

MORE
LOOPING
STOPPED
PROGRAMING
EXECUTING

9010A MICRO-SYSTEM TROUBLESHOOTER

VIEW						TROUBLESHOOTING		TEST SEQUENCING			TAPE
LEARN	I/O	STS / CTL				READ	WRITE	PROGM	EXEC	AUX I/F	READ TAPE
RAM	ROM	C	D	F	F	RAMP	WALK	IF	>	=	WRITE TAPE
TESTS		8	9	A	B	TOGGL ADD	TOGGL DATA	DISPL	LABEL	GOTO	PROBE
AUTO	RAM LONG	4	5	6	7	MODE		ARITHMETIC			PULSE
BUS	RAM SHORT	0	1	2	3	CONT	STOP	AND	SHIFT LEFT	INCR	HIGH
ROM	I/O	ENTER / YES	CLEAR / NO	PRIOR	MORE	RPEAT	RUN UUT	OR	SHIFT RIGHT	DECR	TOGGLE
						LOOP	SETUP	READ PROBE	REG	COMPL	LOW

FLUX
6809/6809E INTERFACE POD
9000A-6809

SEE TEST

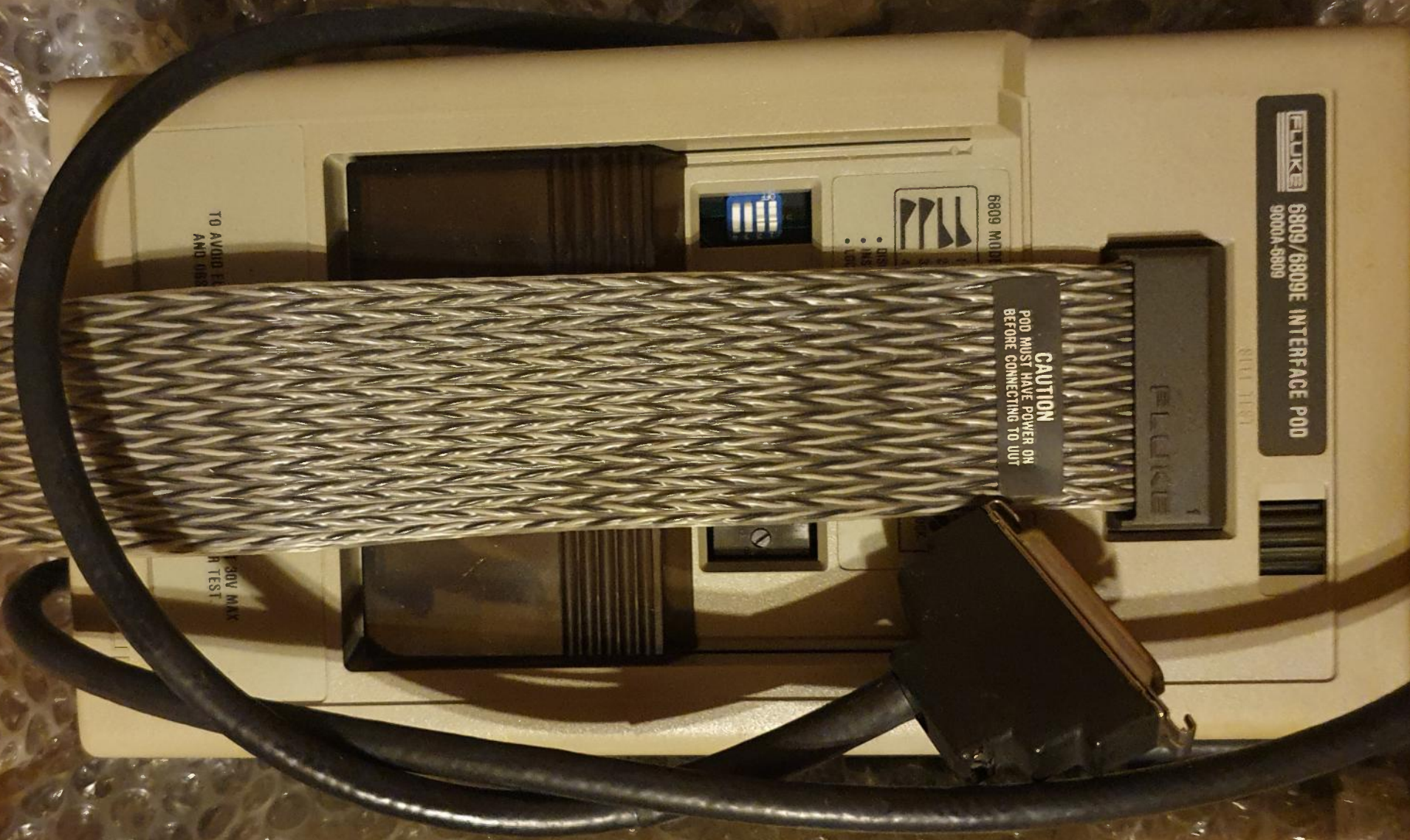
CAUTION
POD MUST HAVE POWER ON
BEFORE CONNECTING TO IUT

6809 MOD

DIS
• ILS
• TEST

TO AVOID E
AND GRS

30V MAX
R TEST

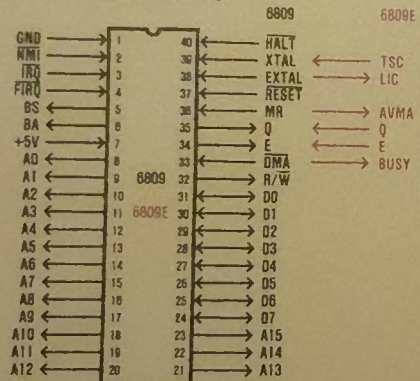




8809/6809E INTERFACE POD
9000A-6809

MEMORY ADDRESS SPACE 0000-FFFF

PIN ASSIGNMENTS



STATUS LINES

BIT	8809 INPUT	6809E INPUT
7	PWR FAIL	PWR FAIL
6	**DMA	**TSC
5	**MR	
4	**RESET	**RESET
3	**HALT	**HALT
2	PIRQ	PIRQ
1	IRQ	IRQ
0	NMI	NMI

**FORCING LINES

CONTROL LINES

BIT	8809 OUTPUT	6809E OUTPUT
7	—	LIC
6	—	BUSY
5	—	AVMA
4	R/W	R/W
3	*BA	*BA
2	*SS	*BS
1	Q (CLK)	—
0	E (CLK)	—

*USER WRITEABLE

FLUKE 8086 INTERFACE POD
9000A-8086

811 1151

240 2500

CAUTION
DO NOT HAVE POWER ON
WHEN CONNECTING TO UNIT

TO AVOID
AND D

FLUKE





8086 INTERFACE POD

9000A-8086

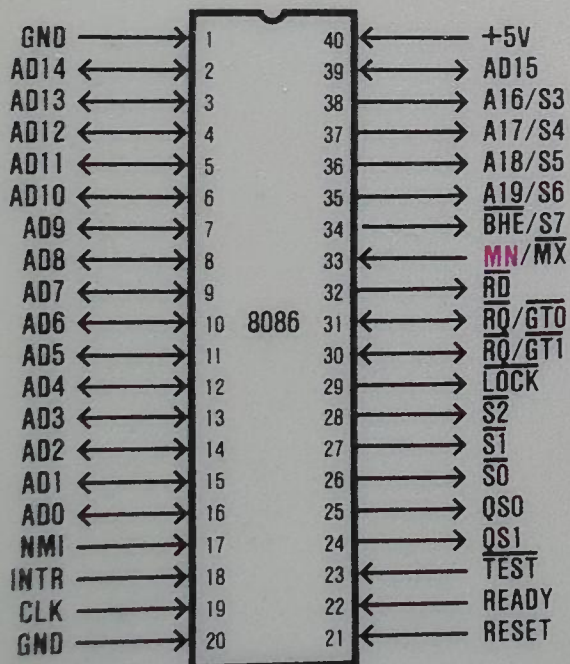
CAUTION

TO ENSURE PROPER VENTILATION,
OPERATE WITH THIS SIDE DOWN.

ADDRESS MAPPING

NAME	WORD ADDRESSES	BYTE ADDRESSES
EXTRA DATA	000000-0FFFFE	800000-8FFFFFF
STACK	100000-1FFFFE	900000-9FFFFFF
CODE	200000-2FFFFE	A00000-AFFFFFF
DATA	300000-3FFFFE	B00000-BFFFFFF
I/O	400000-4FFFFE	C00000-CFFFFFF
INTERRUPT TYPE	—	500000

PIN ASSIGNMENTS



MIN MODE

HOLD
HLDA
WR
M/I0
DT/R
DEN
ALE
INTA

STATUS LINES

BIT	MAX MODE	MIN MODE
11	INT VECT	INT VECT
10	**R/G ERROR	—
9	TEST	TEST
8	MN/MX	MN/MX
7	PWR FAIL	PWR FAIL
6	—	—
5	**HOLD1	—
4	**RESET	**RESET
3	INTR	INTR
2	NMI	NMI
1	**HOLD0	**HOLD
0	**READY	**READY
	**FORCING LINES	

CONTROL LINES

BIT	MAX MODE	MIN MODE
15	S7	S7
14	S6	S6
13	S5	S5
12	S4	S4
11	S3	S3
10	S2	M/I0
9	S1	DT/R
8	S0	DEN
7	BHE	BHE
6	RD	RD
5	*SPECIAL	—
4	*GT1	*HLDA
3	*GTO	—
2	*QS1	*INTA
1	*QSO	ALE
0	*LOCK	WR

*USER WRITEABLE

CAUTION
FRAGILE - HANDLE WITH CARE
SEE POD INSTRUCTION MANUAL
FOR SPECIAL HANDLING INSTRUCTIONS
FLUKE P/N 744763

FLUKE
80186 INTERFACE POD
9000A-80186

TEST TOOL
DM DM
A 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

80186
30-59

EXOTIC

TEST POINTS

TO AVOID
AND

FLUKE
DOV MAX
TEST

FLUKE

FLUKE 80186 INTERFACE POD
9000A-80186

CAUTION
TO ENSURE PROPER VENTILATION,
OPERATE WITH THIS SIDE DOWN

A10/S3 68 A17/S4 67 A18/S5 66 A19/S6 65 BHE 64 A20/S7 63 A21/S8 62 A22/S9 61 A23/S10 60 A24/S11 59 A25/S12 58 A26/S13 57 A27/S14 56 A28/S15 55 A29/S16 54 A30/S17 53 A31/S18 52 A32/S19 51 A33/S20 50 A34/S21 49 A35/S22 48 A36/S23 47 A37/S24 46 A38/S25 45 A39/S26 44 A40/S27 43 A41/S28 42 A42/S29 41 A43/S30 40 A44/S31 39 A45/S32 38 A46/S33 37 A47/S34 36 A48/S35 35 A49/S36 34 A50/S37 33 A51/S38 32 A52/S39 31 A53/S40 30 A54/S41 29 A55/S42 28 A56/S43 27 A57/S44 26 A58/S45 25 A59/S46 24 A60/S47 23 A61/S48 22 A62/S49 21 A63/S50 20 A64/S51 19 A65/S52 18 A66/S53 17 A67/S54 16 A68/S55 15 A69/S56 14 A70/S57 13 A71/S58 12 A72/S59 11 A73/S60 10 A74/S61 9 A75/S62 8 A76/S63 7 A77/S64 6 A78/S65 5 A79/S66 4 A80/S67 3 A81/S68 2 A82/S69 1 A83/S70 0

PIN ASSIGNMENTS

80186
LCC SOCKET

ADDRESS MAPPING

NAME	WORD ADDRESSES	BYTE ADDRESSES
MEMORY	00000-0FFFFE	40000-4FFFFFF
DMA MEMORY	10000-1FFFFE	50000-5FFFFFF
I/O	20000-20FFFE	60000-60FFFFFF
DMA I/O	30000-30FFFE	70000-70FFFFFF

STATUS LINES

BIT	FUNCTION
15	PWR FAIL
14	—
13	INT VECT 1
12	INT VECT 0
11	ACTIVE INTR
10	QSMO
9	NMI
8	TEST
7	TMR IN 1
6	TMR IN 0
5	**DRQ1
4	**DRQ0
3	**RES
2	**HOLD
1	**SRDY
0	**ARDY

CONTROL LINES

BIT	NORMAL MODE	QUEUE STATUS MODE
15	CHIP SEL ERROR	
14	INTA ERROR	
13	TMR OUT ERROR	
12	BHE	
11	SS	
10	S2	
9	S1	
8	SO	
7	DT/R	
6	DEN	
5	RD	
4	WR	*QS1
3	**RES	*QSD
2	*HLDA	
1	*RESET	
0	*LOCK	

**FORCING LINES

*USER WRITABLE

FLUKE

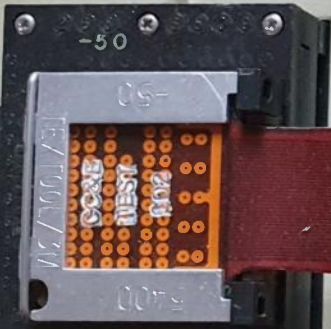
AT 30V MAX
ER TEST.

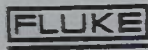
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FLUKE P/N 744763

FLUKE

FLUKE 80188 INTERFACE POD
9000A-80188

TESTEQUIP/SMT
ELICHTON
BOYERS NC





80188 INTERFACE POD

9000A-80188

CAUTION

TO ENSURE PROPER VENTILATION,
OPERATE WITH THIS SIDE DOWN.

A16/S3
A17/S4
A18/S5
A19/S6
S7
WR/QS1
RD/QSMD
ALE/QSO
GND
X1
X2
RESET
CLKOUT
ARDY
S2
S1
S0

68	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52
A15	A14	A13	A12	A11	A10	A9	A8	A7	A6	A5	A4	A3	A2	A1	A0	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

PIN ASSIGNMENTS

80188
LCC SOCKET

18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
DRQ0	DRQ1	TMR IN 0	TMR IN 1	TMR OUT 0	TMR OUT 1	RES	PCSO	GND	PCS1	PCS2	PCS3	PCS4	PCS5/A1	PCS6/A2	LCS	UCS

ADDRESS MAPPING

NAME	ADDRESSES
MEMORY	000000-0FFFFFFF
DMA MEMORY	100000-1FFFFFFF
I/O	200000-20FFFFFF
DMA I/O	300000-30FFFFFF

STATUS LINES

BIT	FUNCTION
15	PWR FAIL
14	—
13	INT VECT 1
12	INT VECT 0
11	ACTIVE INTR
10	QSMD
9	NMI
8	TEST
7	TMR IN 1
6	TMR IN 0
5	**DRQ1
4	**DRQ0
3	**RES
2	**HOLD
1	**SRDY
0	**ARDY

**FORCING LINES

CONTROL LINES

BIT	NORMAL MODE	QUEUE STATUS MODE
15	CHIP SEL ERROR	
14	INTA ERROR	
13	TMR OUT ERROR	
12	S7	
11	S6	
10	S2	
9	S1	
8	S0	
7	DT/R	
6	DEN	
5	RD	
4	WR	*QS1
3	ALE	*QSO
2	*HLDA	
1	*RESET	
0	*LOCK	

*USER WRITABLE

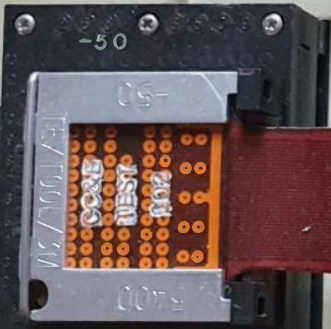
FLUKE

AT 30V MAX
ER TEST.

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FLUKE P/N 744763

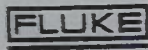
FLUKE

FLUKE 80188 INTERFACE POD
9000A-80188



TESTEQUIP/SNT
ELICHTON
BOYERS NC

TO



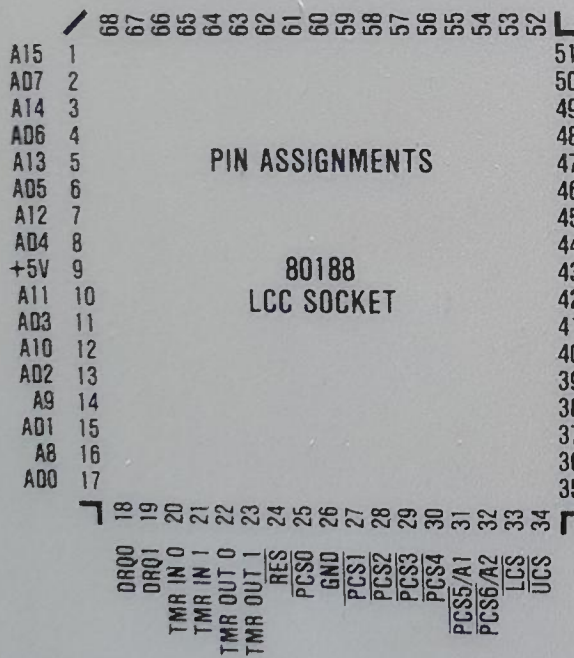
80188 INTERFACE POD

9000A-80188

CAUTION

TO ENSURE PROPER VENTILATION,
OPERATE WITH THIS SIDE DOWN.

A16/S3
A17/S4
A18/S5
A19/S6
S7
WR/QS1
RD/QSMD
ALE/QSO
GND
X1
X2
RESET
CLKOUT
ARDY
S2
S1
S0



ADDRESS MAPPING

NAME	ADDRESSES
MEMORY	000000-0FFFFFF
DMA MEMORY	100000-1FFFFFF
I/O	200000-20FFFF
DMA I/O	300000-30FFFF

STATUS LINES

BIT	FUNCTION
15	PWR FAIL
14	—
13	INT VECT 1
12	INT VECT 0
11	ACTIVE INTR
10	QSMD
9	NMI
8	TEST
7	TMR IN 1
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5	**DRQ1
4	**DRQ0
3	**RES
2	**HOLD
1	**SRDY
0	**ARDY

**FORCING LINES

CONTROL LINES

BIT	NORMAL MODE	QUEUE STATUS MODE
15	CHIP SEL ERROR	
14	INTA ERROR	
13	TMR OUT ERROR	
12	S7	
11	S6	
10	S2	
9	S1	
8	S0	
7	DT/R	
6	DEN	
5	RD	
4	WR	*QS1
3	ALE	*QSO
2	*HLDA	
1	*RESET	
0	*LOCK	

*USER WRITABLE





5004A SIGNATURE ANALYZER

GATE



UNSTABLE
SIGNATURE

PROBE TEST



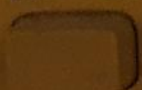
START ST

CLOCK



LINE

OFF ON



START



STOP



CLOCK



HOLD



SELF
TEST



HEWLETT-PACKARD

ANZ
ADL



8000A SIGNATURE ANALYZER
HEWLETT-PACKARD
SWITCHING
SYSTEMS





Handwritten label with the following text:
Pack
2 Out Tap
2 in RIS
2 in 2 in 56
A
2007 10 11

Handwritten label on a black connector with the text:
HARRIS





9010A
Micro-System
Troubleshooter

Service Manual

FLUKE

9000A-80186

Interface Pod

Instruction Manual



3004A SIGNATURE ANALYZER

DATE
LINE
START
STOP
LOCK

9010A Language Compiler