



# APULJACK

## ELECTRONICS LTD

DESIGN AND REPAIR SPECIALISTS

### AE Big Square Panel - 12 Button Version



Replacement Control Panel for Plug In Systems 12 Button  
Panel

Part Number: CTP-APU-011-NE

## 1. General information

This panel replaces all old panels with either 11, 12 or 13 buttons typically named CMS2000, Hi-Tech, IH or Timberland. For the 11 button panels, the external pump button on the new panel will have no function. The Hazard button on the old 13 button versions is not implemented on this new panel (it is usually disabled on most 13 button panels anyway). The Pump-Run input/function of some old panels is not implemented on this new panel – this just means that the pump light will not flash when the pump is actually running.

## 2. Installation

The new panel uses male blade connectors. These need to be connected to the original female blade connectors on the wiring loom from the old unit. The installer should move each connection over ensuring that the correct function goes to the correct pin.

The new blade connections and two typical wiring colour schemes are shown below:-

Connection Legend	Function/Board	Wiring Colours 1	Wiring Colours 2
Leisure battery (VAN)		Brn/Blue	Red
Vehicle battery (CAR)		Brn/Grn	Green
0V		Wht/Org	White
Charger Input		Brn/Wht	Black
Output to Fuse board		Brn/Red	Yellow
Internal Pump Negative		Wht/Grn	Orange
External Pump Negative		Wht/Purp	

The Pump Run wire (usually coloured Purple & Green) is not used by the new panel but should be connected to the Pump Run parking blade to avoid it shorting out on anything.

***WARNING: Incorrect connection could cause permanent damage to the unit.***

## 3. Power input

When correct power is applied, the green LED on the back of the panel will be illuminated (the LED is quite dim to save power).

## 4. Button Functions

### 4.1 Water levels Button

Push the water levels button to show the amount of water in the fresh tank in 25% increments i.e. 0, 25, 50, 75, 100. See also Internal Pump.

### 4.2 Clock/Clock setting

The clock shows the current time when the decimal point is flashing. To set the time push the clock button - the clock will flash to show you are in SET mode. Use the HOURS and MINUTES buttons to change the Hours and Minutes to the correct time. The clock is in 24hr format only. Once the clock has been set, the display will return to the running clock display denoted by the decimal point flashing once a second.

### 4.3 Display dimming

When the clock button has NOT been pressed the HOURS and MINUTES buttons can be used to dim the display. Use the HOURS and Minutes buttons to increase and decrease the brightness, respectively.

### 4.4 Internal/External temperature

Push the INT or EXT TEMP buttons to show the internal or external temperatures. If a temperature probe is disconnected/open circuit, the display will show 'OPEN'.

### 4.5 Current

Push the CURRENT button to display the current, in amps, into or out of the selected battery. Current into the battery (charging) shows as positive and out of the battery (discharging) shows as negative.

### 4.6 External Pump

To turn on/off the external pump, push the EXT PUMP button. The light next to the external pump button illuminates when the pump is on.

### 4.7 Internal Pump

To turn on/off the internal pump, push the INT PUMP button. The light next to the internal pump button illuminates when the pump is on. If the fresh water level is at 0% then the display will warn that the tank is empty by showing 'NO H2O' (the pump will still switch on).

### 4.8 CAR/VAN

To select which battery you wish to power the system, push either the CAR or VAN button. The light next to the button illuminates to show the battery that is currently in use. If CAR is selected and the VAN button is pushed the system will switch over to VAN and vice versa. The display will briefly show "LEIS" to show that the Leisure battery is selected or "STRT" to show that the Starter battery is selected.

If the illuminated button is pushed again the system will switch off and "OFF" will be shown briefly on the display. All outputs will be turned off and the display will go blank (the clock will still keep the correct time). The system is now in a low power standby mode and normal functions (e.g. pumps) cannot be selected. To turn the system back on, push either the CAR or VAN button. If you are not going to use the system for an extended period then you should isolate the power to the vehicle/panel to avoid it flattening the battery.

#### 4.9 Voltage

Pushing the VOLTAGE button will show the voltage of the selected battery. If the Voltage button is pushed again, whilst the voltage is shown, the display will show the voltage of the non-selected battery along with briefly showing "**LEIS**" to indicate Leisure battery or "**STRT**" to indicate Starter battery is about to be displayed.

### 5. Low Voltage Alarm

If the voltage of the Leisure/Van battery is lower than 12.0V then the panel will switch to the Voltage display automatically. The display will show the value of the low voltage along with 'ERR' to alert the user to the low battery situation. To remedy this, charge your battery/turn on your charger.

### 6. Waste Full Alarm

If the waste tank is full, the display will show '**SOIL FULL**'. Empty the waste tank to rectify this.

### 7. Default Display

Each of the displays will return to the Clock display after 5 seconds.

### 8. Display Dimming

Between 10PM and 6AM the display and any lit indicators are set to their lowest brightness to avoid disturbing people.

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