

# “That House”



**Decorating anecdotes for newbies  
and the not so newbie**

# Disclaimer:

Presenter can in no way be held accountable or responsible for any behavior, however odd or foolish, lack of *discretionary* spending, sleepless nights, funny patches of hair falling out, graying, neighbors making a call to the “funny farm”, spontaneous yard overhauls, incessant humming of Christmas Carols, year round, the kids telling friends to “pay no attention, he’s just my dad, and yes, that is Christmas Stuff, he is working on in (pick any month)” etc.....

***Ye be warned.....***

***It is a very slippery slope that stands before you!***

# Who am I?

- Mark Zembruski – Zman on all Christmas Forums
  - Decorating since I was 20
  - Self admitted gadget geek, weekend warrior, learner of all trades, mastering NONE of them.....
  - Decided to start growing in 2003, getting **BIG** just happened
  - Approx **125,000** Lights
  - Approx **530+** channels of AC Light Animation
  - **9600** Channels of **RGB** Pixel Animation
  - One traditional DMX Universe, - **32** E1.31 Universes
  - **Known for using just about every decorating feature available and blending it together tastefully**
  - Generally I do nothing “original” in my display, I enhance what I steal, er, borrow.....
  - Ah... YAWN! OK.....
  - My one claim to fame in our community that most do not know:
    - I originated the tag line. “I have the **C.L.A.P.**, do you?”
      - **C**hristmas **L**ight **A**ddition **P**rogram
  - One of the central organizers of **C.L.A.P.** in the PacNW, regional decorating gathering
    - **C**hristmas **L**ight **A**ddiction **P**rogram, for those with **C.L.A.P.**!

# Agenda

- **Decisions**
- **Logistics**
- **Decorations**
- **Technology**
- **Execution**
- **Advice (take it for what it's worth)**
- **Miscellaneous**
- **Challenge**

**Decisions!  
Decisions!  
Decisions!**



# Decisions

- Starting out there are some decisions that should be reviewed
  - What is your motivation for doing a Christmas display?
    - **Why do I want to do this?**
      - “***That House***” in your ‘hood? A YouTube video, family motives, community or church etc...
    - How involved do you want to get? The Pig or the Chicken?
      - Depending, this could have an impact on everything in your life.
      - Do you want to just put up lights at the Holidays, or:
      - Do you want a new hobby / lifestyle
    - **What’s my Budget??**
      - Time!!! - It will really become the ***critical factor***
      - Money – It’s the reality of everything we do in life
  - Small or **BIG!?**
    - Start where you are comfortable the rest will happen
    - You will figure it out better and enjoy it more
    - DO NOT be known as a “One Hit Wonder!”
    - Your approach *should* be thought of as a marathon, not a sprint

# Decisions

- Off the Shelf? or Do It Yourself (DIY)
  - Buy vs home made
  - Are you crafty, or handy with tools, open to learning?
  - Or a combination of the 2
  - Your budget can influence a trade-off
- Static vs Animation
  - What the heck does this mean!?
  - Static; Traditionally most Decorators start(ed) here
    - Props, LIGHTS!, Gadgets and Gizmo's
      - Store bought, borrowed, Custom Made
  - Animated; Trend That Drive Many to Hobby
    - Dancing Lights , typically to music
    - Carson Williams – Miller Lite Commercial circa 2005 (BC/AC)
- Theme / Message / Color Scheme
- Collect for a Charity
  - Food drive, monetary

**Decisions..... CHECK!  
Now what do I  
do?.....  
LOGISTICS!**





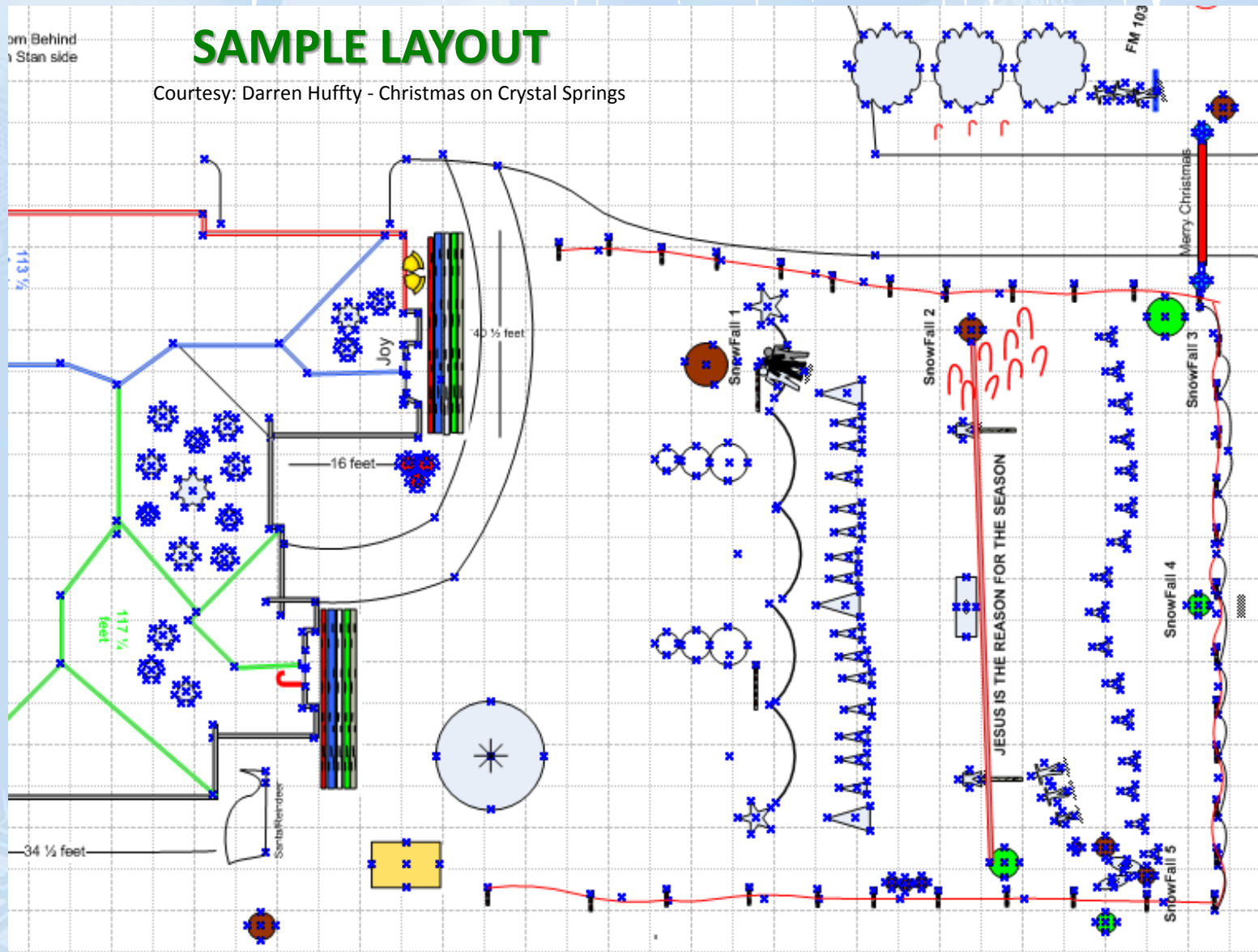
# Logistics

- Planning
  - Budget - **\$\$\$**
    - Determine what you are comfortable spending
    - Do your homework to make frugal purchases
    - Keep some in reserve for last minute gotcha's
    - Be classy, never reveal what you think you spent, even when asked
  - Display Layout
    - Pencil/Paper
    - Excel Spread Sheet
    - Computer Drawing Programs
    - Microsoft One Note
  - Devise a yearly plan and **STICK** to it!
    - It will be hard to resist temptation – changes have ripple effects
    - It will be less stressful
    - Start planning for next year, while you are still in the current year
      - Capture notes all season long and organize them into categories, ex.
        - What Worked/Didn't – New Additions – Fix It etc..
  - Budget - Time
    - No matter what you think you need to accomplish, a specific project or set up, give yourself at least **DOUBLE** what you figured

# Logistics

## SAMPLE LAYOUT

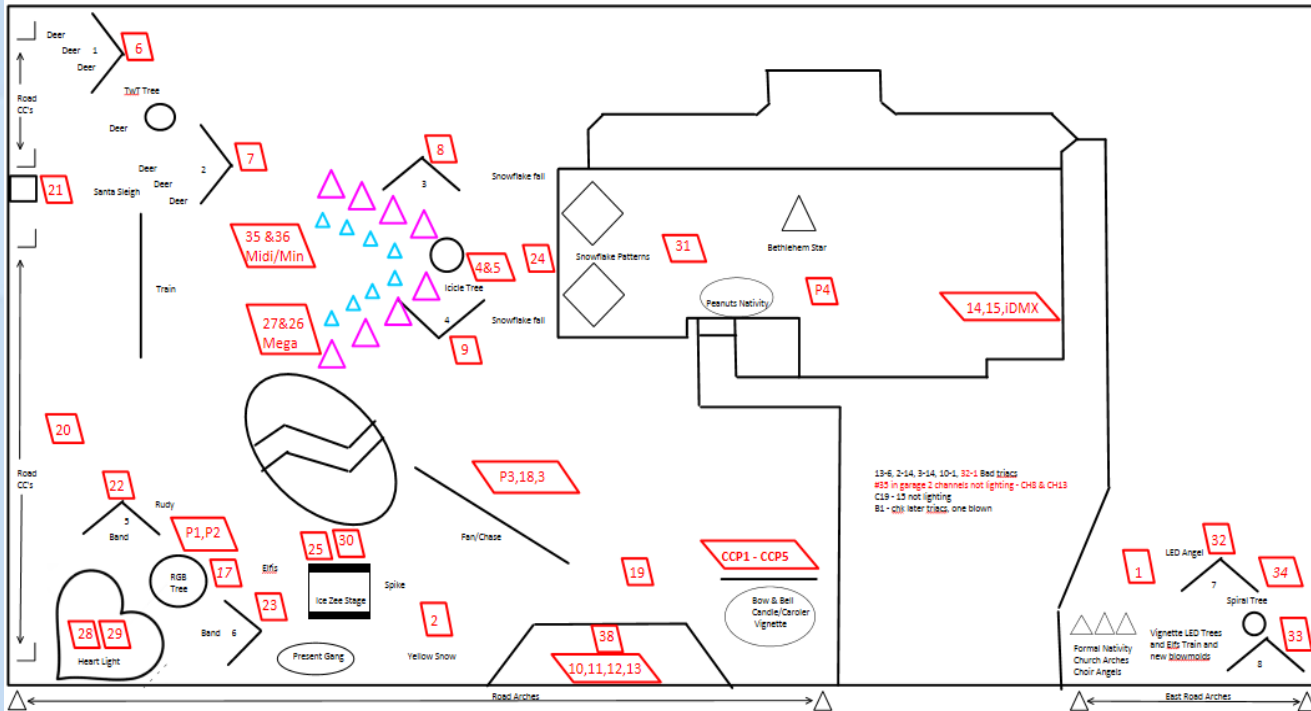
Courtesy: Darren Huffty - Christmas on Crystal Springs



# Logistics

## Yard Plan 2017

Friday, January 15, 2010 5:19 PM



See video for cool double helix and background idea  
RGB Tree



Notes:

1. Verify LED Spare Inventory
2. Fix LOR Controller R42's & J122's
  - a. Reinforce them together
  - b. Old CL look at end fix
3. New announcements
4. Ice See add to IVC or more movement
5. Frank (Bocaz) RGB Fan movements colors...
6. Plant Thermal blankets for sim snow
7. Mini trees in apex of Road Arches?
8. Train car connections
9. Matrix revamp in songs
10. 1/2" PVC "T" to assist with pixel insertion
11. Penetration - There's music to me to Christmas music

- |                      |
|----------------------|
| 1                    |
| 2 3                  |
| 4 5 6                |
| 7 8 9 10             |
| 11 12 13 14 15       |
| 16 14 16 18 20 21    |
| 22 23 24 22 26 27 28 |
| 29 30                |
| 31 32                |
- Possible new pattern for trees...

Disconnect the power. Take the cover off the controller, hold down the reset button and reapply power. The bulbs/pixels will start chasing while also resetting all the internal variables except the Unit ID address. Release the reset button. Disconnect the power. Put the cover back on your controller and run your tests again.

- Light Fan - Universes 30-44
- Road Outline - Universes 50-52
- Already updated Angels use as template
- Adventer RGB Tree 10.10.10.1
- Adventer RGB Tree 10.10.10.2
- Falcon Roof 10.10.10.3
- Falcon Fan 10.10.10.6

From: <http://helpdesk.lightorama.com/tickets.php?ID=3785&msg=1>

- Sequencing Notes
1. Scrub Frosty the Bluesman, it is now missing a channel and needs to be compared to another song in 15
  2. Add 10 Channels for Elves
  3. Add spare channel at top of Bow/Bell for timings
  4. If actuators 2.1 sec up 1.8 down
  5. Think about moving T W/In T to top of Spiral Tree, add spacer, make a Tree Group
  6. Deleted Mega Balls and Mega Tree Channels

- Fix it 2018
1. Projectors
  2. Wood characters
  3. Gary fix resting
  4. LLA sections out
  5. Ice Forest
  - 6.

Disconnect the power. Take the cover off the controller, hold down the reset button and reapply power. The bulbs/pixels will start chasing while also resetting all the internal variables except the Unit ID address. Release the reset button. Disconnect the power. Put the cover back on your controller and run your tests again.

From: <http://helpdesk.lightorama.com/tickets.php?ID=3784&msg=1>

CHANGE EAST HEDGE TO CL 11 or 12 then update songs

- Recipes
- Display Misc - Fixit - Wis
- DMX - Pixel Plan
- Yard Plan 2010
- Yard Plan 2011
- Yard Plan 2012
- Yard Plan 2013
- Yard Plan 2014
- Yard Plan 2015
- Yard Plan 2016
- Yard Plan 2017
- Chelan Ideas



# Logistics

## Spreadsheet to manage light inventory and power consumption

### Light Inventory

Bulb/Light List	WATTS / Amps	Power Type	Item Type	Bulbs per string	Volts AC/D C	Watts per Bulb	Watts per string	AMPS per light	AMPS per String	Feet Per String
Inflatable Igloo	52.0000	WATTS	Unit	1	120	52.0 Watts	52 Watts	.4333 Amps	0.433	
Inflatable Santa	80.0000	WATTS	Unit	1	120	80.0 Watts	80 Watts	.6667 Amps	0.667	
Flash House	0.7300	AMPS	String	240	120	.385 Watts	95 Watts	.0033 Amps	0.730	
Flash Sit	0.7500	AMPS	String	250	120	.36 Watts	90 Watts	.003 Amps	0.750	
Flash Run	0.7500	AMPS	String	250	120	.36 Watts	90 Watts	.003 Amps	0.750	
Chauvet 200Bs	0.2300	AMPS	Unit	1	120	27.6 Watts	28 Watts	.23 Amps	0.230	
Roof Snowflakes LED Rope	0.0300	AMPS	Unit	1	120	10.8 Watts	11 Watts	.09 Amps	0.030	
Flood - Small Costco LED	0.0500	AMPS	Bulb	1	120	6.0 Watts	6 Watts	.05 Amps	0.050	
Flood - Large Costco LED	0.0300	AMPS	Bulb	1	120	10.8 Watts	11 Watts	.09 Amps	0.030	
M6 CDI LED 100	0.0600	AMPS	String	100	120	.072 Watts	7 Watts	.0006 Amps	0.060	34
Candy Cane Wire Frame	0.5800	AMPS	String	150	120	.464 Watts	70 Watts	.0039 Amps	0.580	
M5 HL Replaceable LED		AMPS		50	120	FALSE	FALSE	FALSE	FALSE	17
C6 CDI LED 100	0.0600	AMPS	String	100	120	.072 Watts	7 Watts	.0006 Amps	0.060	34
Warning Threshold (Yellow) 35%										
Mini 50	0.1360	AMPS	String	50	120					
Mini 35	0.1500	AMPS	String	35	120					
LED Angel	0.0800	AMPS	String	250	120					

### Controller 1-25 Overview

Controller Location	Model	VOLTS	AMPS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Controller Totals			
Controller 1	West Yard / Main Tree	CTB16D.1	120	15	0.01	0.01	0.01	0.50			1.34				0.84	0.75	0.54	0.39		4.391	4710	524.95	
Controller 2	Flash	CTB16D.2	120	15	0.04	0.79	0.75	0.01	0.75	0.01	0.75	0.01	0.75	0.01	0.75	0.01	0.06	0.05	0.20	0.20	5.172	2815	620.54
Controller 3	Front Yard / Main Tree	CTB16D.3	120	15		0.60		0.57		0.51	0.07	2.20			0.32	0.38	0.08	0.08	0.08	0.08	4.978	8194	597.25
Controller 4		CTB16D.4	120	15	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.400	1620	72
Controller 5		CTB16D.5	120	15	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	1.400	2920	168
Controller 6	LLA1	CTB16D.6	120	15	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.08	1.00	1.392	1950	165.8
Controller 7	LLA2	CTB16D.7	120	15	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	1.34	1.44	3.042	2020	265
Controller 8	LLA3	CTB16D.8	120	15	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02		0.292	1400	35	
Controller 9	LLA4		120	15	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02			0.292	1400	35	
Controller 10	Road Arches		120	15	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.333	1600	40
Controller 11	Road Arches		120	15	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.313	1600	40
Controller 12	Road Arches		120	15	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.333	1600	40
Controller 13	Road Arches		120	15	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.333	1600	40
Controller 14	Road / Eys		120	15	0.90	0.08	2.70	0.12	0.58	0.58	0.21	0.21	0.21	0.28			0.02	0.02	0.10		6.214	3895	745.7
Controller 15	Road / Eys		120	15	7.65	0.05	0.07	0.25	0.09	0.08	0.08	0.08	0.04	0.02	0.02	0.30	0.02	0.02	0.02	0.02	9.283	4969	1127.25
Controller 16	Light Fan		120	15	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02		0.313	1500	37.5	
Controller 17	Road / Eys / Snow		120	15	0.05	0.01	0.01	0.01	0.07	0.15	0.15	0.02	0.02	0.01	0.01	0.01	0.15	0.15	0.05	0.05	0.391	1492	104.95
Controller 18	Chase Trce 1-16		120	15	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.333	4000	100
Controller 19	Front Yard Chase Arches		120	15		0.52	0.43	1.47		0.03	3.46	0.12	0.28	0.10	0.08	0.10	0.08	0.10	0.08	0.45	7.293	9191	783.906
Controller 20	Road Candy Canes		120	15	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	1.920	3200	230.4
Controller 21	Road Candy Canes		120	15	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	1.920	3200	230.4
Controller 22	LLA5		120	15	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02			0.292	1400	35	
Controller 23	LLA5		120	15	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.25		0.542	1405	65	
Controller 24	Snowflake Fall		120	15	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	1.440	16	172.8
Controller 25	Mini 35 / 50 / 75 / 100		120	15							0.02	0.02	0.02	0.02	0.06	0.01	0.01	0.01	0.01	0.01	0.193	900	22.5
Display Totals																				54,088	63667	6403.1	

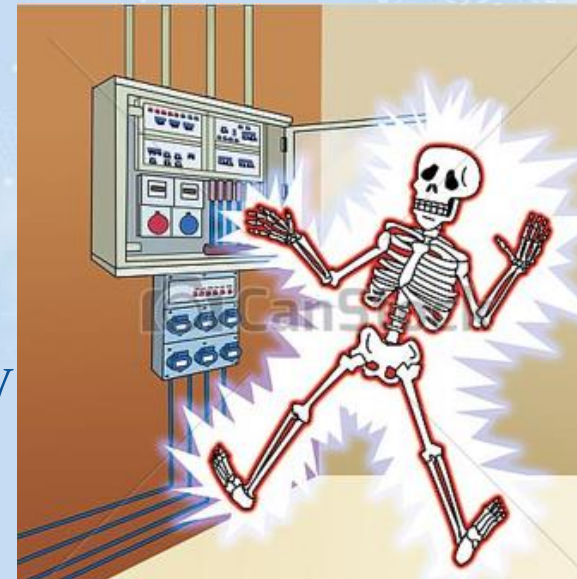


# Logistics



NOT ONLY WILL THIS  
KILL YOU, IT WILL HURT  
THE WHOLE TIME  
YOU ARE DYING

- Electricity
- **BE SAFE!!!!**
  - You will need to get comfortable with both AC & DC.
  - House/Panel capacity (enough?)
  - How will you access power outside
    - Extension cords
    - Temporary Sub Panels
    - **Do NOT overload your Power Grid**
  - Know, and *pay attention* to wire capacity
  - GFCI's (& AFCI's)
    - Protect you, guest, family & pets
    - Buy Quality Devices, you will have less issues
    - Understand how to effectively use them
  - Fully understand the power requirement for every element you incorporate, keep track of this information



Plans all done....  
**WHAT THE HECK  
DO I USE!??**



# Decorations

- What do I want to use?
  - Inflatables



# Decorations

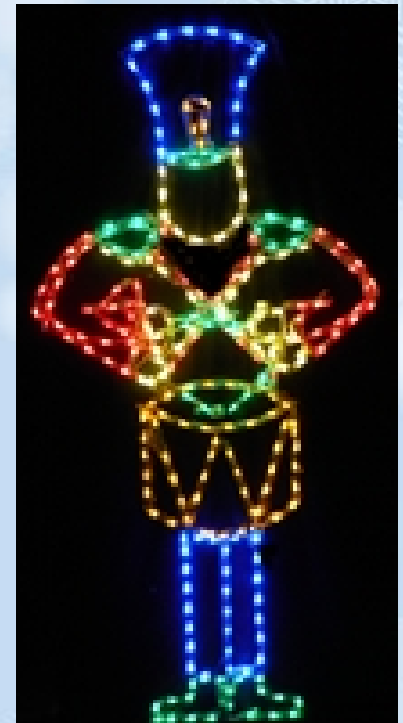
- What do I want to use?
  - Inflatables
  - Blow Molds





# Decorations

- What do I want to use?
  - Inflatables
  - Blow Molds
  - Wireframes



# Decorations

- What do I want to use?
  - Inflatables
  - Blow Molds
  - Wireframes
  - Wood Cutouts



# Decorations

- What do I want to use?
  - Inflatables
  - Blow Molds
  - Wireframes
  - Wood Cutouts
  - Nativity



# Decorations

- What do I want to use?
  - Inflatables
  - Blow Molds
  - Wireframes
  - Wood Cutouts
  - Nativity
  - Statuettes



# Decorations

- What do I want to use?
  - Inflatables
  - Blow Molds
  - Wireframes
  - Wood Cutouts
  - Nativity
  - Statuettes
  - Animatronics



# Decorations

- What do I want to use?
  - Inflatables
  - Blow Molds
  - Wireframes
  - Wood Cutouts
  - Nativity
  - Statuettes
  - Animatronics
  - Trees



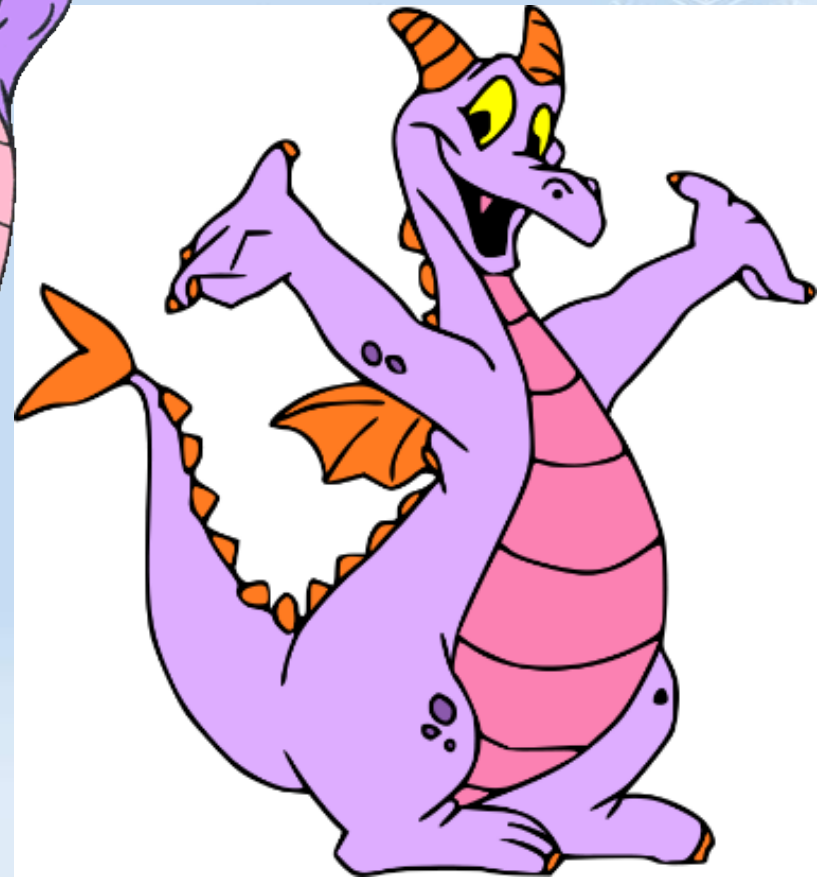
# Decorations

- What do I want to use?
  - Inflatables
  - Blow Molds
  - Wireframes
  - Wood Cutouts
  - Nativity
  - Statuettes
  - Animatronics
  - Trees
  - Coro



# Decorations

- What do I want to use?



- Trees
- Coro
- Use your **IMAGINATION!**



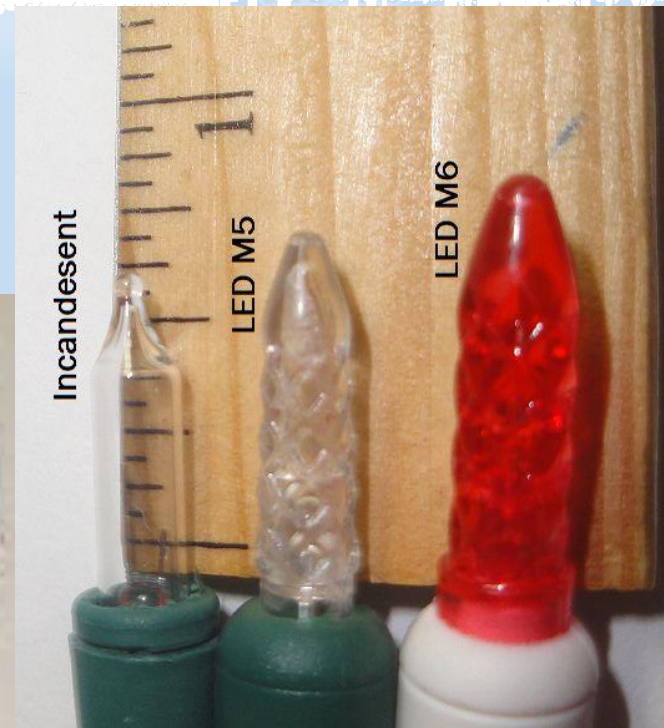
# Technology

- Lights – Lights – LIGHTS!
  - The “Paint” for your Composition
    - **R – G – B – W – Y – P – G – O – A – B – Multi** etc.....
    - Singular or Combination
  - Incandescent or LEDs?
    - Traditional vs Trend
    - Each has their Pro’s & Con’s
- White or Green Wire
- Outdoor vs Indoor
  - So....., what’s the difference between the 2?
    - Which side of the door you put them on!
    - Its all in how they are Marketed!



# Technology

- Lights – Lights – LIGHTS!
  - Traditional Bulbs
  - M-C-G
    - Mini
    - Cone
    - Globe
  - C= 8<sup>th</sup> of an inch
    - C7= 7/8<sup>th</sup> Dia
  - G= mm
    - G12=12mm Dia



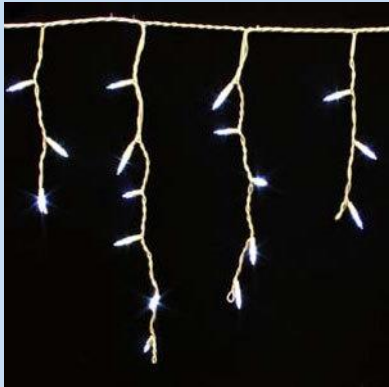
Mini / Fairy Lights



5mm / Conical

# Technology

- Lights – Lights – LIGHTS!
  - Specialty Lights



# Technology

- Light Emitting Diodes – LEDs (Facts & Fallacy)
  - Some love em', some hate em'
    - Brilliant non fading colors – Some think they look cartoonish
    - More durable than incandescents
    - Multiple “White” colors
      - Cool/Pure White (Bluish hue) - In your face!
      - Warm/Sun White (Yellowish hue, closest to incandescent)
        - Warm/Sun White may be inconsistent from vendor to vendor
    - Colors in general can have different hues from vendor to vendor and even year to year.....
    - LEDs don't behave like incandescent bulbs
      - Some Dim (fade), some Don't
      - Fades require planning (not linear)
    - Replaceable Retro C7/9 LEDs (screw in)
    - Smooth and Faceted globes



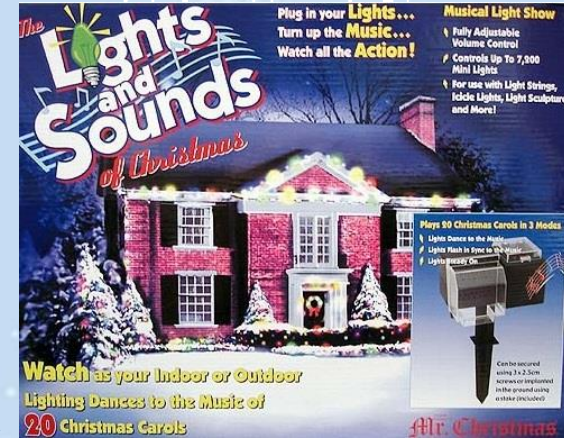
# Technology

- Light Emitting Diodes – LEDs (Facts & Fallacy)
  - Understand why you want to use LEDs
    - Cost more than incandescents
      - Different price depending on **COLOR**
    - 20,000 hours vs. 3000??
      - DC component by anatomy, that are modified for AC
      - Built in China with the cheapest parts possible
  - Return on Investment (ROI) is getting better
    - The LED typically does not fail, the components around it do
  - **LEDs CAN be repaired** – BLUE fails the most
  - Buy quality, sealed units
  - **Increase your display & not your electrical footprint**
    - String of 100 “mini” –LED .047 Amps vs Incandescent .42 Amps
  - Plug WAY more in line – Approx 50 vs 3 or 6 for commercial
  - LEDs do NOT generate heat
  - Full wave vs. Half wave
    - Full wave have less noticeable flicker



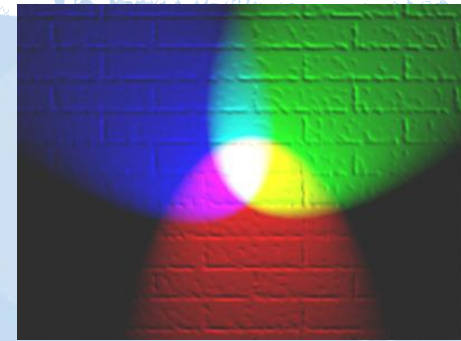
# Technology

- Light Animation
  - 2-3-4 channel static controllers to blink elements
  - Mr. Christmas or equivalent
  - Computer Controlled Animation
    - Computer / Hardware / Software combination
    - Adequate Computer to build & control your Display or:
      - 2 computers, Tower (Build) - Laptop (Show)
    - Lighting Controllers (AC & DC)
      - Makes your lights **DANCE!**
      - Plug & Play – DIY options
      - Stand Alone (SD Card)
      - Microcomputers (Arduino - Raspberry Pi - Beagle Bone Black & Capes)
    - Programming Software
      - Sequence creation – scheduling – executing show
      - Freeware - Vixen – Xlights/Nutcracker - HLS
      - \$-\$\$-\$\$\$ - Light O Rama – Animation Director - Aurora – Light Factory – Madrix



# Technology

- **RGB** – Major shift to this technology
  - Ability to project any color you can imagine
    - Flexibility in color schemes
  - More advanced than AC animation
    - Requires more knowledge of electricity (DC) & networking
  - Pixels, Nodes, Strip, Modules (?!?)
  - Dumb – DC Control (One channel per color **R-G-B**)
  - Intelligent – Serial Peripheral Interface (SPI)
    - Special Controllers/Power/Communications
    - DMX and E.1.31 (DMX over Ethernet) Protocols
    - Added time for building and setup
  - Channel explosion
    - 3 channels per color per “light”/pixels
    - Added Programming
      - More compute power
      - Separate, dedicated network
  - Not cheaper than AC to implement



Things are coming  
together.....  
Now to  
**GET MOVING!**





# Execution – Acquiring Display Item

- Build your own
  - Decorating Forums
- Garage/Estate Sales
  - Online Vendors
- Ebay
  - Craig's List
- Garbage/Scavenging
  - Relatives
  
- After Christmas Sales
  - All Stores
    - Forums -“One Hit Wonders”
- Pre-Season Sales (Jan – April/May)
  - Online Vendors
- Directly from China.....
  - There are vendors decorators use all the time with ease
- **Generate a relationship with your Vendors**
  - Store / Dept Manager
    - Online

# Execution – Set up

- When to start your Masterpiece
  - Needless to say, that Thanksgiving weekend thing might not be in the cards.....
  - Do you have family, friends or neighbor helpers.....
  - High School, Scouts, Church – Community Service Hours
- Take advantage of your House/Yard's natural features
  - Roof/Ridge/Gutter lines - Windows
  - Trees/Bushes - Fences
- Build to your plan/vision
  - Random – Abstract or:
  - Vignettes – Scenes - Flow
- Viewing Angles & Lines
  - Consider from visitors' perspective

# Execution – Intangibles

- Neighbor and Community Relations
  - Do you have an HOA that you need to consult
- Impact to neighbors, you have to live with them 365
- Safety?
  - How will you keep a safe environment around your display
    - Keeping visitors out of your yard
- Security
  - Theft concerns? - Alarms
  - Cameras - **After hours lights**
- Potentially consider added insurance coverage
  - Umbrella policy riders

# Nuggets of Knowledge



# Advice

## ● Crawl – Walk – Run!!!

- This cannot be stressed enough
- Ensure balance in your life – work – family – hobby
- It Christmas! Enjoy the experience
- Start planning, prepping and executing as early as possible
  - The serious decorators plan/work year round!
  - During the season keep a notepad/pen at all times
- Get “Plugged In”
  - Consider attending a national show **ChristmasExpo** meet the vendors, meet decorators from all over the country
  - Decorating Forums
    - Join them - Ask questions – **Search First**
    - Research Subjects - Participate in threads add value
    - **List name & your location** - Find a buddy or mentor or be one
- **Search for regional forums to get plugged in your local area – NETWORK!**

# Advice

- Extension Cords

- Buy good quality 14/3 & 12/3 for Power Grid

- Flexible
- Color code **Red**, **Blue**, **Orange**

- **Make your extension cords**

- SPT<sub>1</sub> or SPT<sub>2</sub>? (**S**tranded, **P**arallel, **T**hermoplastic)

- SPT<sub>1</sub> – 7 amps thinner lighter insulation
- SPT<sub>2</sub> – 8 amps thicker insulation - **compatible with store bought lamp cords**
- SPT<sub>3</sub> – 10 amps thicker than SPT<sub>2</sub>
- Color code **Green**, **Black**, **Brown**, **White**
- 2 Channel Extension Cords

- Vampires plugs, C7 & C9 screw sockets
- Custom wire harnesses, multiple taps
- Make them standard lengths
- Store them by length or vignette



# Advice

- Do **NOT** wrap your plugs, keep them open and off the lawn as much as possible.
- Recycle your used, dead, burnt out light strings
  - Do not throw them in your trash!
  - Find a local hardware store, Organization or ?? Many provide this service after the Season is over.
  - Cut off the female and male ends and keep them
    - These do fail and it is nice to have spares
- Cut the tags off your light strings
  - Yes it takes time, but it makes things look SO much cleaner
- Get a small jar and save the 3A fuses that come in that irritating plastic wrapper

# Advice

- Silicone is a great adhesive/sealer, however, around electrical wiring and components use **RTV Silicone**
  - Normal silicone has chemicals that while curing off-gassing can corrode wires and parts.
- Steal Ideas, ***but give credit where due***
  - Review websites/pictures
  - Take notes keep them organized (Evernote/OneNote)
  - Watch Videos
  - [Christmas Craftsman](#), Jeff Carter, “What's Old is New”
- ***Keep your eyes open in every store you go into with your display in mind.....***
  - You never know when you will see something that might serve your display in some way



# Advice

- What's This?
  - Walking through McLendon's Hardware
  - Candy Cane Light Post Globe Mount



# Advice

- What's This?
  - Walking through McLendon's Hardware
    - **RGB** DMX Flood Housing



# Random Thoughts



# Miscellaneous

- Harbor Freight - Hobby Lobby - Wal-Mart - Amazon - Ebay

- Tools you should consider in your toolbox

- Snips/flush cutters
- Soldering Station/Iron
  - Butane/Battery Solder Iron
- Kill-a-Watt
- Atlas Nitrile Gloves (awesome)
- Heat Shrink Gun
- Scavenge or “hand me down” laptop for the garage or workshop
- Network LAN Cable Tester
- Jumper cables/brick
- Pump Wedge/Slim Jim
- Old solder iron/wood burner



- Zip Tie Gun

- Hot Glue Gun

- LED Keeper

- Light Tester/Fixer

- Digital Volt Meter



# Miscellaneous

- Links to great Documents / Sites
  - **Controller Planning Spreadsheet (Golden)**
    - [Woodinville Wonderland-How To](#)
  - Holiday Coro (Display Planning, RGB, DMX, & more)
    - [Holiday Coro](#)
  - **RGB** 101 & other references
    - [Auschristmaslighting](#)
  - Vendors of all kinds
    - [Planet Christmas](#)
  - High Country Lights (Sequences, Other Links)
    - [High Country Lights](#)

# Miscellaneous

- Facebook has many Christmas/Decorating Pages
- Online Forums you should consider joining (Not an all inclusive list!)
  - [AusChristmasLighting](#)
  - [DIY Christmas.com](#)
  - [DIY Christmas.org](#)
  - [Falcon Christmas](#)
  - [Light O Rama](#)
  - [Planet Christmas](#)
  - [Xlights/Nutcracker](#)

**Home  
Stretch!**



# Challenge

- **Take only what you need. Pay it forward every chance you get, keep your ego in check**
- **Do what YOU want to do and have fun doing it.**
- **Make Display memorable, not cookie cutter**
- **Don't create something where someone thinks "Christmas threw up on the lawn"**
- **Create lasting memories – Become a Tradition**



# Questions??





**Thank you for attending!**

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