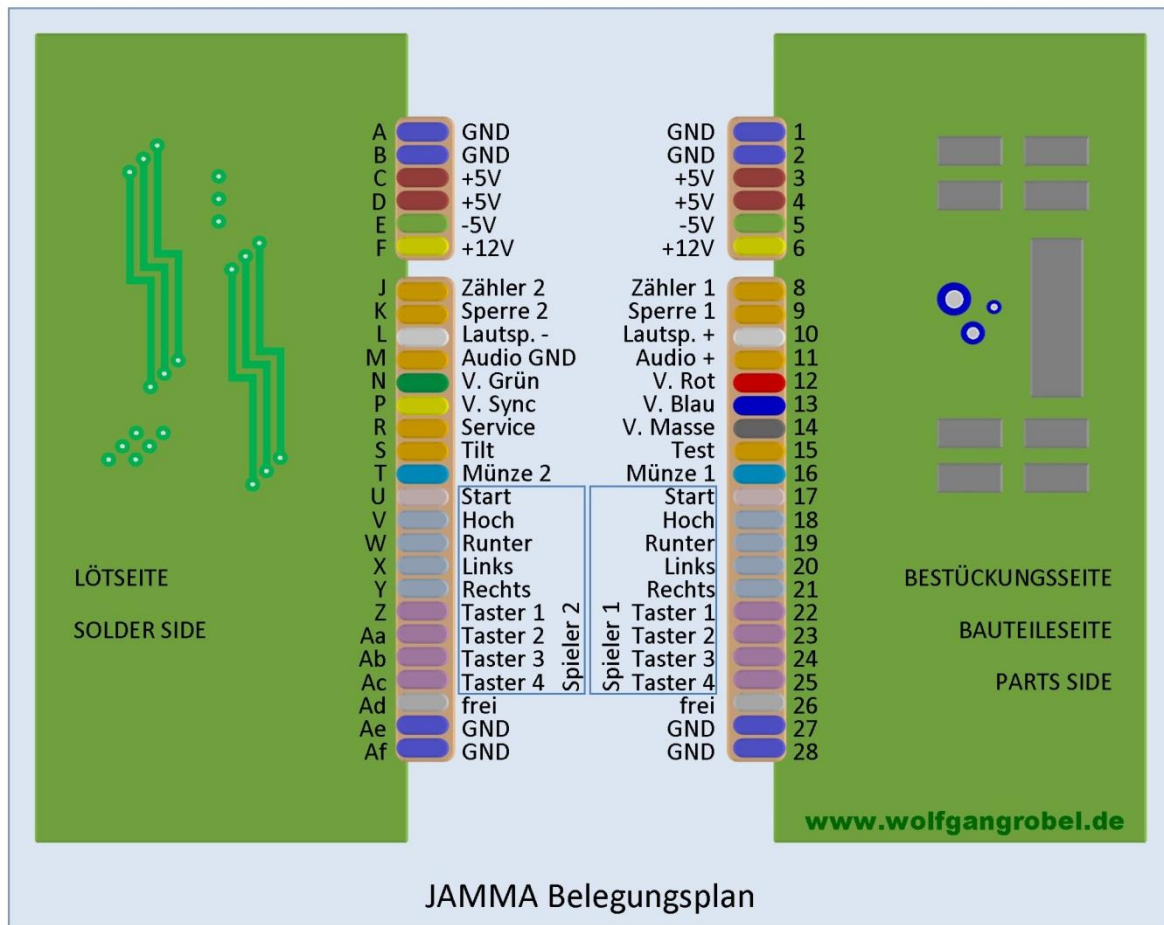
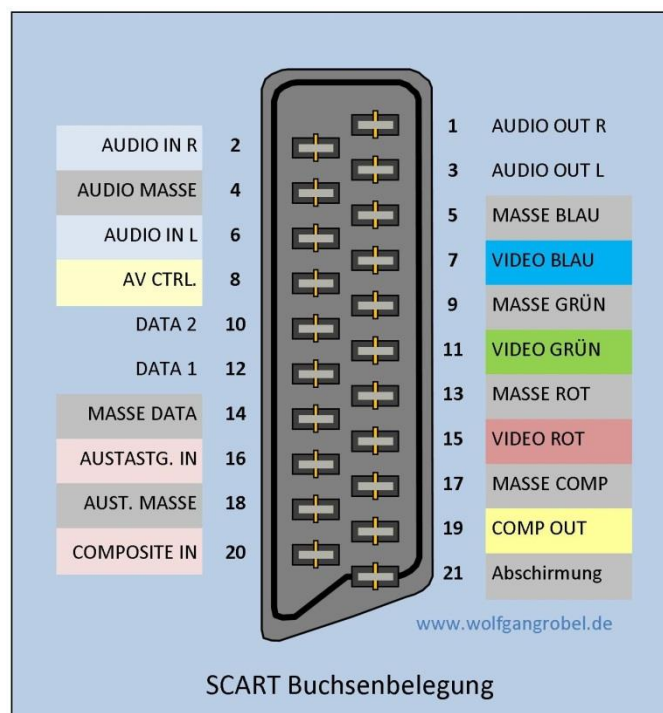




JAMMA CONNECTOR



SCART CONNECTOR





AUTOMATEN - TAB

Oberseite	Lötseite	Belegung
1		GND
	A	GND
2		GND
	B	GND
3		GND
	C	GND
4		+ 5V
	D	+ 5V
5		+12V
	E	+12V
6		- 5V
	F	- 5V
7		-12V
	H	-12V
8		Zähler 1
	J	Zähler + ???
9		Zähler 2
	K	Münzschalter 1
10		Münzschalter 2
	L	Tischumschaltung
11		1. Spieler Start
	M	1. Spieler Action-3
12		2. Spieler Start
	N	2. Spieler Action-3
13		1. Spieler Action-1
	P	1. Spieler Action-2
14		2. Spieler Action-1
	R	2. Spieler Action-2
15		1. Spieler rechts
	S	1. Spieler links
16		1. Spieler rauf
	T	1. Spieler runter
17		2. Spieler rechts
	U	2. Spieler links
18		2. Spieler rauf
	V	2. Spieler runter
19		Video Rot
	W	Video Grün
20		Video Blau
	X	Video Sync.
21		Video GND
	Y	Lautsprecher GND
22		Lautsprecher +
	Z	Testschalter

HELLOMAT

5. Anschlußbelegung TV - Adapter

10-poliger Stecker	12-poliger Stecker	16-poliger Stecker
1 + 5 V braun	1 Kredit weiß	1 1.Spieler links rot-schwarz
2 + 5 V braun	2 Münze ein weiß-rosa	2 2.Spieler links grau
3 - 5 V grau-rot	3 Video-Rot rot	3 1.Spieler rechts weiß-grau
4 + 12 V rot	4 Video-Grün grün	4 2.Spieler rechts weiß-rot
5 GND blau	5 Video-Blau blau	5 1.Spieler auf weiß-schwarz
6 GND blau	6 Video-Synchr. braun	6 2.Spieler auf gelb-braun
7 GND blau	7 + Lautspr. weiß-violett	7 1.Spieler ab braun-schwarz
8 GND-Video schwarz	8 1.Spieler-Taster 4 weiß-grün	8 2.Spieler ab grün-schwarz
9 GND-Lautspr. gelb-rot	9 Lautspr. 2 weiß-blau	9 1.Spieler-Taster 1 gelb
10 Reset grau-blau	10 Lautspr. 2 gelb-blau	10 2.Spieler-Taster 1 weiß-braun
	11 2.Spieler-Taster 4 gelb-weiß	11 1.Spieler-Taster 2 gelb-schwarz
	12 - -	12 2.Spieler-Taster 2 grün-rot
		13 1.Spieler-Taster 3 violett
		14 2.Spieler-Taster 3 rosa-rot
		15 1.Spieler Start rosa
		16 2.Spieler Start orange



HELLOMAT

"PULTANSCHLUS" Electronic Star

1	GND	= blau	0,5²
2	+ 12V	= rot	0,5²
3	1. Spieler	= rosa	0,25²
4	2. Spieler	= grau-blau	
5	1. Spieler auf	= weiß-schwarz	
6	1. Spieler ab	= braun-schwarz	
7	1. Spieler links	= rot-schwarz	
8	1. Spieler rechts	= weiß-grau	
9	1. Taste Spieler 1	= gelb	
10	2. Taste Spieler 1	= gelb-schwarz	
11	3. Taste Spieler 1	= violett	
12	4. Taste Spieler 1	= weiß-grün	
1	2. Spieler links	= grau	0,25²
2	2. Spieler rechts	= weiß-rot	
3	2. Spieler auf	= gelb-braun	
4	2. Spieler ab	= grün-schwarz	
5	1. Taste Spieler 2	= weiß-braun	
6	2. Taste Spieler 2	= grün-rot	
7	3. Taste Spieler 2	= rosa-rot	
8	4. Taste Spieler 2	= gelb-weiß	
9	SONDER 1	= weiß-blau	
10	SONDER 2	= gelb-blau	

Die HELLOMAT-Schnittstelle

10-pol Stecker

Pin	Funktion	Kabelfarbe
1●	+5V	braun
2	+5V	braun
3	-5V	grau-rot
4	+12V	rot
5	GND	blau
6	GND	blau
7	GND	blau
8	Video-GND	schwarz
9	Lautsprecher (-)	gelb-rot
10	NC	---

12-pol Stecker

Pin	Funktion	Kabelfarbe
1●	NC	---
2	Münze ein	weiß-rosa
3	Video-Rot	rot
4	Video-Grün	grün
5	Video-Blau	blau
6	Video-Sync	braun
7	Lautsprecher (+)	weiß-violett
8	1. Spieler – Taste 4	weiß-grün
9	NC	---
10	NC	---
11	2. Spieler – Taste 4	weiß-gelb
12	NC	----

16-pol Stecker

Pin	Funktion	Kabelfarbe
1●	1. Spieler – links	rot-schwarz
2	2. Spieler – links	grau
3	1. Spieler – rechts	weiß-grau
4	2. Spieler – rechts	weiß-rot
5	1. Spieler – auf	weiß-schwarz
6	2. Spieler – auf	gelb-braun
7	1. Spieler – ab	braun-schwarz
8	2. Spieler – ab	grün-schwarz
9	1. Spieler – Taste 1	gelb
10	2. Spieler – Taste 1	weiß-braun
11	1. Spieler – Taste 2	gelb-schwarz
12	2. Spieler – Taste 2	grün-rot
13	1. Spieler – Taste 3	violett
14	2. Spieler – Taste 3	rosa-rot
15	1. Spieler – Start	rosa
16	2. Spieler – Start	orange



Adp Gauselmann

adp Gauselmann ADAPTER - SYSTEM									
schwarz	GND	1	A	GND	schwarz				
schwarz	GND	2	B	GND	schwarz				
rot (dick)	+5 V	3	C	+5 V	rot (dick)				
rot (dick)	+5 V	4	D	+5 V	rot (dick)				
violett (dick)	+12 V	5	E	+12 V	violett (dick)				
grau-rot	-5 V	6	F	-5 V	grau-rot				
schwarz	GND	7	H	GND	schwarz				
		8	J						
		9	K						
gelb-rot	Lautspr.	10	L						
weiß-violett	Lautspr.	11	M	1-Sp. Taste 1	gelb				
grau-blau	Reset/Tilt	12	N	2-Sp. Taste 1	weiß-braun				
gelb-braun	2-Sp. oben	13	P	1-Sp. oben	weiß-schwarz				
	4-Sp. Taste 3	14	R	4-Sp. Taste 3					
weiß-rot	2-Sp. rechts	15	S	1-Sp. rechts	weiß-grau				
		16	T						
grün-schwarz	2-Sp. unten	17	U	1-Sp. unten	braun-schwarz				
		18	V						
grau	2-Sp. links	19	W	1-Sp. links	rot-schwarz				
		20	X						
orange	2-Sp. Start	21	Y	1-Sp. Start	rosa				
rot (dünn)	Video Rot	22	Z	1-Sp. Taste 2	gelb-schwarz				
grün	Video Grün	23	a	2-Sp. Taste 2	grün-rot				
blau	Video Blau	24	b	Münzzähler	weiß-blau				
braun	Video Sync	25	c	Münzeingang	weiß-rosa				
schwarz	GND	26	d	GND	schwarz				
schwarz	GND	27	e	GND	schwarz				
		28	f						
		29	h						
		30	i						

— = Kodierstift

Wir garantieren für dieses Adaptersystem immer die gleichen Drahtfarben und eine elektronisch geprüfte Durchkontaktierung der +5 V und der GND. Ansicht gegen die Stirnseite der Messerleiste.

video klein
Südstraße 42 – 4132 Kamp-Lintfort – Telefon (02842) 6600 Q 65 85

TV Ideal

TV IDEAL

Norm-Steckerbelegung adp TV-Standgerät

		B		A	
schwarz	GND	31		1	GND
	GND	32		2	GND
rot	+5V	33		3	+5V
	+5V	34		4	+5V
gelb	+12V	35		5	+12V
	-5V	36		6	-5V
violett	GND	37		7	GND
rosa	pos. einstellb. Spannung	38		8	pos. einstellb. Spannung
grün	neg. einstellb. Spannung	39		9	neg. einstellb. Spannung
	Reservfunktion	40		10	Lautsprecher -
	1 P Funktion I	41		11	Lautsprecher +
	Zs. 9	42		12	Reset / Tilt
Steuerschalter 1	hoch	43		13	Zs. 14
(Zs. 4) Steuerschalter 2	hoch	44		14	Zs. 7 2 P Funktion III
Steuerschalter 1	rechts	45		15	Zs. 13
(Zs. 3) Steuerschalter 2	rechts	46		16	Zs. 8 1 P Funktion III
Steuerschalter 1	runter	47		17	Zs. 12
(Zs. 2) Steuerschalter 2	runter	48		18	Zs. 6 2 P Funktion I
Steuerschalter 1	links	49		19	Zs. 11
(Zs. 1) Steuerschalter 2	links	50		20	Zs. 5 2 P Funktion II
	1 Spieler	51		21	2 Spieler
	1 P Funktion II	52		22	rot
	Zs. 10	53		23	grün
	Spielezähler	54		24	blau
	Münzeingang	55		25	Sync.
	GND	56		26	GND
	GND	57		27	GND
	GND	58		28	GND
Lautsprecher 2 -		59		29	Lautsprecher 2 +
3 Spieler		60		30	4 Spieler

Steckerleiste
AMP-EDGE 530 655-9



LOGIK – TTL ÜBERSICHT – Teil 1

Typ	Pins	Anzahl	Beschreibung
00	14	4	2 Input NAND
01	14	4	2 Input NAND (OC=Open Collector)
02	14	4	2 Input NOR
03	14	4	2 Input NAND (OC) Andere Belegung als 7401
04	14	6	Inverter
05	14	6	Inverter (OC)
06	14	6	Inverter Buffer/Treiber (OC)
07	14	6	Buffer/Treiber (OC)
08	14	4	2 Input AND
09	14	4	2 Input AND (OC)
10	14	3	3 Input NAND
11	14	3	3 Input AND
12	14	3	3 Input NAND (OC)
13	14	2	4 Input NAND Schmitt-Trigger
14	14	6	Inverter Schmitt-Trigger
15	14	3	3 Input AND (OC)
16	14	6	Inverter Treiber (OC)
17	14	6	Treiber (OC)
18	14	2	4 Input NAND Schmitt-Trigger
19	14	6	Inverter Schmitt-Trigger
20	14	2	4 Input NAND
21	14	2	4 Input AND
22	14	2	4 Input NAND (OC)
24	14	4	2 Input NAND Schmitt-Trigger
25	14	2	4 Input NOR
26	14	4	2 Input NAND (OC)
27	14	3	3 Input NOR
28	14	4	2 Input NOR
30	14	1	8 Input NAND
31	16	-	Verzögerungs-Element (je 2 Non-Inverting, Inverting, 2 Input NAND)
32	14	4	2 Input OR
33	14	4	2 Input NOR (OC)
34	14	6	Treiber
35	14	6	Treiber (OC)
36	14	4	2 Input NOR
37	14	4	2 Input NAND
38	14	4	2 Input NAND (OC)
39	14	4	2 Input NAND Treiber (OC)
40	14	2	4 Input NAND
41	16	-	BCD -> Decimal Decoder (OC)
42	16	-	BCD -> Decimal Decoder



LOGIK – TTL ÜBERSICHT – Teil 2

Typ	Pins	Anzahl	Beschreibung
43	16	-	Excess-3 -> Decimal Decoder
44	16	-	Excess-3-Gray -> Decimal Decoder
45	16	-	BCD -> Decimal Decoder (OC)
46	16	-	BCD -> 7-Segment Decoder (OC)
47	16	-	BCD -> 7-Segment Decoder (OC)
48	16	-	BCD -> 7-Segment Decoder (OC)
49	14	-	BCD -> 7-Segment Decoder (OC)
50	14	-	Dual 2-Wide 2-Input AND-OR-INVERT (1 expandable)
51	14	2	AND-OR-INVERT
52	14	?	Expandable AND-OR
53	14	1	Expandable 4-Wide AND-OR-INVERT
54	14	1	3-2-2-3 Input AND-OR-INVERT
55	14	1	2-Wide 4-Input AND-OR-INVERT
72	14	1	And-Gated-JK-MS Flipflop with preset & clear
73	14	2	JK Flipflop with clear
74	14	2	D Flipflop with preset & clear
75	16	-	4-Bit Bistable Latch
76	16	2	JK Flipflop with preset & clear
78	14	2	JK Flipflop
86	14	4	2 Input XOR
90	14	-	Decade Counter
92	14	-	Divide By-Twelve Counter
93	14	-	4-Bit Binary Counter
95	14	-	4 Bit Parallel Access Shift Register
107	14	2	JK Flipflop with clear
112	16	2	JK Flipflop with preset & clear
121	14	-	Monostable Multivibrator With Schmitt-Trigger
122	14	-	Retriggerable Monostable Multivibrator
123	16	2	Retriggerable Monostable Multivibrator
125	14	4	Tri-State Buffer
126	14	4	Tri-State Buffer
132	14	4	2 Input NAND Schmitt-Trigger
133	16	1	13 Input NAND
136	14	4	2 Input XOR
137	16	1	3-to-8 line decoder / demultiplexer with address latches, low-active outputs
138	16	1	3-to-8 line decoder / demultiplexer , low-active outputs
139	16	2	2-to-4 line decoder / demultiplexer , low-active outputs
146	16	-	BCD -> Decimal Decoder (OC)
147	16	-	10-Line -> 4-Line BCD Priority Encoder
148	16	-	8-Line -> 3-Line Priority Encoder
151	16	1	8:1 Multiplexer



LOGIK – TTL ÜBERSICHT – Teil 3

Typ	Pins	Anzahl	Beschreibung
154	24	1	4-Line -> 16-Line Decoder/Demultiplexer
155	16	2	2-Line -> 4-Line Decoder/Demultiplexer
156	16	2	2-Line -> 4-Line Decoder/Demultiplexer (OC)
157	16	4	2:1 Multiplexer
158	16	4	2:1 Multiplexer , inverted outputs
160	16	-	Sync 4 Bit Binary Counter Async Reset
161	16	-	Sync 4 Bit Binary Counter Async Reset
162	16	-	Sync 4 Bit Binary Counter Async Reset
163	16	-	Sync 4 Bit Binary Counter Async Reset
164	14	-	8 Bit Serial Shift Register
165	16	-	8-Bit Parallel -> Serial (PISO) Shift Register0
166	16	-	4 bit shift register
173	16	4	D-Type Register
174	16	6	Hex-D-FF
175	16	4	Quad D-Flip-Flop
177	14	-	Presetable Binary Counter/Latch
190	16	-	Decimal Up/Down Counter
191	16	-	4-Bit Up/Down Binary Converter
192	16	-	Decimal Up/Down Counter mit Clear
193	16	-	4-Bit Up/Down Binary Counter mit Clear
194	16	-	4-Bit Bidirectional Universal Shift Register
221	16	2	Monostable Multivibrator with Reset
238	16	1	3-to-8 line decoder / demultiplexer , high-active outputs
239	16	2	2-to-4 line decoder / demultiplexer , high-active outputs
240	20	-	8-Bit Tri-State Buffer/Line Driver (invertierend)
241	20	-	8-Bit Tri-State Buffer/Line Driver
242	14	-	4-Bit Bus Transceiver (invertierend)
243	14	-	4-Bit Bus Transceiver (nicht invertierend)
244	20	-	8-Bit Tri-State Buffer/Line Driver (nicht invertierend) - Variante: 16244: 16-Bit-Version
245	20	-	8-Bit Bus Transceiver - Variante: 16T245: 16-Bit-Version
251	16	-	8-Bit Input Multiplexer; 3-State
259	16	-	8-Bit Adressable Latch
260	14	2	5 Input NOR
266	14	4	2 Input Exclusive NOR (OC)
273	20	-	8-fach D-FlipFlop mit Clear
283	16	-	4-Bit Volladdierer
288	16	-	256-bit PROM
299	20	-	8-Bit Universal Shift Register, Common IO-Pins, 3-State
366	16	6	Tri-State Inverting Buffer
367	16	6	Tri-State Buffer
373	20	-	8-Bit Transparent Latch



374	20	-	8-Bit Positiv Edge Triggered Register
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LOGIK – TTL ÜBERSICHT – Teil 4

Typ	Pins	Anzahl	Beschreibung
393	14	2	4-Bit Binary Counter
541	20	-	8-Bit Tri-State Buffer/Line Driver
573	20	-	8-Bit Tri-State D-Type Latch
574	20	8	Tri-State Flipflop
590	16	-	8-Bit binary counter, 3-state output register
595	16	-	8-Bit Serial -> Parallel (SIPO) Shift Register
669	16	-	Synchronous 4 bit up/down counter



LOGIK – TTL – Teil 1

74xx00 / 01 4x NAND2 	74xx02 4x NOR2 	74xx03 4x NAND2 OC 	74xx04 / 05 / 06 6x INV 	74xx07 6x BUFFER
74xx08 / 09 4x AND 	74xx10 3x NAND3 	74xx11 / 12 3x AND3 	74xx13 2x NAND4 ST 	74xx14 6x INV ST
74xx20 2x NAND4 	74xx73 FF 	74xx74 FF 	74xx86 4x XOR2 	74xx90 4-Bit Zähler 0..9
74xx92 4-Bit Zähler 0..11 	74xx93 4-Bit Zähler 0..15 	74xx122 Single Monoflop 	74xx123 Dual Monoflop 	74xx125 4x tristate buffer



LOGIK – TTL – Teil 2

74xx132 4x NAND2 ST 	74xx138 3-to-8 line decoder 	74xx139 2x 2-to-4 decoder 	74xx157 4x Multiplexer 2:1 	74xx160 / 161 / 162 / 163 4-bit Binärzähler
74xx166 4Bit Shift Reg. 	74xx173 4 Bit D-Register 	74xx174 Hex D-Flip-Flop 	74xx175 Quad D-FF 	74xx190 / 191
74xx192 / 193 presettable counter 	74xx194 4 Bit unid. Shift Reg. 	74xx240 8x Bustreiber 	74xx241 8x Bustreiber 	74xx244 8x Bustreiber
74xx245 8x Bustreiber Bidir. 	74xx273 8x D-FF m. Clear 	74xx283 4 Bit Addierer 	74xx257 Quad 2-Data-Mux 	74xx258 Quad 2-Data-Mux



LOGIK – TTL – Teil 3

74xx299 8-Bit-Shift Register 	74xx365 6x tristate buffer 	74xx366 6x tristate inverter 	74xx367 6x tristate buffer 	74xx368 6x tristate inverter
74xx373 8 Bit transp. Latch 	74xx374 8 Bit transp. Latch 	74xx377 8x FF 	74xx378 6x FF 	74xx379 4x FF
74xx669 4 Bit u/d Counter 				



LOGIK – CMOS – ÜBERSICHT TEIL 1

4000	Dual 3-input NOR gate + 1 Inverter
4001	Quad 2-input NOR gate
4002	Dual 4-input NOR gate
4006	18 stage Shift register
4007	Dual Complementary Pair Plus Inverter
4008	4 bit adder
4009	Hex inverting buffer
4010	Hex non-inverting buffer
4011	Buffered Quad 2-Input NAND gate
4012	Dual 4-input NAND gate
4013	Dual D-type flip-flop
4014	8-stage shift register
4015	Dual 4-stage shift register
4016	Quad bilateral switch
4017	Divide-by-10 counter (5-stage Johnson counter)
4018	Presettable divide-by-n counter
4019	Quad AND-OR Select Gate
4020	14-stage binary counter
4021	8-bit static shift register
4022	Divide-by-8 counter (4-stage Johnson counter)
4023	Triple 3-input NAND gate
4024	7-Stage Binary Ripple Counter
4025	Triple 3-input NOR gate
4026	BCD counter with decoded 7-segment output
4027	Dual JK flip-flop
4028	BCD to decimal (1-of-10) decoder
4029	Presettable up/down counter, binary or BCD-decade
4030	Quad XOR gate (replaced by 4070)
4031	64-Bit Static Shift Register
4032	Triple serial adder
4033	BCD counter + 7-segment decoder w/ripple blank
4034	8-stage bidirectional parallel or serial input/parallel output
4035	4-stage parallel-in/parallel-out (PIPO) with J-K input and true/complement output
4038	Triple serial adder
4040	12-stage binary ripple counter
4041	Quad true/complement buffer
4042	Quad D-type latch
4043	Quad NOR R/S latch
4044	Quad NAND R/S latch (tristate output)
4045	21-Stage Counter
4046	PLL with VCO
4047	Monostable/Astable Multivibrator
4048	Multifunctional expandable 8-input (tristate output)
4049	Hex inverter/buffer (NOT gate)
4050	Hex buffer/converter (non-inverting)
4051	Analogue multiplexer/demultiplexer (1-of-8 switch)
4052	Analogue multiplexer/demultiplexer (Dual 1-of-4 switch)
4053	Analogue multiplexer/demultiplexer (Triple 1-of-2 switch)
4054	7-segment decoder/LCD driver
4055	BCD-to-7-segment decoder/driver with "display-frequency" output
4056	BCD-to-7-segment decoder/driver with strobed latch function
4059	Programmable divide-by-N counter
4060	14-stage binary ripple counter and oscillator
4062	Logic dual 3 majority gate
4063	4-bit Digital comparator
4066	Quad Analog switch (Low "ON" Resistance)
4067	16-channel analogue multiplexer/demultiplexer (1-of-16 switch)
4068	8-input NAND gate
4069	Hex inverter
4070	Quad XOR gate
4071	Quad 2-input OR gate
4072	Dual 4-input OR gate
4073	Triple 3-input AND gate
4075	Triple 3-input OR gate
4076	Quad D-type register with tristate outputs
4077	Quad 2-input XNOR gate
4078	8-input NOR gate
4081	Quad 2-input AND gate
4082	Dual 4-input AND gate
4085	Dual 2-wide, 2-input AND/OR invert (AOI)
4086	Expandable 4-wide, 2-input AND/OR invert (AOI)
4089	Binary rate multiplier
4093	Quad 2-input Schmitt trigger NAND gate



LOGIK – CMOS – ÜBERSICHT TEIL 2

4094	8-stage shift-and-store bus
4095	Gated "J-K" (non-inverting)
4096	Gated "J-K" (inverting and non-inverting)
4097	Differential 8-channel analog multiplexer/demultiplexer
4098	Dual one-shot monostable
4099	8-bit addressable latch
4104	Quad Low-to-High Voltage Translator with tristate outputs
4502	Hex inverting buffer (tristate)
4503	Hex non-inverting buffer with tristate outputs
4504	Hex voltage level shifter for TTL-to-CMOS or CMOS-to-CMOS operation
4508	Dual 4-bit latch with tristate outputs
4510	Presettable 4-bit BCD up/down counter
4511	BCD to 7-segment latch/decoder/driver
4512	8-input multiplexer (data selector) with tristate output
4513	BCD to 7-segment latch/decoder/driver (4511 plus ripple blanking)
4514	1-of-16 decoder/demultiplexer active HIGH output
4515	1-of-16 decoder/demultiplexer active LOW output
4516	Presettable 4-bit binary up/down counter
4517	Dual 64-Bit Static Shift Register
4518	Dual BCD up counter
4519	Quad 2-input multiplexer (data selector)
4520	Dual 4-bit binary up counter
4521	24-stage frequency divider
4522	Programmable BCD divide-by-N counter
4526	Programmable 4-bit binary down counter
4527	BCD rate multiplier
4528	Dual Retriggerable Monostable Multivibrator with Reset
4529	Dual 4-channel analog
4532	8-bit priority encoder
4536	Programmable Timer
4538	Dual Retriggerable Precision Monostable Multivibrator
4539	Dual 4-input multiplexer
4541	Programmable Timer
4543	BCD to 7-Segment Latch/Decoder/Driver with Phase Input
4553	3-digit BCD counter
4555	Dual 1-of-4 decoder/demultiplexer active HIGH output
4556	Dual 1-of-4 decoder/demultiplexer active LOW output
4557	1-to-64 Bit Variable Length Shift Register
4560	NBCD adder
4566	Industrial time-base generator
4572	Hex gate : quad NOT, single NAND, single NOR
4584	Hex schmitt trigger
4585	4-bit Digital comparator
4724	8-bit addressable latch
4750	Frequency synthesizer
4751	Universal divider
4794	8-Stage Shift-and-Store Register LED Driver
4894	12-Stage Shift-and-Store Register LED Driver
4938	Dual Retriggerable Precision Monostable Multivibrator with Reset
4952	8-channel analog multiplexer/demultiplexer
40098	3-state hex inverting buffer
40100	32-bit left/right Shift Register
40101	9-bit Parity Generator/Checker
40102	Presettable 2-decade BCD down counter
40103	Presettable 8-bit binary down counter
40104	4 bit bidirectional Parallel-in/Parallel-out PIPO Shift Register (tristate)
40105	4-bit x 16 word Register
40106	Hex Inverting Schmitt-Trigger-(NOT gates)
40107	dual 2-input NAND buffer/driver
40108	4x4-bit (tristate) synchronous triple-port register file
40109	Quad level shifter
40110	Up/Down Counter-Latch-Decoder-Driver
40116	8-bit bidirectional CMOS-to-TTL level converter
40117	Programmable dual 4-bit terminator
40147	10-line to 4-line [BCD] priority encoder
40160	Decade counter/asynchronous clear
40161	Binary counter/asynchronous clear
40162	4-bit synchronous decade counter with load, reset, and ripple carry output
40163	4-bit synchronous binary counter with load, reset, and ripple carry output
40174	Hex D-type flip-flop with reset; positive-edge trigger
40175	Quad D-type flip-flop with reset; positive-edge trigger
40181	4-bit 16-function arithmetic logic unit (ALU)
40192	Presettable 4-bit BCD up/down counter



LOGIK – CMOS – ÜBERSICHT TEIL 3

- 40193 Presettable 4-bit binary up/down counter
- 40194 4-bit universal bidirectional with asynchronous master reset
- 40195 4-bit universal shift register
- 40208 4×4 -bit (tristate) synchronous triple-port register file
- 40240 Buffer/Line driver; Inverting (tristate)
- 40244 Buffer/Line Driver; Non-Inverting (tristate)
- 40245 Octuple bus transceiver; (tristate) outputs,
- 40257 Quad 2-Line-to-1-Line Data Selector/Multiplexer (tristate)
- 40373 Octal D-Type Transparent latch (tristate)
- 40374 Octal D-type flip-flop; positive-edge trigger (tristate)

LOGIK - CMOS

4000	4001	4002
CD4000BMS	CD4001BMS	CD4002BMS
4025	4066	
CD4025BMS	Quad Analog Switch	



SPEICHER – EPROM 8 BIT – Teil 1

1702 256 x 8 TOP VIEW	2704 512 x 8 (+5 / -5 / 12V) *2708 = A₉ 2704 = V_{SS}	2708 EPROM 1k x 8 (+5 / -5 / 12V) *2708 = A₉ 2704 = V_{SS}																														
2716 EPROM 2k x 8 M2716	TMS2516 EPROM 2k x 8 <table><tr><th colspan="2">PIN NOMENCLATURE</th></tr><tr><td>A(N)</td><td>Address inputs</td></tr><tr><td>CS</td><td>Chip Select</td></tr><tr><td>PD/PGM</td><td>Power Down/Program</td></tr><tr><td>Q(N)</td><td>Input/Output</td></tr><tr><td>VCC</td><td>+5 V Power Supply</td></tr><tr><td>Vpp</td><td>+25 V Power Supply</td></tr><tr><td>VSS</td><td>0 V Ground</td></tr></table>	PIN NOMENCLATURE		A(N)	Address inputs	CS	Chip Select	PD/PGM	Power Down/Program	Q(N)	Input/Output	VCC	+5 V Power Supply	Vpp	+25 V Power Supply	VSS	0 V Ground	TMS2716 EPROM 2k x 8 (+5 / -5 / 12V)														
PIN NOMENCLATURE																																
A(N)	Address inputs																															
CS	Chip Select																															
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TMS2532 EPROM 4k x 8 <table><tr><th colspan="2">PIN NOMENCLATURE</th></tr><tr><td>A(N)</td><td>Address inputs</td></tr><tr><td>PD/PGM</td><td>Power Down/Program</td></tr><tr><td>Q(N)</td><td>Input/Output</td></tr><tr><td>VCC</td><td>+5 V Power Supply</td></tr><tr><td>Vpp</td><td>+25 V Power Supply</td></tr><tr><td>VSS</td><td>0 V Ground</td></tr></table>	PIN NOMENCLATURE		A(N)	Address inputs	PD/PGM	Power Down/Program	Q(N)	Input/Output	VCC	+5 V Power Supply	Vpp	+25 V Power Supply	VSS	0 V Ground	2732 EPROM 4k x 8 M2732A	TMS2564 EPROM 8k x 8 ¹V_{CC} may be connected to pin 26 for 24-pin ROM compatibility. <table><tr><th colspan="2">PIN NOMENCLATURE</th></tr><tr><td>A(N)</td><td>Address inputs</td></tr><tr><td>CS(N)</td><td>Chip Selects</td></tr><tr><td>PD/PGM</td><td>Power Down/Program</td></tr><tr><td>Q(N)</td><td>Input/Output</td></tr><tr><td>VCC</td><td>+5 V Power Supply</td></tr><tr><td>Vpp</td><td>+25 V Power Supply</td></tr><tr><td>VSS</td><td>0 V Ground</td></tr></table>	PIN NOMENCLATURE		A(N)	Address inputs	CS(N)	Chip Selects	PD/PGM	Power Down/Program	Q(N)	Input/Output	VCC	+5 V Power Supply	Vpp	+25 V Power Supply	VSS	0 V Ground
PIN NOMENCLATURE																																
A(N)	Address inputs																															
PD/PGM	Power Down/Program																															
Q(N)	Input/Output																															
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VCC	+5 V Power Supply																															
Vpp	+25 V Power Supply																															
VSS	0 V Ground																															



SPEICHER – EPROM 8 BIT – Teil 2

27x64	27x128	27x256
EPROM 8k x 8 Pinout for 27x64 EPROM (M2764A): V_{PP} [1] 28 [V_{CC} A12 [2] 27 [P A7 [3] 26 [NC A6 [4] 25 [A8 A5 [5] 24 [A9 A4 [6] 23 [A11 A3 [7] 22 [G A2 [8] 21 [A10 A1 [9] 20 [E A0 [10] 19 [Q7 Q0 [11] 18 [Q6 Q1 [12] 17 [Q5 Q2 [13] 16 [Q4 V_{SS} [14] 15 [Q3	EPROM 16k x 8 Pinout for 27x128 EPROM: V_{PP} [1] 28 [V_{CC} A12 [2] 27 [P A7 [3] 26 [A13 A6 [4] 25 [A8 A5 [5] 24 [A9 A4 [6] 23 [A11 A3 [7] 22 [G A2 [8] 21 [A10 A1 [9] 20 [E A0 [10] 19 [Q7 Q0 [11] 18 [Q6 Q1 [12] 17 [Q5 Q2 [13] 16 [Q4 V_{SS} [14] 15 [Q3	EPROM 32k x 8 Pinout for 27x256 EPROM: V_{PP} [1] 28 [V_{CC} A12 [2] 27 [A14 A7 [3] 26 [A13 A6 [4] 25 [A8 A5 [5] 24 [A9 A4 [6] 23 [A11 A3 [7] 22 [G A2 [8] 21 [A10 A1 [9] 20 [E A0 [10] 19 [Q7 Q0 [11] 18 [Q6 Q1 [12] 17 [Q5 Q2 [13] 16 [Q4 V_{SS} [14] 15 [Q3
27x512	27x010	27C301 / 27C1000
EPROM 64k x 8 Pinout for 27x512 EPROM (M27C512): A15 [1] 28 [V_{CC} A12 [2] 27 [A14 A7 [3] 26 [A13 A6 [4] 25 [A8 A5 [5] 24 [A9 A4 [6] 23 [A11 A3 [7] 22 [G A2 [8] 21 [A10 A1 [9] 20 [E A0 [10] 19 [Q7 Q0 [11] 18 [Q6 Q1 [12] 17 [Q5 Q2 [13] 16 [Q4 V_{SS} [14] 15 [Q3	EPROM 128k x 8 Pinout for 27x010 EPROM (M27C1001): V_{PP} [1] 32 [V_{CC} A16 [2] 31 [P A15 [3] 30 [NC A12 [4] 29 [A14 A7 [5] 28 [A13 A6 [6] 27 [A8 A5 [7] 26 [A9 A4 [8] 25 [A11 A3 [9] 24 [G A2 [10] 23 [A10 A1 [11] 22 [E A0 [12] 21 [Q7 Q0 [13] 20 [Q6 Q1 [14] 19 [Q5 Q2 [15] 18 [Q4 V_{SS} [16] 17 [Q3	EPROM 128k x 8 non JEDEC Pinout for 27C301 / 27C1000 EPROM: V_{PP} [1] 32 [V_{CC} OE [2] 31 [PGM A15 [3] 30 [NC A12 [4] 29 [A14 A7 [5] 28 [A13 A6 [6] 27 [A8 A5 [7] 26 [A9 A4 [8] 25 [A11 A3 [9] 24 [A16 A2 [10] 23 [A10 A1 [11] 22 [CE A0 [12] 21 [Q7 Q0 [13] 20 [Q6 Q1 [14] 19 [Q5 Q2 [15] 18 [Q4 GND [16] 17 [Q3
27x020 / 27C2001	27C040 / 27C4001	27C080
EPROM 256k x 8 Pinout for 27x020 / 27C2001 EPROM (M27C2001): V_{PP} [1] 32 [V_{CC} A16 [2] 31 [P A15 [3] 30 [A17 A12 [4] 29 [A14 A7 [5] 28 [A13 A6 [6] 27 [A8 A5 [7] 26 [A9 A4 [8] 25 [A11 A3 [9] 24 [G A2 [10] 23 [A10 A1 [11] 22 [E A0 [12] 21 [Q7 Q0 [13] 20 [Q6 Q1 [14] 19 [Q5 Q2 [15] 18 [Q4 V_{SS} [16] 17 [Q3	EPROM 512k x 8 Pinout for 27C040 / 27C4001 EPROM: V_{PP} [1] 32 [V_{CC} A16 [2] 31 [A18 A15 [3] 30 [A17 A12 [4] 29 [A14 A7 [5] 28 [A13 A6 [6] 27 [A8 A5 [7] 26 [A9 A4 [8] 25 [A11 A3 [9] 24 [OE A2 [10] 23 [A10 A1 [11] 22 [CE/PGM A0 [12] 21 [Q7 Q0 [13] 20 [Q6 Q1 [14] 19 [Q5 Q2 [15] 18 [Q4 GND [16] 17 [Q3	EPROM 1M x 8 Pinout for 27C080 EPROM: A19 [1] 32 [V_{CC} A16 [2] 31 [A18 A15 [3] 30 [A17 A12 [4] 29 [A14 A7 [5] 28 [A13 A6 [6] 27 [A8 A5 [7] 26 [A9 A4 [8] 25 [A11 A3 [9] 24 [OE/V_{PP} A2 [10] 23 [A10 A1 [11] 22 [CE A0 [12] 21 [Q7 Q0 [13] 20 [Q6 Q1 [14] 19 [Q5 Q2 [15] 18 [Q4 GND [16] 17 [Q3



SPEICHER – EPROM 16 BIT JEDEC

27C1024	27C2048 / 27C202	27C4096 / 27C4002 / 27C240 / 27C402
64k x 16	128k x 16	256k x 16

SPEICHER – FLASH PROM 8 BIT

29F010	29F020/002	29F040
Flash 128k x 8	Flash 256k x 8	Flash 512k x 8 Nicht EPROM kompatibel!



SPEICHER – EPROM 16 BIT MASK-PROM kompatibel

MX27C1100	MX27C2100	MX27C4100 / HN27C4000
64k x 16 / 128k x 8	128k x 16 / 256k x 8	256k x 16 / 512k x 8
27C800	27C160	27C322
512k x 16 / 1M x 8	1M x 16 / 2M x 8	2M x 16



SPEICHER – MASK PROM

MB831000		MB832000		MB834000	
128k x 8		256k x 8		512k x 8	
TC538200		TC5316200		TC5332202	
512k x 16 / 1M x 8		1M x 16 / 2M x 8		2M x 16 / 4M x 8	
TC538200P		TC5316200AP		TC5332202AP	
HY23C64100 64 Mbit MPROM					
4M X 16					



SPEICHER – EPROM ÜBERSICHT 8 Bit

27C080	27C040	27C020	27C010	27C000	1M	05FFFF	12,75V	27C080	27C040	27C020	27C010	27C000	www.wolfgangrobel.de	27C080
A18	A16	A15	A14	A13	512k	07FFFF	12,75V	27C080	27C040	27C020	27C010	27C000		27C080
A12	A11	A10	A9	A8	256k	03FFFF	12,75V	27C080	27C040	27C020	27C010	27C000		27C080
A7	A6	A5	A4	A3	128k	01FFFF	12,75V	27C080	27C040	27C020	27C010	27C000		27C080
A2	A1	A0	D0	D1	64k	00FFFF	12,75V	27C080	27C040	27C020	27C010	27C000		27C080
D2	D3	D4	D5	D6	32k	007FFF	12,75V	27C080	27C040	27C020	27C010	27C000		27C080
D7	D8	D9	D10	D11	16k	003FFF	12,75V	27C080	27C040	27C020	27C010	27C000		27C080
D12	D13	D14	D15	D16	8k	001FFF	25V	27C080	27C040	27C020	27C010	27C000		27C080
D17	D18	D19	D20	D21	4k	000FFF	25V	27C080	27C040	27C020	27C010	27C000		27C080
D22	D23	D24	D25	D26	2k	0007FF	25V	27C080	27C040	27C020	27C010	27C000		27C080
D27	D28	D29	D30	D31	1k	0003FF	25V	27C080	27C040	27C020	27C010	27C000		27C080
D32	D33	D34	D35	D36	512	0001FF	25V	27C080	27C040	27C020	27C010	27C000		27C080
D37	D38	D39	D40	D41	256	0000FF	48V	27C080	27C040	27C020	27C010	27C000		27C080
D42	D43	D44	D45	D46	32			27C080	27C040	27C020	27C010	27C000		27C080
D47	D48	D49	D50	D51	31			27C080	27C040	27C020	27C010	27C000		27C080
D52	D53	D54	D55	D56	30			27C080	27C040	27C020	27C010	27C000		27C080
D57	D58	D59	D60	D61	28			27C080	27C040	27C020	27C010	27C000		27C080
D62	D63	D64	D65	D66	27			27C080	27C040	27C020	27C010	27C000		27C080
D67	D68	D69	D70	D71	26			27C080	27C040	27C020	27C010	27C000		27C080
D72	D73	D74	D75	D76	25			27C080	27C040	27C020	27C010	27C000		27C080
D77	D78	D79	D80	D81	24			27C080	27C040	27C020	27C010	27C000		27C080
D82	D83	D84	D85	D86	23			27C080	27C040	27C020	27C010	27C000		27C080
D87	D88	D89	D90	D91	22			27C080	27C040	27C020	27C010	27C000		27C080
D92	D93	D94	D95	D96	21			27C080	27C040	27C020	27C010	27C000		27C080
D97	D98	D99	D100	D101	20			27C080	27C040	27C020	27C010	27C000		27C080
D102	D103	D104	D105	D106	19			27C080	27C040	27C020	27C010	27C000		27C080
D107	D108	D109	D110	D111	18			27C080	27C040	27C020	27C010	27C000		27C080
D112	D113	D114	D115	D116	17			27C080	27C040	27C020	27C010	27C000		27C080
D117	D118	D119	D120	D121	16			27C080	27C040	27C020	27C010	27C000		27C080
D122	D123	D124	D125	D126	15			27C080	27C040	27C020	27C010	27C000		27C080
D127	D128	D129	D130	D131	14			27C080	27C040	27C020	27C010	27C000		27C080
D132	D133	D134	D135	D136	13			27C080	27C040	27C020	27C010	27C000		27C080
D137	D138	D139	D140	D141	12			27C080	27C040	27C020	27C010	27C000		27C080
D142	D143	D144	D145	D146	11			27C080	27C040	27C020	27C010	27C000		27C080
D147	D148	D149	D150	D151	10			27C080	27C040	27C020	27C010	27C000		27C080
D152	D153	D154	D155	D156	9			27C080	27C040	27C020	27C010	27C000		27C080
D157	D158	D159	D160	D161	8			27C080	27C040	27C020	27C010	27C000		27C080
D162	D163	D164	D165	D166	7			27C080	27C040	27C020	27C010	27C000		27C080
D167	D168	D169	D170	D171	6			27C080	27C040	27C020	27C010	27C000		27C080
D172	D173	D174	D175	D176	5			27C080	27C040	27C020	27C010	27C000		27C080
D177	D178	D179	D180	D181	4			27C080	27C040	27C020	27C010	27C000		27C080
D182	D183	D184	D185	D186	3			27C080	27C040	27C020	27C010	27C000		27C080
D187	D188	D189	D190	D191	2			27C080	27C040	27C020	27C010	27C000		27C080
D192	D193	D194	D195	D196	1			27C080	27C040	27C020	27C010	27C000		27C080
D197	D198	D199	D200	D201				27C080	27C040	27C020	27C010	27C000		27C080
D202	D203	D204	D205	D206				27C080	27C040	27C020	27C010	27C000		27C080
D207	D208	D209	D210	D211				27C080	27C040	27C020	27C010	27C000		27C080
D212	D213	D214	D215	D216				27C080	27C040	27C020	27C010	27C000		27C080
D217	D218	D219	D220	D221				27C080	27C040	27C020	27C010	27C000		27C080
D222	D223	D224	D225	D226				27C080	27C040	27C020	27C010	27C000		27C080
D227	D228	D229	D230	D231				27C080	27C040	27C020	27C010	27C000		27C080
D232	D233	D234	D235	D236				27C080	27C040	27C020	27C010	27C000		27C080
D237	D238	D239	D240	D241				27C080	27C040	27C020	27C010	27C000		27C080
D242	D243	D244	D245	D246				27C080	27C040	27C020	27C010	27C000		27C080
D247	D248	D249	D250	D251				27C080	27C040	27C020	27C010	27C000		27C080
D252	D253	D254	D255	D256				27C080	27C040	27C020	27C010	27C000		27C080
D257	D258	D259	D260	D261				27C080	27C040	27C020	27C010	27C000		27C080
D262	D263	D264	D265	D266				27C080	27C040	27C020	27C010	27C000		27C080
D267	D268	D269	D270	D271				27C080	27C040	27C020	27C010	27C000		27C080
D272	D273	D274	D275	D276				27C080	27C040	27C020	27C010	27C000		27C080
D277	D278	D279	D280	D281				27C080	27C040	27C020	27C010	27C000		27C080
D282	D283	D284	D285	D286				27C080	27C040	27C020	27C010	27C000		27C080
D287	D288	D289	D290	D291				27C080	27C040	27C020	27C010	27C000		27C080
D292	D293	D294	D295	D296				27C080	27C040	27C020	27C010	27C000		27C080
D297	D298	D299	D300	D301				27C080	27C040	27C020	27C010	27C000		27C080
D302	D303	D304	D305	D306				27C080	27C040	27C020	27C010	27C000		27C080
D307	D308	D309	D310	D311				27C080	27C040	27C020	27C010	27C000		27C080
D312	D313	D314	D315	D316				27C080	27C040	27C020	27C010	27C000		27C080
D317	D318	D319	D320	D321				27C080	27C040	27C020	27C010	27C000		27C080
D322	D323	D324	D325	D326				27C080	27C040	27C020	27C010	27C000		27C080
D327	D328	D329	D330	D331				27C080	27C040	27C020	27C010	27C000		27C080
D332	D333	D334	D335	D336				27C080	27C040	27C020	27C010	27C000		27C080
D337	D338	D339	D340	D341				27C080	27C040	27C020	27C010	27C000		27C080
D342	D343	D344	D345	D346				27C080	27C040	27C020	27C010	27C000		27C080
D347	D348	D349	D350	D351				27C080	27C040	27C020	27C010	27C000		27C080
D352	D353	D354	D355	D356				27C080	27C040	27C020	27C010	27C000		27C080
D357	D358	D359	D360	D361				27C080	27C040	27C020	27C010	27C000		27C080
D362	D363	D364	D365	D366				27C080	27C040	27C020	27C010	27C000		27C080
D367	D368	D369	D370	D371				27C080	27C040	27C020	27C010	27C000		27C080
D372	D373	D374	D375	D376				27C080	27C040	27C020	27C010	27C000		27C080
D377	D378	D379	D380	D381				27C080	27C040	27C020	27C010	27C000		27C080
D382	D383	D384	D385	D386				27C080	27C040	27C020	27C010	27C000		27C080
D387	D388	D389	D390	D391				27C080	27C040	27C020	27C010	27C000		27C080
D392	D393	D394	D395	D396				27C080	27C040	27C020	27C010	27C000		27C080
D397	D398	D399	D400	D401				27C080	27C040	27C020	27C010	27C000		27C080
D402	D403	D404	D405	D406				27C080	27C040	27C020	27C010	27C000		27C080
D407	D408	D409	D410	D411				27C080	27C040	27C020	27C010	27C000		27C080
D412	D413	D414	D415	D416				27C080	27C040	27C020	27C010	27C000		27C080
D417	D418	D419	D420	D421				27C080	27C040	27C020	27C010	27C000		27C080
D422	D423	D424	D425	D426				27C080	27C040	27C020	27C010	27C000		27C080
D427	D428	D429	D430	D431				27C080	27C040	27C020	27C010	27C000		27C080
D432	D433	D434	D435	D436				27C080	27C040	27C020	27C010	27C000		27C080
D437	D438	D439	D440	D441				27C080	27C040	27C020	27C010	27C000		27C080
D442	D443	D444	D445	D446				27C080	27C040	27C020	27C010	27C000		27C080
D447	D448	D449	D45											



SPEICHER – EPROM ÜBERSICHT 16 Bit

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27C322	32M	27C160	16M	27C800	8M	27C4096	4M	27C2048	2M	27C1024	1M	42	40	41	Vcc	Vcc	PH	PH	A19	A18	A17	A16	A15	A14	A13	A12	A11	A10	A9	A8	A7	A6	A5	A4	A3	A2	A1	A0	E#	Vss	G#	D0	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14	D15	D16	D17	D18	D19	D20	D21	D22	D23	D24	D25	D26	D27	D28	D29	D30	D31	D32	D33	D34	D35	D36	D37	D38	D39	D40	D41	D42	D43	D44	D45	D46	D47	D48	D49	D50	D51	D52	D53	D54	D55	D56	D57	D58	D59	D60	D61	D62	D63	D64	D65	D66	D67	D68	D69	D70	D71	D72	D73	D74	D75	D76	D77	D78	D79	D80	D81	D82	D83	D84	D85	D86	D87	D88	D89	D90	D91	D92	D93	D94	D95	D96	D97	D98	D99	D100	D101	D102	D103	D104	D105	D106	D107	D108	D109	D110	D111	D112	D113	D114	D115	D116	D117	D118	D119	D120	D121	D122	D123	D124	D125	D126	D127	D128	D129	D130	D131	D132	D133	D134	D135	D136	D137	D138	D139	D140	D141	D142	D143	D144	D145	D146	D147	D148	D149	D150	D151	D152	D153	D154	D155	D156	D157	D158	D159	D160	D161	D162	D163	D164	D165	D166	D167	D168	D169	D170	D171	D172	D173	D174	D175	D176	D177	D178	D179	D180	D181	D182	D183	D184	D185	D186	D187	D188	D189	D190	D191	D192	D193	D194	D195	D196	D197	D198	D199	D200	D201	D202	D203	D204	D205	D206	D207	D208	D209	D210	D211	D212	D213	D214	D215	D216	D217	D218	D219	D220	D221	D222	D223	D224	D225	D226	D227	D228	D229	D230	D231	D232	D233	D234	D235	D236	D237	D238	D239	D240	D241	D242	D243	D244	D245	D246	D247	D248	D249	D250	D251	D252	D253	D254	D255	D256	D257	D258	D259	D260	D261	D262	D263	D264	D265	D266	D267	D268	D269	D270	D271	D272	D273	D274	D275	D276	D277	D278	D279	D280	D281	D282	D283	D284	D285	D286	D287	D288	D289	D290	D291	D292	D293	D294	D295	D296	D297	D298	D299	D300	D301	D302	D303	D304	D305	D306	D307	D308	D309	D310	D311	D312	D313	D314	D315	D316	D317	D318	D319	D320	D321	D322	D323	D324	D325	D326	D327	D328	D329	D330	D331	D332	D333	D334	D335	D336	D337	D338	D339	D340	D341	D342	D343	D344	D345	D346	D347	D348	D349	D350	D351	D352	D353	D354	D355	D356	D357	D358	D359	D360	D361	D362	D363	D364	D365	D366	D367	D368	D369	D370	D371	D372	D373	D374	D375	D376	D377	D378	D379	D380	D381	D382	D383	D384	D385	D386	D387	D388	D389	D390	D391	D392	D393	D394	D395	D396	D397	D398	D399	D400	D401	D402	D403	D404	D405	D406	D407	D408	D409	D410	D411	D412	D413	D414	D415	D416	D417	D418	D419	D420	D421	D422	D423	D424	D425	D426	D427	D428	D429	D430	D431	D432	D433	D434	D435	D436	D437	D438	D439	D440	D441	D442	D443	D444	D445	D446	D447	D448	D449	D450	D451	D452	D453	D454	D455	D456	D457	D458	D459	D460	D461	D462	D463	D464	D465	D466	D467	D468	D469	D470	D471	D472	D473	D474	D475	D476	D477	D478	D479	D480	D481	D482	D483	D484	D485	D486	D487	D488	D489	D490	D491	D492	D493	D494	D495	D496	D497	D498	D499	D500	D501	D502	D503	D504	D505	D506	D507	D508	D509	D510	D511	D512	D513	D514	D515	D516	D517	D518	D519	D520	D521	D522	D523	D524	D525	D526	D527	D528	D529	D530	D531	D532	D533	D534	D535	D536	D537	D538	D539	D540	D541	D542	D543	D544	D545	D546	D547	D548	D549	D550	D551	D552	D553	D554	D555	D556	D557	D558	D559	D560	D561	D562	D563	D564	D565	D566	D567	D568	D569	D570	D571	D572	D573	D574	D575	D576	D577	D578	D579	D580	D581	D582	D583	D584	D585	D586	D587	D588	D589	D590	D591	D592	D593	D594	D595	D596	D597	D598	D599	D600	D601	D602	D603	D604	D605	D606	D607	D608	D609	D610	D611	D612	D613	D614	D615	D616	D617	D618	D619	D620	D621	D622	D623	D624	D625	D626	D627	D628	D629	D630	D631	D632	D633	D634	D635	D636	D637	D638	D639	D640	D641	D642	D643	D644	D645	D646	D647	D648	D649	D650	D651	D652	D653	D654	D655	D656	D657	D658	D659	D660	D661	D662	D663	D664	D665	D666	D667	D668	D669	D670	D671	D672	D673	D674	D675	D676	D677	D678	D679	D680	D681	D682	D683	D684	D685	D686	D687	D688	D689	D690	D691	D692	D693	D694	D695	D696	D697	D698	D699	D700	D701	D702	D703	D704	D705	D706	D707	D708	D709	D710	D711	D712	D713	D714	D715	D716	D717	D718	D719	D720	D721	D722	D723	D724	D725	D726	D727	D728	D729	D730	D731	D732	D733	D734	D735	D736	D737	D738	D739	D740	D741	D742	D743	D744	D745	D746	D747	D748	D749	D750	D751	D752	D753	D754	D755	D756	D757	D758	D759	D760	D761	D762	D763	D764	D765	D766	D767	D768	D769	D770	D771	D772	D773	D774	D775	D776	D777	D778	D779	D780	D781	D782	D783	D784	D785	D786	D787	D788	D789	D790	D791	D792	D793	D794	D795	D796	D797	D798	D799	D800	D801	D802	D803	D804	D805	D806	D807	D808	D809	D810	D811	D812	D813	D814	D815	D816	D817	D818	D819	D820	D821	D822	D823	D824	D825	D826	D827	D828	D829	D830	D831	D832	D833	D834	D835	D836	D837	D838	D839	D840	D841	D842	D843	D844	D845	D846	D847	D848	D849	D850	D851	D852	D853	D854	D855	D856	D857	D858	D859	D860	D861	D862	D863	D864	D865	D866	D867	D868	D869	D870	D871	D872	D873	D874	D875	D876	D877	D878	D879	D880	D881	D882	D883	D884	D885	D886	D887	D888	D889	D890	D891	D892	D893	D894	D895	D896	D897	D898	D899	D900	D901	D902	D903	D904	D905	D906	D907	D908	D909	D910	D911	D912	D913	D914	D915	D916	D917	D918	D919	D920	D921	D922	D923	D924	D925	D926	D927	D928	D929	D930	D931	D932	D933	D934	D935	D936	D937	D938	D939	D940	D941	D942	D943	D944	D945	D946	D947	D948	D949	D950	D951	D952	D953	D954	D955	D956	D957	D958	D959	D960	D961	D962	D963	D964	D965	D966	D967	D968	D969	D970	D971	D972	D973	D974	D975	D976	D977	D978	D979	D980	D981	D982	D983	D984	D985	D986	D987	D9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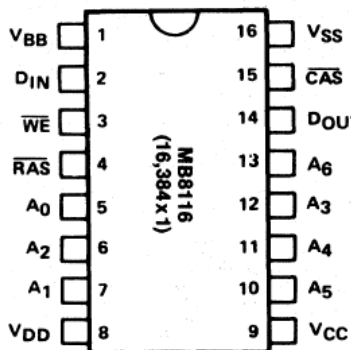
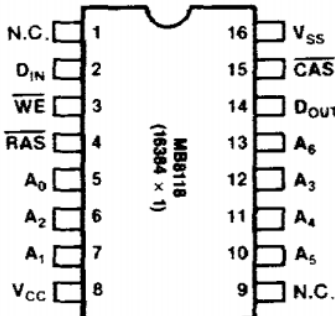
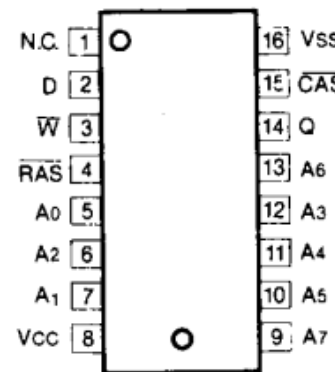
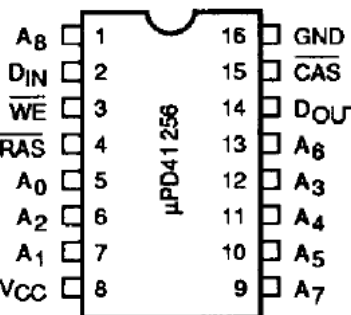
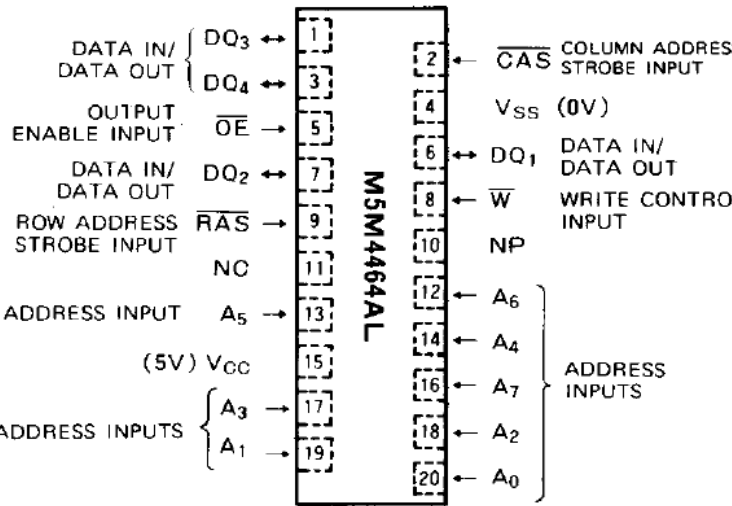
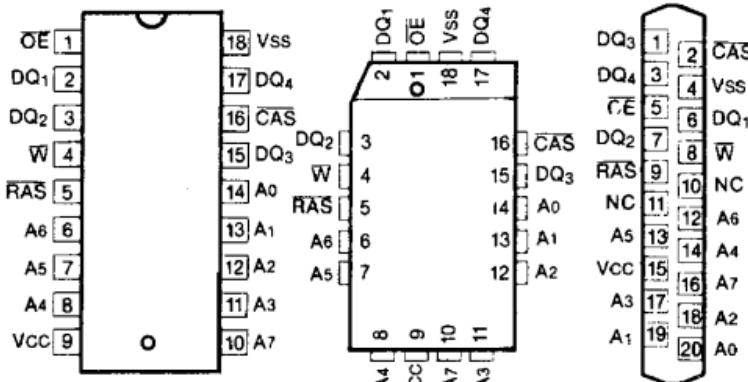


SPEICHER – Statisches RAM (SRAM)

2114	2164	6116
1024 x 4 SRAM	65536 x 1 DRAM	2k x 8 SRAM
6164	61256	61512
8k x 8 SRAM	32k x 8 SRAM	64k x 8 SRAM
93410	UM6114	
256 x 1 SRAM	1k x 4 SRAM	



SPEICHER – Dynamisches RAM (DRAM)

MB8116 TMS4116	MB8118	4164
16kx1 DRAM Triple supply	16kx1 DRAM Single supply	64kx1 DRAM
		
μPD41256	M5M4464AL	
256kx1 DRAM	64kx4 DRAM	
	 NC: NO CONNECTION NP: NO PIN	
Outline 20P5L-A(ZIP)		
61464		
64k x 4 DRAM		
• KM41464AP • KM41464AJ • KM41464AZ 		



SPEICHER – PROM BIPOLAR – Teil 1

N82S123 / MMI 6331 / IM5610 32 x 8 TS 	N82S126 / 7610 256 x 4 OC 	N82S129 / MMI 6301 / MMI 63s141 / IM5623 1k x 4 TS
N82S131 / AM27S13 / 93466 512 x 4 TS 	N82S137 / 63S441 / HM1-7643-5 1024 x 4 TS 	N82S141 / MMI-6341-1J 512 x 8 TS
N82s153 / PLS153 PLA 80x42x10 	N82S181 / HM1-7631-5 1024 x 8 TS 	N82S185 / HM1-7685-5 2048 x 4 TS



SPEICHER – PROM BIPOLAR – Teil 2

N82S191 / AM27S191	N82S195 / HM1-76165-5	N82S23
2048 x 8	4096 x 4	32 x 8 OC
A₇ 1, A₆ 2, A₅ 3, A₄ 4, A₃ 5, A₂ 6, A₁ 7, A₀ 8, D₇ 9, D₆ 10, D₅ 11, GND 12, VCC 24, A₉ 23, A₈ 22, A₁₀ 21, CE₁ 20, CE₂ 19, CE₃ 18, Q₉ 17, Q₇ 16, Q₆ 15, Q₅ 14, Q₄ 13	A₉ 1, A₇ 2, A₆ 3, A₅ 4, A₄ 5, A₃ 6, A₂ 7, A₁ 8, A₀ 9, GND 10, VCC 20, A₈ 19, A₁₀ 18, A₁₁ 17, CE₁ 16, CE₂ 15, Q₁ 14, Q₂ 13, Q₃ 12, Q₄ 11	O₇ 1, O₆ 2, O₅ 3, O₄ 4, O₃ 5, O₂ 6, O₁ 7, GND 8, VCC 16, CE 15, A₄ 14, A₃ 13, A₂ 12, A₁ 11, A₀ 10, O₈ 9

8080		8085	
INTEL 8 Bit CPU		8 Bit CPU	
(GND)	A₁₀ 1 V_{SS} 2 D₄ 3 D₅ 4 D₆ 5 D₇ 6 D₃ 7 D₂ 8 D₁ 9 D₀ 10 (-5V) V_{BB} 11 Reset 12 Hold 13 INT 14 Phase₂ 15 INTE 16 DBIN 17 WR 18 Sync 19 (+5V) V_{CC} 20	40 A₁₁ 39 A₁₄ 38 A₁₃ 37 A₁₂ 36 A₁₅ 35 A₉ 34 A₈ 33 A₇ 32 A₆ 31 A₅ 30 A₄ 29 A₃ 28 V_{DD} (+12V) 27 A₂ 26 A₁ 25 A₀ 24 Wait 23 Ready 22 Phase₁ 21 HLDA	
Z80		8088	
ZILOG 8 Bit CPU		Intel 8/16-Bit CPU	
A₁₁ 1 A₁₂ 2 A₁₃ 3 A₁₄ 4 A₁₅ 5 CLK 6 D₄ 7 D₃ 8 D₅ 9 D₆ 10 +5V 11 D₂ 12 D₇ 13 D₀ 14 D₁ 15 INT 16 NMI 17 Halt 18 MREQ 19 I/OREQ 20	40 A₁₀ 39 A₉ 38 A₈ 37 A₇ 36 A₆ 35 A₅ 34 A₄ 33 A₃ 32 A₂ 31 A₁ 30 A₀ 29 GND 28 RFSH 27 M1 26 Reset 25 BUSREQ 24 Wait 23 BUSACK 22 WR 21 RD	GND 1 A14 2 A13 3 A12 4 A11 5 A10 6 A9 7 A8 8 AD7 9 AD6 10 AD5 11 AD4 12 AD3 13 AD2 14 AD1 15 AD0 16 NMI 17 INTR 18 CLK 19 GND 20	40 V_{CC} 39 A15 38 A16/S3 37 A17/S4 36 A18/S5 35 A19/S6 34 SS0 (HIGH) 33 MN/MX 32 RD 31 HOLD (RQ/GT0) 30 HLDA (RQ/GT1) 29 WR (LOCK) 28 IO/M (S2) 27 DT/R (S1) 26 DEN (S0) 25 ALE (QS0) 24 INTA (QS1) 23 TEST 22 READY 21 RESET



PROZESSOREN 8 BIT – Teil 2

6502		6510	
MOS 8 Bit CPU		MOS 8 Bit CPU	
6522		6532	
VIA – Versatile Interface Adapter		RIOT – RAM-IO-Timer	
R6522 Pin Configuration			

6800				8051			
MOTOROLA 8 Bit CPU				Microcontroller 8 Bit			
V _{SS}	1	40	Reset	P1.0	1	40	V _{CC}
Halt	2	39	TSC	P1.1	2	39	P0.0/AD ₀
Phase ₁	3	38	Not connected	P1.2	3	38	P0.1/AD ₁
IRQ	4	37	Phase ₂	P1.3	4	37	P0.2/AD ₂
VMA	5	36	DBE	P1.4	5	36	P0.3/AD ₃
NMI	6	35	Not connected	P1.5	6	35	P0.4/AD ₄
BA	7	34	R/W	P1.6	7	34	P0.5/AD ₅
V _{CC}	8	33	D ₀	P1.7	8	33	P0.6/AD ₆
A ₀	9	32	D ₁	RST/VPD	9	32	P0.7/AD ₇
A ₁	10	31	D ₂	RxD/P3.0	10	31	EA
A ₂	11	30	D ₃	TxD/P3.1	11	30	ALE
A ₃	12	29	D ₄	INT ₀ /P3.2	12	29	PSEN
A ₄	13	28	D ₅	INT ₁ /P3.3	13	28	P2.7/A ₁₅
A ₅	14	27	D ₆	T ₀ /P3.4	14	27	P2.6/A ₁₄
A ₆	15	26	D ₇	T ₁ /P3.5	15	26	P2.5/A ₁₃
A ₇	16	25	A ₁₅	WR/P3.6	16	25	P2.4/A ₁₂
A ₈	17	24	A ₁₄	RD/P3.7	17	24	P2.3/A ₁₁
A ₉	18	23	A ₁₃	XTAL ₂	18	23	P2.2/A ₁₀
A ₁₀	19	22	A ₁₂	XTAL ₁	19	22	P2.1/A ₉
A ₁₁	20	21	V _{SS}	V _{SS}	20	21	P2.0/A ₈
8048				TMS1100			
Microcontroller 8 Bit				TI Microcontroller 4 Bit			
T0	1	40	V _{CC}	R8	1	28	R7
XTAL ₁	2	39	T1	R9	2	27	R6
XTAL ₂	3	38	P2 ₇	R10	3	26	R5
Reset	4	37	P2 ₆	V _{DD}	4	25	R4
SS	5	36	P2 ₅	K1	5	24	R3
INT	6	35	P2 ₄	K2	6	23	R2
EA	7	34	P1 ₇	K4	7	22	R1
RD	8	33	P1 ₆	K8	8	21	R0
PSEN	9	32	P1 ₅	Init	9	20	V _{SS}
WR	10	31	P1 ₄	O7	10	19	OSC2
ALE	11	30	P1 ₃	O6	11	18	OSC1
DB ₀	12	29	P1 ₂	O5	12	17	O0
DB ₁	13	28	P1 ₁	O4	13	16	O1
DB ₂	14	27	P1 ₀	O3	14	15	O2
DB ₃	15	26	V _{DD}				
DB ₄	16	25	PROG				
DB ₅	17	24	P2 ₃				
DB ₆	18	23	P2 ₂				
DB ₇	19	22	P2 ₁				
V _{SS}	20	21	P2 ₀				



PROZESSOREN 16 BIT

MOTOROLA 16 Bit CPU

Pin	Signal	Pin	Signal
1	D ₄	33	A ₅
2	D ₃	34	A ₆
3	D ₂	35	A ₇
4	D ₁	36	A ₈
5	D ₀	37	A ₉
6	AS	38	A ₁₀
7	UDS	39	A ₁₁
8	LDS	40	A ₁₂
9	R/W	41	A ₁₃
10	DTACK	42	A ₁₄
11	BG	43	A ₁₅
12	BGACK	44	A ₁₆
13	BR	45	A ₁₇
14	V _{CC}	46	A ₁₈
15	CLK	47	A ₁₉
16	GND	48	A ₂₀
17	HALT	49	V _{CC}
18	Reset	50	A ₂₁
19	VMA	51	A ₂₂
20	E	52	A ₂₃
21	VPA	53	GND
22	BERR	54	D ₁₅
23	IPL2	55	D ₁₄
24	IPL1	56	D ₁₃
25	IPL0	57	D ₁₂
26	FC2	58	D ₁₁
27	FC1	59	D ₁₀
28	FC0	60	D ₉
29	A ₁	61	D ₈
30	A ₂	62	D ₇
31	A ₃	63	D ₆
32	A ₄	64	D ₅

TI 16 Bit CPU

Pin	Signal	Pin	Signal
1	V _{BB}	33	IC ₃
2	V _{CC}	34	IC ₂
3	Wait	35	IC ₁
4	Load	36	IC ₀
5	HOLDA	37	Not connected
6	Reset	38	Not connected
7	IAQ	39	Not connected
8	Phase 1	40	V _{SS}
9	Phase 2	41	D ₀
10	A ₁₄	42	D ₁
11	A ₁₃	43	D ₂
12	A ₁₂	44	D ₃
13	A ₁₁	45	D ₄
14	A ₁₀	46	D ₅
15	A ₉	47	D ₆
16	A ₈	48	D ₇
17	A ₇	49	D ₈
18	A ₆	50	D ₉
19	A ₅	51	D ₁₀
20	A ₄	52	D ₁₁
21	A ₃	53	D ₁₂
22	A ₂	54	D ₁₃
23	A ₁	55	D ₁₄
24	A ₀	56	D ₁₅
25	Phase 4	57	Not connected
26	V _{SS}	58	Not connected
27	V _{DD}	59	V _{CC}
28	Phase 3	60	CRUCLK
29	DBIN	61	WE
30	CRUOUT	62	Ready
31	CRUIN	63	MEMEN
32	INTREQ	64	Hold

Quelle: <http://www.cpu-world.com/info/Pinouts/>



PROZESSOREN Sonstige

Z8002	6809
ZILOG Z8000 16-Bit CPU	Motorola 8-Bit CPU
HD46505	2C03B
CRT Controller	PAL Grafik Controller



Audio Generatoren

AY-3-8910 / YM2149	YM2151
Audio Generator + Port Top View	FM Sound Generator • Top View
YM3012	MSM5205
Stereo DAC	Speech Synthesizer
SN76489	
Sound Generator	

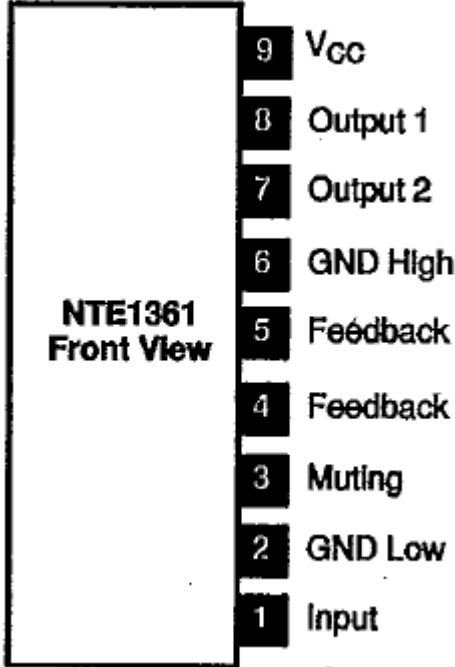
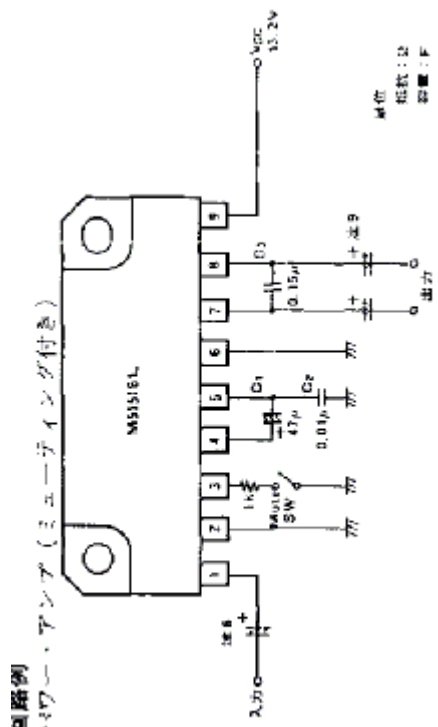
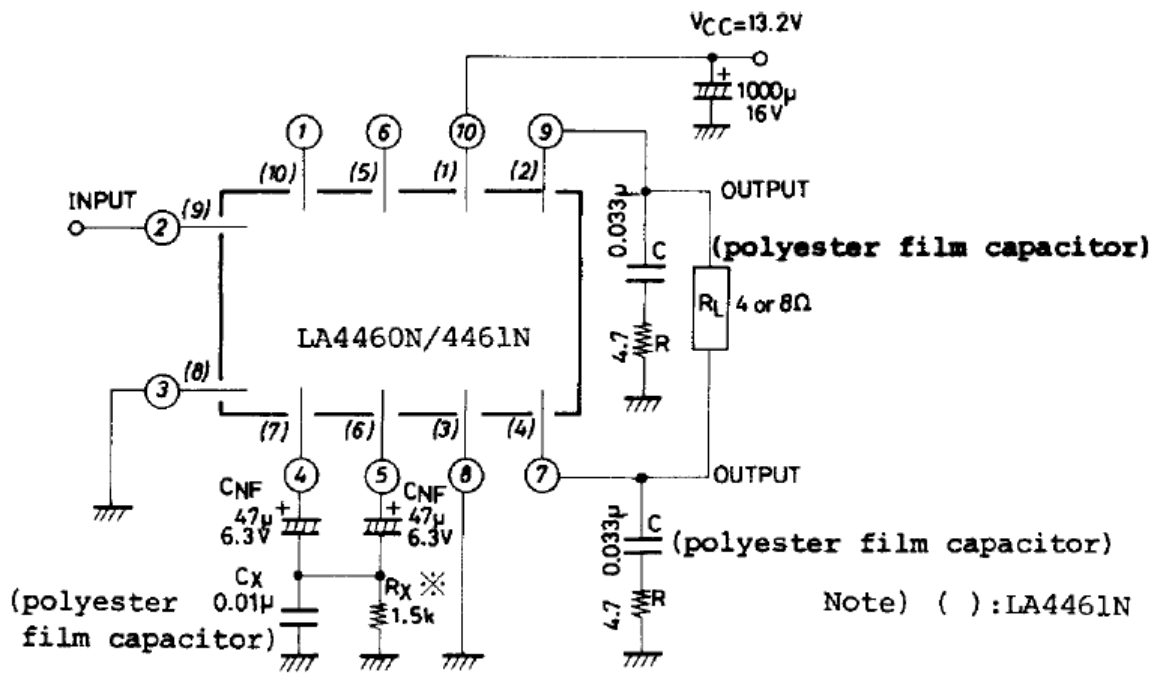


Analog ICs und Audio-Verstärker

LM324 Quad OP-AMP	LM380 Amp 2,5W
NE555 Timer / Multivibrator	NE556 Dual Timer / Multivibrator
μPC1181/1182 12V 9W	LA6358 Dual-OPAMP LA6358N



Analog ICs und Audio-Verstärker – Teil 2

NTE1361	M51516L
12W 18V  NTE1361 Front View	12W 18V  M51516L
LA4460/4461	
12W max. 18V  LA4460N/4461N $V_{CC}=13.2V$ $1000\mu F$ 16V $0.033\mu F$ C (polyester film capacitor) 4.7Ω R R_L 4 or 8Ω $0.033\mu F$ C (polyester film capacitor) 4.7Ω R C_NF 47μF 6.3V C_X 0.01μF (polyester film capacitor) R_X 1.5k Note) ():LA4461N R_X is for starting time adjustment.	



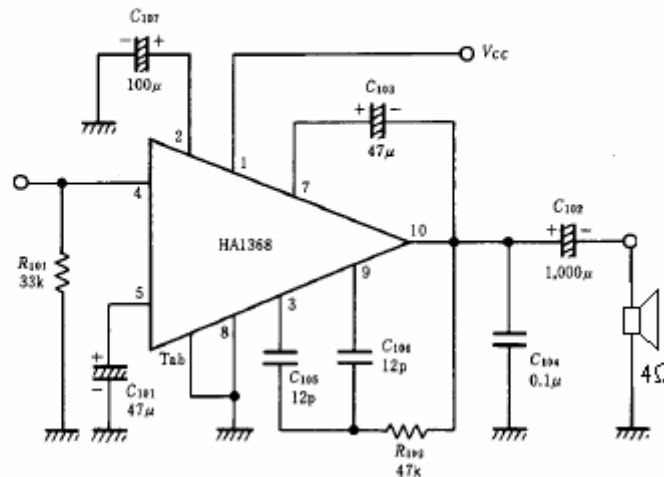
Analog ICs und Audio-Verstärker – Teil 3

HA1368

5,3W

HA 1368 = Standard Pinout

HA 1368/R = Reverse Pinout



TDA1510

24W Bridge Amplifier

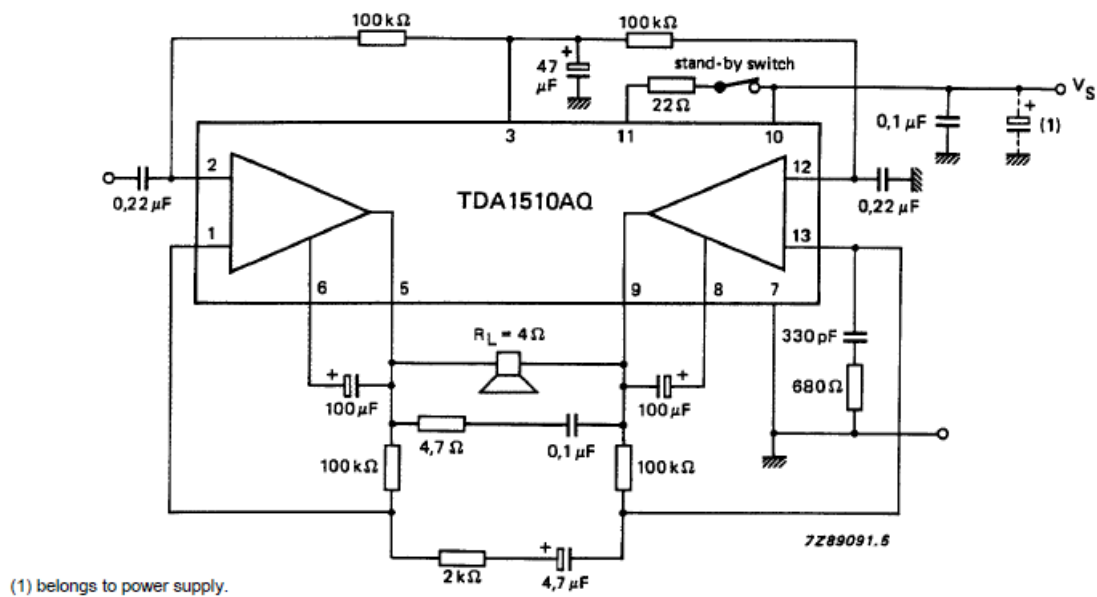


Fig.3 Test and application circuit; Bridge Tied Load (BTL).