



Alexan

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TABLE OF CONTENTS

INTEGRATED CIRCUITS	3	THYRISTORS	13
MPUs	3	UNIUNCTION TRANSISTOR	14
MCUs	3	PROGRAMMABLE UNIUNCTION TRANSISTOR	14
INTERFACE	3	DIODES & RECTIFIERS	14
MEMORY	3	PHOTO DISCRETES	14
EVALUATION/DEVELOPMENT		PHOTOCELL (LDR)	14
& TRAINING TOOLS	3	LED LAMPS	15
D/A & A/D CONVERTERS	4	QUARTZ CRYSTALS	15
CLOCK ICs & MODULES	4	TRANSIENT SUPPRESSOR	15
DISPLAY DRIVERS	4	REED RELAYS	15
PLD/PAL ICs	4	ELECTRO MECHANICAL RELAYS	15
ANALOG SWITCHES	4	THERMISTORS	15
MELODY/SOUND GENERATOR	4	TRANSDUCERS	15
GAME ICs	4	INDUCTORS (CHOKE COIL)	15
STANDARD CMOS LOGIC 4XXX Series	4	RESISTORS	16
STANDARD TTL 74XXX Series	5	HORIZONTAL TRIMMER RESISTORS	16
ADVANCE CMOS 74ACXXX Series	5	VERTICAL TRIMMER RESISTORS	16
ADVANCE CMOS 74ACTXXX Series	6	BOURNS TRIMMERS & POTENTIOMETERS	16
CMOS 74CXXX Series	6	POTENTIOMETERS	17
FAST SCHOTTKY 74FXXX Series	6	CAPACITORS	17
HIGH-SPEED CMOS 74HCXXX Series	6	C&K SWITCHES	17
LOW-POWER SCHOTTKY TTL 74LSXXX Series	7	INTERCONNECT DEVICES AND FLAT CABLE	18
SCHOTTKY TTL 74SXXX Series	8	BEL FUSE	19
TELECOM	9	IC COMPONENT SOCKETS	19
PLL ICs	9	MISCELLANEOUS	19-20
AM/FM RADIO/TV	9		
AUDIO ICs	9	TEST INSTRUMENTS & PRODUCTION TOOLS	21
OP AMPS	9	ALEXAN SCREW DRIVERS	21
LINEAR AMPLIFIERS	10	HI-LO PROGRAMMERS/ERASERS	21
POWER SUPPLY ICs	10	PRODUCTION TOOLS & TEST INSTRUMENTS	21
TIMERS	11	HANDTOOLS	21
TRANSISTOR ARRAYS	11	CRIMPING TOOLS	21
SENSORS/TRANSDUCERS	11	ALEXAN SOLDERING TOOLS & ACCESSORIES	21
FILTERS	11	PROBES	21
SPECIAL FUNCTION	11	TES TEST INSTRUMENTS	21
OPTOCOUPERS	11	TEKTRONIX OSCILLOSCOPE	21
		RIGOL DIGITAL OSCILLOSCOPE	21
		ALEXAN TEST INSTRUMENTS	22-23
DISCRETE COMPONENTS	11		
BIPOLAR TRANSISTORS	11-13	ALEXAN KITS	24-26
RF TRANSISTORS/MODULES	13	BOOKS	27-30
FIELD EFFECT TRANSISTORS	13	ADS	31-56

MPUs (Microprocessors)

80C39	8-Bit MPU, Single-Chip ROMless
MC6800	8-Bit Motorola MPU
MC68000	16-Bit Motorola MPU
MC68A09P	8-Bit Motorola MPU, 1.5 MHz
MC68HC000P	16-Bit Low Power HCMOS Version
NSC800N	8-Bit National MPU, CMOS
Z80A	8-Bit Zilog MPU
Z84C00	8-Bit Zilog MPU, CMOS

MCUs (Microcontrollers)

MC68HC705C8	8-Bit Motorola MCU (SIOP)
MC68HC705J1A	8-Bit Motorola MCU
MC68HC705P9	8-Bit Motorola MCU (SIOP)
Z86C04-4AC1	8-Bit MCU with 1K ROM/124 Bytes RAM
Z86E04 OTP	8-Bit MCU 2K PROM/124 Bytes RAM (8MHz)
Z86E04 OTP	8-Bit MCU w/ PROM 32 I/O 2 Timer (12MHz)
Z86E08 OTP	8-Bit MCU 2K PROM/124 Bytes RAM (12MHz)
Z86E30 OTP	8-Bit MCU 4K EPROM/237 Bytes RAM (16MHz)
Z86E30 OTP	8-Bit MCU 4K EPROM/237 Bytes RAM (12MHz)
Z86E31 OTP	8-Bit MCU 2K EPROM/124 Bytes RAM (12MHz)
Z86E40 OTP	8-Bit MCU 4K EPROM/236 Bytes RAM
Z86E61 OTP	8-Bit MCU 16K OTP ROM
Z86E83 OTP	8 ADC/DAC Channels 1K OTP RAM, 237 RAM
Z86733 OTP	8 K OTP/ROM 236 RAM
Z86743 OTP	8 K RAM/OTP 237 RAM Extended I/O
AT89C2051	20 Pins 8051 MCU 2K Flash Rom (DIL)
AT89C4051	20 Pins 8051 MCU 4K Flash Rom (DIL)
AT89C4051-24SC	20 Pins 8-Bit Microcontroller with 4K Bytes Flash Rom (SMT)
AT89S52-24	8-Bit Microcontroller with 8K Bytes Insystem Programmable Flash
AT89S52-24AI	8-Bit Microcontroller w/8K Bytes (SMT)
AT89S52-24PC	In-System Programmable Flash (DIL)
AT89LS51-16AC	Low-Voltage Microcontroller with 4K Bytes In-System Programmable Flash
ATMEGA128-16U	8-Bit Microcontroller w/128K Bytes In-System Programmable Flash
ATMEGA129PV-8AU	8-Bit Microcontroller w/16K Bytes In-System Programmable Flash
PIC16C57C	8-Bit Microcontroller w/2K Bytes Program Memory (DIL)
PIC16F84	18 pins Flash/EEPROM 8-Bit Microcontroller (DIL)
PIC16F628	18 pins CMOS Flash/EEPROM 8-Bit Microcontroller (DIL)
PIC16F877	40 pins CMOS Flash/EEPROM 8-Bit Microcontroller (DIL)
PIC18F242	28 pins Flash/EEPROM 8/16-Bit Microcontroller (DIL)
PIC18F4455	40 pins High-Performance, Enhanced Flash USB Microcontrollers with nanoWatt Technology (DIL)
PIC18F4620	40 pins Enhanced, Flash Microcontrollers with 10-Bits A/D and nanoWatt Technology (DIL)

INTERFACE

6522	Asynchronous Interface Adapter (VIA)
81LS95N	Non-Inverting Octal Buffers (TS)
81LS96N	Inverting Octal Buffers (TS)
81LS97N	Non-Inverting Octal Buffers (TS)
8155	2K CMOS Static RAM with I/O Port and Timer
82C55	Programmable Peripheral Interface
DS1302	Trickle Charge Timekeeping Chip
DS3691N	RS-422/RS-423 Line Driver w/Transceiver
DS8874N	9-Digit Shift Input LED Driver, Common Cathode
DSP56200	Cascadable Finite Impulse Response Filter
L293B	SGS-Thomson 4-Channel Push-Pull Driver
L293D	High Voltage, High Current, 4-Channel Driver (4W)
L297	A/D Stepper Motor Controller (DIP-20)
L298	High Voltage, High Current Dual Full-Bridge Driver
MAX232C	RS-232 Transceiver
MAX691	Microprocessor Supervisory Circuits
MC1413P	Darlington Peripheral Driver Array

MC1488P	RS-232C Quad Drivers (DS1488)
MC1489AP	RS-232C Quad Receivers (DS1489)
MC145026	CMOS Wireless Serial Stream Encoder (DIL)
MC145027	CMOS Wireless Serial Stream Decoder (DIL)
MC3486P	RS-422/423 Quad Receiver (TS)
MC3487P	RS-422/423 Quad Driver (TS)
MC68B54P	Data Link Controller
MC33039	Closed Loop Brushless Motor Speed Controller
MM58274N	MPU Real Time Clock IC
75107	Dual Line Receivers
75114	Dual Differential Line Drivers
75451	Dual Peripheral AND Drivers
75452	Dual Peripheral NAND Drivers
ULN2003	Refer to MC1413CP
ULN2803	8 Unit Darlington Peripheral Array/Driver
ULN2004	7 Unit Darlington Peripheral, 6V to 15V Array/Driver
ULN2804	8 Unit Darlington Peripheral, 6V to 15V Array/Driver
Z401	Z86C04 Programmed Light Sequencer
Z8420	Z80 PIO IC
Z8430	Z80 CTC IC
Z8440	Z80 SIO IC
Z8470	Z80 DART IC
Z84C10	8-Bit Direct Memory Access Controller
Z84C20	8-Bit Parallel I/O Controller
Z84C30	8-Bit Counter/Timer Circuit
Z84C40	8-Bit Serial I/O Controller
Z84C90	CMOS Serial/Parallel/Counter/Timer (KIO) 8 MHz
Z16C3010VSC	Universal Serial Controller

MEMORY

	EEPROM
24C01	128 x 8 CMOS EEPROM I ² C Bus
24C02	256 x 8 CMOS EEPROM Serial
24C04	512 x 8 CMOS EEPROM I ² C Bus
24C64	64K x 8 Bit Serial Bus EEPROM
NMC9346	64 x 16 EEPROM

	EPROM
27C16	2716 Compatible CMOS Version
27C64	2764 Compatible CMOS Version
27C010	1M (128K x 8) Single Supply
27C020-70DC-179	2M (256K x 8) Single Supply
27C040-12	4M (256K x 8) Single Supply
27C256	256K (32768 x 8) 28-pin
27C512	512K (64K x 8)

	PROM
74S288	256-Bit (32 x 8), Tri-State, 16-pin
74LS471	2K (256 x 8), Tri-State, 20-pin

	DYNAMIC RAM
4164	64K X 1GP DRAM
MCM6256BP10	256K (256K x 1) 100nS, 16-pin

	MOS STATIC RAM
68A10	1K (128 x 8) 360nS, 24-pin
68B10	1K (128 x 8) 250nS, 24-pin

	CMOS STATIC RAM
IS61C64B	(8K X 8) High Speed
6264	64K (8196 x 8), 28-pin
62256	(32k x 8) 100nS, 28-pin

EVALUATION/DEVELOPMENT/TRAINING TOOLS

AT89C2051/4051	Atmel Programmer
AT89C2051/4051-TM1	Atmel Training Module 1
AT89C2051/4051-TM2	Atmel Training Module 2
PICME-16F877	PicMe Microcontroller Starter kit

D/A & A/D CONVERTERS

ADC0804	8- Bit A/D Parallel Output
ADC0808LCN	8-Bit A/D Multiplexed Inputs Parity Output
ADC0817CCN	8-Bit A/D Converter with 16 Channel Multiplexing
ADC0832CCN	8-Bit A/D Multiplexed Inputs Serial Output
ADC-912HP	12-Bit A/D Converter
ADC1205CCJ	12-Bit Plus Sign A/D Converter
ADC1210HCD	12-Bit A/D Converter
DAC0800	8-Bit D/A Converter
DAC0832LCN	8-Bit D/A CMOS/TTL Logic Multiplying
ICL7106CP	3-1/2 Digit Single-Chip A/D Converter (LCD)
ICL7107CP	3-1/2 Digit Single-Chip A/D Converter (LED)
ICL7135CP	4-1/2 Digit A/D Converter

CLOCK ICS & MODULES

TMS3450	Duplex Digital Clock IC
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DISPLAY DRIVERS

MM5480N	3-1/2 Digit LED Display Driver
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ANALOG SWITCHES

74HC4316	Quad Analog Switch with Level Translator
LM1037N	Dual Four-Channel Analog Switch
DG188BA	1-Channel High Speed Driver SPDT JFET Switches
DG200BA	2 x SPST CMOS Analog Switch

MELODY/SOUND GENERATOR

M602	Ding-Dong Doorbell
7943COE	8-Song Melody
7943CON	8-Song Melody
7943COS	8-Song Melody
8030B	Dog Bark Sound IC
AC9202	Electronic Drum
AC9203	16 Melody
AC9301	Jingle Bells Melody
COP420HGZ	10-Song COPs Musical Organ
DSI0241	20 Second Voice/Sound Recorder IC
RTS993-3	12-Song Christmas Melody
RTS0072	Voice Changer (4-Mode) (Replacement for RTS0071)

GAME ICS

COP413LSUH	Lazer Gun Game IC
COP413LSUJ	Memory Game IC
6005	NMOS LSI for 8-Bit MPU based TV console, (substitute for RP2A03 Nintendo)
6022	NMOS LSI designed for TV game console, (substitute for RP2C02 Nintendo)

CMOS LOGIC 4XXX SERIES

CD4000	Dual 3-Input NOR Gate Plus Inverter
CD4001	Quad 2-Input NOR Gate
CD4002	Dual 4-Input NOR Gate
CD4006	18-Stage Static Shift Register
CD4007	Dual Complementary Pair Plus Inverter
CD4008	4-Bit Full Adder with Parallel Carry-out
CD4009	Hex Inverting Buffer
CD4010	Hex Non-inverting Buffer
CD4011	Quad 2-Input NAND Gate
CD4012	Dual 4-Input NAND Gate
CD4013	Dual D Flip-Flop
CD4014	8-Stage Static Shift Register
CD4015	Dual 4-Bit Static Shift Register

CD4016	Quad Bilateral Switch
CD4017	Decade Counter with 10 Decoded Outputs
CD4018	Presettable Divide-by-N Counter
CD4019	Quad AND-OR Select Gate
CD4020	14-Stage Ripple Carry Binary Counter/Divider
CD4021	8-Stage Static Shift Register
CD4022	Divide-by-8 Counter/Divider w/8 Decoded Outputs
CD4023	Triple 3-Input NAND Gate
CD4024	7-Bit Ripple Carry Binary Counter/Divider
CD4025	Triple 3-Input NOR Gate
CD4027	Dual JK Master/Slave Flip-Flop w/ Set and Reset
CD4028	BCD-to-Decimal Decoder
CD4029	Presettable Bi/Decade Up/Down Counter
CD4030	Quad Exclusive-OR Gate
CD4032	Triple Serial Adder (Positive Logic)
CD4034	8-Stage TS Bidirectional P/S I/O Bus Register
CD4035	4-Bit Parallel-In/Parallel-Out Shift Register
CD4038	Triple Serial Adder (Negative Logic)
CD4040	12-Bit Ripple Carry Binary Counter/Divider
CD4041	Quad True-Complement Buffer
CD4042	Quad Clocked D Latch
CD4043	Quad 3-State NOR R/S Latch
CD4044	Quad 3-State NAND R/S Latch
CD4046	Micropower Phase-Locked Loop
CD4047	Low Power Mono/Astable Multivibrator
CD4048	Expandable 8-Function 8-Input Gate (TS)
CD4049	Hex Inverting Buffer
CD4050	Hex Non-Inverting Buffer
CD4051	Single 8-Channel Analog Multiplexer/Demultiplexer
CD4052	Dual 4-Channel Analog Multiplexer/Demultiplexer
CD4053	Triple 2-Channel Analog Multiplexer/Demultiplexer
CD4054	4-Segment Display Driver (DIL)
CD4060	14-Stage Ripple Carry Binary Counter/Divider
CD4066	Quad Bilateral Switch
CD4068	8-Input NAND Gate
CD4069	Hex Inverter (MM74C04N) (High Voltage Type)
CD4070B	Quad 2-Input Exclusive-OR Gate (MM74C86)
CD4071B	Quad 2-Input OR Buffered Gate
CD4072	Dual 4-Input OR Buffered Gate
CD4073B	Double Buffered Triple 3-Input AND Gate
CD4075B	Double Buffered Triple 3-Input OR Gate
CD4076B	4Bit D-Type Register
CD4077	Quad Exclusive-NOR Gate
CD4078	8-Input NOR Gate
CD4081B	Quad 2-Input AND Buffered Gate
CD4082B	Dual 4-Input AND Buffered Gate
CD4093	Quad 2-Input NAND Schmitt Trigger
CD4094	8-Stage Shift/Store Register
CD4097	Dual 8-Channel Analog Multiplexer/Demultiplexer
CD4099	8-Bit Addressable Latch
CD40106	Hex Schmitt Trigger (MC14106)
CD40160	Decade Counter w/ Asynchronous Clear
CD40161	Binary Counter w/ Asynchronous Clear
CD40162	Decade Counter w/ Asynchronous Clear
CD40163	Binary Counter w/ Asynchronous Clear
CD40174	Hex D Flip-Flop
CD40175	Quad D Flip-Flop
CD4501	Triple Gate
CD4502	Strobe Hex Inverter/Buffer
CD4503	Hex Non-Inverting Tri-State Buffer
CD4504	Hex TTL or CMOS-to-MOS Level Shifter
CD4506	Dual Expandable AOI Gate
CD4508	Dual 4-Bit Latch
CD4510	BCD Up/Down Counter
CD4511	BCD-to-7-Segment Latch Decoder/Driver
CD4512	8-Channel Data Selector
CD4513	BCD-to-7-Seg. Latch/Decoder/Driver-Ripple Blanking
CD4514	4-Bit Latched 4-to-16 Line Decoder (Active High Out)
CD4515	4-Bit Latched 4-to-16 Line Decoder (Active Low Out)

CD4516	Binary Up/Down Counter
CD4518	Dual Synchronous Up Counter
CD4519	4-Bit AND/OR Selector
CD4520	Dual Synchronous Up Counter
CD4521	24-Stage Frequency Divider
CD4522	Programmable Divide-by-N 4-Bit BCD Counter
CD4526	Programmable Divide-by-N 4-Bit Binary Counter
CD4527	BCD Rate Multiplier
CD4528	Dual Monostable Multivibrator
CD4532	8-Bit Priority Encoder
CD4536	Programmable Timer
CD4538	Dual Precision Monostable Multivibrator
CD4541	Programmable Timer w/ Oscillator
CD4543	BCD-to-7-Segment Latch/Decoder/Driver for LCD
CD4553	3-Digit BCD Counter
CD4555	Dual Binary to 1-of-4 Decoder/Demultiplexer
CD4556	Dual Binary to 1-of-4 Decoder (Inverting)/Demultiplexer
CD4558	BCD-to-7-Segment Decoder
CD4566	Industrial Time Base Generator
CD4568	Phase Comparator Programmable Counter
CD4569	Dual Programmable BCD Binary Counter
CD4572	Hex Gate (Quad Inverter plus 2-Input NOR Gate)
CD4584	Hex Schmitt Trigger
MC14106	Hex Schmitt Trigger

STANDARD TTL 74XXX SERIES

7400N	Quad 2-Input NAND Gate
7401N	Quad 2-Input NAND Gate (OC)
7402N	Quad 2-Input NOR Gate
7403N	Quad 2-Input NAND Gate (OC)
7404N	Hex Inverter
7405N	Hex Inverter (OC)
7406N	30V 30mA Hex Inverter (OC)
7407N	30V 30mA Hex Buffer (OC)
7408N	Quad 2-Input Positive AND Gate
7410N	Triple 3-Input NAND Gate
7414N	Hex Schmitt Trigger
7420N	Dual 4-Input NAND Gate
7425N	Dual 4-Input NOR Gate with Strobe
7426N	Quad 2-Input High Voltage NAND Gate
7427N	Triple 3-Input NOR Gate
7430N	8-Input NAND Gate
7432N	Quad 2-Input OR Gate
7437N	Quad 2-Input NAND Buffer
7438N	Quad 2-Input NAND Buffer (OC)
7440N	Dual 4-Input NAND Buffer
7441AN	BCD-to-Decimal Decoder/Driver (NIXIE)
7442N	BCD-to-Decimal Decoder/Driver
7445N	BCD-to-Decimal Decoder/Lamp, Relay or MOS Driver
7446AN	BCD-to-7-Segment Decoder/Driver (30 V, Active Low)
7447AN	BCD-to-7-Segment Decoder/Driver (15 V, Active Low)
7450N	Expandable Dual 2-Input AND-OR INVERT Gate
7451N	Dual 2-Input AND-OR-INVERT Gate
7453N	Expandable 2-Input AND-OR-INVERT Gate
7454N	2-Input AND-OR-INVERT Gate
7460N	Dual 4-Input Expander
7472N	Gated JK Master-Slave Flip-Flop
7473N	Dual JK Master-Slave Flip-Flop w/ Clear
7474N	Dual D-Type Flip-Flop w/ Preset and Clear
7475N	Quad Latch
7476N	Dual JK Master/Slave Flip-Flop w/ Preset & Clear
7485N	4-Bit Magnitude Comparator
7486N	Quad 2-Input Exclusive-OR Gate
7490AN	Decade Counter
7495N	4-Bit Parallel Access Shift Register
74107N	Dual JK Flip-Flop w/ Clear

74109N	Dual JK Flip-Flop (FSC9024) w/ Preset & Clear
74121N	Monostable Multivibrator
74123N	Dual Monostable Multivibrator
74125N	Tri-State Quad Buffer (DM8093)
74132N	Quad Schmitt Trigger
74141N	Nixie Driver
74145N	BCD-to-Decimal Decoder Driver (15V,80mA)
74148N	8-Input to 3-Line Priority Encoder (FSC9318)
74150N	1-of-16 Data Selector/Multiplexer
74151N	1-of-8 Data Selector/Multiplexer
74153N	Dual 4 Line-to-1 Line Data Selector/Multiplexer
74154N	4-to-16-Line Decoder/Demultiplexer
74155N	Dual 2-of-4 Decoder/Demultiplexer (Totem-Pole Output)
74156N	Dual 2-of-4 Decoder/Demultiplexer (OC)
74157N	Quad 2-Input Multiplexer (FSC9322)
74161AN	Presettable Binary Counter (FSC9316)
74162AN	Presettable Decade Counter (Sync Clear)
74163AN	Presettable Binary Counter (Sync Clear)
74164N	8-Bit Serial-In/Parallel-Out Shift Register
74165N	8-Bit Parallel-In/Serial-Out Shift Register w/ Computer Output
74166N	8-Bit Parallel-In/Serial-In Shift Register
74170N	4 x 4 Register File
74173N	Tri-State Quad D Register (DM8551N)
74174N	Hex D Flip-Flop
74175N	Quad D Flip-Flop
74176N	Presettable Decade Counter (DM8280)
74180N	Parity Generator/Checker
74185AN	Binary-to-BCD Converter
74190N	Synchronous Decade Up/Down Counter
74191N	Synchronous Binary Up/Down Counter
74193N	Synchronous Binary Up/Down Dual Clock Counter w/ Clear
74194N	4-Bit Bidirectional, Universal Shift Register
74197N	Presettable Binary Counter/Latch (DM8291N)
74199N	8-Bit Parallel-In/Parallel-Out Shift Register, JK Serial Input
74251N	8-Input Multiplexer (TS)
74279N	Quad Set-Reset Latch
74298N	Quad 2-Input Multiplexer with Output Register
74365N	Tri-State Hex Buffer (DM8095)
74366N	Tri-State Hex Inverter (DM8096)
74367N	Tri-State Hex Buffer (4-2)
74368N	Tri-State Hex Buffer (4-2)

ADVANCE CMOS 74ACXXX SERIES

74AC00	Quad 2-Input NAND Gate
74AC02	Quad 2-Input NOR Gate
74AC04	Hex Inverter
74AC08	Quad 2-Input AND Gate
74AC10	Triple 3-Input NAND Gate
74AC11	Triple 3-Input AND Gate
74AC14	Hex Schmitt Trigger
74AC32	Quad 2-Input OR Gate
74AC74	Dual D Flip-Flop
74AC86	Quad 2-Input Exclusive-OR Gate
74AC109	Dual JK Positive Edge-Triggered
74AC153	Dual 4-Input Multiplexer
74AC157	Quad 2-Input Multiplexer
74AC163	4-Bit Binary Counter (Sync Reset)
74AC174	8-Bit Serial-In Parallel-Out Shift Register
74AC240	Octal Buffer/Line Driver, Inverting (TS)
74AC244	Octal Driver (TS)
74AC253	Dual 4-Input Multiplexer with 3-State Outputs
74AC273	Octal D Flip-Flop with Clear
74AC373	Octal Transparent Latch (TS)
74AC374	Octal D Flip-Flop (TS)
74AC540	Octal Inverting Bus/Line Driver

ADVANCE CMOS 74ACTXXX SERIES

74ACT00	Quad 2-Input NAND Gate
74ACT04	Hex Inverter
74ACT08	Quad 2-Input AND Gate
74ACT10	Triple 3-Input NAND Gate
74ACT11	Triple 3-Input AND Gate
74ACT14	Hex Inverting Schmitt Trigger
74ACT32	Quad 2-Input OR Gate
74ACT74	Dual D Flip-Flop with Preset and Clear
74ACT86	Quad 2-Input Exclusive-OR Gate
74ACT132	Quad 2-Input NAND Schmitt Trigger
74ACT138	3-to-8 Line Decoder
74ACT139	Dual 2-to-4 Line Decoder
74ACT151	1-of-8 Decoder/Demultiplexer
74ACT153	Dual 4-Input Multiplexer
74ACT157	Quad 2-Input Multiplexer
74ACT162	BCD Decade Counter (Sync Preset)
74ACT240	Octal Buffer/Line Driver, Inverting (TS)
74ACT245	Octal Bus Transceiver
74ACT253	Dual 4-Input Multiplexer
74ACT258	Quad 2-Input Multiplexer, Inverting (TS)
74ACT273	Octal D Flip-Flop with Clear
74ACT373	Octal Transparent Latch (TS)
74ACT540	Octal Inverting Bus/Line Driver
74ACT810	Quad 2-Input Exclusive-NOR Gate

CMOS 74CXXX SERIES

74C00N	Quad 2-Input NAND Gate
74C02N	Quad 2-Input NOR Gate
74C04N	Hex Inverter
74C08N	Quad 2-Input AND Gate
74C10N	Triple 3-Input NAND Gate
74C14N	Hex Schmitt Trigger
74C20N	Dual 4-Input NAND Gate
74C30N	8-Input NAND Gate
74C32N	Quad 2-Input OR Gate
74C42N	BCD-to-Decimal Decoder
74C48N	BCD-to-7 Segment Decoder
74C73N	Dual JK Flip-Flops w/ Clear
74C74N	Dual D Flip-Flop
74C76N	Dual JK Flip-Flops w/ Clear and Preset
74C83N	4-Bit Binary Full Adder
74C86N	Refer to CD4070 Quad 2-input EXCLUSIVE-OR
74C89N	64-Bit (16x4) RAM (TS)
74C90N	4-Bit Decade Counter
74C93N	4-Bit Binary Counter
74C95N	4-Bit Right-Shift/Left-Shift Register
74C107N	Dual JK Flip-Flops w/ Clear
74C150N	16-Line to 1-Line Multiplexer
74C151N	8-Bit Data Select/Multiplex w/ Strobe
74C154N	4-Line to 16-Line Decoder/Demultiplexer
74C157N	Quad 2-Input Multiplexer
74C160N	Decade Counter w/ Asynchronous Clear
74C161N	Binary Counter w/ Asynchronous Clear
74C162N	Decade Counter w/ Synchronous Clear
74C163N	Binary Counter w/ Synchronous Clear
74C164N	8-Bit Parallel-Out Serial Shift Register
74C165N	Parallel Load 8-Bit Shift Register
74C173N	Quad D Flip-Flop (TS)
74C174N	Hex D Flip-Flop
74C175N	Quad D Flip-Flop
74C192N	Synchronous 4-Bit Up/Down Decade Counter
74C193N	Synchronous 4-Bit Up/Down Binary Counter
74C195N	4-Bit Parallel-Access Shift Register
74C221N	Dual Monostable Multivibrator
74C240N	Octal Buffers and Line Drivers, Inverting (TS)
74C244N	Octal Buffers and Line Drivers, Non-Inv. (TS)

74C373N	Octal Flow-through Latch (TS)
74C374N	Octal D-Type Flip-Flop (TS)
74C906N	Hex Open Drain N-Channel Buffer
74C915N	7-Segment-to-BCD Converter
74C922N	16-Key Keyboard Encoder
74C925N	4-Digit Counters w/ Multiplexed 7-Segment Output Drivers
74C926N	4-Decade Counters w/ Multiplexed 7-Segment Output Drivers and Carry-out

FAST SCHOTTKY 74FXXX SERIES

74F00N	Quad 2-Input NAND Gate
74F02N	Quad 2-Input NOR Gate
74F04N	Hex Inverter
74F08N	Quad 2-Input AND Gate
74F10N	Triple 3-Input NAND Gate
74F11N	Triple 3-Input AND Gate
74F13N	Dual 4-Input NAND Schmitt Trigger
74F14N	Hex Schmitt Trigger
74F20N	Dual 4-Input NAND Gate
74F21N	Dual 4-Input AND Gate
74F32N	Quad 2-Input OR Gate
74F37N	Quad 2-Input NAND Buffer
74F38N	Quad 2-Input NAND Buffer (OC)
74F51N	Dual 2-Input AND-OR-INVERT Gate
74F64N	4-2-3-2-Input AND-OR-INVERT Gate
74F74N	Dual D Flip-Flop
74F86N	Quad 2-Input Exclusive-OR Gate
74F109N	Dual JK Flip-Flop
74F112	Dual Negative Edge Triggered, with Clear
74F125N	Quad Buffer, Low Enable (TS)
74F126N	Quad Buffer, High Enable (TS)
74F132N	Quad 2-Input NAND Schmitt Trigger
74F138N	1-of-8 Decoder/Demultiplexer
74F139N	Dual 1-of-4 Decoder/Demultiplexer
74F148N	8-Input to 3-Line Priority Encoder
74F151N	8-Input Multiplexer
74F153N	Dual 4-Input Multiplexer
74F157AN	Quad 2-Input Multiplexer
74F158AN	Quad 2-Input Multiplexer (Inv Out)
74F160AN	BCD Decade Counter (Async Reset)
74F161AN	4-Bit Binary Counter (Async Reset)
74F163AN	4-Bit Binary Counter (Sync Reset)
74F164N	8-Bit Serial-In/Parallel-Out Shift Register
74F174N	Hex D Flip-Flop with Clear
74F175N	Quad D Flip-Flop with Clear
74F194N	4-Bit Right/Left Shift Register
74F240N	Octal Buffer/Line Driver, Inverting (TS)
74F241N	Octal Buffer/Line Driver (TS)
74F242N	Quad Bus Transceiver, Inverting (TS)
74F243N	Quad Bus Transceiver (TS)
74F244N	Octal Driver (TS)
74F245N	Octal Bus Transceiver (TS)
74F251N	8-Input Multiplexer (TS)
74F253N	Dual 4-Input Multiplexer (TS)
74F259N	8-Bit Addressable Latch (9344)
74F280N	9-Bit Odd/Even Parity Generator/Checker
74F283N	4-Bit Binary Full Adder, Look Ahead Carry
74F373N	Octal Transparent Latch (TS)
74F374N	Octal D Flip-Flop (TS)

HIGH-SPEED CMOS 74HCXXX SERIES

74HC00N	Quad 2-Input NAND Gate
74HC02N	Quad 2-Input NOR Gate
74HC03N	Quad 2-Input Open Drain NAND Gate
74HC04N	Hex Inverter
74HC08N	Quad 2-Input AND Gate

74HC10N	Triple 3-Input NAND Gate
74HC11N	Triple 3-Input AND Gate
74HC14N	Hex Inverting Schmitt Trigger
74HC20N	Dual 4-Input NAND Gate
74HC27N	Triple 3-Input NOR Gate
74HC30N	8-Input NAND Gate
74HC32N	Quad 2-Input OR Gate
74HC42N	BCD-to-Decimal Decoder
74HC51N	Dual AND-OR-INVERT Gate
74HC58N	Dual AND-OR Gate
74HC73N	Dual JK Flip-Flop w/ Clear
74HC74N	Dual D Flip-Flop w/ Preset & Clear
74HC75N	4-Bit Bi-stable Latch w/ Q & Q Output
74HC76N	Dual JK Flip-Flop w/ Preset & Clear
74HC85N	4-Bit Magnitude Comparator
74HC86N	Quad 2-Input Exclusive-OR Gate
74HC107N	Dual JK Flip-Flop w/ Clear
74HC109N	Dual JK Flip-Flop w/ Preset & Clear
74HC112N	Dual JK Flip-Flop w/ Preset & Clear
74HC113N	Dual JK Flip-Flop w/ Preset
74HC125N	Quad Buffers (TS, High Input Control)
74HC126N	Quad Buffers (TS, Low Input Control)
74HC132N	Quad 2-Input NAND Schmitt Trigger
74HC133N	13-Input NAND Gate
74HC137N	3-to-8 Line Decoder w/ Address Latches (Inverting)
74HC138AN	3-to-8 Line Decoder
74HC139N	Dual 2-to-4 Line Decoder
74HC151N	8-Channel Data Selector/Multiplexer
74HC153N	Dual 4-Input Data Selector/Multiplexer
74HC154N	4-to-16 Line Decoder/Demultiplexer
74HC157N	Quad 2-Input Data Selector/Multiplexer
74HC158N	Quad 2-Input Data Selector/Multiplexer (Inverting)
74HC160N	Synchronous Decade Counter w/Asynchronous Clear
74HC161N	Synchronous Binary Counter w/Asynchronous Clear
74HC162N	Synchronous Decade Counter w/Synchronous Clear
74HC163N	Synchronous Binary Counter w/Synchronous Clear
74HC164N	8-Bit Serial-In/Parallel-Out Shift Register
74HC165N	8-Bit Parallel-In/Serial-Out Shift Register
74HC173N	Quad D Flip-Flop w/ Common Clock & Reset (TS)
74HC174N	Hex D Flip-Flop w/ Common Clock & Reset
74HC175N	Quad D Flip-Flop w/ Common Clock & Reset
74HC192N	Presetable Up/Down Decade Counter
74HC193N	Presetable Up/Down Binary Counter
74HC194N	4-Bit Bidirectional Shift Register
74HC195N	4-Bit Parallel Shift Register
74HC237N	3-to-8 Decoder w/ Address Latches
74HC240N	Inverting Octal Buffer (TS)
74HC241N	Non-inverting Octal Buffer (TS)
74HC242N	Inverting Quad Transceiver (TS)
74HC243N	Non-inverting Quad Transceiver (TS)
74HC244N	Non-inverting Octal Buffer (TS)
74HC245N	Non-inverting Octal Transceiver (TS)
74HC251N	8-Input Data Selector/Multiplexer (TS)
74HC253N	Dual 4-Input Multiplexer (TS)
74HC257N	Quad 2-Input Multiplexer (TS)
74HC259N	8-Bit Addressable Latch/3-to-8 Line Decoder
74HC266N	Quad 2-Input Exclusive-NOR Gate, Open-Drain Out
74HC273N	Octal D Flip-Flop w/ Clear
74HC279N	Quad S-R Latches
74HC365N	Non-Inverting Hex Buffer (TS)
74HC366N	Inverting Hex Buffer (TS)
74HC367N	Non-inverting Hex Buffer (TS)
74HC368N	Inverting Hex Buffer (TS)
74HC373N	Octal D-Type Latch (TS)
74HC374N	Octal D-Type Flip-Flop (TS)
74HC4002N	Dual 4-Input NOR Gate
74HC4017N	Decade Counter/Divider w/ 10 Decoded Outputs
74HC4024N	7-Stage Binary Ripple Counter

74HC4040N	12-Stage Binary Ripple Counter
74HC4049N	Hex Inverting Logic Level Down Converter
74HC4050N	Hex Non-Inverting Logic Level Down Converter
74HC4051N	8-Channel Analog Multiplexer/Demultiplexer
74HC4052N	Dual 4-Channel Analog Multiplexer/Demultiplexer
74HC4053N	Triple 2-Channel Analog Multiplexer/Demultiplexer
74HC4060N	14-Stage Binary Counter with Oscillator
74HC4066N	Quad Analog Switch/Multiplexer/Demultiplexer with ON-Resistance Linearity
74HC4075N	Triple 3-Input OR Gate
74HC4078N	8-Input NOR/OR Gate
74HC4316N	Quad Analog Switch/Multiplexer
74HC4351N	8-Channel Analog/Multiplexer/Demultiplexer with Address Latch
74HC4352N	Dual 4-Channel Analog/Multiplexer/Demultiplexer with Address Latch
74HC4353N	Triple 2-Channel Analog/Multiplexer/Demultiplexer
74HC4511N	BCD-to-7-Segment Latch/Decoder/Driver
74HC4514N	4-to-6 Decoder/Demultiplexer w/ Address Latch
74HC4538N	Dual Retriggerable Monostable Multivibrator
74HC4543N	BCD-to-7 Segment Latch/Decoder/Driver for LCD

LOW-POWER SCHOTTKY 74LSXXX SERIES

74LS00N	Quad 2-Input NAND Gate
74LS01N	Quad 2-Input NAND Gate (OC)
74LS02N	Quad 2-Input NOR Gate
74LS03N	Quad 2-Input NAND Gate (OC)
74LS04N	Hex Inverter
74LS05N	Hex Inverter (OC)
74LS08N	Quad 2-Input AND Gate
74LS09N	Quad 2-Input AND Gate (OC)
74LS10N	Triple 3-Input NAND Gate
74LS11N	Triple 3-Input AND Gate
74LS12N	Triple 3-Input NAND Gate (OC)
74LS13N	Dual 4-Input NAND Schmitt Trigger
74LS14N	Hex Schmitt Trigger
74LS15N	Triple 3-Input AND Gate (OC)
74LS20N	Dual 4-Input NAND Gate
74LS21N	Dual 4-Input AND Gate
74LS22N	Dual 4-Input NAND Gate (OC)
74LS26N	Quad 2-Input NAND Gate (HV)
74LS27N	Triple 3-Input NOR Gate
74LS30N	8-Input NAND Gate
74LS32N	Quad 2-Input OR Gate
74LS33N	Quad 2-Input NOR Buffer (OC)
74LS37N	Quad 2-Input NAND Buffer
74LS38N	Quad 2-Input NAND Buffer (OC)
74LS40N	Dual 4-Input NAND Gate
74LS42N	1-of-10 Decoder
74LS47N	BCD-to-7-Segment Decoder/Driver (OC)
74LS48N	BCD-to-7-Segment Decoder
74LS49N	BCD-to-7-Segment Decoder (OC)
74LS51N	Dual 2-Input AND-OR-INVERT Gate
74LS54N	4-Input AND-OR-INVERT Gate
74LS55N	Dual 4-Input AND-OR-INVERT Gate
74LS73AN	Dual JK Flip-Flop w/ Preset & Clear
74LS74AN	Dual D Flip-Flop
74LS75N	Quad Latch
74LS76AN	Dual JK Flip-Flop w/ Preset & Clear
74LS77N	4-Bit Bi-Stable Latch w/ Q
74LS78AN	Dual JK Flip-Flop w/ Preset Common Clock & Clear
74LS83AN	4-Bit Binary Full Adder
74LS85N	4-Bit Magnitude Comparator
74LS86N	Quad 2-Input Exclusive-OR Gate
74LS90N	Decade Counter
74LS91N	8-Bit Serial-In/Serial-Out Shift Register
74LS92N	Divide-by-12 Counter

74LS93N	4-Bit Binary Counter
74LS95N	4-Bit Shift Register
74LS107N	Dual JK Flip-Flop w/ Corner PWR Pins
74LS109N	Dual JK Positive Edge-Triggered Flip-Flop w/ Preset & Clear
74LS112N	Dual JK Negative Edge-Triggered Flip-Flop w/ Preset & Clear
74LS113N	Dual JK Negative Edge-Triggered Flip-Flop w/ Preset & Clear
74LS114N	Dual JK Negative Edge-Triggered Flip-Flop w/ Preset, Clock & Clear
74LS122N	Retriggerable One Shot w/ Clear
74LS123N	Dual Retriggerable One Shot w/ Clear
74LS125N	Quad Buffer, Low Enable (TS)
74LS126N	Quad Buffer, High Enable (TS)
74LS132N	Quad 2-Input NAND Schmitt Trigger
74LS133N	13-Input NAND Gate
74LS136N	Quad 2-Input Exclusive-OR Gate (OC)
74LS137N	3-to-8 Line Decoder/Demultiplexer w/ Address Latches
74LS138N	1-of-8 Decoder/Demultiplexer
74LS139N	Dual 1-of-4 Decoder/Demultiplexer
74LS145N	1-of-10 Decoder/Driver (OC)
74LS147N	10-Input to 4-Line Priority Encoder
74LS148N	8-Input to 3-Line Priority Encoder
74LS151N	8-Input Multiplexer
74LS153N	Dual 4-Input Multiplexer
74LS154N	4-Line-to-16-Line Decoder
74LS155N	Dual 1-of-4 Decoder/Demultiplexer
74LS156N	Dual 1-of-4 Decoder/Demultiplexer (OC)
74LS157N	Quad 2-Input Multiplexer
74LS158N	Quad 2-Input Multiplexer (Inv Out)
74LS160N	BCD Decade Counter (Async Reset)
74LS161N	4-Bit Binary Counter (Async Reset)
74LS162N	BCD Decade Counter (Sync Reset)
74LS163N	4-Bit Binary Counter (Sync Reset)
74LS164N	8-Bit Serial-In/Parallel-Out Shift Register
74LS165N	8-Bit Parallel-In/Serial-Out Shift Register w/ Complementary Outputs
74LS166N	8-Bit Parallel-In/Serial-Out Shift Register
74LS168N	Up/Down Decade Counter
74LS169N	Up/Down Binary Counter
74LS173N	4-Bit D-Type Register (TS)
74LS174N	Hex D Flip-Flop w/ Clear
74LS175N	Quad D Flip-Flop w/ Clear
74LS182N	Carry Look-Ahead Generator
74LS183N	Dual Carry/Save Full Adder
74LS190N	Synchronous Up/Down Decade Counter
74LS191N	Synchronous Up/Down Binary Counter
74LS192N	Synchronous Up/Down Dual Clock Decade Counter
74LS193N	Synchronous Up/Down Dual Clock Binary Counter
74LS194N	4-Bit Right/Left Shift Register
74LS195N	4-Bit Shift Register (9300)
74LS196N	Preset Decade Counter
74LS197N	Preset Binary Counter
74LS221N	Dual Monostable Multivibrator w/ Schmitt-Trigger In
74LS240N	Octal Bus Line Driver, Inverting (TS)
74LS241N	Octal Bus Line Driver (TS)
74LS242N	Quad Bus Transceiver, Inverting (TS)
74LS243N	Quad Bus Transceiver (TS)
74LS244N	Octal Driver (TS)
74LS245N	Octal Bus Transceiver (TS)
74LS247N	BCD-to-7-Segment Decoder/Driver (OC)
74LS248N	BCD-to-7-Segment Decoder/Driver
74LS249N	BCD-to-7-Segment Decoder/ Driver (OC)
74LS251N	8-Input Multiplexer (TS)
74LS253N	Dual 4-Input Multiplexer (TS)
74LS256N	Dual 4-Bit Addressable Latch
74LS257N	Quad 2-Input Multiplexer (TS)
74LS258N	Quad 2-Input Multiplexer, Inverting (TS)

74LS259N	8-Bit Addressable Latch (9344)
74LS260N	Dual 5-Input NOR Gate
74LS266N	Quad Exclusive-NOR GATE (OC)
74LS273N	Octal D Flip-Flop w/ Clear
74LS279N	Quad Set/Reset Latch
74LS280N	9-Bit Odd/Even Parity Generator/Checker
74LS283N	4-Bit Full Adder (Rotated LS83)
74LS290N	Decade Counter (Divide-by-2 and 5)
74LS293N	4-Bit Binary Counter
74LS295N	4-Bit Shift Register (TS)
74LS298N	Quad 2-Multiplexer with Output Register
74LS299N	8-Bit Shift/Storage Register (TS)
74LS322N	8-Bit Shift Register with Sign Extended (TS)
74LS323N	8-Bit Shift/Storage Register (TS)
74LS348N	8-Input-to-3-Line Priority Encoder (TS)
74LS352N	Dual 4-Multiplexer (Inverting LS153)
74LS353N	Dual 4-Multiplexer (TS LS352)
74LS365N	Hex Buffer with Common Enable (TS)
74LS366N	Hex Inverter with Common Enable (TS)
74LS367N	Hex Buffer, 4-Bit & 2-Bit (TS)
74LS368N	Hex Inverter, 4-Bit & 2-Bit (TS)
74LS373N	Octal Transparent Latch (TS)
74LS374N	Octal D Flip-Flop (TS)
74LS375N	Quad Latch
74LS377N	Octal D Flip-Flop with Enable
74LS378N	Hex D Flip-Flop with Enable
74LS379N	4-Bit D Flip-Flop with Enable
74LS385N	Quad 4-Bit Adder/Subtractor
74LS386N	2-Input Quad/Exclusive OR Gate
74LS390N	Dual Decade Counter
74LS393N	Dual 4-Bit Binary Counter
74LS395N	4-Bit Shift Register (TS)
74LS398N	Quad 2-Input Multiplexer with Output Register
74LS399N	Quad 2-Input Multiplexer with Output Register
74LS471N	Refer to PROM List
74LS490N	Dual Decade Counter
74LS540N	Octal Inverting Bus/Line Driver
74LS640N	Octal Bus Transceivers with 3-State Outputs

SCHOTTKY TTL 74SXXX SERIES

74S00N	Schottky Quad 2-Input NAND Gate
74S02N	Schottky Quad 2-Input NOR Gate
74S04N	Schottky Hex Inverter
74S08N	Schottky Quad 2-Input AND Gate
74S10N	Schottky Triple 3-Input NAND Gate
74S14N	Hex Schmitt Trigger
74S20N	Schottky Dual 4-Input NAND Gate
74S32N	Schottky Quad 2-Input OR Gate
74S38N	Schottky Quad 2-Input NAND Buffers (OC)
74S51N	Dual 2-wide 2-input AND-OR-INVERT Gate
74S74N	Schottky Dual D Flip-Flop
74S86N	Schottky Quad 2-Input Exclusive-OR Gate
74S112N	Schottky Dual JK Flip-Flop
74S133N	Schottky 13-Input NAND Gate
74S140N	Dual 4-input NAND 50 + Line Driver
74S151N	Schottky 1-of-8 Data Selectors/MUXS
74S153N	Schottky Dual 4-to-1 Line Data Selectors/MUXS
74S157N	Schottky Quad 2-to-1 Data Selectors/MUXS
74S174N	Schottky Hex D-type Flip-Flop
74S175N	Schottky Quad D-type Flip-Flop
74S194N	Schottky 4-Bit Universal Shift Register
74S195N	Schottky 4-Bit Parallel-Access Shift Register
74S253N	Schottky Data Selector/Multiplexer (TS)
74S257N	Schottky Quad 2-Data Selector/Multiplexer (TS)
74S258N	Schottky Quad 2-Data Selector/Multiplexer (TS)
74S287N	Refer to PROM List
74S288N	Refer to PROM List
74S381	Logic Unit/Function Gen

74S387N	Refer to PROM List
74S472N	Refer to PROM List
74S473N	Refer to PROM List

TELECOM ICS

DF320DJ	CMOS Loop Disconnect Dialers
ET40992	Pulse Telephone Dialer IC
MC34010	Dialer, Tone w/ Speech Net./DC Line Volt. Reg.
MC34012	Tone Ringer
MC34017	Tone Ringer
MC34115	CVDS Modulator/Demodulator
TP5089	DTMF Tone Generator
XR2211	FSK Demodulator/Tone Decoder

PLL ICS

LM565CN	Phase-Locked Loop (DIL)
LM566CN	Voltage-Controlled Oscillator (Mini-DIP)
LM567CN	Tone Decoder IC (DIL)(PLL)
LM1391N	PLL Horizontal TV Processor
MC121022	Prescaler 2 Modulus Selectable
XR205J	VCO Monolithic Waveform Generator

AM/FM RADIO AND TV ICS

BA1320	Stereo Multiplex IC
BA1404	Stereo Transmitter (DIP/MF)
BA1602L	FM Intercom
LM1035	TV Sound IC/Stereo Audio Processor
LM1496N	Balanced Modulator-Demodulator IC (DIL)
LM1868N	AM/FM Radio System IC (DIL)
LM1871N	Radio-Controlled Encoder/Transmitter (DIL)
LM1872N	Radio-Controlled Decoder/Receiver (DIL)
LM1889N	TV Video Modulator (DIL)
LM3820N	AM Radio System (Equivalent to LM1820N)
MC13055	FSK IF Amplifier Detector
MC13135	FM Single Chip Radio Circuit
MC1330AP	Video IF Amplifier
MC1350P	Video IF Amp (DIL)
MC1352P	TV Video IF Amp IC (DIL)
MC1374P	RF Modulator IC (DIL)
MC1377P	Color TV RGB to PAL/NSTC Encoder
MC1378P	Complete Color TV Video Overlay Synchronizer
MC1391P	TV Horizontal Processor (LM3089P)
MC1394P	TV Horizontal Processor IC (Mini-DIP)
MC2831AP	Low Power FM Transmitter System
MC2833	FM/FSK Transmitter
MC3359	IF Amplifier, Narrow Band
MC3363	Receiver Subsystem, Dual Conversion
MC3363DW	Narrow & Dual Conversion Receiver w/ RF Amp/Mute
NE592N	Video Amplifier IC (DIL)
TA2003P	AM-FM Tuner IC
TA7616P	Single Chip Car Radio AM Tuner IC
TDA1083	AM/FM Single Chip Radio System IC
TSO181	TV Sync Generator
ULN2204N	AM/FM Single Chip Radio System IC
µPC587C2	FM Stereo Demodulator IC

AUDIO ICS

PRE-AMPS/AMPS

LA3155	2-Channel 9V Equalizer Amplifier
LA4170	2-Channel Amplifier for Headphone
LM12CLK	150 W Op Amp IC (80V)
LM1875T	20-Watt Power Audio Amplifier (TO-220)

LM1877N	Dual Power Audio Amplifier
LM1896N	Dual 1-Watt Low-Voltage Audio Power Amp. (DIL)
LM2877P	Dual 4-Watt Audio Power Amplifier (SIP)
LM2878P	Dual 5-Watt (6-32V) Audio Power Amplifier (SIP)
LM2879T	Dual 9-Watt Audio Amplifier
LM2896P	Dual 1-Watt Low-Voltage Audio Power Amplifier (SIP)
LM380N-14	Audio Power Amplifier (DIL)
LM380N-8	Audio Power Amplifier (Mini-DIP)
LM381N	Low-Noise Dual Pre-Amp, 112dB Gain (DIL)
LM382N	Low-Noise Dual Pre-Amp, 100dB Gain (DIL)
LM383T	8-Watt Audio Power Amplifier (TO-5B)
LM384N	5-Watt Audio Power Amplifier (DIL)
LM386N	Low-Voltage Audio Power Amplifier (Mini-DIP)
LM387N	Low-Noise Dual Pre-Amp (Mini-DIP)
LM388N	1.5-Watt Audio Power Amplifier (DIL)
LM389N	Low-Voltage Audio Power Amplifier w/ NPN Transistor Array (DIL)
LM390N	1-Watt Battery-Operated Audio Power Amp. (DIL)
LM391N-100	Audio Power Driver (100V)
LM4765	30W Audio Power Amplifier with Mute and Standby Modes
TA7137P	Pre-amp with ALC Transistors for Tape Recorders
TA7313P	500mW Audio Power Amplifier IC
TA7616P	Single Chip Car Radio AM Tuner IC
TA7336P	340mW Audio Power Amp IC
TA7368	600mW Power Amp
TA7628P	600mW Amp System for Portable Cassette Tape
TA8173	Sound Field Generator
TA8216	13W/Channel Dual Audio Amp
TA7641BP	Single Chip AM Radio w/ Audio Power Amp
TBA820M	Low Voltage Audio Amplifier (Mini-DIP)
TDA1083	AM/FM Single Chip Radio System IC
TDA2002	8W Car Radio Audio Amp
TDA2005	20W Bridge Amplifier for Car Radio
TDA2822	Dual Power Amplifier
XR4212	Quad Preamp

AUDIO PROCESSORS

BA3822	Stereo Equalizer IC
DK9501	Digital Delay Processor IC
LM1035N	Dual DC-Operated Tone/Volume/Balance Circuit
LM1036N	Dual DC-Operated Tone/Volume/Balance Control IC
LM1040	Dual DC-Operated Tone/Volume/Balance/Circuit with Stereo Enhancement Facility
LM1818N	Electronically-Switched Audio Tape System (DIL)
SM7183	Digital Echo Reverb IC
TA8184	DC Controlled Tone Control

LED DISPLAY DRIVERS

LM3914N	Dot/Bar Display Driver Linear (DIL)
LM3915N	Dot/Bar Display Driver 3 dB (DIL)
LM3916N	Dot/Bar Display Driver Log (DIL)

OP AMPS

GENERAL PURPOSE

LM1458N	Dual Compensated Op Amp (Mini-DIP)
LM2901N	Low-Power Low-Offset Volt. Quad Comparators (DIL)
LM2902N	Low-Power Quad Op Amp (DIL)
LM2904N	Low-Power Dual Op Amp (DIL)
LM301AN	Uncompensated Op Amp (Mini-DIP)
LM308N	Super Gain Op Amp (DIL)
LM310H	Voltage Follower Op Amp (TO-5)
LM310N	Voltage Follower Op Amp (DIL)
LM318N	High-Slew Rate Op Amp (DIL)
LM324N	Low-Power Quad Op Amp (DIL)
LM324N	Low-Power Quad Op Amp (SMD)
LM348N	Quad 741 Op Amp (DIL)

LM349N	Quad 741 Op Amp High-Speed (DIL)
LM358N	Low-Power Dual Op Amp (DIL)
LM3900N	Quad Operational Amplifier (DIL)
LM741CN-8	Compensated Op Amp (8-pin)
LM747CH	Dual 741 Op Amp (TO-5)
LM747CN	Dual 741 Op Amp (DIL)
LM748CH	Uncompensated 741 Op Amp (TO-5)
LM748CN	Uncompensated 741 Op Amp (Mini-DIP)
LP324N	Ultra-Low Power Quad Op Amp (DIL)
MC34071	High-Performance Single Supply Op Amp
MC4558CG	Dual High Frequency Op Amp (TO-5)
MC4558CP1	Dual High Frequency Op Amp (Plastic DIP)
MC4741P	Quad MC1741 Op Amp (Plastic DIP)
OP-05EP	Instrumentation Op Amp (Mini-DIP)
OP-07DP	Ultra Low Offset Voltage Op Amp (Mini-DIP)
OP-27GP	Ultra-Low Noise, Low Offset Op Amp
XR4741	Quad Op Amp (See MC4741)

COMPARATORS

LM2903N	Low-Power Low Offset Voltage Dual Comp.(DIL)
LM311H	High-Performance Voltage Comparator (TO-5)
LM311N	High-Performance Voltage Comparator (DIL)
LM319N	High-Speed Dual Comparator (DIL)
LM3302N	Low-Power Low-Offset Voltage Quad Comparator (DIL)
LM339N	Low-Power, Low-Offset Voltage Quad Comparator (DIL)
LM339N	Low-Power, Low-Offset Voltage Quad Comparator (SMD)
LM392N	Low-Power Op Amp/Voltage Comparator
LM393N	Low-Power Low Offset Voltage Dual Comparator (DIL)
LM393N	Low-Power Low Offset Voltage Dual Comparator (SMD)
LM710CH	Voltage Comparator (TO-5)
LM710CN	Voltage Comparator (DIL)
LM711CH	Dual Comparator (TO-5)
LP339N	Ultra-Low Power Quad Comparator (DIL)

JFET INPUT

LF347N	Wide Bandwidth Quad JFET Input Op Amp (DIL)
LF351N	Wide Bandwidth JFET Input Op Amp (DIL)
LF353N	Wide Bandwidth Dual JFET Input Op Amp (DIL)
LF355N	JFET Input Op Amp, Low Supply Current (DIL)
LF356H	JFET Input Op Amp Wide Band (TO-5)
LF356N	JFET Input Op Amp Wide Band (DIL)
LF357N	JFET input Op Amp High-Speed (DIL)
LF411CN	Low Offset, Low Drift JFET Input Op Amp(DIL)
LF412CN	Low Offset, Low Drift Dual JFET Input Op Amp (DIL)
LF441CN	Low-Power JFET Input Op Amp (DIL)
LF444CN	Quad Low-Power JFET Op Amp (DIL)
LF13741N	Monolithic 741 with JFET Input Op Amp (DIL)
MC34001P	JFET Input Op Amp (DIL)
TL062	Linear IC Dual Low Power JFET Op Amp
TL071CP	Low Noise JFET Input Op Amp
TL072CP	Dual Low Noise JFET Input Op Amp
TL074CP	Low Noise JFET Input Op Amp
TL081CP	JFET Input Op Amp (plastic DIL)
TL082CP	Dual JFET Input Op Amp (plastic DIL)
TL084CP	JFET Input Op Amp

LINEAR AMPLIFIERS

AMP-03GP	Precision, Unity-Gain Differential Amplifier
LM13700N	Dual Operational Transconductance Amp w/ Linearizing Diodes and Buffers
LM3080N	Operational Transconductance Amplifier (DIL)
LM359N	Dual, High-Speed, Programmable Current- Mode (Norton) Amplifiers (DIL)
SSM2100	Antilog Amplifier
SSM2110P	True RMS to DC Converter (DIP)

POWER SUPPLY ICs

LM3524N	Regulating Pulse Width Modulator
LM3525N	Regulating Pulse Width Modulator
MC1466L	Voltage and Current Regulator
MC1468L	Dual $\pm 15V$ Tracking Regulator (DIL)
MC34161	Universal Voltage Monitor
MC34262	Power Factor Controller
MC3423P1	Overvoltage "Crowbar" Sensing Circuit
MC3425P1	PS Supervisory Protection Circuit
TL494N	Switching Regulator Control IC (DIL)
TL496N	TI IC (DIL)
$\mu A78S40PC$	Universal Switching Regulator Subsystem (1.25V to 40V)

VOLTAGE-INPUT REFERENCE/SOURCE

LM285-2.5	Micropower Voltage Reference (2.5V) Diode (TO-92)
LM329CZ	Precision Voltage Reference 6.95V (TO-92)
LM334Z	3-Terminal Adjustable Current Source (TO-92)
LM336BZ-2.5	2.5V Reference Diode (TO-92)
LM336BZ-5.0	5.0V Reference Diode (TO-92)
LM385Z-2.5	2.5 Micropower Voltage Reference Diode
LM3999Z	Precision Reference 6.95 V (TO-92)
MC1403U	Precision Voltage Reference 2.5V $\pm 25mV$ (CerDIP)
TL431CP	Programmable Reference Voltage

VOLTAGE REGULATORS

LM2931CT	Adjustable Low Dropout Regulator
LM2931T-5.0	Series Low Dropout Regulator 5V (TO-220)
LM305H	Positive Voltage Regulator (TO-5)
LM317T	Adjustable Positive VR 1.5A (TO-220)
LM320KC-XX	Refer to LM79XXCK
LM320T-XX	Refer to LM79XXCT
LM323K	Positive VR 3A, 5V (TO-3)
LM325N	Dual $\pm 15V$ Tracking Voltage Regulator (DIL)
LM337K	3-Terminal Adjustable Negative VR 1.5A (TO-3)
LM337T	3-Terminal Adjustable Negative VR 1.5A (TO-220)
LM338K	Adjustable Positive VR 5A (TO-3)
LM340KC-XX	Refer to LM78XXCK (TO-3)
LM340T-XX	Refer to LM78XXCT (TO-220)
LM345K-5.0	Negative VR 3A, 5V (TO-3)
LM350K	Adjustable Positive VR 3A (TO-3)
LM350T	Adjustable Positive VR 3A (TO-220)
LM376N	Positive Voltage Regulator (DIL)
LM723CH	Adjustable Positive VR 150mA (TO-5)
LM723CN	Adjustable Positive VR 150mA (DIL)
LM7805CK	Positive VR 1.5A, 5V (TO-3)
LM7805CT	Positive VR 1.5A, 5V (TO220)
LM7806CK	Positive VR 1.5A, 6V (TO-3)
LM7806CT	Positive VR 1.5A, 6V (TO-220)
LM7808CK	Positive VR 1.5A, 8V (TO-3)
LM7808CT	Positive VR 1.5A, 8V (TO-220)
LM7812CK	Positive VR 1.5A, 12V (TO-3)
LM7812CT	Positive VR 1.5A, 12V (TO-220)
LM7815CK	Positive VR 1.5A, 15V (TO-3)
LM7815CT	Positive VR 1.5A, 15V (TO-220)
LM7818CK	Positive VR 1.5A, 18V (TO-3)
LM7818CT	Positive VR 1.5A, 18V (TO-220)
LM7824CK	Positive VR 1.5A, 24V (TO-3)
LM7824CT	Positive VR 1.5A, 24V (TO-220)
LM78L05ACZ	Positive VR 100mA 5V (TO-92)
LM78L08ACZ	Positive VR 100mA 8V (TO-92)
LM78L12ACZ	Positive VR 100mA 12V (TO-92)
LM78L15ACZ	Positive VR 100mA 15V (TO-92)
LM78L18ACZ	Positive VR 100mA 18V (TO-92)
LM78L24ACZ	Positive VR 100mA 24V (TO-92)
LM78MXXCP	Refer to LM341P-XX
LM7905-2CT	Negative VR 1.5A, 5.2V (TO-220)

LM7905CK	Negative VR 1.5A, 5V (TO-3)
LM7905CT	Negative VR 1.5A, 5V (TO-220)
LM7906CT	Negative VR 1.5A, 6V (TO-220)
LM7908CT	Negative VR 1.5A, 8V (TO-220)
LM7912CK	Negative VR 1.5A, 12V (TO-3)
LM7912CT	Negative VR 1.5A, 12V (TO-220)
LM7915CK	Negative VR 1.5A, 15V (TO-3)
LM7915CT	Negative VR 1.5A, 15V (TO-220)
LM7918CT	Negative VR 1.5A, 18V (TO-220)
LM7924CK	Negative VR 1.5A, 24V (TO-3)
LM7924CT	Negative VR 1.5A, 24V (TO-220)
LM79L12ACZ	Negative VR 100mA, 12V (TO-92)

TIMERS

LM3905N	Precision Timer (DIL)
LM555CH	IC Timer (TO-5)
LM555CN	IC Timer (Mini-DIP)
LM556CN	Dual IC Timer (DIL)
LMC555	LM555 CMOS Version (DIL)
MC1455P	Timer IC
NE555D	Timer IC (DIL)
NE558A	Quad IC Timer IC (DIL)
XR320	Monolithic Timing Circuit (1 μ S to 1hour)
VS1307	Serial, I ² C Real Time Clock

TRANSISTOR ARRAYS

CA3054	Dual Differential Amplifiers (DIL)
LM3146N	High-Voltage Transistor Array (DIL)

SENSORS/TRANSDUCERS

LM335Z	Precision Temperature Sensor (TO-92)
LM34CH	Precision Fahrenheit Temperature Sensor (TO-5)
LM34Z(CZ)	Precision Fahrenheit Temperature Sensor(TO-92)
LM35CH	Precision Centigrade Temperature Sensor (TO-5)
LM35DZ	Precision Centigrade Temperature Sensor(TO-92)
LM3911N	Temperature Transducer (DIL)
MTS102	Silicon Temperature Sensor

SPECIAL FUNCTION

8005	Light Chaser IC, 8 Function Christmas Light Control
AD633	Low Cost Four-Quadrant Analog Multiplier (DIL)
AN6650	1.8V-6V Motor Speed Governor
AN5552	6-20V, 1A Motor Speed Governor
LM1812N	Ultrasonic Transceiver IC (DIL)
LM1851N	Ground Fault Interrupter
LM1893N	Carrier-Current Transceiver (DIL)
LM2907N	Frequency-to-Voltage Converter (DIL)
LM2917N	Frequency-to-Voltage Converter w/Zener (DIL)
LM331N	Precision Voltage-to-Frequency Converters (DIL)
MC1595L	Four Quadrant Multiplier (DIL)
MM5437N	Digital Noise Source
XR2206	Function Generator

OPTOCOUPERS

4N25	Transistor Output 80mA 30V 0.25W (TR 20%)
4N26	Transistor Output 80mA 30V 0.25W (TR 20%)
4N29	Darlington Output 40mA 30V 0.25W (TR 100%)
4N30	Darlington Output 80mA 30V 0.25W (TR 100%)
4N33	Refer to 4N30
4N35	Transistor Output 60mA 30V 0.3W (TR 20%)
4N38A	Transistor Output 80mA 80V 0.25W (TR 20%)

6N137	High CMR, High Speed TTL Compatible Optocouplers
HA11AA1	AC Input Transistor Output 10mA 30V
HA11D1	Transistor Output I/O Isolator
ITR8102	Slotted Isolator (Case 354-01)
ITR8105	Slotted Isolator (Case 354-02)
MCT2	Transistor Output (TR 20%)
MOC70T1	Slotted Optical Switch 60mA 30V 150mW Transistor Output (Case 354A)
MOC70W1	Slotted Optical Switch 60mA 30V 150mW Transistor Output (Case 792-01)
MOC71W1	Slotted Optical Switch 60mA 30V150mW Darlington Output (Case 792-01)
MOC75U1	Slotted Optical Switch (Case 354B-01)
MOC119	Photo Darlington Output 100mA 30V 0.25W (Transfer Ratio 300%)
MOC3002	Photo SCR Output 60mA 250V 0.4W (Transfer Ratio 300%)
MOC3021	Photo Triac Driver Output 50mA 400V 0.33W
MOC3041	Triac Driver Output (w/ Zero-Crossing Detector)
MOC3043	Triac Driver Output (w/ Zero-Crossing Detector)
MOC3081	Triac Driver Output
MOC5007	Logic Output, 60mA 25W
MOC7822	Slotted Coupler Transistor Output (TR 10%)
MOC8050	Darlington Output 80mA 80V 0.25W (TR 500%)
PC817	High Density Mounting Type Photocoupler NPN Phototransistor Output 50mA 50V 0.25W

BIPOLAR TRANSISTORS

GENERAL PURPOSE

1402	NPN 0.4W 50V 175MHz 0.15A (TO-92)
1602	PNP 0.4W 50V 150MHz 0.15A Driver (TO-92)
1702	NPN 0.6W 30V 120MHz 0.8A Audio Power (TO-92)
1802	PNP 0.6W 30V 120MHz 0.8A Audio Power (TO-92)
8050	NPN 25V 1A (TO-92)
8550	PNP 20V 1A (TO-92)
9011	NPN 0.4W 30V 100MHz 0.05A AM/FM/IF (TO-92)
9012	PNP 0.625W 25V 0.8A Audio Power (TO-92)
9013	NPN 0.625W 25V 0.8A Audio power (TO-92)
9014	NPN 0.625W 50V 150MHz 0.15A Driver (TO-92)
9015	PNP 0.625W 50V 150MHz 0.15A Driver (TO-92)
9016	NPN 0.4W 20V 400MHz 25mA Low-Noise RF (TO-92)
9018	NPN 0.625W 12V (TO-92)
9484	PNP 50V 0.6A (TO-92)
9626	NPN Gen. Purpose Small Signal (TO-92)
2N1132	PNP 0.6W -35V -0.15mA (TO-5)
2N2102	NPN 1W 65V 60MHz 1A (TO-39)
2N2222A	NPN 0.4W 40V 250MHz 0.8A (TO-18)
2N2905A	PNP 0.6W 60V 200MHz 0.6A (TO-39)
2N2907A	PNP 0.4W 60V 200MHz 0.6A (TO-18)
2N2925	NPN 0.2W 25V 125MHz 0.1A (TO-92)
2N2926	NPN 0.2W 18V 125MHz 0.1A (TO-92)
2N3053	NPN 5W 60V 100MHz 0.7A (TO-39)
2N3391	NPN 0.2W 25V 250MHz 0.1A (TO-92)
2N3393	NPN 0.2W 25V 125MHz 0.1A (TO-92)
2N3415	NPN 0.36W 25V 250MHz 0.1A (TO-92)
2N3416	NPN 0.36W 50V 250MHz 0.1A (TO-92)
2N3417	NPN 0.36W 50V 125MHz 0.1A (TO-92)
2N3440	NPN 1W 250V 1A (TO-39)
2N3702	PNP 0.3W 25V 100MHz 0.05A (TO-92)
2N3904	NPN 0.625W 40V 100MHz 0.2A (TO-92)
2N3905	PNP 0.625W 40V 200MHz 0.2A (TO-92)
2N3906	PNP 0.625W 40V 250MHz 0.2A (TO-92)
2N4033	PNP 1.25W 80V 150MHz 1A (TO-39)
2N4036	PNP 5W 65V 60MHz 1A (TO-39)
2N4037	PNP 1W 40V 60MHz 1A (TO-39)
2N4058	PNP 0.625W 30V 390MHz 0.02A (TO-92)
2N4400	NPN 0.625 40V 200MHz 0.6A (TO-92)
2N4401	NPN 0.625 40V 250MHz 0.6A (TO-92)
2N4402	PNP 0.3W 40V 150MHz 0.6A (TO-92)
2N4403	PNP 0.3W 40V 200MHz 0.5A (TO-92)
2N5210	NPN 0.35W 50V 30MHz 0.025A (TO-92)
2N5401	PNP 0.3W 150V 100MHz 0.6A (TO-92)

TIP142	NPN 125W 100V 10A Darlington (TO-218)
TIP147	PNP 125W 100V 10A Darlington (TO-218)

MATCHED PAIR (DUAL AMPLIFIER)

2N3811	PNP Dual Amplifier 0.5W 60V 100MHz 0.05A (Case 610A-04)
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QUAD TRANSISTOR

MPQ6502	Quad Complementary-Pair 0.65W 30V
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RF TRANSISTORS/MODULES

2N3375	NPN 11.6W 40V 1.5A 400MHz (TO-60)
2N3563	NPN 0.3W 12V 600MHz 8mA (TO-106)
2N3866	NPN 1W 30V 500MHz 0.4A (TO-39)
2N3948	NPN 1W 20V 700MHz 0.4A (TO-39)
2N4072	NPN 0.3W 20V 300MHz 0.1A (TO-18)
2N5016	NPN 30W 30V 400MHz 4.5A (TO-60)
2N5090	NPN 5W 30V 500MHz 0.4A (TO-60)
BFR91	NPN 0.4W 12V 5GHz 0.04A (Case 317A-01)
MHW1343	Low Distortion Wideband Amplifier Module (Case 714B-03)
MPS3563	NPN 0.6W 15V 600MHz 8mA (TO-92)
MPS6568A	NPN 0.3W 20V 375MHz 4mA (TO-92)
MRF208	NPN 10W 18V 220MHz 2A (Case 145A)
MRF245	NPN 80W 18V 175MHz Controlled "Q" (Case 316-01)
MRF247	NPN 75W 18V 175MHz 20A Controlled "Q" (Case 316-01)
MRF323	NPN 20W 33V 400MHz 3A (Case 244-04)
MRF326	NPN 40W 33V 450MHz 4.5A (Case 316-01)
MRF421	NPN 100W 20V 30MHz 20A (Case 211)
MRF454	NPN 80W 25V 30MHz 20A (Case 145A)
MRF517	NPN 2.5W 20V 30MHz (Case 79-04/1)
MRF587	NPN 5W 17V 5.5GHz 0.2A (Case 244A-01)
MRF604	NPN 2.5W 20V 800MHz (TO-46)
MRF901	NPN 0.375W 15V 4.5GHz 0.03A (Case 317-01)
MRF904	NPN 0.2W 35V 4GHz 0.03A (TO-72)
MRF905	NPN 0.4W 20V 2.5GHz 150mA (TO-46)
MRF911	NPN 0.4W 20V 5GHz 0.04A (Case 317-01)
NR431E	NPN 0.6W 15V 600MHz 0.3A (TO-92)
NR461E	NPN 0.6W 15V 300MHz 0.3A (TO-92)
PN918	NPN 0.3W 15V 600MHz 3mA (TO-92)

FIELD EFFECT TRANSISTORS**GENERAL PURPOSE**

2N5458	N-Channel General Purpose JFET 0.3W 25V 10mA (TO-92)
2N5461	P-Channel JFET 7.5V 2mA (TO-92)
2N5486	N-Channel JFET 0.3W 25V 30mA (TO-92)
J202	N-Channel General Purpose JFET 0.31W 40V 0.05A (TO-92)
MPF102	N-Channel VHF JFET 0.2W 25V 10mA (TO-92)

TMOS POWER

IRF123	N-Channel 60V 4 Ω 1.1A (FET DIP)
IRF530	N-Channel 75W 100V .18 Ω 14A (TO-220)
IRF640	N-Channel 125W 200V 0.18 Ω 18A (TO-220AB)
IRF740	N-Channel 125W 400V 0.55 Ω 10A (TO-220AB)
IRF830	N-Channel 75W 500V 1.5 Ω 4.5A (TO-220)
IRF840	N-Channel 125W 500V 0.85 Ω 8A (TO-220AB)
IRF9530	P-Channel 75W 100V 0.3 Ω 12A (TO-220)
IRFP460	N-Channel 280W 500V 0.27 Ω 20A (TO-247AC)
IRFZ30	N-Channel 75W 50V 0.05 Ω 30A (TO-220AB)
MTF6661	N-Channel 90V, 4 Ω , 1.0A (TO-226AE)
MTM50N05E	N-Channel 125W 50V 0.028 Ω 50A (TO-220)
MTP40N06	N-Channel 125W 60V 0.04 Ω 40A (TO-220AB)
MTP50N05E	N-Channel 125W 50V 0.028 Ω 50A (TO-220)
MTP50N06E	N-Channel 125W 60V 0.025 Ω 50A (TO-220)

THYRISTORS**SCRs**

2N5061	0.8A 60V (Plastic TO-92)
2N5062	0.8A 100V (Plastic TO-92)
2N5063	0.8A 150V (Plastic TO-92)

2N5064	0.8A 200V (Plastic TO-92)
EC103C	0.8A 300V (Plastic TO-92)
EC103D	0.8A 400V (Plastic TO-92)
MCR225-10F	25A 800V (TO-220AB)
MCR265-010	55A 800V (TO-220AB)
S2003LS3	3A 200V (Thermotab TO-220AB Isolated)
S2003MS3	3A 200V (Metal Can TO-5)
S4003LS3	3A 400V (Thermotab TO-220AB Isolated)
S6003L	3A 600V (Thermotab TO-220AB Isolated)
T106A1	4A 100V (Plastic TO-202AB Non-Isolated)
T106B1	4A 200V (Plastic TO-202AB Non-Isolated)
T106C1	4A 300V (Plastic TO-202AB Non-Isolated)
T106D1	4A 400V (Plastic TO-202AB Non-Isolated)
T106F1	4A 50V (Plastic TO-202AB Non-Isolated)
T106M1	4A 600V (Plastic TO-202AB Non-Isolated)
S1006LS3	6A 100V (Thermotab TO-220AB Isolated)
S2006LS3	6A 200V (Thermotab TO-220AB Isolated)
S4006LS3	6A 400V (Thermotab TO-220AB Isolated)
S6006L	6A 600V (Thermotab TO-220AB Isolated)
S1008LS3	8A 100V (Thermotab TO-220AB Isolated)
S2008LS3	8A 200V (Thermotab TO-220AB Isolated)
S4008LS3	8A 400V (Thermotab TO-220AB Isolated)
S6008L	8A 600V (Thermotab TO-220AB Isolated)
S1010L	10A 100V (Thermotab TO-220AB Isolated)
S2010L	10A 200V (Thermotab TO-220AB Isolated)
S4010L	10A 400V (Thermotab TO-220AB Isolated)
S6010L	10A 600V (Thermotab TO-220AB Isolated)
S1015L	15A 100V (Thermotab TO-220AB Isolated)
S2015L	15A 200V (Thermotab TO-220AB Isolated)
S4015L	15A 400V (Thermotab TO-220AB Isolated)
S6015L	15A 600V (Thermotab TO-220AB Isolated)
S1020L	20A 100V (Thermotab TO-220AB Isolated)
S2020L	20A 200V (Thermotab TO-220AB Isolated)
S4020L	20A 400V (Thermotab TO-220AB Isolated)
S6020L	20A 600V (Thermotab TO-220AB Isolated)
S1025L	25A 100V (Thermotab TO-220AB Isolated)
S2025L	25A 200V (Thermotab TO-220AB Isolated)
S4025L	25A 400V (Thermotab TO-220AB Isolated)
S6025L	25A 600V (Thermotab TO-220AB Isolated)
S1035J	35A 100V (TO-218 Isolated)
S2035J	35A 200V (TO-218 Isolated)
S4035J	35A 400V (TO-218 Isolated)
S6035J	35A 600V (TO-218 Isolated)
S1065J	65A 100V (TO-218 Isolated)
S2050J	50A 200V (TO-219 Isolated)
S2065J	65A 200V (TO-218 Isolated)
S4065J	65A 400V (TO-218 Isolated)
S6065J	65A 600V (TO-218 Isolated)
S1065P	65A 100V (Plastic FAST PAK)
S2065P	65A 200V (Plastic FAST PAK)
S4050J	50A 400V (TO-218 Isolated)

TRIAC

MAC224-8	40A 600V (TO-220AB)
Q401E3	1A 400V (Plastic TO-92)
Q4003M4	3A 400V (Metal Can TO-5)
Q4004L4	4A 400V (Thermotab TO-220AB Isolated)
Q6004L4	4A 600V (Thermotab TO-220AB Isolated)
Q8004L5	4A 800V (Thermotab TO-220AB Isolated)
Q4006L4	6A 400V (Thermotab TO-220AB Isolated)
Q6006L4	6A 600V (Thermotab TO-220AB Isolated)
Q4008L4	8A 400V (Thermotab TO-220AB Isolated)
Q6008L4	8A 600V (Thermotab TO-220AB Isolated)
Q4010L4	10A 400V (Thermotab TO-220AB Isolated)
Q2015L5	15A 200V (Thermotab TO-220AB Isolated)
Q6010L5	10A 600V (Thermotab TO-220AB Isolated)
Q8010L5	10A 800V (Thermotab TO-220AB Isolated)
Q4015L5	15A 400V (Thermotab TO-220AB Isolated)
Q6015L5	15A 600V (Thermotab TO-220AB Isolated)
Q6025P	25A 600V (Plastic FAST PAK)
Q6035P5	35A 600V (Plastic FAST PAK)

LOGIC TRIAC

BT131-600	1A 600V (Plastic TO-92)
L4001M5	1.6A 400V (Metal Can TO-5)
L4004F51	4A 400V (TO-202AB Non-Isolated)
L4008L7	8A 400V (TO-220 THERMOTAB Isolated)

QUADAC

Q4004LT	4A 400V (Thermotab TO-220AB Isolated)
Q4006LT	6A 400V (Thermotab TO-220AB Isolated)
Q4008LT	8A 400V (Thermotab TO-220AB Isolated)
Q4010LT	10A 400V (Thermotab TO-220AB Isolated)
Q4015LT	15A 400V (Thermotab TO-220AB Isolated)
Q6015LT	15A 600V (Thermotab TO-220AB Isolated)

DIAC

GT-32(HT-32)	32V Typical Switching Voltage (TECCOR)
GT-35(HT-35)	35V Typical Switching Voltage (TECCOR)
GT-40(HT-40)	40V Typical Switching Voltage (TECCOR)
GT-60(HT-60)	60V Typical Switching Voltage (TECCOR)

UNIUNCTION TRANSISTOR

2N2646	300mW 35V 50mA UJT (TO-18)
2N4870	300mW 4kΩ UJT

PROGRAMMABLE UNIUNCTION TRANSISTOR

2N6027	N-Type PUT 300mW 375mW 40V (TO-92)
2N6028	N-Type PUT 300mW 375mW 40V (TO-92)

DIODES & RECTIFIERS**SIGNAL DIODES**

1N60	Ge Signal Diode (DO-41 glass)
1N4148	Si Switching Signal Diode (DO-35 glass)

RECTIFIERS

1N4001	1A 50V (DO-41 plastic)
1N4002	1A 100V (DO-41 plastic)
1N4003	1A 200V (DO-41 plastic)
1N4004	1A 400V (DO-41 plastic)
1N4005	1A 600V (DO-41 plastic)
1N4006	1A 800V (DO-41 plastic)
1N4007	1A 1000V (DO-41 plastic)
1N4935	Si 200V 1A Rectifier
1N5393	1.5A 200V (DO-15 plastic)
1N5396	Si 500V Rectifier
1N5400	3A 50V (DO-27 plastic)
1N5401	3A 100V (DO-27 plastic)
1N5402	3A 200V (DO-27 plastic)
1N5403	3A 300V (DO-27 plastic)
1N5404	3A 400V (DO-27 plastic)
1N5405	3A 500V (DO-27 plastic)
1N5406	3A 600V (DO-27 plastic)
1N5407	3A 800V (DO-27 plastic)
1N5408	3A 1000V (DO-27 plastic)
1N5391	1.5A 50V (DO-27)
1N5392	1.5A 100V (DO-27)
1N5393	1.5A 200V (DO-27)
1N5395	1.5A 400V (DO-27)
D2015L	15A 200V (Thermotab TO-220AB isolated)
D2020L	20A 200V (Thermotab TO-220AB isolated)
D2035J	35A 200V (TO-218 isolated)
D2050J	50A 200V (TO-218 isolated)
D4015L	15A 400V (Thermotab TO-220AB isolated)
D4020L	20A 400V (Thermotab TO-220AB isolated)
D4050J	50A 400V (TO-218 isolated)
D6015L	15A 600V (Thermotab TO-220AB isolated)
D6020L	20A 600V (Thermotab TO-220AB isolated)
D6025L	25A 600V (Thermotab TO-220AB isolated)
D6035J	35A 600V (TO-218 isolated)
MR751	6A 100V Lead Mount (Case 194-05)
MR756	6A 600V Lead Mount (Case 194-05)
MUR3020PT	30A 200V (TO-218)

FAST RECOVERY DIODES

1N4937	1A 600V Fast Recovery Diode (DO-41 Glass)
MR851	3A 100V Fast Recovery Diode (Case 267-01 Plastic)
MR821	5A 100V Fast Recovery Diode (Case 194 Plastic)
MR826	Fast Recovery Diode (Case 194 Plastic)

SCHOTTKY RECTIFIERS

SR360	60V 5A (DO-27)
SR506	60V 5A (DO-201AD Plastic)
SR560	60V 5A (DO-27)

HOT CARRIER DIODE

MBD101	VHF/UHF Mixer Detector Diode
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BRIDGE RECTIFIERS

KBPC101	3A 100V Bridge Rectifier Diode
KBPC601	6A 100V Bridge Rectifier Diode
KBPC3504	400V 40A Bridge Rectifier (Metal Electrically Isolated)
KBPC3506	600V 40A Bridge Rectifier (Metal Electrically Isolated)
W04M	1A 250V Bridge Rectifier (TO-5 Plastic)

VARACTORS

MV104	Dual Voltage Variable Capacitance Diode 37-42 pF (range cap.)
MV1650	Voltage Variable Capacitance Diode, Nominal Cap. 100 pF
MV2107	Voltage Variable Capacitance Diode, Nominal Cap. 22 pF
MVAM108	Voltage Variable Capacitance Diode, Nominal Cap. 440 pF

RF DIODES

FV1043	FM AFC Varicap
MPN3404	Si PIN Switching Diode

ZENER DIODES**0.5W (DO-35)**

1N5223B	2.7V	1N5236B	7.5V	1N5248B	18V
1N5225B	3.0V	1N5237B	8.2V	1N5249B	19V
1N5226B	3.3V	1N5238B	8.7V	1N5250B	20V
1N5227B	3.6V	1N5239B	9.1V	1N5251B	22V
1N5228B	3.9V	1N5240B	10V	1N5252B	24V
1N5229B	4.3V	1N5241B	11V	1N5253B	25V
1N5230B	4.7V	1N5242B	12V	1N5254B	27V
1N5231B	5.1V	1N5243B	13V	1N5256B	30V
1N5232B	5.6V	1N5244B	14V	1N5257B	33V
1N5233B	6.0V	1N5245B	15V	1N5258B	36V
1N5234B	6.2V	1N5246B	16V	1N5262B	51V
1N5235B	6.8V	1N5247B	17V	1N5273B	120V

1W (DO-41)

1N4728A	3.3V	1N4741A	11V	1N4753A	36V
1N4729A	3.6V	1N4742A	12V	1N4754A	39V
1N4730A	3.9V	1N4743A	13V	1N4755A	43V
1N4731A	4.3V	1N4744A	15V	1N4756A	47V
1N4732A	4.7V	1N4745A	16V	1N4757A	51V
1N4733A	5.1V	1N4746A	18V	1N4758A	56V
1N4734A	5.6V	1N4747A	20V	1N4759A	62V
1N4735A	6.2V	1N4748A	22V	1N4760A	68V
1N4736A	6.8V	1N4749A	24V	1N4761A	75V
1N4737A	7.5V	1N4750A	27V	1N4762A	82V
1N4738A	8.2V	1N4751A	30V	1N4763A	91V
1N4739A	9.1V	1N4752A	33V	1N4764A	100V
1N4740A	10V				

5W (DO-27A)

1N5333B	3.3V	1N5344B	8.2V	1N5361B	27V
1N5338B	5.1V	1N5346B	9.1V	1N5365B	36V
1N5339B	5.6V	1N5349B	12V	1N5368B	47V
1N5341B	6.2V	1N5352B	15V	1N5384B	160V
1N5342B	6.8V	1N5355B	18V	1N5388B	200V
1N5343B	7.5V	1N5359B	24V		

PHOTO DISCRETES

IE0575HLG	Infrared-Emitting Diode (100mA)
PD87BR1	Infrared-Emitting Pin Photo Diode Receiver 150mW
PIC1018SMB	Infrared-Emitting Receiver Module 3.0V
PIC3088SBG	Infrared-Emitting Receiver Module 3.0V
RS-05FS	Photo Reflective Sensor 75mm
WPT440F	Photo Transistor 100mV

PHOTOCELL (LDR)

5mm Diameter

LED LAMPS

Blue LEDs:

Super Bright Water Clear 5mm 10mA
Jumbo 8 mm

Green LEDs:

Hi-Blinking Water Clear 5mm 9V
Hi-Bright Diffused 5mm 20mA

Jumbo 8 mm
Jumbo 5 mm
Medium 3 mm
Rectangular LED
Super Bright Transparent 5mm 20mA
Super Bright Water Clear 5mm 20mA

Orange LEDs:

Diffused 5mm 10mA
Jumbo 8 mm

Red LEDs:

Hi-Blinking Water Clear 5mm 9V
Hi-Bright Diffused 5mm 20mA

Jumbo 8 mm
Jumbo 5 mm
Medium 3 mm
Midget
Rectangular
Super Bright Transparent 5mm 20mA
Super Bright Water Clear 5mm 20mA
Transparent Jumbo 5 mm

White LEDs:

Jumbo 8 mm LED Indicator Lamp
Super Bright 3mm LED Pen
Super Bright 5mm LED Light Stick

Transparent Jumbo 5mm Super Bright Medium White LED
Transparent Super Bright Jumbo 5mm

Yellow LEDs:

Jumbo 8 mm 5050 LED 7 Colors (5meters Long)
Jumbo 5 mm w/Adaptor & Remote Control
Medium 3 mm 5050 LED White (5meters Long)

Jumbo 5 mm LED Socket

LED SEVEN SEGMENT DISPLAY

0.7" 4-Digit Common-Anode Clock Display

1.2" 5 x 7 LED Matrix

2" 5 x 7 LED Matrix

ELD3051 Dual Common-Cathode

ELD3061 Dual Common-Cathode

ELD5111 Dual Common-Cathode

ELD5121 Dual Common-Anode

ELS401 Single Common-Cathode

ELS402 Single Common-Anode

ELS411 Common-Cathode

ELS422 Common-Anode

ELS5111 Single Common-Cathode

ELS5121 Single Common-Anode

TOM1057 Dot matrix small

TOM2057 Dot matrix Big

TOM2058BKG Dot matrix Big

TOM2058FEG Dot matrix Big

TOS50101AK-B 5" Common-Cathode

TOS50101BK-B 5" Common-Anode

TOS40101AK-B 4" Common-Cathode

TOS40101BK-B 4" Common-Anode

TOS70101AS 7" Common-Anode

TOS70101BS 7" Common-Anode

TRANSIENT SUPPRESSOR

MPTE-5 5 V Supply

MPTE-12 12 V Supply

QUARTZ CRYSTALS

32.768kHz		10.000 MHz	HC-18u
2.0000 MHz	HC-33u	14.31818 MHz	HC-18u
3.5638 MHz	HC-18u	17.413 MHz	HC-18u
3.5795 MHz	HC-18u	17.743 MHz	HC-18u
4.000 MHz	HC-18u	17.73447MHz	HC-18u
4.433 MHz	HC-18u	18.432MHz	HC-18u
6.000 MHz	HC-18u	20.000MHz	HC-18u
8.000 MHz	HC-18u	24.000MHz	HC-18u
11.059 MHz	HC-18u	27.095 MHz	HC-18u

ELECTRO MECHANICAL RELAYS

SPDT	10A 12 V
SPST	1A 6V
SPST	1A 12V
SPST	1A 24V
SPST	10A 6V
SPST	10A 12V
SPST	10A 24V
SPDT	5A 6VDC (Mini-PCB Type)
SPDT	5A 12VDC (Mini-PCB Type)
SPDT	5A 24VDC (Mini-PCB Type)
SPST	16A 48V
DPDT	20A 24V (Screw Mount Type)
DPDT	5A 6VDC (Standard-PCB Type)
DPDT	5A 12VDC (Standard-PCB Type)
DPDT	5A 24VDC (Standard-PCB Type)
DPDT	5A 220V & 6A 6V
DPDT	3A 110VAC (Standard-PCB Type)
DPDT	3A 220VAC (Standard-PCB Type)
DPDT	10A 12VDC (Slug Type)

REED RELAYS

RR105	500 Ohms 5V SPST	RR205	500 Ohms 5V DPST
RR109	700 Ohms 9V SPST	RR209	700 Ohms 9V DPST
RR112	1050 Ohms 12V SPST	RR212	1050 Ohms 12V DPST

TRANSDUCERS

HALL EFFECT

UGN-3120U 25V 20mA Hall Effect Switch

ULTRASONIC

MA40LIS 40 KHz Ultrasonic Transmitter
MA40LIR 40 KHz Ultrasonic Receiver

CERAMIC

CT27 27 mm Ceramic Transducer

THERMISTORS

TDC05A	015L	(15Ω)	110L	(100Ω)	130L	(300Ω)
	045L	(45Ω)	120L	(200Ω)	135L	(350Ω)
	090L	(90Ω)	125L	(250Ω)		
TDC05C	150L	(500Ω)	250L	(5K)	240L	(40K)
	210L	(1K)	310L	(10K)	421	(210K)
	215L	(1.5K)	315L	(15K)	422	(220K)
	220L	(2K)	320L	(20K)	425	(250K)
	230L	(3K)	225L	(25K)	431	(310K)
	235L	(3.5K)				
TDC05D	350L	(50K)	415L	(150K)	440L	(400K)
	410L	(100K)	433L	(330K)	447L	(470K)

INDUCTORS (CHOKE COIL)

Resistor Type

10 μH	33 μH	1.5mH	4.7mH	30mH	56mH
18μH	1mH	2.7mH	12mH	39mH	
27μH	18 mH	3.9mH	27mH	47mH	

Capacitor Type

22 μH

RESISTORS**CARBON FILM RESISTORS STANDARD VALUES****WATTAGE: 1/8W, 1/4W****TOLERANCE: 5%****CARBON FILM AND METALLIZED FILM RESISTORS****WATTAGE: 1/2W, 1W****TOLERANCE: 5%**

0.5Ω	27Ω	150Ω	820Ω	4.7KΩ	27KΩ
1Ω	33Ω	180Ω	1KΩ	5.6KΩ	120KΩ
3.9Ω	39Ω	220Ω	1.2KΩ	6.8KΩ	470KΩ
4.7Ω	47Ω	270Ω	1.5KΩ	8.2KΩ	2.2MΩ
6.8Ω	56Ω	330Ω	1.8KΩ	10KΩ	10MΩ
10Ω	68Ω	390Ω	2.2KΩ	12KΩ	
15Ω	82Ω	470Ω	2.7KΩ	15KΩ	
18Ω	100Ω	560Ω	3.3KΩ	18KΩ	
22Ω	120Ω	680Ω	3.9KΩ	22KΩ	

METALLIZED FILM RESISTORS**WATTAGE: 2W, 5W****TOLERANCE: 5%**

2W	5W			
1Ω	0.1Ω	0.33Ω	1Ω	10Ω
150Ω	0.15Ω	0.39Ω	2Ω	15Ω
200Ω	0.18Ω	0.47Ω	3Ω	50Ω
1KΩ	0.22Ω	0.5Ω	4.7Ω	

PRECISION RESISTORS**WATTAGE: 1/4W****TOLERANCE: 1%**

10Ω	180Ω	3.65KΩ	619KΩ
11Ω	200Ω	3.9KΩ	68KΩ
12.1Ω	220Ω	3KΩ	75KΩ
13Ω	240Ω	4.32KΩ	82KΩ
15Ω	270Ω	4.7KΩ	90.9KΩ
16.2Ω	300Ω	5.1KΩ	100KΩ
18Ω	330Ω	5.6KΩ	110KΩ
20Ω	365Ω	6.19KΩ	121KΩ
22Ω	390Ω	6.2KΩ	130KΩ
24Ω	432Ω	6.8KΩ	150KΩ
27Ω	470Ω	7.5KΩ	162KΩ
30Ω	510Ω	8.2KΩ	180KΩ
33Ω	560Ω	9.09KΩ	200KΩ
36.5Ω	619Ω	10KΩ	220KΩ
39Ω	680Ω	12.1KΩ	240KΩ
43.2Ω	680Ω	13KΩ	270KΩ
47Ω	750Ω	15KΩ	300KΩ
51Ω	750Ω	18KΩ	330KΩ
56Ω	820Ω	20KΩ	365KΩ
61.9Ω	820Ω	24KΩ	390KΩ
68Ω	909Ω	27KΩ	432KΩ
75Ω	909Ω	30KΩ	470KΩ
82Ω	1KΩ	33KΩ	510KΩ
90.9Ω	1.1KΩ	36.5KΩ	560KΩ
100Ω	1.8KΩ	39KΩ	1MΩ
110Ω	2KΩ	43.2KΩ	1.21MΩ
121Ω	2.2KΩ	47KΩ	1.3MΩ
130Ω	2.4KΩ	51KΩ	1.5MΩ
150Ω	2.7KΩ	56KΩ	1.62MΩ
162Ω	3.3KΩ	61.9KΩ	1.8MΩ
			2MΩ

HORIZONTAL TRIMMER RESISTOR

H5KΩ	H10KΩ	H20KΩ	H50KΩ	H100KΩ
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VERTICAL TRIMMER RESISTOR

V500Ω	V2KΩ	V10KΩ	V30KΩ	V50KΩ	V200KΩ
V500KΩ	V1KΩ	V3KΩ	V25KΩ	V47KΩ	V100KΩ
V470KΩ	V1MΩ				

SMD RESISTORS

10Ω	15Ω	33Ω	47Ω	51Ω	100Ω
120Ω	150Ω	270Ω	330Ω	560Ω	680Ω
820Ω	1.2KΩ	1.5KΩ	2.2KΩ	2.7KΩ	3.3KΩ
4.7KΩ	7.5KΩ	8.2KΩ	10KΩ	12KΩ	15KΩ
18KΩ	22KΩ	27KΩ	33KΩ	39KΩ	43KΩ
47KΩ	51KΩ	56KΩ	68KΩ	82KΩ	91KΩ
100KΩ	120KΩ	150KΩ	180KΩ	220KΩ	270KΩ
330KΩ	430KΩ	470KΩ	560KΩ	680KΩ	820KΩ
1M					

BOURNS TRIMPOTS**3006** 3/4" Long Multiturn Cermet Potentiometer (15T) 1.25W, 10% Tol.

3006P	10Ω	500Ω	20KΩ	250KΩ
	20Ω	1KΩ	25KΩ	500KΩ
	50Ω	2KΩ	50KΩ	1MΩ
	100Ω	5KΩ	100KΩ	2MΩ
	200Ω	10KΩ	200KΩ	

3296 3/8" Square Multiturn Cermet Potentiometer (25T) 0.5W, 10% Tol.**3296P (Side Adjust)**

	10Ω	500Ω	20KΩ	250KΩ
	20Ω	1KΩ	25KΩ	500KΩ
	50Ω	2KΩ	50KΩ	1MΩ
	100Ω	5KΩ	100KΩ	2MΩ
	200Ω	10KΩ	200KΩ	5MΩ

3296Y (Top Adjust)

	100Ω	200Ω	500Ω	1KΩ
	2KΩ	5KΩ	10KΩ	20KΩ
	25KΩ	50KΩ	100KΩ	200KΩ
	250KΩ	500KΩ	1MΩ	

3306 6mm Round Single-Turn/Cermet/Open Frame Trimmer Resistor**3306P (Top Adjust)**

	100Ω	200Ω	500Ω	1KΩ
	2KΩ	5KΩ	10KΩ	20KΩ
	25KΩ	50KΩ	100KΩ	250KΩ
	500KΩ	1MΩ		

3309 9mm Round Single-Turn/Cermet/Open Frame Trimmer Resistor**3309P (Top Adjust)**

	500Ω	5KΩ	10KΩ
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3309W (Side Adjust)

	500Ω	1KΩ	2KΩ
	5KΩ	10KΩ	50KΩ
	100KΩ	500KΩ	1MΩ

3362P (Top Adjust)

	50Ω	100Ω	200Ω	500Ω
	1KΩ	2KΩ	5KΩ	10KΩ
	20KΩ	25KΩ	50KΩ	100KΩ
	200KΩ	250KΩ	500KΩ	1MΩ

3590 7/8" Dia., 10-Turn Precision Potentiometer Wirewound Element**3590S**

	100Ω	1KΩ	2KΩ	5KΩ
	10KΩ	20KΩ	50KΩ	100KΩ

BOURNS RESISTOR NETWORK**4609X Series****9-Pin SIP Resistor Network**

	47Ω	100Ω	150Ω	180Ω
	220Ω	270Ω	390Ω	470Ω
	620Ω	820Ω	1.2KΩ	1.8KΩ
	2KΩ	3KΩ	3.9KΩ	5.6KΩ
	8.2KΩ	18KΩ	20KΩ	27KΩ
	39KΩ	47KΩ	56KΩ	82KΩ
	120KΩ	150KΩ	180KΩ	220KΩ
	240KΩ	330KΩ	470KΩ	1MΩ

4610X Series**10-Pin SIP Resistor Network**

	100Ω	1KΩ	10KΩ
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OTHERS**Turns-Counting Dials**

H506 7/8" Diameter/0-15 Turns

POTENTIOMETERS

Without Switch			
MINI			
5K	20K DUAL	50K PCB MOUNT	1M
10K DUAL	20K	100K	
10K	25K	100K DUAL	
	50K	500K	
STANDARD			
1K	10K	100K DUAL PCB	250K
5K	20K	MOUNT	500K
10K	50K DUAL	100K	500KDUAL
10K DUAL	50K	100KDUAL	
LONG			
1K	5K	10K	22K
With Switch			
MINI	STANDARD	LONG	
5K	5K	3K	
10K	10K	5K	
50K	50KDUAL	10K	
VARIABLE	SLIDE	WITH CENTERTOP	
5K (FLAT)	10K(MINI)	100K (STANDARD)	
10K	20K	100K DUAL	
50K (FLAT)	50K DUAL (STANDARD)		
100K	100K DUAL		
100K (STANDARD)	100K		

CAPACITORS

ELECTROLYTIC					
6.3 VOLTS					
10 μ F	47 μ F	1000 μ F	1500 μ F	2700 μ F	4700 μ F
10 VOLTS					
1 μ F	5 μ F	30 μ F	100 μ F	470 μ F	
2.2 μ F	10 μ F	33 μ F	200 μ F	680 μ F	
4.7 μ F	22 μ F	47 μ F	220 μ F	1000 μ F	
16 VOLTS					
0.47 μ F	1 μ F	47 μ F	300 μ F	2200 μ F	
0.5 μ F	5 μ F	50 μ F	330 μ F	3300 μ F	
2.2 μ F	10 μ F	100 μ F	470 μ F	4700 μ F	
3.3 μ F	22 μ F	200 μ F	680 μ F	6800 μ F	
4.7 μ F	33 μ F	220 μ F	1000 μ F		
25 VOLTS					
0.47 μ F	4.7 μ F	47 μ F	470 μ F	4700 μ F	
1 μ F	10 μ F	100 μ F	1000 μ F	10000 μ F	
2.2 μ F	22 μ F	220 μ F	2200 μ F		
3.3 μ F	33 μ F	330 μ F	3300 μ F		
35 VOLTS					
4.7 μ F	220 μ F	470 μ F	2200 μ F	3300 μ F	
10 μ F	330 μ F	1000 μ F	3000 μ F	4700 μ F	
33 μ F					
50 VOLTS					
0.1 μ F	1 μ F	4.7 μ F	50 μ F	1000 μ F	
0.47 μ F	2.2 μ F	10 μ F	100 μ F	2200 μ F	
.22 μ F	3.3 μ F	22 μ F	220 μ F	3300 μ F	
.47 μ F	4 μ F	33 μ F	330 μ F	4700 μ F	
		47 μ F	470 μ F	6800 μ F	
63 VOLTS					
4.7 μ F	100 μ F	2200 μ F	1 μ F		
100 VOLTS	200 VOLTS	400 VOLTS			
330 μ F	10 μ F	100 μ F	10 μ F	220 μ F	
MINI					
6.3V	10V	16V	47 μ F	50V	
47 μ F	47 μ F	10 μ F	100 μ F	.47 μ F	
100 μ F	220 μ F	22 μ F	470 μ F	1 μ F	
		33 μ F	35V	2.2 μ F	
			4.7 μ F	3.3 μ F	

NON-POLARIZED ELECTROLYTIC CAPACITOR

50 VOLTS

4 μ F

MONOLITHIC CAPACITORS

.1 Mono

.01 Mono

18pF

50 VOLTS

MYLAR CAPACITORS

0.001 μ F	0.0039 μ F	0.01 μ F	0.033 μ F	0.068 μ F
0.0015 μ F	0.0047 μ F	0.015 μ F	0.039 μ F	0.1 μ F
0.002 μ F	0.005 μ F	0.02 μ F	0.047 μ F	0.22 μ F
0.0022 μ F	0.0068 μ F	0.022 μ F	0.05 μ F	0.33 μ F
0.0027 μ F	0.0082 μ F	0.027 μ F	0.056 μ F	0.47 μ F
0.0033 μ F				

100 VOLTS

250 VOLTS

630 VOLTS

0.047 μ F	0.015 μ F	47 μ F	0.001 μ F	0.1 μ F
0.056 μ F	0.047 μ F	600 VOLTS	0.005 μ F	0.22 μ F
0.068 μ F	0.1 μ F	0.068 μ F	0.047 μ F	0.47 μ F
0.15 μ F	0.33 μ F		0.06 μ F	

CERAMIC CAPACITORS

1 pF	22 pF	70 pF	390 pF	0.01 μ F
2 pF	24 pF	75 pF	470 pF	0.02 μ F
3 pF	25 pF	100 pF	500 pF	0.022 μ F
4 pF	27 pF	120 pF	560 pF	0.039 μ F
5 pF	30 pF	130 pF	680 pF	0.04 μ F
6 pF	33 pF	140 pF	0.001 μ F	0.05 μ F
7 pF	35 pF	150 pF	0.0015 μ F	0.047 μ F
8 pF	39 pF	180 pF	0.002 μ F	0.1 μ F
10 pF	40 pF	200 pF	0.0022 μ F	0.22 μ F
13 pF	47 pF	220 pF	0.003 μ F	
15 pF	50 pF	270 pF	0.0033 μ F	
18 pF	56 pF	300 pF	0.0047 μ F	
20 pF	68 pF	330 pF	0.005 μ F	

NON-POLARIZED CAPACITORS (NPO)

2 pF	10 pF	18 pF	30 pF	56 pF
4 pF	12 pF	20 pF	33 pF	68 pF
5 pF	15 pF	22 pF	47 pF	70 pF

METALLIZED POLYESTER FILM CAPACITORS
(10% TOLERANCE)

0.01 μ F	0.068 μ F	0.33 μ F	0.047 μ F
0.015 μ F	0.82 μ F	0.68 μ F	

POLYESTER FILM CAPACITORS
(10% TOLERANCE)

0.001 μ F	0.01 μ F	0.033 μ F	0.068 μ F
0.0033 μ F	0.015 μ F	0.039 μ F	0.082 μ F
0.0047 μ F	0.02 μ F	0.04 μ F	0.1 μ F
0.0056 μ F	0.022 μ F	0.047 μ F	0.2 μ F
0.0068 μ F	0.027 μ F	0.05 μ F	0.27 μ F
0.0082 μ F			

TANTALUM CAPACITORS
(10% TOLERANCE)

0.022 μ F/100V	0.47 μ F/35V	2.2 μ F/25V	6.8 μ F/25V
0.1 μ F/35V	0.68 μ F/35V	3.3 μ F/25V	10 μ F/16V
0.15 μ F/35V	1.0 μ F/35V	3.3 μ F/35V	10 μ F/25V
0.22 μ F/16V	1.5 μ F/25V	4.7 μ F/10V	10 μ F/35V
0.22 μ F/35V	1.5 μ F/35V	4.7 μ F/16V	22 μ F/6.3V
0.33 μ F/35V	2.2 μ F/10V	4.7 μ F/25V	22 μ F/16V
0.47 μ F/25V	2.2 μ F/16V	4.7 μ F/35V	47 μ F/16V

POLYESTERINE CAPACITORS
(10% TOLERANCE)

.015 pF				
150 pF	270 pF	300 pF	800 pF	1000 pF

TRIMMER CAPACITORS

6 pF 20 pF 30 pF 40 pF 50 pF 60 pF

SMD CAPACITORS

22pF	470pF	1.5nF	22nF	.001 μ F
100pF	560pF	10nF	68nF	.1 μ F
150pF	1nF	15nF	100nF	.01 μ F

C & K SWITCHES**DIP Switches****(BD Series)**

2-position	4-position	10-position
6-position	8-position	

Toggle Switches**(7000 Series)**

7101S	ON-OFF
7103S	ON-OFF-ON
71058	NOM-OFF-NOM
7105JZ	NOM-OFF-NOM
7203S	ON-OFF-ON
7207	ON-OFF-NOM

Others:

1M31	ON-NONE-ON
1MD1	ON-NONE-ON
1MS1	ON-NONE-ON
1MD3	ON-OFF-ON
1MS3	ON-OFF-ON

Rocker Switch

RA-92	Rocker Switch w/Light
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Thumbwheel/Mini-Push Type Switch

3/4" Mini-push Wheel Switch	End-plate for 3/4" Model
1/2" Mini-push Wheel Switch	End-plate for 1/2" Model

Push-button Key Switches**(KS Series)**

KS11	Momentary Push On (White, Red, Orange, Green, Blue) (Normally Open)
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COMPONENT SOCKETS**General Purpose DIL Sockets**

6-pin	16-pin	22-pin	40-pin
8-pin	18-pin	24-pin	64-pin
14-pin	20-pin	28-pin	

PLCC Sockets

28-pin	44-pin	68-pin
32-pin	52-pin	72-pin

Hi-Reliability IC Sockets

6-pin	14-pin	18-pin	24-pin
8-pin	16-pin	20-pin	28-pin
			40-pin

WIRE WRAP SOCKETS

6-pin	8-pin	14-pin	16-pin	18-pin	20-pin	24-pin	28-pin	40-pin
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TEST SOCKETS (DIL)

14-pin	18-pin	24-pin	40-pin	16-pin	22-pin	28-pin
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OTHERS

SY-303	IC Puller Yellow
SY-304	PLCC Puller
IC Pullers	PLCC Puller

INTERCONNECT DEVICES AND FLAT CABLE

IDD-C9P-TG	9-pin D-Sub Plug Connector w/ Strain Relief
IDD-C9S-TG	9-pin D-Sub Socket Connector w/ Strain Relief
IDD-C15P-TG	15-pin D-Sub Plug Connector w/ Strain Relief
IDD-C15S-TG	15-pin D-Sub Socket Connector w/ Strain Relief
IDD-C25P-TG	25-pin D-Sub Plug Connector w/ Strain Relief
IDD-C25S-TG	25-pin D-Sub Socket Connector w/ Strain Relief
IDD-C37P-TG	37-pin D-Sub Plug Connector w/ Strain Relief
IDD-C37S-TG	37-pin D-Sub Socket Connector w/ Strain Relief
IDE-C50-H-T	50-pin Card Edge Connector Thru-Hole Mounting Flanges
IDH-10LP-S3-TG	10-pin Low Profile Header Straight Solder
IDH-20PK-SR3-T	20-pin 4-Sided Header Right Angle Solder
IDH-40LP-S3-T	40-pin Low Profile Header Straight Solder
IDP-C14-T	14-pin Cable Plug w/ Strain Relief
IDP-C16-T	16-pin Cable Plug w/ Strain Relief
IDP-C24-T	24-pin Cable Plug w/ Strain Relief
IDP-C40-T	40-pin Cable Plug w/ Strain Relief
IDS-C20PK-SR-T	20-pin Socket Connector with Strain Relief
IDS-C40PK-T	40-pin Socket Connector without Strain Relief

OTHERS

2-pin Male/Female Connector
3-pin Male/Female Connector
4-pin Male/Female Connector
4-pin Male/Female Connector Round
5-pin Male Connector
6-pin Male/Female Connector
7-pin Male/Female Connector
7-pin Male/Female Connector Round
8-pin Male/Female Connector
9-pin Male/Female Connector
10-pin Male/Female Connector
25-pin Male Header Connector
25-pin Female Header Connector
Male to Male Gender Changer
Female to Female Gender Changer
Female Header 4 X 2
Female Header 40 X 2
Female Header 11 X 2 Straight
Female Header 40 X 1 Straight
Female Header 8 X 2 for Ribbon Cable
Female Header 10 X 2 for Ribbon Cable
1-pin Male Header Connector
Male Header 8x2 Connector
Male Header 10x2 Connector
Male Header 25x2
RS232 9C Cable
RS232 25C Cable
RS232 25P 90degree Male/Female Cable
RS232 Male/Female Connectors

FLAT CABLES

09-Cable	16-Cable	26-Cable	36-Cable	50-Cable
10-Cable	20-Cable	30-Cable	37-Cable	60-Cable
14-Cable	25-Cable	34-Cable	40-Cable	

BEL FUSE**TYPE 3AG Normal/Fast Blow Glass Tube Fuse - Rohs**

Part Number	Ampere Rating	Voltage Rating
3AG500	0.5	250
3AG750	0.75	250
3AG1	1	250
3AG1.5	1.5	250
3AG2	1.1/2	250
3AG2.5	2	250
3AG3	3	250
3AG5	5	250
3AG10	10	250

* Also available **Rohs Compliant** Fuses

TYPE 3SB Slow Blow Glass Tube Fuse - Rohs

Part Number	Ampere Rating	Voltage Rating
3SB500	1/2	250
3SB750	3/4	250
3SB1	1	250
3SB2	2	250
3SB2.5	2-1/2	250
3SB3	3	250
3SB4	4	250
3SB5	5	250

* Also available **Rohs Compliant** Fuses

TYPE 5TT Slow Blow Glass Tube Fuse - Rohs

Part Number	Ampere Rating	Voltage Rating
5TT500	1/2	250
5TT750	3/4	250
5TT1	1	250
5TT2	2	250
5TT3	3	250
5TT5	5	250

* Also available **Rohs Compliant** Fuses

TYPE 5SF Quick Acting Glass Tube Fuse - Rohs

Part Number	Ampere Rating	Voltage Rating
5SF500	0.55	250
5SF1	1	250
5SF2	2	250
5SF3.15	3.15	250
5SF5	5	250

* Also available **Rohs Compliant** Fuses

TYPE 5ST Time Lag Glass Tube Fuse - Rohs

Part Number	Ampere Rating	Voltage Rating
5ST500	0.55	250
5ST1	1	250
5ST2	2	250
5ST3.15	3.15	250
5ST5	5	250

* Also available **Rohs Compliant** Fuses

MISCELLANEOUS**ALLIGATOR CLIPS**

COLORS: Black, Blue, Green, Red, White, Yellow

BATTERIES AND ACCESSORIES

1.2V AAA NIMH Rechargeable Battery
 1.5V AA Battery (Eveready Battery)
 1.5V AAA Battery (Eveready Battery)
 9V Battery
 Battery Cell (GP-SYLVA-CELL A76)
 Battery Clip (9V)
 Battery Holder
 Battery Terminals

CABLE TIE

Y-J-100 100mm
 Y-J-142 142mm
 Y-J-162 162mm

CORDS

AC Outlet
 Computer Cord
 Dial Cord
 Flat Cord
 TA-33 ALEXAN Extension Cord (3 meters)
 Telephone Wire Line Cord
 WA-5 Universal Adapter
 WA-6 Universal Adapter
 WE-2R4 Extension Cord
 WE-4A +105 Extension Cord
 WE-4A +106 Extension Cord
 WE-4AH05 Extension Cord
 WE-4AH06 Extension Cord
 WE-9R4 Extension Cord
 WONPRO Extension 5-Cord

ePLUS

(see ads on page 37)

ePLUS - DT Touch screen with fully digitized tablet panel
ePLUS - WT Humanized communication platform more just a system.
ePLUS - web extra pen Digital tablet pen

HEATSINK

DF-3B (TO-3) Double Sided 3"
 DF-4B (TO-3) Double Sided 4"
 MA-1W (TO-220)
 MA-103-25 Double Sided
 MA-113A-30 Double Sided
 MB-207-25 Double Sided
 MB-210K Double Sided
 MD-2B (TO-220)
 MD-4B (TO-220)
 MD-6B (TO-220)
 MC-234 Heatsink
 ME-702-3
 ME-702 X 4 Double Sided
 ME-731-40 Double Sided
 MI-301-40 Double Sided
 MI-307-30+P Heatsink
 MK-508-3 Double Sided
 MK-508-4 Double Sided
 MS-3B (TO-220)
 MS-7B (TO-220)
 MT-8B Snap type (TO-220)
 MT-9B (TO-3)
 SF-3B (TO-3) Single Slide 3"
 SF-4B (TO-3) Single Slide 4"

JACKS AND PLUGS

Baby Phone Jack
 Baby Plug
 Banana Plug

BNC Jack
Duplex Jack (PA5-4)
Modular Jack-8 pins (RJ45)
PCB Jack-8P8C
Panel Mount Jack (PMJ)
Phone Jack
Plastic Phone Jack
Plug to Jack Phone Line Extension

RCA Jack
RCA Plug
UL Adapter Plug
VDE Adapter Plug

PLASTIC HOUSING

(see ads on page 56)

MATRIX BOARD/EXPERIMENTER'S PCB/BREADBOARD

(see ads on page 39 & 44)

8051 Multipurpose Protoboard (using Atmel 2051/4051 IC)
PB501 Solderless experimenter's board
PC201 Experimenter's matrix PCB
PC401 Experimenter's matrix PCB
Z86P1 Multipurpose Protoboard (using Z86 IC)

PANEL METER

AC-300V
DC-100MA
DC-100UA
DC-10A
DC-10MA
DC-15V
DC-1A
DC-1MA

DC-30V
DC-3A

DIGITAL PANEL METER

20V
1A
5A

PRINTED CIRCUIT BOARD's**Single Side:**

4 x 4
4 x 6
4 x 12
6 x 12
12 x 12

Double Side:

4 x 4
4 x 6
4 x 12
6 x 12
12 x 12

PRESENSITIZED PCBS

(see ads on page 45)

GD (Glass-Epoxy Double Sided)

4 X 6 6 X 10 12 X 12 12 X 18

PP (Paper Phenolic)

4 X 6 6 X 10 12 X 12 12 X 18

ROBOTICS KITS

(see ads on page 31-35)

Bioid Beginner Kit	Line Tracker Car Kit
Bioid Comprehensive Kit	Mountain Climber
Bioid Expert Kit	Olo Bugs
Coptermech Robot Kit	Robot Arm IR and USB
Escape Robot Kit	Scarab Robot Kit
Follow Me Sound Detecting Robot	Solar Kits
Football ("BOTBALL") Robot Kit	Space Nine Robot Kit
I-Robo ES1, ES2 and ES3	Sumo-Bot
Ladybug Robot Kit	Tarmi V Robotic Line Tracer
Lego Mindstorms NXT	Titan Tank Robot Kit
Line-Tracking Mouse	Trainmech Robot Kit
Line Tracking Robot	Turning Frog Robot Kit

SENSORS**BODY TEMPERATURE SENSOR**

- A sensor with a high sensitivity in detecting body temperature and is suitable for security alarm at home and industry.

ITR9909

- A low cost infrared transmitter and receiver that can be use to detect for obstacle, proximity, and line tracking.

ALCOHOL SENSOR

- It is sensitive to alcohol; suitable as portable alcohol detector.

GAS SENSOR

- A sensor that is used in gas detecting leakage suitable for LPG, natural gas, town gas; it also avoid the noise of alcohol, cooking fumes and cigarette smoke. It has high sensitivity to LPG, natural gas, town gas and small sensitivity to alcohol and smoke.

SPEAKERS

8Ohms .25W (5.8cm dia., Alnico)
8Ohms .50W (5.8cm dia., Alnico)
8Ohms 1W (9.2cm. dia., Alnico)

TEST PINS

CSP-5B CCP P-25M3-1 CCP
CSP-5H CCP R-25W4C-S CCP
CSP-5K CCP

WIRES

Solid Wire No.22
Solid Wire No. 24
Stranded Wire No.22
Wire Wrap Wire No.30

TRANSFORMER

0-14V 4A	14V-0-14V 1.5A
0-28V 1.5A	24V-0-24V 3A
0-9V 750mA	28V-0-28V 3.5A
10V-0-10V 750mA	5-6518T (0-6V 200MA)
12V-0-12V 200mA	6948 (0-9V 500MA)
12V-0-12V 250mA	6949 (0-6V 500MA)
12V-0-12V 750mA	6950 (6-0-6V 500MA)
12V-0-12V 1A	6951 (9-0-9V 1A)
12V-0-12V 2.5A	6952 (6V-0-6V 750MA)
12V-0-12V 150W	

OTHERS

AC to DC Adapters
Alexan Organizer,
Bolts And Nuts
Drill Bits (various sizes)
Duplex Jack (PA5-4)
EchoMAX Alexan Karaoke Mic Adapter
EM-80 Condenser Microphone
Ferric Chloride (solid)
Fuses:

500mA 250V	3A 250V
1A 250V	4A 250V
2A 250V	5A 250V

HTC010 Heat Transfer Compound (10ml)
Magnifying Lamp (Ballast, Switch)
MD3000 Mini Hand Drill
Mica Insulator (for TO-220 & TO-3)

Mini Etching Tank w/ heater & pump
Moisture Meter: (see ads on page 46)
Alexan Shega Moisture Meter
Wood Moisture Meter

Mosquito Repellant TM306
Motor:

6V Motor
Motor Holder
Pulley Rubber

PCB Developing Compound
PCB Edge Connector (Different Contact, Number)
PCB-Mounted Push Button Switch (Different Colors)
Pest Repellant Model: TM-306, TM315 & TM933
Plug to Jack Phone line Extension
Power Transformer (We also accept made-to-order specifications)
SCP003 Silver Conductive Paint (3g)

Screws (various sizes)
Shrinkable Tubes (various sizes)
Slide Switches (Different Specifications)
Sonalert Buzzer:

VIC-2400
VIC-2402
VIC-4201

Telephone Dialer Push Button Numeric Keypad Switches Set
(0-9,*,# total 12 pcs.)
Telephone Jack PA17

Terminal Block
Trimmer and Tuning Capacitors
Trimpt
UV Exposure Box
Variac: 1kV, 2kV, 3kV, 5kV

ALEXAN SCREW DRIVERS

HP10	Precision Torx/Star Driver 6pcs./Set
JK-6088A	3-in-1 Precision Screw Driver
JS-01	Jewellers Screw Driver 6pcs. (3 philips, 3 flats)
PS-06	Precision Screw Driver Set (2 philips, 4 flats)
PT-06	Alexan 10pcs. Screw Driver

HI-LO/ATMEL PROGRAMMERS/ERASERS

ALL-100	Universal & Gang Programmer - Works with IBM PC through USB 1.1/2.0 to perform a high-speed data transmission and accurate programming waves. - Embedded with a 4Mbit memory to support the programming capacity for most E(E)PROM, MCU/MPU and PLD
AT-701	EPROM Eraser - Electronic timer adjustable from 10 to 60 minutes. - Two layer design fully utilizes both top and bottom areas of the UV tube: Top layer capacity: Up to 8 pieces of 32 pin DIP EPROMs. Bottom layer capacity: Up to 9 pieces of 40 pin DIP EPROMs - Top layer features a stair type of receptacle to ensure all 24, 28, or 32 pin EPROMs are positioned correctly for maximum UV exposure.
ATMEL AVR ISP	In-System Programmer for Atmel's AVR Flash Microcontrollers. The AVR ISP gives the designer a compact and reliable programming tool to program all In-System Programmable AVR microcontrollers through a 6- or 10-pin ISP connector. - Interface with AVR Studio - ISP Programming of all In-System Programmable AVR Devices - Programs both Flash and EEPROM - Supports Fuse and Lock Bit Programming - Supports RC Oscillator Calibration - Adjustable Speed. Supports all Target Boards Running at a Speed Higher than 8 kHz - RS-232 Interface

HANDTOOLS

75M	75° Angle Shearcutter (1.2mm or 16AWG)
75S	Ungar Heavy Duty Shear Cutter
170D	Ungar Anti Static Cutter
170M	General Purpose Shearcutter (1.2mm or 16AWG)
170S	Super Shearcutter (1.2mm or 16AWG)
378M	Serrated Jaw Long Nose Plier
378SMM	Smooth-Jaw Long Nose Plier
1178M	Rugged Shearcutter (2mm or 12AWG)
1178S	Super Rugged Shearcutter (2mm or 12 AWG)
YYT-11	Tab Connector Crimping Tool

CRIMPING TOOLS

YTT-02	Crimping Tool and Wire Stripper
YYT-6	Tie Gun
YY-78-318	Cable Cutter and Stripper
YY-78-323	Ring Pliers (6")
YY-78-321	Ring Pliers (8")
YYR-525	PVC Pipe Cutter

ALEXAN SOLDERING TOOLS & ACCESSORIES

Alexan Mini Long Nose
 Alexan Mini Cutter
 Desoldering Tools
 KA-40 Soldering Iron 40Watt/220V (see ads on page 36)
MT-3N1 Multipurpose Tool (see ads on page 36)

MT-3N1 Tip
RD7324 Soldering Lead w/ Tube
 Solder Resist
 Soldering Lead 60/40 1.2mm
 Soldering Lead 60/40 1.0mm
 Soldering Lead 0.6 mm
 Soldering Lead Metal Alpha
 Soldering Iron / Tip / Filament
 Soldering Lead 2K6 60/40 Alpha
 Soldering Stand
 Solder Lead Stand ST-92
 Super Solder Lead (1Kg.)
 Tip 30W, 40W, & 60W Long Life

TEST PROBES

60 MHz Oscilloscope Probe
 100MHz Oscilloscope Probe (HP9100)
 250MHz Oscilloscope Probe
 AC360 Probe
 HVP-40A Analog High Voltage Probe (Analog Meter)
 HVP-40DM High Voltage Probe (Digital Meter)
 High Voltage Probe 40 K
 Temperature Probe (TP-DOS-50C-150C)

TES TEST INSTRUMENTS

TES1300/1302 Digital Type K Thermometers
TES1330 Lux Meter
TES1350A Digital Sound Meter
TES2718 LCR Meter

TEKTRONIX OSCILLOSCOPE

TDS-2012 2 Channel 100 MHz Digital Storage Oscilloscope
 IGS/s maximum sample rate, Dual Time Base, 11
 Automatic Measurements, Autoset Menu with Waveform
 Selection, Waveform and Setup Memories, Probe check
 wizard to ensure correct probe usage, Color LCD display

RIGOL DIGITAL OSCILLOSCOPE

(SEE ADS ON PAGE 53 & 54)

DS1052E 2 Channel 50MHz Digital Oscilloscope ,
 1GSa/s maximum Real-time Sample
 Rate and 1Mpts Memory Depth.
DS1102E 2 Channel 100MHz Digital Oscilloscope,
 1GSa/s maximum Real-time Sample Rate
 and 1Mpts Memory Depth.
DS1102D 2 Channel 100MHz Digital Oscilloscope with a 16 channel
 Logic Analyzer, 1GSa/s maximum Real-time Sample Rate
 and 1Mpts Memory Depth, with logic analyzer time base
 range; 2ns/div ~ 50n/div.
DS1102CA 2 Channel 100MHz Digital Oscilloscope with a 16 channel
 Logic Analyzer, 2GSa/s maximum Real-time Sample Rate
 and 25GSa/s Equivalent-time Sample Rate. Compact
 design with small footprints to save space
DS1302CA 2 Channel 300MHz Digital Oscilloscope with a 16 channel
 Logic Analyzer, 2GSa/s maximum Real-time Sample Rate
 and 50GSa/s Equivalent-time Sample Rate. Compact
 design with small footprints to save space

RIGOL FUNCTION/ARBITRARY Generator & DIGITAL Multimeter

ALEXAN TEST INSTRUMENTS

Analog and Digital Multimeter

AC-34 Digital Pocket Multimeter



For home and light-testing requirements, the pocket AC-34 offers the perfect solutions. It features auto range and auto power off with a count of 2000. The ranges are as follows: DC/AC Voltage: 200mV, 2V, 20V, 200V and 600V; Resistance: 200 - 2K - 20K - 200K - 2M - 20M; Continuity Check: Buzzer sounds at <100 Ohms; Diode Test: Open voltage approx. 1.5V.

AC-2000P Professional DMM & LCR Meter



This 3-3/4 DMM is an *LCR Meter*, *Logic Tester*, *Frequency Counter* and *Temperature Meter*, a diode checker and continuity beeper in one. It measures inductance from 1 μ H to 40 H, capacitance from 1 pF to 40 μ F, frequency from 1 Hz to 4 MHz and temperature from -40°C to 150°C. (Temperature probe is optional).

CT-20K Digital Capacitance Meter



Portable digital capacitance meter designed to measure capacitance from 0.1 pF to 20,000 μ F. Nine capacitance ranges are available with an average accuracy of 0.5%. This meter measures only 135 mm x 72 mm x 33 mm and weighs 207 grams. For low-capacitance measurements, ± 20 pF zero adjustment is provided to compensate for test lead effects.

AC-360P Professional Standard Analog Meter



The AC-360 is the standard-size analog multimeter for measuring voltage, current, and resistance. An auxiliary connector is also provided for checking transistors. Measurement ranges: DC Volt is 0 to 1000 Volts in seven ranges; AC Voltage is 0 to 1000 Volts in five ranges; DC current is 0 to 250 mA in four ranges; Resistance in 4 ranges (x 1 to 20 K Ω); transistor h_{FE} - 0 to 1000; Transistors Leakage Current (I_{CEO}) - 0 to 150 mA; AF output: -10dB to +22dB.

AC-650 Auto Range Digital Multimeter



This meter measures only 138 mm x 70 mm x 32 mm and weighs approximately 140 grams, including battery.

The AC-650 Auto Range DMM is a standard digital multimeter for measuring voltage, current, and resistance with 3-1/2 digit LCD display. Measurement range: DC Voltage is 200 mV to 600 V in five ranges-auto ranging; AC Voltage is 2 V to 600 V in four ranges-auto ranging; DC current is 200mA to 10A in six ranges; Resistance is 200 Ohms to 20M in six ranges; Transistor h_{FE} Test (0 - 2000).

CM-100 Digital Clamp Meter



Equipped with *peak and data hold*, this CM-100 clamp meter is a versatile measuring instrument for hobbyists and professionals alike. This meter has a maximum measurement capability of 1000 A_{AC}, 750 V_{AC}, 1000 V_{DC} with a high degree of accuracy. Aside from these functions, the meter is provided with a 10 Hz to 2 KHz *frequency counter*, a *diode* and *continuity* tester. Its 3-1/2 digit LCD display is provided with unit and *polarity display*, and a *low power indicator*. It weighs only 330 grams and measures 208 mm x 65 mm x 31 mm.

CM-200 Digital Clamp Meter



Equipped with maximum value lock. This CM-200 clamp meter is a versatile measuring instrument for hobbyists and professionals alike. The meter has a maximum measurement capability of 600A_{AC}, 600V_{AC}, 600V_{DC} with a high degree of accuracy. Aside from these functions, the meter is provided with a diode and continuity tester. Its 3-1/2 digit LCD display is provided with unit and polarity display, and a low power indicator. It weighs approximately 200 grams and measures 189mm x 71mm x 37mm, including battery.

Equipped with maximum value lock. This CM-200 clamp meter is a versatile measuring instrument for hobbyists and professionals alike. The meter has a maximum measurement capability of 600A_{AC}, 600V_{AC}, 600V_{DC} with a high degree of accuracy. Aside from these functions, the meter is provided with a diode and continuity tester. Its 3-1/2 digit LCD display is provided with unit and polarity display, and a low power indicator. It weighs approximately 200 grams and measures 189mm x 71mm x 37mm, including battery.

DM-705 Digital Multimeter



The DM-705 is a standard digital multimeter. Features Auto Power Off, Data Hold, Multi-Function, Low Power Consumption and have Ergonomic Design. Measurement range: DC/AC Voltage, DC/AC Current, Resistance/Continuity, Diode and Auto range. Display/Resolution: 3 1/2 Digits 1999 counts LCD. Additional Functions: Functions Select, Data Hold, Auto Power off (15 mins.). Sampling Rate: Approximately 3times/sec. Operation Temperature/Humidity: 0°C-50°C (32°F ~ 122°F)/below 80% R.H. (No condensation). Storage Temperature/Humidity: -10°C - 50°C (14°F ~ 140°F)/below 70% R.H. (No condensation). Power Supply: Battery AA (1.5V) x 2. Fuse: 15A/250V (10A) & 0.5/250V (μ A, mA). This meter measures 140.8mm(L) x 73.7mm(W) x 31.7mm(H) and weight only 145g.

LX-104 Digital Light Meter



The LX-104 Digital Light Meter is designed to accurately measure illumination with a large LCD display and distinct Digital Data Reading. Measurement range scale is from 0.1 ~ 19990 Lux or 0.01~1999 FC. Measuring Range Selection: 200/2000/20000 Lux or 20/200/2000 FC. This meter measures only 148 mm x 71 mm x 36mm and the light receiver measures 85mm x 67mm x 32mm. Features: Sensor used the Exclusive Photo Diode & Correction Filter; Data hold function; Light sensor Separate Design for optimum position measure; Current measurement range scale and illuminated units are displayed on the screen; Low battery indication; Offset adjustment; High accuracy measurement; Large LCD display and distinct digital data reading; Power consumption: Approximately 2mA. Response speed: 2.5 times/sec.

The LX-104 Digital Light Meter is designed to accurately measure illumination with a large LCD display and distinct Digital Data Reading. Measurement range scale is from 0.1 ~ 19990 Lux or 0.01~1999 FC. Measuring Range Selection: 200/2000/20000 Lux or 20/200/2000 FC. This meter measures only 148 mm x 71 mm x 36mm and the light receiver measures 85mm x 67mm x 32mm. Features: Sensor used the Exclusive Photo Diode & Correction Filter; Data hold function; Light sensor Separate Design for optimum position measure; Current measurement range scale and illuminated units are displayed on the screen; Low battery indication; Offset adjustment; High accuracy measurement; Large LCD display and distinct digital data reading; Power consumption: Approximately 2mA. Response speed: 2.5 times/sec.

DM-2400 Benchtop Digital Multimeter



The DM-2400 is a true RMS digital meter for laboratory use. It boasts of 4-1/2 display and easy-to-use controls. DC voltage measurement: Range: ± 199.99 mV, ± 1.9999 V, ± 19.999 V; AC voltage measurement (AC or AC + DC True RMS): range: 199.99mV, 1.9999V, 19.999V, 199.99V 1000V 5 ranges, 1000V range 45Hz ~ 1KHz $\pm (0.5\% + 15d)$; DC current measurement: range: ± 199.99 μ A, ± 1.9999 mA, ± 19.999 mA, ± 199.99 mA, ± 1.9999 A, ± 19.999 A, 6 ranges; accuracy: 199.99 μ A ~ 199.99mA 4 Ranges $\pm (0.2\% + 1d)$, 19999mA ~ 19.999A 2 ranges $\pm (0.3\% + 2d)$; AC current measurement (AC or AC + DC True RMS): range: 199.99 μ A, 1.9999mA, 19.999mA, 199.99mA, 1999.9mA, 19.999A 6 ranges

Frequency Counter

FC-660 Frequency Counter

The FC-660 is a bench type professional digital frequency counter capable of measuring frequency up to 100MHz.

The FC-660 frequency counter has the following features: • 8 digits of 0.5", green 7-segment LED display. • Trigger level can be adjusted from -2.5V to +2.5V or set to 0V. • Low Pass Filter (LPF) up to 100kHz can be switched on to reject high frequency noise when a low frequency signal is measured. • AC or DC coupling can be selected. • Meets IEC-1010-1 (EN61010-1) safety requirements.



Oscilloscopes

AS-9640 Dual Trace 40-MHz Oscilloscope

The AS-9640 oscilloscope has dual channels with frequency bandwidth DC to 40 MHz at -3dB or 40 MHz at -6dB, maximum sweep time 10 ns/DIV, and maximum sensitivity 1 mV/DIV. Waveforms are accurately presented on the oscilloscope's 150 mm rectangular CRT screen with internal graticule. This oscilloscope features delay sweep, two sweep mix, CHB output, Z- modulation, dual time base, and a built-in component tester.



AS-9307 Single Trace Oscilloscope

This model is a single trace multipurpose oscilloscope designed to operate in the frequency range from D.C. to 5 MHz with 3 inch (75mm.) CRT screen and high vertical sensitivity (10mV/div). It is particularly suitable for production lines, laboratories or repairshops to observe the waveform of electronic signals. The AS-9307 provides advanced features such as high vertical input impedance, (1M Ω) direct cascade amplifiers, and internal/external synchronizing circuit.

FS-409 40-MHz Multi-Function Oscilloscope with 5MHz Function Generator and 50MHz Auto Counter

The FS-409 oscilloscope has dual channel, multiple testing application equipment. It built-in at least 2 testing equipment in one. FS-409 is a 40MHz analog oscilloscope built-in a 5MHz Function Generator and a 50MHz Auto-Range, Auto Gatetime Counter. Its function generator and counter can be operated independently or jointly. With frequency bandwidth DC to 40 MHz at -3dB. Waveforms are accurately presented on the oscilloscope's 6 inches rectangular CRT screen with internal graticule.



Signal Function Generators

AF-110 Audio Signal Generator



The AF-110 signal generator is a high performance audio frequency generator designed to meet topmost requirements. It has 600-Ohm output impedance and provides a low-distortion sine (10 Hz to 1 MHz) or square (10 Hz to 100 kHz) wave signal. This AF signal generator is equipped with synchronized input terminal allow high-output signal to be controlled by small signals. The generator measures 100 (h) x 250 (w) x 130 (d) mm and weighs approximately 2.5 kg.

This RF-100 is a compact solid-state radio frequency generator for the hobbyists, technicians and professionals. The frequency range of the unit is from 100 kHz to 150 MHz with an average accuracy better than $\pm 3\%$. An internal 1-kHz oscillator is provided for modulation purposes. The unit measures 150 mm (h) x 250 mm (w) x 130 mm (d) and weighs 2.5 kg.

RF-100 Radio Frequency Generator



FG-210/220C Function Generators

The FG-210/220C are portable, bench type function generators capable of producing different waveforms: sine, square, triangle, pulse and ramp for the FG-210 as well as sweep and frequency counter for the FG-220C. Range: 0.1Hz to 10MHz in 8 Ranges; Amplitude: 20 Vp-p, Open; Output Impedance: 50W $\pm 10\%$; DC Offset: +10V~-10V; Duty Control: 80:20 to 20:80 Continuously Variable with 50:50 calibrated switch; Freq. Accuracy: $\pm 5\%$ of full scale; Distortion: <0.5%, 10Hz~100kHz; Rise/Fall Time: <25nS; V. C. F.: 0 to 5V control frequency to 1000:1; SYNC OUTPUT Rise Time: <25nS; Level: >1Vp-p (open). For the FG-220C, the SWEEP OUT Type: Linear, Log with ramp output with width >1000:1, continuously

variable; Rate: From 10 ms to 5 s, variable; FREQUENCY COUNTER Display: 6 Digits 0.4" Green LED display with Hz, kHz, MHz, GATE, OVFL LED; Attenuator: 0 dB, -30 dB; Accuracy: \pm (Time base accuracy + 1 count); Resolution: 0.1 Hz, 1 Hz, 10 Hz, 100 Hz, 1 kHz; Gate Time: 10S, 1S, 0.1S, 0.01S; Range: 10 Hz to 100 MHz; Sensitivity: ~25 mVrms (10 Hz to 10 MHz), ~150mVrms (10 MHz to 100 MHz); Maximum Input: 150 Vrms; Input Impedance: 1 MW/ 100 pF.





Alexan

QUALITY KITS

AUDIO/HI-FI ACCESSORIES

ISSUE

LED/VU Meter II 43/V5

AUDIO/HI-FI AMPLIFIERS/BOOSTERS

2-Watt Utility Amplifier w/ HC851 19/V3
 6-Watt Power Amplifier 39/V1
 10-Watt Stereo Amp w/ DC Controlled Pre-Amp 65/V2
 15-Watt Bridge (mono) V1
 15-Watt Stereo Amplifier w/ 12-0-12 2.5A 21/V2
 P-50A (50-W) Power Amp w/ 6" Heatsink 56
 100-Watt RMS Incredible Power Amplifier w/ 2-3" Heatsinks V2
 LM12 (150 W) Power Amp Module w/ 4" heatsink 55
 Cassette Stereo Booster w/ HC873, 20V 4A 54
 Low Cost Power Amp Module 58
 Low Cost Power Amp for your PC and CD/MP3 Players w/HC981, MS-7BHS 69
 OTL Pocket Amp for Experimenters w/ HC001 69
 Porta Amp w/ 10-0-10 750mA 35
 Room Amplifier 14/V3
 Ultra Sensitive Mini Amplifier 63
 Universal DC Controlled Pre. Amplifier 63
 Walkman Stereo Amplifier w/ HC991 & 9Vx2 1A 49
 Video Pre-Amp Buffer w/ HC851 & 6950 57

AUDIO/HI-FI EQUALIZERS

5-Band Stereo Graphic Equalizer w/12V 200mA 42/V5
 Equalizer (mono) V3
 Parametric Equalizer Module w/ 6V 500mA 52

AUDIO/HI-FI SIGNAL PROCESSORS

Analog Delay for Echo Rev. FX w/ HC872 & 12x2 750mA 45
 Digital Echo Karaoke Box V5
 Echo Reverb Processor w/ HC841 & 9V 32/V4
 Low-Cost Digital Echo/Reverb Microphone Preamp 65
 PA Annunciator with Microphone Input 62
 Sound Field Generator Module 62
 Stereo Blender w/ 6950 54
 Stereo Enhancer II w/ 6V 500MA 52
 Stereo Enhancer w/ 12.6 200mA 13
 Stereo Simulator w/ HC851 & 9V 33/V5
 Stereo Synthesizer 16/V2

AUDIO/HI-FI MIXERS

4-Input Mixer w/HC841 9/V1
 Attenuator/Direct Injection Box w/ HC812 58
 Minus One Plus One w/ HC841 & 9V 28/V2
 Multipurpose Audio Mixer 64
 Parametric Equalizer Mixer w/ 6V 500MA 52
 Parametric Equalizer Mixer w/ 6V 500MA w/o optional parts 52
 Simple 4-Input Stereo Mixer 60

PREAMPS/INPUT SELECTORS

1040 Tone Volume Balance Control w/ 9VAPT48 31/V4
 Electronic Stereo Source Selector w/ 6V (6952) 31/V4
 Low-Cost Preamp w/ Tone Control 39
 P-50C Control Amp w/ Microphone Input 56
 P-50S Audio Input Selector w/ Phono Pre-Amp 56
 Pre-Amplifier V3
 Universal Hi-Fi Preamp V1
 Universal Mic Preamp w/ HC851 6950 57

AUDIO/HI-FI FILTERS/CROSSOVER NETWORKS

3-Way Active Crossover Network w/ HC851 53/V5
 Audio Notch Filter 66
 Sub-Woofer Pre-driver w/ HC872 & 12Vx2 750mA 47

AUDIO/HI-FI PROTECTION CIRCUITS

Compressor Protector w/ HC991 & 6950 51
 Delayed Switch-On Speaker 21
 Speaker Protector Device 14/V2
 Speaker Sentry w/ 6x2 500 (6950) 51
 Speaker Time Delay 8/V3

AUDIO/HI-FI POWER SUPPLIES

40-Watt Power Supply w/ 25-0-25 4A V1
 100-Watt RMS Power Amplifier (Power Supply) w/ 35-0-35 5A V2
 Power Supply 40
 Low Cost Power Supply Module 58
 LM 12 (100 Watt) Power Supply 28V5A 55
 P-50 Power Supply w/ 36-0-36 3A 12-0-12 1A 56
 Universal Hi-Fi Power Supply w/ 10-0-10 750mA V1

AM/FM RADIO/TV CIRCUITS

AM Pocket Radio 61/V3
 AM/FM Clock Radio (Sleepmate) 59
 AM/FM Pocket Radio 12-725 60
 FM Stereo Broadcast Transmitter w/ HC841 61
 Home Video Distribution System w/ HC851 & 6950 31/V4
 TV Modulator V3
 Video Tone Controller w/ HC981 & 12Vx2 250mA 48

AUTOMOTIVE

Auto. Car Battery Charger w/ 4A 17V V2
 Bark Horn w/ HC001 43
 Bionic Sound Car Horn w/ HC001 38
 Car Battery Monitor 42
 Car Stereo Booster 36/V5
 Car Thief Staller w/ HC991 20/V2
 Kits Scanner w/ Bulb/Light & HC981 V3
 Sensorless Car Alarm w/ HC872 61

CLOCK/COUNTERS/TIMERS

3-in-1 (Up-Down Counter/Frequency Counter/Clock)	59
3-Minute Phone Timer w/ HC981 & 12V 250mA	44
Automatic Minute Timer w/ HC981 & 12-0-12 250mA	29
Darkroom Exposure Timer w/ HC872 & 12V 250mA	45
Multipurpose ON/OFF Timer	38/66
Clock Radio (Sleep Mate AM/FM)	59/V5

DOORBELLS

2-Tone Melody Doorchime II w/ 8 Melody case	58/V5
2-Tone Melody Doorchime w/ 8 Melody case	V4
16-Melody Doorchime w/ 8 Melody case	54/V2
16-Melody Proximity Chime w/ 8 Melody Case	58/V2
Door Phone w/ HC981 & HC001	57
Electronic 2-Tone Doorbell w/ HC981 & 9V	V1
Tok-Tok-Tok Doorbell w/ HC981 & 12-0-12 750MA	35

GAMES

Electronic Number Game	64
LED Dice	67
Memory Challenger w/ HC981	40

TEST & MEASUREMENT/INSTRUMENTATION

3-in-1 (Up-Down Counter/Frequency Counter/Clock)	59/V3
AC-100 Control	20/V2
AC-360 Multitester	V1
AC Line Voltage Monitor	66
AC Line Voltage Sensor w/ HC871	48
Compact Function Generator	66
DC Voltage Monitor	65
Digital Logic Probe II w/ HC11	22/61
Digital Soldering Iron Controller	68
LED Thermometer	66
Live Wire Tester	62
Logic Gate Checker	50
Logic Pulser	36/V2
Multipurpose Coil Tester w/ HC851	55
Modulated Signal Injector w/ HC001	10
RMS to DC Converter w/ HC991 & 12V 200mA	50
SCR Tester	22
Signal Tracer	11
Repairman's Signal And Injector w/ HC001	V3
Soldering Iron Controller w/ HC981 & 6950	50/V4
Transistor Tester w/ HC001	9/V1

POWER SUPPLIES/INVERTERS/VOLTAGE REGULATORS

AC-220 Auto Voltage Regulator (500 Watts)	21/V3
0-25 Volt One Amp. Regulated Power Supply 0-28 1.5A	15/V1
1.25 to 25 Voltage Regulator Power Supply w/ 0-24V 3 Amps	23/V2
20-Amp. Regulated Power Supply w/ DS-6", 2-3" Heatsink	V5
Low Cost Regulated Power Supply w/ HC873, 14V 1.5A	12/V1
Micro DC to AC Inverter w/ HC873 10-0-10 750MA	34
Power Inverter w/ 12V 150W & 9" Heatsink	27/V4
UPS/Power Inverter (Quasi Sine Wave Power Inverter & UPS)	V5
Variable/Adjustable Switching Power Supply	V2
Versa Power Supply w/ 0-14-28 3.5A	33/V3

TELEPHONE PROJECTS

2-Way Intercom System w/ HC001 (2), HC991	11/V2
Automatic Telephone Recorder w/ HC981 & 6V	34
Extension Telephone Switcher w/ HC001	47/V2
FM Telephone Pick-up	15
Simultaneous 2-Way Intercom w/ 8 Melody Case	49
Telephone Amplifier w/ HC981	16
Telephone Call Monitor w/ HC872 & 6V 500MD	49
Telephone Line Tester	68

RUNNING LIGHTS

2 Channel Multifunction Light Chaser	67
Disco Dancing Lights w/ HC841 & 9V	V3
LED Matrix Dancing Lights for your Amplifier	69
Moving LED Light Chain	68/V5
Simple Color Organ	65
Programmable Light Sequencer II w/ HC841 & 6952	58
Programmable Sequential Light I w/ HC841 & 6952	V3
Running Lights w/ 12V 750mA	V2

EMERGENCY LIGHTS

Emergency Lamp/Flasher	20
Mini Emergency Lighting Unit w/ HC851	54

DIMMERS/CONTROLLERS

Electronic Lamp Dimmer w/ HC981	V1
Multifunction Lamp Controller w/ HC981	53/V5
Remote Controlled Lamp Dimmer Transmitter/Receiver w/ HC871 & HC991 & 6950	54
Touch Controlled Lamp Dimmer w/ HC001	39/V5

FLASHER

Night Time LED Flasher	49
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MUSIC PROJECTS

Distortion FX w/ HC981	40
Digital Delay FX w/ HC981	60/V5
Dynamic Phaser w/ HC991	V4
Electronic Drum Set w/ HC872 transformer 6950	53/V5
Electronic Metronome	V2/59
Frequency Doubler FX w/ HC981 transformer 6950	51
Fuzz Tone	23
Guitar Compressor Sustainer w/ HC981	38
Guitar Track Jam Box	64
Intelligent Musical Organ	16/V2
Overdrive FX	58/V2
Practice Amplifier	53
Quick and Dirty Fuzz	68
Simple Color Organ	65
Sound Effect Generator w/ HC851 w/o terminal	29
Super Guitar Headphone Amplifier	62
Tube Overdrive FX w/ HC981	61

PROTECTION CIRCUITS

3-Phase Motor Protecting Switch	59
MCU-Based Power-On Delay	59/V3
Power Sentry w/ HC991 & 9V	26/V3

Power-On Delay w/ HC991 & 9V (10A Relay)	V1
Power-On Delay w/ HC991 & 9V (5A Relay)	V1
RefMate w/ HC812 (Option A & B available)	60
Voltage Level Monitor	12

SECURITY/BURGLAR ALARMS

Anti-Burglar Light w/ HC981 & 12Vx2 200mA	47/V5
Car Burglar Alarm w/ HC981	30
Early Riser Alarm w/ HC981	53
Electronic Combination Lock w/ HC812	9/33
Electronic Watchdog w/ HC981 & 10V750mA	40
Infrared Intruder Alarm TXer/RXer w/ HC812 & 9V & 12V	43/V4
Peek Alarm	67
Sensor Based Sentry w/ 6V 250mA & HC851	41/V1
Simple Backup Beeper	67
Touch Door Knob Alarm w/ HC001	35
Touch Sensitive Alarm w/ HC981	42
Ultrasonic Alarm Intruder w/ HC821 & 12V 750mA	V3
Ultrasonic Proximity Sensor/Parking Radar	67
Ultrasonic Proximity Sensor w/ HC981	69

ELECTRONIC SWITCHES

Clap Switch w/ HC981 & 9V	V4
Clap Switch II w/HC991	69
Electronic Switch w/ HC001	36
Infrared Remote Controlled Switch w/ HC871, HC991	V3
Light Activated Switch w/ HC851, ter.	V3
Multi-Way Lamp Switch w/ HC991, 6V-0-6V 500mA	35
Night Switch	14
Sound/Voice Activated Switch	67
Voice Operated Switch w/ HC981	13/V1

NOVELTY CIRCUITS

Digital Voice Message Recorder	64/V2
EE Shocker w/ HC981 & 6V 250 mA (6950)	47/V3
Electronic Parrot w/ HC851 w/ terminal	32/V4
Lie Detector I	23/V2
Lie Detector II w/ HC001	48/V3
Moving Chain of Lights	17/V2
Telephone Voice Changer w/ HC981	50
Voice Changer Microphone	V5

CHRISTMAS PROJECTS

12-Song Christmas Melody & Dancing Light w/ HC981, 6950	45/V5
Christmas Carol Box (Jingle Bells Melody Song Box)	57
Christmas Desk Decor w/ HC851 6950	57
Christmas Lamp Dimmer	57
Christmas Melody w/ 7930 & HC001	20
LED Accessories	41
Soft Lamp Blinker w/ 6x2 250mA (6950) & HC981	46
Telephone Melody On Hold w/ HC991	37

BATTERY CHARGER/CHECKER

Automatic Car Battery Charger	V2
Battery Checker w/ HC981	36

C/10 AA (NICD/NIMH) Battery Charger	66/V2
UPS/Power Inverter (Quasi Sine Wave Power Inverter & UPS)	V5

CODE CIRCUITS

Morse Code Practice Oscillator	9/V1
Electronic Oscilloscope Caliper	64
Electronic Parrot w/HC851 w/ ter.	32/V4
Low Cost Morse Code Trainer	50

COMPUTER ACCESSORIES

PC Stereo Amp w/ HC872 6950	57
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MCU/MPU EDUCATIONAL MODULES

Digital Trainer kit	
Multipurpose TM-5 Module w/ HC991	69

SPEED CONTROLLERS

DC Motor Speed Controller w/ 12V 1A	42
Fan Speed Controller w/ HC981	27/V4

POWER CONTROLLERS

Power Controller w/ HC981 & 3" Heatsink	28
Power Saver w/ HC991 & 10-0-10 750mA	25/V2

RC CIRCUITS

Infrared Remote Controlled Switch Transmitter/Receiver w/ HC871, HC821 12x2 750mA	41/V3
Ultrasonic Remote Controlled Switch w/ HC981, HC001 & 6x2 (6950)	51

SIREN

Police Car Siren w/ HC001	18
Police Siren	39/V5
Super Siren w/ 1.5" Heatsink & HC991	19/V2

WIRELESS TRANSMITTERS/MICROPHONES

FM Transmitter w/ HC001	26/V3
FM Stereo Broadcast Transmitter	61
Low-Cost Wireless Audio Transmitter w/ HC002	54/V2
Wireless IR Headphone Transceiver w/ HC851 & 12V 250mA	44
Wireless Microphone III w/ HC871	32/V4
Wireless Mike No. 10 w/ HC001	V1
Wireless Mike No. 7 & 8 w/ HC001	V1

OTHERS

Compact Metal Detector w/ HC981	26/V1
Electronic Solid State Relay	55/V5
Electronic Thermostat w/ 6950 Transformer & HC812	55/V5
Fire Alarm w/ HC981 & 6V x2 250mA (6950)	48/V5
Heart Beat Monitor	68
Mosquito Pester	18/V2
Push-Button Digital/Analog Signal Selector w/ HC981	69
Rat Repeller	62
TENS Pain Reliever (Nerve Stimulator) w/ HC001	49/V5
Water Level Alarm w/ HC001	47

ALEXAN ELECTRONIC/COMPUTER BOOKS



Fundamentals of Digital Electronics by: Tirol

A practical easy-to-understand book on basic digital electronics. This book is intended as a reference for all levels in electronics technology courses and training programs, from entry-level introductory courses to

review classes. This book concentrates on the application of logic theories in existing digital ICs. The chapters are arranged in the standard order also used by many textbooks for introducing digital electronics, making this book a valuable reference textbook that can help bridge the gap between theory and practical design.



Learning Digital thru Experiments by: Tirol

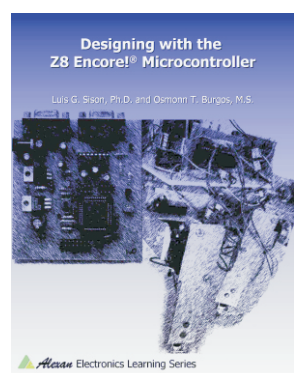
This accompanying experiments manual for the *Fundamentals of Digital Electronics* provides a hands-on guide to learning the topics presented in the textbook. The experiments uses Alexan's Digital Trainer but may also be

performed using discrete components and tools. The experiments are arranged in basically the same order as the textbook to allow corresponding hands-on learning.



Learning Microcontroller thru Experiments (A Step-by-Step Approach to Z8 Design) by: Tirol

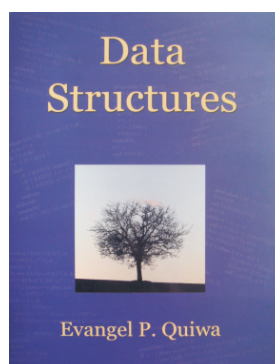
Designed as a quick start guide for using microcontrollers, this manual provides practical lessons through dozens of programming examples. The lessons begin with simple applications that illustrate basic operations of the MCU through simple routines and gradually move on to more complex applications. Every major section ends with practical exercises based on the subjects covered. Topics include making your own LED running lights, connecting switches, relays, seven-segment displays and stepper motors, using interrupts, internal timers, and lookup tables, A/D conversion, multiplexing an LED matrix, and many more.



Designing with the Z8 Encore Microcontroller by: Luis Sison and Osmorn Burgos

This book is for everyone who wants to design electronic products using a microcontroller. Numerous easy-to-follow exercises take you through the hardware and firmware design of a

microcontroller-based system, from using the ZDS IDE for compiling and downloading programs to the microcontroller, to interfacing external devices such as LCD displays. This book is written in tutorial style and is ideal for self-study but can also be used as a textbook for undergraduate or technical courses for students with minimal programming and electronics experience. The sample programs in the book were tested on the earlier Z8F640 development board as well as the Z8F642 development boards currently available.



Data Structures by: Evangel P. Quiwa

This books is intended for a first course on Data Structures and Algorithms, It provides a comprehensive coverage of all the fundamental data structures: stacks, queues and dequeues, binary trees, trees, and forests, graphs, linear and generalized lists, and tables. It analyzes their properties in the abstract as

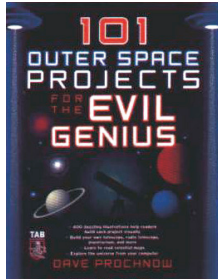
mathematical models, and discusses various ways of implementing them such that they become useful tools in solving problems on a computer.

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EVIL GENIUS

ALIX

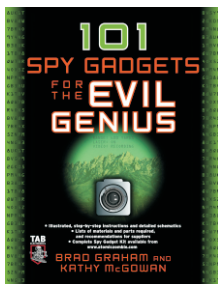
101 Outer Space Projects For The Evil Genius



ISBN: 0071485481
By: Dave Procnow

Steeped in a culture of Sci-Fi literature, NASA accomplishments, and Disney Word OmniSphere movies, 101 Outer Space Projects for the Evil Genius will feature 101 outstanding how-to projects featuring everything to do with space, from model rockets, celestial maps, space robots, GPS, to astronomy and stargazing. 101 Outer Space Projects for the Evil Genius is a delicate blend of first hand experiences, case studies, observations, tips, and resources for making the most out of this "final frontier" - all wrapped up within a "how-to" format.

101 Spy Gadgets for the Evil Genius

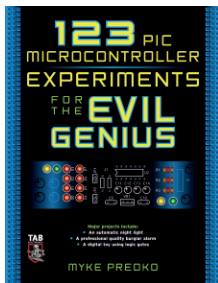


ISBN: 0071468943
By: Graham, Brad; McGowan, Kathy

101 projects that appeal to the spy in you! Utilizing inexpensive, easily obtainable components, you can build the same information gathering, covert sleuthing devices used by your favorite film secret agent. Projects range from simple to sophisticated and come complete with a list of required parts and tools, numerous illustrations, and step-by-step assembly instructions.

Projects include: scanners and radios, night vision devices, telephone devices, computer monitoring, audio eavesdropping, hidden cameras, video transmitters, and more....

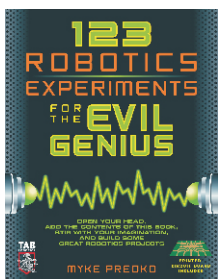
123 PIC Microcontroller Experiments for the Evil Genius



ISBN: 0071451420
By: Predko, Myke

Microchip continually updates its product line with more capable and lower cost products. They also provide excellent development tools. Few books take advantage of all the work done by Microchip. 123 PIC Microcontroller Experiments for the Evil Genius uses the best parts, and does not become dependent on one tool type or version, to accommodate the widest audience possible. Building on the success of 123 Robotics Experiments for the Evil Genius, as well as the unbelievable sales history of Programming and Customizing the PIC Microcontroller, this book will combine the format of the evil genius title with the following of the microcontroller audience for a sure-fire hit.

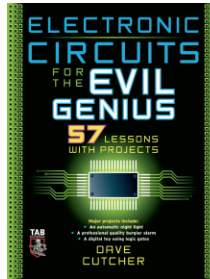
123 Robotics Experiments For The Evil Genius



ISBN: 0071413588
By: Predko, Myke

The purpose of "Evil Genius" is to create an entertaining book made up of a series of projects that will explain electronics from static electricity (rubbing a balloon) to developing robots. The book will include the tools necessary for the reader to create the projects in the book at very little cost or inconvenience. The book will be divided into 19 sections, each one with two or more projects. The introduction to each section will take up two pages, as well as the "For Consideration" at the end. The section introduction and "For Consideration" will explain the history, theory, and parts in the section. It will focus on using pre-built components where ever possible along with using common chips instead of building circuits out of discrete components.

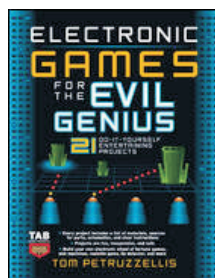
Electronic Circuits for the Evil Genius



ISBN: 0071448810
By: Cutcher, Dave

Cutcher's 57 lessons build on each other and add up to projects that are fun and practical. Reader gains valuable experience in circuit construction and design and in learning to test, modify, and observe results. Bonus website provides: animations; answers to worksheet problems; links to other resources; WAV files to be used as frequency generators; freeware to apply your PC as an oscilloscope.

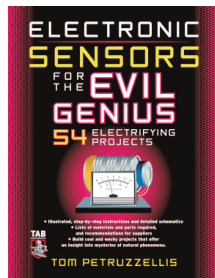
Electronic Games for the Evil Genius



ISBN: 0071475567 / 9780071475563
By: Thomas Petruzzellis

Another fun addition to our growing "Evil Genius" series, this group of fun and just slightly wicked projects features electronic games such as roulette and slot machines, racquetball, alien attack, lie detector, mood meter, quiz master and memory games. As with all the other books in this series, each project is heavily illustrated, and contains step-by-step instructions for building the game being discussed. Readers can then use the different aspects of each of the games to "invent" their own game, or customize the ones provided in the book to their liking. A list of suppliers is provided so the projects are kept to a reasonable cost.

Electronic Sensors for the Evil Genius



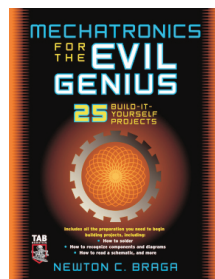
ISBN: 0071470360
By: Petruzzellis, Tom

54 super-entertaining projects offer insights into the sights, sounds, and smells of nature!

Nature meets the Evil Genius via 54 fun, safe, and inexpensive projects that allow you to explore the fascinating and often mysterious world of natural phenomena using your own home-built sensors. Each project includes a list of materials, sources for parts, schematics, and lots of clear, well-illustrated instructions.

Projects include: rain detector, air pressure sensor, cloud chamber, lightning detector, electronic gas sniffer, seismograph, radiation detector, and more!

Mechatronics for the Evil Genius



ISBN: 0071457593
By: Braga, Newton C.

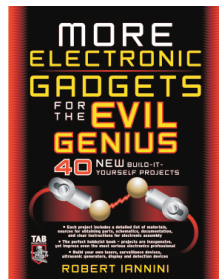
If you're fascinated by electronics and mechanics, this hands-on tour of the junction where they meet will bring you hours of fun and learning. Noted electronics author Newton Braga's Mechatronics for the Evil Genius guides you step by step through 25 complete, intriguing, yet inexpensive projects developed especially for this book.

You will build your own mechanical race car, combat robot, ionic motor, mechatronic head, light beam remote control, and 20 other entertaining learning projects that take you to the heart of mechatronics. More than just hours of entertainment, these stimulating projects provide a solid grounding in mechatronics, the discipline at the core of robotics where electronics, mechanics, and other sciences merge.

EVIL GENIUS

BIONICS

More Electronics Gadget For The Evil Genius



ISBN: 0071459057
By: Iannini Bob

This much anticipated follow-up to the wildly popular cult classic *Electronic Gadgets for the Evil Genius* gives basement experimenters 40 all-new projects to tinker with. Following the tried-and-true Evil Genius Series format, each project includes a detailed list of materials, sources for parts, schematics, documentation, and lots of clear, well-illustrated instructions for easy assembly. The convenient two-column format makes following step-by-step instructions a breeze. Readers will also get a quick briefing on mathematical theory and a simple explanation of operation along with enjoyable descriptions of key electronics topics such as various methods of acceleration, power conditioning, energy storage, magnetism, and kinetics.

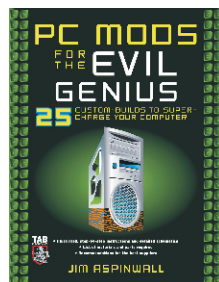
50 Awesome Auto Projects for the Evil Genius



ISBN: 0071477578
By: Harper, Gavin

The perfect marriage of automotive and Evil Genius project books, this title will be appealing to ALL car hobbyists as the projects are not-specific. 50 fun and inexpensive projects run the gamut from installing your own "theater-style" dimmers, electric doors and windows, and DVD player to installing your own Car PC with GPS capabilities, power-supply system, communications, and security features.

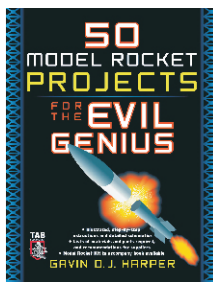
PC Mods For The Evil Genius



ISBN: 0071473602
By: Aspinwall Jim

Here is an illustrated step-by-step guide to 25 of the most innovative and fun tweaks, mods, and custom builds you can do to convert your simple home computer into a PC dream machine. Following the popular Evil Genius format, each project includes a detailed list of materials, tools, schematics, and plenty of clear, well-illustrated assembly instructions. If you yearn for the coolest, most crazed 'puter around, *PC Mods for the Evil Genius* is the key to the kingdom! This book shows you how to supercharge your PC and create a jaw-dropping system that cannot be purchased off any shelf, anywhere! You get complete, easy-to-follow plans, clear diagrams and schematics, and lists of parts and tools, so you know what's needed before you begin.

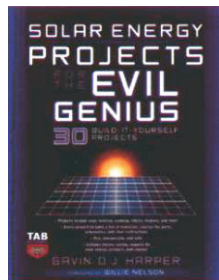
50 Model Rocket Projects For The Evil Genius



ISBN: 0071469842
By: Harper Gavin

Model rocketry is a fascinating and growing hobby, and the perfect vehicle for explaining high-level science concepts in a fun way. Projects start out quite basic, and gradually become more sophisticated as new concepts are introduced. In the end, readers are encouraged to "lift off" and develop their own creative and exciting concepts. The book is ideal for science fairs, as well as other academic venues, where all the other titles in the "Evil Genius" series are turning out to be incredibly popular.

Solar Energy Projects For The Evil Genius

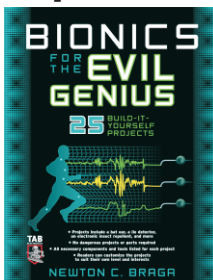


ISBN: 0071477721
By: Harper, Gavin D.J.

Solar energy is a "clean", inexhaustible supply of energy that is being explored more and more given the current state of dependency on foreign oil, and our global concern for the environment. Over the past 20 years, advances in materials and energy conservation have improved the efficiency and practicality of using solar energy. And while solar energy may be a little more expensive than traditional fuels, the non-reliance and traditional fuels and services along with the "environmentally friendly" position provide sufficient incentive for many people to make an investment. The solar energy industry is currently a billion dollar industry!!! This book is particularly timely as we are living in a

world where global energy supplies are dwindling and we are forced to rely on others to meet our energy needs. Sales of even rather old solar or alternative energy books seem to have picked up recently, as a result.

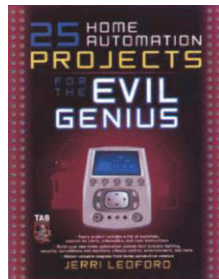
Bionics for the Evil Genius: 25 Build-It-Yourself Projects



ISBN: 0071459251
By: Braga, Newton C.

Step into the future -- (or the past, if you have a touch of Dr. Frankenstein in your soul) -- with these 25 incredibly cool bionic experiments! Demonstrating how life forms can be enhanced, combined, manipulated, and measured with electronic and mechanical components, these inexpensive projects from internationally renowned electronics guru Newton Braga provide hours of fun and learning. Totally safe, *Bionics for the Evil Genius* guides you step by step through 25 complete, intriguing, yet low-cost projects developed especially for this book -- including an electric fish, a bat ear, a lie detector, an electronic nerve simulator, a panic generator, and 20 other exciting bio-electric/mechanical projects!

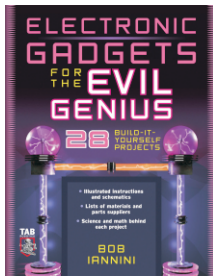
25 Home Automation Projects for the Evil Genius



ISBN: 0071477578
By: Ledford Jerri

Your home may be your castle-but can it cook your dinner? Well, with the help of *25 Home Automation Projects for the Evil Genius*, you can teach it to do just that, along with dozens of other affordable, enjoyable things that will transform your humble abode into a wickedly automated living environment. But fear not-you don't need an engineering degree to complete the projects in this book. That's because technology maven Jerri L. Ledford skillfully provides you with a firm understanding of the basic wiring, networking, and equipment demands for home automation. She then leads you step by step through each application, offering clearly worded and heavily diagrammed guidance that will truly satisfy your inner Evil Genius.

Electronic Gadgets for the Evil Genius



ISBN: 0071426094
By: Bob Iannini

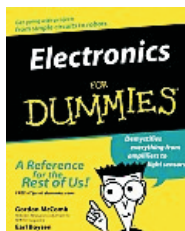
The do-it-yourself hobbyist market, particularly in the area of electronics, is hotter than ever. This book gives the "evil genius" loads of projects to delve into, from an ultrasonic microphone, to a body heat detector, and all the way to a Star Wars Light Saber. This book makes creating these devices fun, inexpensive, and easy. Electronics fans have waited a long time for this book. Not since 1983 has author Bob Iannini published a collection of his amazing projects -- all of them fun, easy, and inexpensive to make at home and, best of all, seriously exciting and impressive!

Books Books Books Books Books



Electronics Demystified

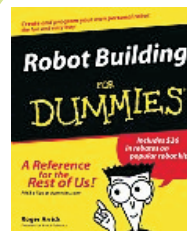
Best-selling Demystified author and electronics expert Stan Gibilisco has penned the perfect introductory book for consumers, hobbyists, and students alike. Coverage includes essential topics such as current and power supplies, wireless, digital principles, measurement and monitoring, transducers and sensors, location and navigation, and more.



Electronics for Dummies

Begin having fun with electronics projects right away. Explore the basic concepts of electronics, build your electronics workbench, and create cool projects. Wish you could fix that faulty doorbell, hook up a motion detector, or maybe build your very own robot? This book will really get you charged up! It won't make you an electrician, but it covers the basics, choosing and using tools, and how to

build more than a dozen really cool, inexpensive gizmos. You'll be shocked at how easy it is! Discover how to Master electricity basics. Fill up your electronics parts bin. Read circuit schematics. Test circuits with multimeters. Design your own printed circuit boards. Build robots and program their actions.



Robot Building for Dummies

Discover what robots can do and how they work. Find out how to build your own robot and program it to perform tasks. Ready to enter the robot world?

This book is your passport! It walks you through building your very own little metal assistant from a kit, dressing it up, giving it a brain, programming it to do things, even making it talk. Along the way, you'll gather some tidbits about robot history, enthusiasts groups, and more. The Dummies Way. Explanations in plain English. "Get in, get out" information. Icons and other navigational aids. Tear-out cheat sheet. Top ten lists. A dash of humor and fun.



Robot Invasion - 7 Cool and Easy Projects!

Fun and easy robot projects!

Discover how simple it is to build a working robot from scratch—using toys you have lying around the house plus a little imagination. This easy-to-follow resource contains detailed materials lists and step-by-step explanations that show you how to complete a variety of exciting, creative, and inexpensive projects. Packed with helpful illustrations to walk you through every step of the building process and hundreds of photos showing these projects in action, this book is entertaining for the entire family.

Create a 4-wheeled robot with a collision arm that changes direction. Create a set of robots that race through a track or

obstacle course. Build a combat arena and watch your robots bash each other with hammers. Simulate a mini-Mars Pathfinder mission and blast a real model rocket hundreds of feet into the air. Assemble your own remote-controlled video bot using an old R/C car and a digital camera. Create an army of "virtual" combat robots with a free computer program. Use a robotic arm to sort objects into multicolored piles.



Robotics Demystified

YOU DON'T NEED ARTIFICIAL INTELLIGENCE TO LEARN ROBOTICS! Now anyone with an interest in robotics can gain a deeper understanding -- without formal training, unlimited time, or a genius IQ. In Robotics Demystified, expert robot builder and author Edwin Wise provides an effective and totally painless way to learn about the technologies used to build robots!

With Robotics Demystified, you master the subject one simple step at a time -- at your own speed. This unique self-teaching guide offers problems at the end of each chapter to reinforce what you have learned.

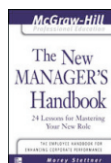
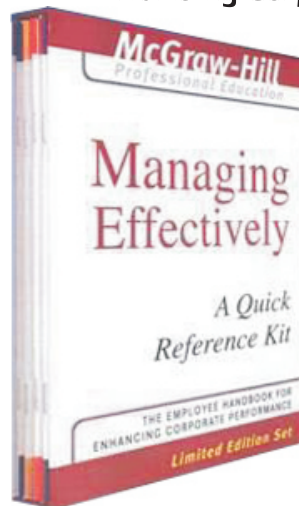
This fast and entertaining self-teaching course makes it fun and

easy to learn about robots. Get ready to:

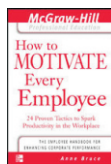
* Learn essential electronics, mechanics, and programming concepts, one step at a time. * Evaluate your progress with self-test questions. * Discover the ins and outs of mobile, industrial, and research bots. * Find out how to make your robot sense and think. * So if you're looking for an enjoyable route into robotics, let Robotics Demystified be your shortcut!

Managing Effectively

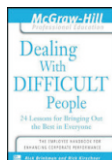
A Quick Reference kit The Employee Handbook for Enhancing Corporate Performance



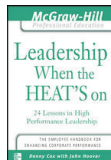
• **The New Manager's Handbook: 24 Lessons for Mastering Your New Role by Stettner**



• **How To Motivate Every Employee: 24 Proven Tactics to Spark Productivity in the Workplace by Bruce**



• **Dealing with Difficult People: 24 Lessons for Bringing Out the Best in Everyone by: Dr. Brinkman/Dr. Kirschner**



• **Leadership When the Heat's On: 24 Lessons in High Performance Management by: Danny Cox/John Hoover**

Brian Tracy's

GREAT LITTLE BOOK SERIES

Be inspired to change your life for the better!

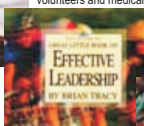
ISBN: 0071238565

Managing time is an age-old concern that affects those who have too much to do and not enough time -- EVERYONE! Couldn't you use more hours in the day to accomplish your goals? Great Little Book on Mastering Your Time gives practical, inspiring guidance on how you can become an expert at time management.



ISBN: 0071238549

Anyone who works with people, from entrepreneurs and fast-paced executives to community volunteers and medical professionals, will find the advice helpful, sound and exhilarating.



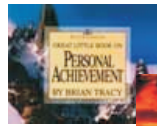
ISBN: 0071238581

Helps you shed those insecurities that prevent achievement, success and happiness. Brian Tracy's words inspire you to believe in your self and take control of your life.



ISBN: 0071238530

Women in positions of leadership, from home business owners to corporate executives, will find the words offered, moving and inspirational.



ISBN: 0071238557

Helps you build wealth into the 21st century, attain a fulfilling personal life and meet high career goals.



ISBN: 007123859X

Discover the "laws" that govern success, money, happiness, love, business, motivation, ability and all other aspects of self-fulfillment.



ISBN: 0071238573

You will be delighted by Brian's common sense and realistic, fresh approach to selling.



ISBN: 0071238522

The most recognizable and thought-provoking quotes of Brian Tracy taken from the Great Little Book series are now captured in this powerful, one-volume treasury.

Alexan Educational Robot Kit

BIOLOID

Bioloid is an educational robot construction kit for building robots using special modular DC servo blocks, especially designed for robotic applications.

AX-S1: Sensor Module for Robotics

The Bioloid kit includes a sensor module with various functions (distance sensing, sound detection, etc.), and unlike conventional remote-controlled toys, autonomous programmable robots with intelligence can be built with the Bioloid robot construction kit.

■ Dynamixel: DC Servo Module for Robotics

Unlike conventional R/C servos that use PWM, the Dynamixel DC servo modules used for the Bioloid kit are special bilateral servos operating on a network with a wide range of feedback functions such as 300 degrees motion and an option for continuous rotation for use as wheel actuators.

■ CM-5: Controller for driving the Dynamixel

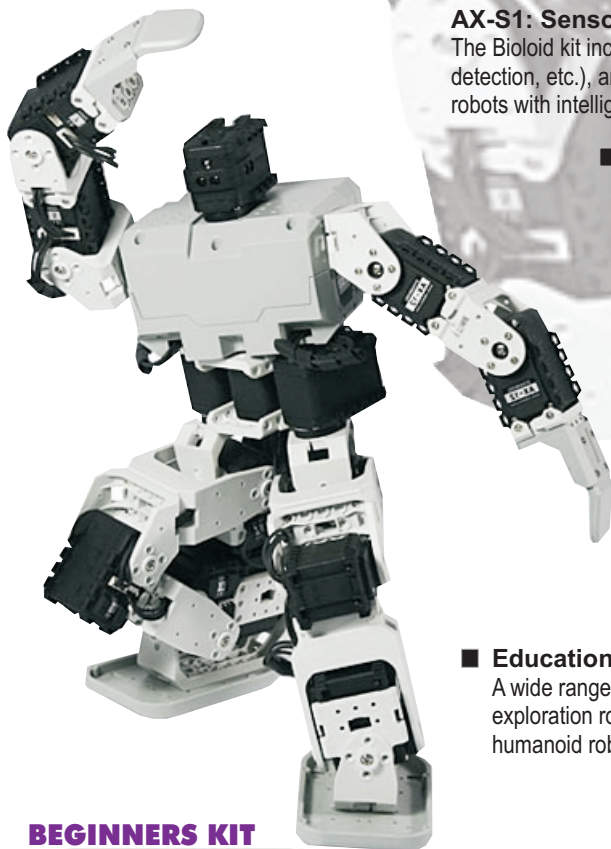
CM-5 is the dedicated central controller module for the Bioloid. Robots are built by connecting Dynamixel modules to the CM-5 module.

■ Versatile Construction using Universal Connection Mechanism

The simple assembly mechanism makes it easy enough for children, and the strong plastic construction makes it safe. Assembly only requires a Philips head screwdriver, and the parts are tough enough to handle numerous assembly and disassembly,

■ Educational Activities

A wide range of intelligent machines can be built using a single Bioloid kit such as; autonomous exploration robots, quadruped puppy robots, hexapod spider robots, dinosaur robots, and bipedal humanoid robots, etc. Students can learn the principles of robotics through these exciting activities.



BEGINNERS KIT



- Learn the basic ideas about robots
- Uses behavior control program
- Offers 14 robot examples
- Build robots with up to 4 degrees of freedom

Parts List :

- 1pc. CM-5 (Main controller) :
- 4pcs. AX-12+ (Robot DC Servo Module) Dynamixel
- 1pc. AX-S1 (Robot Sensor Module) :
- 1pc. SMPS for external power (12V, 5A)
- 1pc. Rechargeable Batteries (9.6V, Ni-MH AA type x8)
- etc.: CD with Software Manual (Quickstart)



COMPREHENSIVE KIT



- Learn the basic idea about robots
- Walking function using motion editor
- 26 robot examples
- Includes beginner's kit contents
- Build robots with up to 18 degrees of freedom

Parts List:

- 1pc. CM-5 (Main Controller)
- 18pcs. AX-12+ (Robot DC Servo Module) Dynamixel
- 1pc. AX-S1 (Robot Sensor Module)
- 1pc. SMPS for external power (12V, 5A)
- 1pc. Rechargeable Batteries (9.6V, Ni-MH AA type x8)
- etc.: CD with Software and Manual (Quick start)

EXPERT KIT



- Acquire special knowledge about robots
- Study method that drives robot using Windows-based behavior control program and C-language
- Control robots using radio communication
- C Programming development environment
- Includes high-technical examples such as contents of comprehensive kit, wireless communication, image realization, and more!

Parts List:

- 21pcs. AX-12+ (Robot DC servo Module) Dynamixel
- 2pcs. CM-5 : (Main Controller) (including battery)
- 1set Wireless communication module ZIG-100
- 3pcs. AX-S1 (Robot Sensor Module)
- set Wireless camera
- 1pc. SMPS external power
- 2sets Frame
- etc.: Cable set for spare, Manual, C language level example and Aluminum case

Express your creativity with the Bioloid robot construction kit!

Alexan Educational Robot Kit

I - ROBO

educational robot kits are designed especially for young students to become more familiar with and to easily learn about robots. I-Robo comes with different levels of robot assembly and programming that can cater to kids, students and enthusiasts. The robots are assembled by the users with the plastic blocks, frames, DC motors, and servo motors that are all packed in a compact-type Do-It-Yourself kit that also includes the instruction manual. I-Robo kits for higher levels can be programmed via a PC to enable the robot to do movements.



Robo ES1 is the basic robot kit for education in order to make children familiar with science, physics, and electricity. This is the basic robot education process for a general understanding of robots. This program involves more than 20 model construction units and sessions, including theory, simple tools, construction of machinery, and the construction of an automatic remote-controlled robot.

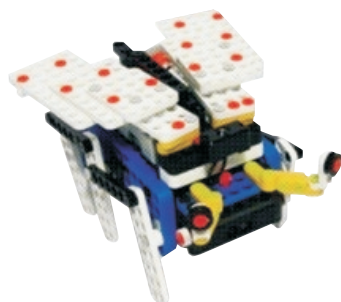


An intermediate-level robot education program, I-Robo ES2 uses an AVR family ATMEGA 8535 keyboard. It involves more than 20 model construction units using a diverse range of theoretical studies, servo-motor and various sensors and output devices. An icon-driven robot control program is also utilized for learning about actual robot movement control.

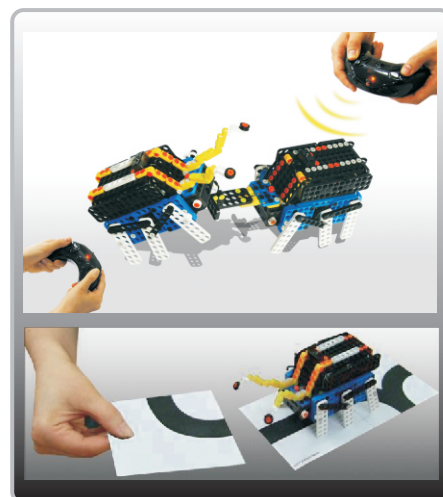


I-Robo ES3 is an advanced robot training course. Various professional information about robots are provided and by using two sub-motors, cater-fielder, and various sensor parts, students can manufacture a total of 9 models enabling complex movements.

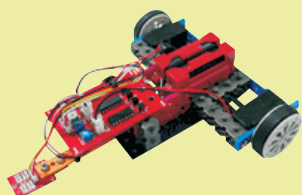
OLLO BUG



A remote-controlled robot, that has the ability to trace a black line, to stop when obstacles are detected, and to move by sound (clapping of hands).



Alexan Educational Robot Kit



**TARMI V
ROBOTIC LINE-TRACER**

Tarmi V is an easy robotic line-tracer with logic circuit for beginners. No programming is needed. Motor speed and sensor sensitivity are controllable and robot's design is also changeable.



**LINE TRACKING ROBOT
LIGHTING SENSOR**

Line Tracking Robot will follow a black line drawn on white paper by using the 2 photo interrupts. Create different routes with black electronic tape or black marker for your Line Tracking Robot and see what he can do.



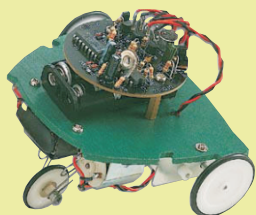
**FOLLOW ME
SOUND DETECTING**

Clap, and the robot will respond and move in the direction of the sound.



**LINE TRACKING MOUSE
SOLDERING KIT**

This kit features two independent gearboxes, two PCB's, a plywood base, and a clear, mouse-shaped body. Kit includes three infrared sensors along the bottom of the robot and a microphone that allows users to start the robot by clapping or tapping its body.



**TURNING FROG
SOLDERING KIT**

Familiarize yourself with the operation of transmissions steered through gears or pulleys. This robot kit is easy to build. The robot is sensor-activated and detects sound. It will move forward and repeat the following steps sequentially: Start (move forward), Stop, Left turn, Stop, Right turn, Stop.



**ROBOT BEETLE
I/R RC MECHANICAL KIT**

This kit provides four different channels to enable four beetles to play together. It has six wheels that enables it to move forward, backward, left and right smoothly, and two motors that operate to open and close and lift and lower its claws. Surely, this is an ideal DIY kit to learn about gear structure, motor principles and electronic circuits.



**ROBOT ARM
WIRED CONTROL KIT**

Learning basic robotic technology and build your own wired-controlled robot arm with five motors and five joints. With its five-switch wired controller, the robot features base rotation, base, elbow and wrist motion, and a functional gripper. The five motors operate the grab, release, lift and lower.



LINE TRACKER CAR KIT

Here's one robot kit hobbyists will surely enjoy-the Mountain Climber Line Tracker Car. Designed for kit builders, it comes with printed circuit boards, programmed IC, loudspeaker, electronic and hardware components and including gear motors. The high torque gear motor allows the tracker to climb up to a 35-degree slope.



ESCAPE

The Escape Robot uses three IR emitting diodes and 1 IR receiving module to send and receive signals. Its built-in microprocessor enables it to "think" from its own-it gathers and processes information from its environment so it can avoid any obstacles. The Escape Robot moves about on 6 legs.



SCARAB

This is a robot that uses two touch sensors to detect obstacles. When its antennas (touch sensor) detect an obstacle, Scarab will first step back and then will automatically execute a two-step maneuver to avoid the obstacle. The maneuver is a combination of "left turn", "right turn", "reverse" or "stop".



LADYBUG

The Ladybug Robot walks on six legs and uses infrared emitting diodes for "eyes" in order to avoid obstacles. Ladybug walks straight ahead but automatically makes a left turn the moment an obstacle is detected. The kit comes complete with 2 sets of differently-designed legs, which move in their own distinct way.



SPACE NINE

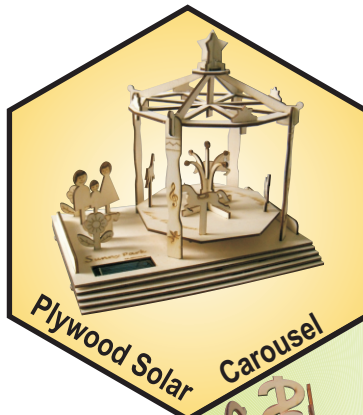
Space Nine, an eight-legged star explorer, uses remote control to move and turn. The Space Nine can walk on the rough surface, turn left, right and even cross rocks. When it moves, its first and third legs on one side of its body move with the second and fourth legs on the other side. Create a moon surface for Space Nine to explore and enjoy the fun!

Alexan SOLAR KITS

A great product to foster children's creativity and their love for science;

An educational tour in teaching science even to kindergartners.

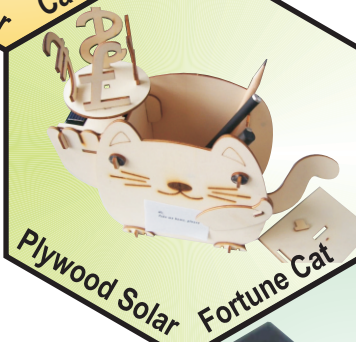
MINIMAL LIGHT SOURCE REQUIRED!



Plywood Solar Carousel

Plywood Solar Fortune Cat - EK-SDIY04-M

- Monocrystalline silicon solar panel
- Plywood DIY design
- No extra tools are needed
- Rotates 10 times per min
- Piggy bank
- Size: 24x9x21cm.



Plywood Solar Fortune Cat



Plywood Solar Windmill House

DIY Plywood Solar Windmill House - EK-SDY104

- No extra tools are needed
- Rotate 10 times per min.
- Size: 21 x 16 x 14cm.

Micro Solar Plane - EK-SC02A-P

- DIY accessory parts
- Monocrystalline silicon solar panel



Solar Plane



Solar Stallion



Solar Robot

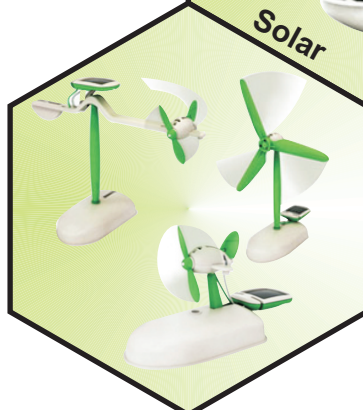
"3 in 1" Solar Robot

The 3-in-1 Solar Robot is an amazing teaching tool for young learners to acquaints themselves with the wonders of science, particularly the utilization of solar energy.

Your kit can be easily transformed into a tank, a robot or a scorpion, ensuring a great learning experience while having fun!



Solar Robot



Solar Windmill

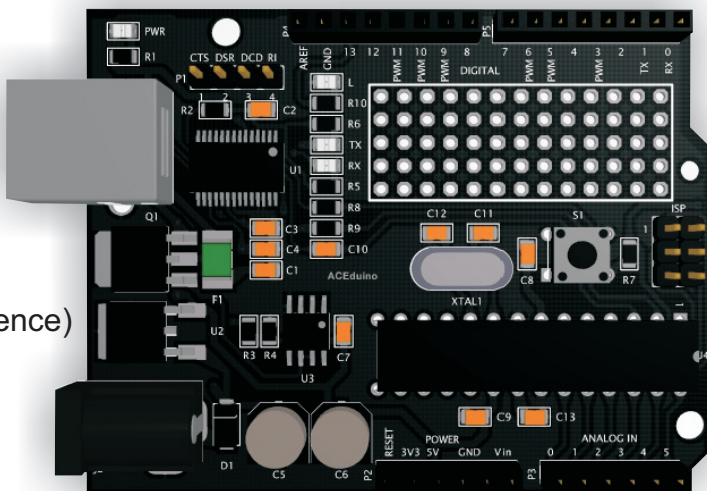
Aceduino

■ **ACEduino 328**
■ **MEGA 2560**

ACEduino 328

Learning microcontrollers has never been this fast and easy. The ACEduino 328 will help you get started even if you have little to no knowledge of using microcontrollers at all. Features include:

- 14 Digital Input/Output pins (6 of which are PWM outputs)
- 6 Analog Input pins (with pin for analog reference)
- Different communication lines available - UART (Rx, Tx), I2C (SDA, SCL) and ISP (MISO, MOSI, SCL)
- On-board solderable prototyping nodes
- 32KB Flash Memory and automatic power selector between USB and DC power

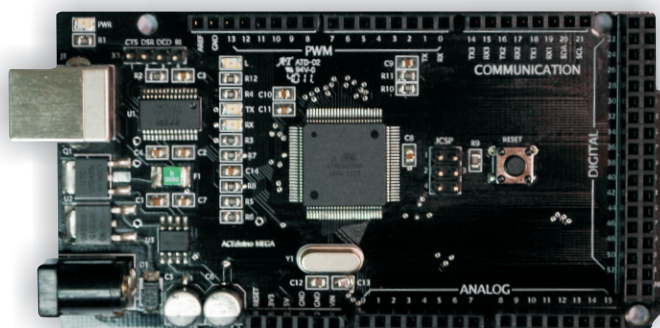


All these features will help you explore and enjoy the vast world of microcontrollers.

ACEduino MEGA 2560

ACEduino MEGA 2560 is the "big brother" of our ACEduino 328. It has similar functionalities with the ACEduino 328, but is designed to be more powerful as it now has 256KB of flash memory-- that is EIGHT TIMES the memory size of the ACEduino 328. Other features include:

- 54 Digital Input/Output pins (14 of which are PWM outputs)
- 16 Analog Input pins (with pin for analog reference)
- 3 additional UART lines (Rx1, Tx1 up to Rx3, Tx3) and is still featuring the same automatic power selector between USB and DC power.



The sky is the limit for this board, and it can pretty much take you as far as your imagination will go.

Alexan TOOLS . . .

MT-3N1 MULTIPURPOSE TOOL

25Watt/220V



• **WOOD BURNING PEN**
For woodburning and leather crafting.

• **SOLDERING IRON**
For small soldering jobs.

• **HOT CUT KNIFE**
For cutting stencils, styrofoam, plastics and ropes.

KA-40 SOLDERING IRON

40Watt/220V



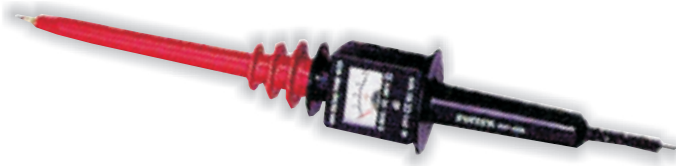
Operating Instruction

1. Plug in the soldering iron and leave on a stand for a few minutes to warm up.
2. Use small scraper, sandpaper, or brush to clean and remove oxidation, dust or oil from the working part to be soldered.
3. Clean the soldering tip with a damp sponge, and wrap solder wire around the tip while it is heated. This process is called pre-tinning, ensuring better soldering results and longer life of the tip. This should be done before and after each soldering job.
4. Heat the working parts with the soldering iron.
5. Apply resin core solder wire to the heated working parts, (not the tip).
6. Use only enough solder, and never too much.

COME AND MEET THE BEST COMPANION FOR YOUR CONVENIENCE!

Alexan High Voltage Probe

HVP-40M ANALOG METER



SPECIFICATIONS (20 ± 5°C, RH < 80%)

Input impedance:	600MΩ
Maximum operation voltage:	40KV DC , CAT II , Pollution 2
Polarity:	Positive only
Display:	Analog indicate
Accuracy:	Factory calibrator 25KV ± 2% FULL scale 40KV ± 3 %
Temperature Coefficient:	≤ 200ppm / °C
Maximum loading Current:	≤ 70 μ A
Maximum loading power:	≤ 3 watt
Voltage Range:	40KV / 1 Range
Voltage resolution:	1KV
Power source:	Need not power
Operating temperature:	0 °C ~ + 50 °C
Storage temperature:	-20 °C ~ + 70 °C
Ground lead length:	90cm (35 ")
Dimensions:	420 L x 80 φ
Weight:	360g

! WARNING !

Before taking any measurements, first connect the alligator clip of this probe to earth ground and make sure connection is electrically good.

DIGITAL HIGH VOLTAGE PROBE



SPECIFICATIONS (20 ± 5°C, RH < 80%)

Input impedance:	2000MΩ
Maximum operation voltage:	40KV DC , CAT II , Pollution 2
Polarity:	Positive/Negative
Display:	3999 digital, LCD
Accuracy:	Full Range ≤ 1.0% ± 2 digital
Temperature Coefficient:	≤ 100ppm / °C
Maximum loading Current:	≤ 20 μ A
Maximum loading power:	≤ 0.8 watt
Voltage Range:	40KV / 4KV / 400V / 3 Range
Voltage resolution:	10V / 1V / 0.1V
Power source:	9V / 006P, IEC6L R1, NEDA 1604A
Low battery Indicate:	≤ 7.3V Auto Indicate
Battery Life:	About 200hr (Alkaline)
Auto power off:	About 30 min
Peak Hold:	≥ 400 ms
Sampling:	4 Sampling / sec
Operating temperature:	0 °C ~ + 50 °C
Storage temperature:	-20 °C ~ + 70 °C
Ground lead length:	90cm (35 ")
Dimensions:	420 L x 80 φ
Weight:	360g

Alexan EchoMAX

KARAOKE MIC ADAPTER

Turn your DVD player into a karaoke machine and sound like a pro with the new **EchoMAX DVD Player Karaoke Mic Adapter** .



Just plug and play into your DVD player or any devices with phono audio outputs and sing your hearts out !

If you love to sing and perform this compact and affordable gadget is a **MUST HAVE** !

working with ePLUS !!!



ePlus^{DT} is not an ordinary touch-screen. It's a fully digitized tablet panel that enables users to directly make hand writing on screen, interact with PC on screen and enjoy every kind of computing style like using a Tablet PC, but on a screen much bigger. Unlike a regular touch-screen, ePlus^{DT} won't allow data damage or system crash caused by user's accidentally touching the screen with fingers.

With ePlus

- "You can make the projective area into a huge touchscreen, and even record everything you draw and say synchronously."
- "You can simply save your multimedia recording to disk or into the Knowledge Center on the web server."
- "You can synchronously record the multimedia contents of onsite training for using in the scenario of e-learning."
- "It's extremely easy to update ePlus multimedia message."



ePlus^{WT} a humanized communication platform more than just a system!.

If not only nicely integrates the multimedia recording which includes Voice, Images, Text and dynamic Markup. ePLUS would highly compress the message for your easy transmission and sharing on the Internet and Intranet. What's more, in less than 10 minutes, ordinary people would be able to make their own multimedia presentation by ePLUS.

SILICON POWER *Memory is Personal*

A50 Armor 2.5" Portable Hard Drive



500GB

Specifications

- Capacity: 500GB
- Dimensions: 133.5 x 78.0 x 16.3mm
- Weight: 200g
- Standard Compliance: USB 2.0/1.1
- Data Transfer Rates: Max. 480 Mbps (USB 2.0 Mode)
Max. 12 Mbps (USB 1.1 Mode)
DC5V (Power supplied through USB)
- Power: DC5V
- Operating temperature: 5°C ~ 55°C
- Storage temperature: -40°C ~ 70°C
- Supported Operating: Windows Vista, Win XP, Windows 2000, Mac OS 9.0.4 or later

Features

- Plug and play compatible, easy to use
- High storage capacity and fast transfer rate (max. 480Mbps/sec)
- In compliance with US military MIL-STD-810F transit drop test
- LED status light to indicate transfer modes
- Has a One Touch backup button
- Comes with management software/password protection/60-day trial version of Norton Antivirus

A70 The Marine 2.5" Portable Hard Drive



500GB

Specifications

- Dimensions: 139.45 x 85.7 x 18.1mm
- Weight: 250g
- Standard Compliance: USB 2.0/1.1
- Data Transfer Rates: Max. 480 Mbps (USB 2.0 Mode)
Max. 12 Mbps (USB 1.1 Mode)
DC5V (Power supplied through USB)
- Power Supply: DC5V (Power supplied through USB)
- Support OS: Windows 7, Windows Vista, WinXP, Win 2000, Mac 10.3. x above, Linux 2.6 x above
- Operating temperature: 5°C ~ 55°C
- Storage temperature: -40°C ~ 70°C
- Capacity: 500GB

Features

- Meets the water resistant standard "IEC 529 IPX7"
- Meets the U.S. military drop-test standards MIL-STD-810F 516.5 procedure IV (transit drop test) with advanced two-stage anti-shock technology
- Anti-pressure and anti-dust function
- Cable carry design
- High capacity with high transferring rate of 480Mbit/sec.
- LED indicates power on and data access
- SP Widget free download software features seven main functions to maximize your SP Portable Hard Drive

A80 2.5" Portable Hard Drive



500GB, 750GB

Specifications

- Dimensions: 139.45 x 94 x 18.1mm
- Weight: 270g
- Interface: USB 3.0/2.0
- Data Transfer Rates: Max. 5Gbps (USB 3.0 Mode)
Max. 460Mbps (USB 2.0 Mode)
- Support OS: Windows 7, Windows Vista, WinXP, Win 2000, Mac 10.3. x above, Linux 2.6 x above
- Power Supply: DC5V (Power supplied through USB)
- Operating temperature: 5°C ~ 55°C
- Storage temperature: -40°C ~ 70°C
- Capacity: 500GB, 750GB

Features

- USB 3.0 Super Speed (High transferring rate up to 5Gbps/sec)
- Meet the water resistant standard "IEC 529 IPX7"
- Meet the U.S. military drop-test standards MIL-STD-810F 516.5 procedure IV (transit drop test) with advanced two-stage anti-shock technology
- Anti-pressure and anti-dust function
- Cable carry design
- LED indicates power on and data access
- SP Widget free download software features seven main functions to maximize your SP Portable Hard Drive
- Package Contents: Armor A80, USB Cable, Quick Start Guide & Utility Disc.

S10 Stream 2.5" Portable Hard Drive



500GB, 750GB

Specifications

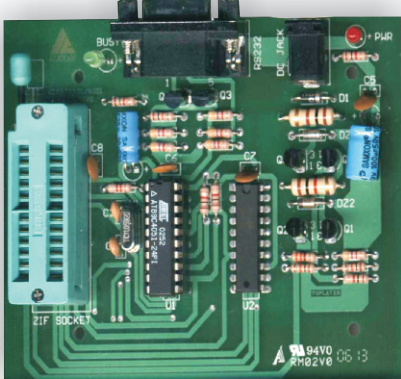
- Dimensions: 134.2 x 78.8 x 17.7mm
- Weight: 145g
- Interface: USB 3.0 (Backwards compatible with USB2.0)
- Support OS: Windows 7, Windows Vista, WinXP, Win 2000, Mac 10.3. x above, Linux 2.6 31 above
- Power Supply: DC5V (Power supplied through USB)
- Operating temperature: 5°C ~ 55°C
- Storage temperature: -40°C ~ 70°C
- Capacity: 500GB, 750GB

Features

- USB 3.0 Super Speed (High transferring rate up to 5Gbps/sec)
- Simple curvaceous design
- Artistry paint treatment, fingerprint free
- Slim, light and easy to carry
- LED indicates power on and data access
- SP Widget free download software features seven main functions to maximize your SP Portable Hard Drive
- Bundles with Carry bag

ALEXAN **8051** Microcontroller

AT89C2051/AT89C4051 Programmer

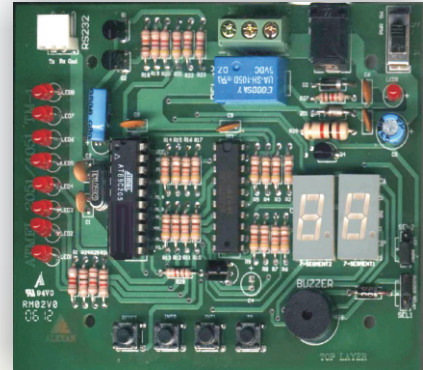


This module programs the **ATMEL AT89C2051** and **AT89C4051** microcontroller.

It has a comprehensive set of features that allows you to view, program, erase and secure the data of an **ATMEL 8051** microcontroller. Equipped with a computer interface, the software allows you to:

1. Load or open hex files containing the code you want to program to the device.
2. Read the hex code from the device and store it in the program buffer for editing or saving.
3. View and edit the hex codes in the program buffer.
4. Save any changes made in the program buffer to a hex file, for use with other devices.
5. Check the device ID.
6. Erase all the data in the device.
7. Blank check the device.
8. Program the hex codes found in the program buffer to the device
9. Verify the programmed hex code in the device
10. Protect the device from accidentally reprogramming by locking the device so that the code cannot be read from it.

AT89C2051/AT89C4051 Training Module 1



The **2051 TM-1** is a helping tool in which you can explore the many features of a microcontroller. This module uses **ATMEL AT89C2051** and **AT89C4051** microcontroller (MCU). This training module has the following applications:

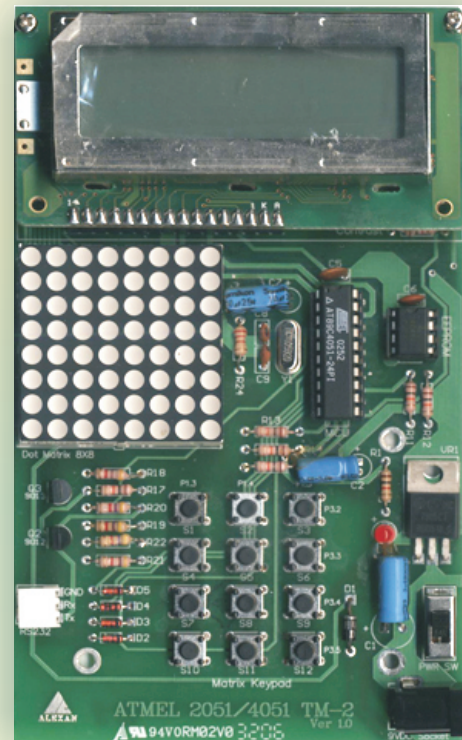
- | | |
|------------------------|-------------------------------|
| 1. 3-External Switches | 4. LEDs |
| 2. 7-Segment Display | 5. Relay |
| 3. Buzzer | 6. RS232 Serial Communication |

AT89C2051/AT89C4051 Training Module 2

Alexan 8051 Training Module-2 (or TM-2) is intended for intermediate to advanced users.

The training module has the following applications:

- Alphanumeric LCD (16x2)
- Dot Matrix (8x8)
- Matrix Keypad (3x4)
- Serial EEPROM
- RS232 Serial Communication



NOTE: ADAPTER & USB to RS232 cord are not included

PIC *Me* Microcontroller Starter Kit



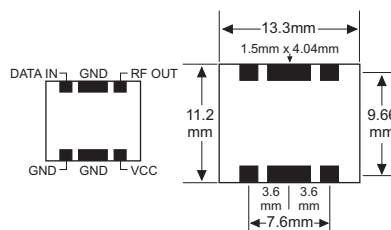
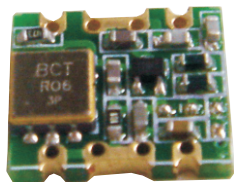
The PICMe™ Microcontroller Starter Kit is designed to give electronic enthusiasts an initial application material in their prototyping and laboratory needs. The board supports the PIC16F877A in the 40-pin DIP package. These controllers have a program memory built on Flash technology which provides fast erasing and reprogramming, thus allowing a quick debugging or error checking.

Board Features:

- A powerful Microchip 8-bit MCU PIC 16F877
- Accessible I/O ports through dual purpose headers
- Display LEDs, potentiometer and pushbuttons
- On-board 5V regulator and RS232 transceiver
- Pocket-sized (2.5 x 1.6 sq. in.) for easy mounting

RF MODULES ... ASK - 280~434Mhz Wireless RF Applications

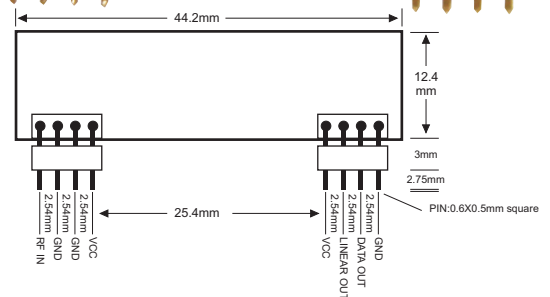
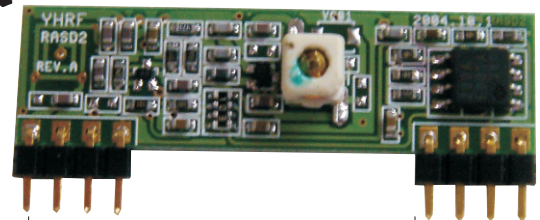
Tx



FEATURES:

- Low Power Consumption for 2.5~12V Operation.
- Designed for 280~434Mhz communication Systems.
- ASK Modulation/Demodulation
- Low spurious noise
- Data rate 4800 bps typical
- Dimension (Tx:13.3x11.2x4.5mm; Rx:44.1x12.4x4.5mm)

Rx



ELECTRICAL SPECIFICATIONS

	Parameter	Tx Module	Rx Module
• Receive frequency band		N/A	280~434Mhz
• Demodulation	Minimum		ASK detection
• Receiver sensitivity	Minimum		-103dBm
• Data rate	Typical		4800bps
• Transmit frequency band		280~434Mhz	N/A
• Modulation		ASK	N/A
• Output power		15.5dBm@12V 14.2dBm@10V 13.5dBm@9V 10.1dBm@6V 8.0dBm@5V 3.0dBm@3V 0dBm@2.5V	
• Duplex type		Transmit only	Receive only
• RF frequency to tolerance		+/- 100K	+/- 500K
• Temperature range	Operation	0°C to 60°C	0°C to 60°C
	Storage	-10°C to 70°C	-10°C to 70°C
• Power source		2~12VDC	4.5~5.5VDC
• Power consumption	Test voltage: 12V	8.0mA@15.5dBm	
• Dimensions		44.2x12.4x4.5mm	13.3x11.2x4.5mm
• Weight		To be determined	To be determined

MARTINDALE ELECTRIC

1.2V RECHARGEABLE BATTERY

— AA & AAA —

+ Rechargeable Ni-MH Battery -

- Low self-discharge • Ready to use
- Nickel-Metal Hydride rechargeable battery



AA 1.2V

2100 mAh



AAA 1.2V

800 mAh

+ ALKALINE 6LR61/9V BATTERY -



Product Specification:

Batteries, in all their aspects, should be in accordance with IEC 60086-1 and IEC 60086-2

- Model no.: Alkaline 6LR61
- Nominal voltage: 9.0Volt
- Open circuit volt.: 9.0Volt + 1.7/ - 0
- Nominal capacity: 475mAh
(Test Condition: 620Ω Load, continuous discharge, and end voltage 4.8V)
- Average weight: 49±2g
- Shelf life: 60 Months
- Performance: Battery service life should meet the values as stated in Table 1:

Discharges					
Test condition			Average duration ¹⁾ at 20°C		
Load	Daily period	End voltage	Initial	After 12 months storage ²⁾	After 36 months storage ²⁾
180Ω	30 m/d	4.8V	11h	10.1h	9.3h
270Ω	1h/d	5.4V	17h	15.6h	14.4h
620Ω	2 h/d	5.4V	40h	36.8h	34h

- * Average service life will be calculated without the highest and the lowest of 9 samples
- * Storage conditions: temperature 20±2°C and the Relative Humidity shall be 65±20%

- Heavy metal content: Mercury (Hg) content should be less than 1 PPM
Cadmium (Cd) content should be less than 5 PPM
Lead (Pb) content be less than 15 PPM

+ Mini Battery Charger -

FOR NI-MH/NI-Cd AA/AAA



Specification

- Input: AC100-240V 50/60HZ
- Output: DC 1.5V
- Charging current: AA 200mA & AAA 140mA

LED Indicator

- Red: Charging
- Green: Full charge

Electrical Appliance Characters

- Universal input AC 100-240V for Worldwide use.
- Equipped with 1 charging channel for charging 2pcs. AA/AAA Ni-MH rechargeable batteries.
- 1 red LED indicators.
- Normal constant current to fully charge batteries safety.
- Automatic trickle charge after full charge.

Charging time

- 2000mAh*2 - 13 hours
- 1800mAh*2 - 12 hours
- 800mAh*2 - 5 hours
- 700mAh*2 - 4.5 hours

+ NI-MH BATTERY CHARGER -

VALUE PACK
FOR NI-MH/9V, AA AND AAA

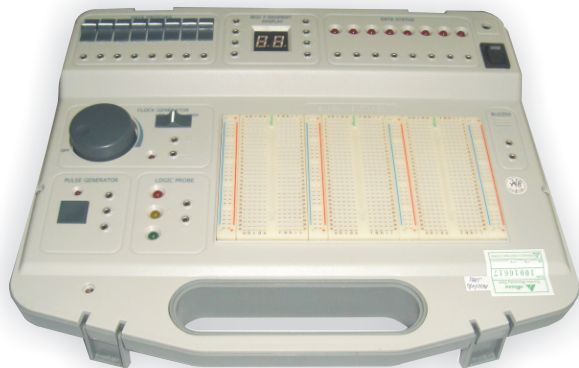


Specification

- Input: 230V/50Hz/4.6W
- Output: AA - 2x(2.8V = 150mA 0.42VA)
AAA - 2x(2.8V = 50mA 0.14VA)
9V - Block - 2x(9.0V = 16mA 0.14VA)

Alexan DT2

digital trainer 2



Digital Trainer II is a general-purpose digital experiment board equipped with different built-in circuits as well as a standard PB-301 breadboard. There are :

8 DATA SWITCHES

The data switch circuits provide eight DATA OUTPUT pins D1 to D8 whose output levels are adjusted using slide switches.

8 DATA STATUS MONITOR

Has eight buffered inputs with LED indicators that show the current state of the inputs.

2 BCD 7-SEGMENT DISPLAY

The two BCD 7-Segment Display accepts 4-bit data (binary values from 0 to 9), and shows the decimal value on the bright 7-segment display. It's really helpful for your timer and counter exercises.

CLOCK GENERATOR

A slide switch is provided for selecting the frequency range. LOW frequency range is about 1 Hz to 500 Hz, while the high frequency range is from 100Hz to 35 KHz. The frequency knob makes it easier to fine tune the signal.

PULSE GENERATOR

The monostable signal generator is based on the 74HC221 IC, there are two outputs. Pressing a switch generates a pulse across the corresponding output pin.

EXPERIMENT AREA

Consists of three PB-301 solderless breadboard. The "+" and "-" pins are already soldered to Vcc and Ground, minimizing the hassles to connect them one by one.

LOGIC PROBE

The probe displays the status of the signal fed across its input pins using three LED status indicators, one each for HIGH, LOW and PULSE.

ALL-100A UNIVERSAL & GANG PROGRAMMER

A high performance programmer for both engineering & production



ALL-100A programmer is a revised version of ALL-100 programmer. Major enhancements include: The revised core processor with built-in 8K-byte cache speeds up programming time by 10% ~ 50%; The regulated device supply voltages further improve IC programming stability; The new USB processor further speeds up and stabilizes data link / transfer.

EXCELLENT PERFORMANCE

ALL-100A's high frequency core circuit design significantly cuts down programming time for around 10% ~ 50%. Precise universal pin drivers provide high speed, low noise, accurate and reliable programming signals for various IC products including high speed low power devices recently released to market.

WIDE RANGE OF IC COVERAGE

ALL-100A supports wide range of IC products including EPROM, EEPROM, Serial PROM, SPI memory, FLASH, MPU/MCU product types and DIP, SDIP, SOP, SSOP, TSOP, PLCC, QFP, QFN, SON, BGA package types.

EASY TO SETUP, OPERATE AND MAINTAIN

ALL-100A setup and operation can be done easily by connecting the programmer to PC with Windows 2000 / XP / Server 2003 / Vista through USB port. It can load data file or read Master IC, and select functional options (Program, Verify, Auto...etc.) to start programming. The self diagnostic utility makes the programmer easy to check and maintain.

HIGH EXPANSION FLEXIBILITY

From development / engineering stage using ALL-100A single-site programming to limited production stage using ALL-100A multi-site / multi-set programming, further to mass production stage using AT3-3XX automated programming, high expansion flexibility of programming platform is well prepared in advance.

TIMELY SUPPORTING SOFTWARE

The supporting software is updated weekly on web site for check / retrieve through Internet. Programming of new products will not be neglected after purchasing.

PROGRAMMABLE LED Lights 5050



5 meters long

in 7 Colors



- Green
- Violet
- Pink
- Orange
- Red
- Yellow
- Blue

INCLUDES

Adaptor and Remote Control

also available!

5050 LED White 5 meters long

SOLAR READING LIGHT

- Energy conservation and environmental protection



- Durable
- Green solar light



The lamp can illuminate for 8 hours continuously.

Maintenance is very easy!

Strictly for indoors use only.

Specifications:

MATERIAL	: ABS	SIZE	: 100X150MM
BULB	: LED	POWER OF	
BATTERIES	: Rechargeable batteries	SOLAR PANEL	: 0.2W

Alexan SOLAR BULB

Features:

- Durable
- Rainproof
- NI-MH battery and lasts for 1.5 years
- It is replaceable
- Hangs outdoor while charging
- Portable
- Simple to use
- High quality solar panel
- Four wide-angle light emitting diode
- AAA recyclable battery
- Automatically switches off in bright light to save charging
- On/off switch



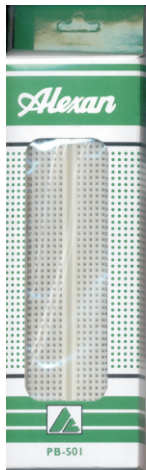
Specifications:

- Four LEDs
- LED current draw: 60/100mA
- Battery capacity(max) - 800mAh
- Battery operating temperature max : 55 degrees C
- Battery operating temperature min: -20 degrees C
- Housing material: ABS
- Globe plastic: polycarbonate
- Hanger material: stainless steel
- Switch type 3-way Hi-off-low



Alexan Prototyping Boards!

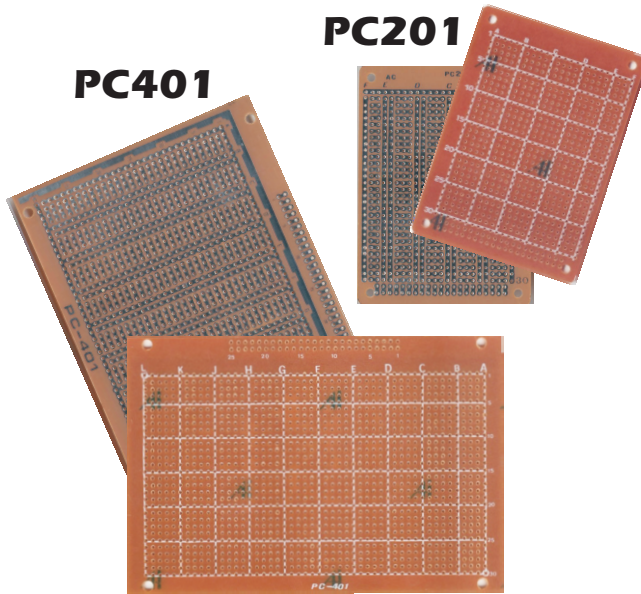
We'll show you a hundred ways to make your circuit work with...



PB501

PC401

PC201

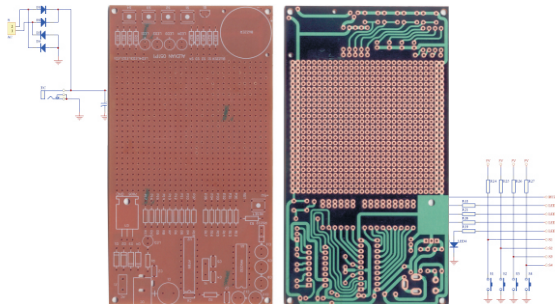


PB501/PB301, PC401, PC201

Circuit ideas begin in your brain, but it doesn't end there! You have to test it and optimize its performance. And this requires prototyping boards! Whatever you need, solderless types or perforated boards we have them!

8051 PROTO BOARD

using Atmel 2051/4051 IC

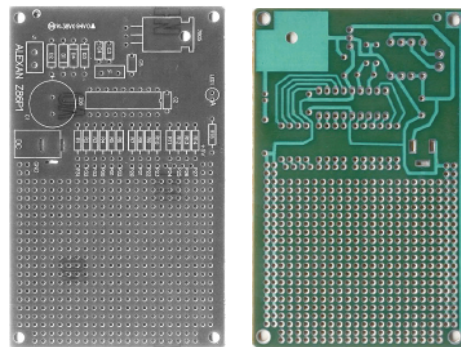


ALEXAN's 8051 Protoboard is a multipurpose prototyping board that allows quick transfer of 8051 circuit ideas from emulation to working prototype.

The board is laid out to accommodate Atmel 2051 and 4051 microcontrollers with the corresponding required oscillator and power supply circuitry. Resistor pads are provided for each of the 15 I/O lines. Included also are RS-232 interface, buzzer, push buttons/tact switches. Definitely a great and easier way to learn 8051 Microcontroller!

Z86P1 CIRCUIT BOARD

Prototype your Z8 designs with the multipurpose Z86P1 circuit board!



ALEXAN's Z86P1 is a multipurpose prototyping board that allows quick transfer of Z8 circuit ideas from emulation to working prototype. The board is laid out to accommodate any 18-pin Z8 microcontroller with the corresponding required oscillator and power supply circuitry. Resistor pads are provided for each of the 14 I/O lines. Options are included for variations in power supply and oscillator configurations. The 18-pin Z8 microcontrollers supported are Z86E02, Z86E04, Z86E08 and OTP MCUs including masked versions.

Alexan Presensitized PCB's

Prototyping has been easier with ALEXAN's Presensitized PCBs!!

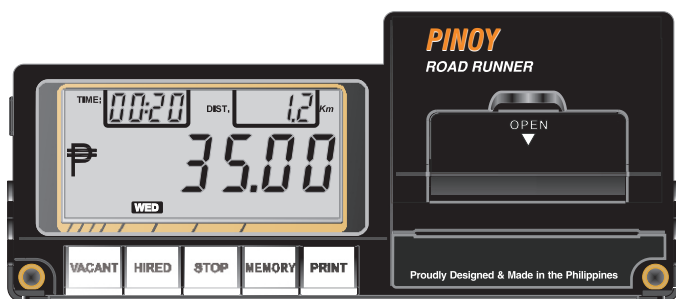


Presensitized positive (+) acting printed boards now available in various sizes. These boards are coated with a highly sensitive photoresist film that allows short exposure time, typically 60 to 90 seconds using UV exposure unit or 6 to 10 minutes using fluorescent lamp. These boards are ideal for prototyping and small production runs. No negatives or darkrooms are needed since they can be exposed directly from art transparency. A light protective cover allows them to be cut into specific sizes without exposing other areas of the board. The boards are 1.6-mm in thickness and come in various sizes as listed below:

Double Sided	Single Sided
GD 4 x 6	PP 4 x 6
GD 6 x 10	PP 6 x 10
GD 12 X 12	PP 12 X 12
GD 12 x 18	PP 12 x 18

PINOY ROAD RUNNER

Digital Taximeter with Thermal Printer



Features:

- Durable large LCD display with easy—to—read figures.
- Advanced MCU-based design provides safeguards on safety and EMI interference.
- Makes use of low cost thermal printer paper rolls.

Issues official receipt with serialized six digit numbering function.

Data accessible with computer and protected with security codes.

Capable of on-unit print of individual transactions; daily, monthly, yearly and overall total transactions.

Provides car battery charge condition by showing instantaneous car battery voltage reading.

Functions as a pulse counter for determining the constant or rpm value.

Built-in anti-tampering-capability.

Wide operating voltage range from 8V to 20VDC.

AFFORDABLE PRICE

PROUDLY FILIPINO MADE!

Inclusive LED for hire and installation

Alexan AGRICULTURAL TESTER

WOOD MOISTURE METER FPRDI

A joint project of: FPRDI, **ASTi**, & *Alexan*



DIGITAL FA507

Wood Species:

- Bagras
- Gmelina
- Gubas
- Japanese Alders
- Mahogany
- Malapapaya
- Mangium
- Narra
- River Red Gum
- Tangle

Features:

- Large LCD display
- Measures 6% to 30% moisture in wood
- Calibrated to 10 pre-defined wood species
- Auto shut-off to conserve battery
- Auto freeze of displayed reading
- Hinged "never-lose" protective cap
- With low battery indicator
- Compact and rugged construction

GRAIN MOISTURE METER

A joint project of: **BPRE** & *Alexan*

FOR PALAY AND CORN



MODEL SHEGA III

Features:

- Microcontroller - Based Processor
- LCD Display with Backlight
- Instant Readout
- Built-in Data Averaging Function
- Built-in Real Time Clock
- Data Logging Function
- Auto Shutoff
- Self Calibrating
- High Level Accuracy
- Excellent Repeatability
- Includes Test Loader
- One-Touch Mode Selector
- Engineering-Grade Dust-Proof Case
- Sleek and Portable

FUEL CELL

H-RACER AND HYDROGEN STATION



The H-racer is a micro-version of what engineers and scientists have been dreaming about for real cars: combining hydrogen with oxygen to generate a DC current to power an electric motor. Unlike a gas-powered car engine, the only byproducts are electricity and pure water. Horizon has created a unique, patented miniature fuel-cell car and hydrogen refueling station. The refueling station creates hydrogen by electrolysis using water, and once the car's hydrogen tank is full, the car can run on its own hydrogen fuel-cell system, with the simple flip of a switch.

RENEWABLE ENERGY EDUCATION SET



The Renewable Energy Science Education Set is a modular experiment set designed to demonstrate the workings of a complete clean energy technology system on a miniature scale. With this kit, an entire miniature renewable energy system can be constructed on a lab-scale. This set includes a wind turbine kit, a solar photovoltaic panel, an electrolyzer, a PEM fuel cell, and hydrogen storage system encouraging users to learn the system step by step, configure the system in different ways, and visualize the workings of clean energy principles from start to finish.

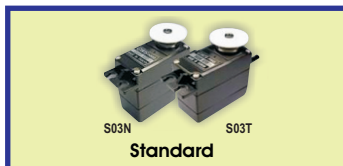
H-RACER 2.0



Discover the automotive technologies of the future by building and driving your own hydrogen fuel cell car. The H-racer 2.0 is the new generation H-racer, featuring a construction kit of the scale model car, as well as remote controlled steering, and light emitting features within the car. The car will run faster, and longer than the original H-racer, while still keeping its signature style. The H-racer received many awards including Time Magazine "Best Inventions", Business Week IDEA - silver award, Metropolitan Home "Design 100", ID magazine annual design review, and Business 2.0 Bottom Line Design Awards.

The product includes a solar cell, hydrogen station, remote control, hydrogen fuel cell car assembly parts, and an instruction manual. Recommended for ages 8 and above.

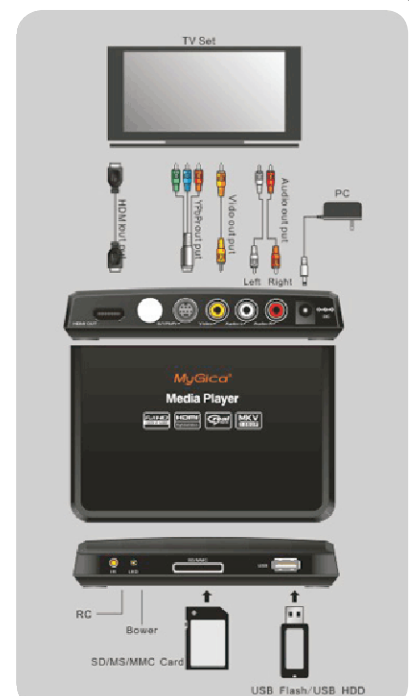
SERVO MOTORS



Specifications:

MODEL	SIZE (L x W x H) mm/in	WEIGHT		4.8V			6V		
		g	oz	Speed (sec/60°)	Torque		Speed (sec/60°)	Torque	
					kg-cm	oz-in		kg-cm	oz-in
NARO-STD	22.0 x 11.24 x 21.35 0.87 x 0.44 x 0.84	8.8	0.31	0.11	0.8	11	0.09	1	14
NARO HP	22.0 x 11.24 x 21.35 0.87 x 0.44 x 0.84	8.8	0.31	0.1	1.2	16	0.09	1.4	19
MICRO STD	28 x 14 x 29.8 1.1 x 0.55 x 1.17	18	0.63	0.16	1.8	25	0.13	2.3	32
MICRO MG	28 x 14 x 29.8 1.1 x 0.55 x 1.17	28	0.98	0.17	5.4	75	0.14	6.4	89
GWS35STD/FP	39.5 x 20.0 x 35.6 1.56 x 0.79 x 1.40	42	1.48	0.15	2.5	35	0.13	2.8	39.2
S03T/STD/F	39.5 x 20.0 x 39.5 1.56 x 0.79 x 1.56	46	1.62	0.33	7.2	100	0.27	8	111
MINI F	35.0 x 16.9 x 32.0 1.38 x 0.67 x 1.26	26.6	0.94	0.15	2.8	39	0.12	3.4	47
PARK STD F	30.86 x 16.17 x 28.5 1.21 x 0.64 x 1.12	18	0.63	0.13	1.9	26	0.1	2.3	32
S677-2BB/MG	63.0 x 32.0 x 61.6 2.48 x 1.26 x 2.43	180	6.35	0.17	21.5	298	0.145	26.5	368

Movie Box MP330



MOVIE BOX MP330 is a multimedia video file player designed for playing back rich contents of video/audio/picture formats on the TV. It can decode and playback multimedia files stored in hard disk drives, USB flash drives and SD/XD/MMC/MS memory card. It can playback MPEG1/2/4/Divx/Xvid/RMVB/RM format encoded files and lets you enjoy movies, music and pictures on your big TV screen. With the HDMI output interface, users can easily hook-up the MP330 HDMI to all existing display devices with the benefit of HDMI interface.

Alexan sudoku

a perfect gift!

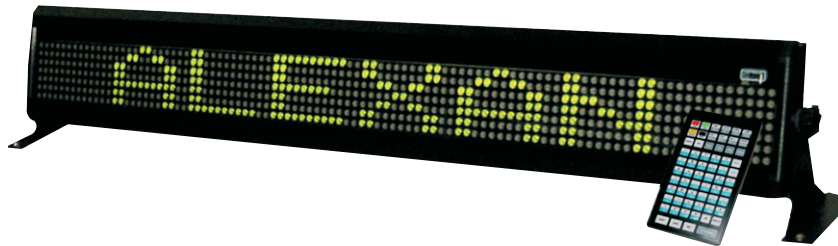
- Test your wits and sharpen your mind!
- Get hooked to the latest craze in town!



This portable electronic game has four levels of difficulty and a learning feature with audible sound alert to let you know when you are going wrong. For those who love challenges, there is a clock with a high score feature so players can pit themselves against others. This game also features a manual input mode. Sudoku on the move – a must for all aficionados!



Alexan MOVING MESSAGE



Features

- True color, creates brighter and more distinctive messages.
- Laser command keypad. Just point & click, and your message is transmitted to the board.
- Stores up to 26 different messages at one time.
- Quickly links one message to another at your command to create more impact.
- 16,000 character memory capacity.
- Set timer control to display messages at different times automatically.
- Pre-programmed and user programmable graphics.
- Display "Big" characters and European languages.

Alexan ... Customizable Projects

SIMPLE ELECTRONICS. GREAT INNOVATIONS.

EMDS

The **Alexan** LED Electronic Moving Display System (EMDS) enhances aesthetically the presentation of characters on billboards, cinemas, offices, schools, etc.

Using an advanced technology on microprocessors and microcontrollers, this product allows the user to enter information into the display with ease.

The comfort of having one controlling unit to update information on multiple display units improves work efficiency due to lesser inputting time.

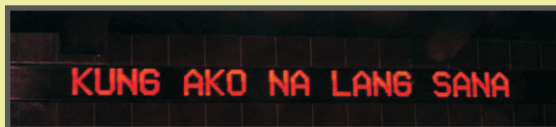
Available in Curve (Modular) or Straight

Indoor

Six-foot Signage



Twenty-foot Signage



Curve (Convex)



Directory



- Simulate, download, upload and store functions
- More than 20 character effects
- PC-interface
- Customizable length (up to 20ft)

DIGITAL CLOCK

Date and time synchronization has never been easier with the **Alexan** Digital Clock. Designed

locally with the use of microcontroller, the clock moves in sync with the system time of the computer to which it is connected with an ordinary LAN cable. The product comes with a specially-designed software that can:

- manually update the date and/or time
- pre-program a series of period for the alarm to go on and off on a given day
- allow the user to choose the type of alarm from those embedded in the system (built-in chime or any multimedia files)



Date/Time



Country/Time



Time



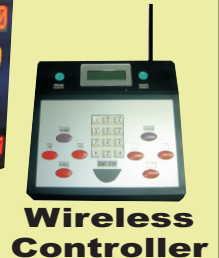
6" Digital Clock with RTC

More...

Alexan
SIMPLE ELECTRONICS. GREAT INNOVATIONS.

Customizable Projects

A l e x a n
scoreboards and
counters offer a
wide selection of
displays with
customizable
lengths and sizes,
data/digit displays,
option for a wired or
wireless controller,
and more!



Ice Hockey Scoreboard



Router

6" Queuing System
with wired controller
for 6 controls and router



Counter Controller



Industrial Digital Counter



Basketball Scoreboard



Production Target Board



8" Queuing System with control

Ace power INVERTER

HTE-150C-12

- Air cleaner produces Anion to kill bacteria and smell, change smoky air into clean and fresh again.
- Mood Light blue LED. Makes everything look soft in car.
- USB port 5V/1A output, runs the appliances with USB, such as, USB Led light, USB fan, mobile phone, iPod, MP3, digital camera charger



SPECIFICATIONS

Continuous output power	150W
AC output volt	AC100V/AC110V/AC120V /AC220V/AC230V/AC240V
Regulation	±5%~8%
Frequency	50Hz/60Hz ± 2Hz
No load current draw	<0.2A
Efficiency	85%~90%
Temp protection	55°C ± 5°C
Input low volt protection	Yes
Input high volt protection	Yes
Over load protection	Yes
Over temp protection	Yes
Output short circuit protection	Yes
Input reverse protection	Yes
Dimension	150 x 67 mm
Weight	0.42 kg

HTS-300-12

Pure Sine Wave

- Switched mode design.
- Pure sine wave output (<2% THD)
- Input & Output fully isolation design.
- High Efficiency 87%~90%
- High surge in motor start capacity.
- 5-stage thermal control fan.
- Frequency 50/60Hz switch selectable.
- Auto restart.



SPECIFICATIONS

Continuous output power	300W
AC output volt	AC100V/AC110V/AC120V /AC220V/AC230V/AC240V
Regulation	±5%~8%
Frequency	50Hz/60Hz ± 2Hz
No load current draw	<0.6A
Efficiency	85%~90%
Temp protection	55°C ± 5°C
THD (distortion)	<2%
Input low volt protection	Yes
Input high volt protection	Yes
Over load protection	Yes
Over temp protection	Yes
DC/AC Isolated	Yes
Output short circuit protection	Yes
Input reverse protection	Yes
Thermal control fan(s)	Yes
Dimension (L x W x H/by mm)	250 x 120 x 72 mm
Weight (by kg)	1.9 kg

HTE-1500-12



- Compact and dexterous dimension design.
- External heatsink.
- With remote control function.
- Re-start function.
- Complete protection design.

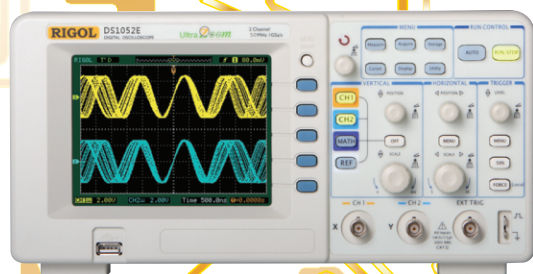
SPECIFICATIONS

HTE-1500-12

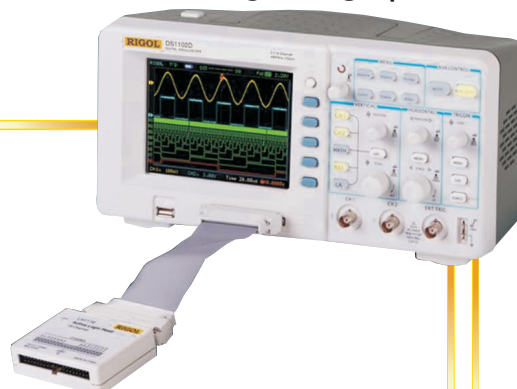
OUTPUT:			
Wave form	Modified Sine wave	Surge power	3000W
AC voltage	100V/120V/230V	Frequency	50/60Hz ± 3%
Continuous power	1500W	AC regulation	± 8%
INPUT:			
No load current draw	0.4A	Efficiency	>85%
DC voltage	12V	DC connector	Cable x 1pc
Voltage range	10.5~16VDV		
PROTECTION:			
Bat. low alarm	11 ± 0.5V	Short circuit protection	Shut-off
Bat. low shutdown	10.5 ± 0.5V	Bat. polarity	Fuse burn out
Over voltage	16 ± 0.5V	Over load	Re-start 2 times. Shut down if failed
Over Temperature	55°C ± 5°C	Accessory	Remote control-D
ENVIRONMENT:			
Working temperature	-20°C~ 50°C	Storage temp., humidity	-30°C~+70°C/-22°F~+158°F, 10~95%RH
Working humidity	20%~90% RH non-condensing	Temp. coefficient	±0.05%/°C(0~55°C)
OTHERS:			
Dimension(LxWxH)	395x179x82.5mm	Net weight	3.40kgs

RIGOL DIGITAL OSCILLOSCOPE

DS1052E/DS1102E



DS1102D



Features:

- A true mixed signal oscilloscope with a 16 channel Logic Analyzer
- 1GSa/s maximum Real-time Sample Rate and 1 Mpts Memory Depth
- Bandwidth options: 50MHz and 100MHz
- Extensive set of trigger modes including: Edge, Video, Pulse Width, Slope, Alternate
- 64k TFT Color LCD, bright and vivid waveform display
- Direct print to PictBridge compatible printers via USB Device interface
- Compact design to save your desktop space

Specifications

	DS1102E/DS1102D		DS1052E	
Bandwidth	100MHz		50MHz	
Channels	2 Channels + External Trigger			
Real-time Sample Rate	1 GSa/s (Single Channel), 500 MSa/s (Dual Channels)			
Equivalent-time Sample Rate	25 GSa/s		10 GSa/s	
Rise Time	3.5 ns		7 ns	
Memory Depth	Channel Mode	Sample Rate	Normal Memory	Long Memory
	Single Channel	1G Sa/s	16 kpts	N.A.
	Single Channel	500MSa/s or Lower	16 kpts	1Mpts
	Dual Channels	500MSa/s or Lower	8 kpts	512 kpts
Time Base Range	2 ns/div ~ 50s/div		5 ns/div ~ 50s/div	
Trigger Modes	Edge, Video, Pulse Width, Slope, Alternate			
Vertical Resolution	8 bits			
Vertical Sensitivity	2 mV/div ~ 10V/div			
Maximum Input Voltage	All inputs 1M II 15pF 300V RMS CAT 1			
Input Coupling	DC, AC, GND			
Roll Range	500ms/div~50s/div			
Cursor Measurements	Manual, Track and Auto Measure models			
Math	+ , -, x, FFT			
Internal Storage	10 Waveforms and 10 Setups			
USB Storage	BMP,CSV, Waveforms and Setups			
Connectivity	USB Device, USB Host, RS-232, P/F Out			
Display	5.6" TFT (64k, Color LCD), 320 x 234 resolution			
Power Supply	AC:100 ~ 240 VACRMS, 45 ~ 440 Hz, CAT II, 50 VA Max			
MSO Logic Analyzer	DS1102D			
Channels	16 Logic Channels			
Sample Rate	200MSa/s (each channel)			
Record Length	512 kpts (each channel)			
Trigger Modes	Pattern, Duration			
Threshold Selections	TTL = 1.4V, CMOS=2.5V, ECL=-1.3V, USER=-8V to + 8V			

RIGOL

DSA1030 SPECTRUM ANALYZER



The DSA1000 series is an economic spectrum analyzer, ideal for general purpose benchtop and field applications where signals and concepts can be investigated at or below 3 GHz. Our use of digital IF technology guarantees the reliability and performance required to meet these RF applications.

Features and Benefits

- 9 kHz to 2 GHz or 3 GHz Frequency Range
- 138 dBm Displayed Average Noise Level
- 80 dBc/Hz @10 kHz offset Phase Noise
- Total Amplitude Uncertainty <1.5 dB
- 100 Hz Minimum Resolution Bandwidth (RBW)
- 3 GHz Tracking Generator (DSA1030 optional)
- Built-in lithium battery that can provide 3 hours continuous operation (optional)
- Advanced measurement functions (DSA1030 optional) and automatic settings provide ultimate flexibility
- 8.5 inch widescreen display with clear, vivid, and easy to use graphical interface
- Various interface options such as LAN/USB Host, USB Device, VGA or GPIB (optional)
- Compact design with a weight of only 13.7 lbs (without battery)

DM3058 is a digital multimeter designed with 5 ½ digits readings resolution especially fitting to the needs of high-precision, multifunction, and automatic measurement.

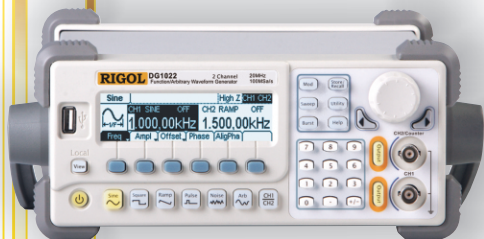
Features and Benefits

- Real 5 ½ digits readings resolution
- Up to 123 rdgs/s of measurement speed
- True-RMS AC Voltage Current measuring
- Quickly Save or Recall the 10 groups of Preset Configuration
- Preset 10 groups of Standard Sensor Configuration, built-in Thermocouple compensate in Cold Terminal
- Clone or backup all the configurations within instrument into other DM3058 via U-disc
- The first 5 ½ digit digital multimeter passing LXI Criterion in industry, which can achieve system integration easily
- With easy, convenient and flexible random sensor measurement control software: UltraSensor
- Standard configuration interface: USB Device, USB Host, LAN, RS-232, GPIB, and support U-disc storage and Web remote control
- Support remote control via a command line and enable to be compatible with commands from main stream multimeters

DM3058 DIGITAL MULTIMETER



DG1022 20MHz FUNCTION/ARBITRARY WAVEFORM GENERATOR



DG1022 Dual-Channel Function/Arbitrary Waveform Generators adopt DDS technology, which enables to generate stable, high-precision, pure and low distortion signals.

Features and Benefits

- Adopt advanced DDS technology; dual channel output; 100 MSa/s maximum sampling rate; 14 bits vertical resolution, 4kpts/waveform length.
- Output 5 standard waveforms; built-in 48 arbitrary waveforms
- Abundant modulation functions: AM, FM, PM, FSK, linear/logarithm sweep and burst
- Abundant output and input: waveform output; synchronous signal output; external modulation source, external clock reference (10 MHz) input, external trigger input
- Unique channel coupling and channel copy
- Built-in high precision and wide band counter, the measurement range: 100 mHz ~ 200 MHz (single channel)
- Standard configuration interfaces: USB Device & USB Host, and support U-disc storage
- Seamlessly interconnect with DS1000 series digital oscilloscope
- Powerful arbitrary waveform editing software "UltraWave"
- Support remote control by commands

DP1000A Series Power Supplies are high-performance 80 W triple output or 160 W single output programmable linear DC power supplies. It has excellent features including timed outputs and tracking capabilities; extremely clean power ripple and noise, comprehensive over-voltage, over current, over-temperature protection, a clean user interface, super performance specifications, and standard interfaces. These power supplies meet the requirements of a wide range of bench top development applications as well as industrial control and production testing.

Features and Benefits

- 3 channel, 80 Watt or 1 channel, 160 Watt Power Supplies
- Linear Power Supply design for improved performance
- Full color display with real time Volts, Amps, and Watts readout
- Wave Track monitors outputs over time

- GPIB, LXI-C (Ethernet), USB host & device interfaces all standard
- Program channels to automatically change value over time
- Save and store setups on flash memory drive

DP1308A PROGRAMMABLE DC POWER SUPPLY





POWER SUPPLIES

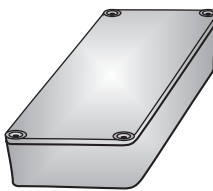
Item	DESCRIPTION				
	OUTPUT		R & N	EFFL.	
D-50A	5V, 1.0~6.0A	±2%	50mV	73%	50W Dual Output Switching PS
	12V, 0.3~2.0A	±5, -8%	100mV		
ESC-120-13.5	13.5V, 0~8A	±2%	120mV	81%	108W Desktop Power Supply or Charger
LPP-150-24	24V, 6.3A	±1%	100mV	83%	150W Single Output w/PFC Function
LPS-100-24	24, 4.2A	±1%	150mV	80%	100W Single Output w/PFC Function
LPS-75-12	12V, 6.2A	±2%	100mV	80%	75W Single Output Switching PS
PS-25-12	12V, 2.1A	±2%	100mV	78%	25W 1~2 Output Switching PS
PS-25-24	24V, 1.0A	±2%	240mV	79%	25W 1~2 Output Switching PS
PS-45-12	12V, 3.7A	±2%	100mV	76%	45W 1~3 Output Switching PS
PS-45-24	24V, 1.9A	±2%	100mV	78%	45W 1~3 Output Switching PS
PS-65-12	12V, 5.2A	±2%	100mV	79%	65W 1~3 Output Switching PS
PS-65-24	24V, 2.7A	±2%	100mV	80%	65W 1~3 Output Switching PS
Q-250D	5V, 2.0~15A	±2%	80mV	78%	250W Quad Output Switching PS
	12V, 0.5~6.0A	+6, -10%	120mV		
	24V, 0.5~5.0A	±8%	240mV		
	-12V, 0.0~1.0A	±6%	120mV		
S-100-24	24V, 0~4.5A	±1%	100mV	84%	100W Single Output Switching PS
S-145-24	24V, 0~6.0A	±1%	150mV	83%	145W Single Output Switching PS
S-145-5	5V, 0~25V	±2%	100mV	78%	145W Single Output Switching PS
S-150-12	12V, 0~12.5A	±1%	180mV	82%	150W Single Output Switching PS
S-15-12	12V, 0~1.3A	±1%	50mV	68%	15W Single Output Switching PS
S-15-24	24V, 0~.7A	±1%	50mV	73%	15W Single Output Switching PS
S-201-24	24V, 0~8.3A	±1%	150mV	81%	200W Single Output Switching PS
S-250-12	12V, 0~18.0A	±1%	120mV	79%	250W Single Output Switching PS
S-250-24	24V, 0~10.0A	±1%	120mV	81%	250W Single Output Switching PS
S-35-12	12V, 0~3.0A	±1%	100mV	76%	35W Single Output Switching PS
S-35-24	24V, 0~1.5A	±1%	100mV	78%	35W Single Output Switching PS
S-35-5	5V, 0~7.0A	±2%	75mV	70%	35W Single Output Switching PS
S-50-12	12V, 0~4.2A	±1%	100mV	78%	50W Single Output Switching PS
	5V, 0.6~7.0A	±2%	100mV		
	12V, 0.2~1.0A	±5%	100mV		
T-50A	5V, 0.2~1.0A	±5%	100mV	66%	50W Triple Output Switching PS
	-5V, 0.2~1.0A	±5%	100mV		
	CONTINUE POWER	INPUT VDC	OUTPUT VAC/Hz	EFF	
A-301-300-F4	300W	15-Oct	230/50	82%	150W~600W DC-AC Square Wave Power Inverter

Alexan Exclusive Distributor

Visit, call or write us for other available power supplies!

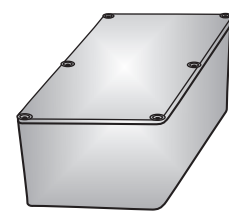
Alexan METAL CASES

For electronic circuits requiring better protection against noise, nothing beats these metal cases...



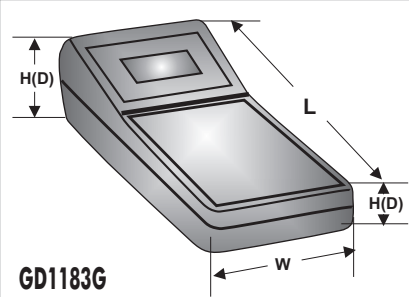
GD124

	LENGTH	WIDTH	HEIGHT (DEPTH)
GD123	90	38	30
GD124	110	60	30
GD234	119	93.50	56.50



GD347

	LENGTH	WIDTH	HEIGHT (DEPTH)
GD247	187	118	56-50
GD347	187	118	81.70



GD1183G

	LENGTH	WIDTH	HEIGHT (DEPTH)
G1168	150	95	28.50/49.50
G1169	189	104.50	33.20/59
GD1183G	189	134	32/54.60

Note: All dimensions in millimeters (mm.).

Alexan ORGANIZER & PLASTIC ENCLOSURES

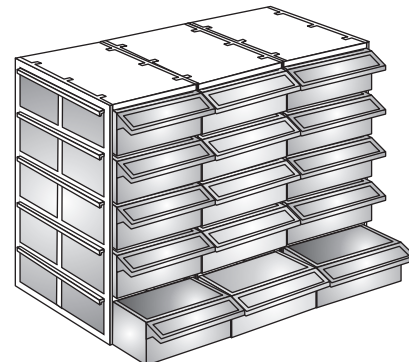
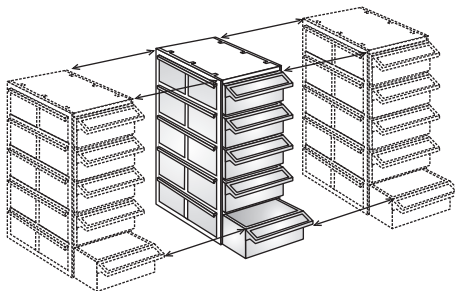
MULTI PURPOSE

ALEXAN ORGANIZER

Each drawer measures 2"(h) x 4"(w) x 8" (l) in. (External dimension), and can be subdivided so that each can have several compartments.

The overall size of one unit (5 drawers) is approximately 11-1/2"(h) x 8-5/8" (w) x 4-5/8" (l).

Six available colors GREEN, YELLOW, ORANGE, PINK, RED AND BLUE, also available transparent



HB 021

13.53cm x 7.55cm x 3.82cm external dimensions
13.07cm x 7.05cm x 3.32cm internal dimensions
w/4AA & 19V battery compartment



HB 051

15.5cm x 11.56cm x 4.56cm external dimensions
14.94cm x 10.61cm x 3.91cm internal dimensions
w/4AA battery compartment



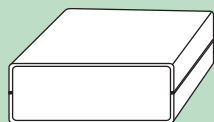
HC 001

10cm x 6.3cm x 3cm external dimensions
9.6cm x 5.9cm x 2.6cm internal dimensions



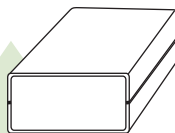
HC 002

10cm x 6.3cm x 3cm external dimensions
9.6cm x 5.9cm x 2.6cm internal dimensions



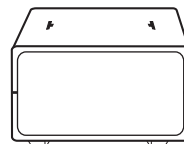
HC841-01

20.1cm x 6.6cm x 15.9cm external dimensions
18.9cm x 5.8cm x 14.9cm internal dimensions



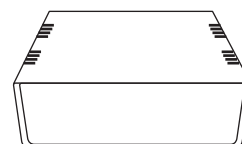
HC 872

17cm x 14.86cm x 5.47cm external dimensions
15.2cm x 14.24cm x 4.87cm internal dimensions



HC 873

21cm x 14cm x 9.5cm external dimensions
19.71cm x 12.4cm x 8.53cm internal dimensions



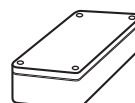
HC 881

25.3cm x 19cm x 8.15cm external dimensions
24.8cm x 17.75cm x 7.45cm internal dimensions

Number of Compartments

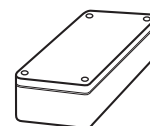
Internal Dimensions (dwh) mm of each compartment

KC-1	1	one	24 x 88 x 157
KC-3	3	two	24 x 88 x 30
		one	24 x 88 x 94
KC-5	5	five	24 x 88 x 30
KC-20	20	twenty	8 x 4 x 3
KC-30	30	thirty	7 x 3 x 4
Mini Component Box (x 4)	5	four	12 x 42 x 26
		one	11 x 85 x 52
Mini Component Box (x 6)	7	six	10 x 27 x 26
		one	47 x 86 x 152



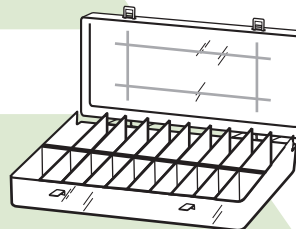
HC 981

13.51cm x 7.52cm x 5.3cm external dimensions
13cm x 7cm x 4.43cm internal dimensions

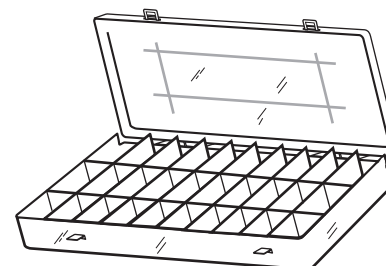


HC 991

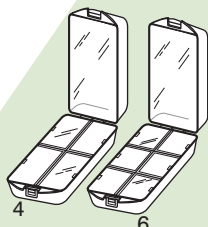
15.98cm x 9.15cm x 5.26cm external dimensions
15.48cm x 8.65cm x 4.71cm internal dimensions



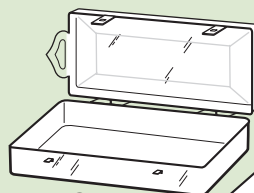
KC-20



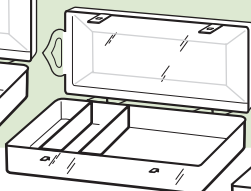
KC-30



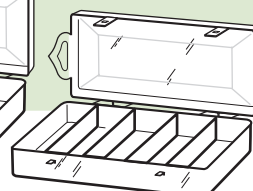
Mini Component box



KC-1



KC-3



KC-5

Come and visit our branches for complete information on our products and services.



812 Elcano St., Binondo, Manila • P.O. Box 4459 - Manila Phones: 241-9493, 243-3327, 243-3328 • Fax: 241-9491

Branches: 631 Sales St., across G. Puyat (Raon), Quiapo, Manila
• 12 Timog Avenue, Barangay, Laging Handa, Quezon City
• SM Megamall, 5th Level Bldg. A, Mandaluyong City