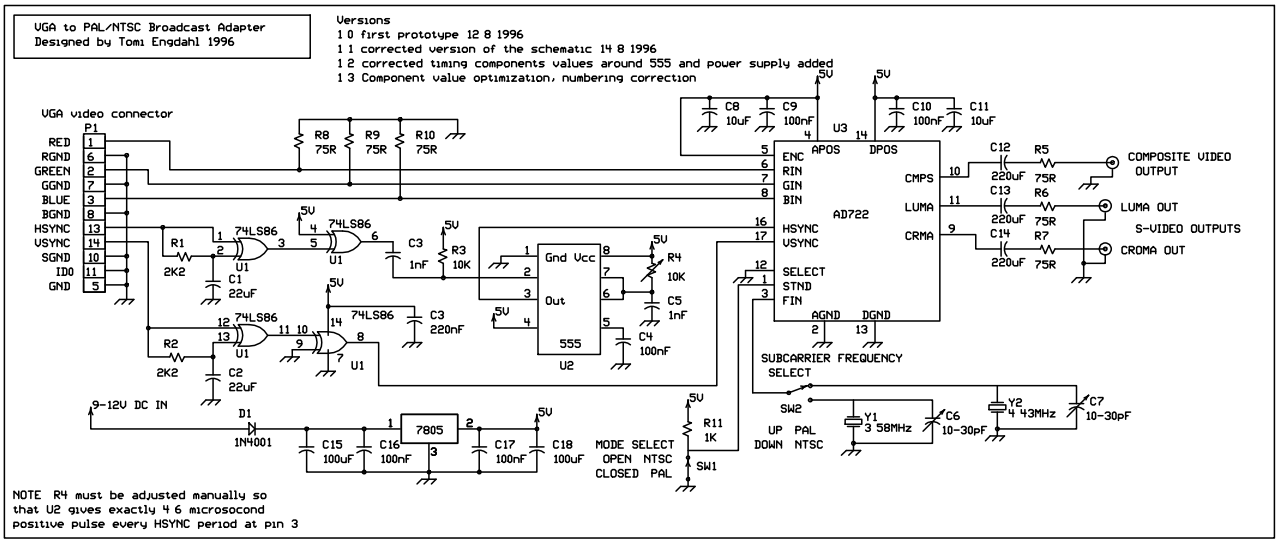
VGA to PAL/NTSC Broadcast Adapter
Designed by Tomi Engdahl 1996
Versions
1 0 first prototype 12 8 1996
1 1 corrected version of the schematic 14 8 1996
1 2 corrected timing components values around 555 and power supply added
1 3 Component value optimization, numbering correction
VGA video connector
P1
RED 1
RGND 6
GREEN 2
GGND 7
BLUE 3
BGND 8
HSYNC 13
VSYNC 14
SGND 10
ID0 11
GND 5
R8 75R
R9 75R
R10 75R
R1 2K2
C1 22uF
R2 2K2
C2 22uF
74LS86
U1
C3 1nF
C3 220nF
R3 10K
555
U2
Gnd
Vcc
Out
R4 10K
C5 1nF
C4 100nF
5V
C8 10uF
C9 100nF
C10 100nF
C11 10uF
U3
AD722
ENC
APOS
DPOS
RIN
GIN
BIN
HSYNC
VSYNC
SELECT
STND
FIN
AGND
DGND
CMPS
LUMA
CRMA
C12 220uF
C13 220uF
C14 220uF
R5 75R
R6 75R
R7 75R
COMPOSITE VIDEO OUTPUT
LUMA OUT
CROMA OUT
S-VIDEO OUTPUTS
SUBCARRIER FREQUENCY SELECT
SW2
UP PAL
DOWN NTSC
Y1 3 58MHz
C6 10-30pF
Y2 4 43MHz
C7 10-30pF
9-12V DC IN
D1 1N4001
7805
C15 100uF
C16 100nF
C17 100nF
C18 100uF
R11 1K
MODE SELECT
OPEN NTSC
CLOSED PAL
SW1
NOTE R4 must be adjusted manually so that U2 gives exactly 4 6 microsocond positive pulse every HSYNC period at pin 3