

1978 DATA CATALOG



GENERAL INSTRUMENT CORPORATION • MICROELECTRONICS

JFA PHILIPSE



1978 DATA CATALOG

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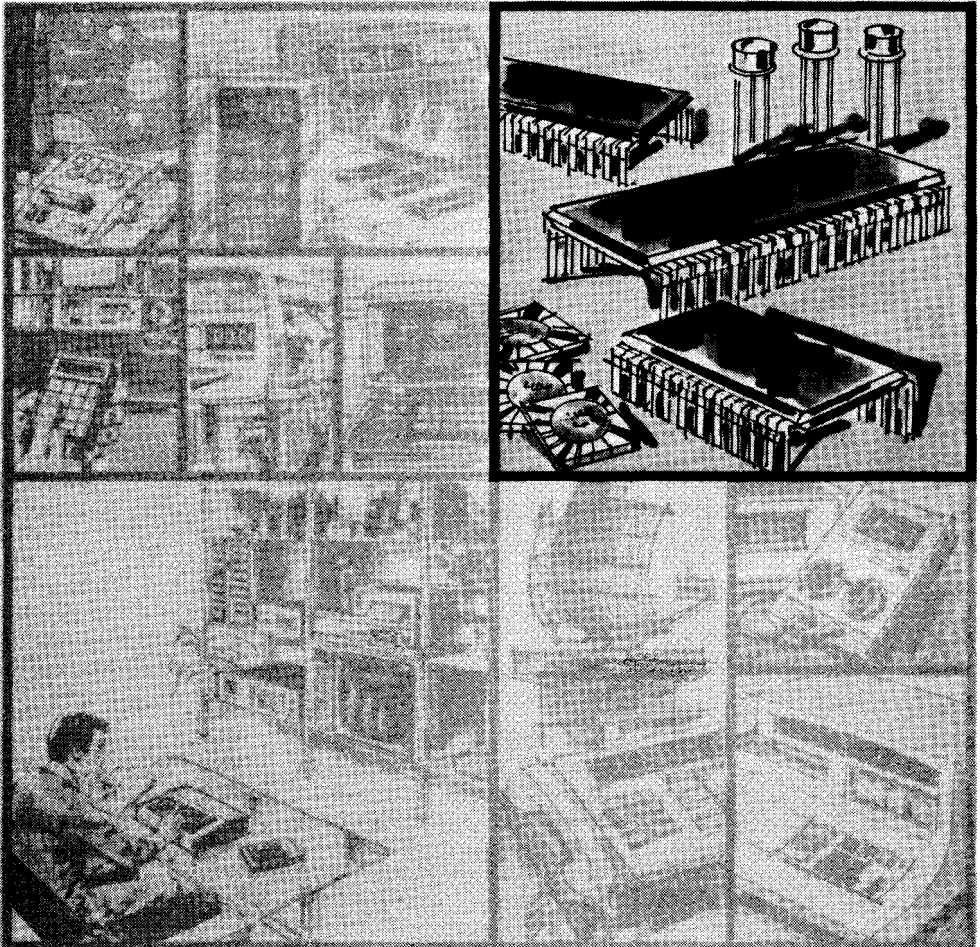
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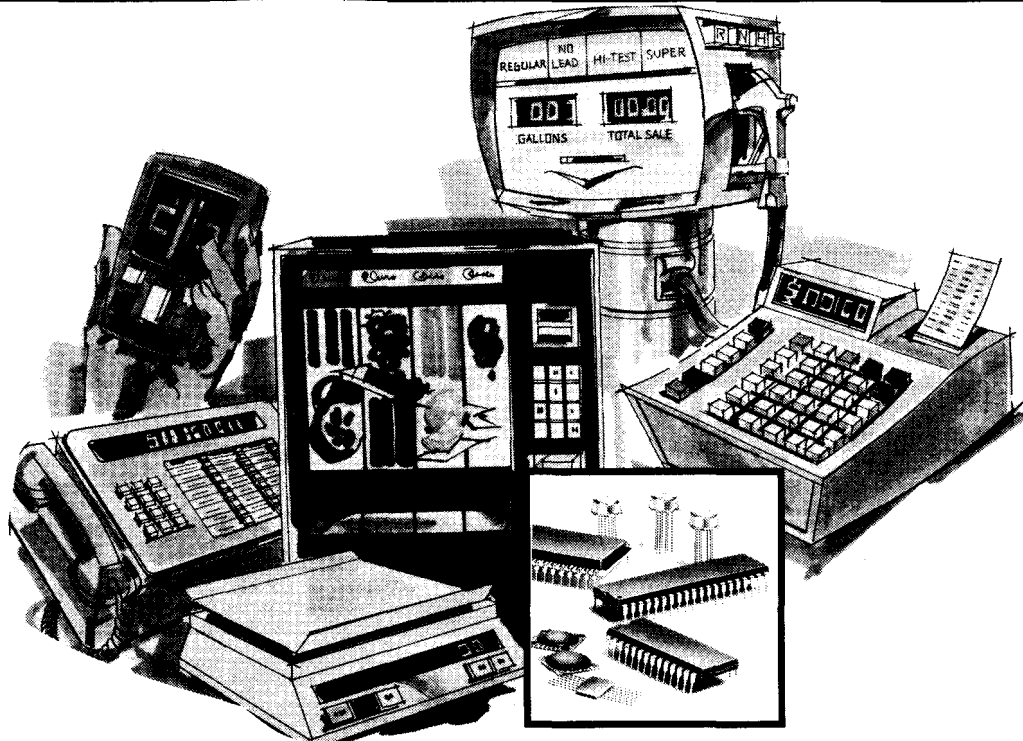
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Microprocessor 2



MICROPROCESSOR - 2		Series 8000 LSI Circuits				
FUNCTION	DESCRIPTION	PART NUMBER	SYSTEM FUNCTION	PACKAGE	FEATURES	PAGE NO.
8 BIT MICRO-PROCESSOR SYSTEM	The LP8000 Logic Processor is a complete 8-bit single chip microprocessor with 48 general purpose internal registers. The 8-bit data bus is supplemented by a 6-bit address bus to give a 14-bit address capability.	LP8000	PROCESSOR	40 DIP	Two chip minimum system consisting of the LP8000 Processor and the LP6000 Program Memory (plus clock). 48 basic instructions. Binary and decimal arithmetic. Direct and indirect I/O capability. Automatic subroutine nesting on memory devices.	2-52
		LP6000	PROGRAM MEMORY	40 DIP		2-52
		LP1030	CLOCK GENERATOR	8 DIP		2-52
		LP1010	I/O BUFFER	40 DIP		2-52
		LP1000	MEMORY INTERFACE	40 DIP		2-52

Microcomputer 3



MICROCOMPUTER - 3		SBA Series LSI Circuits			
FUNCTION	DESCRIPTION	PART NUMBER	PACKAGE	FEATURES	PAGE NO.
1 BIT SINGLE CHIP MICRO-COMPUTER	The SBA can directly evaluate a set of Boolean equations. Thirty programmable inputs and outputs as well as memory make the SBA a true 1-bit microcomputer.	SBA	40 DIP	24 basic instructions including AND, OR, XOR, COMPARE, INVERT. 1023 words of ROM program. 30 programmable inputs, outputs or multiplexed inputs/outputs. 16 element stack. 120 element read/write memory.	3-30
SINGLE CHIP DEVELOPMENT MICRO-COMPUTER	SBA microcomputer without ROM.	SBA-1	64 DIP	ROM data lines are brought out to pins to allow the use of any external RAM or PROM to aid in program development.	3-41

MICROCOMPUTER - 3		SBA Series Hardware / Software			
FUNCTION	DESCRIPTION	PART NUMBER	PACKAGE	FEATURES	PAGE NO.
SBA FIELD DEMO SYSTEM	Contains an SBA-1, a program counter, and sockets for 5 1K PROMs.	SBA-FD	7½" x 9" PC Board	Includes demultiplexing circuitry for the 30 I/O lines with DIP switches for changes in I/O assignment.	3-42
SBA COMPILER	Converts a list of Boolean equations to optimized SBA code.	SBACOMP	—	Produces two output files, one of which may be used directly with the SBA simulation program SBASIM. Available in either Host System or CP1600 assembly language for a GIMINI system.	3-43
SBA SIMULATOR	Simulates all SBA actions for program debug and verification.	SBASIM	—	Available in either a Host System version or in CP1600 assembly language for execution on a GIMINI microcomputer.	3-48



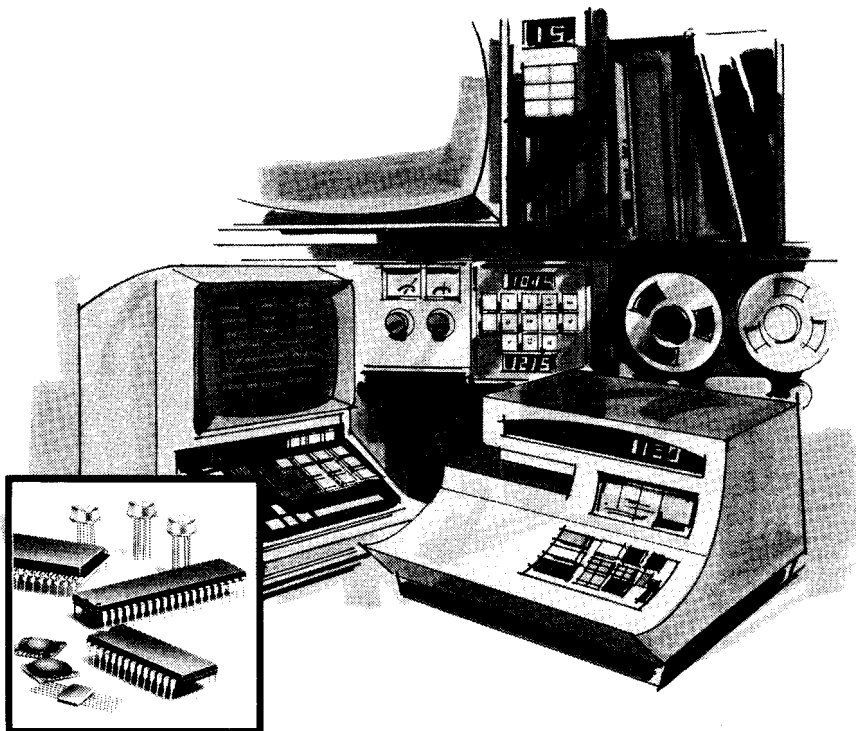
MICROCOMPUTER - 3		PIC Series LSI Circuits			
FUNCTION	DESCRIPTION	PART NUMBER	PACKAGE	FEATURES	PAGE NO.
8 BIT SINGLE CHIP MICRO-COMPUTER	The PIC 1650 series of single chip microcomputers contain RAM, I/O, and a central processing unit as well as a customer defined ROM to specify the overall functional characteristics of the device.	PIC 1650	40 DIP	User programmable. 32 8-bit registers. 512 x 12-bit ROM for program. Arithmetic logic unit. 4 sets of 8 user-defined TTL compatible input/output lines. Self-contained oscillator. Single +5V power supply.	3-4
		*PIC 1645	18 DIP	All the features of the PIC 1650 but with less ROM (256 x 12), fewer I/O lines (4 in, 4 out, 4 I/O) and registers (24). Plus external interrupt capability.	3-13
		PIC 1655	28 DIP	All the features of the PIC 1650 but with fewer I/O lines (4 in, 8 out, 8 I/O).	3-14
		*PIC 1670	40 DIP	All the features of the PIC 1650 but with double the amount of ROM (1024 x 12) and a 4 level stack area.	3-15
SINGLE CHIP DEVELOPMENT MICRO-COMPUTER	PIC 1650 microcomputer without ROM and with the addition of a HALT pin.	PIC 1664	64 DIP	ROM address and data lines are brought out to pins to allow the use of any external RAM or PROM to aid in program development. Can be stopped or single-stepped.	3-16

*For future release.

MICROCOMPUTER - 3		PIC Series Hardware			
FUNCTION	DESCRIPTION	PART NUMBER	PACKAGE	FEATURES	PAGE NO.
PIC DEVELOPMENT SYSTEM	Contains a pre-programmed PIC 1650, a PIC 1664, 512 x 12 RAM, a TTY interface, and a cabled 40 pin DIP plug.	DB1650	8" x 8 1/2" PC Board	The pre-programmed PIC 1650 contains PICBUG, a program which enables loading a PIC 1650 program and providing in-circuit emulation capability and full debug commands.	3-19
PIC FIELD DEMO SYSTEM	Contains a PIC 1664 and sockets for external PROMs. Provision for an on-board RC oscillator or external clock.	FD1664	4" x 6 1/2" PC Board	Supplied with a ribbon cable terminated in a 40 pin DIP plug, to demonstrate a PIC system before committing to a masked ROM.	3-20

MICROCOMPUTER - 3		PIC Series Software			
FUNCTION	DESCRIPTION	PART NUMBER	PACKAGE	FEATURES	PAGE NO.
PIC ASSEMBLER	Converts symbolic source programs for the PIC 1650 into suitable code.	PICAL	—	Produces a binary paper tape output which may be loaded and executed by the DB1650 or used to directly mask program a PIC chip. Available in either Fortran IV or CP1600 assembly language for a GIMINI system.	3-21
PIC SIMULATOR	Simulates all PIC instructions for program debug and verification.	PICSIM	—	Available in either Fortran IV or CP1600 assembly language for execution on a GIMINI microcomputer.	3-24

Memory 4



MEMORY - 4 Random Access Memories

FUNCTION	DESCRIPTION	PART NUMBER	ACCESS TIME	CYCLE TIME	SUPPLY VOLTAGES	PACKAGE	FEATURES	PAGE NO.
1K RAM	1,024 bits organized 256 x 4	RA-3-4256	500ns	500ns	+5	24 DIP	Power-down mode.	4-4
		RA-3-4256A	650ns	650ns	+5	24 DIP	Power-down mode.	4-4
		RA-3-4256B	650ns	650ns	+5	22 DIP		4-4

MEMORY - 4 Electrically Alterable Read Only Memories

FUNCTION	DESCRIPTION	PART NUMBER	READ ACCESS	ERASE TIME	WRITE TIME	SUPPLY VOLTAGES	PACKAGE	FEATURES	PAGE NO.
512 BIT EAROM	512 bits organized 32 x 16	ER2051	3 μ s	50ms	50ms	+5, -28	28 DIP	Word erase.	4-18
	512 bits organized 64 x 8	ER2055	4 μ s	50ms	50ms	+5, -28	22 DIP	Word erase.	4-21
1K RAM/EAROM	1,024 bits organized 256 x 4	ER1711	900ns	16ms	16ms	+5, -12	22 DIP	Cycle time: 1.5 μ s	4-13
1400 BIT SERIAL EAROM	1,400 bits organized 100 x 14	ER1400	2.8 μ s	16ms	16ms	-35	14 DIP	Word erase.	4-10
4K EAROM	4,096 bits organized 1,024 x 4	ER2401	2 μ s	100ms	10ms	\pm 5, -14, -24	24 DIP	Bulk erase.	4-24
		ER3400	900ns	10ms	1ms	+5, -12, -30	22 DIP	Word/bulk erase.	4-36
8K EAROM	8,192 bits organized 2,048 x 4	ER2805	1.65 μ s	100ms	10ms	\pm 5, -14, -24	24 DIP	Bulk erase.	4-30

NEW
NEW



MEMORY - 4 Read Only Memories

FUNCTION	DESCRIPTION	PART NUMBER	REPLACES	ACCESS TIME	CLOCKS / VOLTAGE	SUPPLY VOLTAGES	PACKAGE	FEATURES	PAGE NO.
2K ROM	2,560 bits organized 512 x 5	RO-3-2560	—	450ns	Static	+5	18 DIP		4-42
4K ROM	4,096 bits organized 512 x 8	RO-3-4096	—	500ns	Static	+5	22 DIP		4-44
5K ROM	5,120 bits organized 512 x 10	RO-3-5120	EA4000	500ns	Static	+5	24 DIP		4-46
8K ROM	8,192 bits organized 2,048 x 4	RO-5-8192	AMI S8865	1.2µs (typ.)	2/TTL	+5, -12	24 DIP		4-48
16K ROM	16,384 bits organized 2,048 x 8	RO-3-8316A	INTEL 8316A	850ns	Static	+5	24 DIP	Replaces 2716 UV EPROM.	4-51
		RO-3-8316B	AMI S6831A	450ns					4-51
		RO-3-9316A	INTEL 8316E	850ns	Static	+5	24 DIP		4-51
		RO-3-9316B	AMI S6831B	450ns					4-51
		RO-3-9316C	SY2316B	350ns					4-51
	16,384 bits organized 4,096 x 4	RO-3-16384	AMI S8996	1µs	Static	+5	24 DIP	Address latch.	4-60
32K ROM	32,768 bits organized 4,096 x 8	RO-3-9332A	TMS 4732 SY2332 SIG 2633	850ns	Static	+5	24 DIP		4-56
		RO-3-9332B		450ns				4-56	
		RO-3-9332C		350ns				4-56	
64K ROM	65,536 bits organized 8,192 x 8	RO-3-9364B	MK36000	450ns	Static	+5	24 DIP	Edge-activated.	4-59

*For future release.

Note: All Read Only Memories are mask-programmable.

MEMORY - 4 Keyboard Encoders / Character Generators

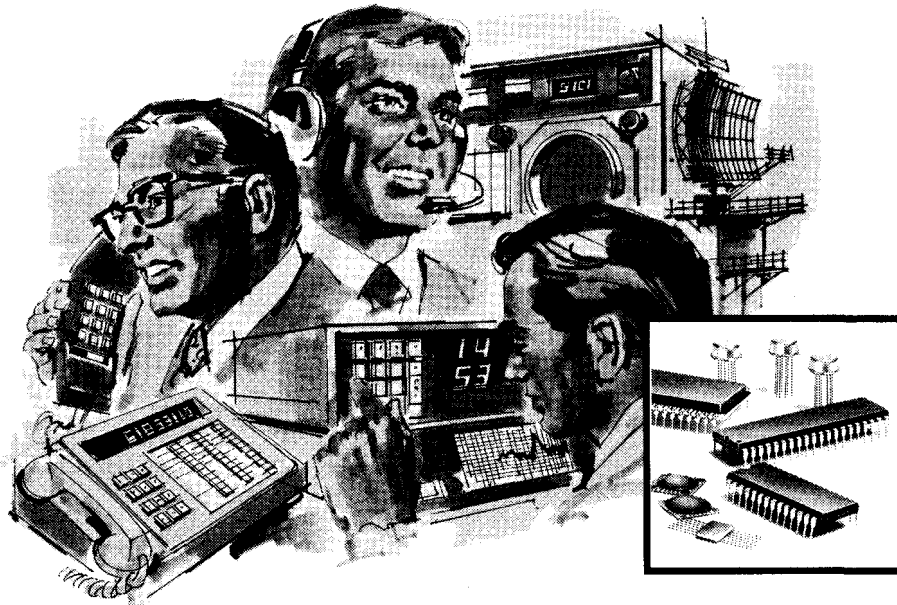
FUNCTION	DESCRIPTION	PART NUMBER	REPLACES	ACCESS TIME	CLOCKS / VOLTAGE	SUPPLY VOLTAGES	PACKAGE	FEATURES	PAGE NO.
KEYBOARD ENCODERS	2,376 bits organized as 88 keys x 3 modes x 9 bits.	AY-5-2376	SMC KR2376	10-100kHz Scan rate	1/TTL or Int. Osc.	+5, -12	40 DIP	2 key rollover.	4-64
	3,800 bits organized as 90 keys x 4 modes x 10 bits.	AY-5-3600	SMC KR3600	10-100kHz Scan rate	1/TTL or Int. Osc.	+5, -12	40 DIP	2/N key rollover.	4-69
		AY-5-3600-PRO	—					Preprogrammed binary codes.	4-75
CAPACITIVE KEYBOARD ENCODER	4,592 bits organized as 112 keys x 4 modes x 10 bits, plus 112 bits for internal programming of "function" keys.	AY-3-4592	—	11-66kHz Scan rate	1/TTL or Int. Osc.	+5	40 DIP	Also usable: inductive, Hall effect, mechanical switches.	4-78
CHARACTER GENERATORS	2,240 bits organized as 64 - 5 x 7 characters	RO-5-2240S	MK2302 FSC3257	1µs (typ.)	1/TTL for Scanning	+5, -12	24 DIP	Column output, on-chip scan.	4-88
	2,560 bits organized as 64 - 5 x 8 characters.	RO-3-2513	SIG 2513	450ns	Static	+5	24 DIP	Row output.	4-92
	5,184 bits organized as 64 - 9 x 9 characters.	RO-5-5184	—	5µs (typ.)	1/TTL for Scanning	+5, -12	24 DIP	On-chip left/right scanning.	4-97

Note: All Keyboard Encoders and Character Generators are mask programmable. Standard patterns are available.

MEMORY - 4 Static Shift Registers

FUNCTION	DESCRIPTION	PART NUMBER			MAXIMUM FREQUENCY	SUPPLY VOLTAGES	PACKAGE	FEATURES	PAGE NO.
		0 to 70°C	-55 to +125°C	0 to 70°C					
VARIABLE	32 bit variable length.	SS-5-1032	SS-6-1032	—	1MHz	+5, -12	16 DIP	1, 1, 2, 4, 8, 16 S/R.	4-106
DUAL REGISTERS	Dual 16 bit.	SS-5-8211	SS-6-8211	SS-7-2016	2MHz	+5, -12	16 DIP	Dual data input.	4-124
		SS-5-8212	SS-6-8212	SS-7-8212	2MHz	+5, -12	14 DIP, 8 TO		4-126
	Dual 50 bit	SL-5-2050	SL-6-2050	SL-7-2050	1MHz	+5, -12	14 DIP, 8 TO		4-108
	Dual 64 bit.	SL-5-2064	SL-6-2064	SL-7-2064	1MHz	+5, -12	14 DIP, 8 TO		4-110
	Dual 100 bit.	SL-5-C2100	—	SL-7-C2100	2MHz	+5, -12	14 DIP, 8 TO		4-112
	Dual 128 bit.	SL-5-2128	—	SL-7-2128	1MHz	+5, -12	14 DIP, 8 TO		4-114
QUAD REGISTERS	Quad 16 bit	SL-5-4016	—	SL-7-4016	2MHz	+5, -12	14 DIP		4-118
	Quad 25 bit.	SL-5-4025	SL-6-4025	SL-7-4025	1MHz	+5, -12	14 DIP		4-120
	Quad 32 bit.	SL-5-4032	SL-6-4032	SL-7-4032	1MHz	+5, -12	14 DIP		4-122

SS-7/SL-7 Series available only in Europe.



TELECOMMUNICATIONS - 5			Telecom Hybrids		
FUNCTION	DESCRIPTION	PART NUMBER	PACKAGE	FEATURES	PAGE NO.
UNIVERSAL ACTIVE FILTERS	Generate any filter response by means of external connections.	ACF 7032C	16 TO	The design provides for independent control of Frequency, Q, and Amplifier Gain, and is usable throughout the frequency range of 10Hz to 10kHz.	5-48
		ACF 7092C	16 DIP		5-48
LOW PASS FILTERS	PCM transmit filters.	ACF 7270C	8 SIP	Minimum 32 dB attenuation at 4.2kHz and an in-band ripple of ± 0.125 dB from 300Hz to 3kHz. ACF 7272C also includes 60Hz attenuation.	5-52
		*ACF 7272C	14 SIP		5-56
	PCM receive filters	ACF 7271C	8 SIP	Minimum 32 dB attenuation at 4.2kHz. Compensated for $\sin x/x$ response. ACF 7273C also includes gain adjust input.	5-54
		*ACF 7273C	14 SIP		5-57
BAND PASS FILTERS	Full wave detector and a factory tunable four pole fixed bandwidth band pass filter.	ACF 7300C	14 DIP	Center frequency range (F_0): 540Hz to 1980Hz.	5-58
		ACF 7301C		Center frequency range (F_0): 700Hz to 1700Hz.	5-60
		ACF 7302C		Center frequency range (F_0): 2280Hz to 3825Hz.	5-62
	Detects and passes the 2600Hz signalling frequency.	ACF 7310C	28 DIP	Minimum attenuation from center frequency of 2600Hz: 30 dB ± 200 Hz, 50 dB ± 500 Hz, 70 dB ± 1000 Hz.	5-64
		ACF 7323C	12 TO	These two pole constant Q filters are available in the standard AT&T tone frequencies and in the standard MF steps.	5-66
		ACF 7363C	10 SIP		5-66
ACF 7383C	16 DIP	5-66			
BAND REJECTION FILTERS	Dial tone suppression, rejects frequencies of 350 and 440Hz.	*ACF 7401C	20 DIP	Provides for 0dB insertion loss in the pass band of 697Hz through 1633Hz. Also provides 60Hz attenuation.	5-68
	Rejects the 2600Hz signalling frequency.	ACF 7410C	34 DIP	Minimum attenuation of 60dB ± 15 Hz from the center frequency of 2600Hz.	5-69
BAND SEP FILTER	Isolates low and high groups of DTMF frequencies.	ACF 7711C	16 DIP	Minimum attenuation of 30 dB for the adjacent frequencies of 941Hz and 1209Hz. 0 dB in the pass bands, 25 dB out of band.	5-70

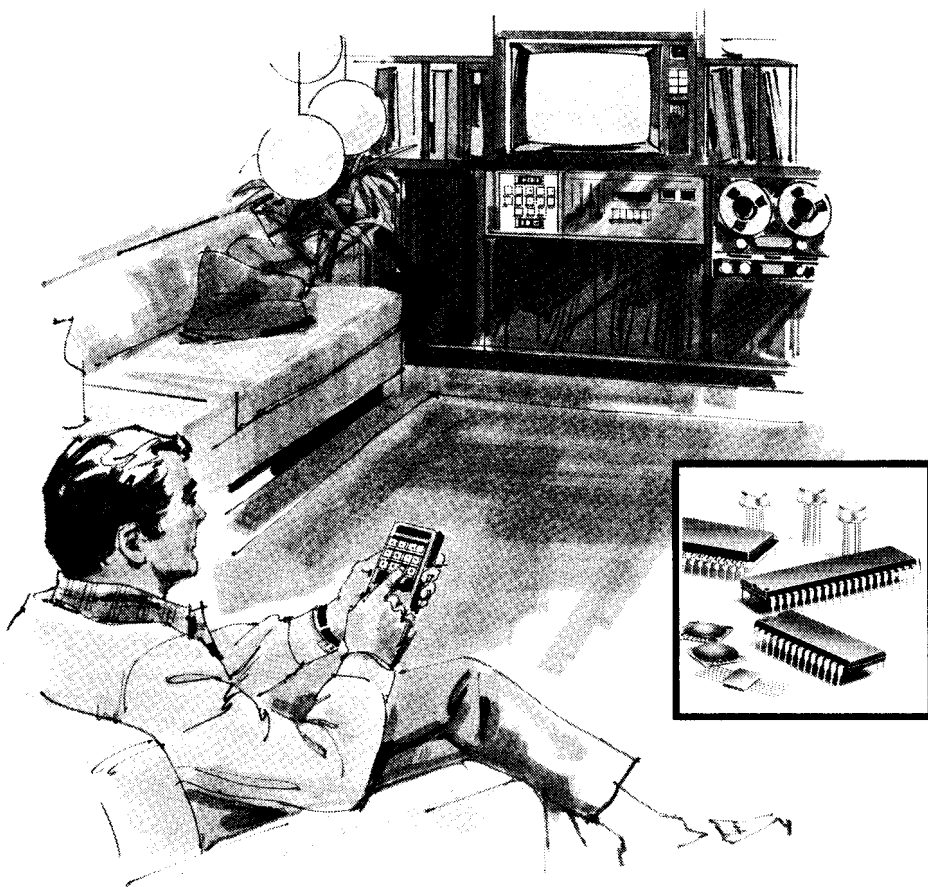
*For future release.



TELECOMMUNICATIONS - 5			Telephony			
FUNCTION	DESCRIPTION	PART NUMBER	SUPPLY VOLTAGES	PACKAGE	FEATURES	PAGE NO.
5 CHANNEL RELAY DRIVER	Isolates +5V logic and exchange-powered relays.	AY-5-9050	+5, -48	14 DIP	Separate logic and exchange grounds, each driver is capable of supplying 50mA.	5-4
PUSH BUTTON TELEPHONE DIALERS	Converts push button input to rotary dial pulses.	AY-5-9100	See data sheet.	18 DIP	20 digit storage, selectable dialling rate, selectable mark/space ratio, selectable inter-digital pause. Redial of last number and access pause facility (except on AY-5-9118).	5-7
		AY-5-9106		18 DIP		5-7
		AY-5-9110		18 DIP		5-7
		AY-5-9118		14 DIP		5-7
		AY-5-9120	18 DIP	5-7		
		AY-5-9151/52	18 DIP	5-14		
		AY-5-9153/54	+2.5 to +5	28 DIP		5-14
AY-9-9600	+1.5 to +8	16/22 DIP	5-33			
REPERTORY DIALLER	Stores ten 22 digit telephone numbers.	AY-5-9200	See data sheet.	16 DIP	Complements the AY-5-9100 series to provide storage of up to ten 22 digit telephone numbers. Stackable.	5-20
DUAL-TONE MULTI-FREQUENCY GENERATORS	Generates DTMF/tone telephone frequencies.	AY-3-9400	+5	14 DIP	12 tone pairs, 3.52 dB high group pre-emphasis.	5-26
		AY-3-9401		16 DIP	16 tone pairs, 2 dB high group pre-emphasis.	5-26
		AY-3-9410		16 DIP	16 tone pairs, 3 or 6 dB high group pre-emphasis.	5-26
		*AY-9-9086	+1.5 to +8	16 DIP	16 tone pairs, 3.58 MHz crystal reference.	5-6
CLOCK GENERATOR	Generates 2-phase clocks from a single power supply.	AY-5-9500	-4 to -15	14 DIP	Generates the 2-phase clocks for the AY-5-9100/9200.	5-29
DUAL-TONE MULTI-FREQUENCY RECEIVERS	Detects and converts DTMF/tone telephone frequencies.	AY-5-9801/21	+8.5, -8.5	28 DIP	4 bit output code, on-chip Op Amps.	5-34
		AY-5-9802/22		40 DIP	1 of 16 output code, on-chip Op Amps.	5-34
		AY-5-9803/23		40 DIP	2 of 8 output code, on-chip Op Amps.	5-34
		AY-5-9804/24		28 DIP	Binary output code, on-chip Op Amps.	5-34
		AY-5-9805/25		24 DIP	4 bit output code.	5-34
		AY-5-9806/26		40 DIP	1 of 16 output code.	5-34
		AY-5-9807/27		24 DIP	2 of 8 output code.	5-34
AY-5-9808/28	24 DIP	Binary output code.	5-34			
CODEC	Duplex Delta-Sigma/PCM converter.	AY-3-9900	+9, +5	24 DIP	With external D-S modulator, provides full duplex PCM. Pin-selectable A-Law/ μ -Law.	5-39
MICRO-COMPUTER DIALLER	A single-chip microcomputer pre-programmed for in-telephone applications.	TZ2001	+5	40 DIP	Push button dialling (pulse output), display of up to 12 dialled digits, 32 telephone number storage with one button selection, 6 digit clock and elapsed time display, provision for add-on of scientific calculator (C/CF-599).	5-45

*For future release.

TELECOMMUNICATIONS - 5			Data Communications						
FUNCTION	DESCRIPTION	PART NUMBER	MAXIMUM BAUD	MAXIMUM FREQUENCY	TEMP. RANGE	SUPPLY VOLTAGES	PACKAGE	FEATURES	PAGE NO.
UAR/T	Complete 5-8 bit receiver/transmitter interface.	AY-5-1013A	40kB	640kHz	0 to 70	+5, -12	40 DIP	1 or 2 stop bits.	5-74
		AY-6-1013	22.5kB	360kHz	-55 to +125	+5, -12			5-74
		AY-3-1014A	30kB	480kHz	0 to 70	+5 to +14		1, 1½, or 2 stop bits	5-74
		AY-3-1015D	30kB	480kHz	0 to 70	+5			5-74
P/SAR	Programmable receiver interface.	AY-8-1472B	640kB	640kHz	0 to 70	+5, -12	40 DIP	Programmable mode selection and transmission codes.	5-87
P/SAT	Programmable transmitter interface.	AY-8-1482B	640kB	640kHz	0 to 70	+5, -12	40 DIP		5-94
16 CHANNEL MULTIPLEXER	Multiplexes 16 analog channels with on-chip logic control.	AY-5-1016	—	2MHz	0 to 70	+5, -12	40 DIP	Current mode or voltage mode.	5-102
		AY-6-4016			-55 to +125				5-102



ENTERTAINMENT - 6

Radio

FUNCTION	DESCRIPTION	PART NUMBER	AM/MW/SW IF OFFSET	FM/VHF IF OFFSET	SUPPLY VOLTAGES	PACKAGE	FEATURES	PAGE NO.
FREQUENCY COUNTERS	Counts & displays MW, SW, and VHF frequencies.	AY-5-8100	460kHz	10.7MHz	+5, -12	28 DIP	4½ digit display drive, 0-99 FM channel mode.	6-4
		AY-5-8102	455kHz					6-4
FREQUENCY COUNTERS WITH CLOCK	Counts and displays AM/FM frequencies, with a 4-digit clock.	AY-3-8110	262.5kHz	10.46 to 10.76MHz	+10 to +16	28 DIP	12 hr. clock, 10kHz AM steps, 200kHz FM steps.	6-8
		AY-3-8112	455kHz					6-8
		AY-3-8114	455kHz					6-8
FUNCTION	DESCRIPTION	PART NUMBER	SYSTEM FUNCTION	SUPPLY VOLTAGES	PACKAGE	FEATURES	PAGE NO.	
STEREOMEGA PLL-DIGITAL TUNING SYSTEM	Provides full electronic control of a varactor-tuned AM/FM radio. Includes storage of 5 AM & 5 FM "favorite" stations.	AY-3-8115	CONTROLLER	+10 to +13	40 DIP	Provides PLL capability on-chip freq. division, reference osc.	6-12	
		ER1400	EAROM MEMORY	+12, -24	14 DIP	Non-volatile storage of station tuning information.	6-20	
		AY-3-8116	CLOCK	+5 to +13	28 DIP	12 hour clock, time or frequency select inputs.	6-23	
		AY-3-8117	DISPLAY DRIVER	+9 to +13	40 DIP	Latches & decodes multiplexed display data.	6-26	



ENTERTAINMENT - 6 Television

FUNCTION	DESCRIPTION	PART NUMBER	SYSTEM FUNCTION	SUPPLY VOLTAGES	PACKAGE	FEATURES	PAGE NO.
OMEGA 82 CHANNEL TUNING SYSTEM	Provides full electronic control of a varactor-tuned 82-channel television from a two-digit calculator-like keyboard entry.	T-1002	CONTROLLER	+12	40 DIP	Accepts keyboard/remote inputs to control system.	6-30
		T-1102	DISPLAY DRIVER	+12	40 DIP	Stores, decodes, displays selected channel number.	6-30
		ER1400	EAROM MEMORY	+12, -24	14 DIP	Non-volatile storage of station tuning information.	6-34
		MEM 4956	D/A CONVERTER	+12, V _{REF}	14 DIP	Converts output to coarse and fine tune outputs.	6-37
		T-1201	FAVORITE CHANNEL MEMORY	+12	40 DIP	A 20-line EAROM for single-digit channel selection.	6-30
ECONOMEGA 16 CHANNEL TUNING SYSTEM	Provides full electronic control of a varactor-tuned 8, 12 or 16 channel television, featuring automatic or manual tuning.	AY-3-8203	CONTROLLER	+12	40 DIP	Accepts direct/remote inputs to control system.	6-40
		ER1400	EAROM MEMORY	+12, -24	14 DIP	Non-volatile storage of station tuning information.	6-34
		MEM 4956	D/A CONVERTER	+12, V _{REF}	14 DIP	Converts output to coarse and fine tune outputs.	6-37
FUNCTION	DESCRIPTION	PART NUMBER	SUPPLY VOLTAGES	PACKAGE	FEATURES	PAGE NO.	
ON-SCREEN CHANNEL/TIME DISPLAY	Various circuits in series to display channel numbers on TV screen with some additionally featuring either separate or simultaneous time display (ref. AY-5-1203A clock circuit)	AY-5-8300	+18	14 DIP	Channels 0-15, upper right screen display.	6-46	
		AY-5-8301			Channels 1-16, upper right screen display.	6-46	
		AY-5-8310	+18	24 DIP	Channels 0-15 or 00-99 or time, upper right screen display.	6-46	
		AY-5-8311			Channels 1-16 and/or time, upper right screen display, automatic on channel change.	6-46	
		AY-5-8321				6-46	
		AY-5-8322	+13	24 DIP	Channels 1-16 and/or time, lower center screen display, automatic on channel change.	6-46	
		AY-5-8324				6-46	
ON-SCREEN TUNING SCALE	Provides an electronic on-screen tuning scale for varactor-tuned TV sets.	AY-3-8330A	+12	16 DIP	Four bands, mask-programmable band or channel number display and display position.	6-57	
		AY-3-8331				6-57	
		AY-3-8335				6-57	

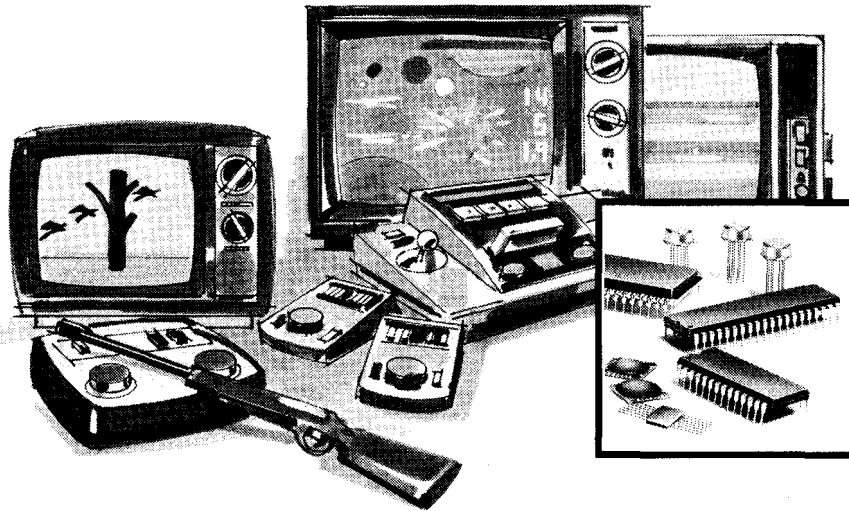
NEW

ENTERTAINMENT - 6 Remote Control

FUNCTION	DESCRIPTION	PART NUMBER	SUPPLY VOLTAGES	PACKAGE	FEATURES	PAGE NO.
R/C SYSTEM I	30 channel discrete frequency ultrasonic transmitter.	SAA 1024	+9	16 DIP	30 ultrasonic control frequencies in the range 34-44kHz. Crystal controlled.	6-62
	30 channel discrete frequency ultrasonic receiver.	SAA 1025	+18	16 DIP	16 TV channel selection (& 5 spares), on/off signal, 8 analog functions.	6-64
R/C SYSTEM II	23 channel PCM ultrasonic or infrared transmitters.	AY-5-8410	+15	18 DIP	23 control channels, either local control at receiver (AY-5-8410) or remote control (AY-5-8411).	6-68
		AY-5-8411	+9			6-68
	31/63 channel PCM ultrasonic or infrared receiver.	AY-5-8420	+15	14 DIP	5 or 6 bit modes, error-detection, on-chip oscillator, LED "receive" driver output.	6-70
R/C SYSTEM III	30 channel discrete frequency ultrasonic transmitter.	AY-5-8450	+9	16 DIP	30 ultrasonic control frequencies, interfaces with a 5 x 6 matrix keyboard.	6-72
	16 channel discrete frequency ultrasonic receivers.	AY-5-8460	+12, -6	18 DIP	Interfaces directly with OMEGA keyboard, plus on/off, recall, 4 analog functions.	6-74
		AY-5-8461				6-74
R/C SYSTEM IV	264 command PCM infrared transmitter.	*AY-3-8470	+9	28 DIP	8-bit PCM system plus 8 PWM analog commands. 4 x 8 keyboard (32 x 8 with shifts).	6-78
	264 command PCM infrared receiver.	*AY-3-8475	+12	40 DIP	5-bit program output. CPU data bus interface for full 264 functions.	6-81

*For future release.

TV Games 7



TV GAMES - 7		Dedicated TV Games						
FUNCTION	DESCRIPTION	PART NUMBER	GAMES	LINE STANDARD	PACKAGE	FEATURES	PAGE NO.	
BALL & PADDLE	Six selectable games for one or two players, with vertical paddle motion.	AY-3-8500	Tennis Soccer Squash	Practice Rifle I Rifle II	625	28 DIP	On-screen scoring. Sound generation. Selectable paddle size, ball speed, rebound angles.	7-4
		AY-3-8500-1			525			7-4
BALL & PADDLE (TWO AXIS)	Six selectable games for one or two players, with vertical and horizontal paddle motion.	AY-3-8550	Tennis Soccer Squash	Practice Rifle I Rifle II	625	28 DIP	Above, plus color-coding of score and player, and "hit" and "miss" scoring in Practice game.	7-16
		AY-3-8550-1			525			7-16
COLOR PROCESSOR	Adds color to the AY-3-8500-1 and AY-3-8550-1.	AY-3-8515	—	525	16 DIP	Colors changed by the "game select" inputs.	7-25	
NEW ROADRACE	One or two player games where racing skill in "traffic" generates the highest score.	AY-3-8603	Roadrace Qualify	—	625	28 DIP	Each player maneuvers around other cars on the race track. Color display with the AY-3-8615.	7-26
		AY-3-8603-1			525			7-26
NEW WARFARE	One or two player games featuring subs, destroyers, cargo ships, and spaceships.	AY-3-8605	Sea Battle Counterattack I&II Night Battle	—	625	28 DIP	Fire depth charges, missiles, and torpedoes. Varied skill selection. Color display with the AY-3-8615.	7-28
		AY-3-8605-1	Space Battle I&II		525			7-28
NEW WIPEOUT	One or two player games where players "wipe out" objects by controlling a ball in the play area.	AY-3-8606	Wipeout I - IV Color Squares I - IV Breakthrough I&II	—	625	28 DIP	Skill selection including paddle size, ball size, and ball speed. Color display with the AY-3-8615.	7-32
		AY-3-8606-1			525			7-32
NEW SHOOTING GALLERY	Twelve games for one or two players using external photocell rifles for shooting.	AY-3-8607	Skeet I - IV Attack I - IV Destruct I - IV	—	625	28 DIP	Three dimensional target effect by diminishing target size. Color display with the AY-3-8615.	7-36
		AY-3-8607-1			525			7-36
SUPERSPORT	Ten selectable games for one or two players, with vertical and horizontal paddle motion.	AY-3-8610	Tennis Hockey Soccer Squash	Practice Gridball Basketball I&II Target I&II	625	28 DIP	Realistic ball service & scoring. Individually selectable paddle sizes. Color-coded score. Color display with the AY-3-8615.	7-40
		AY-3-8610-1			525			7-40
COLOR PROCESSOR	Adds color to the "8600" series dedicated TV Game circuits.	AY-3-8615	—	525	28 DIP	Colors changed by the "game select" inputs.	7-51	
BATTLE	A two player "tank battle" game where each player has a steerable tank and a fire control button.	AY-3-8710	Tank Battle	—	625	28 DIP	The on-screen "battlefield" includes anti-shell barricades and exploding mines.	7-52
		AY-3-8700-1			525			7-52
MOTORCYCLE	A one player game where the player controls the speed of a motorcycle on a three track course.	AY-3-8760	Stunt Cycle Drag Race Motocross Enduro	—	525 or 625	28 DIP	Selectable NTSC/CCIR compatibility. Pro-Am game difficulty selection. Full color display.	7-56



TV GAMES - 7		Programmable TV Games						
FUNCTION	DESCRIPTION	PART NUMBER	GAME FUNCTION	PACKAGE	FEATURES	PAGE NO.		
GIMINI ECONOMY "8600" PROGRAMMABLE GAME SYSTEM	With a single AY-3-8615 "resident processor" chip in the game console, the GIMINI Economy "8600" minimizes system cost. Each game cartridge provides full color games with realistic sounds and scoring.	AY-3-8615	RESIDENT PROCESSOR	28 DIP	Console-mounted game/color processor.	7-64		
		AY-3-8603	ROADRACE CARTRIDGE	28 DIP	Two racing games—one or two players.	7-68		
		AY-3-8605	WARFARE CARTRIDGE	28 DIP	Six battle games—one or two players.	7-69		
		AY-3-8606	WIPEOUT CARTRIDGE	28 DIP	Ten games encompassing combat, strategy, and skill.	7-70		
		AY-3-8607	SHOOTING CARTRIDGE	28 DIP	Twelve target games—one or two players.	7-71		
		AY-3-8610	SUPERSPORT CARTRIDGE	28 DIP	Ten ball and paddle and target games.	7-72		
		AY-3-8610-1						
		AY-3-8785	MOTORCYCLE CARTRIDGE	28 DIP	Four motorcycle racing/jumping games.	7-73		
		GIMINI CHALLENGER "8950" PROGRAMMABLE GAME SYSTEM	BASIC COMPONENTS: A complete microprocessor programmable game with only 3 LSI chips (plus standard RAM), the GIMINI Challenger "8950" is ideal for sports games and games of chance and mental skill.	CP1610	MICROPROCESSOR	40 DIP	A full 16-bit microprocessor for processing all game data.	7-86
				AY-3-8950	TV INTERFACE/ GRAPHICS ROM	40 DIP	Generates video and sound. On-chip 64 character graphics ROM.	7-78
AY-3-8950-1								
RO-3-9501	PROGRAM ROM			40 DIP	A 2048 x 10 ROM which contains the executive plus resident games.	7-92		
OPTIONAL COMPONENTS: The basic "8950" system can be expanded to include additional ROM and RAM, and to add complex sound generation.	2112A		SYSTEM RAM	16 DIP	Customer-supplied 256 x 4 RAMs (minimum of two required).	7-99		
	RO-3-9500		CARTRIDGE ROM	28 DIP	A 2048 x 10 ROM which contains additional game programs.	7-92		
	2112A/2114		PROGRAM/ SYSTEM RAM	16/18 DIP	Customer-supplied 256 x 4 or 1K x 4 RAMs to increase system capabilities.	7-99		
	AY-3-8910		SOUND GENERATOR	40 DIP	Provides programmed generation of complex sound effects.	7-100		
GIMINI DELUXE "8900" PROGRAMMABLE GAME SYSTEM	BASIC COMPONENTS: A complete microprocessor programmable game with only 5 LSI chips, the GIMINI Deluxe "8900" offers the capability for maximum game flexibility with detailed graphics definition and manipulation.	CP1610	MICROPROCESSOR	40 DIP	A full 16-bit microprocessor for processing all game data.	7-107		
		*AY-3-8900	TV INTERFACE	40 DIP	Processes graphics data and generates all video signals.	7-107		
		*AY-3-8900-1						
		RO-3-9502	PROGRAM ROM	40 DIP	A 2048 x 10 ROM which contains the executive program.	7-108		
		RO-3-9503	GRAPHICS ROM	40 DIP	A 2048 x 8 ROM which stores 256-8 x 8 graphics characters.	7-108		
	OPTIONAL COMPONENTS: The basic "8900" system can easily be expanded to include additional games plus software-controlled graphics interaction, complex sound generation, and supplementary peripherals.	*RA-3-9600	SYSTEM RAM	40 DIP	Contains a 352 x 16 memory plus a 20 word "current line" buffer.	7-108		
		RO-3-9500	CARTRIDGE ROM	28 DIP	A 2048 x 10 ROM which contains additional game programs.	7-109		
		2112A/2114	PROGRAM/ GRAPHICS RAM	16/18 DIP	Customer-supplied 256 x 4 or 1K x 4 RAMs to increase system capabilities.	7-109		
		AY-3-8910	SOUND GENERATOR	40 DIP	Provides programmed generation of complex sound effects.	7-109		
		*AY-3-8915	COLOR PROCESSOR	16 DIP	Generates a single composite color signal from AY-3-8900-1 digital input.	7-109		
		*AY-3-8920	TAPE CASSETTE INTERFACE	40 DIP	Interfaces system to standard audio cassette decks.	7-109		
IOB 1680	INPUT/OUTPUT BUFFER	40 DIP	General purpose buffer for keyboards, displays etc.	7-109				

*For future release.

FUNCTIONAL INDEX

Consumer 8



CONSUMER - 8 Calculators

FUNCTION	DESCRIPTION	PART NUMBER		PACKAGE	FEATURES	PAGE NO.	
		6½-8½V LED	7-9V LED				
8 DIGIT BASIC	Basic 4 functions and %.	C-683D	C-1683D	28 DIP		8-16	
		C-685D	C-1685D		Plus one-key or multi-key memory.	8-16	
8 DIGIT ALGEBRA	Basic 4 functions, %, x ² , √x, 1/x, +/-, memory.	C-687D	C-1687D				8-16
		C-689D	C-1689D		Plus brackets and inch-cm. conversion.		8-16
FUNCTION	DESCRIPTION	PART NUMBER	PACKAGE	FEATURES		PAGE NO.	
9 DIGIT SCIENTIFIC	Full 21 function calculator circuit for 15V fluorescent displays.	CF-599	28 DIP	Basic 4 functions, %, sin, cos, tan, arc sin, arc cos, arc tan, ln x, e ^x , log ₁₀ , 10 ^x , √x, 1/x, x ² , y ^x , +/-, memory, pi, two levels of parentheses, trig functions in degrees or radians.		8-15	
12 DIGIT PRINTING	Basic 4 functions and %, decimal select mode, memory-in-use indicator, rounding options, non-add (#)/date key, and other features.	C-717X	40 DIP	Plus Accumulator and Grand Total Memories. Interfaces with Seiko 310 printer.		8-18	
		C-718		Plus Accumulator, item counter, and 4-key memory. Interfaces with Seiko 310 printer.		8-19	
		C-1720		Features of C-718 but interfaces with Seiko 320 printer.		8-20	
DISPLAY INTERFACE	Adds display capability to above printing calculators.	C-719	28 DIP	For both LED and fluorescent displays.		8-21	

CONSUMER - 8 Clocks

FUNCTION	DESCRIPTION	PART NUMBER	FLASHING SECONDS	ZERO BLANKING	50/60Hz OPERATION	PACKAGE	FEATURES	PAGE NO.
4 DIGIT	12/24 hour clocks with features for most clock/timing applications.	AY-5-1200A		✓	✓	24 DIP	For 7-segment fluor. display.	8-24
		AY-5-1202A	✓	✓	✓	24 DIP	For 7-segment fluor. display.	8-24
		AY-5-1203A	✓		✓	24 DIP	BCD outputs.	8-24
		AY-5-1204A	✓		✓	24 DIP	For 7-segment fluor. display	8-24
		AY-5-1224A		✓	✓	16 DIP	BCD or 7-seg. LED outputs.	8-27
4 DIGIT CLOCK RADIO	12/24 hour clock, 24 hour alarm, sleep timer, battery standby.	CK3300	✓	✓	✓	28 DIP	Includes snooze alarm and pre-settable timeswitch.	8-29
4 DIGIT AUTO CLOCK	12 hour clock, timing derived from 3.58MHz TV crystal.	CK3500		✓	Crystal Input	40 DIP	For 7-segment LED display.	8-41
		CK3500F					For 7-segment fluor. display.	8-41



CONSUMER - 8		Music					
FUNCTION	DESCRIPTION	PART NUMBER	MAXIMUM FREQUENCY	SUPPLY VOLTAGES	PACKAGE	FEATURES	PAGE NO.
TOP OCTAVE GENERATORS	Generates a complete octave of musical frequencies.	AY-1-0212	1.5MHz	-14, -27	16 DIP	12 outputs, 50% duty cycle.	8-48
		AY-1-0212A	2.5MHz				8-48
		AY-3-0214	4.5MHz	+10 to +16	16 DIP	12 outputs, 50% duty cycle.	8-50
		AY-3-0215				13 outputs, 50% duty cycle.	8-50
AY-3-0216				13 outputs, 30% duty cycle.	8-50		
LATCHING NETWORK	Establishes priority of 13 pedal latch inputs/outputs.	AY-1-1313	20kHz	-12, -27	40 DIP	Stackable for expanded latching/priority function.	8-54
RHYTHM GENERATOR	Generates 6 rhythms, drives 8 instruments.	AY-5-1315	10kHz	-15	18 DIP	Resets for coupling chords to rhythm, 32 beat pattern, mask programmable.	8-56
CHORD GENERATOR	Produces major, minor, 7th chords, walking bass.	AY-5-1317A	50kHz	-15	40 DIP	Mixed outputs, sustain, top key priority.	8-58
PIANO KEYBOARD	Electronically simulates piano keyboard operation.	AY-1-1320	—	-10, -27	40 DIP	12 keys per unit, "loudness" proportional to key press velocity.	8-62
FREQUENCY DIVIDERS	4 stage divider.	AY-1-5051	1MHz	-13, -27	10 TO	Arranged 2+1+1.	8-66
	5 stage divider.	AY-1-6721/5			10 TO	Arranged 3+2.	8-66
	6 stage divider.	AY-1-6721/6			12 TO	Arranged 3+2+1.	8-66
	7 stage dividers.	AY-1-5050			14 DIP	Arranged 3+2+1+1.	8-66
		AY-1-1007B			50kHz	-12, -27	14 DIP

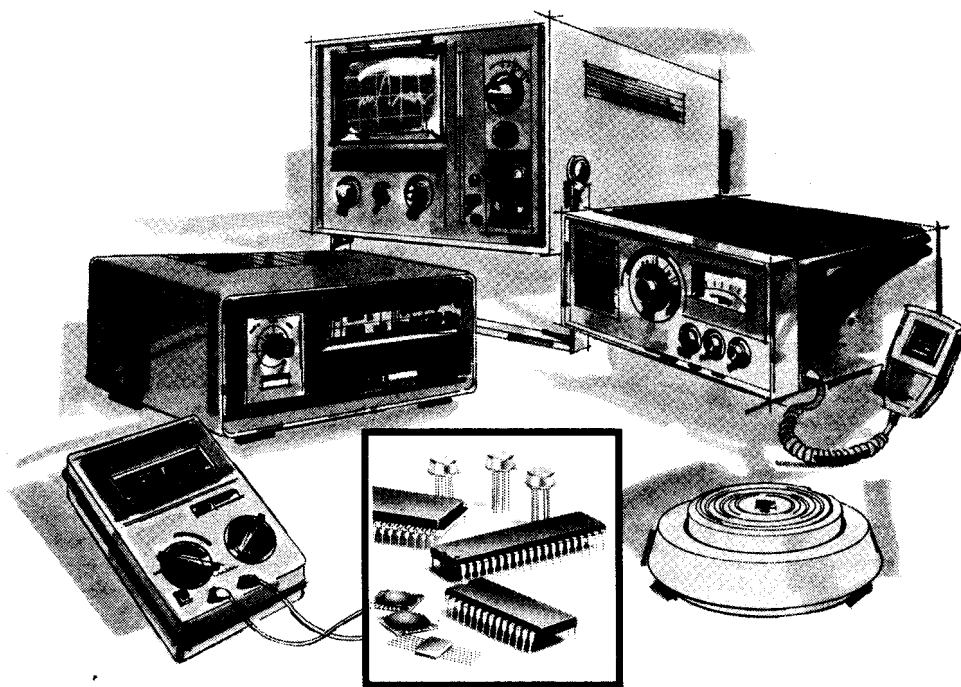
CONSUMER - 8		Appliances					
FUNCTION	DESCRIPTION	PART NUMBER	SUPPLY VOLTAGES	PACKAGE	FEATURES	PAGE NO.	
CLOCK / TIMERS	24 hour programmable, repeatable on/off time switch with 4 digit clock.	AY-5-1230	-12 to -18	28 DIP	50Hz input (50 or 60Hz on AY-5-1231), BCD or 7-segment direct fluorescent display drive outputs, zero blanking, 24 hour display (12 or 24 hour on AY-5-1231).	8-70	
		AY-5-1231		40 DIP		8-70	
		AY-5-1232		28 DIP		8-70	
		AY-5-1233		28 DIP		8-70	
OVEN / COOKER TIMERS	Appliance timers with clock. Full control of "start" time, "stop" time, or "duration."	*AY-3-1250	+12	28 DIP	Three timed outputs, "minute minder" feature, 12/24 hour system, 4 digit display (AY-5-1250) or 14 digit display (AY-5-1251).	8-74	
*AY-3-1251	40 DIP	8-74					
MICROWAVE OVEN TIMER	Three mode magnetron control, timer and 4 digit clock.	AY-5-1260	-5, -16	40 DIP	99 minute/99 second oven control and minute timer, status indicators, audio output.	8-80	
DIGITAL THERMOMETER	Deep-freeze thermometer, -40°C to 0°C.	*AY-3-1270	+9	40 DIP	For LCD/LED display, ±1°C accuracy, power fail/over-range indication (flashing display).	8-82	
COINBOX MEMORY	Memory/credit accumulator for coin-operated equipment.	AY-1-8622	-12, -27	40 DIP	Seven different coin inputs, credit and "bonus" features.	8-85	
VIDEO TAPE TIMER	Program "start" time for 2/4 hour video tape recorders.	VTR 3300	+7.5 to +15	28 DIP	12 or 24 hour time, direct drive for 7-segment LED's.	8-90	

*For future release.

CONSUMER - 8		Security					
FUNCTION	DESCRIPTION	PART NUMBER	SUPPLY VOLTAGES	PACKAGE	FEATURES	PAGE NO.	
SMOKE DETECTORS	Complete ionization smoke detector circuitry.	MEM 4962	+9	14 DIP	On-chip input MOSFET and output driver, low battery warning.	8-98	
	Circuitry for ionization, photoelectric, or both.	MEM 4963	+9	14 DIP	As above, plus an interconnection capability for common alarm in multiple-unit installations.	8-100	

The MEM 4962 is recognized under the Component Program of Underwriters Laboratories, Inc.

Industrial/Mosfet 9



INDUSTRIAL/MOSFET - 9		Counters / DVMs					
FUNCTION	DESCRIPTION	PART NUMBER	MAX. COUNT FREQUENCY	SUPPLY VOLTAGES	PACKAGE	FEATURES	PAGE NO.
3½ DIGIT DVM	DVM logic utilizing dual ramp integration.	AY-5-3507	40kHz	-15	18 DIP	Range to 1999, 7-segment outputs.	9-8
		AY-5-3510			16 DIP	Range to 1999, BCD outputs.	9-8
3% DIGIT DVM	DVM logic utilizing single ramp integration.	AY-5-3500	200kHz	-7.5, -15	28 DIP	Ranges: 999, 1999, 2999. Dual polarity, BCD & 7-segment outputs.	9-4
4% DIGIT DVM	DVM logic utilizing dual ramp integration.	AY-3-3550	400kHz	+5	40 DIP	Auto-range, auto-zero, auto-polarity, BCD & 7-segment outputs.	9-18
4 DIGIT COUNTER	Counts, stores, and decodes 4 decades to BCD outputs.	AY-5-4057	500kHz	+5, -12	16 DIP	BCD outputs.	9-80
4 DIGIT COUNTER/DISPLAY	Counts, stores, and decodes 4 decades to 7-segment outputs.	AY-5-4007	600kHz	+5, -12	24 DIP	BCD outputs, true/complement control.	9-16
		AY-5-4007A			40 DIP	Includes all features of AY-5-4007 and AY-5-4007D.	9-16
		AY-5-4007D			24 DIP	Serial output with shift clock input, 3 carry outputs.	9-16



INDUSTRIAL/MOSFET - 9 Mosfet Transistors

TYPE	PART NUMBER	BV _{oss} /gss VOLTS-MIN.	I _{gssF} nA-TYP.	V _{es} (th) V-MIN/MAX.	r _{DS(on)} OHMS-TYP.	PAGE NO.	PART NUMBER	BV _{oss} /gss VOLTS-MIN.	I _{gssF} nA-TYP.	V _{es} (th) V-MIN/MAX.	r _{DS(on)} OHMS-TYP.	PAGE NO.
P-CHANNEL ENHANCEMENT MODE	MEM511	-30/-30	-0.05	-3/-6	150	9-34	MEM560C	-30/-30	-0.2	-1/-3.5	175	9-82
	MEM511A	-30/-30	-0.5	-3/-6	300	9-38	MEM561	-30/-50	-0.05pA	-1.5/-3	100	9-64
	MEM511C	-25/-25	-0.05	-3/-6	150	9-38	MEM561C	-25/-40	-0.5, A	-1.5/-3	150	9-64
	MEM517	-30/-25	-0.15	-2.5/-5	35	9-40	MEM806	-40/-40	-0.1pA	-2/-5.5	150	9-112
	MEM517A	-30/-25	-0.15	-2.5/-5	35	9-42	MEM806A	-40/-40	-0.05pA	-2/-5.5	150	9-112
	MEM517C	-25/-25	-0.15	-2.5/-5	35	9-44	MEM807	-40/-40	-0.1	-2/-5.5	150	9-114
	MEM520	-30/-40	-0.03pA	-3/-6	150	9-46	MEM807A	-40/-40	-0.2	-2/-5.5	150	9-114
	MEM520C	-25/-25	-0.1pA	-3/-6	150	9-48	MEM814	-35/-35	-0.1	-1.5/-3	80	9-116
	MEM556	-50/-50	-0.1	-3/-6	700	9-50	MEM816	-30/-30	-0.2	-2/-5	150	9-118
	MEM556C	-45/-45	-0.3	-3/-6	700	9-56	MEM817	-45/±200	-0.05pA	-2.5/-5.5	150	9-119
	MEM560	-35/-35	-0.1	-1.5/-3	100	9-62	MEM823	-35/±200	-0.05pA	-2.5/-5.5	150	9-120
DUAL P-CHANNEL ENHANCEMENT MODE	MEM550	-30	-0.1	-3/-6	250	9-50	MEM954A	-30	-0.03	-2/-5	100	9-121
	MEM550C	-25	-0.2	-3/-6	250	9-50	MEM954B	-30	-0.03	-2/-5	100	9-121
	MEM551	-30	-0.03pA	-3/-6	250	9-50	MEM955	-35	-0.02pA	-2/-5	100	9-121
	MEM551C	-25	-1.0pA	-3/-6	250	9-50	MEM955A	-35	-0.02pA	-2/-5	100	9-121
	MEM954	-30	-0.03	-2/-5	100	9-121	MEM955B	-35	-0.02pA	-2/-5	100	9-121
N-CHANNEL ENHANCEMENT MODE	MEM562	20/±30	1.0pA	0.5/4	150	9-66	MEM711	25/±30	0.1	0.5/1.5	50	9-106
	MEM562C	20/±30	10pA	0.5/4	150	9-66	MEM712	25/±30	.01	0.5/2	50	9-106
	MEM563	20/±30	1.0pA	0.5/4	40	9-68	MEM712A	30/±30	.01	0.5/2	30	9-108
	MEM563C	20/±30	10pA	0.5/4	50	9-68	MEM713	20/±30	10pA	0.5/2	50	9-110
N-CHANNEL DEPLETION MODE	MEM654	20/+5, -10	5	0.01	-1.5	9-52	MEM632	25/±6	6	20	-4/-2	9-84
	MEM554C	20/+5, -10	5	0.05	-1.5	9-54	MEM636	20/±6	15	50	-4	9-88
	MEM557	20/±10	5	0.01	-4	9-58	MEM637	20/±6	15	20	-4	9-88
	MEM557C	20/±10	5	0.05	-4	9-60	MEM638	20/±6	15	20	-4	9-88
	MEM564C	20/±6	5	1.0	-1.5	9-70	MEM639	20/±6	10	—	-6	9-82
	MEM571C	20/±6	4	±10	—	9-72	MEM655	20/±6	4	±10	-4	9-94
	MEM610	20/±6	10	—	-6	9-74	MEM660	20/+30, -20	3	—	-4	9-96
	MEM614	20/±6	5	1.0	-1	9-76	MEM667	20/±100	3	0.05pA	-4	9-98
	MEM616	25/±6	10	20	-4	9-78	MEM670	20/±100	3	0.05pA	-4	9-99
	MEM617	20/±6	6	20	-4	9-78	MEM680	25/±6	4/30	50	-4	9-100
	MEM618	20/±6	10	20	-4	9-78	MEM681	25/±6	2/20	50	-4	9-100
	MEM619	20/±6	15	20	-4	9-82	MEM682	25/±6	3/20	50	-4	9-100
	MEM630	25/±6	6	20	-4/-2	9-84	MEM683	20/±6	15	20	-4	9-104
	MEM631	25/±6	10	20	-4/-3	9-84						

INDUSTRIAL/MOSFET - 9 Mosfet Analog Switches

FUNCTION	DESCRIPTION	PART NUMBER	P-P INPUT RANGE	ON RESISTANCE	TEMPERATURE RANGE	SUFFIX/PACKAGE	PAGE NO.
ANALOG SWITCHES	4 Channel Switch	MEM780	20V	30Ω	-65 to +85 (Plastic DIP) -65 to +125 (Ceramic DIP, Flat Pack)	P-14 Plastic DIP	9-124
		MEM781				D-14 Ceramic DIP	9-124
		MEM851	30V	100Ω		F-14 Flat Pack	9-126
	6 Channel Switch	MEM855	25V	350Ω			9-132
		MEM856	40V	1000Ω			9-134
		MEM857	25V	150Ω			9-136
8 Channel Switch	MEM853	25V	150Ω		P-24 Plas. DIP, D-24 Cer. DIP, F-24 Flat Pack.	9-128	
10 Channel Switch	MEM853	25V	150Ω		P-14 Plas. DIP, D-14 Cer. DIP, F-14 Flat Pack.	9-140	
DRIVER	4 Channel Driver	MEM4900	—	—			