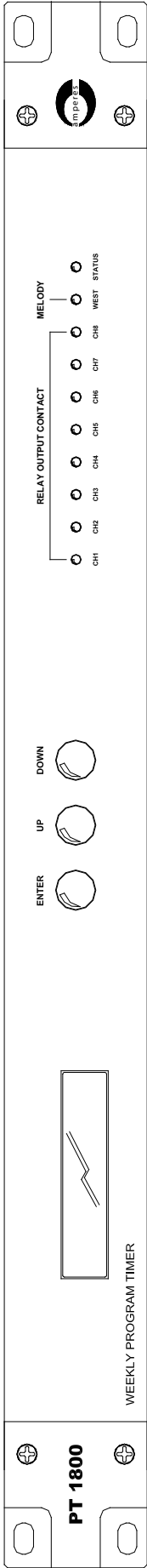


# INSTRUCTION MANUAL

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## PT1800

### MULTICHANNEL PROGRAMMABLE TIMER



## Introduction

Thank you for selecting another product from Amperes and you shall be delighted for making the right choice for the right application.

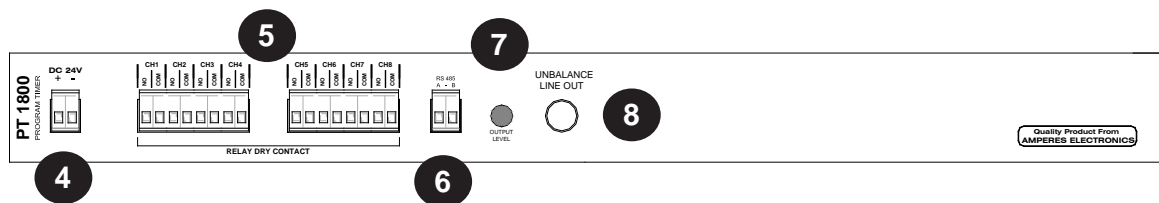
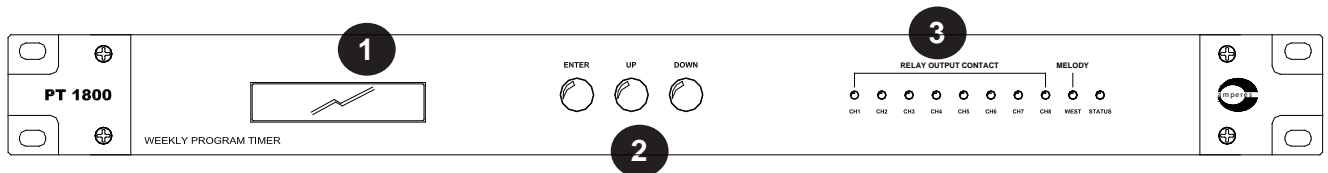
What makes PT1800 stands out among the rest?. The answer lies in you, as the user or installer. It is a product that suits your applications and every features had been crafted to your needs.

PT1800 is an 8 channel weekly programmable timer with 250 steps in total, more than required by the industry standard. It has built in chime should you need it for alert and does not want to invest in another chime unit. Its' RS485 port can be used to interface with other equipment as well as link to PC for monitoring purpose, or during setup. A setup program is available free for your convenience.

Use it with confidence, and we assure you of its quality and durability. Should you need assistance, we are just a click away.

## Parts Identification

### Front View



### Rear View

#### 1. LCD DISPLAY

2 X 16 character LCD display for programming as well as status indication purpose.

#### 2. MENU / UP / DOWN BUTTON

Used for accessing the setup / programming menu.

#### 3. LED INDICATORS

The LED for the corresponding channel when triggered shall lit. If the built in melody accompanies the triggered channel, it shall be indicated by the MELODY led. Green STATUS led denotes that the unit is powered in running.

#### 4. POWER SUPPLY INPUT

The unit operates with 24V DC power supply. Please us Amperes PS9400 power supply unit or other recommended regulated power supply adaptor.

NOTE : Do not tap power supply directly from a charging batteries or via battery charger in the system. The excessive voltage would damage the equipment.

## Parts Identification ( cont )

### 5. TRIGGERING DRY CONTACT

8 output channels are available in PT1800. Whenever a channel is activated by the timer, a dry contact is available and this is then connected to external equipment such as message recorder to activate a specific playback message for a specific time.

### 6. RS485 DATA PORT

RS485 data port is used to interface with other Amperes products, to enable simpler cabling or interconnection works. Alternatively, it can be linked to PC for setup and monitoring purpose. A USB-RS485 converter shall be required for this purpose. The software is available free and can be downloaded from the website .. [www.ampereselectronics.com/downloads](http://www.ampereselectronics.com/downloads)

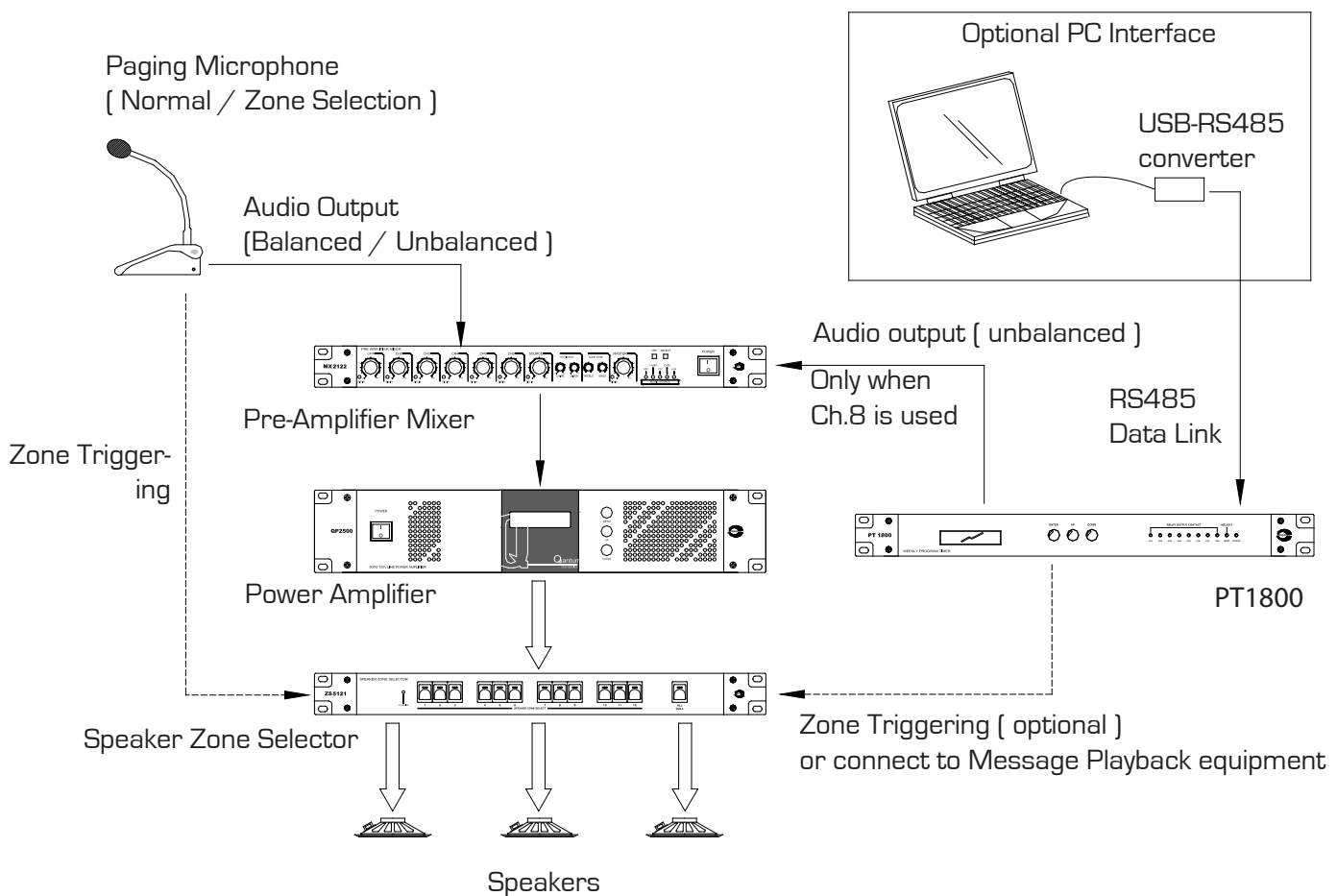
### 7. OUTPUT VOLUME

PT1800 comes with a built in Westminster chime. The output volume can be adjusted accordingly to suit the requirement.

### 8. OUTPUT JACK

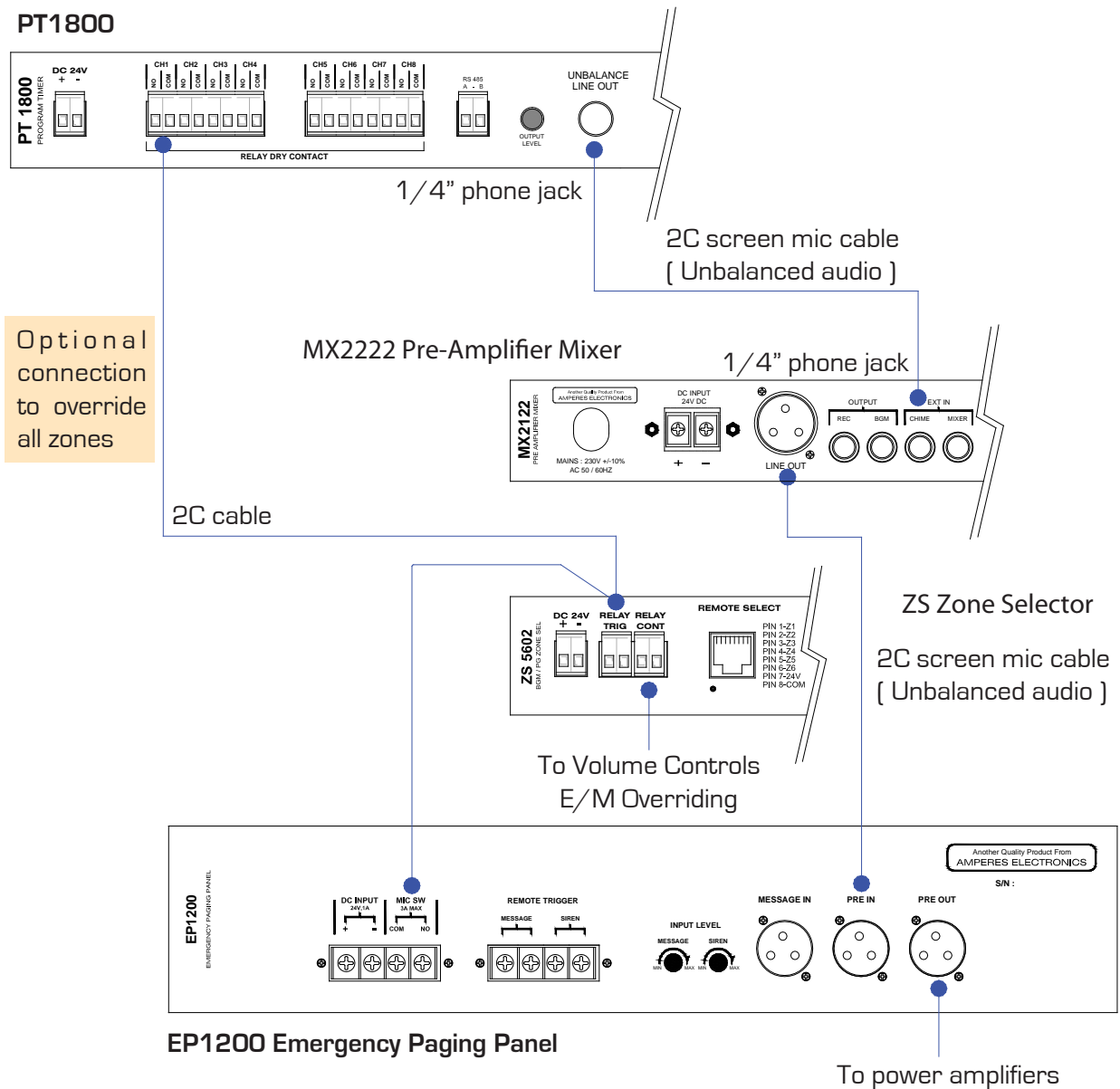
The chime output can be connected to pre-amplifier mixer with 1/4" unbalanced phone jack.  
Note : Chime output is only available when CH8 is used as output channel.

## General Schematic Diagram



# Connection Diagram

## Option 1 : Using PT1800 with its chime output



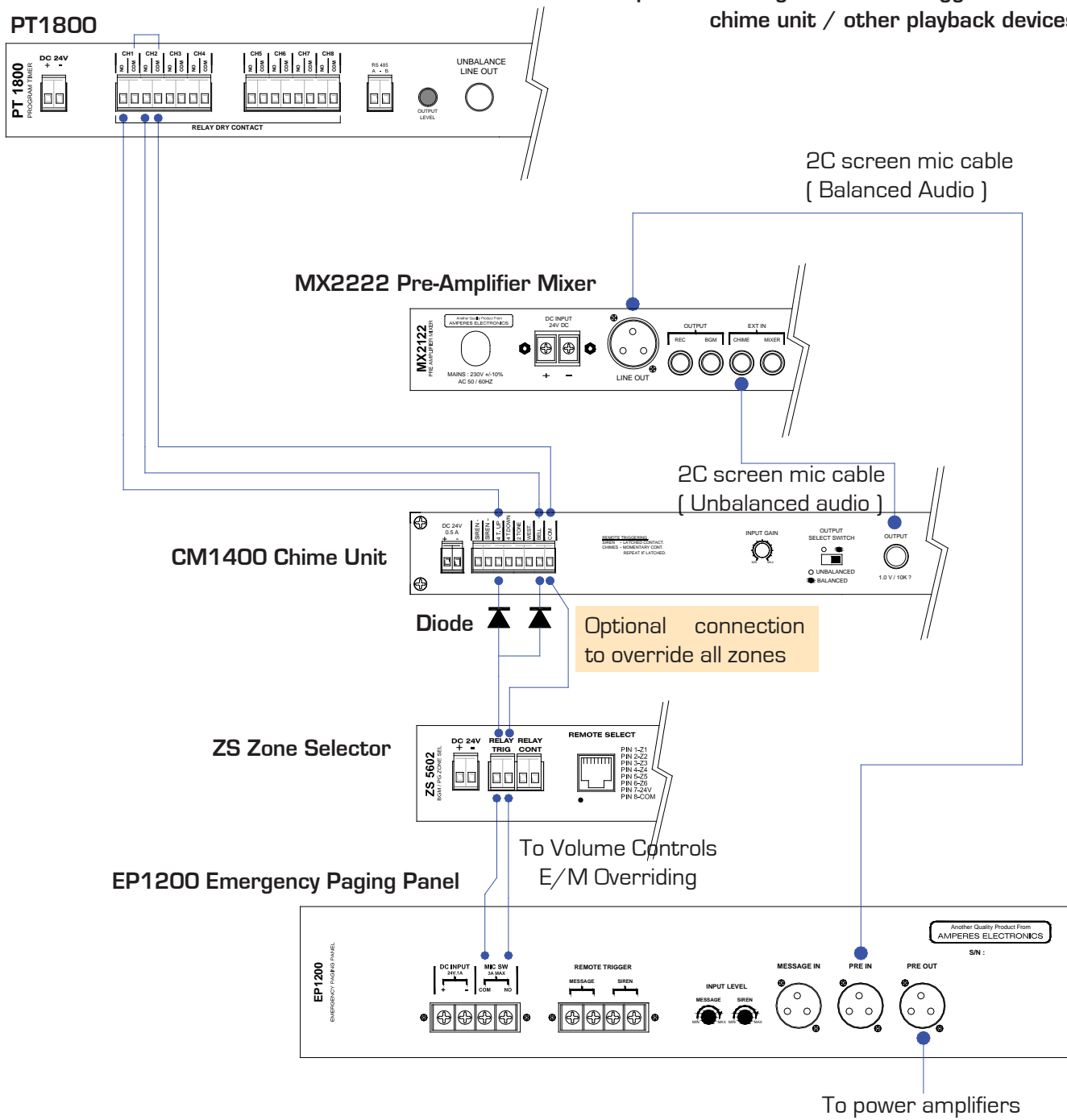
The connection diagram above utilises the built in chime of PT1800 to feed to mixer chime input. The timer is set to trigger a dry contact for one channel and is then connected to Zone Selector Relay Trigger port.

The relay port is also connected to EP1200 Mic Switch relay port for emergency overriding of Volume Controllers.

When the preset time at PT1800 is reached, it will provide a dry contact for channel 1, This will provide an chime output to the mixer. In the mean time, it shall also trigger all zones at the zone selector. The chime shall be broadcasted to all zones with volume controller bypassed.

# Connection Diagram

Option 2 : Using PT1800 to trigger external chime unit / other playback devices




The connection diagram above uses external chime unit ( or other playback devices ), which shall be triggered by PT1800 at designated time.

It is also intended to trigger different chime or message for different times, such as to differentiate the melody for morning and the afternoon working shift. In this case, a set of times shall trigger channel 1 and another set shall trigger channel 2. This is then linked to chime / tone unit at the corresponding triggering port.

If whenever a time is reached and requires all zones to be activated, use diodes as shown above for connection to Zone Selector all call triggering. Otherwise, this connection may be omitted.

## Setting Up

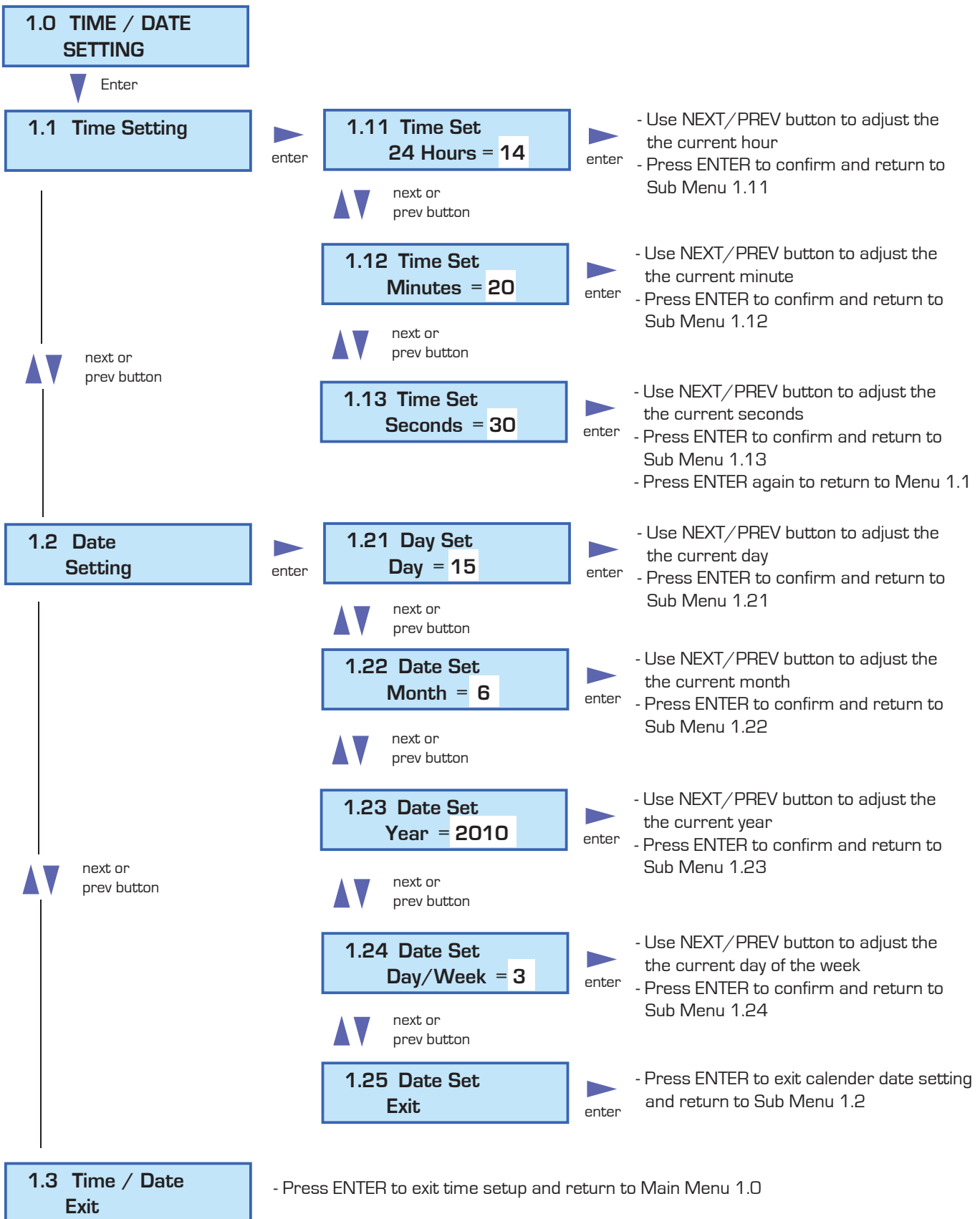
The unit has to be setup prior to operating, and can be done via the front panel setup menu or via a notebook. To enter setup menu, press SETUP/ENTER button, and the following main menu shall appear.

 Use the NEXT and PREV button to toggle between the main menu. To select, press MENU/ENTER button	<b>1.0 TIME / DATE SETTING</b>	To set the current time, date and day of the week of the unit
	<b>2.0 PRG.SCHEDULE SETTING</b>	To set the triggering time and the corresponding channel of up to 250 memories.
	<b>3.0 SCHEDULE CHECK</b>	To check the preset memories
	<b>4.0 MANUAL TRIG ON / OFF</b>	To manually trigger the channel relay port
	<b>5.0 CASCADE</b>	Cascade setup if more than one PT1800 is used, ie. if memories required are more than 250
	<b>6.0 FACTORY RESET</b>	To erase all settings and return the parameters to factory default
	<b>7.0 EXIT</b>	To exit from the setup menu

# Setting Up ( Cont )

## 1.0 TIME AND DATE SETTING

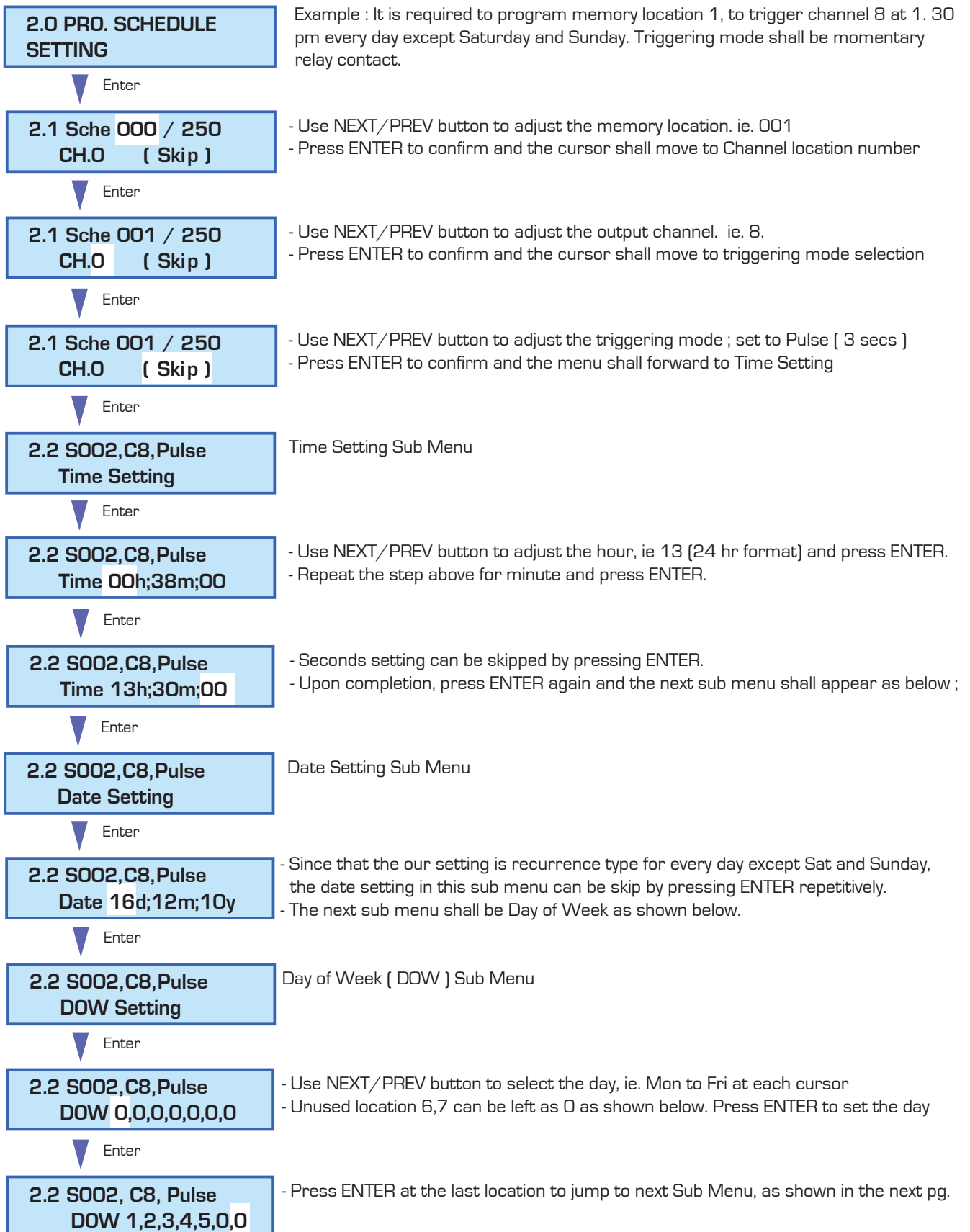
For first time installation, the time, date and day of the week in the unit's system has to be set. To select, press ENTER / MENU at this menu, and the following sub menus shall appear .



## Setting Up ( Cont )

### 2.0 PROGRAMMING TRIGGERING TIMES

Up to 250 memories can be stored in the unit. Select the Main Menu 2.0 to program the times as shown.



## Setting Up ( Cont )

▼ Enter

**2.2 S002,C8,Pulse**  
**Save and Exit**

Save and Exit Sub Menu

▼ Enter

**2.2 S002,C8,Pulse**  
**Save. Yes**

- Use NEXT/PREV button to toggle between saving and discarding the setup.
- Press ENTER and return to 2.0
- Repeat the steps shown for other time setting.

### 3.0 SCHEDULE CHECKS

This menu shall be used to check the setup times.

**3.0 SCHEDULE**  
**CHECK**

▼ Enter

**3.1 Sche. 001/250**  
**CH.0 (Pulse)**

- Use NEXT/PREV button to select the schedule number.
- Press ENTER to confirm selection

▼ Enter

**3.1 Sche. 003/250**  
**Time : 08h ; 30m : 00s**

- The selected schedule number, eg. 003 is selected, the time of trigger is shown
- Press ENTER to view other parameters.

▼ Enter

**3.1 Sche. 003/250**  
**Date : 01d ; 12m ; 10y**

- The date is shown, but ignore this date if the schedule is recurrence type.
- Press ENTER to view next parameters.

▼ Enter

**3.1 Sche. 003/250**  
**DOW : 1,2,3,4,5,0,0**

- The triggering shall occur at every day except Sat and Sun, shown as 0.
- Press ENTER to continue. DOW = Day of Week

▼ Enter

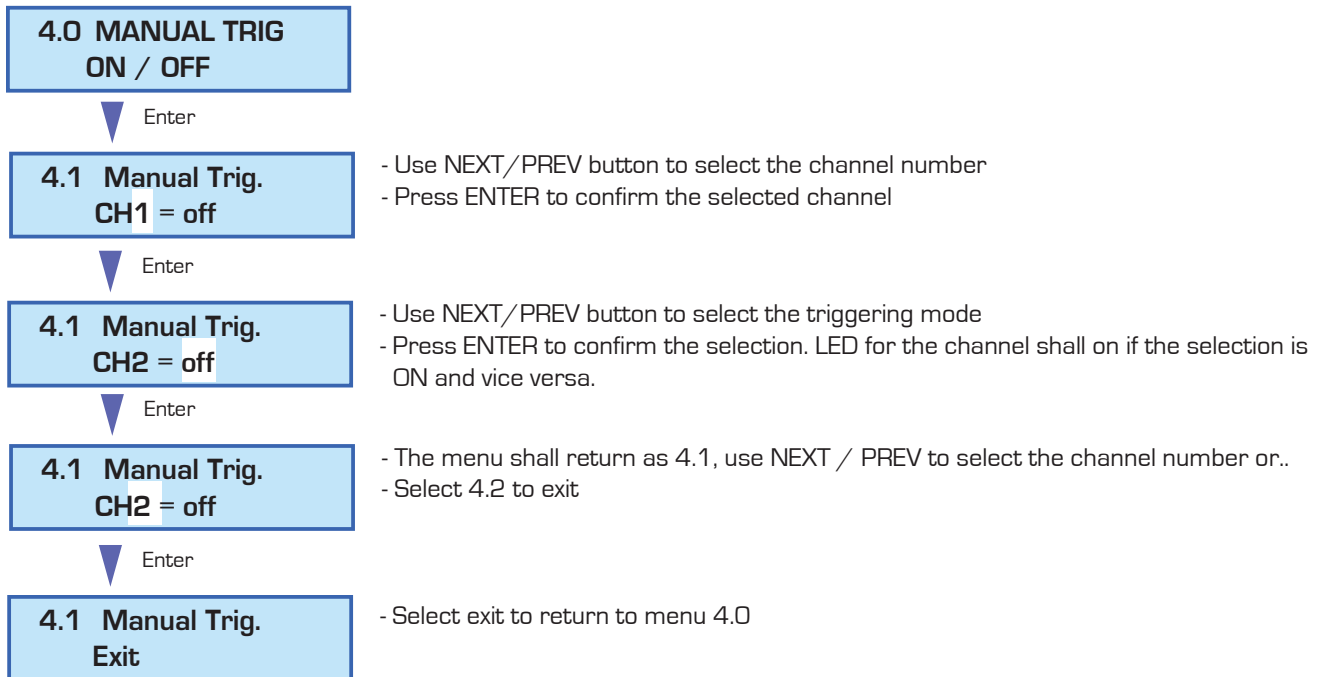
**3.1 Sche.**  
**Exit**

- To exit the current selection, press ENTER
- Menu shall return to 3.0
- To view other schedules, repeat the same steps above

## Setting Up ( Cont )

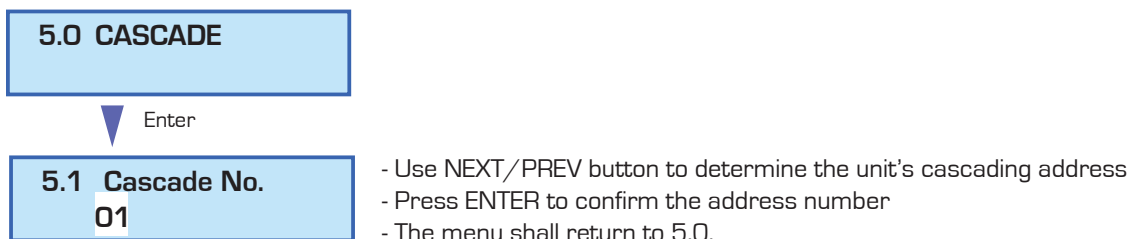
### 4.0 MANUAL TRIGGERING

The output channel can be triggered manually, overriding the scheduled activation. It can be ON (relay closed ), OFF (relay open) or Pulse.



### 5.0 CASCADE

Up to 16 units can be cascaded, if number of schedules in a unit is insufficient or number of channels are more than 8. This setting is only applicable if RS485 data is required, or linked to a PC for monitoring.



## Setting Up ( Cont )

### 6.0 FACTORY RESET

This is to delete all the settings done previously and return to factory default settings.

**6.0 FACTORY  
RESET**

▼ Enter

**6.1 Fact. Reset  
NO ?**

- Use NEXT/PREV button to select YES or NO
- Press ENTER to confirm selection
- The menu shall return to 6.0 above.

### 7.0 EXIT

To exit programming mode, enter this menu.

**7.0 EXIT**

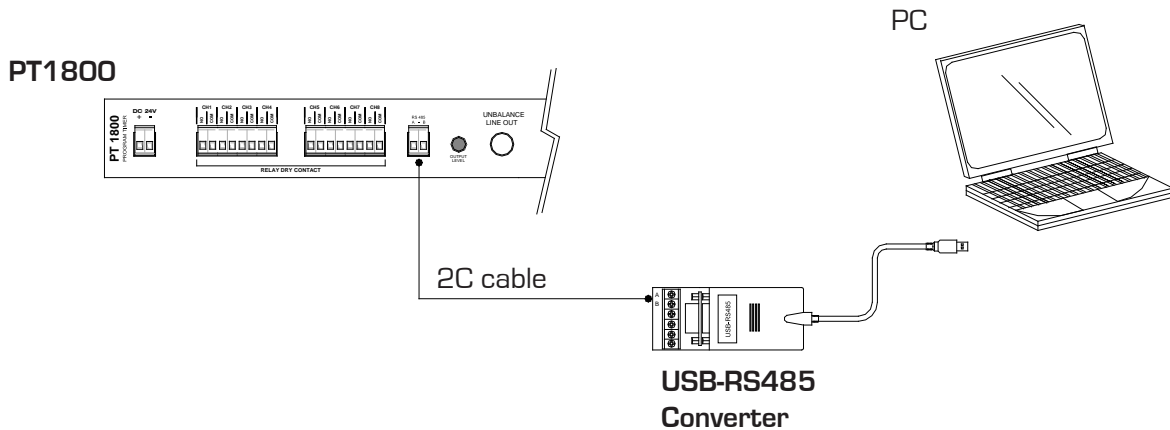
▼ Enter

**7.1 Exit  
NO ?**

- Use NEXT/PREV button to select YES or NO
- Press ENTER to confirm selection
- If NO, the menu shall return to 1.0 otherwise to time display [ running mode ].

## PC Interface

PT1800 can be linked to a notebook / PC for the convenience of programming triggering times as well as for monitoring purpose.



USB - RS485 converter shall be required for communication between PT1800 and PC. It is available separately. Please enquire about this item before purchasing.

The programming software is available for free and can be downloaded from website : [www.ampereselectronics.com/downloads](http://www.ampereselectronics.com/downloads)

### INSTRUCTIONS FOR INTERFACING WITH A PC

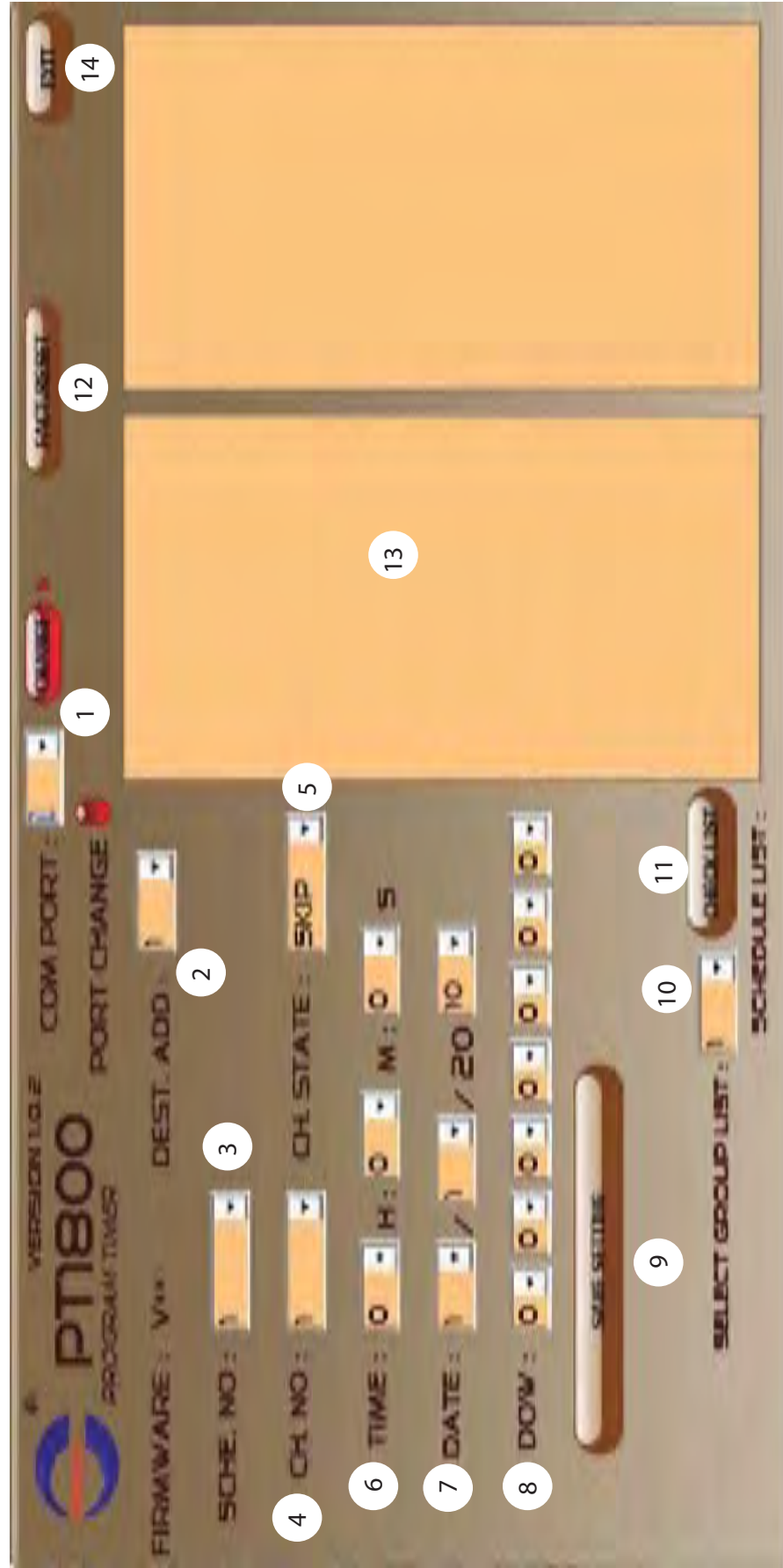
- Load the PT1800 Program Timer Software into your PC, an Icon shall appear at your desktop's screen
- Plug in the USB-RS485 converter to your PC, and shall prompt for the driver.  
A CD containing the driver is supplied with the converter and select to install the driver to your PC  
or  
Download the driver from our website : [www.ampereselectronics.com/downloads](http://www.ampereselectronics.com/downloads)
- Connect the RS485 data link between the converter and PT1800's RS485 data port.  
Make sure A and B connections are correct.
- To start the program, click the icon shown and a control page shall appear.



**SOFTWARE CONTROL PANEL**

Control panel below shall appear when the program is run. This shall provide easier programming and monitoring of the timer. Up completing the programming, click SAVE SETTING button to upload the setup. To download settings from the timer, click CHECK SETTING.

Further explanation on each button is shown in the next page.



### 1. COM PORT SELECTION

The default COM PORT is 1. If upon installing the USB-RS486 converter and its driver, the PC still fails to communicate with the Timer, change the COM PORT number. Try to change to different number and press the CHANGE button. If successful, it will be indicated by a green button.

If the attempts still fail, go into the PC's hardware configuration to change the setting at :  
Control Panel / Systems / Device Manager / USB Controllers

### 2. DESTINATION ADDRESS

If only 1 timer is installed, select 1. If multiple timers are available, select the correct address according to the timer's address [ under cascade mode ]. The PC interface shall only communicate with one timer at a time.

### 3. SCHEDULE NUMBER

Also known as Memory step number. Up to 250 memories can be stored in the timer.

### 4. CHANNEL NUMBER

It corresponds to the channel output number. 8 channels are available in the timer providing a dry contact to activate external devices.

### 5. CHANNEL STATE

Also known as triggering mode. Available output states are SKIP, ON, OFF and PULSE [ 3 seconds ]

### 6. TIME

Triggering time of the timer is in 24 hr format

### 7. DATE

It is for specific date of triggering. If this feature is not required in your programming, just ignore it and proceed to DOW. Any setting at DOW shall bypass the function, and if specific date activation is required, settings at DOW shall be left with all 0.

### 8. DAY OF WEEK ( DOW )

If only 1 timer is installed, select 1. If multiple timers are available, select the correct address according to the timer's address [ under cascade mode ]. The PC interface shall only communicate with one timer at a time.

### 9. SAVE SETTING

Click this button to transfer all data to the timer, as schedules shown in the left column of the table.

### 10. SELECT GROUP LIST

Select group list is also known as page number for schedule list. Each page shall display 10 schedules, to refer to the next 10 schedules, select the next available number.

## Summary of Features

### 11. CHECK LIST

Schedules stored in a timer can be transferred to PC by clicking this button. The schedules shall appeared in the right column.

### 12. FACTORY RESET

To reset the timer, click this button. Alternatively, resetting can be done via the timer itself.

### 13. SCHEDULE LIST

Each column shall show 5 schedule list, ie. a total of 10 schedules shall be shown in one page. To view the next page, click the Select Group List.

### 14. EXIT

Click EXIT to quit the program.

## Technical Specifications

Input voltage	24V DC ; 0.2 A
Power consumption	4.8W
Output channels	8
Triggering mode	ON, OFF, pulse [ 3 seconds ]
Memory	250 preset time
Contact rating	3A
Indicators	LED for triggered channel, Melody, Standby
Output chime	Westminster
Chime output level	Line level ; 1.2 V
Volume attenuation	off to 0 dB
Output connection	1/4" phone jack ; unbalanced
Impedance	600 Ohm
Data link	RS485
Baud rate	19.2 kbps
Protocols	AMNET propriotor codes
Dimensions	482W x 44H x 180D mm
Weight	2.6 kg

## warranty conditions

Only Amperes Electronics Service Centres are allowed to make warranty repairs : a list of Amperes Electronics Service Centres may be asked for by the purchaser or send directly to Amperes Electronics Sdn Bhd at 70 Jalan Industri PBP 3, Tmn Perindustrian Pusat Bandar Puchong, 47100, Puchong, Selangor, Malaysia or its authorized master distributor, Amperes Global Marketing. This warranty is not valid if repairs are performed by unauthorized personnel or service centres.

This warranty covers only repairs and replacement of defective parts ; cost and risks of transportation as well as removal and installation of the product from the main system are for the account of the purchaser. This warranty shall not extend to the replacement of the unit.

This warranty does not cover damages caused by misuse, neglect, accident of the product as well as using the product with power supply voltage other than shown on the product, or any other power supply source / adaptor not recommended by the manufacturer.

This warranty does not cover damages caused by fire, earthquakes, floods, lightning and every cause not directly related to the unit.

This warranty does not include any indemnity in favor of the purchaser or the dealer for the period out of use of the unit; moreover the warranty does not cover any damages which may be caused to people and things when using the product.

This warranty certificate is valid only for the described product, and is not valid if modifications are made on this certificate or on the identification label applied on the product.

This warranty covers all the material and manufacturing defects and is valid for a period of 12 months from the date of purchase or for a longer period in countries where this is stated by a national law. In this case, the extension is valid only in the country where the product is purchased.

Amperes Electronics Sdn Bhd is not obliged to modify previously manufactured products under warranty if the design changes or improvements are made.

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