



ALLEN AND HEATH BRENELL LTD.

VARISPEED OWNERS MANUAL

HOW TO USE YOUR 'BRENNELL VARISPEED'

Sufficient cable is allowed to enable the 'VARISPEED' to be positioned remotely. It should be remembered that in use the main unit gets quite hot, this is normal, therefore you must allow GOOD VENTILATION around the unit.

Connect the 'VARISPEED' as shown in the connection diagram. The 'VARISPEED' will not operate as soon as the MINI 8 is switched on.

With the switch on the control box switched to 'SYNC' the tape speed will be synchronised to the mains frequency.

With the switch on the 'VARY' position the L.E.D. will illuminate and the tape speed may now be varied by means of the control potentiometer. It is possible to obtain a speed variation of approximately $\pm 15\%$ of normal tape speed.

The 'VARISPEED' will be fully stable approximately fifteen minutes after switch on.

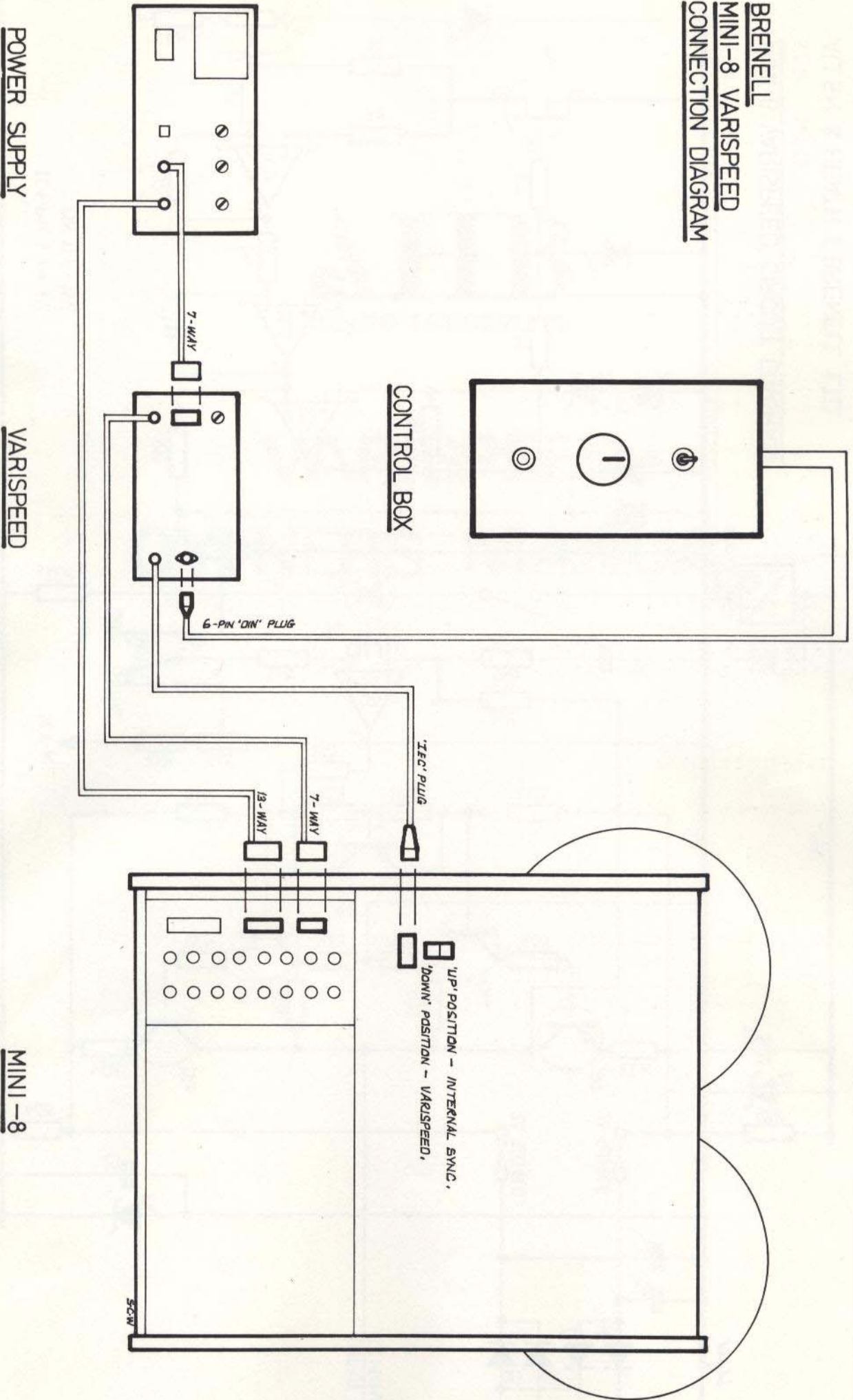
Should you wish to bypass the 'VARISPEED' and run from normal mains but without fully disconnecting it, simply switch the rocker switch on the 'MINI 8' into its upmost position.

EXTERNAL CONTROL

It is possible to control the tape speed from an external voltage source. To do this proceed as follows:—

- a) Obtain a suitable 6 pin DIN PLUG.
- b) Disconnect mains.
- c) Disconnect the control box from the 6 way DIN socket.
- d) Insert 6 pin DIN plug and connect pins 1 and 5 together. This puts the 'VARISPEED' into the 'VARI' mode.
- e) Apply the control voltage to pin 4 of the 6 pin DIN plug. This voltage should be low impedance (approximately 600 ohms) and is of a fairly low level, in the range of 0.6 volts to 1.1 volts. Exceeding these values may cause the capstan motor to fall out of synchronisation.

**BRENELL
MINI-8 VARISPEED
CONNECTION DIAGRAM**



POWER SUPPLY

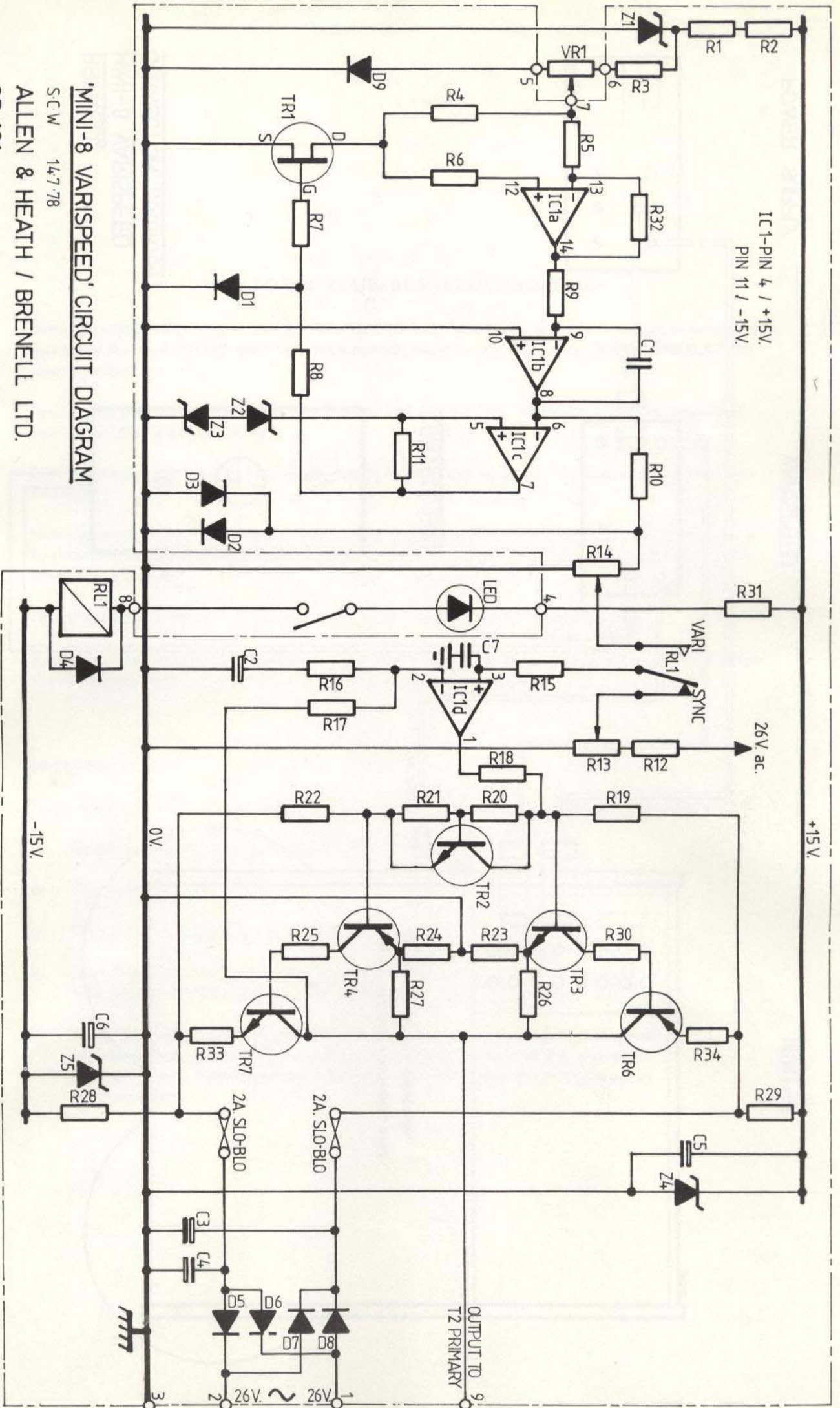
VARISPEED

CONTROL BOX

MINI-8

SCW

IC1-PIN 4 / +15V.
PIN 11 / -15V.



'MINI-8 VARISPEED' CIRCUIT DIAGRAM

S.C.W 14.7.78

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CD 101

MINI 8 VARISPEED COMPONENTS

R1	=	1K	VR1	=	220R Linear
R2	=	1K	C1	=	0.33 mfd
R3	=	3K9	C2	=	100 mfd 3v Tantillum
R4	=	47K	C3	=	5000 mfd Electrolytic 50v
R5	=	100K	C4	=	5000 mfd Electrolytic 50v
R6	=	47K	C5	=	220 mfd Electrolytic 25v
R7	=	47K	C6	=	220 mfd Electrolytic 25v
R8	=	47K	C7	=	0.047 mfd Mylar 100v
R9	=	2K2	TR1	=	BF244 FET
R10	=	12K	TR2	=	BF240
R11	=	10K	TR3	=	BFX85
R12	=	180K	TR4	=	BFX87
R13	=	2K Preset	TR6	=	TIP36C
R14	=	2K Preset	TR7	=	TIP35C
R15	=	47K	D1	=	1N4148
R16	=	680R	D2	=	1N4148
R17	=	82K	D3	=	1N4148
R18	=	100R	D4	=	1N4148
R19	=	4K7	D5	=	1N5401
R20	=	150R	D6	=	1N5401
R21	=	470R	D7	=	1N5401
R22	=	4K7	D8	=	1N5401
R23	=	22R 2.5W Wirewound	D9	=	1N4148
R24	=	22R 2.5W Wirewound	IC1	=	LM324N
R25	=	150R 2.5W Wirewound	Z1	=	BZY 88 5v6
R26	=	220R 2.5W Wirewound	Z2	=	BZY 88 5v6
R27	=	220R 2.5W Wirewound	Z3	=	BZY 88 5v6
R28	=	1K $\frac{1}{2}$ W Carbon	Z4	=	BZY 88 15v
R29	=	1K $\frac{1}{2}$ W Carbon	Z5	=	BZY 88 15v
R30	=	150R 2.5W Wirewound	RL1	=	MZ 24HG Single Pole Changeover
R31	=	560R			
R32	=	100K			
R33	=	2R2 7W Wirewound			
R34	=	2R2 7W Wirewound			

ALL RESISTORS $\frac{1}{4}$ WATT CARBON UNLESS OTHERWISE STATED.