Randomise switch
SW6 SW_SPST
D13 LED +5V
R40 1k
RANDOM
GND

Arduino Nano
+5V
C10 100nF
3V3
VIN
GND
RESET RESET AREF A0 A1 A2 A3 A4 A5 A6 A7
GND GND GND
D0/RX D1/TX D2 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13
CLOCK_IN RESET_IN FLIP_IN RANDOM INC_LED DEC_LED SER_DATA SER_CLOCK SER_LATCH
Arduino_Nano A1

Expansion header
EXPANSION_CLOCK
EXPANSION_LATCH
EXPANSION_DATA
J13 Conn_01x03

Clock in
J1 AudioJack GND
R1 100k
R10 1M
D5 1N5817
+5V R20 1k
R17 10k
D8 LED
R23 1k
Q1 2N3904
SW1 SW_Push
C3 220nF
CLOCK_IN
GND

Reset in
J2 AudioJack GND
R2 100k
R11 1M
D6 1N5817
+5V R21 1k
R18 10k
D9 LED
R24 1k
Q2 2N3904
SW2 SW_Push
C4 220nF
RESET_IN
GND

Flip in
J3 AudioJack GND
R3 100k
R12 1M
D7 1N5817
+5V R22 1k
R19 10k
D10 LED
R25 1k
Q3 2N3904
SW3 SW_Push
C5 220nF
FLIP_IN
GND

Direction LEDs
D11 LED
R38 1k
INC_LED
D12 LED
R39 1k
DEC_LED
GND

Non-inv
J4 AudioJack GND
R4 1k
U1C TL084
−10/+10V
R5 1k
D1 LED
D2 LED
R15 10k
SW4 SW_SPST
RV1 A1M
Glide
C1 470nF
U1B TL084
RV1 A1M
R26 100k
−10/+10V
R30 100k
+12V −5/+5V −12V
Offset
R28 6.8k RV3 B10k R34 6.8k
R32 100k
−5/+5V
RV5 B10k Scale
R36 220k
U1A TL084
0/+5V −12V
R41 100k
R43 68k
−2.5V
R44 18k
CV_OUT1
GND
C6 100nF
C7 100nF
U1E TL084
+12V −12V

Inv
J5 AudioJack GND
R6 1k
U1D TL084
+10/−10V
R13 10k

Non-inv
J6 AudioJack GND
R7 1k
U2C TL084
−10/+10V
R8 1k
D3 LED
D4 LED
R16 10k
SW5 SW_SPST
RV2 A1M
Glide
C2 470nF
U2B TL084
R27 100k
−10/+10V
R31 100k
+12V −5/+5V −12V
Offset
R29 6.8k RV4 B10k R35 6.8k
R33 100k
−5/+5V
RV6 B10k Scale
R37 220k
U2A TL084
0/+5V −12V
R42 100k
R45 68k
−2.5V
R46 18k
CV_OUT2
GND
C8 100nF
C9 100nF
U2E TL084
+12V −12V

Inv
J7 AudioJack GND
R9 1k
U2D TL084
+10/−10V
R14 10k

SER_DATA SER_CLOCK SER_LATCH
+5V
EXPANSION_CLOCK
EXPANSION_LATCH
U4 74HC595
SER SRCLK SRCLR RCLK OE VCC GND
QA QB QC QD QE QF QG QH QH'
EXPANSION_DATA

CV 1
RV7 B10k   RV9 B10k   RV11 B10k   RV13 B10k   RV15 B10k   RV17 B10k   RV19 B10k   RV21 B10k
R50 100k   R56 100k   R64 100k   R70 100k   R76 100k   R82 100k   R88 100k   R94 100k
CV_OUT1

CV 2
RV8 B10k   RV10 B10k   RV12 B10k   RV14 B10k   RV16 B10k   RV18 B10k   RV20 B10k   RV22 B10k
R51 100k   R57 100k   R65 100k   R71 100k   R77 100k   R83 100k   R89 100k   R95 100k
CV_OUT2

R47 10k +5V   R53 10k +5V   R61 10k +5V   R67 10k +5V   R73 10k +5V   R79 10k +5V   R85 10k +5V   R91 10k +5V
Buffer
Q4 2N3904   Q5 2N3904   Q6 2N3904   Q7 2N3904   Q8 2N3904   Q9 2N3904   Q10 2N3904   Q11 2N3904
R48 10k   R54 10k   R62 10k   R68 10k   R74 10k   R80 10k   R86 10k   R92 10k

Step LED
D14 LED R49 R52 1k   D15 LED R55 R58 1k   D16 LED R63 R66 1k   D17 LED R69 R72 1k   D18 LED R75 R78 1k   D19 LED R81 R84 1k   D20 LED R87 R90 1k   D21 LED R93 R96 1k

Gate out
J8   J9   J11   J12   J14   J15   J16   J17
AudioJack AudioJack AudioJack AudioJack AudioJack AudioJack AudioJack AudioJack

+12V
U3 L7805
IN OUT
C11 330nF
C12 100nF
+5V
GND

−12V
C13 10uF
C14 10uF
R59 10R
R60 10R
J10 Conn_02x05
+12V
GND