## MEDIA TEAM    training packet                2015

**Media Team Leader Job description - 1-1-14**
1. Recruit, train, and schedule all volunteers. (Minimum of 4 volunteers for each week)
    Post schedule on line.
2. Work directly under the supervision of the Pastor and/ or worship leader.
3. Create lyrics on pro presenter (provided in emailed setlist) prior to Weds night
    practice. Set up all other video and graphics for experience that week.
4. Communicate with Pastor on all work by phone and email. Especially before
    making any changes with placement of computers, furnishings, lights, switches,
    storage, etc. Communicate with each volunteer team member weekly.
5. Prepare 4 quick start guides to be posted online. Including pro presenter, sound
    board, light controls, and video switching / capturing. This must be a simple plan
    for all volunteers to follow.
6. Prepare annual budget for equipt, software, misc labor, etc.
7. Keep ongoing list for I.T. support. This should be performed throughout the
    work week and take a backseat to Sunday morning media presentation.
8. Turn in hours monthly by email and hours on each project. Be the first to arrive
    and the last to leave at Weds. rehearsal and Sunday mornings.
9. Edit videos throughout the week for testimonies, baptism, and other special
    events. Consult with Pastor before final rendering or public posting.
10. Keep a current written inventory of all gear and estimated value.

**I.T. (***information technology***) Director - job description 1-1-14**
1. Provide support (to all dept heads) on all computers, hardware, software
    installations, and updates at Anewchurch.TV. Call each dept. head weekly.
2. Keep written (dated) log of all work done including passwords, user names, log
    in info, serial #, program installation details, etc.
3. Write a back up / contingency plan for all system operations. Include "how to"
    guides for the server and other hardware.
4. Provide a written budget for possible future upgrades on software and
    hardware. Include web address, link and details for ordering exact products.
5. Post, update, and back up website and social media. Keep written records for all changes.
6. email the Pastor weekly with all required data.
7. Do NOT make changes or improvements without approval and documentation.
8. Turn in hours for work performed and list of projects completed each week by email.
9. Be Nice! This job is a support role, not a supervisory position.
10. Keep a current written inventory of all gear and estimated value.

| | 1st week | 2nd week | 3rd week | 4th week | 5th week | phone |
|---|---|---|---|---|---|---|
| setlist | mb 1 # 1 | mb2 #2 | 31-Mar | Easter | Evan | 747-6590 |
| vocals | Marshall | Robert G | Marshall | Robert G | Robert G | 541-1060 |
| back up v | Michelle | | | | | |
| lead guitar | Robert W | Robert W | Robert W | Robert W | Marshall | 478-3353 |
| drums | Ghent | Ghent | Ghent | Braden R | Ghent | 977-9644 |
| bass | Eli | Eli | Greg P | Eli | Eli | 747-6591 |
| keyboard | Evan | Evan | Evan | Evan | Greg P | 242-4980 |
| sound | Greg P | Greg P | Charlie | Greg P | Holly | 747-8713 |
| lights | Charlie | Holly | Roberta | Holly | Joe | 484-3639 |
| media shout | Stacy | Roberta | Holly | Roberta | Kyle | 402-5790 |
| camera | Holly | Kyle | Kyle | Charlie | Kenny | 977-8794 |
| camera | Roberta | Charlie | Luke  luke | Charlie J | | 231-7226 |
| switcher | Braden W | Luke | Braden W | Braden W | Stacy | 278-4568 |
| Editing . | Matt C | | | | | 977-7553 |

# TECH TEAM TRAINING ANEW CHURCH.TV - 2014

**Identify, locate, and describe the following equipment:**

1. Sound Board - Behringer X 32 (download APP for remote access)
2. Amplifiers (2) Crown CTS3000
3. Amplifier (2) QSC 5050
4. Media Laptops (6) and (2) desktops (PC & Apple)
5. Video Switcher/ Scaler Kramer VP724
6. House / Main Speakers EAW
7. Stage / Monitors Behringer powerplay 16
8. Dual Sub Woofers EAW
9. Light Controller Chauvet OBEY 3
10. Intelligent Lighting (4) Chauvet Legend DMR150
11. Haze Machine Chauvet Hurricane
12. (4) Martin Mania scx 600 stage lights
13. Kramer RCA Audio switcher
14. Quatro analog video switcher
15. Cordless Handheld Mic Shure
16. Stage Mic's (3) Shure SM58 Beta
17. Confidence Video Monitor SamePage Stand Alone System
18. DVD Backup Player SONY rack mount
19. DB Meter Radio Shack
20. Video Cameras -Digital, high def (2) Sony MC 2000 U, (1) Sony HDR CX210
21. Live Broadcast – Black Magic TV studio w/ Media Express
22. Video Projectors (3)Panasonic XGA6000, (1) Mitsubishi 3500 lumens
23. Stage Flood / Wash Lights (13) LED par can 64 (4) min spot LED
24. Hall research video distribution system for multiple TV viewing
25. Misc. Media- TV's and DVD players with USB drive for kids & conference room
26. Black magic video signal converter boxes for HDMI, coax, composite
27. NTI - VGA video Amplifier / Distributor (4 way)

**Answer the following questions, or complete these assignments:**

**26.** Describe the order of turning on and off all equipment.

**27.** Define the following types of cables: (see form)

XLR, 1/4", 1/8", VGA, SDI, HDMI, composite (rca), componant (rgb), Speak on,

- High / Low Impedance, shielded, TRS, cat5, etc.

**28.** Become familiar with the following sites and software:

CCLI, Pro Presenter, IMG Burn, Filezilla (FTP Download), Black magic / media express, Church Metrics, GoDaddy (Domain Registration), SamePage Music,

29. Explain a DB Meter and the acceptable limits.

30. Where should the Sound Board Operator be stationed?

31. Where should the Camera Operators be stationed?

32. What is the difference between a Stage Mix and a House Mix?

33. What is a "Media Driven Church"?

34. What can happen if someone moves or repositions Sound Equipment?

35. What can happen if someone moves or repositions Lighting Equipment?

36. What happens when a musician can't hear themselves?

37. What happens when a visitor thinks it's too loud?

38. What happens when lighting or video becomes distracting?

39. What happens when the words are off track or misspelled?

40. What happens when there is no haze?

41. What happens when there is too much haze?

42. Why do we keep media playing before an experience? What about volume?

43. Why do we use a countdown clock?

44. Why do we cross-train people on the Tech Team?

45. Why do we never "try out" a new idea on Sunday?

46. What is the most important thing about mistakes?

47. Why does EVERYONE need to be at practice AND sound check?

48. Why should I listen to others opinions?

49. Why should I give my opinion and how should I do it?

## Video Projects for the media team (ONGOING)
Convert all formats to .mp4

_____

1. Buffer videos (for in between experiences)
2. Baptism videos
3. Testimony videos
4. Kids media prep. And training volunteers.
5. Countdown clocks
6. New believer help
7. Download Christian rock music videos (itunes)
8. Mix and edit music live videos from Sunday
9. New life group video
10. Announcement videos
11. Offering video
12. Communion video
13. Glow stick video for baptisms

## General ideas / plans
1. Always use multiple input on the creative process. 3 people
2. Leave time for final editing before Sunday. Don't finalize without Pastors approval.
3. Use the best quality, high res. possible. The days of cutting corners (and settling for mediocre) are behind us!
4. Keep project on time and meet deadlines. We always have more to do.
5. Plan ahead with props, and budget for expenses.
6. Always search for creative music and sound effects to keep on file.

**Lights Core value / essentials for media team A**
1. For a one color background (red) use the same color lights (red)
2. Two color background use only the same colors as on the back ground
3. Tempo speed must match fast songs and on slower songs (match the tempo)
4. Turn on fog during countdown 1 min before worship
5. During sermon black out all stage lights,
6. Push BO button (Black Out) to turn off yoke lights (never put lights in the audience)
7. Never move lights during prayer or talking between songs
8. During closing prayer turn on only stage lights.
9. Closing song do not use fog (lights should never distract from worship)

**Computer (Pro presenter)**
1. Make sure all font is universal such as 36 Ariel Bold, all same size for each slide
2. If fast song, use fast background, slow song use slow back ground
3. In every worship set use Red, Green, Blue, backgrounds.
4. Computer person is responsible for showing video clips before and between services

**Soundboard**
1.  The goal is to have a good and balanced sound in the congregation area.
3. During practice walk up to the stage area to hear what the band is playing
4. During practice walk around in the seating area to hear what the audience hears.
5. Use the DB meter to make sure the sound is never over 100db (even on stage)

**Essentials for media team Cameras (upstairs)**
1. Topside camera 1 will zoom slowly, camera 2 will PAN back and forth
2. Make sure all camera setting are full gain and white balance
3. Focus on soloist as needed.

**Switching –** (leader for B team)
1. Make sure all camera people are in there place during countdown
2. Make sure audio and video programs are running / recording to SD cards
3. Know which song will be live feed, for baptisms
4. Switch each camera shot every 4 seconds. Rotating each viewpoint. Capture each person on stage with equal time.
5. Immediately following countdown clock, turn off all auditorium lights.
6. Never use effects on live recording. Save that for post editing.
7. After worship turn off "Debut" system (Hit Red Button) on screen
8. Immediately after the closing prayer, turn ALL auditorium lights back on

**Editing –** (sony vegas / post editing)
1. Mix audio and give balance to every track.
2. Add lyrics for worship songs. Use logo for book ends and solo's.
3. Use audience and light patches to cover any mistakes.

**Light addresses:**

| ITEM | ADDRESS | MANUFACTURER | MODEL |
|---|---|---|---|
| Fog 01 | 133 | Chauvet | H urricane 1800 flex |
| Drums | 211 | Chauvet | LED Par 64-36 3 ch |
| Bass Guitar | 217 | Chauvet | LED Par 64-36 3 ch |
| front stage left | 169 | generic | RGBD 01x |
| front right | 175 | generic | RGBD 01x |
| center left | 187 | generic | RGBA 01x |
| center | 193 | generic | RGBD 01x |
| center right | 199 | misc | PAR LED 56 |
| center far right | 205 | generic | RGBW |
| center far left | 181 | generic | RGBA w |
| yoke top right | 65 | (user) Marshall | l egend 150dmr |
| yoke bottom left | 97 | (user) Marshall | legend 150dmr |
| yoke top left | 81 | (user) Marshall | legend 150dmr |
| yoke bottom right | 113 | (user) Marshall | legend 150dmr |

Martin (4)
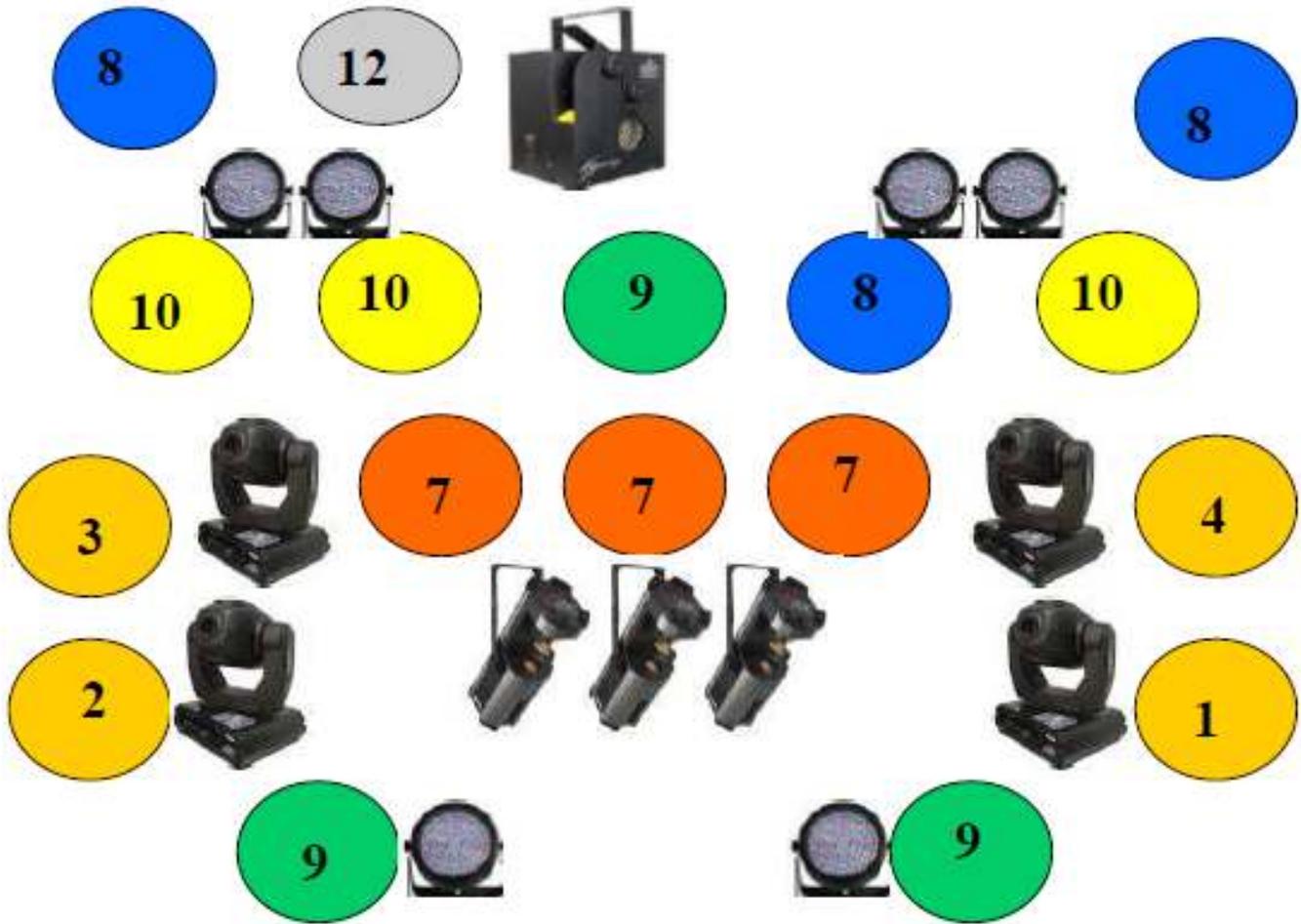
**Controller is a Chauvet "Obey 40"**
1,2,3,4 are Chauvet Yoke (legend 150DMR)
      moving heads on trussing.        (address 1, 17, 33, 49)
7 = (3 fixtures) martin mania scx600 on stage (address 97)
12 = smoke machine— Chauvet hurricane haze 20
      *(faders 1 & 2 all the way up for smoke)*   address 177
9= LED Par can 64 (generic RGBD 01x)        address 129
8= LED Par can 56 (venue)                address 113
10= LED Par can 56 (DBV?)                address 145
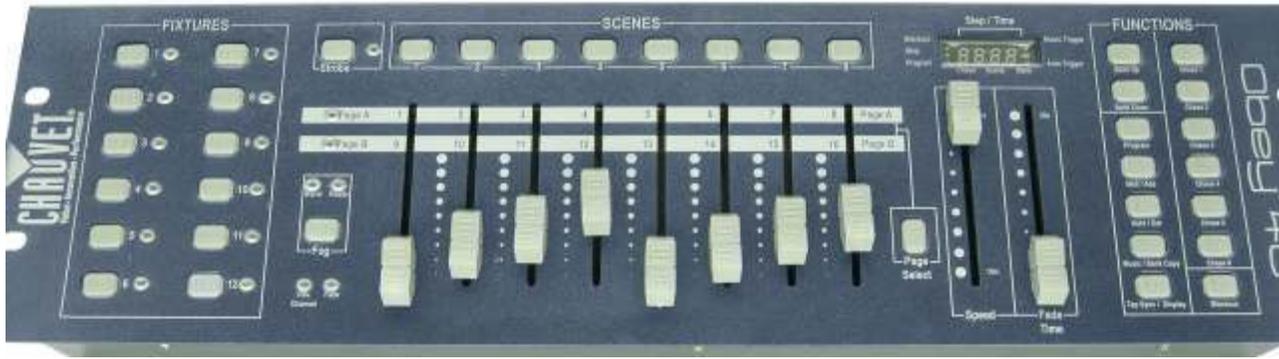
# To program a show -

Set fixtures # 9 and 10 first. LED's. Go to page A, fader #1 is Red, #2 is Green, #3 is Blue, #4 is shutter. Select color and fade the shutter open all the way to the top. It will display "255" on the read out screen. Hold down "program" for 3 seconds. Push "bank up, or bank down" to select a bank. Push "add", push scene 1.

Set fixture #8 and deselect 9 and 10. Set color but fader #4 is for white. Push "add" and scene 1 again.

Select fixture 7 and move the Martin scanners on stage (see chart below)

Select fixtures 1 through 4 Chauvet Yoke as needed (see chart) Push "add" scene 1 until all lights are entered the way you want. Push program to exit and save.

Go to all scenes and save for that bank #.

Push program for 3 seconds, then enter chase #, add scenes.

You can have 8 scenes in each chase.

You can have 6 chases in each bank.

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**Martin= faders, page A**
1 = strobe / 201
2 = dimmer / 255
3 = color / 130 blue
6 = side position / 123
7 = front position / 60
8 = motion / 0
Page B
9 = gobo's

**Chauvet yoke = faders, page A**
1 = pan / 130
2 = tilt / 122
3 = strobe / 255
4 = gobo / 58

5 = color / 87 blue
6 = motion / 0
7 = shutter / 0

## TO RUN A LIGHT SHOW:

1. Turn on the "on / off" switch on back.
2. Press bank up / bank down for bank 1
3. Press chase #1 for blue.
4. Press scene 1, the lights should be on but still.
5. Make sure "page select" is on page A
6. Run smoke by pressing fixture 12 and slide up faders 1 &2
7. Press auto / del and a chase should begin.
8. Slide "speed" fader all the way up and the "fade time" all the way down. Adjust very easy, it is sensitive.
9. When the song is over, press "auto / del" again and it will stop.
10. Go to the next chase #2 for green.
11. Chase #3 is red
12. Communion lights engage when you have any scene on and go to "BANK". Bank up or bank down until it reads 104 and press scene 1 twice.

13. Press black out on bottom right for teaching video.

# Anew Church Lighting DMX Addresses

| Fixture # | Channel | Dip Switch Positions |
|---|---|---|
| 5 | 65 | 2 3 4 5 6 7 8 9 10 |
| 6 | 81 | 2 3 4 6 8 9 10 |
| 7 | 97 | 2 3 4 5 8 9 10 |
| 8 | 113 | 2 3 4 8 9 10 |
| 10 | 133 | 2 4 5 6 7 9 |
| 13 | 169 | 1 4 6 8 |
| 14 | 175 | 1 2 3 4 6 8 |
| 15 | 181 | 1 3 5 6 8 |
| 16 | 187 | 1 2 4 5 6 8 |
| 17 | 193 | 1 7 8 |
| 18 | 199 | 1 2 3 7 8 |
| 19 | 205 | 1 3 4 7 8 |
| 20 | 211 | 1 2 5 7 8 |
| 21 | 217 | 1 4 5 7 8 |



ANEW church light wiring diagram
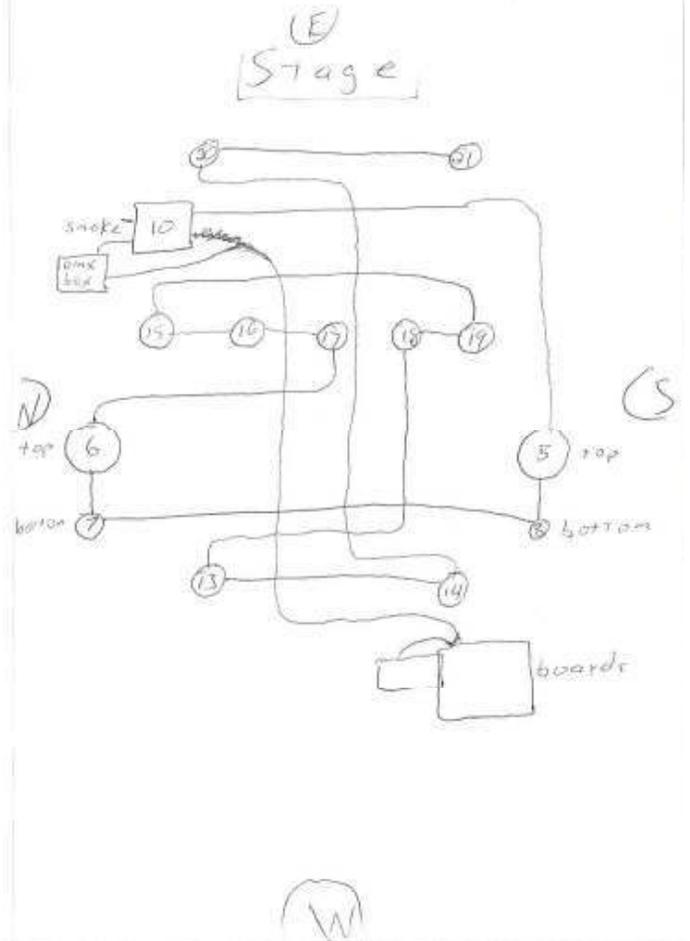
# Preparation

Turn on equipment
Turn on all power toggle switches on the Rack System
Turn on all the toggle switches for the "M. Projector" and "Video System" located by the green screen
Turn on the Soundboard
Plug in the four power cords in the center of the stage
Turn on the two power strips near the left and right of the stage in front of the offices
Turn on the "RIGHT" light switch by Marshall's office on stage (by bass guitar)
Go into the office (left side of the stage) and turn on the 2 amps (house and sub speaker amps)
Then to the right of the amps plug in the large blue extension cord (For LED Lights)
Turn on the four media computers
Login into the user "Media"
Open Pro Presenter and open the latest playlist
"Lights" computer start emulation
Turn on all three projectors (all should come on automatically except the left projector)
If needed turn on the left projector use the Panasonic remote stand near the green screen
Set the Quattro to PC mode by Pressing "PC" and then pressing "Take"


# Turn Off Equipment

Turn off equipment
Go into the office (left side of the stage) and turn on the 2 amps (house and sub speaker amps)
Turn off the "RIGHT" light switch by Marshall's office on stage (by bass guitar)
Turn off the two power strips near the left and right of the stage in front of the offices
Unplug in the four power cords in the center of the stage
Turn off all power toggle switches on the Rack System
Turn off all the toggle switches for the "M. Projector" and "Video System" located by the green screen
Turn off the Soundboard
Shut Down ALL Computers
Using the Video switchers (Kramer, and Quattro)

**Incoming & outgoing signals**:

# RACK MOUNTED AUDIO & VIDEO switchers

1. (3) rows of 8 toggle switches / on-off

2. Quattro video switcher

3. Kramer AUDIO switcher

4. Preview screens (marshall)

5. DVD player

6. AETM black magic studio camera switcher

7. Wireless mic receiver (shure)

8. Kramer video switcher
9. splitter / amplifier to projectors & TV's
    (4 way)

1. Pro presenter input from Apple desktop (song lyrics)
2. DVD output (technical pro) message / teaching
3. live feed from Balck Magic ATEM (input from video cameras)
* push Kramer button on Quatro. Push "take"

*select audio feed: Using the Audio (Kramer)
To Send the PC to the Soundboard press "ALL" then press "PC"
To Send the DVD to the Soundboard press "ALL" then press "DVD"
To Send Cable TV, press "all" and "3"

**Quartro switcher** sends video signal to "splitter / amplifier" at bottom of rack before signal is sent to projectors and TV's

**Kramer video switcher** = AV1 is DVD player,     AV2 is Live Camera Feed, Component is for Cable TV,     VGA 1 is the propresenter (Apple computer)

Push the
**1ˢᵗ BUTTON**
on the left to
use the 16
channels for
vocals and
instruments.
Slide faders as
needed.
Push the



**2ⁿᵈ BUTTON**

on the left to
Control
volume from
media
upstairs.
They will
switch from
one source to
the other.
Push the



**3ʳᵈ BUTTON**

on the left to
Control effects
Such as Delay &
"reverb" on
the vocals.

Unmute for
singing, and
mute this
effect for
talking.

**Topside Camera Team**
1. TURN ON GREEN POWER STRIP ON STAGE NEXT TO SMALL CAMERA
2. SET CAMERA TO"VIDEO" MODE
3. TURN OFF "DEMO" MODE
4. GO UPSTAIRS, TURN ON ALL EQUIPMENT
     (COMPUTER, CAMERAS, MONITORS, ETC)
5. SET CAMERAS TO "AUTO"
6. SET CAMERAS TO "SUNSET" MODE
7. MAKE SURE MEDIA EXPRESS IS READY TO CAPTURE
8. MAKE SURE AUDIO IS ENGAGED ON LAPTOP SWITCHER PROGRAM,
     TURN DOWN AUDIO ON DESKTOP COMPUTER
9. MAKE SURE ALL 3 CAMERAS HAVE SEPARATE VIEW OF BAND
10. MAKE SURE ALL TRIPODS ARE SECURED
11. ENGAGE SOFTWARE AND CAPTURE EACH EXPERIENCE
12. ZOOMING AND PANNING ON CAMERAS BY OPERATORS
     MUST BE SLOW AND STEADY
13. SWITCH VIEW EVERY 3-4 SECONDS

**EDITING**
1. CAPTURE AUDIO USING Laptop –TEST DURING SOUNDCHECK
2. AFTER CHURCH EXPERIENCES, TRANSFER WAVE FILES ON SD CARD TO
SONY VEGAS, OR GIVE FILES TO AN OUTSIDE STUDIO.
     (MUST BE RETURNED BY TUESDAY).
3. LINE UP VIDEO AND AUDIO "EXACTLY" FOR EACH SONG
4. USE "FADE IN" AND "FADE OUT" FOR EACH SONG
5. IMPORT LYRICS FOR EACH SONG AND USE LOGO PERIODICALLY
6. CHECK FORMATTING FOR WIDESCREEN AND
     RENDER AS 16X9, hd, MP4/1080i
7. POST TO YOUTUBE AND ARCHIVE IN (2) FORMATS - AS MP1 FOR PEGASYS?
8. PREVIEW WITH BAND ON WEDNESDAY PRIOR TO PRACTICE
9. USE TEAM INPUT FOR CRITIQUE, CORRECTIONS, AND ADJUSTMENTS

# Guidelines for Entering Lyrics with Pro Presenter

1. Get song set list from worship leader on Monday or asap and load songs prior to Band practice on Weds night.
2. Enter lyrics from each song. Use CCLI song select if you like, but confirm the arrangement such as verse 1, chorus, bridge, etc.
3. Follow you tube video (our recording if possible) for order of song.
4. Always use motion loops for the background that are high resolution 16 x 9. Use primary colors only – red, blue, and green. Dark backgrounds for white letters. No multi colored or fading to light. Fast action for fast songs, slow for slow, etc.
5. Use at least 2 lines of lyrics and no more than 4 per slide.
6. Make sure the "break" is in a natural place for the song. Do not split up a verse with part of the chorus on the same slide.
7. Do not get creative with fonts, sizes, or transitions. Use standard format only. Too much "fluff" can be distracting and hinder the ability to follow the song.
8. Keep the words VERY large. They are not an afterthought to the cool background.
9. Make it easy to follow the song for a new person singing, and for a new volunteer to run the program.

***ProPresenter***     The Basics

Turn on Computer Power and Log In – anewmedia7
~ start ProPresenter Software

***Quick Reference Guide***

~ Library = where imported content is stored
~ Playlist = service designated folder with service content
~ Video/Image Bin = library location for imported video and background content
~ Clear Functions = software buttons allowing user to clear audio and visual elements
currently showing on main screens
~ Editor = software button to open tools for advanced editing tools
~ Video/Image = software button to open Video/Image Bin
~ Messages = software button to open countdown timer window
~ Volume = controls volume output level of audio coming from ProPres
~ Output = Controls video image output to screens. Either on or off
~ Disable Slide = making a slide inactive in the flow of the song
~ Enable Slide = making a slide active in the flow of the song

~ Select the appropriate service in the playlist
~ use mouse to select a song or use up and down arrows to scroll through songs
~ use either space bar or left click on desired slide within song

~ while holding command key tap "S" key or
~ click File and select "Save Show" in drop down window

Text Edits
~ right click on slide needing editing
**Note Slide will have blue border around it
~ select "Quick Edit" from drop down menu
~ click in text box popup window (all text will be highlighted)
~ click text second time, placing cursor where editing is needed
~ type changes needed
~ click "X" in upper left corner of popup window to exit
Disabling/Enabling a Slide
~ right click on slide needing disabling
~ select "Disable" from drop down menu

Note: slide will be greyed out in song window and will be automatically skipped
during advancement of slides, unless clicked with mouse
~ right click on slide needing enabling
~ select "Enable" from drop down menu

Note: slide will match the look of other slide with song window and will be automatically displayed during advancement of slides
Add Clear Action Cue
~ right click on slide needing clear action cue
~ select "Add Clear Action Cue"
~ select type of function you would like to clear

Removing an Add Clear Action Cue
~ right click on slide needing clear action cue removed
~ select "Remove: Background" or "Remove: Clear All"

Adding a Label
~ right click on slide needing label
~ select "Label" from drop down menu
~ select from one of the defaults or click "other…" and type your own
Removing a Label
~ right click on slide needing label removed
~ select "Label" from drop down menu
~ select "none" at the top of drop down window
Adding a Color
~ right click on slide needing color
~ select "Color" from drop down menu
~ select from one of the defaults in drop down menu
Removing a Color
~ right click on slide needing color removed
~ select "Color" from drop down menu
~ select "none" at the top of drop down window
Copy and Paste a Slide
~ right click on slide needing to be copied
~ hold command key while left clicking to select multiple slides
~ select "Copy" from drop down menu
~ right click on slide that comes before the location new slide is to be pasted
~ select "Paste" from drop down window
Insert a Blank Slide
~ hold command key and select slide that comes before the location new slide is to be inserted
Note: this slide should now be framed in blue
~ left click "+" button at button left corner of slide window

Re-arranging Playlist Order
~ left click and hold song to be moved and drag to new location
Adding a Background

~ click "Video/Image" in top menu bar to open Video/Image Bin window at bottom of screen
~ select desired background in "Video/Image" bin
~ while holding command key, left click and drag image to desired slide location
Advanced Text Edit
~ select song you wish to edit
~ click "edit" in slide window or
~ right click on a slide and select edit slide from drop down menu
~ click on slide to be edited
~ click once to select text box, click a 2nd time to highlight all text
~ text editing controls are located on the right column (see tech pic 2)
Note: any change made to a slide can be applied to all
(see tech pic 4 yellow arrow)
Text Editing Parameters

Outline
~ value should be 2
~ color of outline should be set to black
Tracking
~ value should be 0
Leading
~ value should be 20
Text Placement
~ standard is usually centered
~ pending image type text can be moved to exposed a key feature of a background
~ click done button in bottom left corner of the slide window to exit

Text transition time
~ text transition timing is changed by slider at bottom of slide window
~ standard time is 0.6
Background transition time
~ background transition timing is changed by slider at bottom of
"Video/Image Bin" window (see tech pic 5 yellow arrow)
~ standard time is 0.6 for sermon and Family Life slides
~ standard time is 3.0 for slide backgrounds
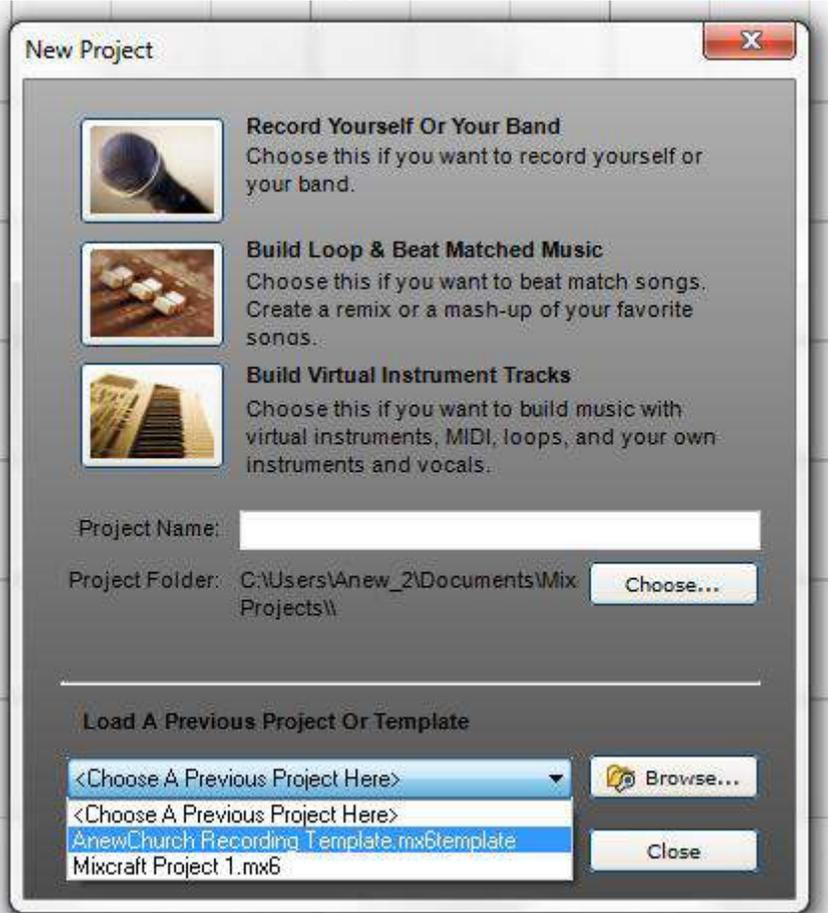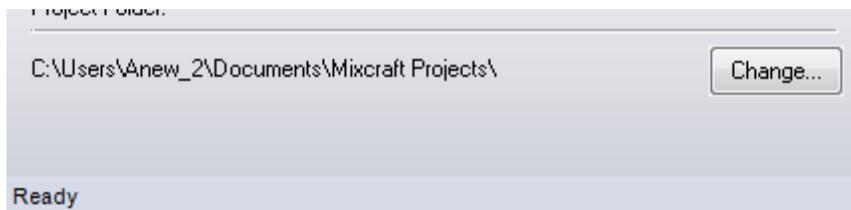
To record audio on Sundays:
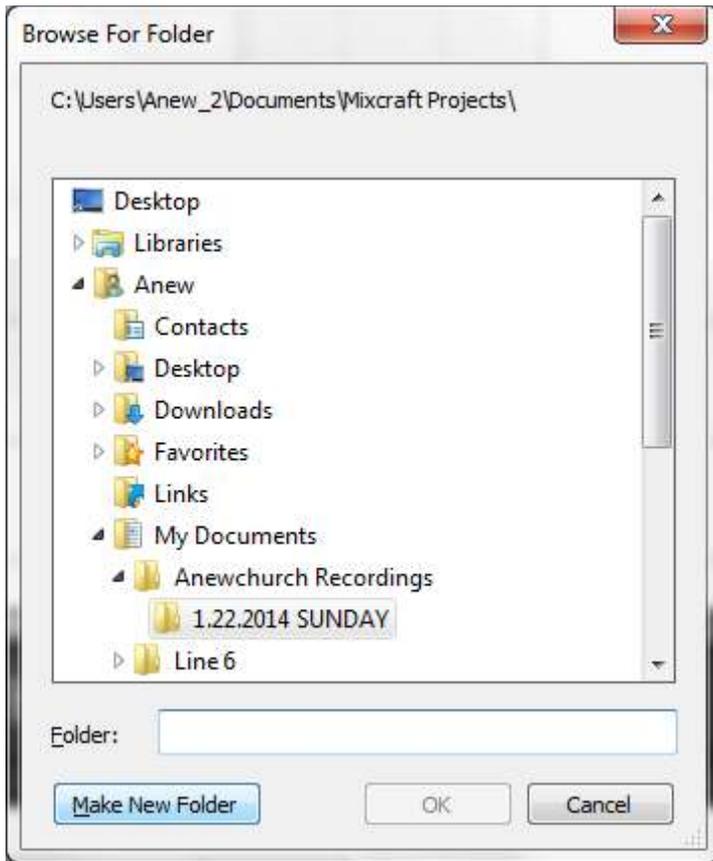Step 1



Open Mixcraft 6
Step 2
Select "AnewChurch Recording Template.mx6template"



IMPORTANT: push "change" in the bottom left of the screen



Select: Make New Folder and then save it as the date (day.month.year) followed by the day in all caps.

Every track, 1-17, is automatically "armed" which means it is set to record when pushing record.



Do not run around the program and experiment with the program.
When ready to record, push the red record button or push "R" on the keyboard. To stop recording at anytime, push the spacebar, or push the stop button (either the record button or the play button stops recording).

When getting ready to save, save it as the date and the day in all caps.
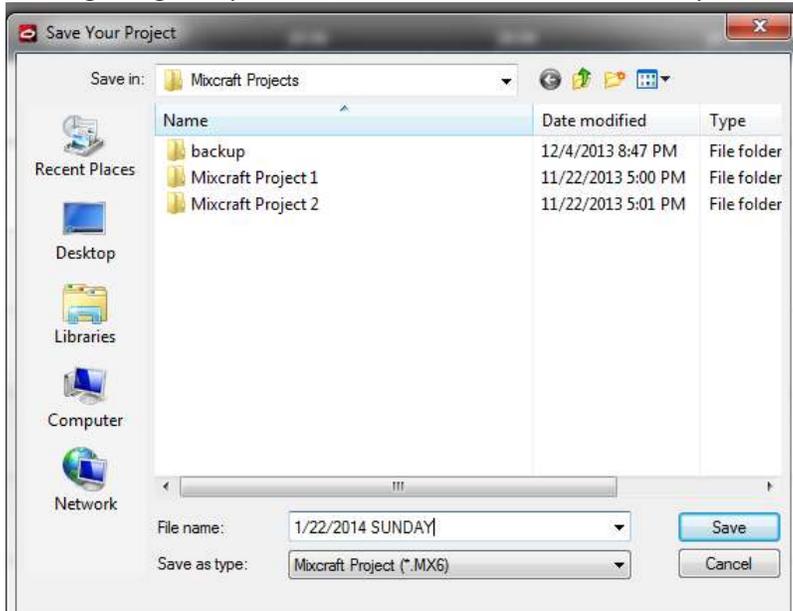
## VIDEO   DISTRIBUTION...

Video originates from Apple computer (Pro Presenter) and is sent by DVI cable into the Quatro (2) switcher / scaler for video. Audio is sent to the Kramer audio (3) from Apple, and DVD.

Other Video feeds originate from the DVD player by yellow composite cable into the Kramer video (5) and live feed from the cameras into the AETM (7). The AETM is controlled by a laptop with switching software, and "Media Express" software on another computer for capturing the footage.

The Kramer video collects several sources and is sent to the Quatro. The Quatro is sent to the Amplifier / Splitter (9) and is then sent to the projectors and TV's.

The multiple TV feed is split by VGA to the HRT receiver by converting VGA to CAT5 and back to VGA. This is done for the convenience of using CAT5 cable.
Long Video Runs from a camera are converted from HDMI to SDI cable with the use of Black Magic conversion boxes. (SDI cable can run longer than HDMI)
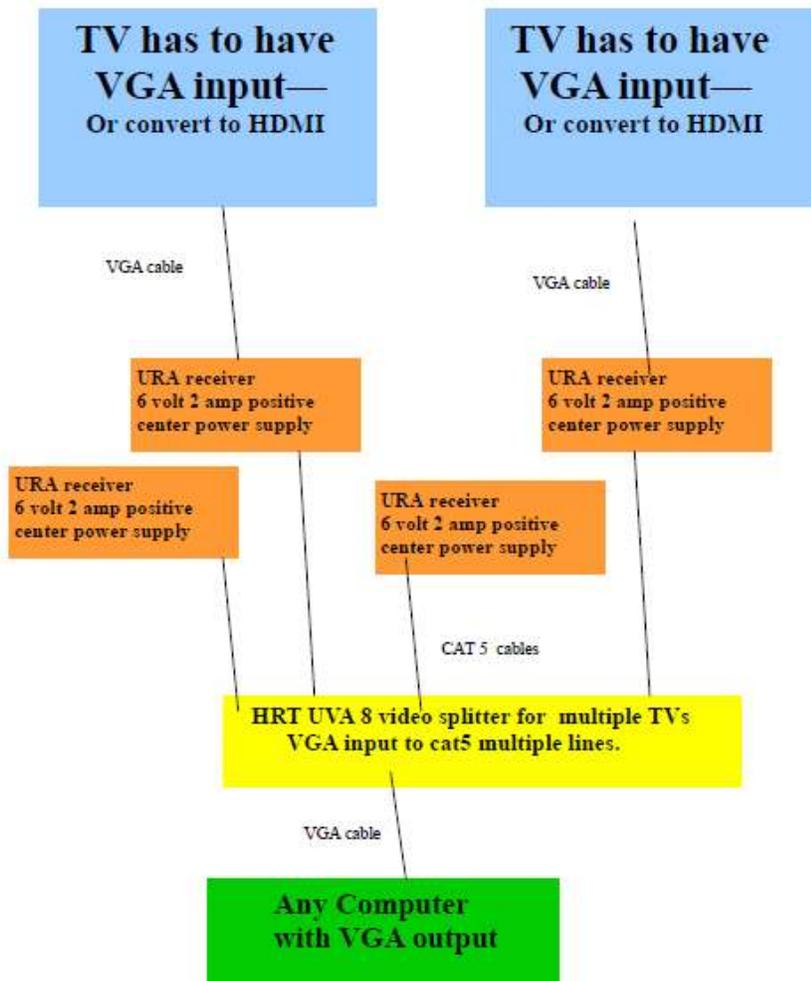
**OPTIONAL distrobution group for off-site such as BUSHIDO, etc**
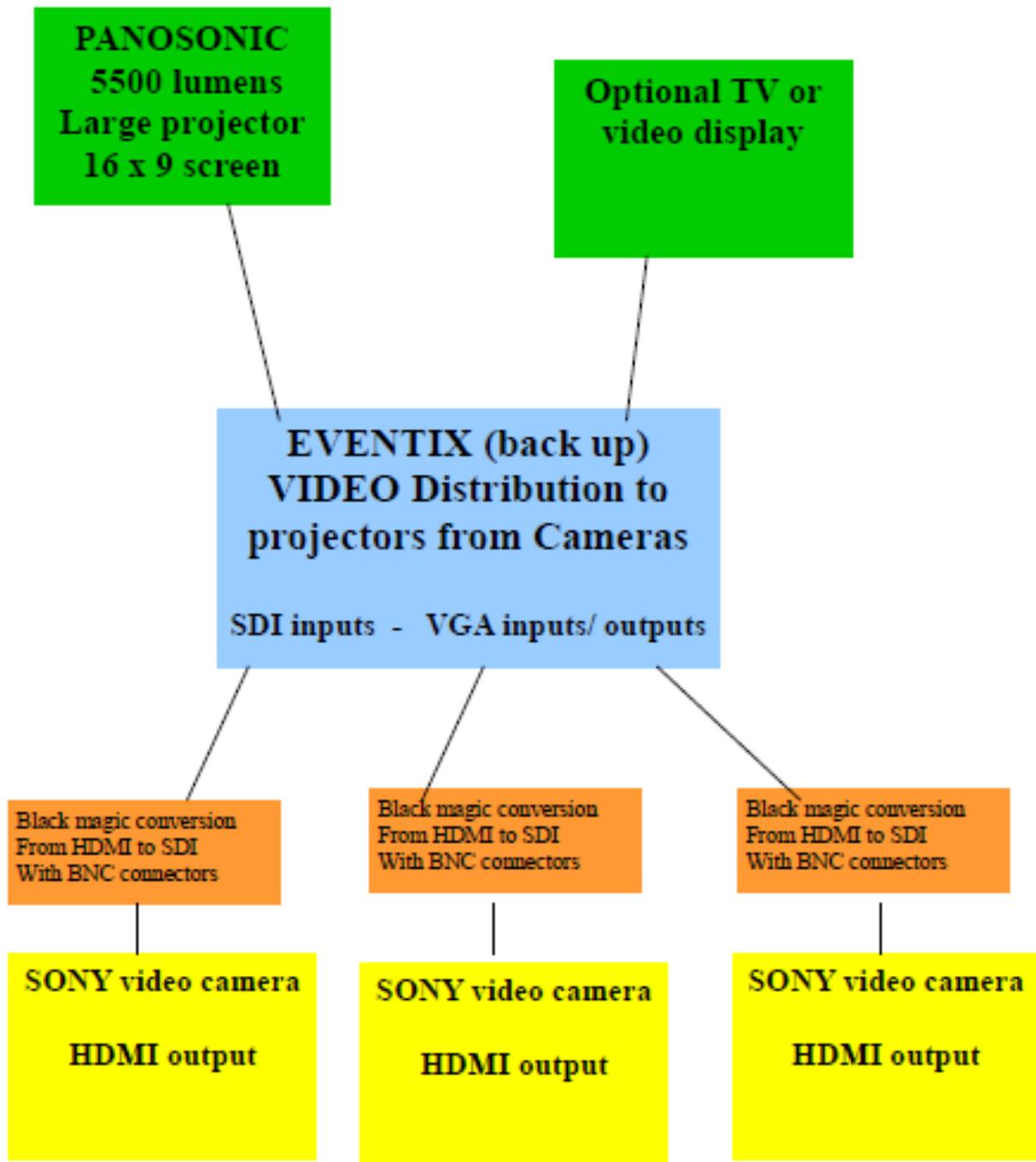
1. USB
2. Coax
3. DVI
4. VGA
5. Composite
6. Component
7. HDMI
8. BNC connectors
9. BNC to RCA converters
10. S Video
11. RCA
12. XLR
13. 1/4 " stereo
14. 1/4 mono
15. CAT 5
16. HDMI to mini HDMI
17. USB power cable
18. Transformer
19. 1/8 inch
20. Speak ON