TKμP

8086, MCS51, 8085 Hands-on Training Lab

1. Windows IDE	√
2. Multi Processor DB	√
3. Max of 512K RAM	√
4. 8279, 8255, 8155, 8251	√
5. Mux Hex Keypad	√
6. 8 Status LEDs	√
7. Mux 4x 7Seg Display	√
8. 16x2 Line LCD	√
9. ADC	√
10. DAC	√
11. I2C RTC	√
12. I2C EEPROM	√
13. Relay	√
14. Pot for ADC/LCD	√
15. Test/ Interrupt key	√
16. Temperature Probe	√
17. DC Motor	√
18. Stepper Motor	√
19. Elevator	√
20. LGLite Interface	√
21. UXASM Assembler	√
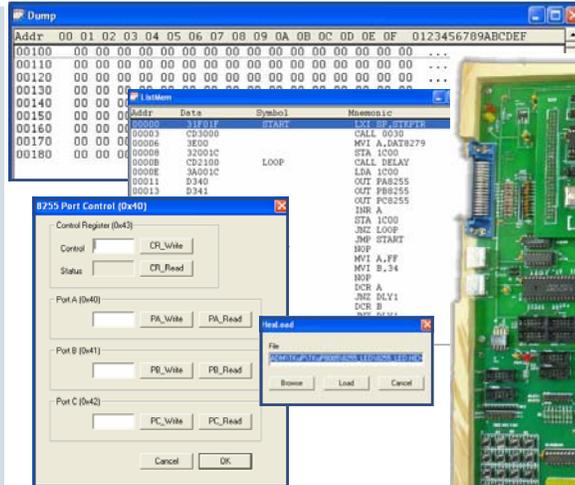
## Perfect Educational Solution

TKμP is a PC Window's hosted universal μP training tool aimed at enabling students and engineers to easily exercise and learn basic microprocessor technology for 8085, 8032 & 8086.

TKμP Windows IDE dialog boxes are used for downloading program codes and also demonstrates codeless working of onboard peripheral devices like 8279, 8255, 8155 and 8251.

Students can then design, implement and debug hardware and μP software using UXASM assembler and LGLite Real Time Logic Analyzer.

Combine TKμP, UXASM Assembler with ADM's versatile 50Mhz LGLite Logic Analyzer   and you have a complete, interactive μP lab without the need for any external test instruments.
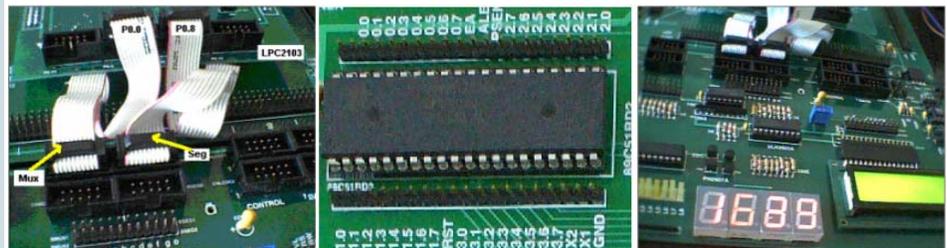
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# LGLite — Real Time Waveform Generation & Capture

When to use a Logic Analyzer / Pattern Generator?

- When you need to see many signals at once.
- When you need to look at signals the same way your hardware does.
- When you need to generate a changing pattern of highs and lows.
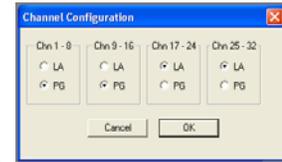
LGLite is really a multi-configurable instrument in one. The first part is a 50Mhz timing analyzer, the second part is a 50Mhz state analyzer and the third part is a 50Mhz Pattern Generator . LGLite's real time Pattern Generator & Analyzer's make up a powerful tool for the digital designer.

When is a Timing Analyzer used?
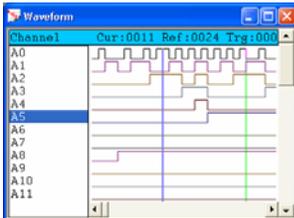
A timing analyzer is the part of a LGLite that is analogous to an oscilloscope.

The timing analyzer displays information in the same general form as a scope, with the horizontal axis representing time and the vertical axis as voltage amplitude. Because the waveforms are time-dependent, the display is said to be in the time domain.

LGLite timing analyzer is the right choice if you need to verify timing relationships among several signals by seeing them all together. LGLite timing analyzer has an internal clock up to 50Mhz to control sampling, so it asynchronously samples the system under test.

What does a State Analyzer capture?

LGLite state analyzer is a very valuable tool, especially when tracking down bugs in software and hardware.

A "state" for a logic circuit is a sample of a bus or line when its data is valid. Again, a state change occurs each time there is a positive transition on the clock line. A state analyzer displays data in a listing format in hex or binary.

LGLite state analyzer synchronously samples the system using its 3 external clock inputs. A world of embedded processor & protocols may have many such state clocks.

Where is a Pattern Generator used?

Functional validation in µC is to test its ability to perform its logical operation correctly with external peripherals.

The pattern generator is ideal for systems where surrounding boards or buses / protocols that normally provide digital signals to the device under test are missing. Pattern Generator creates & sends a series of patterns to µC and monitors µC real time response using logic analyzer.

LGLite Pattern generator performs this task of producing endless pattern's at speeds up to 50Mhz matching the needs of complex µC design.