Sheet: Sheet1

File: file5D940AF3.sch

Sheet: Sheet5D659BBD

File: file5D659BBD.sch

Sheet: /
File: KU-14194HB-REV-B-KiCad.sch

**Title: C64 Motherboard KU-14194HB**

| Size: A3 | Date: 2019-10-05 | **Rev: 1.0** |
|---|---|---|
| KiCad E.D.A.  eeschema 5.1.4-e60b26684ubuntu16.04.1 | | Id: 1/3 |

SERIAL BUS (6-PIN FEMALE DIN) CN4
6 RESET
1 SRQIN
5 DATA
4 CLK
3 ATN
2

CONTROL PORT2 (MALE DB9) CN8
7
9 POTBX
5 POTBY
1 JOYB0
2 JOYB1
3 JOYB2
4 JOYB3
6 BTNB
8

CONTROL PORT1 (MALE DB9) CN9
7 5V_joyport
9 POTAX
5 POTAY
1 JOYA0
2 JOYA1
3 JOYA2
4 JOYA3
6 BTNA\LP
8

KEYBOARD (20-PIN MALE) CN1
13 COL0
19 COL1
18 COL2
17 COL3
16 COL4
15 COL5
14 COL6
20 COL7
12 ROW0
11 ROW1
10 ROW2
5 ROW3
8 ROW4
7 ROW5
6 ROW6
9 ROW7
4 +5V
3 RESTORE
2 (KEY)
1

USER PORT (24-PIN MALE EDGE) CN2
4 CNT1
5 SP1
9 ATN'
6 CNT2
7 SP2
8 PC2
M PA2
C PB0
D PB1
E PB2
F PB3
H PB4
J PB5
K PB6
L PB7
B FLAG2
2
3 RESET
10 9VAC-
11 '9VAC-
12
A
N

U28 4066
U7 6510A MPU
U1 6526 CIA (DC00- DCFF)
U2 6526 CIA
U29A 74LS74
U31B 74LS629N
U30 74LS193
U29B 74LS74
U31A 74LS629N
U20B 556
U20A 556

CASS_MOTOR
CASS_SENSE
CASS_WRT

+9V_UNREG
Q1 2SC1815
Q3 TP298/2SD880
Q2 2SC1815
CR2 1N755 7.5V

CASSETTE (6-PIN MALE EDGE) CN3
CASS_SENSE F.6
CASS_WRT' E.5
CASS_RD D.4

POWER INPUT CN7 (7PIN MALE DIN)
LED CONNECTOR CN10

VR1 7812
VR2 7805
+12V
+9V_UNREG
CR4
CR5 1N4001
CR6 1N4001

14.31818 MHz - NTSC
17.734472 MHz - PAL

PHI_COLOR
DOT_CLOCK
60Hz
To Cartridge Expansion

This is a full-page schematic diagram.



Title block:

Retraced and schematics by bwack 2019
**Commodore 1982**
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**Title: C64 Motherboard KU-14194HB**

| Size: A3 | Date: 2019-10-05 | **Rev: 1.0** |
| KiCad E.D.A. eeschema 5.1.4-e60b26684ubuntu16.04.1 | | Id: 3/3 |

Cartridge/Expansion (44 PIN FEMALE) CN6