

CARTER KEYBOARDS

73

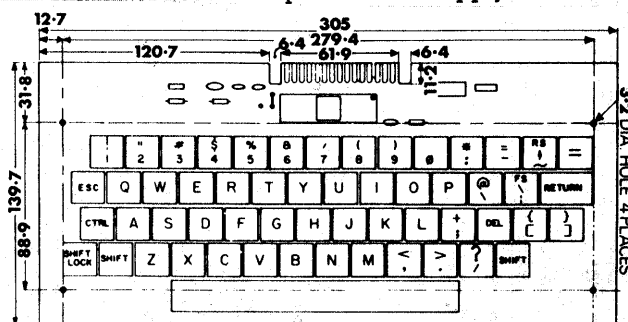


Ex Stock

The Model 756 ASCII Keyboard has been specifically designed for professional microprocessor applications and with the following features will meet most present and future applications.

- Full 128-character ASCII 8-bit code.
- Upper and lower case characters generated by keyboard with latching shift-lock.
- User selectable positive or negative DC level and pulse strobe signal for easy interface to any 8-bit input port microprocessor system, video display or terminal. Strobe pulse width 1 msec (adjustable).
- Optional 10 key numeric pad available - decoder I.C. has special provision.
- MIL. spec. PCB with plated through holes.
- Selectable parity.
- 2 key roll-over for low error rate.
- Extra keys and caps available.
- MOS/DTL/TTL compatible outputs (1 TTL load). Power needed is +5 and -12V, but on board DC/DC converter available as option - this eliminates need for separate -12V supply.

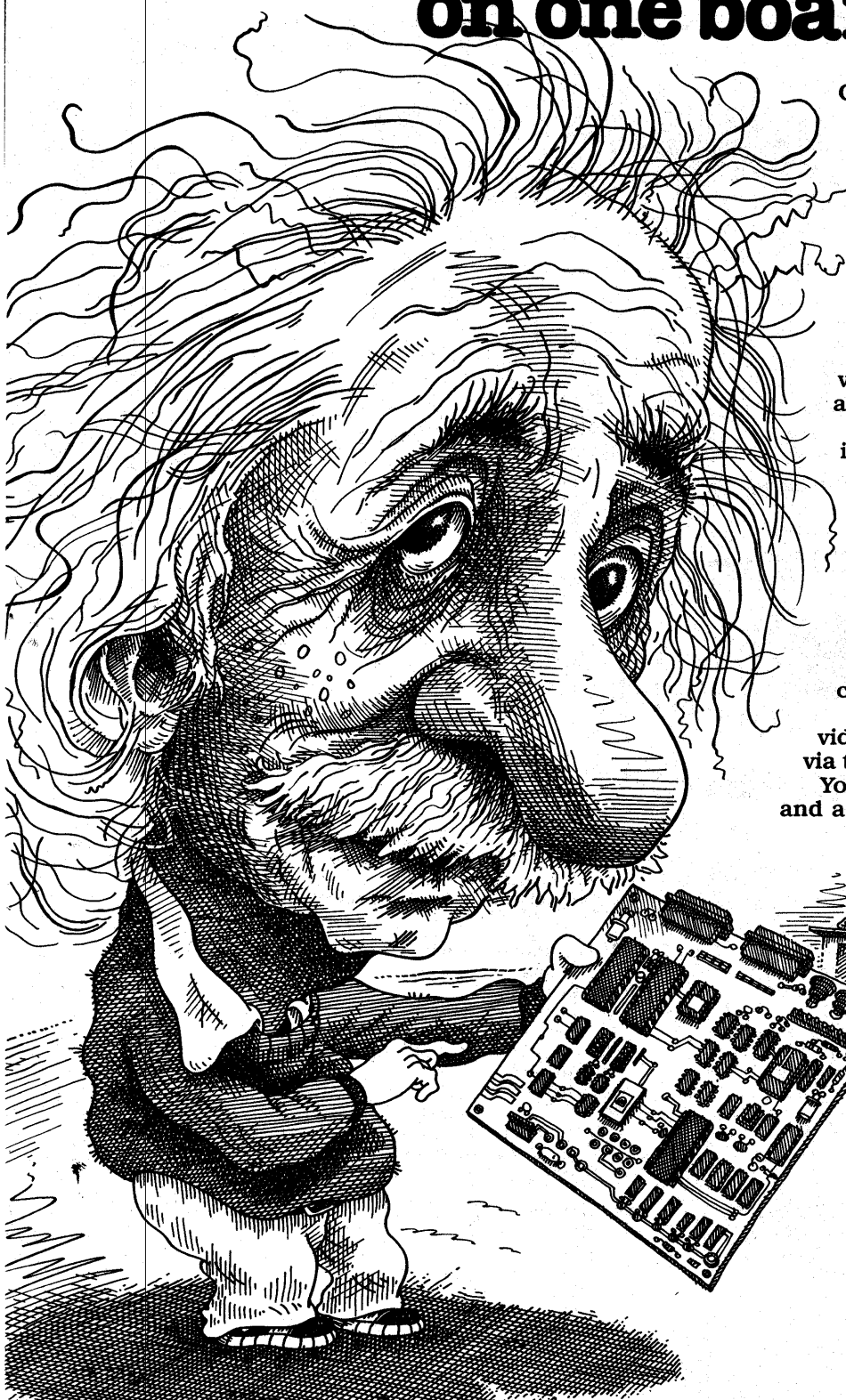
- Metal mounting frame and plastic housing available as options.
- 56 keys.
- Gold contact low-bounce keyswitches - each switch element sealed for utmost reliability.
- User selection of positive or negative logic data and strobe output.
- Shift and alpha lock.
- Size 305 x 140 x 32 mm.
- Specially masked MOS encoder chip gives features not normally available in standard ASCII keyboards - supports numeric keypad and has cursor control ability.
- Serial output 20ma/RS232 - (110-9600 baud) easily added.
- Applications notes give ASCII code reference chart, control code generation details, and comprehensive information on pin assignments, etc.



KEYBOARD LAYOUT AND DIMENSIONS

CARTER KEYBOARDS

It took a bit of genius to put a smart CRT terminal on one board.



Only Standard Microsystems could build so much CRT capability in a small terminal-on-a-board.

Our new Hawk 1 video terminal module gives you all the circuitry you need to build a truly smart terminal. The Hawk is available in either 24 x 80 or 16 x 64 displays. It has an easy-to-read 7 x 11 dot matrix in a 9 x 12 dot character field. With up to 64 graphic characters.

It can give you underlining, reverse video, character blinking, half intensity and character blanking.

Editing features include character insert/delete, line insert/delete, tab operations and full/partial screen erase.

It has such communications features as a full RS-232 I/O port with 8 selectable baud rates and an auxiliary RS-232 printer output port. Other features include 50 or 60Hz screen frame rate; both direct drive and composite video outputs; on-board alarm and on-board CRT brightness and contrast controls.

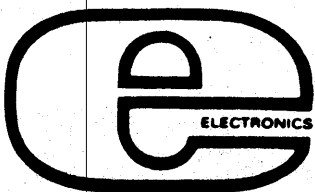
In addition to the standard program provided, it can be user-custom-programmed via two on-board ROM sockets.

You just connect a keyboard, a monitor and a power supply and you're ready to go.

Imagine being a bit of a genius yourself with Standard Microsystems'


Hawk 1—a smart terminal-on-a-board.

**EX STOCK
DELIVERY**

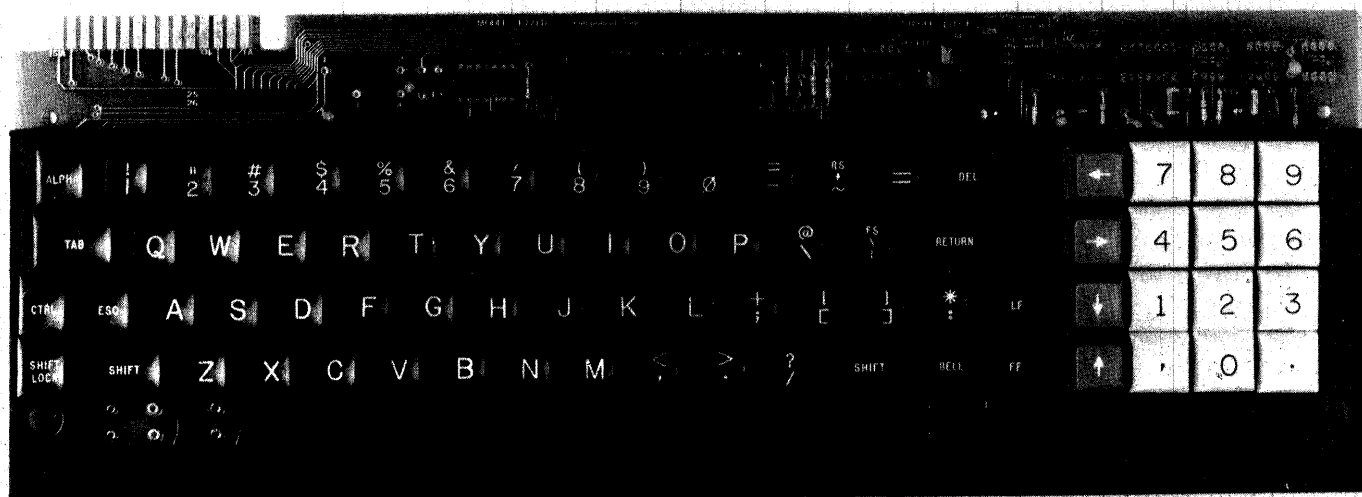
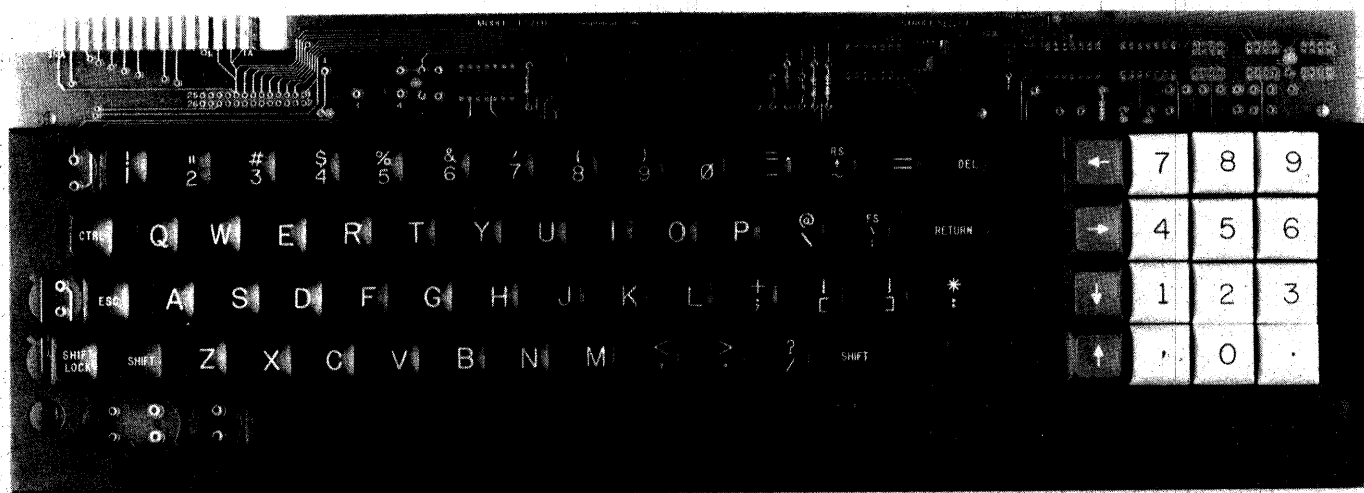


eagle electric co (pty) ltd

p o box 3106 cape town

 (021) 45-1421 telex 57-20713

QUICKPRINT



Professional ASCII Keyboards

The Model 700 Series ASCII Keyboards have been specifically designed for professional microprocessor applications and the following features will meet most present and future applications:-

- 77 and 72 key versions including 16 key numeric keypad with cursor controls, full stop and comma.
- Metal mounting frame fitted as standard to give extra mechanical stability.
- Mil. spec. PCB with plated through holes and Solder mask.
- Full 128-character ASCII 8-bit code 7-bits for data, bit 8 for parity.
- Upper and lower case characters generated by keyboard with latching shift lock.
- Shift and alpha lock.
- 2 Key roll-over for low error rate.
- Time auto repeat on all keys in all modes. (Option 'A' versions only) on models 771/777).
- Data output positive logic (negative is selectable).
- Parity output polarity selectable.
- User selectable positive or negative DC level and pulse strobe signal for easy interface to any 8-bit input port microprocessor system, video display or terminal. Strobe pulse width 1 msec (adjustable).
- Positive keyboard switch feel for high operator speed.
- Gold contact low-bounce keyswitches — each switch element sealed for utmost reliability.
- MOS/DTL/TTL compatible outputs (1 TTL load). Power needed is +5 and -12V, but on board DC/DC converter available as option eliminates need for separate -12V supply.
- Specially masked MOS encoder chip gives features not normally available in standard ASCII keyboards.
- Connection by PC Board edge connector. (Option 'C' versions also have ribbon cable with 'D' connector. Model 771/777 only).
- Fully plug compatible with similar keyboards by other makers.
- Extra keys and caps available.
- Metal Housing an available option.
- Very competitive pricing.
- Delivery from stock.

382 Interfacing

The 700 Series ASC11 keyboards are very easy to interface with almost any microprocessor system.

Output Strobe

Most interfaces use the keyboard strobe signal to indicate that the keyboard data is ready. The following strobe outputs are provided and these should provide for almost any application:

Strobe	goes high with any key depression
Strobe	goes low with any key depression
Strobe Pulse	a 1ms pulse following key depression, going high
Strobe Pulse	a 1ms pulse following key depression, going low
Model Option	'A' Only - Auto Repeat / (Model 771 and 777 only)
Strobe Pulse	a 1ms pulse following key depression, going high-repeating with extended depression
Strobe Pulse	a 1ms pulse following key depression, going low-repeating with extended depression

By consulting your system manuals, decide on the logic requirements needed by the 'strobe', 'data ready' or 'key pressed' inputs, and use the output that will fill these requirements. If your system requires a strobe pulse width other than 1ms, it may be changed by altering the value of the 2.2uF capacitor (C1-Model 756 and C7-Model 771/777).

Models 771/777 have the strobe pulse-not signal connected to output strobe on connector. If any of the other strobes are required, remove link connecting the strobe select to strobe pulse-not and jumper appropriate strobe to the strobe select.

Data Output

The ASC11 code uses eight bits. The first seven bits are for data, and the eighth bit for parity. The bits are numbered B1 to B8, with

B8 being the parity bit. Parity will not normally be used with microprocessor related products, and is used mainly in telecommunications for error checking. If the parity is used, connect as below.

The data may be positive or negative logic. This can be carried out on the board by connecting also as below. (Note: some systems may refer to the least significant bit B1 as B0, and the most significant bit B8 as B7, this is no problem, and the user should just consider B0 as B1 etc.).

Parity and Data Polarity Selection

Model 756

If the parity is used, connect the 'PARITY INVERT' select to +5V for even parity or ground for odd parity. The other 7 bits, B1 to B7, are connected directly to your interface except for B6, where either bit B6A or B6B may be used. Using B6B when only upper case alphabetical characters are required, and B6A for both upper and lower case. In either case, only alphabetical characters are affected and the shift and control keys still select punctuation and control.

The data may be positive or negative logic: connect 'DATA & STROBE INVERT' to GND, for positive logic, and to +5V for negative logic. This can also be carried out on the board by connecting jumper near 2376 1.C at 'D.S.1' location. If negative logic is selected, the strobe and strobe will also operate in negative logic, while the strobe pulses are invalid, and should not be used.

Most Important - Do not leave D.S.1 link unconnected.

Model 771/777

If the parity is used, connect the 'PARITY JUMPER' near I.C.6 to even or odd parity. The other 7 bits, B1 to B7, are connected directly to your interface.

The data may be positive or negative logic. This can be carried out on the board by connecting jumper near I.C.6 location.

Alpha Lock

Alpha Lock is much preferred by many

users of electronic keyboards. When depressed, the keyboard will output upper case only, but the shift keys will still be active for selecting numerals and punctuation. When released, the keyboard outputs normally shifted upper and lower case. In any event, the control may be used to generate control codes and functions.

Model 756

Bit 6 Alpha is an output from an optional Alpha Lock circuit provided on the keyboard PC board.

The PC board has jumpers (2) near the Shift Lock key, which connect the keyswitch as a Shift Lock key. As long as the keyboard is jumpered this way, the user may only select between B6A and B6B. A manual SPDT switch may be used to select between the two bit 6 outputs.

Optionally, the shift lock may be converted to an alpha lock key. This is done by adding two parts, changing two jumpers and moving the bit 6 output connections. The added parts are a 7400 or 74LS00 IC, and a 4.7K 1/4 watt resistors. Change the jumpers by moving the jumper from COM-SHIFT to COM-ALPHA (change both jumpers). Finally, move the bit 6 interface lead from wherever it is to the pin marked Bit 6 Alpha. Now, the selection of upper-lower case is made electrically, on the keyboard, by the status of the Shift Lock latching type keyswitch. This is an Alpha Lock switch now, and a cap marked 'ALPHA' is available to order part No. CAR60.

Model 771/777

Circuitry for Alpha lock is incorporated during manufacture.

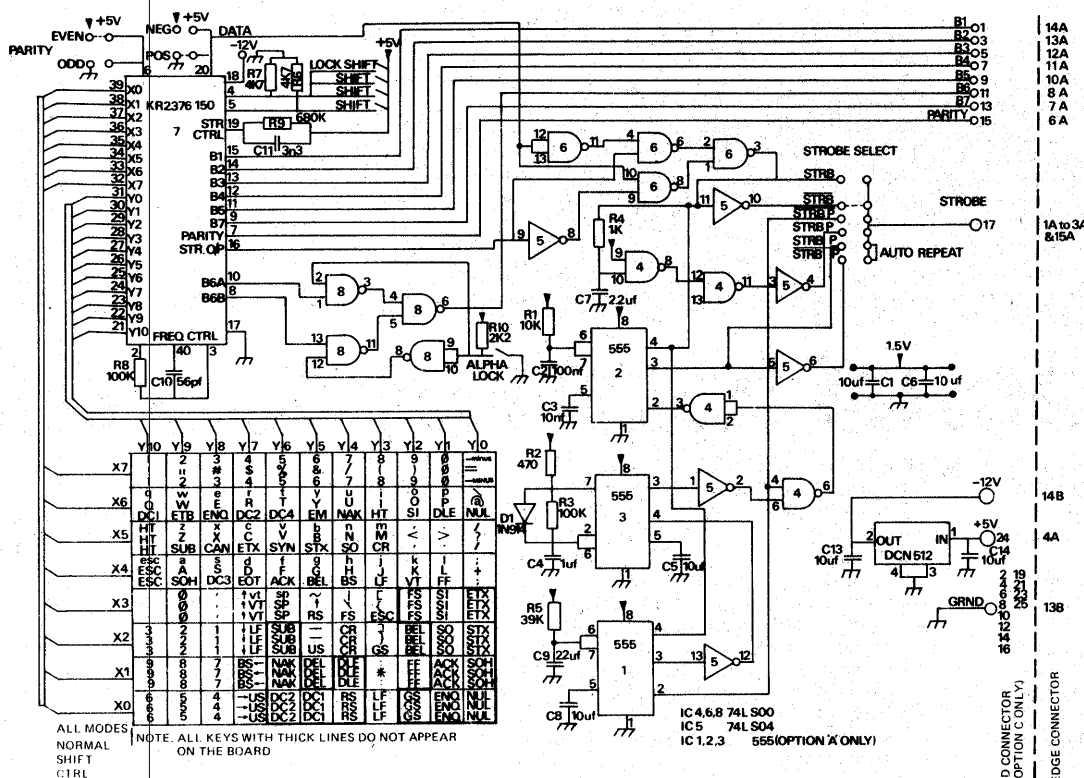
Model 771D

Provision to add ALPHA cap and switch has been made on the PC board. Order parts CAR58 for locking switch and CAR60 for alpha cap and simply fit into position marked 'alpha' on PC board.

Model 777 D

Switch and cap fitted as standard.

Model 771/777



Edge Connector

A1	Strobe select and output
A2	Strobe select and output
A3	Strobe select and output
A4	+ 5V
A6	Parity output
A7	B7 ASCII data output
A9	B6 ASCII data output
A10	B5 ASCII data output
A11	B4 ASCII data output
A12	B3 ASCII data output
A13	B2 ASCII data output
A14	B1 ASCII data output
A15	Strobe select and output

Strobe select details shown on each keyboard. A1, A2, A3 and A15 are common and each gives out strobe selected.

B13 Ground
B14 -12V

2376 KEYBOARD ENCODER PIN ASSIGNMENTS			
1	Vcc (+5V)	21	Y 10
2	Freq. Control	22	Y 9
3	Freq. Control	23	Y 8
4	Shift input	24	Y 7
5	Control Input	25	Y 6
6	Parity Invert	26	Y 5
7	Parity Output	27	Y 4
8	Data Output B7 (MSB)	28	Y 3
9	Data Output B6B (UC)	29	Y 2
10	Data Output B6A (UC/LC)	30	Y 1
11	Data Output B5	31	Y 0
12	Data Output B4	32	X 7
13	Data Output B3	33	X 6
14	Data Output B2	34	X 5
15	Data Output B1 (LSB)	35	X 4
16	Strobe Output (level)	36	X 3
17	Vss (ground)	37	X 2
18	Vgg (-12V)	38	X 1
19	Strobe Control	39	X 0
20	DSI (Data and Strobe Invert)	40	Freq. Control

Power Supply

Needs +5V at 20 mA and -12V at 10 mA. Use our DCN 512 converter to run complete keyboard from +5V. Keyboard has special provision for it.

Output Loading

The keyboard will drive one standard TTL load with higher loads needing buffering. The encoder allows data to fluctuate between key depressions, and care must be taken to see that this does not lead to erratic operation. For interconnecting cables longer than 2M, use line drivers.

Troubleshooting

All keyboards are subjected to a vigorous test before despatch. If any problems are experienced, please check all connections carefully, check that correct strobe output is being used, and make sure that the clock output is present at Pin 2 of the decoder IC.

Generation of Control Codes

A control code is generated when an alphabetical key and the control key are simultaneously depressed. For example, by referring to matrix drawing on circuit diagram, control character ETX would be obtained from C and control key.

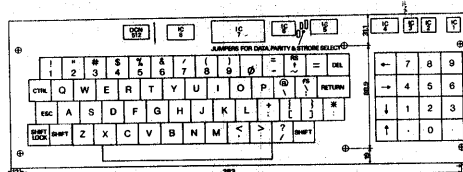
MSD	0	1	2	3	4	5	6	7
LSD	000	001	010	011	100	101	110	111
0	0000 NUL	DLE	SP	@	P	Q	R	S
1	0001 SOH	DC1	!	A	B	C	D	E
2	0010 STX	DC2	"	2	3	4	5	6
3	0011 ETX	DC3	#	3	4	5	6	7
4	0100 EOT	DC4	\$	4	5	6	7	8
5	0101 ENG	NAK	%	5	6	7	8	9
6	0110 ACK	SYN	&	6	7	8	9	0
7	0111 BEL	ETB	'	7	8	9	0	1
8	1000 BS	CAN	(	8	9	0	1	2
9	1001 HT	EM	)	9	0	1	2	3
A	1010 LF	SUB	*	0	1	2	3	4
B	1011 VT	ESC	+	1	2	3	4	5
C	1100 FF	FS	=	2	3	4	5	6
D	1101 CR	GS	<	3	4	5	6	7
E	1110 SO	RS	>	4	5	6	7	8
F	1111 SI	VS	/	5	6	7	8	9

Full ASCII Alphabet with punctuation and control characters.

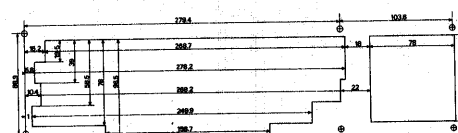
Keyboard Layout

General Description

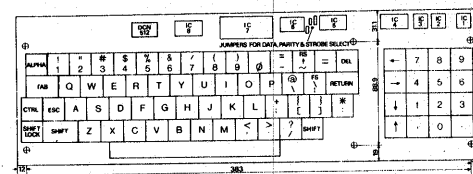
The Model 700 Series keyboards are intended for a wide range of microprocessor data input and video display applications. They provide encoding for all 128 ASCII characters and control functions, imposing no limitations on software design or hardware capability. The keys, arranged in a matrix format, address an encoder IC which outputs an ASCII code dependent to the key address. A strobe output from the encoder IC goes high and stays high for the duration of each key closure. The strobe output is gated to produce both pulse and DC level strobe outputs of normal or inverted polarity. Provision of 4 different strobe outputs gives greater flexibility and permits easy interfacing. Model Option 'A' has in addition auto-repeat by holding down a key by extended depression (Models 771 and 777 only).



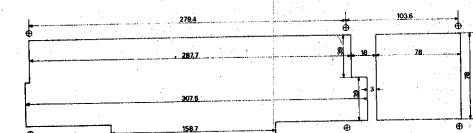
KEYBOARD LAYOUT AND DIMENSIONS — MODEL 771



SUGGESTED PANEL CUTOUT — MODEL 771

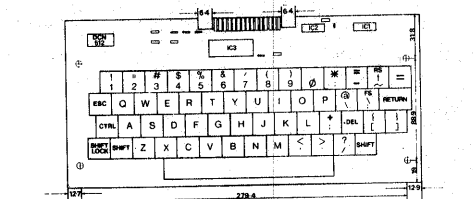


KEYBOARD LAYOUT AND DIMENSIONS — MODEL 777

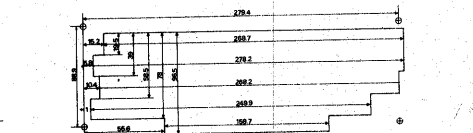


SUGGESTED PANEL CUTOUT — MODEL 777

All dimensions in millimetres.



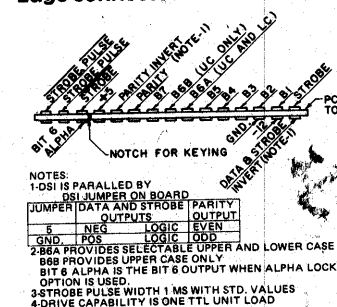
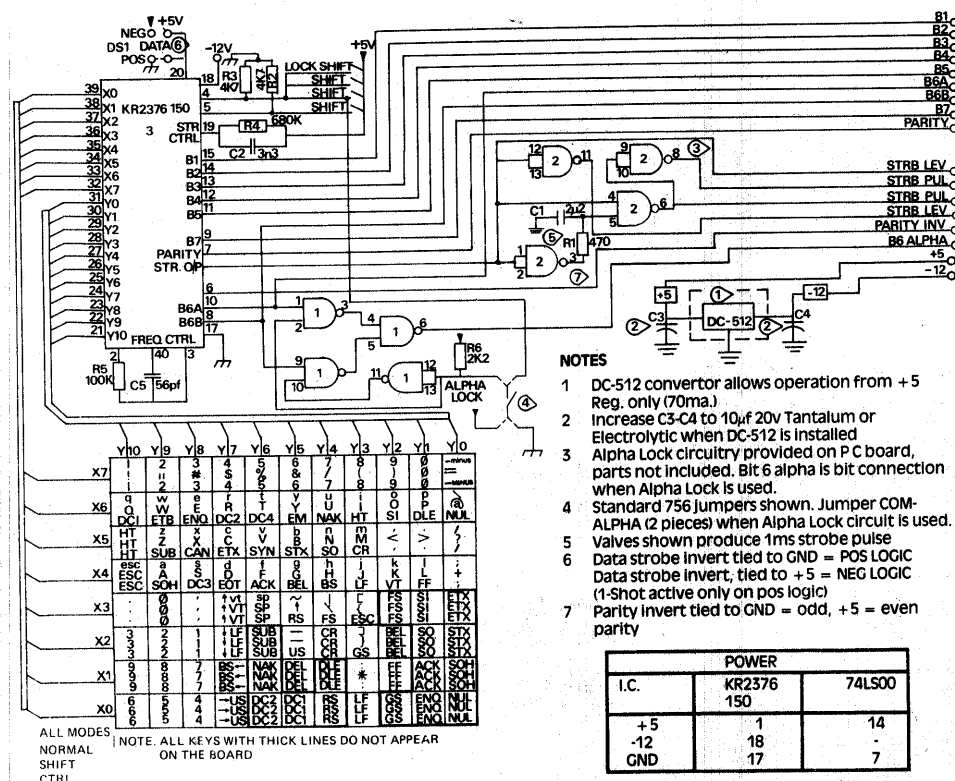
KEYBOARD LAYOUT AND DIMENSIONS — MODEL 756



SUGGESTED PANEL CUTOUT — MODEL 756

Model 756

Edge Connector



Ordering Information for Keyboards and Accessories

Keyboards are supplied with metal mounting frame for added rigidity and perfect alignment. It is not necessary to order mounting frame separately. Enclosure should be ordered separately.

Model 756 Keyboard

Order by specifying Part No. 756

Numeric Keypad (Model 756 only)

10 keys mounted on fibre glass P.C.B. size 105 x 76mm. Keys engraved 0-9 and unencoded. Matrix type format with columns and rows. Max. height 35mm. Part No. 710.

Model 771D Keyboard

Order by specifying Part No. 771D.

For auto repeat specify Part No. 771D/A. For your keyboard to be fitted with one metre of ribbon cable with D connector, specify 771D/C. For auto repeat and ribbon cable order Part No. 771D/AC. (Model 771D stock item only).

Model 777D Keyboard

As above i.e. for auto repeat specify 777D/A, auto repeat with ribbon cable specify 777D/AC. (Model 777D/A stock item only).

PC Edge Connector

Suitable 30 contact gold-plated PC card connector
Part No. CAR/30.

Ribbon Cable Connector (Model 777 only)

26 way insulation displacement type
Part No. CAR/31.

Metal Housing

Robust enclosure finished in hard wearing Sandtex finish. Punched at rear to take miniature D connector. Colour Moonstone Fawn.

Size: 434 x 195 x 58mm High for Model 771 & 777

Size: 335 x 195 x 58mm High for Model 756

Part No. CAR/23 Model 756

Part No. CAR/21 Model 771D

Part No. CAR/19 Model 777D

DC/DC Converter

Mounts on the keyboard in space provided

for it. Takes 5V DC supply and converts it to 12V DC to power negative rail. Complete keyboard can then run of 5V DC.
Part No. DCN 512

Spare Keys and Keytops

We can offer single PC board switches with blank keycaps under

Part No. CAR/57 Non-locking switch

Part No. CAR/58 Locking switch

Part No. CAR/59 Blank Cap

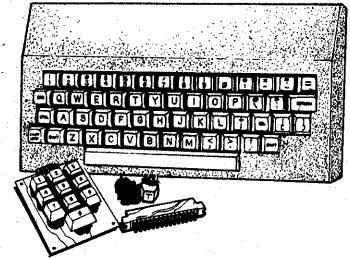
Part No. CAR/60 'Alpha' Cap

Spare Encoder IC

Specially encoded rom version

Part No. KR2376-150

All specifications are subject to change in the light of continuing development.



ASCII Code Reference Chart

ASCII	BINARY	OCTAL	DECIMAL	HEX	ASCII	BINARY	OCTAL	DECIMAL	HEX	ASCII	BINARY	OCTAL	DECIMAL	HEX	ASCII	BINARY	OCTAL	DECIMAL	HEX
NUL	00000000	000	000	00	SP	00100000	040	032	20	␣	01000000	100	064	40	␣	01100000	140	096	60
SOH	00000001	001	001	01	!	00100001	041	033	21	A	01000001	101	065	41	a	01100001	141	097	61
STX	00000010	002	002	02	"	00100010	042	034	22	B	01000010	102	066	42	b	01100010	142	098	62
ETX	00000011	003	003	03	#	00100011	043	035	23	C	01000011	103	067	43	c	01100011	143	099	63
EOT	00000100	004	004	04	\$	00100100	044	036	24	D	01000100	104	068	44	d	01100100	144	100	64
ENQ	00000101	005	005	05	%	00100101	045	037	25	E	01000101	105	069	45	e	01100101	145	101	65
ACK	00000110	006	006	06	&	00100110	046	038	26	F	01000110	106	070	46	f	01100110	146	102	66
BEL	00000111	007	007	07	'	00100111	047	039	27	G	01000111	107	071	47	g	01100111	147	103	67
BS	00001000	010	008	08	(	00101000	050	040	28	H	01001000	110	072	48	h	01101000	150	104	68
HT	00001001	011	009	09	)	00101001	051	041	29	I	01001001	111	073	49	i	01101001	151	105	69
LF	00001010	012	010	0A	*	00101010	052	042	2A	J	01001010	112	074	4A	j	01101010	152	106	6A
VT	00001011	013	011	0B	+	00101011	053	043	2B	K	01001011	113	075	4B	k	01101011	153	107	6B
FF	00001100	014	012	0C	,	00101100	054	044	2C	L	01001100	114	076	4C	l	01101100	154	108	6C
CR	00001101	015	013	0D	-	00101101	055	045	2D	M	01001101	115	077	4D	m	01101101	155	109	6D
SO	00001110	016	014	0E	.	00101110	056	046	2E	N	01001110	116	078	4E	n	01101110	156	110	6E
SI	00001111	017	015	0F	/	00101111	057	047	2F	O	01001111	117	079	4F	o	01101111	157	111	6F
DLE	00010000	020	016	10	0	00110000	060	048	30	P	01010000	120	080	50	p	01110000	160	112	70
DC1	00010001	021	017	11	1	00110001	061	049	31	Q	01010001	121	081	51	q	01110001	161	113	71
DC2	00010010	022	018	12	2	00110010	062	050	32	R	01010010	122	082	52	r	01110010	162	114	72
DC3	00010011	023	019	13	3	00110011	063	051	33	S	01010011	123	083	53	s	01110011	163	115	73
DC4	00010100	024	020	14	4	00110100	064	052	34	T	01010100	124	084	54	t	01110100	164	116	74
NAK	00010101	025	021	15	5	00110101	065	053	35	U	01010101	125	085	55	u	01110101	165	117	75
SYN	00010110	026	022	16	6	00110110	066	054	36	V	01010110	126	086	56	v	01110110	166	118	76
ETB	00010111	027	023	17	7	00110111	067	055	37	W	01010111	127	087	57	w	01110111	167	119	77
CAN	00011000	030	024	18	8	00111000	070	056	38	X	01011000	130	088	58	x	01111000	170	120	78
EM	00011001	031	025	19	9	00111001	071	057	39	Y	01011001	131	089	59	y	01111001	171	121	79
SUB	00011010	032	026	1A	:	00111010	072	058	3A	Z	01011010	132	090	5A	z	01111010	172	122	7A
ESC	00011011	033	027	1B	;	00111011	073	059	3B	[	01011011	133	091	5B	{	01111011	173	123	7B
FS	00011100	034	028	1C	<	00111100	074	060	3C	\	01011100	134	092	5C	}	01111100	174	124	7C
GS	00011101	035	029	1D	=	00111101	075	061	3D	]	01011101	135	093	5D	~	01111101	175	125	7D
RS	00011110	036	030	1E	>	00111110	076	062	3E	^	01011110	136	094	5E	~	01111110	176	126	7E
US	00011111	037	031	1F	?	00111111	077	063	3F	-	01011111	137	095	5F	DEL	01111111	177	127	7F

Switch Data.

Items	Type No.	CAR/57	CAR/58
Operating System		Lock	Non lock
Rating		24V, 1mA	24V, 1mA
Operating Force (gr)		300 ± 150gr	100 ± 25gr
Stroke (mm)		Full Stroke 3.5 ± 0.5mm Lock Position 2.5 ± 0.5mm	3.1 ± 0.5mm
Contact Position (mm)			1.4 ± 0.5mm
Life (10 ³ cycles)		10	3,000
Chattering	Initial		3mS or less
	Life End		5mS or less
Terminal Strength		2kg. 1 minute	2kg. 1 minute
Contact Resistance	Initial	100mΩ or less	100mΩ or less
	Life End	50mΩ or less	50mΩ or less
Insulation Resistance		DC 250V, 100M or more	DC 500V, 100M or more
Withstand Voltage		AC 250V, 1 minute	AC 500V, 1 minute
Terminal Heat-Durability (Within 5 sec)		250°C	250°C
Vibration Durability	Amplitude	1.5mm	1.5mm
	Frequency	10-55Hz 1 cycle, 1 minute	10-55Hz 1 cycle, 1 minute
	Hours (X, Y, Z axis direction each 2 hours)	8 Hours	8 Hours
Shock Durability		100G	100G
Environmental Conditions	Operating Temperature	-10°C → 60°C	-10°C → 60°C
	Storage Temperature	-20°C → 70°C	-20°C → 70°C
	Humidity	60 C or less, 95% RH or less	60 C or less, 95% RH or less

CARTER KEYBOARDS

SEALED KEYBOARDS



These sealed keyboards have been specially designed for use under very severe climatic and environmental conditions.

A very wide range of various models is available and we would be very keen to send you our detailed 11 page technical catalogue on this product.

- * Available with 4,8,10,12,16,20 or 28 keys
- * Protection and sealing by elastomer sheets with keycaps mounted on the sheets
- * Common centre or matrix system
- * Standard units mount with metal plate and 3mm threaded studs
- * Apart from standard versions they are available for military application and also in luminous versions
- * Standard keycaps are ABS moulded in different colours with legends hot stamped white or black
- * Low profile keycaps are standard - high profile optional
- * Various classes of protection available:
 - Class 1: protection against hydrocarbons, lactic acids, oil, animal fats, non chloric and non ammoniacal detergents.
Operating temperature: -25°C to +70°C
 - Class 2: protection against ozone and ultraviolet radiation.
Operating temperature: -25°C to +70°C
 - Class 3: protection against alkaline agents and hydrocarbons.
Operating temperature: -40°C to +100°C
- * Soft (model CC) or click (model CCX) action
- * Gold crosspoint contacts
- * Operating temperature -30°C to +70°C
- * Withstand severe humidity tests
- * Sealed according to French and International climatic specifications
- * Life of at least 5 million operations at 5v10mA
- * Wide range of keycap legends available

Light Dimmers

Snowflake Moodmaster Dimmers

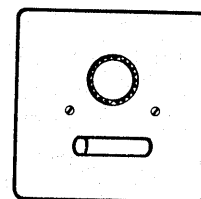
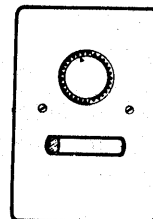
This range of Solid State dimmers is ideal for controlling light level in homes, restaurants, theatres, hospitals and lecture rooms.

Snowflake dimmers have many features which make them particularly attractive for domestic and institutional use;

1. Separate robust rocker switch - the light comes on where it went off.
2. Available in attractively finished cover plates of white enamel (standard), cream, B.M.A. finished solid brass or anodised aluminium.
3. Low acoustic noise level.
4. Incorporates effective radio interference suppression.
5. Models up to 5000 watts ex stock.
6. Built-in safety fuse.
7. Available for single gang (2" x 4") or double gang (4" x 4") boxes and surface mounting units.
8. Available with two-way switches.
9. Slide-control option available (surface mounting units only).
10. In-line models available for table lamps, desk lamps and floor lamps light level control, in smart modern two-tone grey plastic case.

SELECT A MODEL IDEAL FOR YOUR APPLICATION:

Model A:	750 Watt, 2" x 4"
B:	750 Watt, 2" x 4" with extra switch
C:	750 Watt, 4" x 4"
D:	750 Watt, 4" x 4" with extra switch
E:	750 Watt, 4" x 4" with two extra switches
F:	1300 Watt, 2" x 4"
G:	1300 Watt, 4" x 4"
H:	1300 Watt, 4" x 4" with extra switch
J:	2000 Watt, 4" x 4"
K:	Dual 750 Watt 4" x 4"
L:	Dual 1300 Watt 4" x 4"
M:	400 Watt, In-line (size 100 x 50 x 40mm)
P:	3000 Watt, surface mounting (size 120 x 120 x 75mm)
S:	5000 Watt, surface mounting (size 120 x 120 x 75mm)



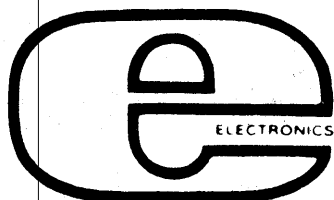
Models P and S available with rotary knob or slide control.

ORDERING INFORMATION:

It is sufficient to mention only the model required. It will be supplied complete with a Snowflake white cover plate and is ready for installation.

OPTIONS:

Should you want a B.M.A. finished solid brass plate or a silver anodised or an ivory plate, this must be mentioned. Also, two-way switches must be specifically ordered.

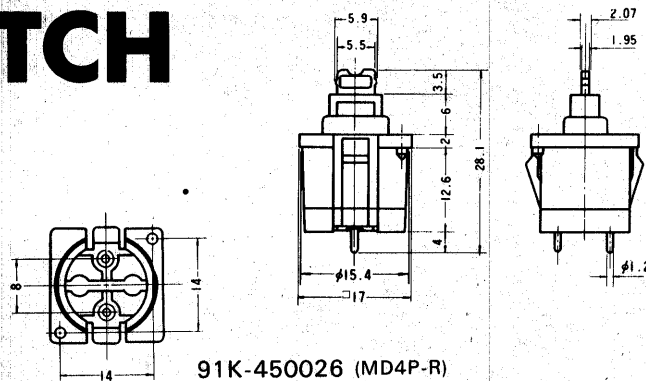


eagle electric co (pty) ltd

p.o. box 3106, Cape Town, (021) 45-1421, telex 57-20713

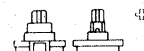
KEYBOARD SWITCH PRODUCTS

Professional keyboard switches and keycaps are now available from stock. They are intended for use in all custom-built keyboards for computers, point-of-sale terminals and any other application needing an extremely reliable, low-cost switch.



91K-450026 (MD4P-R)

C stem
(Cross Stem)



SPECIFICATIONS

CONTACTS	Gold crosspoint rated 24 V, 1 mA.
OPERATING FORCE	100 g.
STROKE	3,1 ± 0,5 mm.
MOUNTING PITCH	19 mm.
SHOCK DURABILITY	100 G.
CONTACT RESISTANCE	100 mΩ initial.
TYPICAL LIFETIME	10 million cycles.
DIMENSIONS	See drawings.

Our switches are fitted with "C" style cross stems to take all our keycaps. Switches may be mounted directly into PC board or, for greater rigidity, it is suggested that a mounting plate be used with 16,2 to 16,4 mm round holes. Switches have spring-tension clips fitting these holes.

TWO SWITCH MODELS -

- (A) Normal keyboard momentary action Part no. KBS1
- (B) Alternate push-on push-off, as used on shift lock Part no. KBS2

A wide range of double-shot moulded keycaps is available from stock. All keycaps used in a typical 56-key ASCII keyboard are available in matt charcoal.

SINGLE-WIDTH CAPS are -

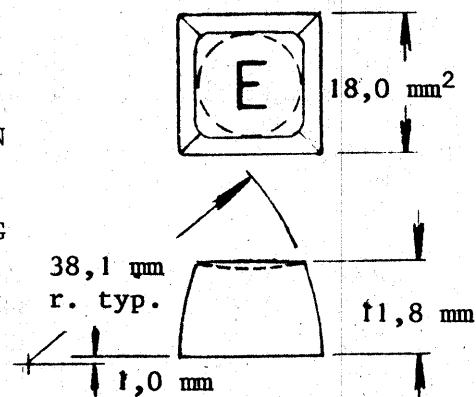
A	B	C	D	E	F	G	H	I	J	K	L	M
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
!	"	#	\$	%	&	'	()				
1	2	3	4	5	6	7	8	9	0			
*	+	=	<	>	[	]	=	@	?	RS	FS	
:	;		,	.	{	}	-	\	/			

as well as CTRL, DEL, ESC, shift and shift lock.

1½-WIDTH KEYCAP - return.

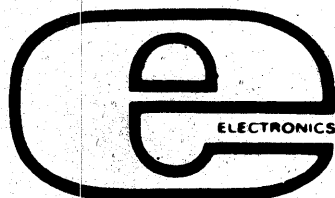
SPACER BAR is 150 mm long and has three keyswitch positions.

SINGLE
POSITION
KEY TOP
AND
MOUNTING
SIZE



NUMERIC KEYCAPS are available in white moulding material. These are 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 in single-width size.

ARROW KEYCAPS are available in blue. They have a single arrow (→), are single width and are very useful in cursor control applications.



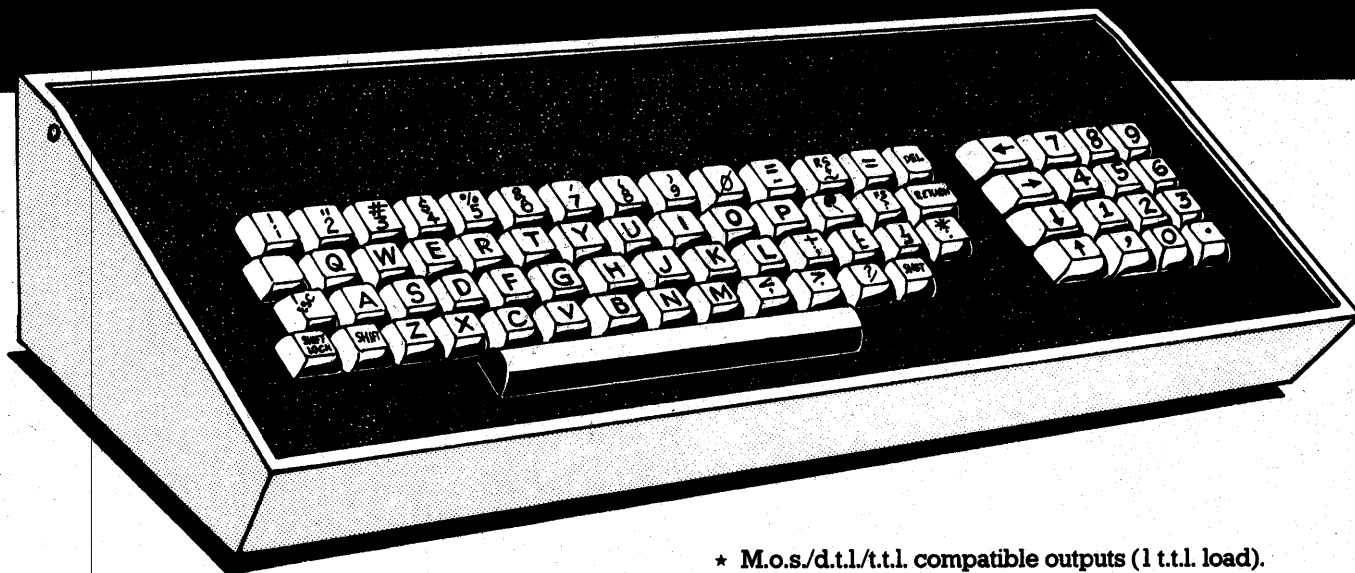
eagle electric co (pty) ltd

p o box 3106 cape town

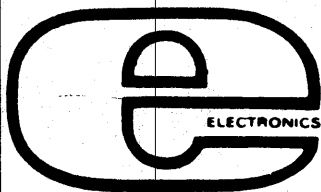


(021) 45-1421 telex 57-20713

Professional ASCII Keyboards



- ★ Model 771D
- ★ Full 128-character ASCII 8-bit code 7-bits for data, bit 8 for parity.
- ★ Upper and lower case characters generated by keyboard with latching shift lock.
- ★ Provision has been made for the selection of six different types of strobe signals: Strobe, Strobe-Not, Strobe Pulse, Strobe Pulse-Not, Strobe Pulse Auto Repeat, Strobe Pulse-Not Auto Repeat. The 771 Keyboard has the strobe pulse-not signal connected to pin 9. If any of the other strobes are required, remove link connecting the strobe select to strobe pulse-not and Jumper appropriate strobe to the strobe select.
- ★ 72 keys including 16 key numeric keypad with cursor controls, full stop and comma.
- ★ Positive keyboard switch feel for high operator speed.
- ★ Timed auto repeat on all keys in all modes.
- ★ Parity output polarity selectable.
- ★ Mil. spec. p.c.b. with plated through holes.
- ★ Data output positive logic (negative is selectable).
- ★ 2 Key roll-over for low error rate.
- ★ Extra keys and caps available.
- ★ Solder masked p.c. board.
- ★ M.o.s./d.t.l./t.t.l. compatible outputs (1 t.t.l. load). Power needed is +5 V and -12 V, but on-board d.c./d.c. converter available as option — this eliminates need for separate -12 V supply.
- ★ Metal mounting frame fitted as standard to give extra mechanical stability.
- ★ Beautifully styled, robust housing of structural plastic finished in smart beige colour — front panel matt black.
- ★ Flat ribbon cable terminated with female 25-pin D connector.
- ★ Gold contact low-bounce keyswitches — each switch element sealed for utmost reliability.
- ★ Fully plug compatible with similar keyboards by other makers.
- ★ Shift and alpha lock.
- ★ Sizes: p.c. board 406 mm × 139 mm
Housing 483 mm × 190 mm × 89 mm
- ★ Specially masked m.o.s. encoder chip gives features not normally available in standard ASCII key boards.
- ★ Serial RS232C/20 mA current loop output card available as option.
- ★ Available without housing.
- ★ Detailed application details and notes on ASCII codes with every keyboard.
- ★ Very competitive pricing.
- ★ Delivery from stock.



eagle electric co (pty) ltd

p o box 3106 cape town



(021) 45-1421 telex 57-20713