APPENDIX C MCS-4 CUSTOM ROM ORDER FORM

4001 Metal Masked ROM

All custom ROM orders must be submitted on forms provided by Intel. Programming information should be sent in the form of computer punched cards or punched paper tape. In either case, a print-out of the truth table must accompany the order. Refer to Intel's Data Catalog for complete pattern specifications. Alternatively, the accompanying truth table may be used. Additional forms are available from Intel.

	For Intel use only
CUSTOMER	S# PPPP
P.O. NUMBER	STD zz
DATE	DATE I/O
INTEL STANDARD MARKING The marking as shown at right must contain the Intel logo, the product type (P4001), the four digit Intel pattern number (PPPP), a date code (XXXX), and the two digit chip number (DD). An optional customer identification number may be substituted for the chip number (ZZ). Optional Customer Number (Maximum 6 characters or spaces)	P4001 PPPP Intel Pattern Number XXXX ZZ Chip Number or Customer Numbrish
MASK OPTION SPECIFICATIONS	
A. CHIP NUMBER (Must be specified - any nu	umber from 0 through 15 - DD)
 B. I/O OPTION — Specify the connection numbers for options are shown below: 	r each I/O pin (next page). Examples of some of the possiblie I/O
EXAMPLES - DESIRED OPTION/CONNECTIONS BEOL	UBED

- Non-inverting output 1 and 3 are connected.
- 2. Inverting output 1 and 4 are connected,
- 3. Non-inverting input (no input resistor) only 5 is connected.
- 4. Inverting input (input resistor to V_{SS}) -2, 6, 7, and 9 are connected,
- Non-inverting input (input resistor to V_{DD}) = 2, 7, 8, and 10 are connected.
- 6. If inputs and outputs are mixed on the same port, the pins used as the outputs must have the internal resistor connected to either VDD or Vgg (8 and 9 or 8 and 10 must be connected). This is necessary for testing purposes. For example, if there are t wo inverting inputs (with no input resistor) and 2 non-inverting outputs the connection would be made as follows:

Inputs - 2 and 6 are connected Outputs - 1, 3, 8 and 9 are connected or

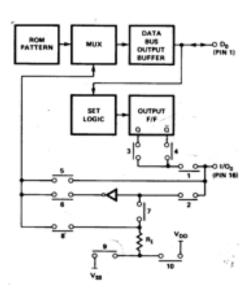
1, 3, 8 and 10 are connected

If the pins on a port are all inputs or all outputs the internal resistors do not have to be connected,

4001 CUSTOM ROM PATTERN - Programming information should be sent in the form of computer purished cards or punched paper tape. In either case, a print-out of the truth table must accompany the order. Refer to Intel's Data Catalog for complete pattern specifications. Alternatively, the accompanying truth table may be used. Based on the particular customer pattern, the characters should be written as a "P" for a high level output = n-logic "0" (negative logic "0") or an "N" for a low level output = n-logic "1" (negative logic "1").

Note that NOP = BPPPP PPPPF = 0000 0000

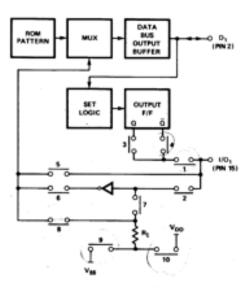
4001 I/O Options



I/O_o (PIN 16)

CONNECTIONS DESIRED (LIST NUMBERS & CIRCLE CONNECTIONS ON SCHEMATIC).

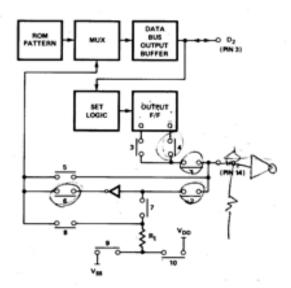
- a. For T 2 L, compatibility on the I/O lines the supply voltages should be $V_{OO} = -10V$:5%, $~V_{SS} = *5V$:5%
- b. If non-inverting input option is used, V_{IL} = -6.5 Volts maximum (not TTL).



I/O, (PIN 15)

CONNECTIONS DESIRED (LIST NUMBERS & CIRCLE CONNECTIONS ON SCHEMATIC).

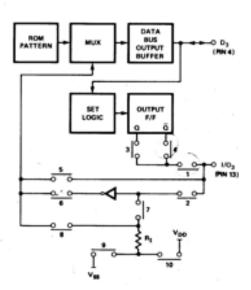
- a. For T²L compatibility on the I/O lines the supply voltages should be $V_{DD} = -10V \pm 5\%$, $V_{SS} = +5V \pm 5\%$ b, If non-inverting input option is used, $V_{IL} = -6.5$ Volts maximum (not TTL),



1/O2 (PIN 14)

CONNECTIONS DESIRED (LIST NUMBERS & CIRCLE CONNECTIONS ON SCHEMATIC)

- a. For T 2L compatibility on the I/O lines the supply voltages should be $V_{DD}^-=-10V$:5%. $V_{SS}^-=+5V$:5%
- b, If non-inverting input option is used, V_{IL} = -6.5 Volts maximum (not TTL).



I/O3 (PIN 13)

CONNECTIONS DESIRED (LIST NUMBERS & CIRCLE CONNECTIONS ON SCHEMATIC)_

- a. For T²L compatibility on the I/O lines the supply voltages should be V_{OO} = -10V ±5%, V_{SS} = +5V ±5% b. If non-inverting input option is used, V_{IL} = -6.5 Volts maximum (not TTL).

4001 CUSTOM ROM TRUTH TABLE

Customer	-	 	
P.O. No			
Chip No.			
Date			

The customer truth pattern should be placed in the blue screen area. The white section above the screen area will be used by Intel to verify the customer pattern.

Based on the particular customer pattern, the characters should be written as a "P" for a high level output = n-logic "0" (negative logic "0") or an "N" for a low level output = n-logic "1" (negative logic "1").

Word OPR OPA		OPA	Word INSTRUCTION OPA OPA		Word	INSTRUCTION OPR OPA		Word	INSTRUCTION OPR OPA		
Number	0,0,0,0,	0,0,0,0,0	Number	ومورموه	0,0,0,0,0	Number	وم,مرمره	وموموه	Number	0,0,0,0	0,0,0
0			32	1111	tito.	64	ining	1110	96	neini	data
1	e de la composição de l	أغانانا	33		dina	65	i i i i i i i i	titoi	97	noisin	ri in
2	die	dini.	34	inania	1	66	deten	pin.	98	ndrich	Tit
3			35	inatio		67	CLUCK	1010	99	relation	dia
4	min	ringia.	36	die	atio.	68	idate	tion.	100	min	aja a
5			37			69	ininin		101	recent	
6	emia	أفافت	38	dia		70		inin	102	ingan	rigin)
7		أواران	39	emen		71			103	100,000	
8		1000	40			72	inini	inin	104	distriction	
9	iono		41			73		danie i	105	inco	
10		riusi	42			74	ininin	e de la composição de l	106	inini	
11	بالبليا		43	injohi		75.		LUC	107		ú
12			44	-	4	76	ingin	hit	108		77
13			45	inter	1111	77	1999	min.	109		11
14			46		-	78	770	1111	110	1000	71
15			47	(11)		79	HTD		111	, in the	П
16			48	10000	-	80	TITE	1111	112		7
17	ana		49			81	inni		113	hii	T
18			50			82		dami.	114		
19			51	i di di di		83	1000		115	1100	
20			52			84	mini	diam'r.	116	rem	
21			53		naabii	85			117		
22			54			86		1000	118	inin	ţ.
23			55			87			119	inida	ú
24			56			88			120	ridada	
25	النبا		57			89			121		3,1
26			58			90			122		
27		otio	59	dent		91			123	dini	TT
28			60			. 92		1111	124		
29			61			93		17010	125	THE	
30			62			94			126	rineri	
31			63		11:11	96			127		

4001 CUSTOM ROM TRUTH TABLE

Customer	
P.O. No	
Chip No	
Date	

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Word	INSTRUCTION OPR OPA	Word	INSTRUCTION OPR OPA	Word	INSTRUCTION OPA OPA	Word	INSTRUCTION OPR OF
Number	ahahaha ahahaha	Number		Number	ممرعره ممعرعره	Number	0,0,0,0, 0,0,0
128	OTTO HOLD IN	160		192		224	ani de estado de la composição de la com
129	OTHER DESIGNATION OF THE PERSON OF THE PERSO	161		193		225	
130	distant and	162	HILLIER	194		226	
131		163		195	disensioned.	227	nuivienaisu
132	COLUMN TO SERVICE SERV	164	in the	196	113.0000000	228	orence.
133	inacimiză;	165		197	i intrini nerra	229	
134	probable.	166		198	intro	230	orieniesen
135	DESTRUCT	167		199	interiorismi	231	
136	pingpiners:	168		200	15771777	232	dictionsis
137	identificant	169		201	000000000	233	dictioners
138	ontones.	170		202	division.	234	ridicidences
139	HILLING	171		203	constant	235	riniairen
140	of the latest particular to the latest particu	172	HT HER	204	COLUMN TO SERVICE	236	ation or to
141	PERFECT.	173		205	75712777	227	interiore
142	THE PROPERTY.	174		206	FEET BOTTON	238	trianati
143	rice control	175		207	THEFT	239	dependencia
144	NUMBER	176	rinning and a	208	763.E1R#151.E1	240	and the same
145	10000000	177		209	augment.	241	
146	entroners:	178		210	and the same	242	di mina
147	HEIGHER	179		211		243	i de Principio
148	merioderis	180		212	aleitren.	244	ni encui
149	naireonni essais	181		213		245	iemani
150	ricitoretta	182		214		246	ientovie
151	REPLECT	183		215	nicianica.	247	LEGISLA
152	PETTER	184		216		248	istationeria
153		185		217		249	ing district
154		186		218	ein pia neron.	250	والللا
155	neista austria	187	HILLIAN	219		251	icinena
156		188		220	min min	252	فيدنين
157		189		221		253	
158		190		222			
159				223			

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