Visualist issues:

1) Trim coil: there is a variable inductor at the input which is obsolete and thus hard to find.
Its goal is to remove chrominance from the video signal, which works but seems dependent of the source load, reacting differently depending of the source used.
It can be jumpered , the chrominance from the original signal might bleed (=interfere) with the chrominance signal generated by the crystal oscillator (rainbow effect on color saturated parts at the output) and also fake the comparators a bit (chrominance interpreted as luminance), which is mainly visible on test pattern for exemple, but it can be resolved by inputting a black and white signal directly.
On the FFG, this filter has been replaced by a low pass active filter, which provides a buffered input so it can work with any source, however the lowpass filters some of the high details of the picture, compared to the trap filter originally used. But using an op amp for proper input buffering also helps for 2)

2) Comparators: it seems that the comparators are set for a input signal of a bit more than 3V of amplitude, which means a standard 1Vpp video signal will only hit a third of the comparators, resulting in not getting the full color range. The transistor stage based around T1 doesn't amplify and just add an offset to the video signal (about 900mV). It can be adjusted in two ways:

- Change the resistors value in the voltage dividers used for low/high threshold of the comparators, low threshold must start from black level to a bit under the middle of the active video part, high threshold must start a bit above middle until white level. Best for this is to input a picture which is half black, half white, so you have your minimum and maximum voltages. Then check the signal with an oscilloscope at the positive input of the comparators. Then change the value of the resistors so the thresholds range cover the whole signal. Note that if the lower threshold get's under the black level, it might result in loss of colors at the output.
- Amplify the signal at the input. It might be less easy than changing the resistors values as mentionned above cause you'll probably need some extra circuitry to do it.

For FFG, I did a bit of both. First I used the other op amp available to give the input signal some gain, with a switch for 2 different gains, accomodating 1 and 2Vpp sources (the CCTV cameras I have are outputing a 2Vpp signal weirdly, while all other devices I have are 1Vpp). And I changed the thresholds level a bit, first by separating both thresholds for modulation (and also cause it makes it easier to calculate). Finally, I adjusted the levels so it suits the amplified/offseted video signal. I found this solution a bit better than making the range of the thresholds smaller, cause this seems to makes the resulting picture more prone to noise.

3) Pull up resistors: the 7x 680 ohm resistors used as pull-up for the priority encoder (CD4532) are getting quite hot. Putting a higher resistor value can seems to correct the temperature problem, however it can make visual artifacts when the value is too high (check about "weak vs strong pull up resistors"). When checking the LZX Castle ADC from Phil Baljeu, he's using Shottky diodes which is a better solution. However it uses 74HC148 for the encoder and it might be difficult to adapt to the Visualist: the CD4532 is used for bits encoding but also, it make use of the Enable In (pin 5) for blanking the 3 R, G and B signal (using the sync extracted from the video signal). The 74HC148 Enable In works in reverse compared to the CD4532, so it will require some modifications.

4) Ramp Generator: the 43k and 1nF between pin 1 and pin 16 of the MC1377 makes a RC filter for the MC1377 internal ramp generator. With those value, I wasn't able to have color displayed on every monitor that I tried, pro monitors being more picky with the signal specs. At first, changing the capacitor value to 1.2nF did a better job, but it is easier to change the resistor value and try different values if you're not getting color at the output.

FFG replaces the 43k resistor by a 100k trimmer, so the ramp can be set exactly, which solves the loss of color issue.