available through ADT as part of a total system - 36 mo contract	Custom
Nortek GC-DBC-1	Pro	Wired WiFi	1 MP	Motion activated, 180 deg FOV, available through Nortek as part of 2GIG system, \$15/mo (30d)	Custom
Vivint	Pro	Wired WiFi	1 MP	Motion activated, 180 deg FOV, available through Vivint as part of a total system, \$45/mo (30d) - 60 mo contract	\$940

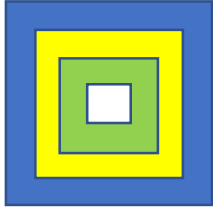
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Video Camera System Comparison (4 Cameras)

Vendor	Install	Mounting	Resolution	Remarks	Cost
Arlo Ultra VMS5440	DIY	Wire-Free Wi-Fi	8 MP	Motion activated, 180 deg FOV, audio, siren, spotlight, cloud storage \$10/mo (30d)	\$1,000
Nest Cam IQ	Pro	Wired Wi-Fi	2 MP	Motion activated, 130 deg FOV, audio, on camera active indicator, cloud storage \$30/mo (30d)	\$1,200
Ring Spot Cam	DIY	Wire-Free Wi-Fi	2 MP	Motion activated, 140 deg FOV, audio, siren, spotlight, cloud storage \$10/mo (60d)	\$599
ADT OC835	Pro	Wired Wi-Fi	1 MP	Motion activated, 95 deg FOV, cloud storage available through ADT - 36 mo contract	Custom
Eastern CCTV	Pro	Wired PoE	8 MP	Motion activated or continuous w/NVR, 110 deg FOV, available through Nortek resellers	Custom
Vivint	Pro	Wired Wi-Fi	2 MP	Motion activated, 112 deg FOV, Available through Vivint as part of a total system, monitoring \$45/mo - 60 mo contract	Custom
Lorex 4KHDIP822NWW	DIY Pro	Wired PoE	8 MP	Motion activated or continuous w/NVR, 110 deg FOV, smart phone app included	\$1,500 Custom

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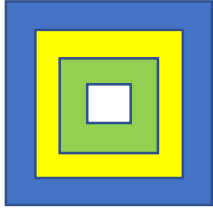
Burglar Alarm/Video Camera Companies and Local Installers

- Manufacturers

- Arlo (<https://www.arlo.com>)
- Nest (<https://nest.com>)
- Ring (<https://ring.com>)
- SimpliSafe (<https://simplisafe.com>)
- ADT (<https://www.adt.com>)
- Nortek(2GIG/GoControl) (<https://www.nortekcontrol.com>)
- Lorex (<https://www.lorextechnology.com>)
- Vivint (<https://www.vivint.com>)

- Local Installers

- Sentinel (<https://www.sentinelsecuritysolutions.com>) – (805-773-6100)
- Smith's Alarm & Electronics (www.smithane.com) – (805-619-4510)
- ADT (<https://www.adt.com/local/ca>) – (800-246-9147)
- Safe 'n Sound (www.mysafesound.com) – (805-215-7169)



Summary

- Develop a security mindset
- Control access to your valuables and your home
 - If it's important enough to protect then put it in a safe bolted to the ground
 - Lock windows, doors and gates
- Deter criminals from choosing you as their victim
 - Make your house look occupied at all times
 - Install and use a burglar alarm system
 - Install a video doorbell
 - Consider video cameras with at least 5 MP resolution (preferably 8 MP or greater) and mounting heights no greater than 8 feet to capture facial features

Find this presentation on the web at:

<https://members.mytrilogylife.com/committees/58#committee-documents/2019-02-09> Intro to Home Security