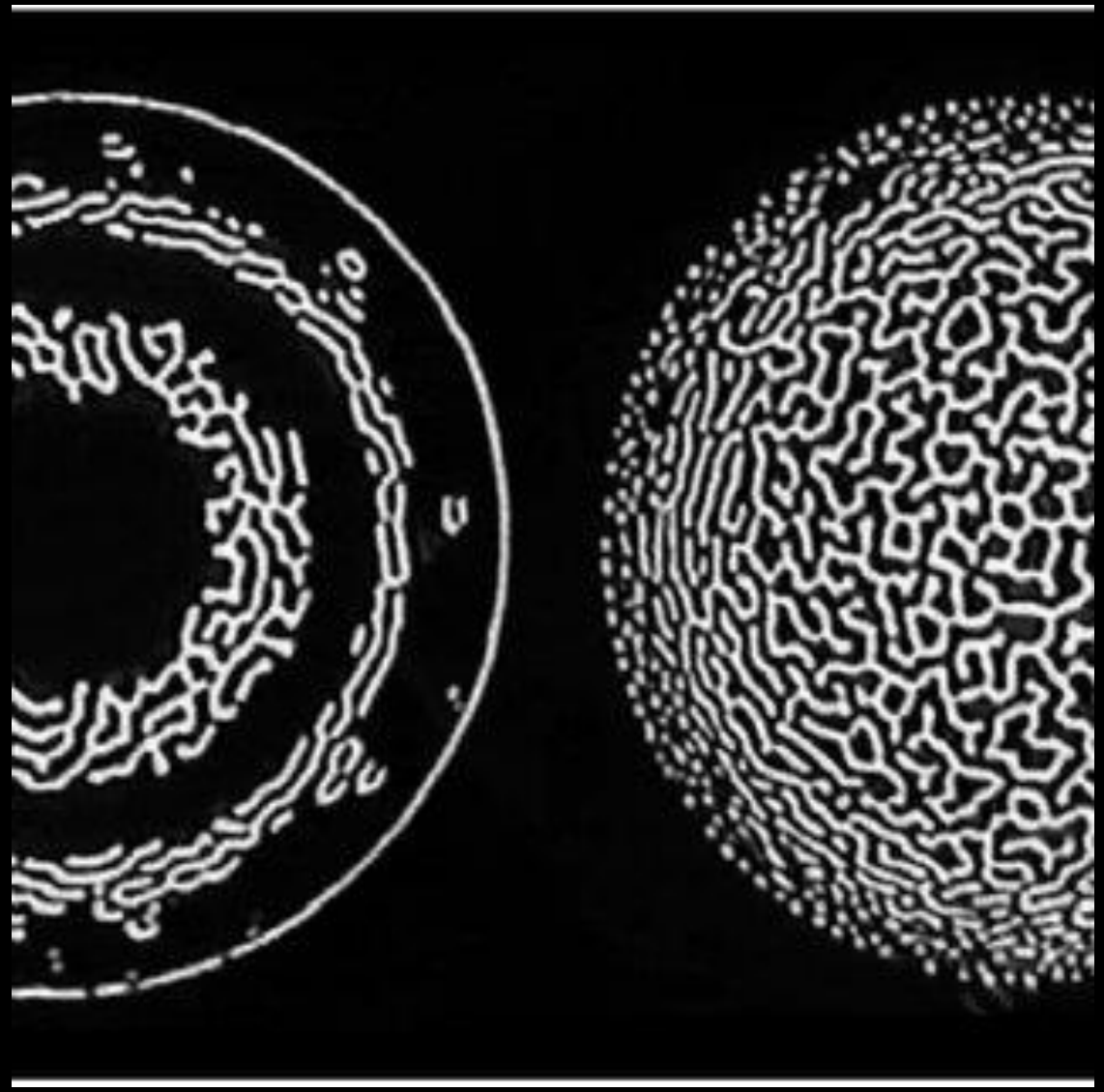
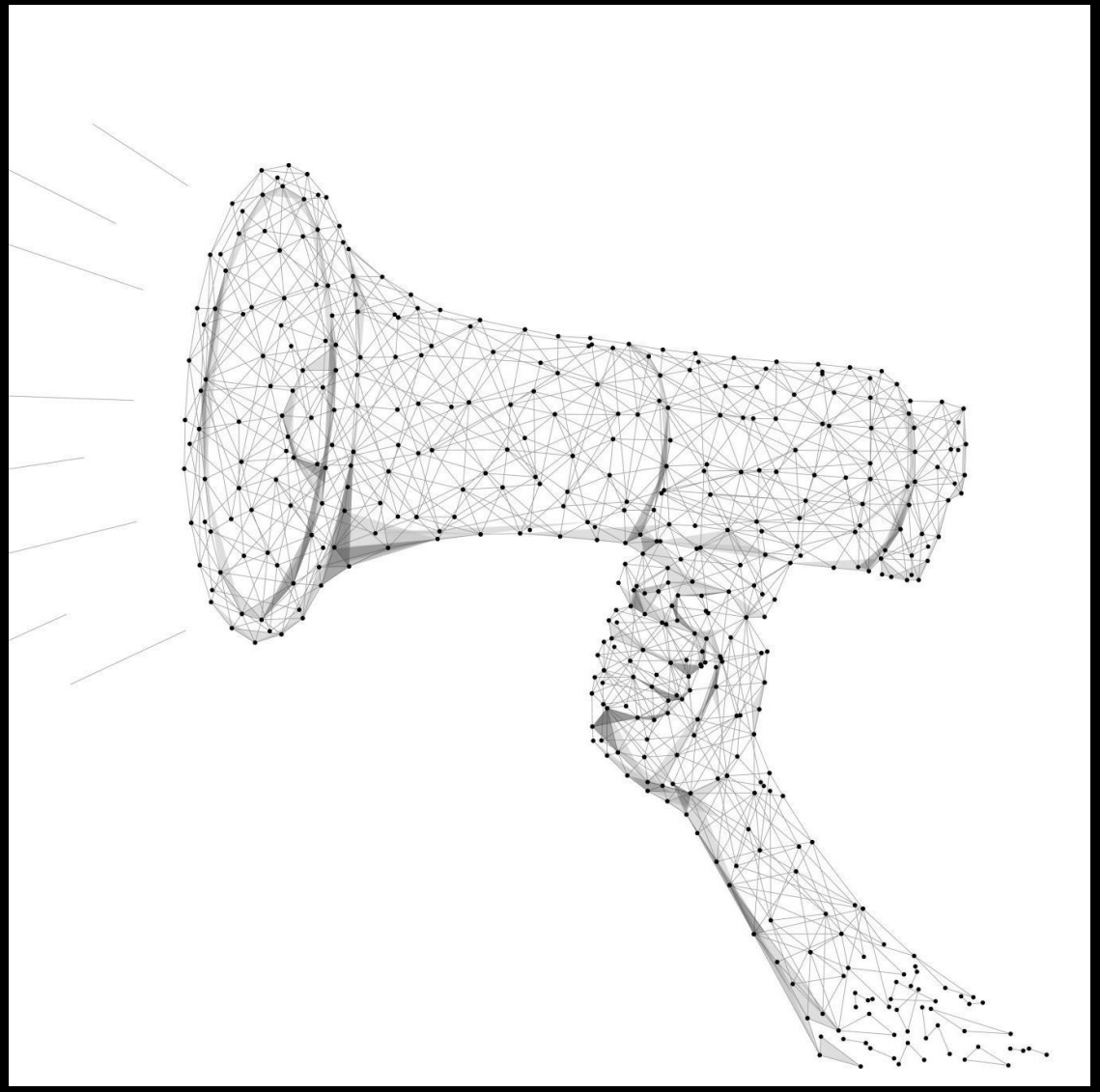
FEEDBACK

Harnessing the power of generative nature of Touchdesigner

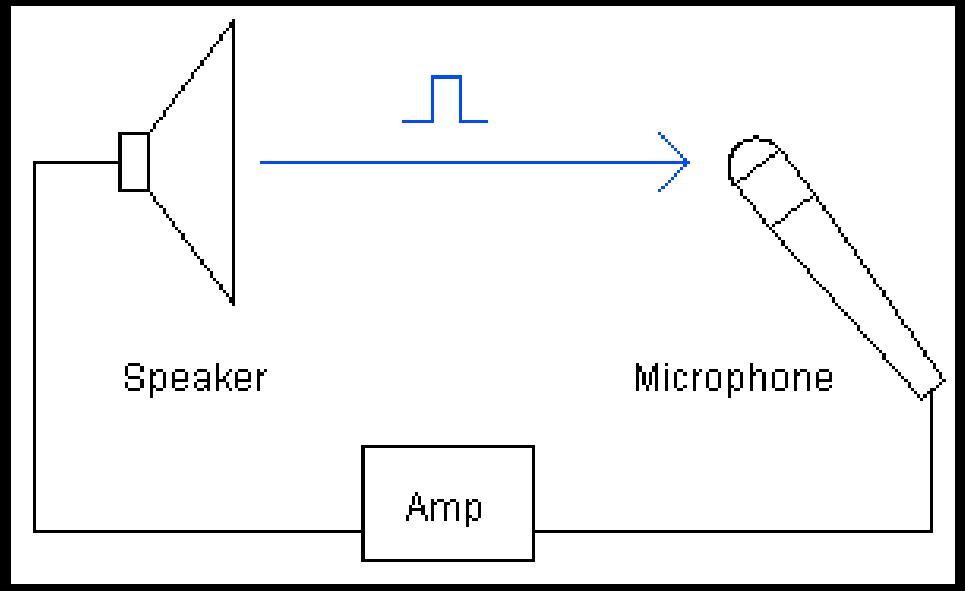


WHAT IS FEEDBACK?

Most often we perceive and know feedback from sound. Especially when the microphone is pointed towards the speaker, resulting a high shrieking sound.



A CLOSED AND LOOPING SYSTEM



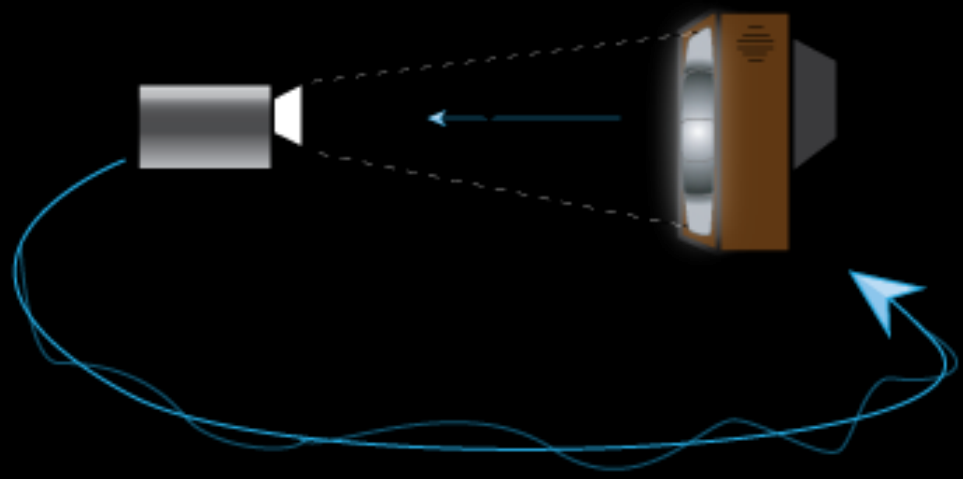
- There is an open connection between mic and speaker
- The mic picks up the direct output of the speaker
- The picked up sound travels through the amplifier again, summing the two signals and increasing the amplitude
- Sound travels around 343 km/s, high pitch sound travels faster than low pitch resulting in the high screams.

FEEDBACK CAN ALSO BE BEAUTIFUL

A BIT DIFFERENT BUT BEAUTIFUL

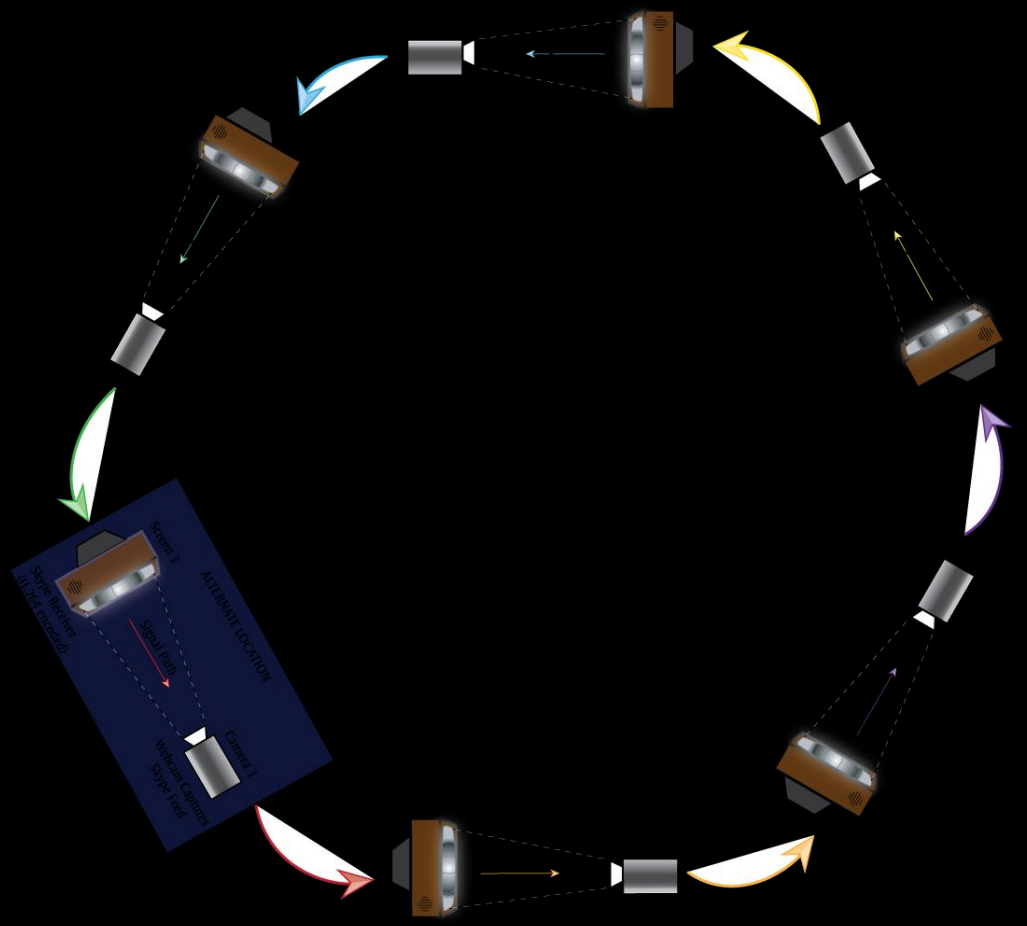
FEEDBACK IS ALSO POSSIBLE WITH VIDEO

Pointing the camera directly onto the captured feed, feedback is occurring.



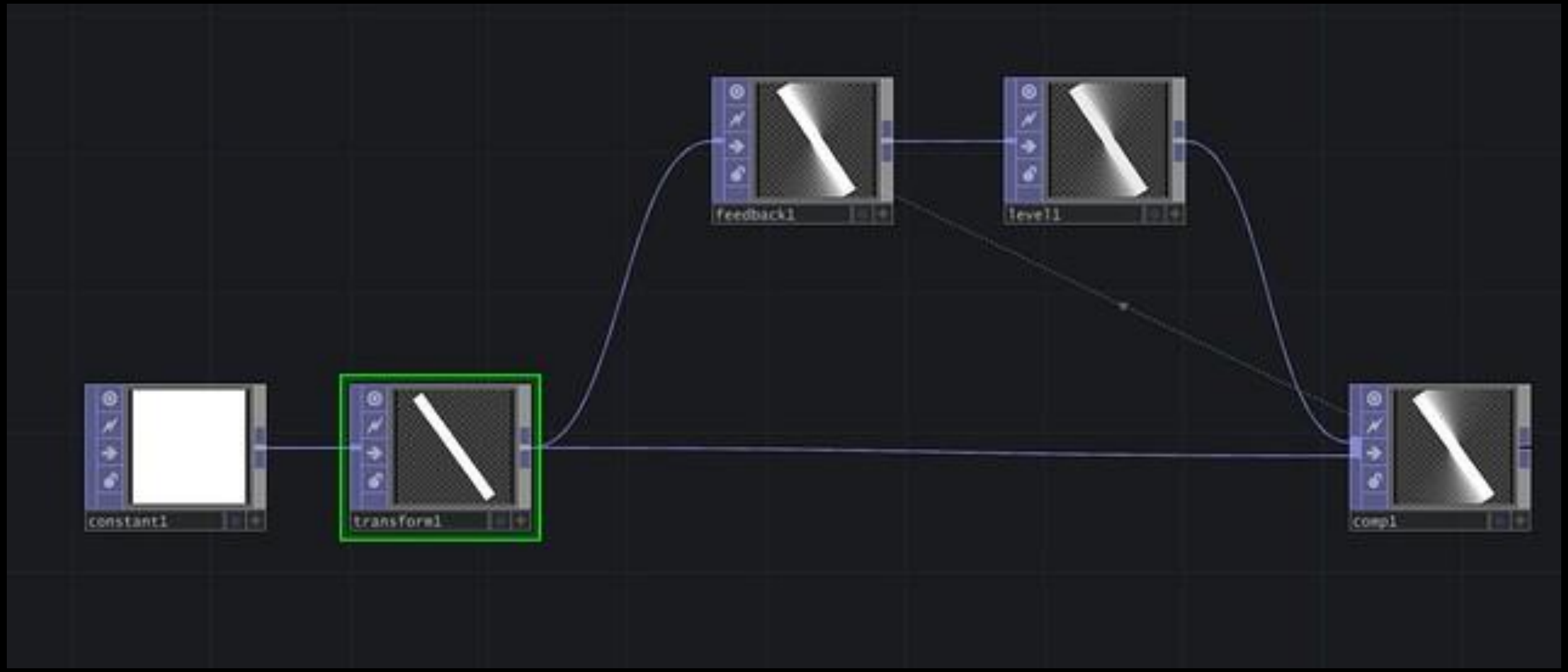
FEEDBACK ART

Setups can be made as intricate as you would like



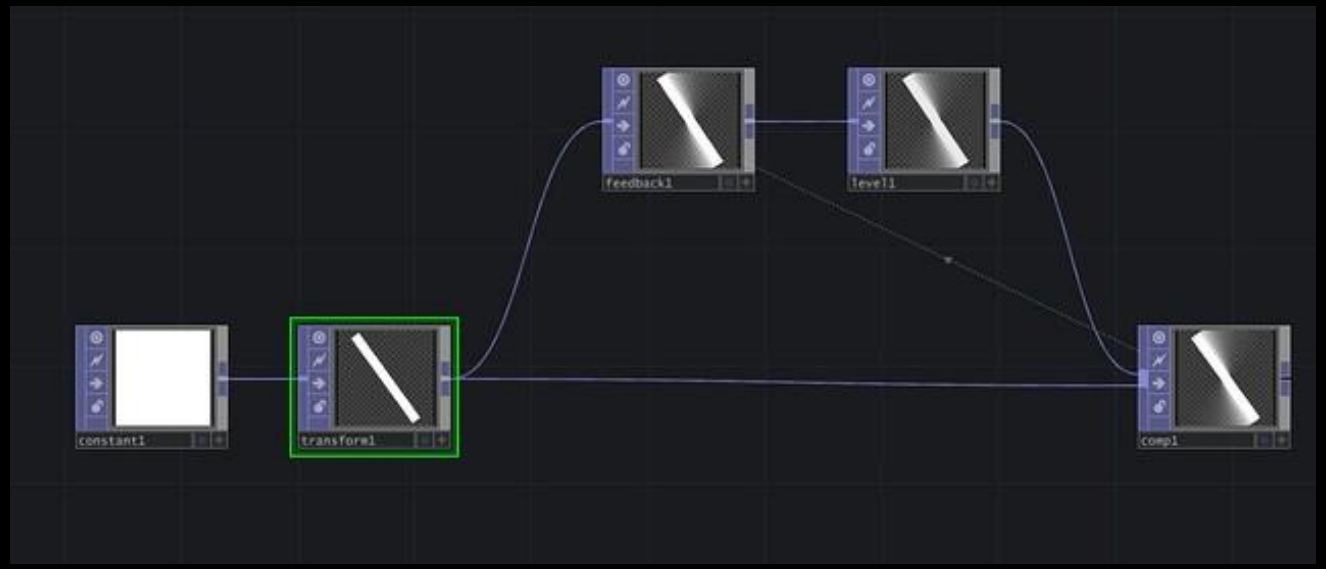
FEEDBACK IN TOUCHDESIGNER

- Due to Touchdesigner's generative nature, all video, and other data, is being processed on the fly and realtime. Hence the play bar running continuously at the bottom of the program. We've experienced that when you pause the timeline, the whole program, or network pretty much stops, because no new information is being processed and relayed through the various networks.
- If we could overlay one operator onto another and take the picture information, looping it over the original we're creating a closed feedback loop.
- Fortunately, Touchdesigner has a designated operator especially for that purpose.

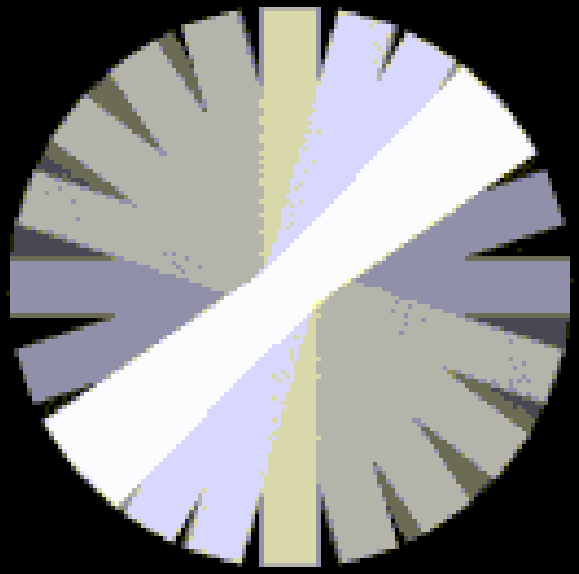

feedback1
level1
constant1
transform1
comp1

OPERATORS USED:

There is a source image
Then there is a branch for the feedbacking.
And a branch that keeps the original image.
Finaly the COMP operator overlays the two branches of video creating a closed feedback loop.



WE'LL TAKE A LOOK AT DIFFERENT FEEDBACK NETWORKS



CASE: COMBINE ALL THE TECHNIQUES THAT WE COVERED AND PRODUCE AN ARRAY OF ANIMATIONS THAT ARE SWITCHABLE THROUGH KEYBOARD INPUT.

AT LEAST 6 ANIMATION