

# Quest

ELECTRONICS

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1977  
CATALOG

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Six .50 inch LED displays. MM5314. Includes all components and full instructions plus two PC boards and transformer. \$17.45  
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	1K RAM	1.80	1.30
MM5375-AA	Alarm Clock	3.75	2.20
FND503	.50" Display	1.20	.89
	18 MHz Crystal	3.90	2.50
PD411-4	150 ns		
	4K RAM	8.00	5.75
MA1002E	.50" Alarm Clock Module	8.95	6.95
MA1013E	.70" Alarm Clock Module	11.50	8.95
MM5309	Clock	3.90	2.70
MM5314	Clock	3.90	2.70
2708	4K EPROM	39.00	29.00
MA1010E	.84" Alarm Clock Module	11.95	9.95
1702A		9.00	8.00
	Other Parts also available		

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Sockets Resistors  
Displays Transistors  
Switches Diodes  
Capacitors Rectifiers  
More Kits

### COSMAC 'ELF'

RCA CMOS microcomputer. Complete kit of parts to build the 'Elf' including CDP1802 and Users Manual as listed in August 1976 Popular Electronics. \$92.00  
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### 8K RAM BOARD KIT

Low power 500 ns RAMS. Plug complete with Altair 8800 and Imsai 8080. \$225.00  
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I/O Board Kit 44.50  
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### 1977 IC UPDATE MASTER MANUAL

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SN7440N	Dual 4-Input NAND Buffer	.17
SN7441N	BCD to Decimal Decoder/Nixie Driver	1.10
SN7442N	BCD to Decimal Decoder	.78
SN7443N	Excess 3 to Decimal Decoder	.75
SN7444N	Excess 3-Gray to DEC Decoder	.85
SN7445N	BCD/DEC Decoder/Driver	.85
SN7446N	BCD/7 SEG Decoder/Driver	1.04
SN7447N	BCD/7 SEG Decoder/Driver	.60
SN7447AN	BCD/7 SEG Decoder/Driver	.78
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SN7474N	Dual D-Type Edge-Triggered F/F	.32
SN7475N	Quad Bistable Latch	.49
SN7476N	Dual J-K Master-Slave F/F	.44
SN7479N	Dual D Flip Flop	4.50
SN7480N	Gated Full Adder	.45
SN7482N	2-Bit Binary Full Adder	1.75
SN7483N	4-Bit Binary Full Adder	.70



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SN7485N	4-Bit Magnitude Comparator	.99
SN7486N	Quad 2-Input Exclusive OR Gate	.41
SN7488N	256 Bit Read Only Memory	3.50
SN7489N	64 Bit Random Access Read/Write Memory	2.00
SN7490N	Decade Counter	.45
SN7491N	8-Bit Shift Register	.95
SN7492N	Divide-By-Twelve Counter	.45
SN7493N	4-Bit Binary Counter	.49
SN7494N	4-Bit Shift Register PISO	.75
SN7495N	4-Bit Shift Register	.75
SN7496N	5-Bit Shift Register	.75
SN7497N	Synchronous Binary Rate Multiplier	4.00
SN74100N	Dual 4-Bit Bistable Latch	.90
SN74107N	Dual J-K Master-Slave F/F	.39
SN74109N	Dual J-K Positive Edge F/F	.85
SN74116N	Dual 4-Bit Latch with Clear	1.75
SN74121N	Monostable Multivibrator	.39
SN74122N	Retrig Monostable Multivibrator	.39
SN74123N	Retrig Monostable Multivibrator	.87
SN74125N	Quad 3-State BUS Buffer	.45
SN74126N	Quad 3-State BUS Buffer	.45
SN74128N	Quad 2-Input NOR Buffer	.67
SN74132N	Quad Schmitt Trigger	1.25
SN74136N	Quad 2-Input Exclusive OR Gate	.60
SN74141N	BCD to Decimal Decoder/Driver	1.15
SN74142N	Center Latch Nixie	4.00
SN74143N	Center Decoder	4.50
SN74144N	Center Decoder	4.50
SN74145N	BCD to DEC Decoder/Driver OC	.89
SN74147N	10 To 4 Priority Encoder	1.85
SN74148N	8 To 3 Priority Encoder	1.40
SN74150N	16 To 1 Mux	.95
SN74151N	8 To 1 Mux	.75
SN74153N	Dual 4 To 1 Mux	1.10
SN74154N	4 To 16 Decoder/Demux	1.10
SN74155N	Dual 2 To 4 Decoder/Demux	.95
SN74156N	2 To 4 Decoder/Demux	.95
SN74157N	Quad 2-In Data Selector	.95
SN74158N	Quad 2-In Data Selector	1.15
SN74160N	Sync 4-Bit Decade Counter	1.35
SN74161N	Sync 4-Bit Binary Counter	.95
SN74162N	Sync 4-Bit Decade Counter	1.35
SN74163N	Sync 4-Bit Binary Counter	1.35
SN74164N	8-Bit P Out Serial S R	1.45
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SN74177N	Binary Counter/Latch with Preset	.90
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SN74179N	4-Bit Parallel Shift Register	2.15
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SN74181N	4-Bit Arithmetic Logic Unit	2.40
SN74182N	Look-Ahead Carry Generator	.85



## 7400 TTL

SN74152N	8-Input Multiplexer, Inverted Output	5.25
SN74184N	BCD to Binary Converter	2.20
SN74185N	Binary to BCD Converter	2.20
SN74187N	1024—Bit ROM	4.50
SN74188N	256—Bit PROM (32 X 8 OC)	5.35
SN74190N	Synchronized BCD Up/Down Counter	1.15
SN74191N	Synchronized Binary Up/Down Counter	1.25
SN74192N	Synchronized Decade Up/Down Counter	1.25
SN74193N	Synchronized 4—Bit Up/Down Counter	.85
SN74194N	4—Bit BiDirectional SR	1.15
SN74195N	4—Bit Parallel Shift Register	.90
SN74196N	Decade Counter/Latch with Preset	1.10
SN74197N	Binary Counter/Latch with Preset	.90
SN74198N	8—Bit Shift Register	1.65
SN74199N	8—Bit Shift Register	2.20
SN74200N	Tri-State 256—Bit Random Access Memory	6.00
SN74221N	Dual Monostable Multivibrator	1.55
SN74251N	Tri-State 8 Channel Multiplexer	1.60
SN74279N	Quad S—R Latch	1.50
SN74284N	Tri-State 4—Bit Multiplier	6.00
SN74285N	Tri-State 4—Bit Multiplier	6.00
SN74298N	Quad 2—Input Mux with Storage	1.65
SN74365N	HS Hex Buffers/Inverters	2.00
SN74366N	HS Hex Buffers/Inverters	2.00
SN74367N	HS Hex Buffers/Inverters	2.00
SN74368N	HS Bex Buffers/Inverters	2.00

## DM8000 TTL

DM8090	Quad Inverter/Dual 2-Input NAND Gate	1.80
DM8091	Quad 2-Input NAND Buffer	.75
DM8092	Dual 5-Input NAND Gate	.75
DM8093	Tri-State Quad Buffer	.80
DM8094	Tri-State Quad Buffer	.80
DM8095	Hex Buffer — Three State	.55
DM8096	Hex Inverter — Three State	.55
DM8097	Hex Buffer — Three State	.55
DM8098	Hex Inverter — Three State	.55
DM8102		1.20
DM8116		1.20
DM8121	Tri-State 8 Channel Multiplexer	1.10
DM8122		1.20
DM8123	Tri-State 9322 Multiplexer	1.90
DM8124		1.90
DM8130	10—Bit Comparator	3.50
DM8131	6—Bit Comparator with High Z Inputs	3.00
DM8136	6—Bit Unified Bus Comparator Open Collector	1.95
DM8160	6—Bit Identity Comparator	1.90
DM8200	4—Bit Magnitude Comparator	2.55
DM8210	8 Channel Digital Switch	3.50
DM8211	8 Channel Multiplexer with Strobe	2.50
DM8212		2.40
DM8214	Tri-State Dual 4—Input Multiplexer	2.30
DM8219	Tri-State 16/1 Multiplexer	2.30
DM8220	9—Bit Parity Generator/Checker	1.60
DM8223	8 Channel Demultiplexer	2.70
DM8230	Tri State 2-Line-to-4-Line Demultiplexer	2.90
DM8280	Presetable Decade Counter	.95



## DM8000 TTL

DM8281	Presetable Binary Counter	1.00
DM8288	Presetable Divide-by-12-Counter	1.50
DM8511	Low Power Dual Gated D Flip Flop	.75
DM8512	Low Power Gated Dual J-K Flip Flop	1.90
DM8520	Modulo N Divider	1.70
DM8542	Tri State Quad I/O Register	1.90
DM8544	Quad Contact-Bounce Eliminator	2.40
DM8546	Tri State 8—Bit Universal Shift Register	3.00
DM8551	Tri State Quad D Flip Flop	2.20
DM8552	Tri State Decade Counter and Latch	3.00
DM8553	Tri State 8—Bit Latch	4.00
DM8554	Tri State Binary Counter and Latch	3.00
DM8555	Tri State Presetable Decade Counter	3.00
DM8556	Tri State Presetable Binary Counter	3.00
DM8560	Decade Up/Down Counter	1.60
DM8563	Binary Up/Down Counter	1.10
DM8570	Serial-In Parallel-Out 8—Bit Shift Register	2.20
DM8573	1024—Bit Field Programmable Read Only Mem	5.50
DM8574	Tri State Field Programmable 1024—Bit Read Only Memory	6.25
DM8575	Programmable Logic Array (Active Output)	5.50
DM8576	Programmable Logic Array (Active Output)	5.50
DM8577	256—Bit Field Programmable ROM Open Collector	4.50
DM8578	256—Bit Field Programmable ROM Tri State Output	5.00
DM8590	Parallel-In Serial-Out 8—Bit Shift Register	1.75
DM8599	Tri State 64—Bit Random Access Memory	4.50
DM8601	One Shot	.75
DM8602	Dual One Shot	1.00
DM8613	Gated Quad D Flip Flop	1.35
DM8802		1.40
DM8806		1.50
DM8810		.75
DM8811		1.25
DM8812		.75
DM8820	Dual Differential Line Receiver	2.70
DM8822		3.25
DM8830	Dual Differential Line Driver	2.70
DM8831		3.25
DM8832		3.25
DM8833	Quad Tri-State Transceiver (True)	1.65
DM8834	Quad Tri-State Transceiver (Inverting)	1.65
DM8835	Quad Tri-State Transceiver (Inverting)	1.65
DM8836	Quad Two-Input Bus Receiver	.69
DM8837	Hex Unified Bus Receiver	1.65
DM8838	Quad Unified Bus Transceiver	1.65
DM8839	Quad Tri-State Transceiver	1.65
DM8844		1.90
DM8853	Double-Edge Dual One Shot	1.50
DM8863	8—Digit LED Driver (500 ma Sink)	1.75

## DM80L00/80C00 TTL

DM80L97	Low Power Tri State Hex Buffer (4—2 Grouping)	1.90
DM81L22		1.90
DM81L23	Tri State Low Power Quad 2—Input Multiplexer	2.40
DM85L51	Tri State Low Power Quad D Flip Flop	3.00
DM85L52	Low Power Tri State Decimal Counter/Latch	3.00
DM85L63	Low Power Binary Up/Down Counter	1.60

## DM80L00/80C00 TTL

DM86L70	Low Power 8—Bit Serial-In Parallel-Out Shift Reg.	1.90
DM86L75	Low Power Presettable Decade Counter	2.40
DM86L99	Low Power Tri State 64—Bit Random Access Mem.	4.10
DM88L12		1.10
DM80C95		1.50
DM80C97		1.50

## 9000 TTL

DM9002	Quad 2-Input NAND Gate	.30
DM9003	Triple 3-Input NAND Gate	.30
DM9005	Quad 2-Input AND/OR Gate	.40
DM9008	2—2—3—2 AND/OR Invert Gate	.40
DM9009	Dual 4-Input Buffer	.40
DM9016	Hex Inverter	.30
DM9020		.40
DM9300	4—Bit Parallel Shift Register	1.30
DM9301	BCD to Decimal Decoder	1.30
DM9309	Dual 4-Input Multiplexer	1.00
DM9312	8-Input Multiplexer	1.00
DM9316	Presettable Binary Counter	2.00
DM9328		1.10
DM9334	8—Bit Addressable Latch	2.60
DM9601	Retriggerable Monostable Multivibrator	.75
DM9602	Dual One Shot	1.00

## 74S00 SCHOTTKY TTL

SN74S00N	Quad 2-Input NAND Gate	.29
SN74S02N	Quad 2-Input NOR Gate	.29
SN74S03N	Quad 2-Input NAND Gate	.80
SN74S04N	Hex Inverter (OC)	.35
SN74S05N	Hex Inverter (OC)	1.00
SN74S08N	Quad 2-Input AND Gate	.75
SN74S10N	Triple 3-Input NAND Gate	.90
SN74S11N	Triple 3-Input AND Gate	1.00
SN74S15N	Triple 3-Input AND Gate (OC)	.85
SN74S20N	Dual 4-Input NAND Gate	.95
SN74S22N	Dual 4-Input NAND Gate (OC)	1.00
SN74S26N		1.50
SN74S30N		1.00
SN74S32N	Quad 2-Input OR Gate	.80
SN74S37N	Quad 2-Input NAND Buffer	.85
SN74S40N	Dual 4-Input NAND Buffer	1.00
SN74S64N	4—2—3—2—Input A01 Gate	1.00
SN74S65N	4—2—3—2—Input A01 Gate	
SN74S74N	Dual D-Type Edge Triggered Flip Flop	.68
SN74S78N		1.30
SN74S86N	Quad 2-Input Exclusive OR Gate	2.40
SN74S89N		
SN74S107N		1.20
SN74S112N	Dual J-K Edge Flip Flop	.78
SN74S113N	Dual J-K Positive Edge Flip Flop	1.90
SN74S114N	Dual J-K Negative Edge Flip Flop	1.90
SN74S133N	13-Input NAND Gate	1.10
SN74S135N	Quad Exclusive OR/NOR Gate	1.80
SN74S136N		1.80
SN74S138N	3 to 1 of 8 Decoder/Demux	2.60
SN74S139N	Dual 2 to 10 of 4 Decoder/Demux	2.03



## 74S00 SCHOTTKY TTL

SN74S140N	Dual 4-Input NAND Line Driver	1.00
SN74S151N	8 to 1 Mux	2.03
SN74S153N	Dual 4 to 1 Mux	2.60
SN74S157N	Quad 2-In Data Selector (NI)	1.82
SN74S158N	Quad 2-In Data Selector (1)	1.82
SN74S174N	Hex D-Type Flip Flop with Clear	2.97
SN74S175N	Quad D-Type Edge Triggered Flip Flop	2.53
SN74S200N	256-Bit RAM (256 X 1 TS)	8.00
SN74S206N		2.50
SN74S257N	Quad 2 to 1 Data Selector/Mux	2.75
SN74S258N	Quad 2 to 1 Data Selector/Mux	2.50
SN74S280N	9-Bit Odd/Even Parity Element	2.50
SN74S412N		4.75

## LOW POWER SCHOTTKY TTL

SN74LS00N	.34	SN74LS54N	.34	SN74LS161N	2.05
SN74LS01N	.34	SN74LS55N	.34	SN74LS162N	2.05
SN74LS02N	.34	SN74LS73N	.52	SN74LS163N	2.05
SN74LS03N	.34	SN74LS74N	.59	SN74LS164N	2.00
SN74LS04N	.39	SN74LS75N	.75	SN74LS170N	2.85
SN74LS05N	.39	SN74LS76N	.55	SN74LS174N	1.85
SN74LS08N	.39	SN74LS78N	.39	SN74LS175N	1.85
SN74LS09N	.39	SN74LS86N	.52	SN74LS190N	2.60
SN74LS10N	.39	SN74LS90N	1.10	SN74LS191N	2.60
SN74LS11N	.39	SN74LS92N	1.10	SN74LS192N	2.60
SN74LS12N	.39	SN74LS93N	1.10	SN74LS193N	2.60
SN74LS13N	.67	SN74LS95N	1.10	SN74LS194N	2.00
SN74LS14N	1.90	SN74LS107N	1.89	SN74LS195N	2.00
SN74LS15N	.34	SN74LS109N	.52	SN74LS196N	2.00
SN74LS20N	.34	SN74LS112N	.52	SN74LS197N	2.00
SN75LS21N	.34	SN74LS113N	.52	SN74LS221N	1.95
SN74LS22N	.34	SN74LS114N	.52	SN74LS251N	2.05
SN74LS26N	.39	SN74LS132N	1.50	SN74LS253N	2.05
SN74LS27N	.39	SN74LS136N	.59	SN74LS257N	1.75
SN74LS28N	.41	SN74LS138N	1.68	SN74LS258N	2.20
SN74LS30N	.34	SN74LS139N	1.68	SN74LS260N	.49
SN74LS32N	.39	SN74LS145N	1.50	SN74LS261N	3.50
SN74LS33N	.39	SN74LS151N	1.60	SN74LS266N	.95
SN74LS37N	.39	SN74LS153N	1.55	SN74LS283N	2.00
SN74LS38N	.39	SN74LS155N	1.50	SN74LS290N	2.00
SN74LS40N	.39	SN74LS157N	1.40	SN74LS293N	2.00
SN74LS42N	1.35	SN74LS158N	1.40	SN74LS386N	.95
SN74LS51N	.34	SN74LS160N	2.05	SN74LS670N	5.40

## TTL HIGH SPEED

74H00	.30	74H20	.30	74H62	.35
74H01	.30	74H21	.30	74H72	.40
74H04	.30	74H30	.30	74H74	.40
74H08	.30	74H40	.30	74H101	.75
74H10	.30	74H51	.30	74H103	.75
74H11	.30	74H53	.35	74H108	.75



## DTL

830	.20	837	.20	857	.20
832	.20	844	.20	858	.20
833	.20	845	.20	861	.20
835	.20	846	.20	862	.20
836	.20	849	.20	863	.20

## TTL LOW POWER

74L00	.30	74L20	.30
74L04	.30	74L30	.30
74L10	.30	74L93	1.35

## LINEAR

CA3018	Transistor Array	1.00
CA3020	Wideband Power Amplifier	2.50
CA3026	Dual Differential Amplifier	1.00
CA3028	RF Amplifier	1.60
CA3029	6V Wideband Amplifier	.80
CA3035	Single-Ended I/O Amplifier Triple	2.45
CA3045	Transistor Array	.90
CA3046	Transistor Array	.95
CA3047	Operational Amplifier	.90
CA3049	Dual Differential Amplifier	.85
CA3054	Dual Differential Amplifier	1.00
CA3081	Transistor Array NPN	1.80
CA3082	Common Collector NPN Array	1.90
CA3086	Transistor Array NPN	1.40
CA3089	FM IF System	3.75
CA3090AQ	Stereo Multiplex Decoder	4.75
LM300H	Positive Voltage Regulator	1.25
LM301AN	High Performance OP AMP	.35
LM301AH	High Performance OP AMP	.35
LM302H	Voltage Follower	.66
LM304H	Negative Regulator	.90
LM305H	Positive Voltage Regulator	.87
LM307H	General Purpose Comparator OP AMP	.35
LM307N	General Purpose OP AMP	.35
LM308AH	Super Gain OP AMP	1.25
LM308H	Super Gain OP AMP	.89
LM308N	Precision OP AMP	.89
LM309H	5V Regulator 200 ma	1.15
LM309K	5V Regulator	1.25
LM310H	Improved OP AMP Voltage Follower	1.10
LM310N	Improved Voltage Follower OP AMP	1.25
LM311H	Voltage Comparator	.90
LM311N	High Performance Voltage Comparator	.90
LM312H	Super Gain Comparator OP AMP	1.10
LM313H	Precision Reference Diode	5.80
LM318H	High Slew Rate OP AMP	1.35
LM318N	Precision Hi Speed OP AMP	1.35
LM319N	Hi Speed Dual Comp	1.30
LM320K-5	Negative 3 Term Voltage Regulator 5V	1.50
LM320K-12	Negative 3 Term Voltage Regulator 12V	1.50
LM320K-15	Negative 3 Term Voltage Regulator 15V	1.50
LM320T-5	Negative Voltage Regulator	1.60
LM320T-8	Negative Voltage Regulator	1.60
LM320T-12	Negative Voltage Regulator	1.60
LM320T-15	Negative 3 Term Voltage Regulator 15V	1.60



## LINEAR

LM323K-5	5V 3 Amp Regulator	6.95
LM324N	Quad OP AMP	1.80
LM325N	Dual Track Regulator 15V, -15V	2.95
LM339N	Quad Comparator	1.55
LM340K-5	5V Positive Voltage Regulator	1.60
LM340K-12	12V Positive Voltage Regulator	1.60
LM340K-15	Positive 3 Terminal Voltage Regulator 15V	3.50
LM340K-24	24V Positive Voltage Regulator	1.60
LM340T-5	Positive 3 Terminal Voltage Regulator 5V	1.50
LM340T-8	Positive 3 Terminal Voltage Regulator 8V	1.50
LM340T-12	Positive Voltage Regulator	1.70
LM340T-15	Positive 3 Terminal Voltage Regulator 15V	1.50
LM340T-18	Positive 3 Terminal Voltage Regulator 18V	1.50
LM340T-24	Positive Voltage Regulator	1.70
LM343H	High Voltage OP AMP	4.25
LM341P-5		
LM345K-5		
LM345K-5.2		
LM348N	Quad 741 OP AMP	2.40
LM350N	Dual Peripheral Driver	1.00
LM351N	Dual Peripheral Driver (75453)	.60
LM358N	Low Power Dual OP AMP	2.45
LM370N	AGC Squelch AMP	1.15
LM373N	AM/FM SSB Strip	2.90
LM377N	Dual 2 Watt Power AMP	3.60
LM379S	Dual 6W Audio Amplifier	5.00
LM380N	2 Watt Audio Power AMP	1.00
LM381N	Low Noise Power AMP	1.60
LM382N	Low Noise Dual Preamplifier	1.60
LM386N	Low Voltage Audio Amplifier	1.75
LM703N	RF-IF AMP	.45
LM709H	OP AMP	.29
LM709N	OP AMP	.29
LM710H	Voltage Comparator	.75
LM710N	Voltage Comparator	.65
LM711N	Dual Difference Comparator	.39
LM723H	Voltage Regulator	.50
LM723N	Voltage Regulator	.44
LM733N	Video AMP	.89
LM741H	Compensated OP AMP	.40
LM741N	Compensated OP AMP	.35
LM747H	Dual 741 OP AMP	.62
LM747N	Dual 741 OP AMP	.62
LM748N	Frequency Adjust 741	.35
LM1303N	Stereo Preamp	.82
LM1304N	FM Multiplex Stereo Demodulator	1.10
LM1305N	FM Multiplex Stereo Demodulator	1.27
LM1307	FM Multiplex Stereo Demodulator	2.00
LM1310	Stereo Demodulator	2.75
LM1458N	Dual OP AMP	.59
LM1800N	PLL Demodulator	.75
LM1812N	Ultrasonic Transceiver	7.50
LM2111N	FM Detector and Limiter	1.75
LM2901N	Quad OP AMP	2.50
LM2901N	Quad OP AMP	3.50
LM3900N	Quad Amplifier	.55
LM3905	Precision Timer	1.75
LM3909N	LED Flasher/Oscillator	.69

## LINEAR

78L05	TO 92 Positive Regulator	.90
78L08	TO 92 Positive Regulator	.90
79L05	TO 92 Negative Regulator	1.00
NE540L	Power Driver	3.50
NE550N	Precision Voltage Regulator	.65
NE555V	Timer	.43
NE556A	Dual Timer	1.25
NE565A	Phase Locked Loop	1.15
NE566V	Voltage Control Oscillator	1.85
NE567H	Tone Decoder PLL	1.55
NE567V	Tone Decoder PLL	1.45
SN75107CN	4 Segment LED Driver	.50
SN75108N	Dual Line Receiver	1.75
SN75138CN	Quad Bus Transceiver	3.50
SN75150N	Dual Driver	1.90
SN75491CN	Quad MOS-LED Segment Driver	.75
SN75492CN	Hex MOS-LED Digit Driver	.85
SN75494CN	6 Segment LED Driver	.85
SN75450CN	Dual Peripheral Driver	.47
SN75451CN	Dual Peripheral Driver	.39
SN75452CN	Dual Peripheral Driver	.39
SN75453CN	Dual Peripheral Driver	.37
SN75454CN	Dual Peripheral Driver	.37

## CMOS

34001PC	Fairchild Quad 2-Input NOR Gate	.50
CD4000	Dual 3-Input NOR Gate with Inverter	.25
CD4001	Dual 2-Input NOR Gate	.25
CD4002	Dual 4-Input NOR Gate	.25
CD4006	18-Bit Static Shift Register	1.80
CD4007	Dual Complementary Pair with Inverter	.25
CD4008	4-Bit Full Adder	2.30
CD4009		.80
CD4010	Hex Buffer (Noninverting)	.53
CD4011	Quad 2-Input NAND Gate	.25
CD4012	Dual 4-Input NAND Gate	.25
CD4013	Dual D-Type Flip Flop	.40
CD4014	8-Bit Static Shift Register	2.00
CD4015	Dual 4-Bit Static Shift Register	2.00
CD4016	Quad Bilateral Switch	.60
CD4017	Decade Counter/Divider	1.00
CD4018	Presetable Divide-by-N Counter	2.75
CD4019	Quad AND/OR Gate	2.00
CD4020	14-Bit Binary/Ripple Counter	1.35
CD4021	8-Bit Static Shift Register	2.00
CD4022	Octal Counter/Divider	1.40
CD4023	Triple 3-Input NAND Gate	.25
CD4024	7-Bit Binary/Ripple Counter	1.20
CD4025	Triple 3-Input NOR Gate	.25
CD4026	Dual Schmitt Trigger	3.85
CD4027	Dual J-K Flip Flop	.85
CD4028	BCD-to-Decimal Binary-to-Octal Decoder	1.50
CD4029		1.60
CD4030	Quad Exclusive OR Gate	.60
CD4035	4-Bit In-Parallel Out-Shift Register	2.00
CD4040	12-Bit Binary Counter	2.25



## CMOS

CD4042	Quad Clocked D-Type Latch	1.50
CD4043	Quad NOR Tri-State Latch	2.00
CD4044	Quad NAND Tri-State Latch	1.00
CD4046	Phase Locked Loop	2.90
CD4049	Inverting Hex Buffer	.62
CD4050	Non-Inverting Hex Buffer	.62
CD4051	8 Channel Multiplexer	2.10
CD4060		2.10
CD4066	Quad Bilateral Switch	1.20
CD4068	8-Input NAND Gate	.25
CD4069	Hex Inverter	.25
CD4070	Quad Exclusive OR Gate	.40
CD4071	Quad 2-Input OR Gate	.40
CD4072	Dual 4-Input OR Gate	.40
CD4073	Triple 3-Input AND Gate	.40
CD4075	Triple 3-Input OR Gate	.40
CD4076	Quad D Register	1.50
CD4078	8-Input NOR Gate	.40
CD4081	Quad 2-Input AND Gate	.40
CD4082	Dual 4-Input AND Gate	.40
CD4116		1.30
CD4490	Hex Contact Bounce Eliminator	2.50
CD4508	Dual 4-Bit Latch	4.00
CD4510	BCD Up/Down Counter	2.00
CD4511	BCD to 7-Segment Latch/Decoder	2.20
CD4515	4/16 Line Decoder (LO)	4.00
CD4516	Binary Up/Down Counter	2.00
CD4518	Dual BCD Counter	2.45
CD4520	Dual Binary Up Counter	2.90
CD4527	BCD Rate Multiplier	4.75
CD4528	Dual Monostable Multivibrator	1.50
CD4553	Three-Digit BCD Counter	5.75
CD4566	Industrial Time Base Generator	2.25
CD4583	Dual Schmitt Trigger	4.50
CD4585	4-bit Magnitude Comparator	2.45
CD40106	Hex Schmitt Trigger	2.10
CD40192	Decade Up/Down Counter	2.40

## 74L00 TTL

74L01	.30	74L51	.40	74L90	1.75
74L02	.30	74L54	.50	74L91	1.75
74L03	.30	74L55	.40	74L95	1.95
74L05	.45	74L71	.35	74L98	3.10
74L06	.35	74L73	.60	74L123	1.75
74L08	.45	74L74	.60	74L154	2.25
74L09	.45	74L75	1.40	74L164	2.80
74L26	.45	74L78	1.00	74L165	3.00
74L32	.50	74L85	1.60	74L192	1.50
74L42	1.75	74L86	.85	74L193	1.45
		74L89	3.75		

## 7400 CMOS

74C00	Quad 2-Input NAND Gate	.28
74C02	Quad 2-Input NOR Gate	.28
74C04	Hex Inverter	.33
74C08	Quad 2-Input AND Gate	.50
74C10	Triple 3-Input NAND Gate	.28

## 7400 CMOS

74C14	Hex Schmitt Trigger	2.10
74C20	Dual 4-Input NAND Gate	.28
74C22		.85
74C30	8-Input AND Gate	.28
74C32	Quad 2-Input OR Gate	.60
74C42	BCD to Decimal Decoder	1.40
74C48	BCD to 7 Segment Decoder Driver	2.95
74C73	Dual J-K Master-Slave Flip Flop	.75
74C74	Dual D-Type Edge Triggered Flip Flop	.65
74C76	Dual J-K Master-Slave Flip Flop	1.40
74C83	4-Bit Binary Full Adder	1.40
74C85	4-Bit Magnitude Comparator	2.40
74C86	Quad 2-Input Exclusive OR Gate	.85
74C89		3.50
74C90	Decade Counter	1.15
74C93	4-Bit Binary Counter	1.40
74C95	4-Bit Shift Register	1.40
74C107	Dual J-K Master-Slave Flip Flop	.85
74C151	8 to 1 Mux	1.50
74C154	4 to 16 Decoder/Demux	3.00
74C157	Quad 2-Input Data Selector	2.00
74C160	Synchronous Decade Counter	1.44
74C161	Synchronous 4-Bit Binary Counter	1.75
74C162	Synchronous 4-Bit Decade Counter	1.75
74C163	Synchronous 4-Bit Binary Counter	1.75
74C164	8-Bit P Out Serial S R	1.75
74C165	Parallel-Load 8-Bit S R	1.75
74C173	Quad 3-State D-Type Flip Flop	2.60
74C174	Hex D-Type Flip Flop with Clear	2.20
74C175	Quad D-Type Edge Triggered Flip Flop	1.70
74C192	Up/Down Counter	2.40
74C193	Synchronous 4-Bit Up/Down Counter	1.60
74C195	4-Bit Parallel Shift Register	1.40
74C200		1.50
74C221	Dual One Shot	2.75
74C901	Hex Inverting TTL Buffer	.90
74C902	Hex Non-Inverting TTL Buffer	.90
74C903	Hex Inverting PMOS Buffer	.90
74C904	Hex Non-Inverting PMOS Buffer	.90
74C905	12-Bit Successive Approximation Register	3.50
74C906	Hex Open Drain N-Channel Buffer	.90
74C908	Dual High Voltage CMOS Drive	2.20
74C910	256-Bit Tri-State RAM	4.50
74C914	Hex Schmitt Trigger	2.00
74C925	4-Digit Counter with Multiplex 7-Segment Output Driver	10.00
74C926	4-Digit Counter with Multiplex 7-Segment Output Driver	10.00
74C927	4-Digit Counter with Multiplex 7-Segment Output Driver	10.00

## TV GAME CHIPS

MM57100	6 Games Chip	}	29.50	GI AY38500-1	24.50
MM53104	Driver				
LM1889	Modulator				

## A TO D CONVERTER

8700	CMOS 8 bit A to D Converter	16.00
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## N8000 TTL

N8200	Dual 5—Bit Buffer Register	2.40
N8202	10—Bit Buffer Register	2.30
N8222		2.30
N8223	256—Bit PROM (32 X 8 OC)	2.90
N8225	64—Bit RAM (16 X 4 OC)	2.90
N8230	8—Input Multiplexer	1.85
N8233	2—Input 4—Bit Multiplexer	1.85
N8234	2—Input 4—Bit Multiplexer	1.85
N8241	Quad Exclusive OR	1.10
N8242	Quad Exclusive NOR	1.10
N8250	Binary-to-Octal Decoder	1.85
N8251	BCD-to-Decimal Decoder	1.85
N8260	Arithmetic Logic Element	3.00
N8261	Fast Carry Extender	1.20
N8262	9—Bit Parity Generator/Checker	3.00
N8263	3—Input 4—Bit Multiplexer	4.00
N8264	3—Input 4—Bit Multiplexer	4.00
N8266	2—Input 4—Bit Multiplexer	2.20
N8267	2—Input 4—But Multiplexer	4.00
N8271	4—Bit Shift Register	2.00
N8275	10—Bit Parallel/In Shift/Out Register	2.00
N8277	Dual 8—Bit Shift Register	3.00
N8280	Presetable Decade Counter	1.10
N8281	Presetable Binary Counter	1.10
N8288	Divide-by-Twelve Counter	1.80
N8290	Presetable H S Decade Counter	2.40
N8293	Presetable Low Power Binary Counter	3.00
N8815	Dual 4—Input NOR Gate	1.25
N8816	Dual 4—Input NAND Gate	1.25
N8825	DC Clocked J—K Binary	2.20
N8826	Dual J—K Binary	3.00
N8828	Dual D Binary	2.00
N8848	AND—OR Invert Gate (Exp)	.40
N8855	Dual 4—Input Driver	1.20
N8880	Quad 2—Input NAND Gate	1.10
N8480	Quad 2—Input NAND Gate	1.00
N8490	Hex Inverter	1.30

## TRIM POTS

10 Turn Pot	\$ .89 each	Quantities of 10 mixed	\$ 7.00
RESISTANCE VALUES			
10 $\Omega$	100 $\Omega$	1K $\Omega$	5K $\Omega$
20 $\Omega$	200 $\Omega$	2K $\Omega$	50K $\Omega$
50 $\Omega$	500 $\Omega$		100K $\Omega$
			200K $\Omega$
			500K $\Omega$
			1M $\Omega$

## MICROPROCESSORS

8080	Central Processing Unit with Data	19.00
8080A	Central Processing Unit with Data	23.50

## MICROPROCESSOR SUPPORT DEVICES

8212	8—Bit Input/Output Port for 8080	4.50
8224	Clock Generator/8080 Driver	8.50
8228	System Controller/8080 Bus Driver	8.50
8214	Interrupt Control Unit	8.00
8216	Non-Inverting Bi-Directional Bus Driver	4.25
8251	Programmable Communications Interface (USART)	11.95

## INTERFACE

N8T09A	Quad 3-State Bus Driver	1.25
N8T10B	Quad D-Type 3-State Flip Flop	4.50
N8T13A	Dual Line Driver	3.00
N8T16A	Dual EIA/MIL Line Receiver	2.50
N8T20B	BIDI Monostable (Diff. In.)	5.50
N8T23B	Dual IBM 360/370 Intl. Driver	3.10
N8T24B	Triple IBM 360/370 Intl. Driver	3.50
N8T25V	Dual MOS Sense Amplifier with Latch	3.20
N8T26B	Quad 3-State Bus Driver/Receiver	2.75
N8T28B	Quad 3-State Bus Driver/Receiver	2.75
N8T34	Quad Bus Transceiver	3.00
N8T37	Hex Bus Receiver with Hysteresis	3.00
N8T38	Quad Bus Transceiver (OC)	3.00
N8T80A	Quad 2-Input NAND Gate	2.75
N8T90A	Hex Inverter	2.75
N8T97B	HS Hex Buffer/Inverter	2.45
N8T98B	HS Hex Buffer/Inverter	2.45
N8T110	Quad 3-State Differential Receiver	2.50

## MOS/MEMORY

### RAM

2101-1	256 X 4 Bit-Static RAM (500 NS)	4.50
2102	1024-Bit Static RAM (1,000 NS)	1.50
2102-1	1024-Bit Static RAM (500 NS)	1.80
21L02-1	1024-Bit Static RAM (500 NS)	2.50
2107B	150 NS 4K Dynamic RAM	8.00
2111-1	1024-Bit (256 X 4) Static RAM Data No. 700 Common	7.00
PD411D-3	150 NS 4K Dynamic RAM	8.00
2112-2	256-Bit Static RAM (650 NS)	7.90
5262	2048 X 1 Dynamic RAM (350 NS)	.90
82S06	256-Bit RAM (256 X 1 TS)	2.50
82S07	256-Bit RAM (256 X 1 OC)	2.50
82S11	1024-Bit RAM (1024 X 1 TS)	2.50
82S12	32-Bit SAM (8 X 4 OC)	2.50
82S17	256-Bit RAM (256 X 1 OC)	2.50
91L02A	1024-Bit Static Low Power RAM (500 NS)	2.90

### PROM

1702A	256-Bit Erasable PROM	9.00
2708	1024 X 8 Erasable PROM	35.00
MM16330	256-Bit PROM (32 X 8 OC)	3.00
MM16331	256-Bit PROM (32 X 8 TS)	3.50
N82S23	256-Bit PROM (32 X 8 OC)	3.25
N82S25	64-Bit RAM (16 X 4 OC)	2.50
N82S123	256-Bit PROM (32 X 8 TS)	4.00
N82S126	1024-Bit PROM (256 X 4 OC)	4.85
N82S129	1024-Bit PROM (256 X 4 TS)	4.85
N82S130	2048-Bit PROM (512 X 4 OC)	5.25
N82S131	2048-Bit PROM (512 X 4 TS)	5.25
DM8577	256-Bit PROM (32 X 8 OC)	2.90

### UART

AY5-1013	UART 30K BAUD	6.20
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## SHIFT REGISTERS

MM5013	1K Dynamic Shift Register	2.75
MM5027	2K Dynamic Shift Register	3.95
MM5058	1K Static Shift Register	2.20
MM5060	Dual 128-Bit Shift Register/Accum	3.20
MM5061	100-Bit Static Shift Register	2.95
1402	256-Dynamic Shift Register	2.40
1403	512-Dynamic Shift Register	2.40
1404	1K Dynamic Shift Register	1.75
2513	64 X 8 X 5 Character Generator	10.00

## FIFO

3341PC	MOS/SGT 4 X 64 Fifo Memory 700 KHz	8.50
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## CLOCK CHIPS

CT7001	6-Digit Calendar Alarm 12/24 Hour	5.80
MM5309	6-Digit Interval Clock Timer	3.90
MM5311	6-Digit with BCD	3.60
MM5312	24 Pin Any Readout 4-Digit 1 PPS Output	4.80
MM5313	28 Pin Any Readout 6-Digit LPS BCD	3.60
MM5314	24 Pin LED Incandescent Readout 6-Digit	3.90
MM5315	6-Digit Interval Clock Timer	4.00
MM5316	40 Pin Alarm Set Snooze Timer	5.00
MM5318	Clock/TV Character Generator	8.95
MM5320	Video Sync Generator	5.95
MM5330	4-1/2 Digit DVM	9.75
MM5371	Digital Alarm Clock 50 Hz	5.50
MM5375AA	Digital Alarm Clock 60 Hz Gas Discharge	3.90
MM5375AB	Digital Alarm Clock 60 Hz LED 12 Hour	4.90
MM5841	TV Time/Channel Display Generator	10.80
MM5865	4-Digit 7-Function Stopwatch/Timer	9.00
MM5865	Ten Page Spec Only	1.00
NCT200	Opto-Coupler Isolator	.90
7205	Stopwatch	16.50

## CLOCK MODULES

Complete Clock Modules minus transformer and switches.

MA1002 A, C, E	0.5 inch	8.95
102P3	Transformer	2.25
MA1010E	0.8 inch	11.95
102P2	Transformer	3.25
MA1013E	0.7 inch	10.95
102P4	Transformer	3.25

## CLOCK SUPPORT DEVICES

DS0026CN	5 MHz Dual MOS Clock Driver	3.75
MM5369	Oscillator-Prescaler (3.58 MHz to 60 Hz)	2.10
DS0056CN	5 MHz Dual MOS Clock Driver	3.75

## RESISTORS

1/4 Watt 5% 2.2 Ohm to 22 Megohm

10 pcs. minimum per value	\$ .05 ea
25 pcs. minimum per value	.03 ea
100 pcs. minimum per value	.025 ea
1,000 pcs. minimum per value	.015 ea

350 piece resistor assortment, 5 each per value \$9.50. Values are included from 2.2 Ohm to 22 Megohm.

## IC SOCKETS

### SOLDER TIN LOW PROFILE

PIN	1 UP
8	.15
14	.18
16	.20
18	.27
22	.35
24	.36
28	.43
36	.58
40	.61

### SOLDER TIN STANDARD

PIN	1 UP
14	.24
16	.25
18	.30
24	.42
28	.81
36	1.15
40	1.30
TO-5 Sockets 8 Pin .27	

### WIRE WRAP #3 LENGTH

PIN	1 UP
14	.55
16	.60
18	.75
24	1.05
28	1.40
36	1.59
40	1.75

## TRANSISTORS

2N706	.30	2N3645	.25	2N4913	.80
2N708	.30	2N3703	.35	2N4916	.30
2N930	.30	2N3704	.35	2N4918	.60
2N1302	.30	2N3725	.90	2N5087	.25
2N1306	.30	2N3762	.70	2N5088	.25
2N1711	.30	2N3793	.35	2N5163	.43
2N1893	.40	2N3904	.25	2N5179	.60
2N2222	.25	2N3905	.25	2N5189	.40
2N2222A	.25	2N3906	.25	2N5294	.60
2N2223A	.35	2N4037	1.10	2N5296	.60
2N2646	.40	2N4064	.75	2N5322	.75
2N2904A	.20	2N4093	.50	2N5461	.35
2N2905	.20	2N4124	.20	2N6055	3.00
2N2906	.18	2N4126	.20	2N6056	3.25
2N2907	.18	2N4208	.32	PN3568	.22
2N2945A	.35	2N4220	.90	PN3642	.29
2N3053	.40	2N4234	.84	PN5139	.18
2N3055	.79	2N4237	.75	MPSA12	.65
2N3300	.32	2N4247	.35	MPSA20	.28
2N3440	.50	2N4303	.45	MPS6566	.68
2N3502	.34	2N4314	.32	MPSU10	.25
2N3504	.20	2N4400	.25	TIP33A	1.00
2N3565	.25	2N4401	.75	TIP34A	1.10
2N3568	.25	2N4402	.20	TIS58	.45
2N3569	.30	2N4403	.75	TIS92	.30
2N3634	.25	2N4416	1.00	TIS93	.30
2N3640	.25	2N4900	.60	TIS97	.30
2N3643	.25	2N4910	.60	E202	.55

## DIODES AND RECTIFIERS

1N270	.15	1N752A	.25	1N825A	.60
1N703	.25	1N753A	.25	1N914	20/1.00
1N704A	.25	1N755A	.25	1N4001	.08
1N746A	.25	1N756A	.25	1N4002	.08
1N748A	.25	1N757A	.25	1N4003	.08
1N749A	.25	1N821	.50	1N4004	.08
1N750A	.25	1N823A	.50	1N4005	.08
1N751A	.25			1N4006	.08



## DIODES AND RECTIFIERS

1N4148	20/1.00	1N4739A	.25	1N4749A	.25
1N4733A	.25	1N4742A	.25	1N4750A	.25
1N4734A	.25	1N4744A	.25	1N4751A	.25
1N4736A	.25	1N4746A	.25	1N4752A	.25
1N4738A	.25			1N4764A	.25

## SWITCHES

### PUSH BUTTON

SPDT	
Maintain Action	1.45
Momentary Action	.95
Economy Type	.50
Normally Open/ Normally Closed	1.50

### SUBMINIATURE TOGGLE

SPDT		DPDT	
On Off On	1.75	On Off On	2.25
On None On	1.50	On None On	2.00

## ANTI-STATIC MATERIALS

Conductive Wrist Strap	\$5.75
Conductive foam	3.50 per sq. ft.

## VOLUME SPECIALS

		1	100
MM5262	2K RAM	.90	.50
MM5369	Divider	2.10	1.40
2102-1	500 ns 1K RAM	1.80	1.30
MM5375AA	Alarm Clock	3.75	2.20
FND503	.50" Display	1.20	.89
	18 MHz Crystal	3.90	2.50
PD411-3	150 ns 4K RAM	8.00	5.75
MA1002E	.50" Alarm Clock Module	8.95	6.95
MA1013E	.70" Alarm Clock Module	11.50	8.95
MM5309	Clock	3.90	2.70
MM5314	Clock	3.90	2.70
2708	4K EPROM	35.00	29.00
MA1010E	.84" Alarm Clock Module	11.95	9.95
1702A	256 X 8 MOS Erasable PROM	9.00	8.00
Other parts also available			

## IC TEST CLIPS

	1	10		1	10
Red	.50	.43	Black	.50	.43

## CAPACITORS

Ceramic Disc  
Mylar  
Electrolytic — Radial and Axial  
Tantalums

Capacitors are available in a wide range of voltages and capacitances. A complete listing is available upon request for \$.50 handling.

## BATTERIES

Nicad Sub C	2.90	Nicad AA	2.00
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## TRANSFORMERS

12V 300 ma	2.25	102P3 used with MA1002	2.25
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## DISPLAY LEDS

TYPE	POLARITY	HT.	1 UP	25 UP	100 UP
MAN1	Common Anode	.270	2.90		
MAN3	Common Anode	.125	.39		
MAN72	Common Anode	.30	1.50		
MAN74	Common Cathode	.30	1.50		
MAN6640	Common Cathode	.56	2.95	(Orange Dual)	
DL704	Common Cathode	.30	1.25		
DL707	Common Anode	.30	1.50		
DL727	Common Anode	.50	2.55	(Double Digit)	
DL747	Common Anode	.60	2.25		
FND359	Common Cathode	.357	.95		
FND503	Common Cathode	.50	1.05	1.00	.95
FND510	Common Anode	.50	1.05	1.00	.95
FND800	Common Cathode	.80	1.90	1.80	1.60
FND807	Common Anode	.80	1.90	1.80	1.60
5-Digit Red	14 Pin Dip	.125	2.50		
NSN33M	3-Digit Red	.125	.39		
5082-7340	Hex		6.75		
TIL 311			9.50		
7520	Clairex Photocells		.25		
DG-8	Fluorescent		1.75		
DG-10	Fluorescent		1.75		

## LEDS

Green To 18	.20	Red To 18	.15	Orange Jumbo	.25
Orange To 18	.20	Yellow Jumbo	.25	Red Jumbo	.20
Yellow To 18	.20			Green Jumbo	

## CRYSTALS

1	MHz	\$4.50	5.185	MHz	\$4.50
1.8432	MHz	\$6.00	5.7143	MHz	\$4.50
2	MHz	\$4.50	6.5536	MHz	\$4.50
2.097152	MHz	\$7.75	10	MHz	\$4.25
2.4576	MHz	\$7.50	18	MHz	\$3.90
3.2768	MHz	\$7.50	18.432	MHz	\$4.50
4	MHz	\$4.25	20	MHz	\$3.90
5	MHz	\$4.25	22.1184	MHz	\$4.50
5.0688	MHz	\$4.50	32	MHz	\$3.90
		32768 Hz	\$4.00		

## COMPUTER BOARDS AND KITS

### VIDEO INTERFACE BOARD

S-100 bus compatible. Display is 32 or 64 characters by 16 lines (DIP switch selectable). Parallel and composite outputs to video monitor or TV set. 1K on board memory for graphics and text. Upper and lower case, Greek alphabet, other interchangeable fonts available. 2 X 3 matrix graphics. Kit includes software manual.

Kit with 1K 500 ns low power RAMS  
Wired and tested kit

\$149.95  
\$225.00

### MOTHERBOARD

Compatible only with Altair 8800. Space for 15 connectors. 0.125 spacing between pins. Board only - \$35.00. Board with 10 edge connectors - \$75.00. With 15 - \$90.00.

Altair/Imesai extender board - \$8.00. Board with 100 pin connector - \$12.50.



## 4K/8K MEMORY BOARD

Designed especially to make the 8K "piggy-back" a simple task. Separate pads for the chip enable, selection of 4K or 8K by DIP switch and one jumper. No heat sinks required when running 8K. A power saver since the same TTL and regulators are used for the additional 4K of RAMS.

- PC Board Only — \$30.00
- Kit with 4K 500 ns low power RAMS — \$105.00
- Kit with 8K 500 ns low power RAMS — \$199.95
- Wired and Tested 4K Board — \$144.95
- Wired and Tested 8K Board — \$239.00

## 8K RAM BOARD KIT — \$225.00

- Plug compatible with the Altair 8800 and Imsai 8080, or any other system using the "Altair bus".
- Low power, 500 nanosecond AMD RAMS (91L02A). No wait cycles required.
- Low Power Schottky support chips
- Dip switch selection of memory address assignment and wait cycles.
- Memory protect can be set for increments of 256 bits, 512 bits, 1K, 2K, 4K, or 8K by DIP switch.
- T1 low profile sockets provided for all RAMS and IC's
- Gold plated edge connector contacts
- Solder mask
- Provision for battery backup

## 2K/4K EPROM BOARD KIT

- Altair 8800 and Imsai 8080 plug compatible
- Option of 2K (8) or 4K (16) 1702A's
- Dip Switch selection of addressing and wait cycles
- Reverse voltage protection
- On board regulators for +5 and -9V
- All sockets included
- Gold plated finger contacts

PC Board Alone	25.00
Complete Kit (Less EPROM's)	60.00
Complete Kit (8 EPROM's)	135.00
Complete Kit (16 EPROM's)	200.00

## I/O PROM UNIVERSAL CARD

Altair 8800 and Imsai 8080 plug compatible.

Two I/O ports committed, pads provided for three additional ports, including one serial. Other pads to facilitate wiring for a UART, EPROMS, etc. Instructions include information on several wiring options. Gold contacts for edge connector. Kit includes parts necessary for two I/O ports.

PC Board Only	\$25.00	Complete Kit	\$44.00
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## NATIONAL SEMICONDUCTOR SC/MP KIT — \$99.00

Includes Programming Manual with Complete Specs and Instructions Plus:

1 — CPU	1 — 7414	1 — Edge Connector
2 — 2101	1 — 1 MHz Crystal	1 — Printed Circuit Board
1 — ROM	1 — LM320MP-12	8 — Capacitors
1 — DM81LS95N	2 — Sockets	7 — Resistors

## COSMAC 'ELF'

### Parts List (Popular Electronics, August 1976)

10 $\mu$ f 16V Electrolytic	.19	4013	.40
30 PF Disc	.17	LM309K	.95
1N914	.08	Red LED	.20
CDP1802CD	29.50	47K 1/4W	.06
2101	4.50	10M 1/4W	.06
4050	.62	470 $\Omega$ 1/4W	.06
4016	.60	SPDT Toggle Switch	1.15
4023	.25	Pushbutton Switch NO/NC	1.50
4049	.62	2 MHz Crystal	4.50
MPM201A Cosmac Users Manual	7.50	5082-7340	6.75
MPM202 Cosmac Time Sharing Manual			7.50
MPM206 Cosmac Binary Arithmetic Sub Routines Manual			7.50
MPM208 Cosmac Development Systems Operators Manual			7.50
Complete kit of parts to build the 'Elf' minus power supply and board			92.00

### Support Devices

CDP1821SCD	1024 X 1, 4-6V RAM	18.00
CDP1822SCD	256 X 4, 4-6V RAM	24.00
CDP1824CD	32 X 8, 4-6V RAM	10.25
CDP1825CD	Byte I/O, 4-6V I/O	9.00

### SIGNETICS BIPOLAR KIT - SK3000KT00A

Fastest processor available, includes instruction manual and:

4-3002	1-745182	2-8T26	2-MM5262
1-3001	3-825114	1-8T31	(2K RAM)

\$234.00 value for **\$100.00**. Board not included

## DIGITAL CLOCK KITS

### AUTOMOTIVE DIGITAL CLOCK KIT

As described in January 1977 article, Radio Electronics

Feature: Crystal controlled oscillator, automatic dimming, direct interface with either 7 segment LED or incandescent displays, low current when ignition is off, no radio interference, the power supply fully protects vehicle wiring and clock circuitry. Operates from 6 to 18 volts. Can be removed with the small display board. Clock and display boards only \$9.00. Complete kit \$42.00. (Available in February.)

### DIGITAL CAR CLOCK KIT - \$28.50

- 12 Volt AC to DC
- Crystal Time Base
- Battery Back-up for power failure
- Six 0.4 inch LEDs
- Size - 1-3/4" X 4" X 4-1/2"
- Beautiful dark grey case
- Mounting Bracket included
- Complete instructions

### 60 Hz CRYSTAL TIME BASE KIT - \$4.75

Will convert digital clocks from AC line frequency to crystal time base for accuracy of 2 PPM or better. Parts list includes:

1 - PC Board	1 - 3.579545 Crystal
1 - MM5369	2 - Capacitors
1 - 22 Meg Resistor	1 - Ceramic Trimmer

Excellent for cars, boats, campers and other portable use. Eliminates AC problems and small size fits clock enclosures.



## DIGITAL CLOCK — \$17.45 COMPLETE

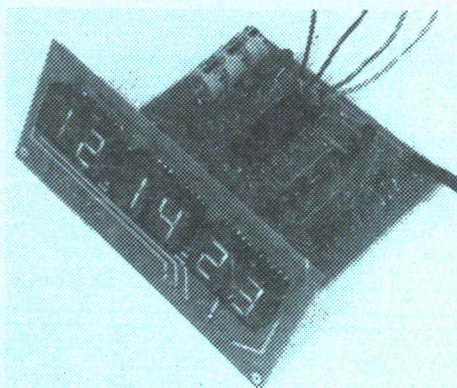
This is not a "Cheap Clock". See August 1976 issue of Radio Electronics for evaluation.

6-Digit Clock — hours, minutes and seconds. Includes: 12/24 hour operation, fast set, slow set and hold features.

- 2 — PC Boards
- 1 — Transformer
- 13 — Transistors
- 10 — Resistors
- 3 — Capacitors
- 6 — .50" LEDS
- 1 — 5314 Clock Chip
- 1 — 24 Pin Socket
- 1 — Set of Complete Instructions

Clock will fit a case 5" X 5" X 2".

Same Clock Kit available with 0.8 inch displays \$23.50



## RECREATIONAL VEHICLE ALARM CLOCK KITS



Handsome, 12 Volt, battery operated digital clock kits complete in all respects with 0.5 inch digits. Quartz-crystal time base insures superb accuracy. Low power consumption, long life, dust free and water resistant with beautiful stainless front easily mounted in a wall or dashboard of any boat or camper, etc. Excellent for recreational vehicles of all kinds. One year full warranty when fully assembled.

RVC-4 (3" X 5-1/2" X 1/2") Digital Kit without Alarm	28.00
Fully assembled and guaranteed	30.00
RVC-6A (7" X 4" X 3/4") Digital Clock with Alarm with Connection to Radio or Tape Player plus Snooze Alarm	38.00
Fully assembled and guaranteed	40.00

## DIGITAL STOPWATCH KIT — \$26.95

Intersil 7205 chip with 6 digit readout PC board, complete instructions, all parts minus case. This should be the most cost effective straight stopwatch on the market. Excellent accuracy, .125 inch displays. Case will be available at a later date.



## COUNTER KITS

### UNIVERSAL COUNTER KIT — \$10.50

- Three digit .125" display
- Debounced inputs
- Overflow cascading
- Count rates up to 5 MHz
- Wide power supply operating range 5 — 16 Volts

This kit is designed as a building block and expandable unit for modular counting systems. Its versatility includes counting, totaling and any application requiring an adaptable counting system. Complete instructions with board.

### FREQUENCY COUNTER KIT — \$40.00

The Quest frequency counter kit is designed as a building block and expandable unit. Versatility and flexibility have been incorporated to accommodate the serious builder who wants a specialized configuration. The counter can be expanded to be a DVM, temperature meter or part of a more sophisticated system with the proper options. Covers audio, ultrasonic and low amateur band.

FEATURES: 2.5 MHz count rate, 10 Hz low end, dual channel high sensitivity plus or minus 25 millivolts. Crystal controlled clock. Can be prescaled for higher frequencies; for example, 30 MHz by adding a 7490, 7416 and changing the voltage regulator from 6 to 12 volts. Six .50 inch LED'S. Complete instructions with application notes. Comes without power supply or case.

### DIGITAL TEMPERATURE KIT — \$39.95

Indoor and outdoor. Beautiful .50" LED readouts. Six foot probes. Can be set on automatic to alternate between indoor and outdoor temperatures every few seconds. Nothing like this available on the market. Needs no additional parts for complete, full operation. Will measure extremes of temperature, air or liquid, -100<sup>o</sup>F to +200<sup>o</sup>F. Can be calibrated for centigrade. Very accurate. Uses latest IC technology. Easy to build with complete instructions.

### MILES PER GALLON CIRCUIT

As described in EDN magazine, January 1976, an electronic measurement device can be built for your dashboard to indicate miles per gallon with a digital readout using CMOS rate multipliers.

DIGITAL FLOW SENSOR	\$29.50	
SPEED TRANSDUCER	8.00	(Specify car make and year for speedometer fitting)
8 CMOS CIRCUITS	19.95	
2 .50 INCH DISPLAYS	2.50	

No PC Board or instructions available at this time. Copy of article included.

### DIGITAL MILES PER GALLON METER — \$124.50

Comes completely assembled with case ready to mount on your dashboard. 3.8" by 4.3". Three digit LED readout, automatic dimming. The system operates as a variable time-base frequency counter, which counts pulses generated by the speed transducer between time intervals as determined by the flowsensor pulses. Specify car make and year. Cannot be used on diesels, fuel-injected engines or on any engines with fuel return line back from carburetor to tank.

### DATA ACCESS ARRANGEMENT KIT — \$10.00

Circuit and Instructions Included

Not to be used on public telephone lines. For use on local or private two-wire lines.



## MODEM — \$79.50

These modems have been pulled from used Vadic equipment. They are simple, easy to use 103 type, 0 to 300 Baud with full duplex, transmit and receive.

Require only a simple, inexpensive Data Access Arrangement to connect to your phone lines and avoids interference caused by acoustic couplers. Needs two 22 pin edge connectors. Plus and minus 12V, +5 power easily taken from your present operating system. Output adjustable -9 to 0 dbm. Sensitivity 0 to -50.

Complete documentation supplied. For the adventuresome hobbyist and for the serious users requiring higher data rate, the 202 type modem is also available (0 to 1200 Baud) at \$175.00.

## IC UPDATE MASTER — 1977 MANUAL

This is the latest hardbound version just off the press. It includes complete Integrated Circuit data from all manufacturers with free quarterly updates through 1977.

### EVERYTHING YOU NEED TO SELECT IC'S IN ONE MANUAL

### 17,000 CROSS REFERENCES

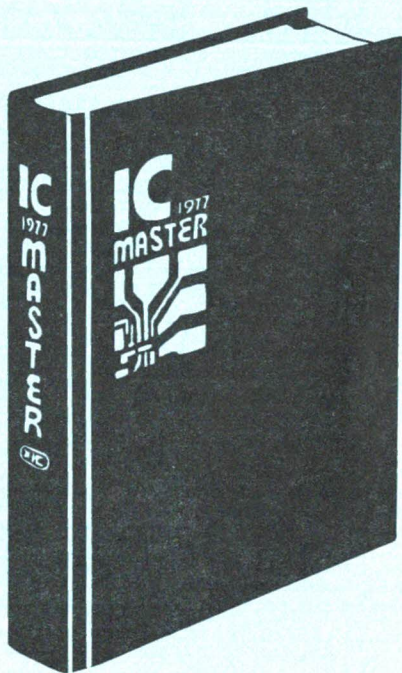
Indexed by device, manufacturer, product category, functional characteristics, key product data, application note directory, military parts directory and manufacturer address, phone numbers and who to ask for. The IC UPDATE publication will arrive every three months free of charge thru 1977.

This is the most complete reference tool in the industry. There never has been such a wealth of Integrated Circuit information in one easy to use manual.

Many new consumer circuits have been added as well as latest technology microprocessors, memories, etc. Try it, you will never want to be without it.

\$30.00 with update service. Domestic postage \$2.50. All others add \$6.00.

Your money will be returned if you are not satisfied with this great value within ten days.



## DATA BOOKS

TTL	\$3.00	These are National Semiconductor data books that are up to date and include most parts available.
Linear	4.00	
CMOS	3.00	Other manufacturers' data books also available.
Memory	3.00	
MOS	4.00	

## ELECTRONIC KEYSER CMOS LSI CHIP

The 8043 CMOS Integrated Electronic Keyer Circuit is a space age component designed specifically for the CW operators. It has all the most wanted features in an electronic keyer all on one LSI chip at reduced cost. **\$14.95**. Comes with spec, instructions and socket.

### FEATURES

- Extremely low power requirement
- Any voltage supply 3 – 15 VDC
- Runs on 009P 9V Transistor battery
- Self-completing jam proof dots, dashes and spaces
- Instant starting clock
- Iambic for squeeze keying
- Dynamic dot memory
- Key debounce circuitry for faultless operation
- Weight Control
- Internal sidetone
- Low impedance inputs for RF immunity
- Double diode protected inputs
- Standard 16 pin package

### APPLICATIONS

- Build homebrew miniature keyer
- Build into your regular rig
- Build into your qrp rig
- Build into your keyer paddle
- Update your present keyer
- Include in new commercial transceivers
- Use in commercial keyers

## LED MOUNTING CLIPS — 4/\$1.00

New Cliplites allow you to mount LEDs in a 1/4 inch hole without any tools in a fraction of the time and effort required for conventional methods. Cliplites just snap into place. They provide wider viewing angle, increased brightness and more uniform beautiful appearance with a variety of colors.

Available in red, amber, green, yellow and clear colors. Specify color when ordering. Colors may be mixed. Quantity price breaks available on request.

### PLEASE NOTE

Many, many parts and component lines are available from QUEST but are not listed here due to space and time requirements.

Please let us know your requirements (both large and small) and we will be happy to meet competitive prices with quality products.





QUEST ELECTRONICS  
P.O. Box 4430S  
Santa Clara, Calif. 95054

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1000 N. 1st St.  
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