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Not all of these documents mirror Easy Steps documents laminated in the studio control room. Most of these have been updated. If you'd like to further updates any of these documents, please contact Ljanakos@communitytv.org. Easy steps updates for blog on January 27, 2020.

EASY STEPS FOR CAMERA OPERATOR

A User Guide (2 pages)

CAMERA OPERATORS PRIOR TO LIVE TAPING--WARM UP

1. Arrive about 45 min. before show. Put your headset on **20 MINUTES** before start time. Listen for instructions. Can't hear? Turn up the volume button on the camera (small knob in back of camera) or tell the director. Check security of cable on back of camera that leads to the control room.
2. When talent gets seated, fully zoom in on a detail (e.g, the eyes of the talent) to establish focus. Uncertain about focus? Ask floor manger, technical director or director for help prior to going live. (Refocusing is common during a production.)
3. Practice camera shots and angles, such as close ups, medium shots, multiple shots of guests. Cameras 1 and 3 practice over the shoulder shots. Camera 2 practice wide shots. The director will set up or approve all opening camera shots.
4. Practice zooming in and out, panning, and trucking.

DURING A LIVE PRODUCTION

1. You may be asked to **tilt** the camera up or down, usually to alter headspace.
2. You may be asked to **pan** left or right. If so, swivel just the camera to the left or right. This shot may be asked of you when the director wants to add another person in a shot or wants to scan a spread of visuals such as maps on a back wall.
3. You may be asked **zoom** in or out. If **live**, **zoom** slowly without jerky movement. You'll have to tilt or pan the camera as well in order to maintain an aesthetic shot. If you can't do this shot while live, let the director know before the show.
4. You may be asked to **truck** left, right, forward or back. In this case move the entire tripod. This is rarely (though sometimes) asked of you while live. It usually means the director is looking for a better angle. You will have to refocus if asked to do this shot.
5. While, live, don't move your camera unless directed. Stay aware of which camera is live; red tally light will be on. Tally light not working? Check the monitor or ask the director, "Am I live?"

A FEW DO's and DON'T's

1. Turn off all cell phones. No food or drink in studio. Stay at your camera, headset on.
2. We go live at sound of the **COUNTDOWN**. Listen to the director. **Ready** =you're in preview. **Take**=you're live. Keep camera still when live.
3. Keep tilt lever on the camera unlocked. When leaving a camera, lock the lever.
4. Need to talk to the director during show? Push button on underside of right handle. Green light comes on. Speak softly to avoid the mics picking up your voice.
5. When your camera **isn't live and** at the director's okay or instruction, you may be creative and change shots on your own. The director will let you know which shots she/he will go with. Shooting a talk show? **Camera 2** be prepared for a full table shot. **Camera 1** be prepared for a medium shot of the host or guest. **Camera 3** be prepared for a medium shot of a guest or host. Shooting a music show? Stay aware of the music and musicians to catch the solos or get other interesting and creative shots.
6. If you must leave the studio during taping, let the director know and leave quietly.
7. Avoid stepping on or rolling the tripod over cables.
8. Stay on headset until after director says the show is over. Place **headset** in its position on the camera and lower the tripod to its lowest position.
9. Make sure the **camera** is locked and faces forward and not up or down. Replace the lens cap.
10. Make sure **cables** are wrapped correctly and hung on the wall if needed. Do not plug-in or unplug cables, however. Do not push or pull any cables through openings in the walls.

Easy Steps for Technical Director

A User Guide for the TriCaster Switcher (2 pages)

A Technical Director follows the Director's call on which shot to put in preview or live.

Bottom row: **Preview.** (*Green*)

Second bottom row up: **Live.** (*Red*)

Third bottom row up: **Graphics.** (*Blue*)

Upper Rows: **M/E** (green screen, blue screen, virtual sets, etc.): (*Yellow*)

During production Technical Director will mostly be using two rows, the bottom row (*green* for previews) and second bottom row (*red* for live).

DDR 1 and DDR 2

These buttons represent panels for media assets. These may be filled with roll-ins, audio or graphics. (Based on Director's call, DDRs should be set to auto or single.)

DSK 1 and DSK 2

These keys are set by the director through the blue graphics utility row. Buttons should not be pressed after the director sets them. These represent keyed assets. CG operator accesses Live Text titles through DSK 1. CG operator accesses motion graphics such as scrolling credits through DSK 2. Titles and stills are generally visible in GFX (graphics) pane. Motion Graphics such as scrolling end credits are most often visible in DDR 2 pane.

EXAMPLE FOR OPENING AND CLOSING OF SHOW

OPENING

- For first shot, SET LIVE KEY (**RED** row) to "black."
- For second shot, SET PREVIEW KEY to READY (**GREEN** row) to whatever the director wants. It may be Camera 1, 2 or 3. Or it may be DDR 1 or DDR 2. DSK 1 or 2 may be added.
- Show may open with black screen and fade or cut to camera 1, 2, 3 or to DDR 1 or DDR 2. To transition from shot to shot, use the key called Auto. To dissolve, use Fade. DSK 1 or DSK 2 are generally used for Live Text graphics.
- Either DSK key may be keyed to Graphics, a camera, or a DDR pane. Motion graphics won't work in DSK 1.

CLOSING

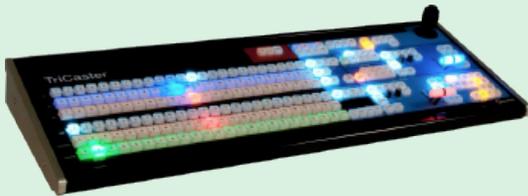
For closing shot, "Black" may be keyed in Preview (GREEN row). If asked upon Director's call, **fade to black** by moving the transition bar.

Best technique: Keep three fingers of left hand on Camera 1, Camera 2, and Camera 3. Keep a right hand finger ready for take button or auto (fade) button to the right of the general keyboard alongside the *green* and *red* rows.

General Use of the Switcher During Production

READY (camera #) . The Director will tell you which shot to **preview**. Set up the shot in the bottom **GREEN** row by pressing on the camera #.

TAKE (camera #) . The Director will tell you which shot to **go live** with. Most of the time, the shot will be in preview. To go live, press the **Take** or **Auto** (fade) button to the right of the keyboard. When the shot is live, it will be in the second bottom **RED** row.



READY DDR (1 or 2). She will tell you when to set DDR1 or DDR 2 in preview mode (**GREEN** row).

TAKE DDR (1 or 2). He will tell when to set DDR 1 or DDR 2 in live mode (**RED** row).

Roll--ins should fade in and out. Press **Auto** button to fade in and out. See take and auto buttons below.



Pushing **FADE** offers a quick and convenient way to select the Crossfade transition. Push the **TRANS** button to activate the last used transition icons for a video layer or layers. For new sessions, **TRANS** jumps to the first transition in the bin. The fade and trans buttons are mutually exclusive.

AUDIO



Click the **Audio Mixer** tab (centered in the lower third of the Live Desktop) to reveal audio features.

NOTE

Imported files are automatically categorized and sent to the correct locations, making them easy to find and use during live productions. Written and prepared by L.D. Janakos and Brian T. Shulman, version 3, January 2015.

EASY STEPS FOR COMPUTER GRAPHICS

A User Guide

Two-Part Process

1. Create title and lower third slides for the first time or in **Live Text**. Create motion graphics such as end credits in **Live Text**.
2. Import, Edit Type or Apply title and lower third slides in **Live Production**.

(Unless you want to change the style, font, template, etc., edit non-motion text within slides in Live Production rather than in Live Text. All motion graphics, however, must be edited in Live Text.)

CREATING TITLES, LOWER THIRDS AND END CREDITS IN LIVE TEXT

GETTING INTO LIVE TEXT

- Live Production may be on or off to work in Live Text.
- On Homepage, access Graphics icon (*Not in proper session? Click large gray arrow top left.*)
- Save project as cg. (not png) **DO NOT SAVE AS A NEW FILE. DO NOT DATE.**

CREATING OR EDITING GRAPHICS IN LIVE TEXT

- Select Add a Page for blank page or template from upper right pull down menu
- Input show's data for one slide.
- Select **SAVE PROJECT** often.

EDITING TYPE

- Select **T Box** (top left).
- To change type color, access upper left color box. Highlight type. Select color.
- To change font, access lower left Fonts. Choose style, edges, spacing, etc.

EDITING TEMPLATE (STRAP OR TITLE)

- Select **Arrow Box** (top left) to globally move type.
- Select **Font Justify** to justify (move) entire type within a strap.
- Select **Arrange Box** to move the strap.
- Select **Clone** (upper right) to duplicate slides. Input info. Leave one blank slide.

SCROLLING END CREDITS

- Select **Add** a still page (or add a scroll or crawl page).
- Input names and other credits.
- Select the **up arrow** in the Motion Type Bar (lower middle under the Type Box).
- Select speed. Select **Stop** for End Behavior (other choices exist).
- Test your selections. Select start box in playback control (on right middle).
- Select **Send Page to Live**. It will appear as an AVI movie (motion graphics).

FINISHED? Select **Send All Pages to Live** or **Send Page to Live** (upper left).

Working with Slides in Live Production

Reminder: If you already have slides in the panes from previous shows, edit the text in Live Production rather than in Live Text.

IMPORTING STILL SLIDES FROM LIVE TEXT

- Click **+** SYMBOL in lower left of GFX pane.
- Find your session in Media Folder. Find newly created slides under Titles.
- Highlight slides you want to import. To highlight an adjacent group of slides, **CLICK** on first slide, **SHIFT & CLICK** on last slide to highlight all. **IMPORT**.

IMPORTING MOTION SLIDES FROM LIVE TEXT

- Click **+** SYMBOL in lower left of DDR 2 pane.
- Find your session in Media Folder. Find newly created slides under Clips.
- To highlight and import, follow procedure for still slides.

Position the **GFX** and **DDR 2** panes next to each other to make both visible.

EDITING TEXT INFO ON SLIDES IN GFX PANE IN LIVE PRODUCTION SESSION

- Click wheel in lower right corner of slide to edit or title slide.
- You may edit type info such as names or websites. You can't alter type or design.
- You may add information to a blank slide or create duplicates for editing.
- Slides are numbered. Add a corresponding name to slide for easier access.
-

FILL IN PAPER CREDIT SHEET

- Input names of crew members and their positions. Lower thirds and title slides should correspond (same order) to slides in the **GFX** pane and **DDR 2** pane.

APPLYING STILL TITLES AND LOWER THIRDS DURING PRODUCTION

- Click on the **SLIDE** once to preview or ready it for live. Click **DSK 1** to go live.
- Clicking again on **DSK 1** removes slide from live. Light on **DSK 1** goes out.
- Click on **MOTION SLIDE** to preview. Click on **DSK 2** to go live.
- Clicking again on **DSK 2** removes from live. Light on **DSK 2** goes out.
- *Note: "Take" means a straight in or out. "Auto" means fade in or fade out.*

ADDED NOTES

- The director may program **DSK 1** for still graphics and **DSK 2** for motion graphics for you through the blue utility rows.
- To change transition types, go through **DSK 1** or **DSK 2** in the far upper right.
- The director will tell you when to use lower third, title or end credits.

EASY STEPS FOR GREEN SCREEN - STUDIO

A User Guide

CTV studio offers the perfect tools for working with a green/blue screen. The studio has six two-sided screens on wheels. On one side the entire screen is green. On the other side, the upper half of the screen is blue and the bottom half made up of simulated wood paneling.

Green Screen Set Up

Before you reserve the studio, consider how much of the background behind your subject you need to key-out and replace with an image or video. *Assume you are standing in the middle of the studio facing the rear wall, the control room to your right, the studio monitor behind you.*



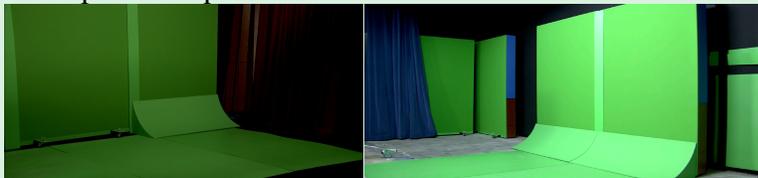
Example one: Shooting a subject sitting behind a table.

- Your shots of the subject are waist up only. Face the green vertical panels toward the cameras. Push together as many screens needed to provide a background wide enough for your shot.
- With panels and subject area positioned, attach the green plastic vertical strips along the seams between the panels to cover the shadow produced by the screen's edges. The strips are stored in a rack attached to the rear wall of the studio.



Example two: Shooting a subject sitting or standing in full view in a keyed environment that surrounds him or her on all sides.

- This type of shoot requires more pre-production planning and set-up in the studio.
 - Know your set and where you will position subjects and props.
 - Determine your widest shot and the number of vertical and floor panels you will need.
 - Floor panels require the use of "coves." You'll need one cover per vertical panel.



Coves are placed at

the base of the vertical panels and covers their wheels. The covers are not kept in the studio and must be ordered separately when you make your reservation.

Setting Up a Subject in Full View

1. Move the wheeled blue/green panels off to the left area of the studio. This gives you room to remove the green plastic floor panes from the racks attached to the rear wall.
2. Remove the wood grain bars hanging across the large green floor panels and put them off to the side. These can top over easily, so handle with care. (These bars are not used with blue screen only and cover gaps between the vertical panels.)
3. Remove the needed green floor panels. Grip the edge of the top green floor panel and slide it out of the left side of the wall rack. Two people pushing and pulling works best.
4. Position the floor panels flat, 5 or 6 feet out from the wall and approximately in line with where you expect to place the vertical panels. This should give you enough room to work as you position the vertical panels.
5. Remove the narrow green plastic strips from their wall rack. Place accessible out of the way. These will cover the gaps between the edges of the green vertical panels.
6. Roll the vertical green panels into position. Both the vertical and floor panels should cover the area behind your subject. Check your shots in the camera(s).
7. Slide the floor panels to the bottom edge of the vertical panels. Check their alignment on the floor as gaps between panels will not key and may become noticeable.
8. Position each of the wooden covers at the vertical/floor panel junction. Carefully place the cutouts in the covers over the wheel brackets.
9. Place the narrow green plastic strips over the area where the vertical green panels join. You can cover any floor seams with chroma green tape.
10. Make all adjustment to the mixed effects bus in the TriCaster and inspect the images from the camera(s) to confirm you have a continuous, clean key.

Note 1: Reflections interfere with getting a clean key. When placing your subjects and props, avoid any reflection from the green screen onto the backs of the subjects and props. Placing the subject 5 or 6 feet away from the screen is usually sufficient but rely on visual inspection of the set-up as light intensity and clothing of the subject may require adjustments.

Note 2: Lighting: Find two diagrams for lighting above the lightbox on the wall outside the control room. One diagram shows typical green screen lighting for placing subject(s) on left side of studio (wall facing monitor). The other diagram shows typical green screen lighting for placing subject on right side of studio (wall facing monitor.).

This document is from a project in the Producers/Directors Workshop. It is based on a draft outline by Ron Powell, who gave a workshop on the basics of setting up a green screen at CTV on 11-18-2018. The outline was revised and adapted for Easy Steps by L.D. Janakos:11-26-2018 for control room & on 1-26-2020 for the blog.

EASY STEPS FOR GREEN SCREEN - KEYING

A User Guide

Chroma Keying at the TriCaster

With the studio set up and cameras locked down into position, you can key on the control surface of the TriCaster, also known as the physical switcher for cameras and mixed effects.

Setting Up Three M/E's

- **Establish** your keying in M/E before you use Live Matte. It allows you to more easily adjust your Live Matte settings for nuances of that video or image.
- **Assign** M/E busses A and B as well as M/E 1, M/E 2, M/E 3, and ME/4. Most popular for A and B busses: **Assign** the A bus for the talent at green screen and the B bus for the keyed asset (image or video). Each M/E tab may be connected to the following: Mixing; transitions or Effects; M/E Layers; M/E Keyers; Virtual Sets.

Step-by-Step for 2 Layers

- **Access** the Mode Selector in the upper right of the monitor window located to the left of the T-bar. **Click** on the default “2” set, which stands for 2-Layer effect. The Mode Selector functions for changing between “effect” and “mix.” You may also select mode “3” or “4” if you are working with more than 2 layers. Most remaining modes are for virtual set templates.



- **Locate** the M/E busses in upper left of the monitor below Preview and Program windows.

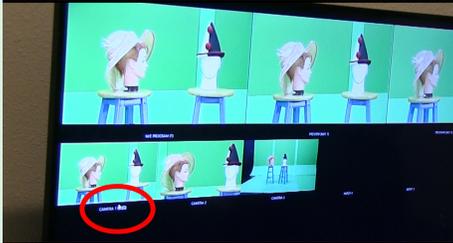


- Keys light up when selected.
- One at a time, **assign** each M/E tabs to a tab in the “A” bus. Example: **Select** M/E “1” tab followed by the A Bus followed by the B bus. Example: Select M/E 1. Assign 1 in the A bus to correspond to Camera 1 and select DDR 1 to the B bus to correspond to an image in DDR 1.
- One at a time, **assign** M/E tabs to a tab in “B” bus. Example: **Select** M/E “1” to an asset location (DDR, GFX, etc.), and the location in the “B” bus. Repeat for each M/E tabs.
- *Optional: You may crop, scale, position or rotate an imported asset inside a layer. Select the “Positioner Icon” located at the left end of the A and B mix busses. A modal window with your choices will pop up, which will allow you to make changes.*

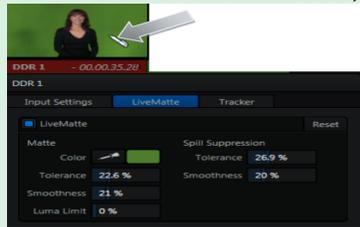
Using the Live Matte Tool to Pull a Key

Step-by-Step

- One at a time, select the Input (studio cameras 1, 2, or 3) you are using. Repeat the process for each Input.
- **Select** the gear in the lower left corner or **double-click** on the input monitor window.

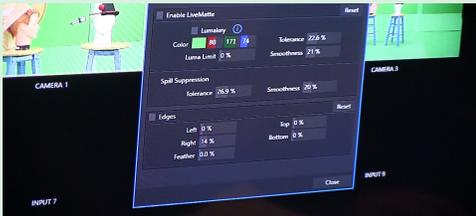


- A modal window pops up with five tabs. **Choose** the Live Matte tab.
- The additional tables are Input; Settings; Color; Automation; Tracker
- Using the mouse, **hover over** the color swatch until the eyedropper tool appears.
- **Hold** down the left side of the mouse; **drag** the eyedropper to the green screen on the



monitor.

Open Live Matte



- **Move** the eyedropper around the monitor until you find the best median green and **select** it. You can monitor the color variations of the screen in the color swatch. **Release** the mouse to key the screen. The background turns black, the default color for a keyed screen in Live Matte.
- **OPTIONAL:** To use a checkerboard instead of black overlay, **right-click** on the monitor window. Chose OVERLAY > CHECKERBOARD.

Using Tolerance & Smoothness in Live Matte

*To adjust Key color and other visual information, we increase or decrease the **Tolerance** range (0% - 100%) in percentage increments. We increase to apply more of the key color and decrease to subtract it. To smooth edges of the key and talent, we increase or decrease the percentage increments of **Smoothness**.*

Increasing/Decreasing Percentages (Fine Tuning)

- To start, set both Tolerance and Smoothness to 0%.
- Increase the tolerance until the key color is completely transparent, but the talent or subject is still solid and not affected by the Tolerance setting.
- If the key does not hold while the subject moves around the set, make further adjustments.
- Rule of Thumb: Adjust only as much as needed to pull the best key. Higher tolerance percentages will key out your talent, making the talent transparent.

Additional Tools

Cropping (Under Edges in Live Matte)

- Cropping the key will eliminate fringe color appearing along the edges of the frame.
- Select Input Settings to open the Live Matte modal window. To reopen, click on the gear (lower left) of the Input you are working in (i.e., Camera 1, 2, or 3), or double-click on the Input monitor window.
- To activate Crop, select the box adjacent to the Edges title in the lower part of the Live Matte window. It turns blue when activated.
- Crop left, right, top or bottom by increasing the percentages (range: 0% - 100%). Start with lower percentages and increase until you see the edge of the talent and then slowly decrease the percentage. Give the talent enough room within the area to be keyed.

Colored Lines or KEY or COLOR under Camera Inputs

Once you have pulled your key or cropped edges, you will see a colored title beneath your Camera or Input monitor.

- An active Camera or Input shows a green “KEY” title.
- A cropped Key (“Edges” in Live Matte) shows a green “KEY” title in the Input monitor. *Note: The KEY title does double-duty for the Chroma Key and Edge Tool.*
- A yellow title named “COLOR” indicates you changed something. It only activates if you are adjusting saturation or any of the settings in the Color tab.
- If you do not see a KEY or COLOR title, this indicates no key or crops are active.

Note: Each M/E has 4 separate Downstream Keyer DSK layers, allowing you to overlay a graphic over the video or program, including a key you have already set up. Place a graphic in a Buffer. In the M/E Keyer, choose the source (e.g., Cameras, Network, Media Players, Buffers) linked to your graphic. Select the TAKE or AUTO button to activate the overlay over the video. The graphic will now appear as additional top layer. To remove the DSK hit TAKE or AUTO again and it will go away (You can also use the main output or a M/E/ tab as the Keyer.)

This document is from a project in the Producers/Directors Workshop. It is based on a draft outline by Daniel Saenz, who gave the workshop “Pulling a Key at the TriCaster” at CTV on 11-18-2018. The outline was revised and adapted for by L.D. Janakos for Easy Steps 11-26-18. Adapted for blog on January 26, 2020.

EASY STEPS FOR TELEPROMPTER

A User Guide

Three-Part Process

1. Set up the teleprompter in the studio first or the teleprompter will not work from control room.
2. Set up the text through the computer in the control room.

STUDIO: *SET UP TELEPROMPTER ATTACHED TO CAMERA 1*

1. Find the cable rolled up on the rack next to the light board. The HDMI cable is marked "TELEPROMPTER."
2. Grab an orange extension cord.
3. Connect the cables and extension cord to the teleprompter on camera 1.

CONTROL ROOM: *SET UP TEXT AT COMPUTER IN CONTROL ROOM*

1. On the desktop on the computer, access the program called Script-Q. (Its green with light lettering) A window will open for your text. Access Home tab.
2. If you have text to upload on a thumb drive or on the desktop, click File, Open, and click on your file. It will automatically appear on screen.
3. You can also type text directly into the window. The text edit bar gives you font style, size, and color options.

Three Ways to Get Text into the Window

1. Prepare your text beforehand and upload it from a thumb drive. Open your file, copy and paste.
2. Create your text in the Text Editor box. Be sure to check your font size and style.
3. You can open a file and copy paste (this option works for longer files you are extracting partial text).

CONTROL ROOM: *Running Text for Readers*

1. Controls are at the top of the page. ACCESS Setup tab. When ready, click on the arrow in the right corner next to the speed bar. It turns green before taking you to a new screen.
2. Set the speed of the text to roll. It's a good idea to practice with the reader
3. Slow down or speed up the scrolling through the mouse or through the controls at the top of the open window.

EASY STEPS FOR STUDIO LIGHTING

A User Guide

The Studio Supervisor turns on the lighting board.

The lighting for ceiling lights is already positioned for studio use. You need only adjust the sliders on the light board. Adjust the sliders for each light or set of lights based on your needs. Be sure the fluorescent lights are turned off during your adjustments. Slide the master switch up and down to the appropriate intensity.



Example

TIPS

- Avoid flat and one-dimensional lighting. Under most circumstances, you want lights open and smooth. Video demands smooth and even lighting. For green or blue screens or for virtual sets, use the moveable floor lamps to fill in shadows.
- Floor lamps are especially helpful when using blue or green screen.
- Use key light for bright side; fill light for shadowy side. Add backlight and curtain light for dimension. If needed, use gel for changing light to add dimension if needed.
- In General: Coordinate **3-point lighting** for one camera and **9-point lighting** for all three cameras. Focus each camera separately. The focus is dependent on camera and location of light on set. Depending on camera location, the lighting can be lost or 1 dimensional.



Written and prepared by L.D. Janakos. Based on a lighting class taught by Sandra Leigh at CTV, 2014. Adapted from an earlier Easy Steps by L.D. Janakos & Sandra Leigh. Adapted for the blog on January 26, 2020 by L.D. Janakos.

EASY STEPS FOR TRANSCODING

A User Guide

Transcoding Files for Export For Exporting After Show

In Live Mode: To Save on the TriCaster Hard Drive and Later Copy to Your Flash Drive After Recording. This method is considered fail safe.

Export

Begin at EXPORT (top menu).



- Click on the *gear* to open its menu.
- Click on *Transcode Live* and make sure the check mark is next to it.
- Move on to next menu by clicking on the *gear* next to Transcode Live.
- Click on *Configure Transcode Preset*.

At Configure Transcode Preset

- In this menu, click each of the menu items to set your preferences. The *Format* preference is usually *MV (h.264)*. The ***Publish*** preference is usually *both clips and stills*.
- Click on ***Directory*** to browse and select your destination. The *Browse for Folder* window opens.

In Browse for Folder window

- Find the appropriate *Drive Media*, usually *D or E*.
- Click on *Sessions*. It will automatically date and save.
- Click *OK*. You're set to transcode your show during recording.
- Return to *EXPORT* on top menu.

Export

You can do this next step after you record your show.

- Click on the *gear* of Export to again access the Export menu.
- This time click on *Export Media* to get to the next window.
- *Media Browser* opens.

In Media Browser

- Click on *Add* and Find the file to export under Sessions Recordings.
- Click on your file.
- Find the "*Export*" tab at the bottom of the window and click on it. Click on close.

Manage to Browse to Drag and Drop or Copy and Paste

- Start at Main Window and click on *Manage* to get to next window.
- Click on *Browse* to get to next menu.
- Click on the media, usually *Clips*, to find your file to copy to your flash drive.
- Drag or copy over.

NOTE: The G drive is for maintenance and storage only. Do not transcode or add files to it. Be sure to remove any files of your shows to your thumb or external hard drive as files will be eventually removed as the G Drive fills up.

This document is from a project connected to the Producers/Directors Workshop. It is based on a draft by Keith Gudger and a studio presentation by David Goldman followed by a group discussion. Both document and presentation were revised and adapted by L.D. Janakos for Easy Steps 06-6-2019 and for the blog on January 26, 2020.