

TTL/Bipolar PROM and RAM Reference Guide booklet V5 - print version Also a few old CMOS PROMS

Added some modern PROM-pin and -speed compatible CMOS EPROM types, also some military versions, which use a combined NiCr fuselink and CMOS technology.

TS = Tri-State output **OC** = Open Collector output

To be compatible with the rest of the world:
databits OUT now start with D0 (D-zero) and not anymore with 01

Hacked, copied, edited and extended by PE1ABR to give it a decent shape and handy booklet form.

The main part is extracted from

http://www.arlo.net/vectorlist/archive/mbox/November_1997

and in detail: from the text part about the Bipolar PROMs List

See also old reference info at:

<http://matthieu.benoit.free.fr/cross/>

and the info at

<http://antiquetech.com/>

<http://www.xs4all.nl/~ganswijk/chipdir/n/>

Updated with info from:

<http://www.spies.com/arcade/> and <http://www.citylan.it/wiki/index.php/PROM>

also take a look at: <http://guru.mameworld.info/>

					32*8 = 256 bit			
					+---\ /---+			
NEC	Fujitsu	Intersil	Mitsubishi	OKI	D0	1	16	Vcc
-----	-----	-----	-----	-----	D1	2	15	/CE
TS uPB410	MB7051 MB7112	IM5610	M54730	MSL8215	D2	3	14	A4
					D3	4	13	A3
					D4	5	12	A2
OC uPB400	MB7056 MB7111	IM5600		MSL8216	D5	6	11	A1
					D6	7	10	A0
					GND	8	9	D7
					+-----+			

	Signetics	MMI	TI	Harris	Raytheon	AMD	National	Intel
	-----	-----	-----	-----	-----	-----	-----	-----
TS 82S123 (50ns)	6331-1	TBP18S030	HM7603-5	-	AM27S19	-	-	
82S123A(25ns)	63S081 63LS081	-	-	-	AM27S19AC AM27S09 AM27LS09	74S288	-	
						DM8577		
OC 82S23 (50ns)	6330-1	TBP18SA030	HM7602-5	-	AM27S18	-	-	
82S23A(25ns)	63S080 63LS080	-	-	-	AM27A18AC AM27S08 AM27LS08	74S188	-	
						DM8578		

Mask programmed custom ROM version: TS= 74S88

An old military SPECIAL

64*8 = 512 bit

		+--\/--+	
N.C.	1	24	Vcc
N.C.	2	23	GND2"
A0	3	22	D0
A1	4	21	D1
A2	5	20	D2
CE1	6	19	D3
CE2	7	18	D4
A3	8	17	D5
A4	9	16	D6
A5	10	15	D7
GND1	11	14	N.C.
Do not connect	INTERNAL	12	13 GND2
		+-----+	

Harris	Landsdale	AMD	National	Intel
-----	-----	-----	-----	-----
HMx-0512-x	HL0512	-	-	-
JAN-0512				

	NEC	Fujitsu	Fairchild	Intersil	Mitsubishi
	-----	-----	-----	-----	-----
TS	uPB423	MB7052 MB7114	93427	IM5623	M54700
OC	uPB403	MB7057 MB7113	93417	IM5603	

256*4 = 1024 bit
 +--\ /--+
 A6 | 1 16 | Vcc
 A5 | 2 15 | A7
 A4 | 3 14 | /CE2
 A3 | 4 13 | /CE1
 A0 | 5 12 | D0
 A1 | 6 11 | D1
 A2 | 7 10 | D2
 GND | 8 9 | D3
 +-----+

	Signetics	MMI	TI	Harris	Raytheon	AMD	National	Intel	OKI
	-----	-----	-----	-----	-----	-----	-----	-----	-----
TS	82S129 (50ns) 82S129A(27ns) 82S27	6301-1 63S141	TBP24S10 TBP34S10	HM7611-5 HM7611A	29661	27S21 27S21A 27S11	74S287	3621	MBL8521A
OC	82S126 (50ns) 82S126A(30ns)	6300-1 63S140	24SA10 -	HM7610-5 HM7610A	29660	27S20 27S20A 27S10	74S387 -	3601	MBL8520A

Mask programmed custom ROM version: TS= DM7597 / DM8597 / SN74S187 / 82S229
 OC= 82S226

VERY RARE CMOS PROM

This is NO Bipolar PROM

But a TTL compatible CMOS PROM with polysilicon fuses

Pinout compatible with CMOS SRAM HM-6562

256*4 = 1024 bit

	+--\ /--+		
A3	1	16	Vcc
A2	2	15	A4
A1	3	14	/prog
A0	4	13	/CE
A5	5	12	D3
A6	6	11	D2
A7	7	10	D1
GND	8	9	D0
	+-----+		

Harris

TS HM-6611

	NEC	Fujitsu
	-----	-----
TS	uPB421	MB7118
OC		MB7117

256*8 = 2048 bit

```

+---\ /---+
A0 | 1  20 | Vcc
A1 | 2  19 | A7
A2 | 3  18 | A6
A3 | 4  17 | A5
A4 | 5  16 | /CE1
D0 | 6  15 | /CE2
D1 | 7  14 | D7
D2 | 8  13 | D6
D3 | 9  12 | D5
GND|10 11 | D4
+-----+

```

	Signetics	MMI	TI	Harris	Raytheon	AMD	National	Intel
	-----	-----	-----	-----	-----	-----	-----	-----
TS	82S135 (45ns)	6309-1	TBP18S22	-	29601	AM27S23	DM74S471	-
	82LS135(100ns)	-	TBP28L22	-	-	-	DM74LS471	-
		63S281	TBP38S22				DM87S221	
		63LS281	SN74S471					
			SN74S571					
OC	-	6308-1	SN74S470		29600		DM74S470	
		63S280					DM74LS470	
		63LS280	TBP38SA22				DM87S222	

Mask programmed custom ROM version: TS= SN74S371, OC= SN74S27

SPECIAL PINNING VERSION

256*8 = 2048 bit

+--\ /--+			
A7	1	24	Vcc
A6	2	23	NC
A5	3	22	NC
A4	4	21	/CE0
A3	5	20	/CE1
A2	6	19	CE2
A1	7	18	CE3
A0	8	17	D7
D0	9	16	D6
D1	10	15	D5
D2	11	14	D4
GND	12	13	D3
+-----+			

	Signetics	MMI	Harris	Raytheon	AMD	National	Intel
	-----	-----	-----	-----	----	-----	-----
TS	-	6335-1	HM7629-5	-	-	-	-
OC		6336-1	HM7628-5				

SPECIAL PINNING VERSION

256*8 = 2048 bit

```

+--\/--+
A2 | 1   24 | NC !!
A1 | 2   23 | NC
A0 | 3   22 | NC
D0 | 4   21 | A3
D1 | 5   20 | A4
D2 | 6   19 | A5
D3 | 7   18 | A6
D4 | 8   17 | A7
D5 | 9   16 | Vcc!!
D6 |10  15 | NC
D7 |11  14 | /CE0
GND|12  13 | /CE1
+-----+

```

	Signetics	MMI	TI	Harris	Raytheon	AMD	National	Intel
	-----	-----	-----	-----	-----	---	-----	-----
TS	-	63135-1	-	-	-	-	-	-

256*8 = 2048 bit
(latched)

```

+---\ /---+
A3 | 1  24 | Vcc
A4 | 2  23 | A2
NC | 3  22 | A1
A5 | 4  21 | A0
A6 | 5  20 | /CE1
A7 | 6  19 | CE2
D0 | 7  18 | STROBE
D1 | 8  17 | D7
D2 | 9  16 | D6
D3 | 10 15 | D5
FE2| 11 14 | D4
GND| 12 13 | FE1
+-----+

```

	Signetics	MMI	TI	Harris	Raytheon	AMD	National	Intel
TS 82S114 (60ns)	-	-	-	-	-	-	-	-

Mask programmed custom ROM version: TS= 82S214 , 8204

					512*4 = 1024 bit				
					+---\ /---+				
					A6		16		Vcc
					A5		15		A7
					A4		14		A8
					A3		13		/CE
					A0		12		D0
					A1		11		D1
					A2		10		D2
					GND		9		D3
					+-----+				
					Motorola				
					Harris	Raytheon	AMD	National	Intel
					-----	-----	-----	-----	-----
	FSC								
	NEC	Fujitsu	Fairchild	Intersil					
	-----	-----	-----	-----					
TS	uPB412	MB7053	93446	IM56S24					
		MB7116		IM5624					
OC		MB7058	93436	IM56S04					
		MB7115		IM5604					
TS	82S131 (50ns)	6306-1	-	HM7621-5	29611	AM27S13	DM74S571	3622	
	82S131A(30ns)	63S241		HM7621A	29613	AM27S13A	DM74S571A	3622A	
		63LS241		MCM7621					
OC	82S130 (50ns)	6305-1	-	HM7620-5	29610	AM27S12	DM74S570	3602	
	82S130A(33ns)	63S240		HM7620A-5	29612	AM27S12A	DM74S570A	3602A	
		63LS240		MCM7620					

Mask programmed custom ROM version: TS= 82S231 / SN74S370
 OC= 82S230 / SN74S270

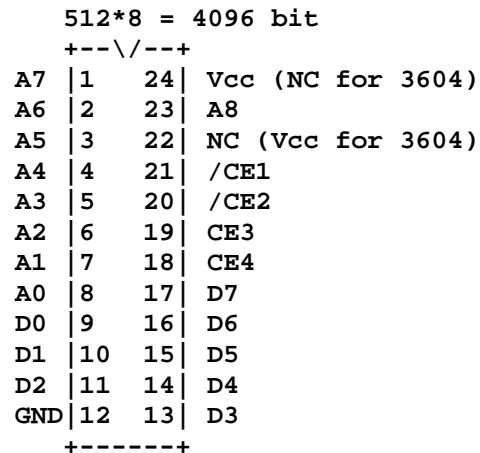
	NEC	Fujitsu
	-----	-----
TS	uPB424	MB7124
OC		MB7123

512*8 = 4096 bit

	+--\ /---+		
A0	1	20	Vcc
A1	2	19	A8
A2	3	18	A7
A3	4	17	A6
A4	5	16	A5
D0	6	15	/CE
D1	7	14	D7
D2	8	13	D6
D3	9	12	D5
GND	10	11	D4
	+-----+		

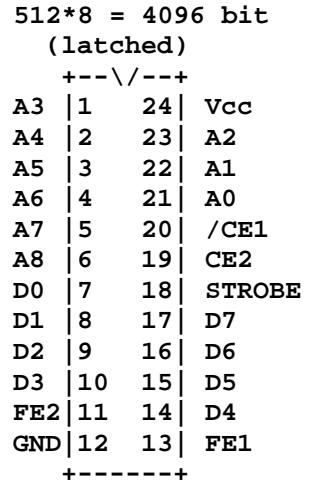
	Signetics	MMI	TI	Motorola Harris	Raytheon	AMD	National	Intel
	-----	-----	-----	-----	-----	-----	-----	-----
TS	82S147 (60ns)	6349-1	TBP28S42	HM7649-5	29621	- 27?	DM74S472	-
	82S147A(45ns)	6349-2	TBP28L42	HM7649A-5	29621A	AM27S29	DM74S472A	-
	82HS147		TBP18S42		29623			
	82S147AN/BN	63LS481						
OC	82S146	6348-1	TBP28SA42	HM7648-5	29620	AM27S28	DM74S473	-
		6348-2			29622			
		63LS480						

	NEC	Fairchild	Fujitsu	Intersil
	-----	-----	-----	-----
TS	uPB425	93448	MB7126	IM5625
OC	uPB405	93438		IM5605



	Signetics	MMI	TI	Motorola Harris	Raytheon	AMD	National	Intel
	-----	-----	-----	-----	-----	-----	-----	-----
TS	82S141 (60ns)	6341-1 63S483 63S485	TBP28S46 SN74S474	HM7641-5 MCM7641	29625 29627	AM27S31	DM74S474 87S296	3624
OC	82S140 (60ns)	6340 63S482	TBP28SA46 SN74S475	HM7640-5 MCM7640	29624 29626	AM27S30	DM74S475 87S295	3604

Registered / latched PROM



	Signetics	MMI	TI	Harris	Raytheon	AMD	National	Intel
TS	82S115 (60ns)	-	-	7647O 7647R	-	27S15	-	-

Mask programmed custom ROM version: TS= 82S215 , 8205

NO BIPOLAR, but EPROM CMOS registered/clocked PROM

Added to be complete....

Cypress

TS CY7C225A (25 / 12 ns)

512*8 = 4096 bit
(latched)

+---\ /---+			
A7	1	24	Vcc
A6	2	23	A8
A5	3	22	/Set
A4	4	21	/OE
A3	5	20	/Clr
A2	6	19	/ES
A1	7	18	Clock
A0	8	17	D7
D0	9	16	D6
D1	10	15	D5
D2	11	14	D4
GND	12	13	D3
+-----+			

VERY SPECIAL LATCHED VERSION

512*8 = 4096 bit
(latched)

This is a PROM, but NOT a TTL Bipolar version

It does have the same internal programming technology
= NiCr fuse cell's and NO EPROM cell's

Interfacing = NOT bipolar, but very low power CMOS

Military (handheld) application !!

Registered / latched (synchronous) PROM

Clocked address-in as data-out

```

+--\ /--+
A7 | 1  24 | Vcc
A6 | 2  23 | A8
A5 | 3  22 | /CE1
A4 | 4  21 | /CE2
A3 | 5  20 | CE3
A2 | 6  19 | /Clock
A1 | 7  18 | PGM / GND
A0 | 8  17 | D7
D0 | 9  16 | D6
D1 |10  15 | D5
D2 |11  14 | D4
GND|12  13 | D3
+-----+
    
```

MIL-STD/882 VERSION

HM1 = 0.600 Mil (wide)

HM6 = 0.300 Mil (slim)

HM4 = CLCC

B = faster

	Signetics	Intersil	Harris	Raytheon	AMD	Intel
TS	-	HM1-6642/883	-	-	-	-
	-	HM1-6642B/883	-	-	-	-
	-	HM6-6642/883	-	-	-	-
	-	HM6-6642B/883	-	-	-	-
	-	HM4-6642/883	-	-	-	-

(or HM-6642)

							1024*4 = 4096 bit			
							+--\ /--+			
NEC	Fujitsu	FSC	Mitsubishi	Intersil	Hitachi	A6	1	18	Vcc	
-----	-----	-----	-----	-----	-----	A5	2	17	A7	
TS uPB426	MB7122	93415	M54741A	IM56S26	HN25045	A4	3	16	A8	
uPB426-1	MB7134?	93453		LH5626		A3	4	15	A9	
uPB426-2	MB7054					A0	5	14	D0	
						A1	6	13	D1	
OC uPB406	MB7021	93452	M54740A	IM56S06	HN25044	A2	7	12	D2	
uPB406-1				LH5606		/CE1	8	11	D3	
uPB406-2	MB7059					GND	9	10	/CE2	
							+-----+			

		Motorola						
Signetics	MMI	TI	Harris	Raytheon	AMD	National	Intel	
-----	-----	-----	-----	-----	-----	-----	-----	
TS 82S137 (60ns)	6353-1	TBP24S41	HM7643-5	29641	27S33	74S573	3625	
82S137A(45ns)	63S441	-	HM7643A-5	-	-	74S573A	-	
82S137B(35ns)	63S441A	-	HM7643B-5	-	27S33A	74S573B	-	
			MCM7643					
OC 82S136 (60ns)	6352-1	TBP24SA41	HM7642-5		27S32	74S572	3605	
	63S440		MCM7642					

(Signetics 8228 is a **NON** compatible custom ROM [1024*4] version with only **16 pins**, no /CE pins, GND shifts to pin 8, further identical pinning sequence)

							1024*8 = 8192 bit			
							+---\/--+			
NEC	Fujitsu	Fairchild	Hitachi	Cypress	Intersil	A7	1	24	Vcc	
-----	-----	-----	-----	-----	-----	A6	2	23	A8	
TS	uPB428	MB7132	93451	HN25089	CY7C281	A5	3	22	A9	
		MB7162	93Z451		(EPROM)	A4	4	21	/CE1	
			93L451			A3	5	20	/CE2	
OC	uPB408	MB7131	93450	HN25088		A2	6	19	CE3	
			93Z450		IM5608	A1	7	18	CE4	
			93L450			A0	8	17	D7	
						D0	9	16	D6	
						D1	10	15	D5	
						D2	11	14	D4	
						GND	12	13	D3	
									+-----+	
				Motorola						
	Signetics	MMI	TI	Harris	Raytheon	AMD	National	Intel		
	-----	-----	-----	-----	-----	-----	-----	-----		
TS	82S181	70ns	6381-1	TBP28S86	7681-5	29631	27S181	74S478	3628A	
	82S181A	55ns	6381-2	28S86-60	7681A	29631A	27S181A	87S181	-	
	82S181C	30ns	63S881	-	-	29633	-	87S181A	-	
				(24S86 ?)						
OC	82S180	70ns	6380-1	28SA86	7680	29632	27S180	74S479	3608	
			63S880		HM7680P-5			87S180		
			also C/LS							

Mask programmed custom ROM version: TS= 82S281 / 27S281 ?
(custom version probably NO inverse CE1 , CE2 ??) OC= 82S280 / 27S280 ?

SPECIAL VERSION

1024*8 = 8192 bit

This Prom 82S2708 is a much faster 2708 EPROM replacement

-5, +12 and Vpp NO internal connection

(NEC PROM uPB419 and Harris HM7616 are
2716 EPROM replacements)

```

+---\ /---+
A7 | 1  24 | Vcc
A6 | 2  23 | A8
A5 | 3  22 | A9
A4 | 4  21 | NC
A3 | 5  20 | /CE
A2 | 6  19 | NC
A1 | 7  18 | NC
A0 | 8  17 | D7
D0 | 9  16 | D6
D1 |10  15 | D5
D2 |11  14 | D4
GND|12  13 | D3
+-----+
    
```

Signetics	TI	NEC	Harris	Fairchild	Motorola	Raytheon
-----	-----	-----	-----	-----	-----	-----
82S2708	TBP28S2708	uPB417	HM7608-5	93461C	MCM82708C MCM82707	29635

MMI	Fujitsu
-----	-----
6384-1	MB7055, MB7060
6385-1	MB7153L, MB7154L

This is NO "TTL Bipolar" PROM - SPECIAL LATCHED EPROM VERSION

1024*8 = 8192 bit

This PROM is CMOS UV erasable EPROM replacement
Addresses and data are internally LATCHED with /E

It allows upgrading to a HM-6716 (double sized) EPROM

```

+--\/--+
A7 | 1  24 | Vcc
A6 | 2  23 | A8
A5 | 3  22 | A9
A4 | 4  21 | P
A3 | 5  20 | /OE
A2 | 6  19 | Y
A1 | 7  18 | /E
A0 | 8  17 | D7
D0 | 9  16 | D6
D1 | 10 15 | D5
D2 | 11 14 | D4
GND| 12 13 | D3
+-----+
    
```

This HM-6758 device is NOT equal, but comparable with the Intel 2758 EPROM.
The Intel device is static, it has NO latched feedthrough, 18=/CE, 20=/OE
EPROM 2758 is comparable with the standard 2716

	Intel	Harris	
	-----	-----	
TS	(2758)	HM-6758H	Y = Vcc
		HM-6758L	Y = Gnd

SPECIAL

1024*8 = 8192 bit

+--\ /---+			
A6	1	22	Vcc
A5	2	21	A7
A4	3	20	A8
A3	4	19	A9
A2	5	18	/CS0
A1	6	17	/CS1
A0	7	16	D7
D0	8	15	D6
D1	9	14	D5
D2	10	13	D4
GND	11	12	D3
+-----+			

	Fujitsu	MMI
	-----	-----
TS	MB7129	6386-1
OC??	MB7132	6387-1

SPECIAL

1024*8 = 8192 bit

	+--\ /---+	
A0	1	20 Vcc
A1	2	19 A8
A2	3	18 A7
A3	4	17 A6
A4	5	16 A5
D0	6	15 A9
D1	7	14 D7
D2	8	13 D6
D3	9	12 D5
GND	10	11 D4
	+-----+	

Harris

TS HM7683-5

OC??

Registered / latched PROM

1024*8 = 8192 bit
(latched)

+---\ /---+			
A7	1	24	Vcc
A6	2	23	A8
A5	3	22	A9
A4	4	21	/CE1
A3	5	20	/CE2
A2	6	19	CE3
A1	7	18	STROBE
A0	8	17	D7
D0	9	16	D6
D1	10	15	D5
D2	11	14	D4
GND	12	13	D3
+-----+			

	Signetics	Harris	FSC Fairchild
TS	82S183 (60ns)	7681R-5	93L451
		=	

VERY SPECIAL LATCHED VERSION

This is a PROM, but NOT a TTL Bipolar version

This device is a PROM with EPROM technology

1024*8 = 8192 bit
(latched)

+--\/--+			
A7	1	24	Vcc
A6	2	23	A8
A5	3	22	A9
A4	4	21	/OE
A3	5	20	/INIT
A2	6	19	/ES
A1	7	18	Clock
A0	8	17	D7
D0	9	16	D6
D1	10	15	D5
D2	11	14	D4
GND	12	13	D3
+-----+			

Cypress

CY7C235A 25 / 12 nsec

	NEC	Fairchild	Fujitsu	Hitachi
	-----	-----	-----	-----
TS	uPB427	93515	MB7128	HN25085 HN25085S
OC		93514	MB7127	HN25084 HN25084S

2048*4 = 8192 bit

+---\ /---+			
A6	1	18	Vcc
A5	2	17	A7
A4	3	16	A8
A3	4	15	A9
A0	5	14	D0
A1	6	13	D1
A2	7	12	D2
A10	8	11	D3
GND	9	10	/CE
+-----+			

	Signetics	MMI	TI	Motorola Harris	Raytheon	AMD	National	Intel
	-----	---	-----	-----	-----	-----	-----	-----
TS	82S185(100ns)	6389	-	MCM7685	29651	-	-	-
	82S185A(50ns)	63S841	TBP24S81		29651A	27S185	87S185	-
	82S185B(45ns)	-	24S81-55		29653	27LS185	87S185A	-
OC	82S184(100ns)	6388 63S840	TBP24SA81	MCM7684	29650 29652	27S184 27LS184	87S184	-

SPECIAL PINNING

2048*4 = 8192 bit

+--\ /---+			
A7	1	18	Vcc
A6	2	17	A8
A5	3	16	A9
A4	4	15	A10
A3	5	14	D0
A2	6	13	D1
A1	7	12	D2
A0	8	11	D3
GND	9	10	/CE
+-----+			

Harris

TS HM7685-5

OC HM7684-5

SPECIAL VERSION

2048*4 = 8192 bit

+--\ /--+			
A7	1	20	Vcc
A6	2	19	A8
A5	3	18	A9
A4	4	17	A10
A3	5	16	D0
A2	6	15	D1
A1	7	14	D2
A0	8	13	D3
/CE0	9	12	/CE1
GND	10	11	/CE2
+-----+			

Harris

Motorola

HM7686-5

MCM7686

HM7687-5

2048*8 = 16384 bit

						+---\ /---+			
FSC						A7	1	24	Vcc
NEC	Fairchild	Hitachi	Fujitsu	Cypress		A6	2	23	A8
-----						+-----+			
TS	uPB429	93511P	HN25169	MB7138	CY7C292	A5	3	22	A9
	uPB429-1	93Z511			CY7C292A	A4	4	21	A10
	uPB429-2			MBH38	(EPROM's)	A3	5	20	/CE1
				(EPROM?)	(CY7C291	A2	6	19	CE2
OC	uPB409	93510	HN25168	MB7137	CY7C293)	A1	7	18	CE3
	uPB409-1	93Z510				A0	8	17	D7
	uPB409-2					D0	9	16	D6
						D1	10	15	D5
					ST	D2	11	14	D4
	WSI			Sharp	Thomson	GND	12	13	D3
	-----			-----	-----	+-----+			
TS	WS57C191C	(fast EPROM version)		LH57191	JBP38S165				
	WS57C291C	(fast EPROM version)							
						Motorola			
	Signetics	MMI	TI	Harris	Raytheon	AMD	National	Intel	
	-----	-----	-----	-----	-----	-----	-----	-----	
TS	82S191(80ns)	-	28S166	76161	29681	-	87S191	3636B	
	82S191A(55ns)	63S1681	28S166-55	76161A	29681A	27S191 /291	87S191A	-	
	82S191C(35ns)	-	38S165	-	-	27S191A	87S291	-	
			(EPROM ?)				87S193		
OC	82S190(80ns)	63S1680	28SA166	76160	29683	27S190	87S190	3606	
							87S290		

SPECIAL VERSION

2048*8 = 16384 bit

	+--\ /--+	
A0	1	22 Vcc
A1	2	21 A8
A2	3	20 A7
A3	4	19 A6
A4	5	18 A5
D0	6	17 A9
D1	7	16 D7
D2	8	15 D6
D3	9	14 D5
A10	10	13 D4
GND	11	12 /CE
	+-----+	

Fujitsu

TS MB7136

OC MB7135

SPECIAL VERSION

2048*8 = 16384 bit

This prom is a much faster 2716 EPROM replacement

(NEC PROM uPB417 and Harris HM7608-5 are
2708 EPROM replacements)

+--\ /--+			
A7	1	24	Vcc
A6	2	23	A8
A5	3	22	A9
A4	4	21	NC
A3	5	20	/CE
A2	6	19	A10
A1	7	18	NC
A0	8	17	D7
D0	9	16	D6
D1	10	15	D5
D2	11	14	D4
GND	12	13	D3
+-----+			

Harris	NEC
-----	-----
HM7616-5	uPB419

VERY SPECIAL LATCHED VERSION

2048*8 = 16384 bit
(latched)

This prom device looks like a registered (= LATCHED)
2716 EPROM replacement **10x faster**
But PIN A10 DIFFERENT !

```

+--\/--+
A7 | 1  24 | Vcc
A6 | 2  23 | A8
A5 | 3  22 | A9
A4 | 4  21 | A10
A3 | 5  20 | /INIT
A2 | 6  19 | /OE
A1 | 7  18 | Clock
A0 | 8  17 | D7
D0 | 9  16 | D6
D1 | 10 15 | D5
D2 | 11 14 | D4
GND| 12 13 | D3
+-----+
    
```

	Waferscale	
	Integration Inc	
AMI	WSI	Cypress
-----	-----	-----
TS AM27S45	WS57C45	CY7C245
		CY7C245A
	(PROM-speed compatible EPROM versions)	

VERY SPECIAL LATCHED VERSION

2048*8 = 16384 bit
(latched)

This is a PROM, but NOT a TTL Bipolar version

It does have the same internal programming technology
= NiCr fuse cell's and NO EPROM cell's

Interfacing = NOT bipolar, but very low power CMOS

Military (handheld) application !!

Registered / latched (synchronous) PROM

Clocked address-in as data-out

MIL-STD/882 VERSION

```

+--\ /--+
A7 | 1   24 | Vcc
A6 | 2   23 | A8
A5 | 3   22 | A9
A4 | 4   21 | /PGM(Vcc)
A3 | 5   20 | /CE
A2 | 6   19 | A10
A1 | 7   18 | /Clock
A0 | 8   17 | D7
D0 | 9   16 | D6
D1 | 10  15 | D5
D2 | 11  14 | D4
GND| 12  13 | D3
+-----+
    
```

	Signetics	Intersil	Harris	Raytheon	AMD	Intel
	-----	-----	-----	-----	-----	-----
TS	-	HM1-6617/883 (or HM-6617)	-	-	-	-

SPECIAL VERSION

4096*4 = 16384 bit

+--\ /--+			
A6	1	20	Vcc
A5	2	19	A7
A4	3	18	A8
A3	4	17	A9
A2	5	16	D0
A1	6	15	D1
A0	7	14	D2
A10	8	13	D3
/CE2	9	12	A11
GND	10	11	/CE1
+-----+			

Fujitsu

TS MB7134

OC MB7133

	Fujitsu	NEC	FSC Fairchild
	-----	-----	-----
TS	MB7152	uPB430 uPB431	93513

OC

4096*4 = 16384 bit

```

+---\ /---+
A8 | 1  20 | Vcc
A7 | 2  19 | A9
A6 | 3  18 | A10
A5 | 4  17 | A11
A4 | 5  16 | /CE1
A3 | 6  15 | /CE2
A2 | 7  14 | D0
A1 | 8  13 | D1
A0 | 9  12 | D2
GND|10 11 | D3
+-----+

```

	Signetics	MMI	TI	Motorola Harris	Raytheon	AMD	National
	-----	-----	-----	-----	-----	-----	-----
TS	82S195 (45ns)	63S1641	-	76165-5	-	AM27S41	87S195
	82S195A(35ns)	63S1641A	-	-	-	AM27S41A	87S195A
	82S195B(25ns)		-	-	-	-	-
OC		63S1640 63LS1640				AM27S40 AM27S40A	

8192*8 = 65536 bit

						+--\ /---+			
Fujitsu		Lattice	Cypress	Fairchild	National	A7	24	Vcc	
-----		-----	-----	-----	-----	A6	23	A8	
TS	MB7143	PR64K8	CY7C261	93Z565	93Z665C	A5	22	A9	
	MB7144		CY7C263	93Z565A	93Z667C	A4	21	A10	
			CY7C264	-		A3	20	/CE1	
			(EPROM's)			A2	19	A11	
						A1	18	A12	
	Waferscale					A0	17	D7	
	Integration Inc					D0	16	D6	
	WSI		ICT	Sharp	NEC	D1	15	D5	
	-----		-----	-----	-----	D2	14	D4	
TS	WS57C49C		27CX641	SH5762	27HC65	GND	12	D3	
	(EPROM)		27CX642						
									+-----+
	Signetics	MMI	TI	Harris	Raytheon	AMD	SSI		
	-----	-----	-----	-----	-----	-----	-----		
TS	82S641 (55ns)	-	TMS27PC49	76641-5	-	AM27S49	SS1203		
	82S641A(45ns)	-	-	76641A-5	-	AM27S49A			
	82S641B(35ns)	-	-	-	-	-	-		

(Some devices are PROM-pin AND -speed compatible EPROM's - **10x faster EPROM**)

VERY SPECIAL VERSION with POWER DOWN mode on CE pin

Cypress

CY7C266

8192*8 = 65536 bit

+--\ /---+			
Vcc	1	28	Vcc
A12	2	27	Vcc
A7	3	26	NC
A6	4	25	A8
A5	5	24	A9
A4	6	23	A11
A3	7	22	/OE
A2	8	21	A10
A1	9	20	/CE
A0	10	19	D7
D0	11	18	D6
D1	12	17	D5
D2	13	16	D4
GND	14	15	D3
+-----+			

NO Bipolar device, but fast EPROM technology

VERY SPECIAL LATCHED VERSION

Cypress

CY7C265

8192*8 = 65536 bit

+--\ /--+			
A7	1	28	Vcc
A6	2	27	A8
A5	3	26	A9
A4	4	25	A10
A3	5	24	A11
A2	6	23	A12
GND	7	22	/OE/E/INIT
Clk	8	21	GND
A1	9	20	GND
A0	10	19	D7
D0	11	18	D6
D1	12	17	D5
D2	13	16	D4
GND	14	15	D3
+-----+			

NO Bipolar device, but fast EPROM technology

Waferscale
 Integration Inc
 WSI

 TS WS57C51C
 (=EPROM version)

	Philips/NXP Signetics -----	AMD -----	Cypress -----	Sharp -----
TS 82HS1281		27S51	CY7C251 CY7C253 CY7C254 (EPROM)	LH57127

16384*8 = 131072 bit

+---\/--+			
A9	1	28	Vcc
A8	2	27	A10
A7	3	26	A11
A6	4	25	A12
A5	5	24	A13
A4	6	23	/CE1
A3	7	22	/CE2
A2	8	21	CS3
A1	9	20	/CS4
A0	10	19	D7
D0	11	18	D6
D1	12	17	D5
D2	13	16	D4
GND	14	15	D3
+-----+			

(Some devices are PROM-pin AND -speed compatible EPROM's - 10x faster EPROM)

Waferscale
Integration Inc
WSI

TS WS57C71C

(= fast EPROM version)

32768*8 = 262144 bit

+---\ /---+			
A9	1	28	Vcc
A8	2	27	A10
A7	3	26	A11
A6	4	25	A12
A5	5	24	A13
A4	6	23	A14
A3	7	22	/CE3
A2	8	21	CS2
A1	9	20	/CS1
A0	10	19	D7
D0	11	18	D6
D1	12	17	D5
D2	13	16	D4
GND	14	15	D3
+-----+			

(This device is a PROM in EPROM technology - **10x faster EPROM**)

VERY SPECIAL LATCHED VERSION

32768*8 = 262144 bit

Cypress

CY7C277

(fast EPROM version)

+---\ /---+			
A9	1	28	Vcc
A8	2	27	A10
A7	3	26	A11
A6	4	25	A12
A5	5	24	A13
A4	6	23	A14
A3	7	22	ALE
A2	8	21	Clk
A1	9	20	/OE
A0	10	19	D7
D0	11	18	D6
D1	12	17	D5
D2	13	16	D4
GND	14	15	D3
+-----+			

(This device is a PROM in EPROM technology - 10x faster EPROM)

VERY SPECIAL VERSION with POWER DOWN mode on CE pin

32768*8 = 262144 bit

Cypress

CY7C271 300 mil

(fast EPROM version)

	+--\ /--+	
A9	1 28	Vcc
A8	2 27	A10
A7	3 26	A11
A6	4 25	A12
A5	5 24	A13
A4	6 23	A14
A3	7 22	/CS1
A2	8 21	CS2
A1	9 20	/CE
A0	10 19	D7
D0	11 18	D6
D1	12 17	D5
D2	13 16	D4
GND	14 15	D3
	+-----+	

(This device is a PROM in EPROM technology - 10x faster EPROM)

VERY SPECIAL VERSION with POWER DOWN mode on CE pin

32768*8 = 262144 bit

Cypress

CY7C274 600 mil

(fast EPROM version)

+--\ /--+			
Vpp	1	28	Vcc
A12	2	27	A14
A7	3	26	A13
A6	4	25	A8
A5	5	24	A9
A4	6	23	A11
A3	7	22	/OE
A2	8	21	A10
A1	9	20	/CE
A0	10	19	D7
D0	11	18	D6
D1	12	17	D5
D2	13	16	D4
GND	14	15	D3
+-----+			

(This device is a PROM in EPROM technology - 10x faster EPROM)

FOLLOWING NOW: **TTL (ONLY) bipolar RAM**

THIS IS NOT A PROM

This is a **RAM**, it's here to be complete and not confused

Dual output port memory (single port IN)

A0 - A3 = read / write addresses port A

B0 - B3 = read only addresses port B

Dix = data IN

DxA = data port A out

DxB = data port B out

/SA = enable output A

/SB = enable output B

8*4 = 32 bit

+--\/--+			
/WE	1	24	Vcc
DI1	2	23	WE
DI0	3	22	DI2
A0	4	21	DI3
A1	5	20	B0
A2	6	19	B1
/SA	7	18	B2
D0A	8	17	/SB
D1A	9	16	D3B
D2A	10	15	D2B
D3A	11	14	D1B
GND	12	13	D0B
+-----+			

	Philips/NXP Signetics	MMI	TI	Harris	Motorola Fairchild Raytheon	AMD	National	Intel
	-----	-----	-----	-----	-----	-----	-----	-----
TS	82S112	-	-	-	-	-	-	-
OC	82S12	-	-	-	-	-	-	-

THIS IS NOT A PROM

This is a **RAM**, it's here to be complete and not confused
 Standard **INVERSE** data OUT, except *1)

16*4 = 64 bit

```

+---\ /---+
A0 | 1 | 16 | Vcc
/CE | 2 | 15 | A1
/WE | 3 | 14 | A2
I0  | 4 | 13 | A3
/D0 | 5 | 12 | I3
I1  | 6 | 11 | /D3
/D1 | 7 | 10 | I2
GND | 8 | 9  | /D2
+-----+
  
```

	NEC	Motorola
	-----	-----
TS	uPB2089	-
OC	uPB2289	4064

	Philips/NXP Signetics	MMI	TI	Harris	Fairchild Raytheon	AMD	National	Intel
	-----	-----	-----	-----	-----	-----	-----	-----
TS	74S89 74F189 74F219 *1)	6561 5561	74S189	-	93405	AM27S03 AM27S07 *1)	-	-
OC	82S25	6560 5560	74S289 74LS289	-	93404	AM27S02 AM27LS02	-	3101A

*1) AM27S07 and 74F219 = NON-inverting outputs D0 - D3 and NOT /D0 - /D3

THIS IS NOT A PROM

This is a **RAM**, it's here to be complete and not confused

2 BIT Dual port Stack memory

32*2 = 64 bit

```

+--\/--+
/WE | 1  16 | Vcc
/WS0 | 2  15 | WS1
/Di0 | 3  14 | Di1
  A4 | 4  13 | A0
   CE | 5  12 | A1
STROBE | 6  11 | A2
  Do0 | 7  10 | A3
  GND | 8   9 | Do1
+-----+
    
```

	Philips/NXP				Fairchild			
	Signetics	MMI	TI	Harris	Raytheon	AMD	National	Intel
	-----	-----	-----	-----	-----	-----	-----	-----
TS								
OC	82S21							

THIS IS NOT A PROM

This is a RAM, it's here to be complete and not confused

256*1 = 256 bit

	NEC -----	Motorola -----	Hitachi -----
TS	uPB2202	4256	-
OC	uPB2206	-	HM2504

+--\/--+			
A1	1	16	Vcc
A0	2	15	A2
/CE1	3	14	A3
/CE2	4	13	Din
/CE3	5	12	/WE
/Dout	6	11	A7
A4	7	10	A6
GND	8	9	A5
+-----+			

	Philips/NXP Signetics -----	MMI -----	TI -----	Harris -----	Fairchild Raytheon -----	AMD -----	National -----	Intel -----
TS	82S16 82S116 (82S06 TTL) 82LS16	6531	74S200 74S201 TTL	-	93421	AM27S00 AM27LS00	-	P3106
OC	82S17 82S117 (82S07 TTL) 82LS17	- -	74S301 TTL (74S206 TTL) 74LS301	-	93411	AM27S01 AM27LS01	-	P3107

THIS IS NOT A PROM

This is a **RAM**, it's here to be complete and not confused

Stack or FIFO memory (with parity or flag)

OUTPUT IS THE COMPLEMENT OF THE INPUT DATA !!
 (= inverted !)

64*9 = 576 bit

+--\/--+			
A3	1	28	Vcc
A4	2	27	A2
A5	3	26	A1
DI0	4	25	A0
DI1	5	24	/DO0
DI2	6	23	/DO1
DI3	7	22	/DO2
DI4	8	21	/DO3
DI5	9	20	/DO4
DI6	10	19	/DO5
DI7	11	18	/DO6
DI8	12	17	/DO7
/WE	13	16	/DO8
GND	14	15	/CE
+-----+			

	Philips/NXP Signetics	MMI	TI	Harris	Motorola Fairchild Raytheon	AMD	National	Intel
	-----	-----	-----	-----	-----	-----	-----	-----
TS	-	-	-	-	-	-	-	-
OC	82S09 82S19	-	-	-	-	-	-	-

THIS IS NOT A PROM

This is a RAM, it's here to be complete and not confused

1024*1 = 1024 bit

	NEC -----	Intersil -----	Hitachi -----
TS	-	5518	HM2511
OC	-	5508	HM2510

+--\/--+			
/CE	1	16	Vcc
A0	2	15	Din
A1	3	14	/WE
A2	4	13	A9
A3	5	12	A8
A4	6	11	A7
Dout	7	10	A6
GND	8	9	A5
+-----+			

	Philips/NXP Signetics -----	MMI -----	TI -----	Harris -----	Motorola Fairchild Raytheon -----	AMD -----	National -----	Intel -----
TS	82S11	-	74S209	-	93425A	-	-	-
OC	82S10	-	74S309	-	93415A	-	-	3110??

THIS IS NOT A PROM

This is a **RAM**, it's here to be complete and not confused

Stack memory

256*4 = 1024 bit

```

+--\/--+
A3 | 1  22 | Vcc
A2 | 2  21 | A4
A1 | 3  20 | /WE
A0 | 4  19 | /CS1
A5 | 5  18 | /OE
A6 | 6  17 | CS2
A7 | 7  16 | D3out
GND | 8  15 | D3in
D0in | 9  14 | D2out
D0out | 10 13 | D2in
D1in | 11 12 | D1out
+-----+
    
```

	Philips/NXP Signetics	MMI	TI	Harris	Motorola Fairchild Raytheon	AMD	National	Intel
TS	-	-	-	-	93L422	-	-	-

THIS IS NOT A PROM

This is a **RAM**, it's here to be complete and not confused

Stack memory for 8X300 or 8X305 CPU
Latched

256*8 = 2048 bit

+--\/--+			
D7	1	22	Vcc
D6	2	21	A7
D5	3	20	A6
D4	4	19	A5
D3	5	18	A4
D2	6	17	A3
D1	7	16	A2
D0	8	15	A1
/ME	9	14	A0
WC	10	13	MCLK
GND	11	12	SC
+-----+			

	Philips/NXP Signetics	MMI	TI	Harris	Motorola Fairchild Raytheon	AMD	National	Intel
	-----	-----	-----	-----	-----	-----	-----	-----
TS	8X350	-	-	-	-	-	-	-
OC	X							

THIS IS NOT A PROM

This is a **RAM**, it's here to be complete and not confused

Latched Stack or FIFO memory

Latched and UN-latched mode

256*8 = 2048 bit

```

+--\/--+
D7 | 1  22 | Vcc
D6 | 2  21 | A7
D5 | 3  20 | A6
D4 | 4  19 | A5
D3 | 5  18 | A4
D2 | 6  17 | A3
D1 | 7  16 | A2
D0 | 8  15 | A1
OD  | 9  14 | A0
/WE |10 13 | /L1
GND |11 12 | /CE
+-----+
    
```

	Philips/NXP Signetics	MMI	TI	Harris	Motorola Fairchild Raytheon	AMD	National	Intel
TS	82S208	-	-	-	-	-	-	-
OC	X							

THIS IS NOT A PROM

This is a **RAM**, it's here to be complete and not confused

Latched Stack or FIFO memory (with parity or flag)

Latched and UN-latched mode

256*9 = 2304 bit

```

+--\/--+
D8 | 1  24 | Vcc
D7 | 2  23 | A7
D6 | 3  22 | A6
D5 | 4  21 | A5
D4 | 5  20 | A4
D3 | 6  19 | A3
D2 | 7  18 | A2
D1 | 8  17 | A1
D0 | 9  16 | A0
OD |10  15 | /L2
/WE|11  14 | /L1
GND|12  13 | /CE
+-----+
    
```

	Philips/NXP Signetics	MMI	TI	Harris	Motorola Fairchild Raytheon	AMD	National	Intel
TS	82S210	-	-	-	-	-	-	-
OC	X	-	-	-	-	-	-	-

THIS IS NOT A PROM

This is a **RAM**, it's here to be complete and not confused

Stack or FIFO memory (with parity or flag)

256*9 = 2304 bit

```

+--\/--+
D8 | 1  22 | Vcc
D7 | 2  21 | A7
D6 | 3  20 | A6
D5 | 4  19 | A5
D4 | 5  18 | A4
D3 | 6  17 | A3
D2 | 7  16 | A2
D1 | 8  15 | A1
D0 | 9  14 | A0
/OE| 10 13 | /CE
GND| 11 12 | /WE
+-----+
    
```

	Philips/NXP Signetics	MMI	TI	Harris	Motorola Fairchild Raytheon	AMD	National	Intel
TS	82S212	-	-	-	-	-	-	-
OC	X	-	-	-	-	-	-	-