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THREE

MOORE MEGA1
Evolution Panels Version
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2006
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CHAPTER 3:
Moore Mega1

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CHAPTER 3: Moore Mega1.

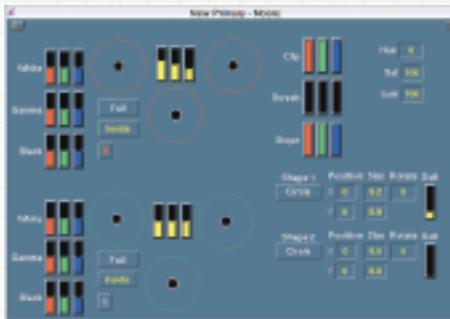
COLOUR CORRECTOR ORDER.

The order in which various corrections are done can have a significant effect on the final result. The various correctors are described in individual sections in this manual, but the order through the Pixi system is: MegaGamma (Input), Mega 1, Vignette, Mega 2, Primary 2 and MegaGamma (output). This should be born in mind as, for instance, lowering the saturation level in Mega 1 can make isolating objects in Mega 2 more difficult.

Moore Mega1.

Moore Mega1 has two sets of primary correctors, and 10 channels of selectable secondary colour correction. There are separate vdu windows for the two correctors, which open automatically depending on which one is selected. There are shape generators for both the primary and secondary correctors of Mega 1, which work in basically the same way (as do those in the Vignette channels).

Fig. 30



The Primary channels, Mega 1 secondaries and Vignettes each have two shapes available; the default for Primary and the first six Mega 1 secondary channels is that they work on the full screen. Once a shape is applied, the channel can work either inside or outside it; two or more channels can share the same shape, again either working inside or outside it. With the secondaries, any isolations and output changes will be applied only in the area defined by the shape, or, if selected, outside it. **Mega 1 shapes and MegaShapes are not the same thing.**

PRIMARY CONTROLS.

The keys on the SCC panel assign control of the selected colour corrector; those with the same names on the Transport Panel are used to select channels for copying etc.

Each of the two Primary correctors can be controlled by either the roller-balls or with the knobs on the SCC Panel. To select Mega 1 Roller-Ball Primaries, press "P1" of the smaller square white keys on the SCC panel; the Primary window Fig. 30 will open on the vdu and the roller-balls will be illuminated red. The "R" channel selector key will be illuminated; this indicates that one of the primary controls is assigned to the roller-balls and also to the knobs, **but the names of the controls will not be shown on the SCC panel.**

To select the other primary corrector (represented by the White/Gamma/Black bar graphs in the vdu window), press the "G" channel selector; the knobs on the SCC Panel will now be assigned to Whites, Gammas and Blacks (from the top down), and those names will appear alongside the knobs. The 'G' channel can also be controlled by the roller-balls if preferred. These two correctors will be referred to as Prim RB (roller-ball) and Neg (bar graph). Pressing the the "R" channel key will re-select Prim RB.

The controls for the two shape generators are at the bottom right of the window; their use is described below.

The two correctors work independently of each other, but tapping the reset icon at the top right of the window will reset both to their default settings; Prim RB can be reset separately using the black reset buttons on the roller-ball panel, and Prim BG has individual resets for each of its controls on the SCC panel. A macro can be programmed to reset all the Prim BG controls at once, or a new vdu window made containing just those controls, which can then be reset with the window reset icon. These functions are described later in this manual.

There is no particular advantage to using one primary channel rather than the other, but Neg is useful for pre-balancing tape source material with a built in colour bias, or for additional adjustment of film material if it is outside the useful range of the telecines own controls.

When "P1" is first selected, the orange panel (SCC) will display its input Hue, Saturation and Luminance controls, from left to right in the top row, labelled 'P Hue', 'P Sat' and 'P Lum'; the levels for these are displayed in the boxes at the top right of the Primary vdu window. They are applied before the two Primary channels; control of them can be assigned to the orange sub-panel by tapping on their level display boxes.

The fourth position is labelled 'Full', and is the shape control selector for Prim RB (this has the same function as the 'Full' button adjacent to the Prim RB graphics on the vdu). Pressing its black button will change its display to 'Shape 1' and, if pressed again, 'Shape 2'; it will then return to 'Full' if pressed a third time.

When 'Shape' is displayed, the bottom row of knobs will show (from left to right): 'Rotate', 'Soft', 'X Asp' and 'Y Asp'. These last two are the aspect of the shape (labelled 'Size' on the vdu); the first allows its rotation, and 'Soft' is the edge softness. This is applied from the edge of the shape outwards, so will increase the size of the shape.

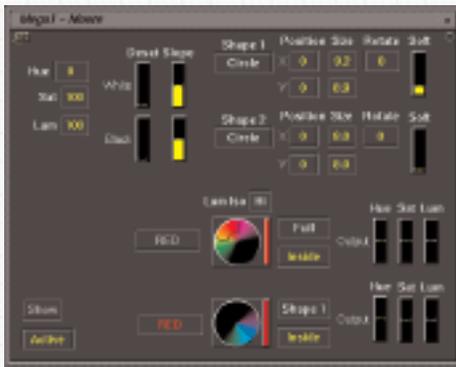
At the end of its range, the softness expands very suddenly, but careful adjustment gives a very wide range of control. The position of the shape is controlled by the track-ball; the outer ring will also change the softness, but is rather insensitive.

The shape itself (either a circle, diamond or square) is selected on the vdu from the button below the Shape 1 or 2 label; this is usually best done first, as the the 3 options can vary in size. To apply correction outside the shape, rather than inside (the default), press the large white key above the 'R' channel selector; it is illuminated blue when a shape is inverted this way. This is the same function as tapping on the 'Inside' button on the vdu; the vdu display will change to 'Outside' if selected either way.

MEGA 1 SECONDARIES.

Pressing the "M1" key on the SCC panel will select Mega 1 secondaries Fig. 31; to see the window that shows all the secondary channels at the same time, double press the "M1" key (this window currently shows 12 channels, but the upper 2 are no longer available).

Fig. 31



The Mega 1 secondary channel can be chosen from the white keys at the bottom of the panel, marked R,G,B,Y,C and M; the current channel selector key will be illuminated green. Although these channels are set so the colours (vectors) they initially effect roughly correspond to the label on the white key, **any channel can be made to work on any colour**; the labels (RGBYCM) should be regarded as names.

To use the extra 4 channels which don't have their own keys, hold down the small white macro button above the R channel selector and then press the R,G,B or Y keys, which will select the top 4 channels; the selected channel key will be illuminated blue (rather than green).

In the single channel window the lower of the two channel indicators will also highlight. These 4 channels are slightly less powerful than the top 6; see below. All 10 channels are always available, and any combination of channels can be used; either shape generator can be used with any channel.

To see which colours on the screen will be affected by the output controls, press "Show", the white key above the C channel selector. "Show" can also be selected in the Mega 1 window on the vdu; when selected (by either method) its vdu colour will change to blue. Those areas which are highlighted in white on the viewing monitor are those which will change when the output controls are altered. If no areas are highlighted, no colours in the image are inside the current channels selection.

Mega 1 channels can be made to select all the picture by using the "Expand" key, above the "M" channel selector. This cannot be toggled off; once expanded, the only way to reduce the selection is by individual adjustment of each selection parameter, or by clearing the current Pogle mode and starting again.



Fig. 32

The top left knob of the nine on the SCC panel Fig. 32 will alter the colours chosen (vector centring) ; it has no end position, so can be rotated through all possible colours. The one to its right will alter the spread of colours (vector width).

The second knob down on the left will progressively exclude lower saturation from the selection, and the one below it will exclude either upper or lower luminance, depending on the setting of the Hi/Lo button in the Mega 1 vdu window (the top 4 channels do not have this function).

This button is above the vector display for each channel (or to the left of it in the window that shows all channels); in Hi, the higher luminance areas will be excluded, and in Lo, the lower. The rightmost knob on each row is a slope control, which affects the amount of correction applied to pixels with similar values to, but not matching exactly, those originally selected.

Thus if the value of the lower saturation selector is adjusted, adjusting the slope control will spread the selection into more saturated areas, with a similar value to those originally chosen; if it is turned to its minimum value for each selection control in turn, only those pixels which exactly match the selection will be affected by the output controls.

To make a precise selection, turn all three of the right hand knobs anti-clockwise until the endstop warning sound is heard (for each control). This will turn off the slope for each selection parameter; they can then be re-adjusted as required after making the original selection.

The output controls for the selection are the three knobs at the top of the roller-ball panel; they are hue, saturation and luminance (from left to right). Their output levels are shown in the bar-graphs to the right of the vector display for the colour channel.

The level of possible luminance change is limited by how visually intrusive the results are; hue and saturation can generally be changed by fairly large amounts, but all three will depend on how well the original object can be selected. To reset the input selection and output values for a single channel, hold down its selector key for a couple of seconds (this will not affect any shapes used by the channel).

Mega 1 channels have no priorities; selecting a colour with one channel does not prevent any other channel selecting the same colour. Imagine a shot with a sky that is blue on one side but cyan on the other. Any two channels can be used to even the colour of the sky, and another used to adjust its overall saturation and hue.

Or one channel can be expanded and then used to make an image monochrome, and other channels used to selectively re-introduce colours, although how well this works will depend on the separation of the colours in the original. This will work with any arrangement of channels, but it might be easier to remember which is which if they are used from left to right.

USING MEGA 1 SHAPES.

When "M1" is pressed, the top row of the orange display (SCC) changes to, from left to right, M Hue, M Sat and M Lum; the levels for these are shown in the small boxes at the top left of the Mega 1 vdu window. They control the levels at the input to the Mega 1 secondary channels, so will affect all channels equally. These three functions are the same regardless of the selected colour channel, but the fourth knob, labelled 'Full', allows the Shapes for the secondary channels to be applied.

The actual controls are identical to the Primary shapes, except there is no 'Grab' button, as each channel has the same switch to allow shape selection. Although there are only two shape generators for the Mega 1 secondaries, **multiple channels can share the same shape, and can work either inside or outside it.**

To find the position of a shape which is in use, but not visible because nothing in it is currently selected, choose another, unused colour channel and select the same shape for it. Expand the new channels selection and turn 'Show' on. Expand only works with the selected shape, which will now be easily visible, so allowing it to be re-positioned. When 'Show' is turned off, reselect the original channel, which will now work with the shape.

DESAT.

To control the black and white desaturation function, tap on the bar graph for any of the four parameters; this will assign control to the orange sub-panel. 'Desat' will force the blacks and whites of a signal to the same levels; **this is not the same as balancing the levels with the roller-balls.**

'Slope' adjusts the rate at which this control is applied across the signal level. New users should use this control with caution, as its visual effect can be unnatural and often unpleasant; a much better balance is usually achieved by balancing the blacks and whites with the roller-balls.

SOFT CLIP.

Also in the Mega 1 Primary vdu window are Soft Clip controls [Fig. 33](#).

Tapping on any of the bar graphs will assign that Soft Clip control to the orange sub-panel. Soft Clip will introduce a curve into the upper gain levels from Mega 1, to help prevent any highlights burning out and losing detail. **This only works if any white clipping is being caused by the Mega 1 primary correctors;** it cannot unclip signals that are already clipped at the input to the Pixi.

The controls are: Clip, which sets the actual level of the signal at which the Soft Clip starts to work; Thresh, which sets the range of the signal either side of the clip; and Slope, which varies the rate at which it is applied. To use the Soft Clip, the Clip level should be brought down until it is starting to have an effect on the image on the viewing monitor (or it may be easier to see this on a scope), and then Thresh and Slope adjusted in turn for the best visual effect; the Clip level may then need re-adjustment.

Slope usually works best at its default level. To adjust all three channels by the same amount, hold down the "Alt" key while adjusting the B channel knob on the orange sub-panel (this assumes that when the controls were assigned, they are displayed as RGB from left to right).

All the separate controls can be individually adjusted, either to clip a single channel, or to deliberately introduce a colour bias into the affected areas. Soft Clip is reset with the other controls in the window by tapping on the reset icon at the top right of it; to reset it independently, use the reset buttons on the orange sub-panel. Alternatively, a new window containing the Soft Clip controls could be made; how to do this is described later in the manual.



Fig. 33

VIGNETTE CARD.

The Vignette card Fig. 35 has 4 channels, with full primary control at the output for each one. Its window opens automatically if "V1" is pressed on the SCC panel, and the display on the orange panel (SCC) changes to allow control of its shape generators, which are the same as those for Mega 1.

Fig. 35



Once "V1" is pressed and the window open, the R and G channels are used to select areas of the picture. There is no colour selection, only the shapes are used; R, G, B and Y are channel names only. The lower orange display (SCC) will show the shape controls, in the same order as for Mega 1. As the R and G channels have their own shape generators, the knobs control whichever of these two channels is currently selected.

The shape type is selected on the vdu, as with Mega 1, and its position is controlled with the track-ball. The "Show" key (or clicking on 'Show' on the vdu) will highlight the current channels shape in white.

Correction can be applied inside or outside the shape; the white key above the R channel selector will toggle the current channel between the two, or the 'Inside/Outside' button in the vdu window can be tapped on. There is also saturation and luminance control for the area selected, these are on the centre and right knobs at the top of the roller-ball panel.

Some operators might notice that the gamma response is slightly different to that of the Mega 1 and 2 correctors; this is because the Vignette card uses different hardware. Control of the roller-balls cannot be assigned to the orange sub-panel, unlike Mega 1 and 2.

At the bottom right of the shape value boxes in the vdu window is a small button, normally displaying a white '1'. This can be clicked on to change the way the softness is applied (there are two options); in position '2', the rate the softness as seen is less linear than that of position '1'. If this switch is altered at one end of a dynamic event, the same change will need to be made at the other end of the dynamic, or a flash will occur at some point in the dynamic event.

The B channel has no shape itself, **but works outside either or both of the other channels.** Instead of the B channel shape controls, there is a button, normally labelled 'Out R+G'. In this position, once the R and G channels have shapes selected, any correction from the B channel is applied outside those shapes.

The button can be changed to select either 'Out R' or 'Out G'; in these positions, any correction from the B channel is applied only outside the shape of the chosen channel. The correction available is the same as for the other two channels. The 'Y' channel has the same correction as the others, but is applied to the full picture area; it has no shape generator or other method of selection.

To reset a channel, hold down its selection key for a couple of seconds; all the output levels, and the shape itself, will be reset to their default (although the shape does not return to its default position). A single press of the black button above the track-ball will reset the current channels shape to its default type, size and position.