4K-UHD Production

The MultiFeed feature allows you to use the utility buses of an ME as the background and preset sources for the configurable program outputs of an ME. If you use multiple configurable program outputs from the same ME, you can have two program outputs with different background sources that transition together. These separate program outputs can be further enhanced by excluding some keys from each program output. This allows you to have separate keys for each program output. For example, you can have key 1 included in Program/Preset A but excluded from Program/Preset B and key 2 is included in both. This allows key 1 to be transitioned on or off-air for Program A without affecting Program B and key 2 to be common across both outputs.
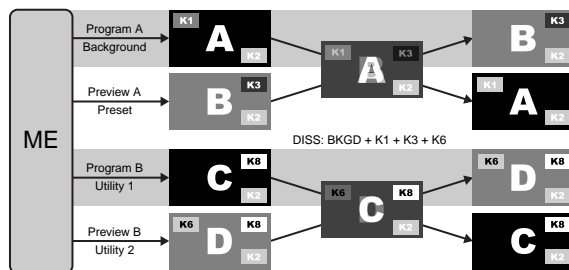

Figure 1: Separate Program Outputs from the same ME

If you set up two MEs like this and then set the second ME to auto follow the first, you now have four separate program outputs from 2 MEs that are tied together. This is the basis for a 4K-UHD configuration stitching together (Square Division) or combining (2 Sample Interleave (2SI)) four Full-HD (1920×1080p) signals to make a single UHDTV1 (3840×2160p) image. Both methods involve separating the 4K-UHD signal into four separate streams before going into the switcher and then combining them again after.
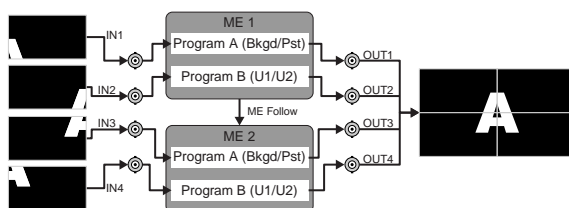

Figure 2: Square Division Quad-Link

ME Setup for 4K-UHD

A number of MEs must be set up to work together for the switcher to operate in a 4K-UHD production.

To Set Up MultiFeed for 4K-UHD

1. Press **HOME** > **Setup** > **Installation** > **Program Assignment**.
2. In the **Select ME** area, press **ME X** for the ME that you want to configure the output for.

   For example, press **ME 1**.
3. In the **Program A** and **Preview A** rows, select the keys that you want included.
4. In the **Program B** and **Preview B** rows, select the keys that you want included.
5. In the **Program B** row press, **Bkgd/Pst** to select **U1/U2**.
6. Select a second ME and configure the Program/Preview A and B outputs as above.

   For example, press **ME 2**.
7. Press **HOME** > **Confirm**.

To Set Up ME Follow for 4K-UHD

1. Press **HOME** > **Setup** > **Personality** > **More** > **Auto Follow Setup**.
2. Press **ME** and use the **Echo From** and **Echo To** knobs to select which ME you want to follow another ME.

   For example, use the **Echo From** knob to select **ME 1** and the **Echo To** knob to select **ME 2**.
3. Press **Set**.

Bus Setup for 4K-UHD

With the switcher properly set up for a 4K-UHD production, you need a way to select four different sources on four different buses at the same time. Part of this involves updating the bus follow set up from the ME follow to have the utility buses follow the program and preset buses. The other part is to create different bus maps for each bus so that when a source button is selected

on one bus, the other buses that are following will select different sources.

To Set Up Bus Follow for 4K-UHD

1. Press **HOME** > **Setup** > **Personality** > **More** > **Auto Follow Setup** > **More** > **Buses**.

2. Use the **Echo From** knob to select the program bus of the ME you want to follow from.

3. Use the **Echo To** knob to select the utility 1 bus for the same ME.

4. Press **Set Bus**.

5. Repeat these steps for the preview and utility 2 buses of the same ME.

To Create a Bus Map for 4K-UHD

For each 4K-UHD stream you must create four bus maps. Each bus map allows the same button on each bus to select a different source. For example, when you press button 5 on the background bus of ME 1 the auto follow settings select button 5 on the background bus of ME 2 and utility bus 1 of both MEs. The four different bus maps allow you to map button 5 to the four sources making up the 4K-UHD image.

Apply the same bus map to the utility bus 2 of both MEs as you did to utility bus 1 so that the bus follow for the preset bus is mapped correctly.

1. Press **HOME** > **Setup** > **Bus Maps** > **Edit**.

2. Use the **Map** knob to select the bus map you want to edit.

3. Select the button on the shift level that you want to assign a video signal to. Use the middle knob to scroll the list. The button lights on the program bus of all panel rows.

4. Use the **Source** knob to select the video source that you want to assign to the selected source button.

5. Press **HOME** > **Confirm**.

6. Repeat this procedure for the other 3 bus maps making sure to assign each of the 4 inputs of the 4K-UHD stream to the same button.