

Membrane Template Layout

Data			Function							Mode		Manual			Spindle		
7 1	8 5	9 9	X 13	G 17	CLW 21	Repeat 25	AUX Input 29	Reset 33	Load END 37	Cass 41		45	▲ 49	45° 52			
4 2	5 6	6 10	Y 14	M 18	CCLW 22	Dwell 26	Offset 30	Comp 34	Edit End 38	Clock Search 42		◀ 46		▶ 53	Fwd 56	58	Rev 61
1 3	2 7	3 11	Z 15	Feed 19	T 23	Mirror X 27	Scale 31	Float Datum 35	Data Link 39	TPG END 43		47	▼ 50	54		Off 59	
0 4	. 8	- 12	Enter 16	EOB 20	S 24	Mirror Y 28	Prog Stop 32	ABS Datum 36	ABS INC 40	Inch Mm 44		- 48	Feed- Rate Override 51	+ 55	- 57	60	+ 62

On 25 0	Stop 29 0	Cycle Start 63		Cycle Stop 35 0	Single Step 64
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The operation of **On**, **Stop** & **Cycle Stop** is different to the rest of the keyboard action. When any of those key are pressed, a connection to 0 volts is made.

Digit Driver		Key Reader							
74LS373		74LS244							
When O/P Low		D7	D6	D5	D4	D3	D2	D1	D0
O7		60	21	58	22	64	24	63	23
O6		44	17	43	18	42	20	41	19
O5		36	9	35	10	34	12	33	11
O4		40	13	39	14	38	16	37	15
O3		45	49	54	52	46	50	47	53
O2		32	5	31	6	30	8	29	7
O1		28	1	27	2	26	4	25	3
O0		48	56	55	61	51	62	57	59

Keyboard membrane cables

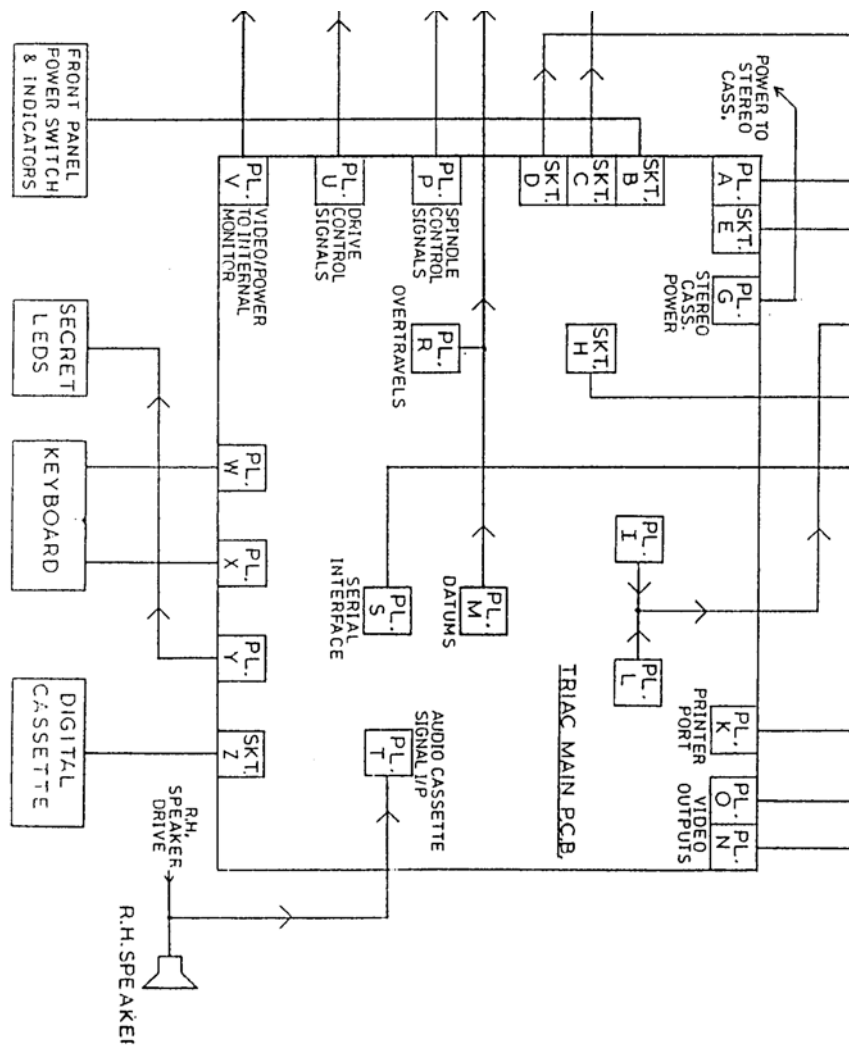
PL.W (10w 0.1 BERG) - JAYCO FRONT PANEL/KEYBOARD

<u>CABLE</u>	<u>PIN</u>	<u>SIGNAL</u>	<u>SOURCE/DESTINATION</u>
10w RIBBON			KEYBOARD CONN. 1
	1	DIGIT 6	Pin 1
	2	DIGIT 7	Pin 2
	3	KEY 6	Pin 3
	4	KEY 4	Pin 4
	5	KEY 0	Pin 5
	6	KEY 2	Pin 6
	7	KEY 1	Pin 7
	8	KEY 3	Pin 8
	9	KEY 5	Pin 9
	10	KEY 7	Pin 10

PL.X (10w 0.1 BERG) - JAYCO FRONT PANEL KEYBOARD

<u>CABLE</u>	<u>PIN</u>	<u>SIGNAL</u>	<u>SOURCE/DESTINATION</u>
10w RIBBON			KEYBOARD CONN. 2
	1	0v	Pin 1
	2	DRIVE ON KEY	Pin 2
	3	STOP KEY	Pin 3
	4	CYCLE STOP KEY	Pin 4
	5	DIGIT 3	Pin 5
	6	DIGIT 0	Pin 6
	7	DIGIT 1	Pin 7
	8	DIGIT 2	Pin 8
	9	DIGIT 5	Pin 9
	10	DIGIT 4	Pin 10

Position of PLW and PLX connectors on main board



The schematic diagram illustrates the internal circuitry of the TRIAC Processor Section. It features several integrated circuits (ICs) and their interconnections:

- IC9 5264**: A central processor unit with multiple pins connected to other components.
- IC1 8304**, **IC2 8304**, **IC3 244**, **IC4 373**, **IC5 373**, **IC6 244**: Various logic and control chips used for signal processing and timing.
- IC7 138**: A decoder or driver chip at the top right.
- Peripheral Components**: Includes switches (SW), LEDs (LED), and connectors (CON) for user interaction and system integration.
- Power and Grounding**: Shows connections for +5V and ground (GND) across the board.
- Signal Lines**: Labeled lines such as DATA BUS, ADDRESS BUS, and various control signals (e.g., RD+WR, WR).

NOTES:

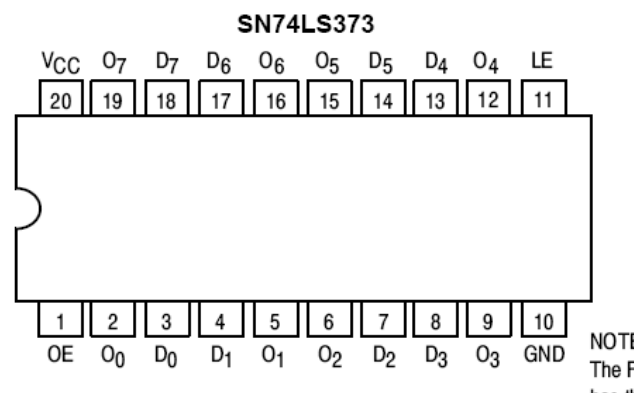
- IC15 = LS244
- IC2 = LS04
- D1, D2 = OA47

NORTH EAST ELECTRONICS

TRIAC

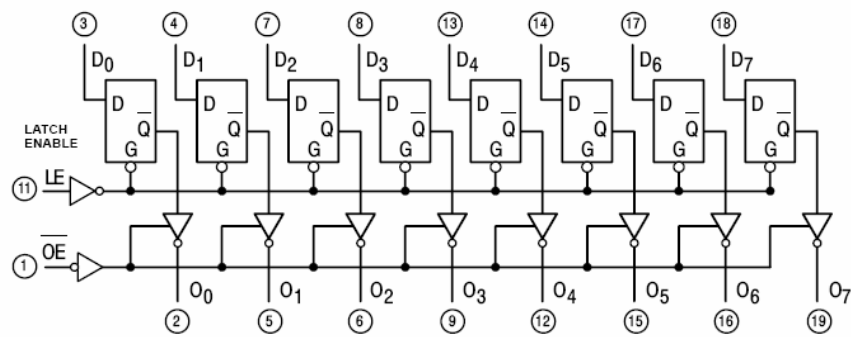
PROCESSOR SECTN.

74LS373



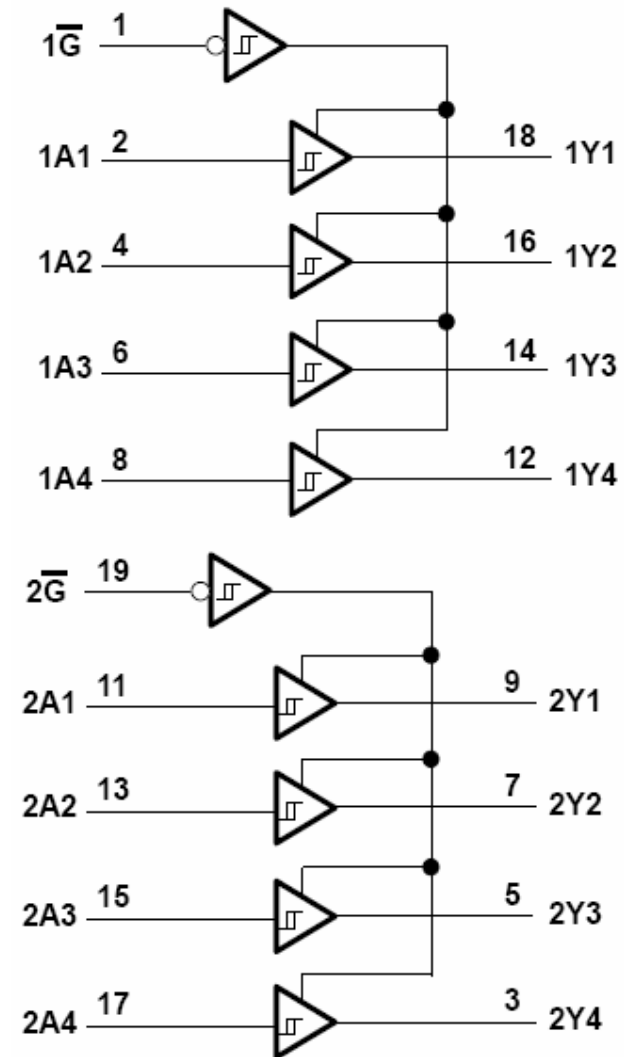
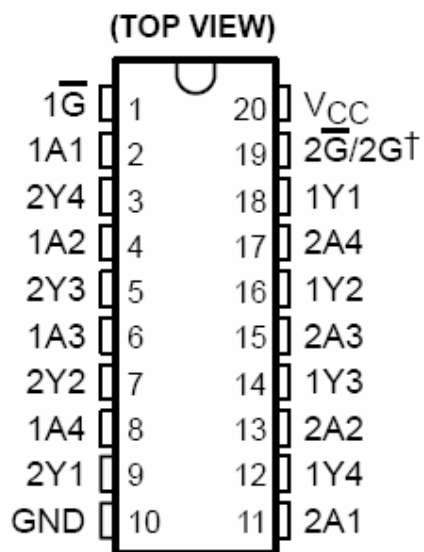
LOGIC DIAGRAMS

SN74LS373



V_{CC} = PIN 20
GND = PIN 10
○ = PIN NUMBERS

74LS244



PLX 10 way			PLW 10 way		
1	Ground	Gnd	1	Dig6	IC5-12
2	Drive	IC3-13	2	Dig7	IC5-9
3	Stop	IC3-8	3	Key6	IC6-8
4	Cstop	IC3-11	4	Key4	IC6-6
5	Dig3	IC5-D1	5	Key0	IC6-2
6	Dig0	IC5-19	6	Key2	IC6-4
7	Dig1	IC5-2	7	Key1	IC6-17
8	Dig2	IC5-16	8	Key3	IC6-15
9	Dig5	IC5-D2	9	Key5	IC6-13
10	Dig4	IC5-15	10	Key7	IC6-11

Pin 1 is RHS of 10 way connector

Test Panel Layout using 16 Pin IC Socket

Dig 7	PLW-2	Pin1	Pin16	PLW-10	Key 7
Dig 6	PLW-1	Pin2	Pin15	PLW-3	Key 6
Dig 5	PLX-9	Pin3	Pin14	PLW-9	Key 5
Dig 4	PLX-10	Pin4	Pin13	PLW-4	Key 4
Dig 3	PLX-5	Pin5	Pin12	PLW-8	Key 3
Dig 2	PLX-8	Pin6	Pin11	PLW-6	Key 2
Dig 1	PLX-7	Pin7	Pin10	PLW-7	Key 1
Dig 0	PLX-6	Pin8	Pin9	PLW-5	Key 0

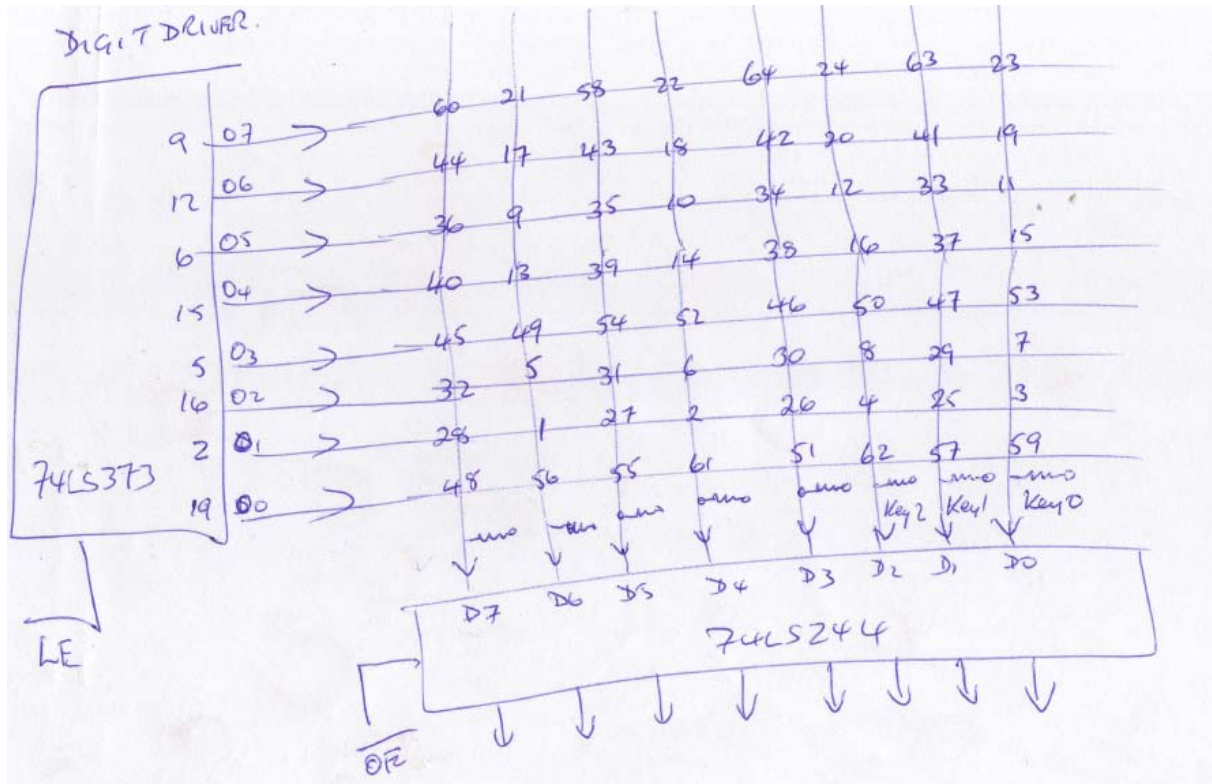
Shorting Dig X to Key X using wire link

	Key 7	Key 6	Key 5	Key 4	Key 3	Key 2	Key 1	Key 0
Dig 7	60	21	58	22	64	24	63	23
Dig 6	44	17	43	18	42	20	41	19
Dig 5	36	9	35	10	34	12	33	11
Dig 4	40	13	39	14	38	16	37	15
Dig 3	45	49	54	52	46	50	47	53
Dig 2	32	5	31	6	30	8	29	7
Dig 1	28	1	27	2	26	4	25	3
Dig 0	48	56	55	61	51	62	57	59

Schematic layout of keyboard membrane

Note the two diodes in use on the output of IC5 at pins 5 & 6.

Note also the On, Stop & Cycle Stop are not included as these inputs are shorted to 0V when their respective keys are pressed.



IC5 – 74LS373, Keyboard Digit Driver (scans the keyboard)

IC6 – 74LS244, Keyboard input (reads which key has been pressed)