

# PRU 256 PROGRAMMER AND LOGGER

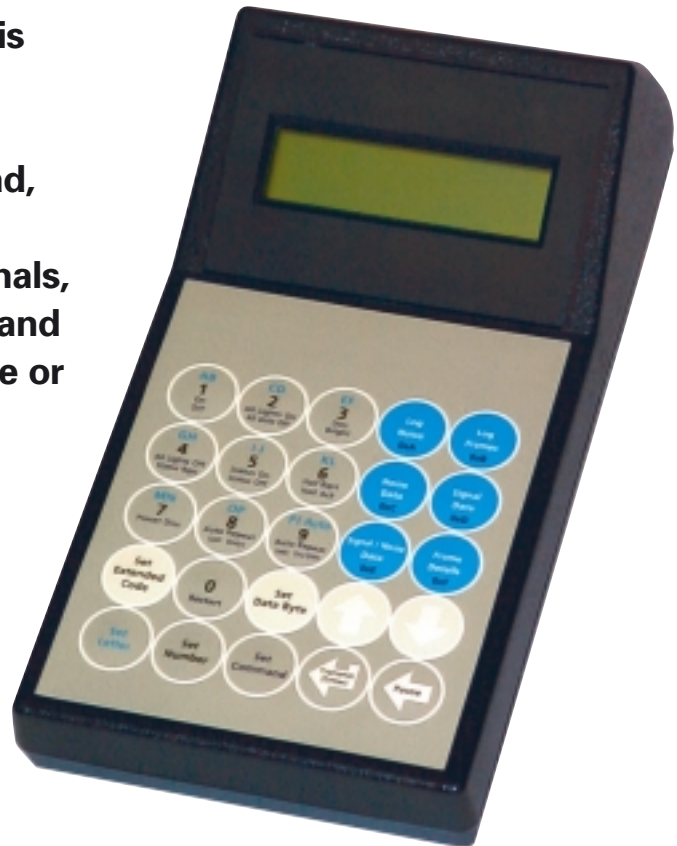
The PRU256 Programmer/logger is able to send and receive both standard and extended X-10 commands. Using the keypad, users can: transmit signal levels, transmit single or continuous signals, select zero crossing degree shift, and display or log the power line noise or signal level on the PRU256 LCD screen.

## Features

- Transmits and receives both standard and extended X-10 commands
- Displays noise level on the power line
- Displays signal level on the power line
- Log noise and signal levels over a 24 hour period
- Auto transmit mode for system testing
- Adjustable transmit voltage in 33.3mV increments
- Time/date (24 hour format)
- Selectable 0°, 30°, 60°, 90°, 120°, 150° transmit pulse
- Shows received X-10 packets as one frame or two frames: can be used to determine whether signal is repeated or original
- Can be used as P1 test transmitter when combined with the Marmitek XPTR test receiver (Art.No. 09103)

## Applications

- Programming tool for Marmitek MicroModules
- Display signal strength on line from other transmitters and two-way receivers
- Use to test potential installation sites for possible installation problems
- Pinpoint loads to be filtered by logging power-grid noise levels (user defined time periods up to 24 hours)



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Supply voltage	120 to 277 VAC (+/- 10%)
Frequency	50 Hz
Current draw	270mA at 240VAC/50Hz
Receive Parameters	The PRU256 will accept power line carrier transmission signals with minimum strength of 25mV peak to peak. The carrier frequency of this signal will be 120kHz $\pm$ 4kHz. The pulse width will be 1ms $\pm$ 10% and occur no later than 200ms after the zero crossing of the main voltage.
Transmit Parameters	The PRU256 will output power line carrier transmission signals with a minimum of 6V peak-to-peak strength into a power line with a 50hm load attached. The carrier frequency will be 120kHz $\pm$ 1kHz. The transmission pulse will be 1ms $\pm$ 10% and will start no later than 200ms after the zero crossing of the mains voltage, and when enabled, an additional pulse will be transmitted no later than 200ms after the 30° point of the half wave.
Transmit Locations	All transmission locations (0°, 30°, 60°, 90°, 120° & 150°) can be individually activated or deactivated through the setup menu. NOTE: More than four activated transmit locations may deliver unsteady transmit level results. NOTE: The 0° transmit location must remain enabled if the automatic level adjustment is to remain active. If the 0° transmission is disabled, the circuit will always adjust to maximum level.
Transmit level	The level of the power line carrier transmissions can be adjusted through the setup menu. When the level is set from 0 to 150, the Automatic level adjustment will be active. This will readjust the signal level for line loading conditions. The maximum adjustable level is 5V peak to peak (level settings of 150). Any setting above this will result in a maximum output ( $\geq$ 6V peak to peak).
Display	16 Character x 2 Row LCD, bottom viewing angle. Contrast adjustment is possible with adjustment potentiometer on the right side of case.

**PROGRAMMING**

**Setup**

Restart the PRU256 by holding the "0" key for at least 3 seconds. Press PAUSE key when Version number information appears in the LCD screen. Now you are able to choose one of the following options:

1. TX voltage: height of transmission level
2. TX location: activation of transmission locations (0°, 30°, 60°, 90°, 120° & 150°)
3. Date and Time
4. Clear Logs
5. Exit

**Keys**

Receiver functions (blue keys):

- Log Noise
- Log Frames
- Noise Data
- Signal Data
- Signal and Noise Data
- Frame Details

Transmitter functions (grey keys):

Enter the command by using the three "set" (set letter, set number, set command) keys at the bottom of the keyboard

Automatic transmit function (P1):

Push key "P1 Auto" and then "Transmit"  
P1 will be switched ON and OFF continuously  
You can stop the P1 auto mode by transmitting any other command

Signal/Noise:

Press "Signal Data" to display the signal level and X-10 commands  
Press "Signal Noise" to display both the noise and signal levels

**Mechanical parameters**

Dimensions:	102x190x54mm
Weight:	350g
Power Cable:	1.5m with Europlug

**Environmental parameters**

Operation temperature range	0 to +49° C
Storage temperature range	-29 to +66° C
Humidity range	10 to 95% non-condensing

**CE**