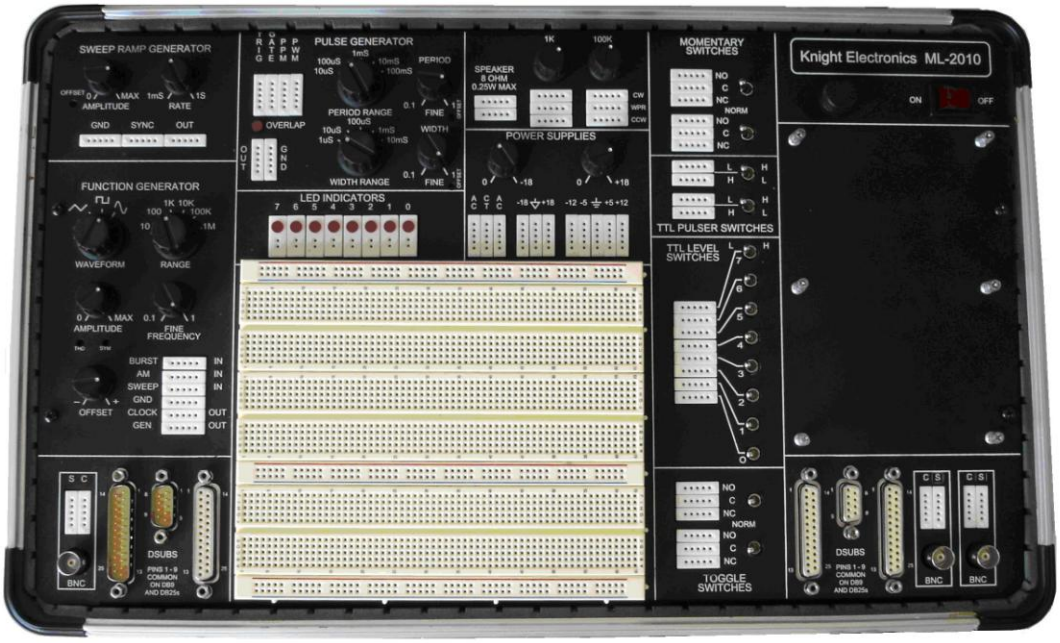
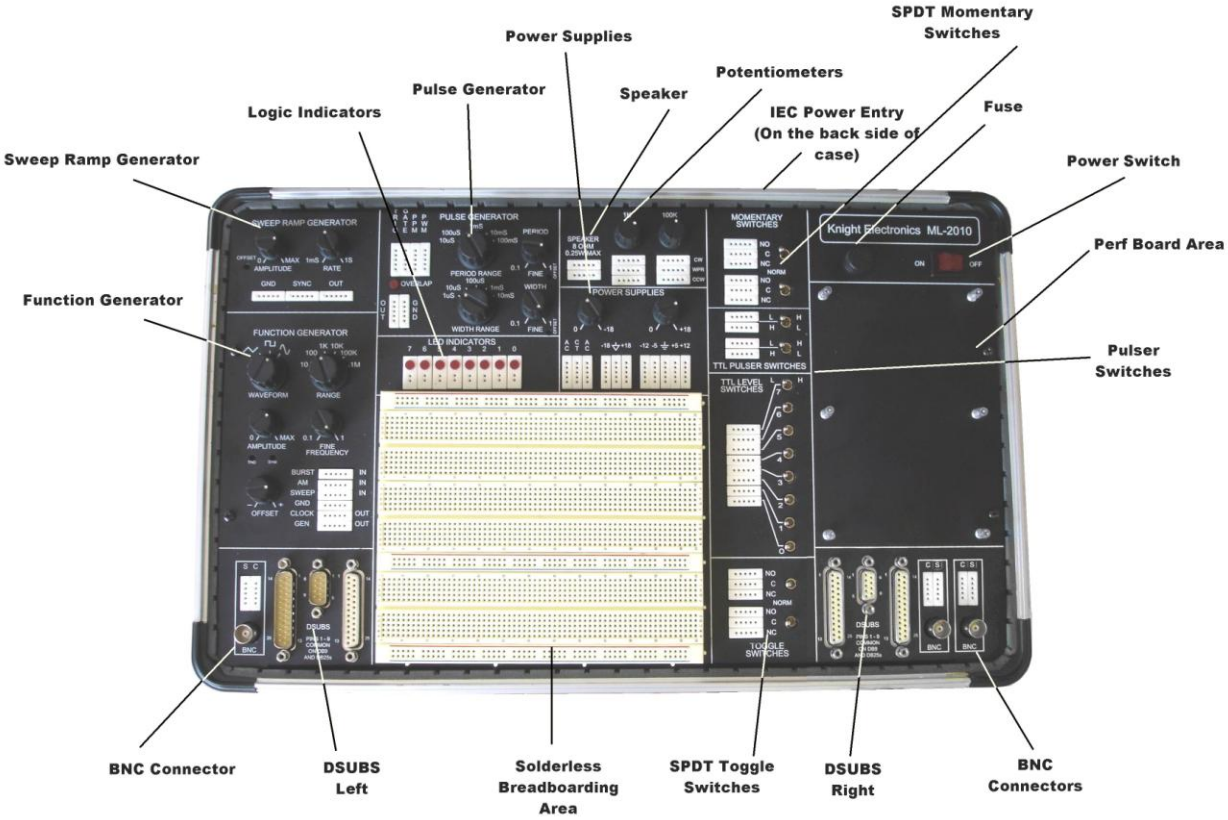
KNIGHT ELECTRONICS

ML2010 MINI LAB

The ML2010 is a complete prototyping station and has been designed to consolidate all of your test equipment needs into one compact package. This miniature laboratory used in conjunction with an oscilloscope and multimeter puts everything you need at your fingertips for building and testing all types of digital and analog circuits. The features incorporated in this equipment are perfect for the hobbyist, designer, technician, and student in electronics.


SWEEP RAMP GENERATOR
PULSE GENERATOR
SPEAKER 8 OHM 0.25W MAX
MOMENTARY SWITCHES
Knight Electronics ML-2010
ON
OFF
FUNCTION GENERATOR
LED INDICATORS
POWER SUPPLIES
TTL PULSER SWITCHES
TTL LEVEL SWITCHES
TOGGLE SWITCHES
DSUBS
BNC


SPDT Momentary Switches
Power Supplies
Potentiometers
Pulse Generator
Speaker
Logic Indicators
IEC Power Entry (On the back side of case)
Fuse
Sweep Ramp Generator
Power Switch
Perf Board Area
Function Generator
Pulser Switches
BNC Connector
DSUBS Left
Solderless Breadboarding Area
SPDT Toggle Switches
DSUBS Right
BNC Connectors

SPECIFICATIONS

POWER INPUT: 120 VOLT AC 50/60 HZ
FUSED (2A 250V, 5x20mm GLASS, FAST ACTING)
LIGHTED POWER ON INDICATOR

DC POWER SOURCES: +5 VOLTS ±3% @ 1 AMP
-5 VOLTS ±3% @ 1 AMP

+12 VOLTS ±3% @ 1 AMP
-12 VOLTS ±3% @ 1 AMP

0 TO >+18 VOLTS VARIABLE @ 1 AMP
0 TO >-18 VOLTS VARIABLE @ 1 AMP
(ISOLATED GROUND FOR VARIABLE SUPPLIES)

0.1% LINE REGULATION
0.1% LOAD REGULATION

SHORT CIRCUIT AND THERMAL OVERLOAD PROTECTED

AC POWER SOURCE: 15 VOLTS CENTER TAPPED @ 500 MILLIAMPS

PULSE GENERATOR: CONTINOUSLY VARIABLE IN FIVE DECADE RANGES:
PULSE WIDTH: ≤ 100nSEC TO ≥10mSEC
PULSE REPETITION: ≤ 1uSEC TO ≥ 100mSEC

OVERLAP INDICATOR

CAPABLE OF 100% DUTY CYCLE

PULSE POSITION AND WIDTH MODULATION INPUTS

TTL COMPATIBLE GATE AND TRIGGER INPUTS

RISE AND FALL TIMES LESS THAN 10nSEC

SWEEP RAMP GENERATOR:

ADJUSTABLE PERIOD - ≤ 1mSEC TO ≥ 1SEC

ADJUSTABLE 0 TO 3.7 VOLT OUTPUT AMPLITUDE

NEGATIVE LINEAR RAMP OUTPUT FOR LINEAR SWEEP

SEPARATE TTL COMPATIBLE SYNC OUTPUT

FUNCTION GENERATOR:

SINE, SQUARE, OR TRIANGLE WAVE OUTPUT

0 TO 18 VPP OUTPUT AMPLITUDE
~500 OHM OUTPUT IMPEDANCE
SHORT CIRCUIT PROTECTED

DC OFFSET ADJUSTABLE FROM 0 TO ±10 VOLTS

SEPRATE TTL/HC COMPATIBLE CLOCK OUTPUT
(20mA OUTPUT AT 0.33VDC (LOW) OR 4.3VDC (HIGH)
RISE/FALL TIME LESS THAN 20nSEC

CONTINUOUSLY VARIABLE FREQUENCY FROM 1HZ TO 1MHZ
IN SIX DECADE RANGES
(NOTE: DUE TO LIMITATIONS OF THE FUNCTION GENERATOR CHIP WAVEFORM VARIATIONS, OR ROLL OFF, MAY BE EXPERIENCED AT THE MAXIMUM RANGE.)

DISTORTION: SINE WAVE ≤ 2% TO ≥ 100KHZ
TRIANGLE WAVE ≤ 2% TO ≥ 100KHZ

RISE & FALL: SQUARE WAVE ≤ 20nSEC

FREQUENCY MODULATION INPUT
AMPLITUDE MODULATION INPUT
BURST INPUT
SWEEP INPUT CAPABLE OF 1000:1 SWEEP
(START FREQUENCY DETERMINED BY SWEEP RAMP AMPLITUDE
STOP FREQUENCY DETERMINED BY GENERATOR FREQUENCY SETTING)

SPEAKER: 2-1/4” 8Ω 0.25W

POTENTIOMETERS: UNDEDICATED 1KΩ AND 100KΩ
LINEAR TAPER
20% 0.125W

INDICATORS: EIGHT BUFFERED LED (CMOS/TTL COMPATABLE)

SWITCHES: EIGHT LEVEL - 0V OR +5V UNBUFFERED TOGGLE SWITCHES
TWO UNDEDICATED SPDT TOGGLE SWITCHES [ON – NONE – ON]
TWO UNDEDICATED SPDT MOMEMTARY [ON – NONE – (ON)]

PULSERS: TWO TTL LEVEL DEBOUNCED PULSERS WITH COMPLEMENTARY OUTPUTS

INTERFACE: DB25 MALE – DB9 MALE – DB25 FEMALE
DB25 FEMALE – DB9 FEMALE – DB25 FEMALE
(DB25 TO DB25 PINNED 1 TO 1 WITH DB9 COMMON TO FIRST 9)

THREE BNC TO TIE-POINT BLOCK