
MODEL 412PLC

PROGRAMMABLE LEVEL CONTROL

The 412PLC Programmable Level Control is a wired remote audio level controller. Its output voltage can be used to control a voltage controlled amplifier (VCA) such as IED Models 110V or 132. It can control or be controlled by a 2016PLC (Programmable Level Control Interface for the 2000 Series UDAPS®) or by another 412PLC for ganged operation.

The output voltage level which corresponds to an audio level is indicated on the front panel of the 412PLC by 10 LEDs arranged in a column. When the output level is zero all LEDs are off. As the user increases the level by depressing the 'Up' arrow, the number of LEDs which are illuminated increases from the bottom of the column toward the top. The percentage of LEDs which are on equals the percentage of the maximum output which appears at the output terminals.

The 412PLC has a textured Lexan™ front panel with no protruding components. It makes use of membrane-type switches and windows for LED indicators. It fits into a single or gangable decorator style plate.

There are three operating modes, Normal, Emergency, and Preset. In the Normal mode, voltage (audio) can be set manually from the panel. It is increased by pressing the 'Up' arrow, and decreased by pressing the 'Down' arrow. The Emergency mode is a preset level for making Emergency announcements. It is invoked by a 5 V pulse on the bus. The Preset mode is a simply a selected level, usually used to return all 412PLCs on the bus to a nominal level after an event in which the levels of various units may have been set to various levels. The preset mode is invoked by momentarily grounding the bus with an external contact closure.

Provision has been made to lock the control so that changes cannot be made by unauthorized persons. The panel can be locked in either of two ways. One is by pressing a hidden switch, and at the same time pressing the 'Down' arrow. If locked in this way, it can be unlocked by pressing the same hidden switch and the 'Up' arrow at the same time. If desired, a key switch can be provided to lock and unlock the panel, or it can be locked by a remote contact closure from a device such as a relay.

A green LED located at the right center of the control panel indicates the state of the unit. When it is unlocked, the green LED is On. When it is locked, the green LED is Off.

There are 3 set-up modes which provide for setting the cut-off (control range), the preset level of the unit, and the Emergency level. These three setup modes are accessed sequentially in the order listed above. Details can be found in the operating instructions. The first setup mode encountered is the cutoff. This mode can be recognized by the column of illuminated LEDs extending downward from the top. Adjusting the cutoff point sets the lower end of the control voltage range. Whatever the control voltage range, it will always consist of 100 steps. The second setup mode is 'Preset'. The 'Preset' is the level which the system will go to when the 'Preset' operating mode is invoked. In this mode, the appearance of the front panel is similar to the normal operating mode. The last setup mode is the 'Emergency' level setup. In this mode, the green 'System unlocked' LED will be flashing. In each mode the levels can be adjusted by the 'UP' and 'Down' arrows. The levels are retained in on-board non-volatile memory. To return to normal operation,



press the same switch combination again. While in setup, if no keyboard entry is made for 2 minutes, it will time out and return to normal mode.

If the system is powered down, the last level setting is retained in non-volatile memory. When powered up it will return to the last setting.

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SPECIFICATIONS

ELECTRICAL

1. Output Ramp Voltage Range
(Jumper selectable ranges, all LEDs Off to all LEDs On)
 - Normal
 - Low Range 0 - 5 VDC
 - High Range 0 - 10 VDC
 - Reverse
 - Low Range 5 - 0 VDC
 - High Range 10 - 0 VDC
2. Bus Specifications
 - 'Up' operation
 - Waveshape Square Wave
 - Voltage 2.5 - 5.0 V
 - Frequency 62.5 Hz
 - 'Down' operation
 - Voltage 2.5 - 0 V
 - Frequency 62.5 Hz
 - No Operation
 - Voltage 2.5 VDC
3. Lock Input Contact closure to ground locks keypad
4. Power Requirements
 - Supply Voltage Range 7.0 - 15.0 VDC
 - Supply Current 100 mA, Max.
 - V = 15.0 VDC

INDICATORS

1. Output Setting 10 red LEDs in a vertical column
2. Lock/Unlock Green LED (1)

CONNECTORS

1. Control and Power Phoenix 1803604
5-pin plug-in compression-type screw terminal connector

MECHANICAL

1. Size, Maximum Overall Dimensions
 - Height (10.4 cm) 4.095"
 - Width (4.45 cm) 1.75 "
 - Depth (2.78 cm) 1.095 "
2. Weight (53.8 gm) .1185 lb.

ENVIRONMENTAL

1. Operating Temperature Range (0 °C - +50 °C) 32 °F - 122 °F
2. Storage Temperature Range (- 40 °C - +70 °C) -40 °F - 15 8 °F



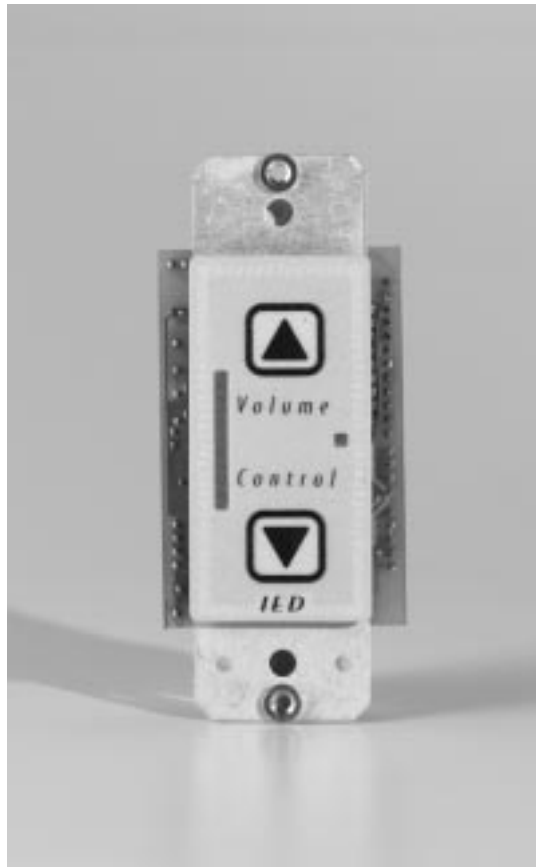


Figure 1 - 412PLC
Front View

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