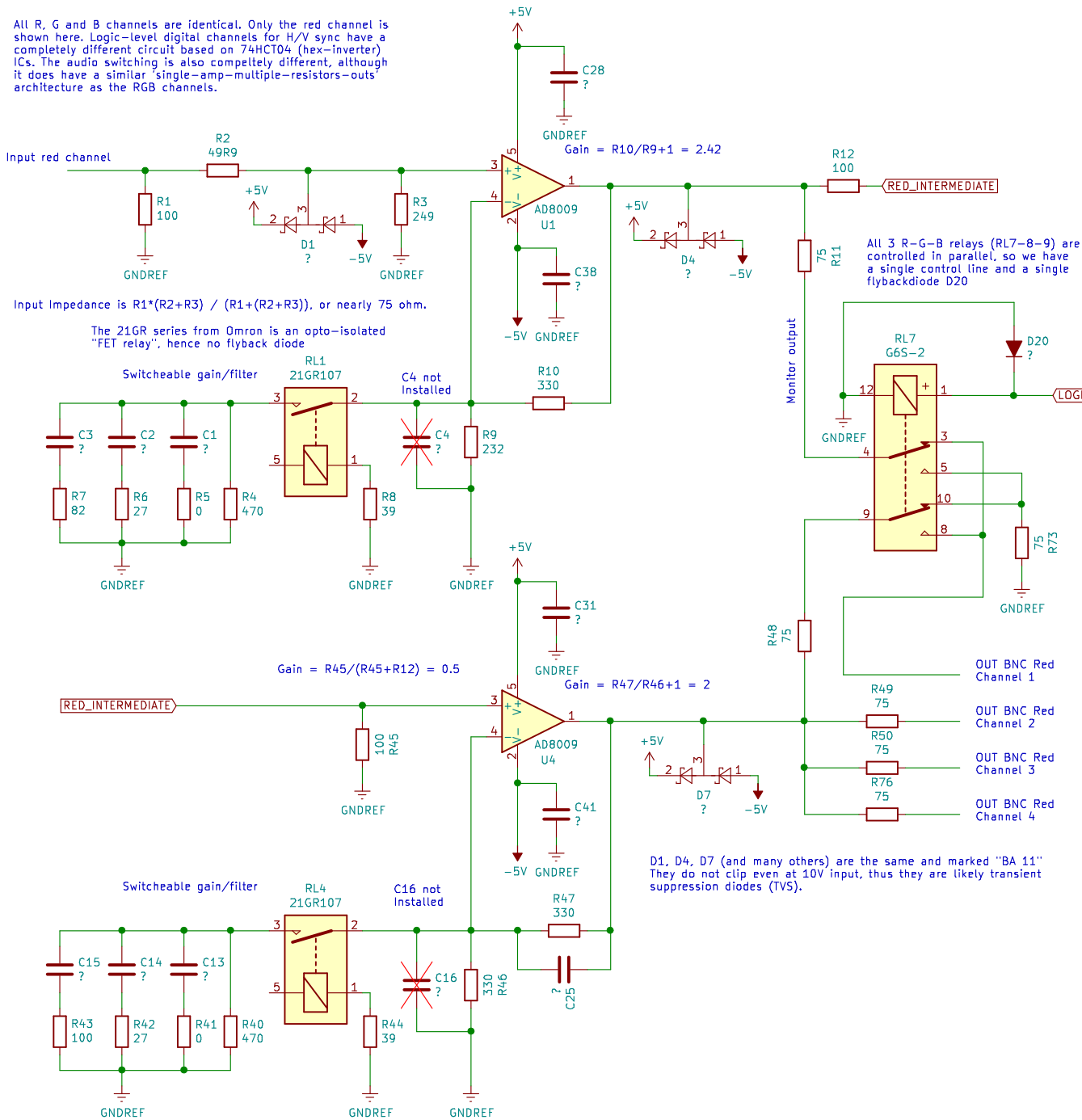


All R, G and B channels are identical. Only the red channel is shown here. Logic-level digital channels for H/V sync have a completely different circuit based on 74HC04 (hex-inverter) ICs. The audio switching is also completely different, although it does have a similar 'single-amp-multiple-resistors-outs' architecture as the RGB channels.



Mod 1: change impedance to 50 ohm  
 - All 75 ohm resistors changed to 50 ohm (or 49.9)  
 - 49.9 ohm resistors are 1210 1/2W (x23) or 0805 (x3; R73 etc...)  
 - 1210 have to be bought, 0805 can be salvaged from the three input stages or replaced by 1210.  
 - R73 (and similar for G/B channels) can also be omitted, see front panel output mod below.

Mod 2: each amp has a 50 ohm resistive divider (gain 0.5) before it. Thus each amp stage needs a gain of 2. For U1 this means replacing R9 by a 330 ohm resistor, however the little extra gain provided by the 232 ohm resistor doesn't hurt so left as is.

Mod 3: merge RGB channels  
 - Remove R2/R3 equivalents on B/G channels (maybe D1 too?)  
 - Bridge U1, U2 and U3 inputs  
 This allows all monitor outputs to be active on front panel.

Mod 4: input stage  
 - remove R1  
 - replace R2 with 15nF capacitor (AC coupled)  
 - replace R3 with 49.9 ohm resistor  
 Impedance at 10MHz:  $49.9 + 1/(2 * \pi * f * c) = 49.9 + 1.06 = 51.05$  ohm, close enough to 50 ohm for Australia.

Mod 5: front panel outputs  
 - Remove R73, as monitors are all exported to front panel and we don't use back-panel monitor anymore.  
 - Connect relay pin 5 or 10 of each relay to the three front new panel BNCs

Mod 6: salvage cute opto solid-state relays  
 - RL1/RL5 and their B/G channel equivalents can be salvaged. This avoids accidental switching of those filters which are not useful anymore.

All 3 R-G-B relays (RL7-8-9) are controlled in parallel, so we have a single control line and a single flyback diode D20

D1, D4, D7 (and many others) are the same and marked "BA 11" They do not clip even at 10V input, thus they are likely transient suppression diodes (TVS).