

Parts list

MOTHER BOARD

Resistors:

R1, R2, R19 = 10 kOhm

R3 = 1.30 kOhm*

R4, R29, R33 = 1.0 kOhm*

R5, R9 = 47 kOhm

R6, R18, R37–R41 = 10 Ohm

R7, R8, R30 = 10.0 kOhm*

R10 = 40.2 kOhm*

R11 = 60.4 kOhm*

R12, R34, R35 = 100 kOhm

R13, R36 = 1 kOhm

R14, R26 = 100 Ohm

R15 = 4.7 Ohm

R16 = 76.8 kOhm*

R17 = 22.1 kOhm*

R20 = 243 Ohm*

R21 = 2.21 kOhm*

R22–R25 = 200 Ohm*

R27 = 49.9 Ohm*

R28 = 1.40 kOhm*

R31 = 68 Ohm

R32 = 6.49 kOhm*

* = 1%

Potentiometers

P1 = 5 kOhm (4.7 kOhm) multiturn preset

P2, P3 = 10 kOhm linear

P4 = 220 Ohm (250 Ohm) linear

P5 = 1 kOhm multiturn, linear (e.g. Bourns Type 3590S-002-102)

P6 = 10 kOhm multiturn preset

Capacitors:

C1 = 2.2 μ F, polypropylene*, 10%

C2 = 220 nF, polypropylene*, 5%

C3 = 22 nF, polypropylene*, 5%

C4 = 2.2 nF, polypropylene*

C5 = 180 pF, polyester, 2%

C6 = 22 pF, polyester, 2%

C7 = 22 pF foil trimmer

C8, C10, C13, C22, C27, C28, C31, C32, C35–C38, C40 = 10 nF

C9, C11, C12 = 4.7 μ F, 10 V, radial

C14, C16, C20, C21 = 100 nF

C15, C17 = 100 pF ceramic

C18, C19 = 220 μ F, 10 V, radial

C23, C24 = 2200 μ F, 35 V, radial

C25, C26 = 10 μ F, 16 V, radial

C29, C30 = 4.7 μ F, 16 V, radial

C33, C34, C39 = 10 μ F, 10 V, radial

C41, C42 = 100 μ F, 16 V, radial

C43, C44 = 100 μ F, 10 V, radial

Semiconductors:

D1 = 1N4148
D2–D5 = 1N4002

Integrated circuits:

IC1 = MAX038CPP (Maxim)
IC2 = OP249GP (Analog Devices)
IC3, IC6 = AD708JN (Analog Devices)
IC4 = OPA603AP (Burr Brown)
IC5 = 74HC14
IC7 = 7815
IC8 = 7915
IC9 = 7805
IC10 = 7905

Miscellaneous:

K1–K4 = BNC socket (board fitting)
K6 = 10-way box header
K7, K9 = 3-way terminal block, 5 mm pitch
K8 = 2-way terminal block, 7.5 mm pitch
S1, S2 = 2-pole, 6-position rotary switch
S3 = 4-pole, 3-position rotary switch
S4 = double-pole on/off switch
F1 = fuse, 100 mA, slow
Tr1 = mains transformer, secondary 2x18 V, 13 VA
2 off heat sink, 6.5 K/W (e.g. SK129/25*)
1 off heat sink, 83 K/W (e.g. ICK6/8L) for DIP-8 case
4 off ceramic washers
Screened cable as required
Enclosure to individual requirements
(prototype = LC960 from LTP)
PCB Ref. No. 950068
Front panel foil Ref. No. 950068-F
* Dau (UK) Ltd, Phone (01243) 553031

DISPLAY BOARD

Resistors:

R1 = array of 4x10 kOhm
R2, R4 = 10 kOhm
R3 = 1 MOhm

Capacitors:

C1 = 22 pF foil trimmer
C2 = 22 pF ceramic
C3 = 100 nF, polypropylene
C4 = 10 µF, 10 V, radial
C5–C12 = 10 nF

Inductors:

L1 = 100 µH

Integrated circuits:

IC1 = 74HC08
IC2 = 74HC266

IC3 = 74HC20
IC4 = 74HC32
IC5 = 74HC14
IC6 = 74HC390
IC7 = ICM7207A
IC8 = ICM7224

Miscellaneous:

K1 = 10-way box header
LCD1 = 4.5 digit liquid crystal display
(prototype Seiko SP516P)
X1 = crystal, 5.24288 MHz
2 off 10-way socket
10-core flatcable as required.