

## Dual Feed Macro Effects – by TD Scott Dailey

This paper is a description of the method I use to create effects for Dual Feed technical directing. It is by no means the only way to operate the switcher. This method is dependent upon a combination of timelines and macros. It is written for use on the Mobile Television Group 1 ME Kalypso switcher; however it is also applicable to any other Kalypso set up. Mobile Television Group specifies control of DDR devices such as the Fast Forward/Lance Controller to Misc. 6. Control of Macros is delegated to Misc. 3. If you build effects with this in mind, your setup should work from truck to truck. What this method allows is for effects to be called up and run regardless of switcher states. It does not use crosspoint holds and it does not care what is assigned to a keyer or if it is on or off. I use Key Memory in the ON state in order to simplify certain things such as the replay bug opacity and Tele and Elvis Key levels. For this method to work you must leave keyer 4 on all the time. If you turn it off to clear a key, be sure to reset the key source and turn the keyer back on. If you don't, the switcher timeline will not turn the keyer back on.

To begin, you need to build a series of macros. The macros I use are single action (they only execute one button push) I recommend putting them somewhere out of the way since you are somewhat limited on macro space on the smaller switcher. I put mine in the 80 to 100 range. Here is a list of the macros I use.

- Macro 80 - Set Keyer 3 to SS 5&6
- Macro 81 - Set Keyer 3 to Fox Box
- Macro 82 - Set Keyer 4 to Fast Forward/Clip Store
- Macro 83 - Set Keyer 4 to Telestrator
- Macro 84 - Set Keyer 4 to Elvis split key
- Macro 85 - Push the Auto Trans button
- Macro 86 - Push the Cut button
- Macro 87 - Push the Play Trigger in the P-bus menu (This is actually 2 button pushes, Push the Play button then push the Test Triggers button)
- Macro 88 - Recall emem 0

All effects are built with Auto Recall ON. I build Emems 1-9 as follows:

Auto Recall "ON", Level assigned - PGM/PST

- Camera 1 with Fox Box - Register 1 .
- Camera 2 with Fox Box - Register 2 .
- Camera 3 with Fox Box - Register 3 .
- Camera 4 with Fox Box - Register 4 .
- Camera 5 with Fox Box - Register 5 .
- Camera 6 with Fox Box - Register 6 .
- Camera 7 with Fox Box - Register 7 .
- Camera 8 with Fox Box - Register 8 .
- Camera 9 with Fox Box - Register 9 .

I assign the keyers as follows:

Keyer 1-Font 1

Keyer 2-Font 2

Keyer3-Fox Box

Keyer 4-Telestrator

I set key priorities in descending order as Key 4- Key 1- Key 2- Key 3

Keyers 3 and 4 are HOT all the time.

I also build an Elvis Take Emem at Register 10. Keyer 3 is off for this Register. I typically have a Macro that recalls this Register, waits 6 fields and Selects Bank 1 Register 0. This is a reset Register that gets me back to bank 0. I find that a six field delay is plenty long enough for the switcher to communicate with any device involved with effects without causing a glitch. These are the only emems I rebuild on a regular basis. They determine the type of key, level and color for the Telestrator. I set the Telestrator up in Engineering Setup as it own hole cutter. I matte fill the Tele whatever color and shadow combination the client asks for. These are the only Registers that need to be rebuilt for the day's show.

Register 0 is set to recall Misc. 6 only. Just for the sake of knowing what is there, I copy the Replay On animation to Register 0 on the Lance Controller. As discussed earlier, this is a dummy recall that simply returns me to Bank 0. This allows me to quickly cut to a camera without having to select a bank of Registers. Registers 11 thru "whatever I need" are set to recall Misc. 3 and Misc. 6. I put my Replay ON effect at Register 71 and my OFF at 72. What follows is a description of the Replay ON and OFF effects as well as a generic timeline for all other transitions. Numbers and locations given are simply where I store my Macros and Registers. They are not defined by anything other than where I happened to put them.

### **Replay ON**

Go to any register not currently being used except for 71. (71 is where I store my replay) This is important for reasons I'll discuss in a moment. I suggest putting it in the 90's.

Make sure that your DDR is enabled in the P-bus menu.

Go to the Macro menu and make sure that the Macro Recall is enabled and set to "None".

Select Misc. 3 & 6 and learn to Register 91. This KF 1.

Turn off Misc. 6 at this point. It requires no further interaction with the DDR at this point. It simply enables you to recall the appropriate register.

Go back to the Macro menu and enable the macros for the Misc. 3 timeline.

KF 2) Select Macro 82 (set keyer 4 to Fast Forward) and insert a keyframe

KF 3) Select Macro 87 (push the Play Trigger) and insert a keyframe

KF 4) Select Macro 85 (auto trans) and insert a keyframe

KF 5) Select Macro 80 (keyer 3 to SS 5&6)

KF 6) Select Macro 83 (set Keyer 4 to Tele) and insert a KF

KF 7) Select Macro 88 (recall Reg. 0)

You can now recall the effect and Run it to test for proper execution. If everything looks right you can adjust the KF times.

Recall the effect and turn off Misc. 6

Go to the timeline menu and make the duration of KF 1, 1 frame long.

Go to KF 2 and make its duration 1 frame long

Go to KF 3 and make its duration approximately 15 frames long

Go to KF 4 and make its duration 1 frame long

Go to KF 5 and make its duration approximately 15 frames long

Go to KF 6 and make its duration 1 frame long

Recall one of your camera emems, preset a source you want to effect to and run the effect. If necessary, adjust KF's 3 and 5 for the proper duration.

### **Replay OFF**

Go to the next available emem available (92 in our example) and learn an effect with Misc. 3 & 6 enabled. Turn off Misc. 6.

KF 2) Select Macro 82 (set keyer 4 to Fast Forward) and insert a keyframe

KF 3) Select Macro 87 (push the Play Trigger) and insert a keyframe

KF 4) Select Macro 85 (auto trans) and insert a keyframe)

KF 5) Select Macro 81 ( set keyer 3 to Fox Box) insert a KF

KF 6) Select Macro 83 (set keyer 4 to Tele)

KF 7) Select Macro 88 (recall register 0)

Make the appropriate adjustment to KF lengths and you are done

Remember to turn off Misc. 6 when you adjust time or the switcher will put keyframes

in on Misc. 6

### **Graphic and Package Transitions**

I handle graphic and package transitions a little differently. I don't need the Fox Box or the Replay brand as part of the effect. I simply set the Next Transition with or without the Fox Box. The timeline looks like this:

Learn register 93 with Misc. 3 and 6 enabled. his is KF 1.

KF 2) Select Macro 82 (set keyer 4 to Fast Forward) and insert a keyframe

KF 3) Select Macro 87 (push the Play Trigger) and insert a keyframe

KF 4) Select Macro 85 (auto trans) and insert a keyframe)

KF 5) Select Macro 83 (set keyer 4 to Tele)

KF 6) Select Macro 88 (recall register 0)

Since not all of the transition animations are the same length, you can adjust KF's 3

and 5 to match your animation requirements. In all of these examples it is important to note that the Macro is pushing the Auto Trans button for you. Not the timeline. Therefore you can preselect what your next transition is going to be. Since PGM/PST is not enabled the switcher does not care about the Next Trans state. It just executes what you have preset.

### **Promos**

Timelines to run promos are only 3 keyframes long.  
Learn register 94 with Misc 3 and 6 enabled. This is KF 1. Turn off Misc 6  
KF 2) Select Macro 82 (set keyer 4 to fast Forward)  
KF 3) Select Macro 87 (Play Fast Forward trigger)  
each KF is 1 frame long

After the animation completed its run I select Macro 88 which resets keyer 4 to the Telestrator. I have this Macro attached to a button on the 1ME panel in a convenient place. I could just as easily put in another KF that selects Macro 88, however, some of the animations are longer than others. This would necessitate adjusting the length of KF 3. I find it more expedient to just select macro 88 myself.

Now we can address the reason for not putting the effect where you want to use it. I like to recall my effects on Dual Feeds and have them Run automatically. However I do not want to use AUTO RUN. If I build a macro at Macro 1 that does the following:

Recall Register 11, wait 6 fields and then Push the RUN button

The switcher has a glitch. It will for some reason push the Auto Trans button twice, thereby making the effect unusable.

If however, I build a macro that recalls emem 71 (currently empty) waits 6 fields and then pushes the RUN button. Now I copy effect 91 to effect 71, the glitch does not occur. Don't ask me why because I don't know.

Using this method I can quickly add or delete effects to the days show by copying my master timelines out of register 93 (generic animation timeline). Some clients use only 2 or 3 transitions while other seem to want them all. I attach my replay On and Off register to the User Transition buttons on the 1 ME panel. This leaves me 24 macro locations on the panel that I can custom label for the director's names for them and recall and run them in an instant.

### **Split Screens**

Split Screens are traditionally an effect that ties up an entire ME, allowing the effect to be viewed before being taken to air. To accomplish the same thing when you are limited to one ME we need to approach the problem differently. I like to think of the keyers that I am not currently using, as another ME. If we are going to build a split screen to be used live we have to take into account what resources we are currently

using. Game action typically involves the PGM buss for a camera and keyer 3 for the Fox Box. This leaves us the Preset Buss and 3 keyers to use in Preview to use as the resources for a split screen. I build a split screen as an Emem Register as follows:

Select your left side camera in Keyer 2

Select your right side camera in Preset

Select your Split Screen graphic in Keyer 4. This can be done a couple of ways.

Currently I use still store 7&8 with the split art work stored as Video and Key. Still 7&8 are set as a Video Key Pair. I have also stored the art in the Fast Forward and looped it as part of the Register

Set keyer 2 as a mask key masking off the right side of the camera to fit under the split art work. When you build this effect take the time to go through all your cameras and set them up as a mask key on keyer 2. Since we have Source Memory turned ON, we have one Register for all split screens. I turn Source hold ON for the A buss. Off for everything else. The most typical split I use is in baseball with Low Third on the left and Tight Center on the right. I set this up in preview with my Next transition set as a Mix with PST, Key 2, Key 3 and Key 4 in Preview. Now I can see the effect before taking it to air. If you need a different split just select the cameras in Keyer 2 and Preset and hit the Cut button or dissolve. It is even possible to fly out of a replay to a split with the help of your macro timeline. I consider this unwise because it is a blind effect. If you have really good camera ops, do it anyway.

### **Double Boxes**

I approach double boxes the same way as split screens. I typically have the art work in the Fast Forward. Camera assignments take place in Keyer 2 and 3 with Effects Send turned ON. Position your cameras in the Transform Engines, set key priorities appropriately, and set your Next transition to preview the effect. If you need to use the Duet as part of the effect, have the operator put the Double Box names in channel 2. Fonts for the player come off of Channel 1. Build a timeline that changes keyer 1 from Font 2 to Font 1 clearing the effect at the same time over the A buss with Crosspoint Hold turned ON.

### **Elvis Keyables**

Here again I prefer to use Macros to change Keyer 4 to the primary side of Elvis set as a Split Key. I prefer this over an emem because it does not care if the Fox Box is Keyed or not. I can dissolve clean to a camera and select my Elvis key effect without kicking the Fox Box back on line. If your director needs to key the Duet over the Elvis live, make keyer priority changes part of your Elvis key Macro. After going back to a camera just select that cameras Register to reset the keyers.

### **Macro Recall and Run**

At this point I need to discuss how I recall and run the effect. Through trial and error I found that the Fast Forward would miss triggers sent by the switcher if the Recall of the effect and the Run trigger happened at the same time. Earlier I mentioned that I

insert a 6 field (3 frames) delay in the Macro before it runs the effect. Any shorter and the Fast Forward would occasionally miss the trigger. Any longer and I felt it was detrimental to the time it took for the effect to execute. To build the macro start recording at the location you want. Select the bank and number of your Register. Go to the Macro menu and insert a 6 field pause. Hit the Run button on the switcher. Stop recording. I name the Macros with a short description of the effect.

Here are the advantages I see to using this method:

If the director wants to go to a replay source with a font IN, I simply set this as my next transition, Push the appropriate macro, and the switcher executes the effect properly.

If I have built my show originally for a white Tele with a black Border and the next client wants a Blue Tele with a no border, I only have to change Registers 1 thru 10.

If the client does not use a Tele, I simply source patch non-keyable black to the Tele. (Have the EIC patch black back to the switcher and assign itself as its hole cutter). For example, say your EIC re-enters black into the switcher at input 70. Go in to the ENG Setup menu, Source Definition sub menu. Go to input 70 and assign input 70 as the key signal. I call this Linear Black. I have also heard it called digital black. The point is a black key signal is not a key signal at all. There is no linear value for a black key signal to key anything. If I do not need a Tele for the day's show. I source patch black where the Tele is located. The switcher still has the key enabled but there is nothing to key.

Transitions automatically return me to Bank 1. Camera cuts are always close at hand if play resumes sooner than expected.

Disadvantages:

Having key memory ON can bite you. Pay attention to what you do with your effects during pre-pro or any custom rollout effects. The switcher will remember the last state of that keyer and you might just hose yourself.