

OPERATOR'S MANUAL

- MODEL 610 LOGIC PROBE (20MHz FREQUENCY DISPLAYABLE)
- MODEL 610B LOGIC PROBE WITH BEEPER TONE (20MHz FREQUENCY DISPLAYABLE)
- MODEL 615 LOGIC PROBE (50MHz FREQUENCY DISPLAYABLE)
- MODEL 620 LOGIC PULSER
- MODEL 625 LOGIC PROBE (50MHz FREQUENCY DISPLAYABLE) & LOGIC PULSER

LOGIC PROBE (model 610. 610B. 615. 625)

INTRODUCTION

The logic Probe is ideal for troubleshooting and analysis of logic circuits. It works as a level detector, a pulse detector, a pulse stretcher, and a pulse memory (model 610 & 610B only). It features include

- a. Circuit powered.
- b. LED indicators: HI (red LED), LO (green LED), and PULES/MEMORY (yellow LED) (model 610 & 610B only).
- c. Logic HI; LO; PULSER with defferent beeper tone (model 610 Bonly)
- d. Switch-selectable pulse detection or pulse memory function (model 610 & 610B only).
- e. Switch-selectable TTL or CMOS circuits. (model 610 & 610 Bonly).

OPERATION

- a. Attach red alligator clip to positive side of d.c. power supply of printed circuit board under test.
- b. Attach black alligator clip to negative side of d.c. power supply of printed circuit board under test.
- c. LED Display Pattern

MODEL	610 & 610B			610B	615 & 625		
	LED				BEEPER	LED	
	HI	LO	PULSE			HI	LO
Logic "1"	●	○	○	High tone	●	○	
Logic "0"	○	●	○	Low tone	○	●	
Bad Level or Open Circuit	○	○	○		○	○	
Square Wave < 200KHz	●	●	*	1. Alternate and Intermittently sound 2. Mixed and Intermittently sound	●	●	
Square Wave > 200KHz	◐	◐	*		●	●	
Narrow High Pulse	○	●	*	Intermittently low tone	●	●	
Narrow Low Pulse	●	○	*	Intermittently high tone	●	●	

- LED ON
- LED OFF
- ◐ LED may or may not be on.

* Blinking LED. Intensity is proportional to the duty cycle of the signal observed.

Note If model 615 & 625 LOLED lighted, when power supply voltage is upper 10V, This is normal condition, will not effect the logic probe features.

- D. After the PULSE/MEMORY Switch is placed in MEM position, the Pulse indicator (yellow LED) will latch on with the first transition (either rising or falling) Thereafter, as long as the probe is powered, the LED will remain on until reset by switching to PULSE position. (610 & 610B only).

SPECIFICATIONS

GENERAL :	Operating Temperature	0°C to 50°C, 80% Relative Humidity
	Storage Temperature	-20°C to 65°C, 75% Relative Humidity
	Weight	610 & 610B 1.6 Ounces (45g) approx. 615 1.2 Ounces (35g) approx. 620 1.4 Ounces (40g) approx. 625 1.76 Ounces (50g) approx.
	Dimensions	8.2 Inches (21cm) Long X 0.7 Inch (1.8cm) Wide X 0.7 Inch (1.8cm) Deep.

ELECTRICAL (At 23 ±5°C, 75% Relative Humidity Maximum):

MODEL	610 & 610B	615 & 625
Maximum Input Signal Frequency	20MHz	50MHz
Input Impedance	1 M Ω	120K Ω
Operating Supply Range:	4V DC Minimum, 18V DC Maximum	
TTL Logic "1" (HI LED)	>2.3 ± 0.2V DC	> 3.0 ± 0.25V
Logic "0" (LO LED)	<0.8 ± 0.2V DC	<0.75V ± 0.25V
CMOS Logic "1" (HI LED)	>70% Vcc ± 10%	>60%Vcc ± 5%
Logic "0" (LO LED)	<30% Vcc ± 10%	<15% Vcc ± 5% <40% Vcc ± 5%
		For 7-18Vcc
Minimum Detectable Pulse width	30 Nanoseconds	10 Nanoseconds
Maximum Signal Input Protection	±220V AC/DC (15 sec)	± 70V AC/DC (15sec)
Power Supply Protection	± 20V DC	± 20V DC
Pulse Indicator Flash Time	500ms	

LOGIC PULSER (model 620 & 625)

INTRODUCTION

The Logic Pulser is a very effective tool for inspecting and repairing the logic circuits. It can be used directly to inject a signal into the logic circuits without removing the IC or breaking the circuits. The 100mA pulse output insures that the device under test will be pulsed, while the short 10µS duration of the output pulse makes sure that no damage will be done to the circuit under test. The Logic Pulser output is switchable between 0.5 and 400Hz, making it suitable for use with either a logic probe or with an oscilloscope, also has an external sync input, which enables the user to synchronize the pulse output with an external signal, such as a computer clock circuit.

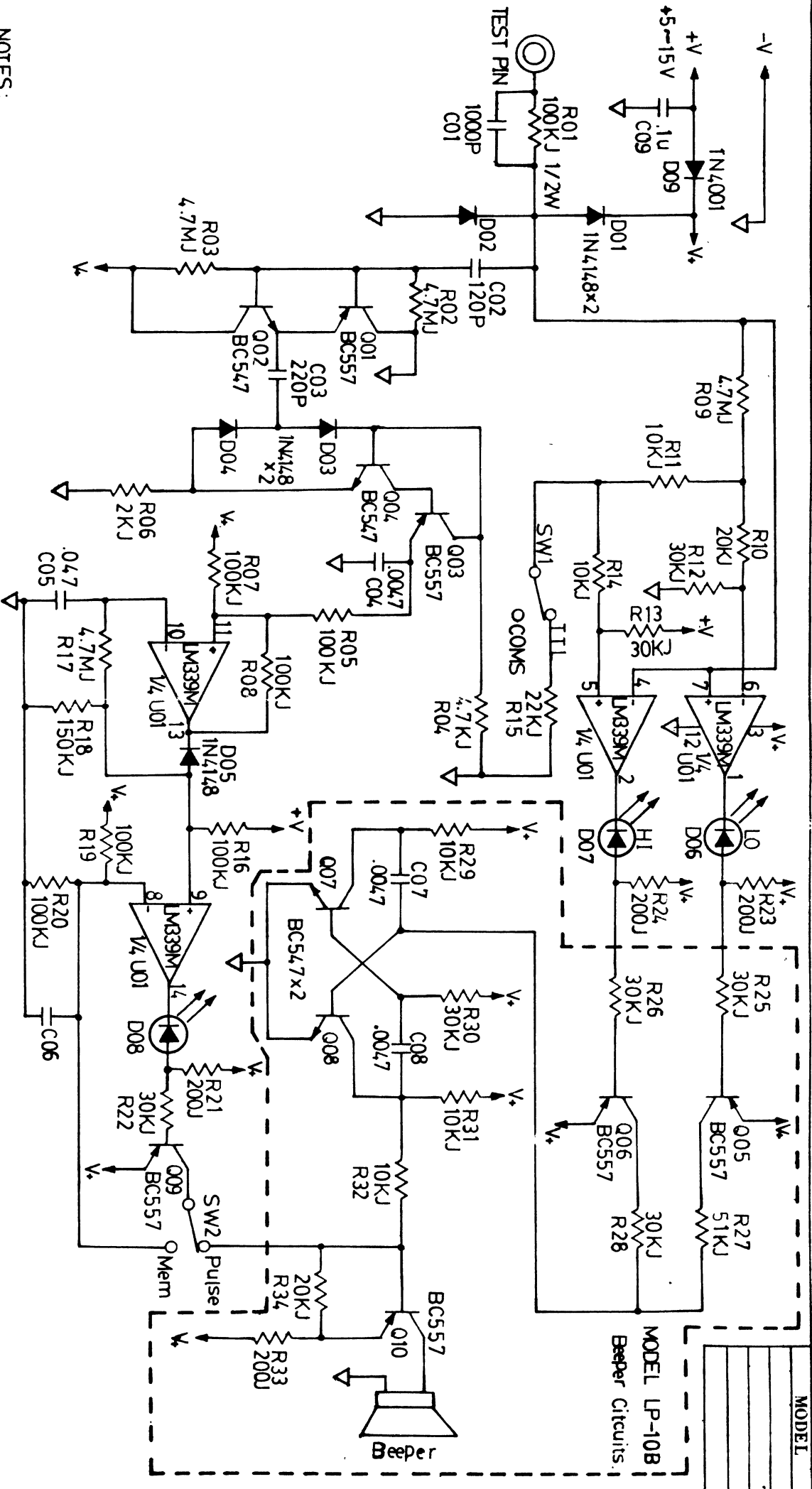
OPERATION

- Attach red alligator clip to positive side of d.c. power supply of printed circuit board under test.
- Attach black alligator clip to negative side of d.c. power supply of printed circuit board under test.
- Setting the repetition rate switch to 0.5pps or 400pps.

SPECIFICATIONS


Sync Input Impedance	1M Ω
Pulse Rate	0.5/400 Hz
Pulse Width	10 µS
Output Current	100mA sink/source
Square Wave Output Current	5mA sink/source
Power Supply Range	5 – 15 V DC
Power Supply Protection.	20V DC (30 second max.)
Sync Input Protection	120V DC (30 second max.)
Test Point Protection.	35V DC (30 second max)





NOTES:
 UNLESS OTHERWISE SPECIFIED
 1. ALL RESISTANCE VALUES IN OHMS.
 2. ALL CAPACITANCE VALUES IN MICROFARADS.

MODEL 610, 610B SCHEMATIC DIAGRAM

 中德电子工业股份有限公司 CHONGDE ELECTRONIC INDUSTRIES INTERNATIONAL CO., LTD.		MATERIAL	UNIT	TITLE	DSGN	DW'N	CKD	APPVD	APPVD
		T. R.	SCALE	PART. NO.					
REMARKS		SHEET	OF	DWG. NO.					