



PICPROG-V.6.11

User's Guide

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Introduction

1.1 Welcome

Thank you for purchasing the PICPROG-V.6.11 Demo Board from Logic Power!!

The PICPROG - V.6.11 Demo Board is a simple board which is capable to program of the **PIC10/12/16/18/24/32, dsPIC30/33** and Enhanced PIC devices. Sample programs are provided to demonstrate the unique features of the supported devices. (**See Device Support List**)

The PICPROG-V.6.11 Demo Board comes with the following:

- PICPROG-V.6.11 Demo Board
- CD-ROM, which contains:
 - Sample programs
 - PICPROG-V.6.11 Demo Board User's Guide

If you are missing any part of the kit, please contact our Logic Power office listed in the back of this user guide for help.

The PICPROG-V.6.11 Demo Board required following Tools:
(Externally you should Purchase from Our Website)

- 9V, 500mA Power supply.



Fig. 1.1

1.2 PICPROG-V.6.11 Demo Board

The PICPROG-V.6.11 Demo board is specially designed for Microchip's 8-bit,16-bit and 32-bit microcontrollers. Board also support 8-pin to 40-Pin DIP PIC microcontroller.

Key Features:

- 40-Pin Zip socket for easy inserting and removing the MCU
- Board dimensions 139mm x 89mm
- ICSP connection for connecting demo board with the PICKit2/ PICKit 3/ MPLAB ICD3/ MPLAB PICKit 4/ MPLAB ICD4 etc
- RJ-11 connection for connecting demo board with the PICKit2/ PICKit 3/ MPLAB ICD3/ MPLAB PICKit 4/ MPLAB ICD4 etc
- 9V, 500mA DC external power supply Jack for providing the external power to the demo board
- Four Red LEDs connected to PORTB and Power Supply through the jumper
- 4 MHz external crystal
- AMS1117 for 5V power and 3.5V power to the MCU and LED's
- Jumper J1-J14 are provided for PORT connections
- Jumper J15-J22 are provided for 4 MHz external crystal Connections
- Jumper J23 and J24 are provided for PORT LED
- Switch S1 and S2 are provided for Power Supply LED's (5V and 3.5 V resp.)
- Switch S1 and S2 are provided for Vcap 1 and Vcap 2
- Vcap is provided for PIC18/24/32 MCU

Hardware Details

The PICPROG-V.6.11 Demo Board hardware is extremely simple and is intended to illustrate the ease of use of 8bit, 16bit and 32bit PIC MCUs.

The features of the board hardware elements are as follows:

2.1 MCU ZIP Socket

It's very hard to remove one microcontroller and solder another one on PCB, when first one gets damaged or need to work with different microcontroller. PICPROG-V.6.11 pin demo board provides 40-Pin Zip socket to easily add or remove MCU, it provides Zero Insertion Force for adding and removing the MCU.

2.2 Power Supply

Two ways to supply power to the PICPROG-V.6.11 demo board

- A 9V, 500 mA DC supply can be plugged. Power supply can be purchased through LOGIC POWER
 - **Note:** PICPROG-V.6.11 Demo Board kit does not include a Power Supply.
- An internal power supply can also be provided by using PICKit2/ PICKit 3/ MPLAB ICD 3/ MPLAB ICD4/ MPLAB PICKit 4 (Please check particular Programmers User Guide to set an internal power supply, also we recommend you to use an EXTERNAL Power Supply for your demo board).

(To Purchase any programmer/debugger from Logic Power, please email your requirement to the below email Id.: sales@logicpower.in or Buy it from our website directly: www.logicpower.in)

2.3 Display LEDs

Four LEDs are provided on board, connected through the Jumper (J23 & J24), and Switch (S1 & S2). LED connected on S1 & S2 is also used for an indication of Power ON, it turns ON, when powered through an external source and while programming the device. LED connected to the Jumper (J23 & J24), is use for Test purpose. It indicates programming MCU is working properly or not.

2.4 SWITCH CCONNECTOR

Demo board has 2 switches.

- Switch S1 :- Used for provide 5V supply
- Switch S2 :- Used for provide 3.5V supply
- Switch S3 :- Enable Vcap (10uf/20v) for Jumpers(J7,J8 and J9)
- Switch S4 :- Enable Vcap (10uf/20v) for Jumpers(J13)

2.5 LINK CONNECTOR

Demo board has 4 Link Connectors.

- **Link L1 (3 Pin) :-** Used for Connecting 5V and 3.5V supply to the board
- **Link L2 (10 Pin) :-** Used for Enable connection between Programming Pin and Actual MCU programming pins. Actual programming pin may be vary as per MCU vary and Jumpers vary.
- **Link L3 (12 Pin) :-** Used for Enable connection between Programming Pin and Actual MCU programming pins. Actual programming pin may be vary as per MCU vary and Jumpers vary.
- **Link L4 (18 Pin) :-** Used for Enable connection between Programming Pin and Actual MCU programming pins. Actual programming pin may be vary as per MCU vary and Jumpers vary.

2.6 POWER OUTPUT

Demo Board contain Power Jumper (J23 & J24) i.e. 5v and 3.5v regulated through AMS1117 voltage regulator.

2.7 PICKit™ CONNECTOR

The ICSP and RJ-11 connector are provided for programming purpose. Also we provide Link connector (L1, L2, L3 & L4) for connecting all Jumper to the 40 Pin ZIF sockets

2.8 On Board Jumper SETTINGS (See:- Fig 2.8)

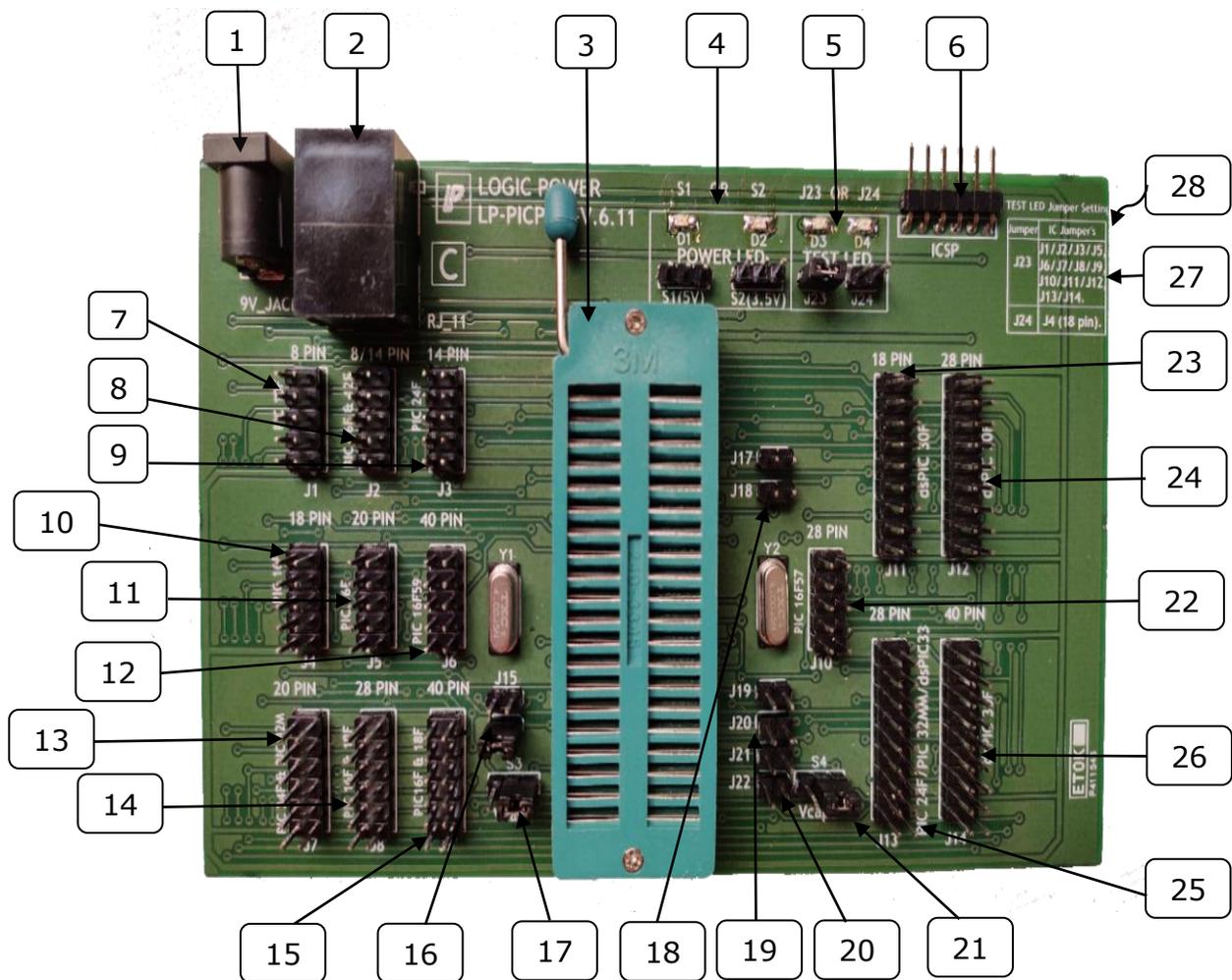


Fig. 2.8

- 1. 9V_JACK :-** 9V, 500mA external power supply for providing the external power to the demo board.
- 2. RJ-11 CONNECTOR :-**It is use for programming demo board with the PICKit2/ PICKit 3/ MPLAB ICD3/ MPLAB PICKit 4/ MPLAB ICD4 etc.
- 3. 40_Pin_Zif SOCKET :-**40-Pin Zip socket to easily add or remove MCU.
- 4. S1 OR S2 Tri-Pin Switch :-** It is use for provide internal as well as external 5V and 3.5 V resp. to the board.
- 5. J23 OR J24 JUMPER :-** It is use for Test LED. The LED is connected to PORT B of all MCU. Also LED Jumper Settings shown in table (See:- Fig 2.1) as per your MCU you will able to test LED.
- 6. ICSP CONNECTOR :-**It is use for programming demo board with the PICKit2/ PICKit 3/ MPLAB ICD3/ MPLAB PICKit 4/ MPLAB ICD4 etc.
- 7. J1 JUMPER (8 PIN):-** J1 Jumper is use for programming 8 bit (PIC10F) MCUs. Link connector (L2) is provided with LP-PICProg-V.6.11.For more detail of supported MCU please check device support List (<https://www.logicpower.in/products.aspx>).
- 8. J2 JUMPER (8/14 PIN):-** J2 Jumper is use for programming 8 bit (PIC16F/12F) MCUs. Link connector (L2) is provided with LP-PICProg-V.6.11.
- 9. J3 JUMPER (14 PIN):-** J3 Jumper is use for programming 16 bit (PIC24F) MCUs. Link connector (L2) is provided with LP-PICProg-V.6.11.
- 10. J4 JUMPER (18 PIN):-** J4 Jumper is use for programming 8 bit (PIC16F) MCUs. Link connector (L2) is provided with LP-PICProg-V.6.11.
- 11. J5 JUMPER (20 PIN):-** J5 Jumper is use for programming 8 bit (PIC16F) MCUs. Link connector (L2) is provided with LP-PICProg-V.6.11.

- 12. J6 JUMPER (40 PIN):-** J6 Jumper is use for programming 8 bit (PIC16F59) MCUs. Link connector (L2) is provided with LP-PICProg-V.6.11.
- 13. J7 JUMPER (20 PIN):-** J7 Jumper is use for programming 16 bit (PIC24F) and 32 bit (PIC32M) MCUs. Link connector (L3) is provided with LP-PICProg-V.6.11.
- 14. J8 JUMPER (28 PIN):-** J8 Jumper is use for programming 8 bit (PIC16F & 18F) MCUs. Link connector (L2) is provided with LP-PICProg-V.6.11.
- 15. J9 JUMPER (40 PIN):-** J9 Jumper is use for programming 8 bit (PIC16F & 18F) MCUs. Link connector (L2) is provided with LP-PICProg-V.6.11.
- 16. J15 & J15 JUMPER (2 PIN):-** Both Jumper are use for Enable External Crystal for 8 pin (PIC16F877 & 16F877A) MCUs. All details are given back side of H/w.
- 17. S3 SWITCH (3 PIN):-** It is use for providing Vcap Capacitor to the board. It having value of 10uF for programming 8/16/32 bit (PIC16F/18/24/32) MCUs. By default(S3) It is connected to GND, as per programming specification of MCU you can Enable Vcap through S3.Also it is Enable by using Jumper (J7, J8 & J9).
- 18. J17 & J18 JUMPER (2 PIN):-** Both Jumper are use for Enable External Crystal for 8 pin (PIC16F57A) MCUs. All details are given back side of H/w.
- 19. J19 & J20 JUMPER (2 PIN):-** Both Jumper are use for Enable External Crystal for 8 pin (PIC16F54A & 16F84A) MCUs. All details are given back side of H/w.
- 20. J21 & J22 JUMPER (2 PIN):-** Both Jumper are use for Enable External Crystal for 8 pin (PIC16F59) MCUs. All details are given back side of H/w.
- 21. S4 SWITCH (3 PIN):-** It is use for providing Vcap Capacitor to the board. It having value of 10uF for programming 16/32 bit (PIC24F/32MM/dsPIC33) MCUs. By default(S4) It is connected to GND, as per programming specification of MCU you can Enable Vcap through S3.Also it is Enable by using Jumper (J13).

- 22. J10 JUMPER (28 PIN):-** J8 Jumper is use for programming 8 bit (PIC16F57) MCUs. Link connector (L2) is provided with LP-PICProg-V.6.11.
- 23. J11 JUMPER (18 PIN):-** J11 Jumper is use for programming 16 bit (dsPIC30F) MCUs. Link connector (L4) is provided with LP-PICProg-V.6.11.
- 24. J12 JUMPER (28 PIN):-** J12 Jumper is use for programming 16 bit (dsPIC30F) MCUs. Link connector (L4) is provided with LP-PICProg-V.6.11.
- 25. J13 JUMPER (28 PIN):-** J13 Jumper is use for programming 16/32 bit (dsPIC30F/PIC24F/32MM) MCUs. Link connector (L4) is provided with LP-PICProg-V.6.11.
- 26. J14 JUMPER (40 PIN):-** J14 Jumper is use for programming 16 bit (dsPIC30F) MCUs. Link connector (L4) is provided with LP-PICProg-V.6.11.
- 27. Table No.1:-** LED Jumper (J23 & J24) is use for Test LED. LED connections may be vary as Jumpers vary or MCU vary. How to used D3 and D4 as per MCUs Jumper, It was showing in this table.
- 28. Table No.2:-** External crystal is provide as per MCu requirement. Connections may be vary as Jumpers vary or MCU vary. How to connect jumper As per MCU is showing in this table. It is present bottom side of Board.



Please contact us for any query related to our Product.

Pune Office

#8, 2nd Floor, Sujit Complex,
S.No.60/7/1A/2,Wadgaon
Budruk,
Off Sinhadgad Road, Pune
411051

Cell.No.:

+91-9422943523/8551021420/8551021421

EmailId:

sales@logicpower.in