

9. SPECIFICATIONS

Power Source	220 - 230 V AC, 50/60 Hz
Power Consumption	10 W
Audio Output	Westminster Chime Level : 0 dB, 600 Ω
Synchronize Time	Send out pulse per 1 minute
Control Output	8 channels contact switch (NO) 1 output contact switch (NO)
Display	Power indicator : Green, LCD Character : Back Light Green, USB Indicator PC Link : Orange
PC Requirements	Windows XP 1/2/3 , Windows 7/8 RAM 512 MB
Operating Temperature	0 °C to 40 °C (14 °F to 104 °F)
Operating Humidity	Under 90% RH (no Condensation)
Color	Front panel : Aluminium, Black, Alumite Case : SECC plate, Black, Paint
Dimensions	420 (w) x 59 (h) x 342 (d) mm (16.54" x 2.32" x 13.46")
Weight	3.2 kg (7.05 lb)

Note : The design and specifications are subject to change without notice for improvement

• Accessories

Power Cable (YA-301)1
Removable terminal plug (2 pins)12
TT-208-AS CD-ROM1

• Optional product

Rack-mounting bracket : MB-15B



INSTRUCTION MANUAL

PROGRAM TIMER

TT-208-AS

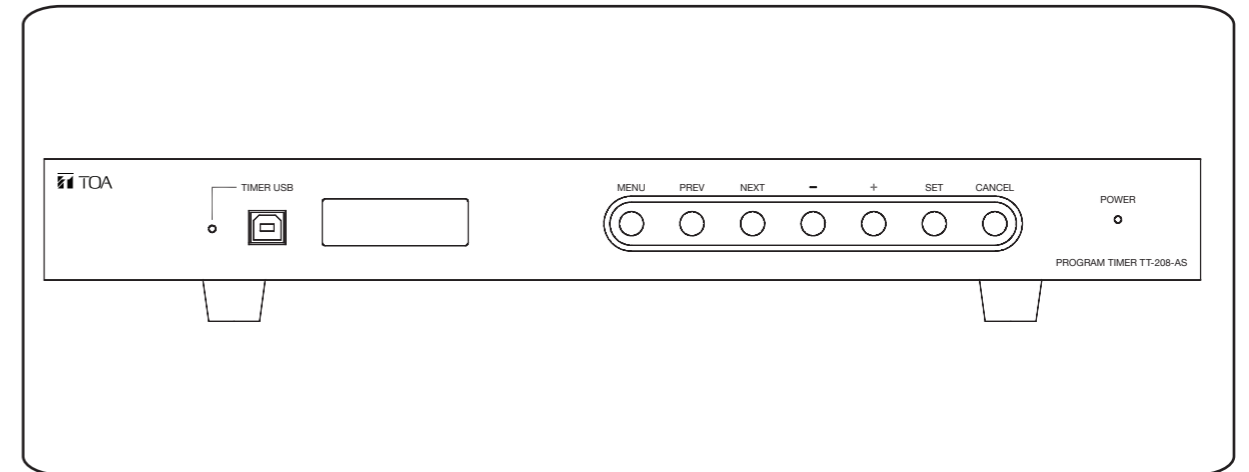


TABLE OF CONTENTS

1. SAFETY PRECAUTIONS	2
2. FEATURES	4
3. INSTALLATION PRECAUTIONS	4
4. NOMENCLATURES AND FUNCTIONS	4
Front	4
Rear	5
5. RACK MOUNTING	6
6. TT-208-AS CONNECTIONS	7
6.1. TT-208-AS Cascade System	7
6.2. TT-208-AS Connection with A-2000 / A-1700 / A-1800 Series Mixer Power Amplifier	8
6.3. TT-208-AS Connection with FV-200PP-AS	9
6.4. TT-208-AS Connection with FV-200PP-AS & EV-20R / EV-350R	9
6.5. TT-208-AS Connection with SS-2010-AS & EV-20R For Zone Broadcast	9
7. CONFIGURATION	10
7.1. TT-208-AS Configuration by LCD Menu	10
7.2. TT-208-AS Configuration by PC Setting Software	16
7.2.1. PC Setting Software Installation	16
7.2.2. PC Setting Software Instruction	17
8. DIMENSIONAL DIAGRAM	23
9. SPECIFICATIONS	24

Thank you for purchasing TOA's Program Timer.

Please carefully follow the instructions in this manual to ensure long, trouble-free use of your equipment.

1. SAFETY PRECAUTIONS

- Before installation or use, be sure to carefully read all the instructions in this section for correct and safe operation.
- Be sure to follow all the precautionary instructions in this section, which contain important warnings and/or cautions regarding safety.
- After reading, keep this manual handy for future reference.

Safety Symbol and Message Conventions

Safety symbols and messages described below are used in this manual to prevent bodily injury and property damage which could result from mishandling. Before operating your product, read this manual first and understand the safety symbols and messages so you are thoroughly aware of the potential safety hazards.

⚠ WARNING Indicates a potentially hazardous situation which, if mishandled, could result in death or serious personal injury.

⚠ CAUTION Indicates a potentially hazardous situation which, if mishandled, could result in moderate or minor personal injury, and/or property damage.

⚠ WARNING

When installing the unit

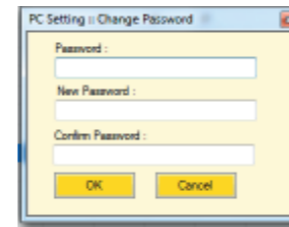
- Do not expose the unit to rain or an environment where it may be splashed by water or other liquids, as doing so may result in fire or electric shock.
- Use the unit only with the voltage specified on the unit. Using a voltage higher than that which is specified may result in fire or electric shock.
- Do not cut, kink, otherwise damage nor modify the power supply cord. In addition, avoid using the power cord in close proximity to heaters, and never place heavy objects -- including the unit itself -- on the power cord, as doing so may result in fire or electric shock.
- Avoid installing or mounting the unit in unstable locations, such as on a rickety table or a slanted surface. Doing so may result in the unit falling down and causing personal injury and /or property damage.
- Install the unit only in a location that can structurally support the weight of the unit and the mounting bracket. Doing otherwise may result in the unit falling down and causing personal injury and/or property damage.
- Owing to the unit's size and weight, be sure that at least two persons are available to install the unit. Failure to do so could result in personal injury.

- Tighten each nut and bolt securely. Ensure that the bracket has no loose joints after installation to prevent accidents that could result in personal injury.

When the unit is in use

- To prevent a fire or electric shock, never open nor remove the unit case as there are high voltage components inside the unit. Refer all servicing to qualified service personnel.
- Do not place cups, bowls, or other containers of liquid or metallic objects on top of the unit. If they accidentally spill into the unit, this may cause a fire or electric shock.
- Do not insert nor drop metallic objects or flammable materials in the ventilation slots of the unit's cover, as this may result in fire or electric shock.
- Do not touch a plug during thunder and lightning, as this may result in electric shock.

15. Fast Change Password



1. Click File-----> Change Password, then Create old password.
2. Create New password.
3. Confirmation new password.
4. click OK, if all steps finish.

16. Open File

1. Click File -----> Open.
2. Choose file want to open.

17. Exit

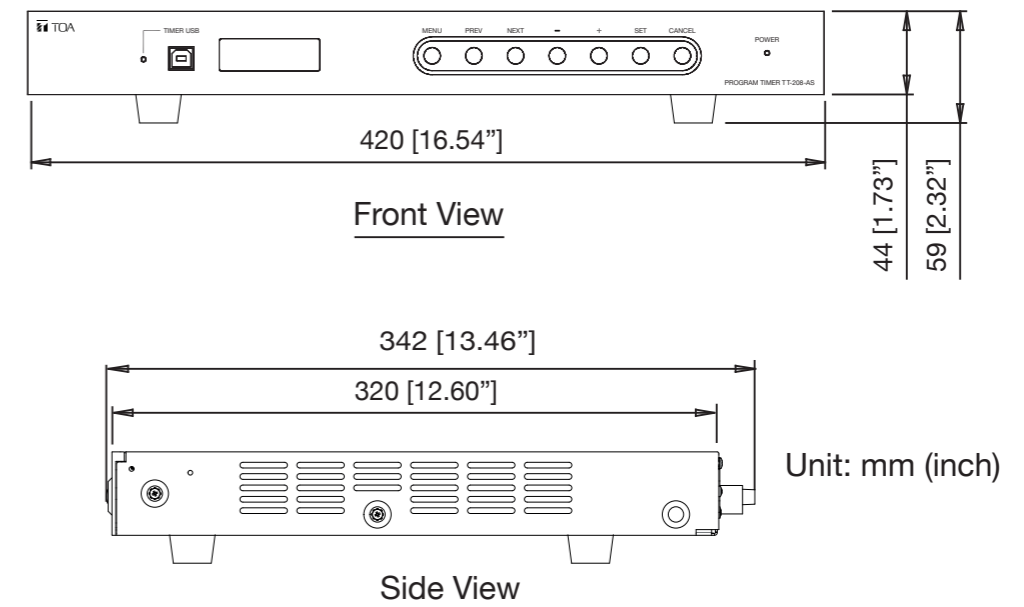
Click file -----> Exit

18. Version

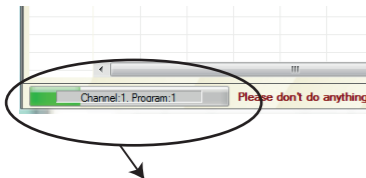
1. Click Help -----> Version.
2. Then show the information box like below.
3. Then click OK.



8. DIMENSIONAL DIAGRAM

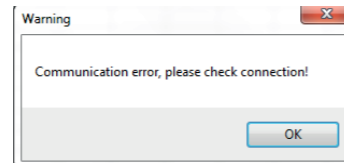


3. Wait until upload process finish.



Uploading process display

if show notification like below, please connect again between TT-208-AS and PC Setting Software.



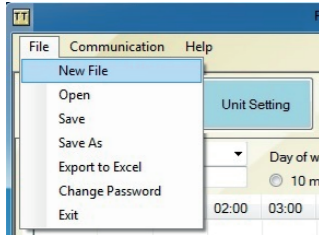
4. Check result uploading in TT-208-AS LCD menu at Make program menu.

12. Downloading Program From TT-208-AS To PC Setting Software

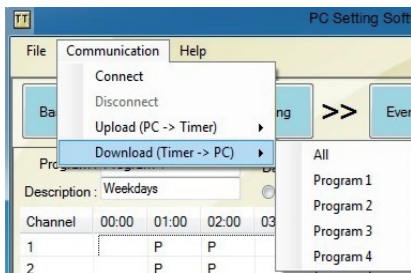
Steps for downloading are :

1. Make sure communication status "connect", look at right below program window.

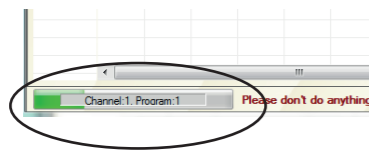
2. Choose File--> New File.



3. Choose Communication → Download (Timer → PC) → All or Program 1, 2, 3, 4.



4. Wait until download process finish and after downloading finish, worksheet will show program from TT-208-AS.



Downloading process display

13. Export To Excel

1. Click File -----> Export to Excel.
2. Wait until worksheet excel open.

14. Save Program

Save Program Timer use with format .dat.

Step :

Click file -----> Save as, then choose file and create filename.

⚠ WARNING

When installing the unit

- Should the following irregularity be found during use, immediately switch off the power, disconnect the power supply plug from the AC outlet and contact your nearest TOA dealer. Make no further attempt to operate the unit in this condition as this may cause fire or electric shock.
 - If you detect smoke or a strange smell coming from the unit.
 - If water or any metallic object gets into the unit.
 - If the unit falls, or the unit case breaks.
 - If the power supply cord is damaged (exposure of the core, disconnection, etc.).

⚠ CAUTION

- Never plug in nor remove the power supply plug with wet hands, as doing so may cause electric shock.
- When unplugging the power supply cord, be sure to grasp the power supply plug; never pull on the cord itself. Operating the unit with a damaged power supply cord may cause a fire or electric shock.
- When moving the unit, be sure to remove its power supply cord from the wall outlet. Moving the unit with the power cord connected to the outlet may cause damage to the power cord, resulting in fire or electric shock. When removing the power cord, be sure to hold its plug to pull.
- Do not block the ventilation slots in the unit's cover. Doing so may cause heat to build up inside the unit and result in fire. Also, periodically clean the ventilation slots of dust.
- To avoid electric shocks, be sure to switch off the unit's power when connecting speakers.

- If it is malfunctioning (no tone sounds.) Be sure to follow the instructions below when rack-mounting the unit. Failure to do so may cause a fire or personal injury.
- Install the equipment rack on a stable, hard floor. Fix it with anchor bolts or take other arrangements to prevent it from falling down.
- When connecting the unit's power cord to an AC outlet, use the AC outlet with current capacity allowable to the unit.

All units

- Avoid installing the unit in humid or dusty locations, in locations exposed to the direct sunlight, near the heaters, or in locations generating sooty smoke or steam as doing otherwise may result in fire or electric shock.
- When unpacking or moving the unit, be sure to handle it with two or more persons. Falling or dropping the unit may cause personal injury and/or property damage.

When the unit is in use

- Do not operate the unit for an extended period of time with the sound distorting. This is an indication of a malfunction, which in turn can cause heat to generate and result in a fire.
- If dust accumulates on the power supply plug or in the wall AC outlet, a fire may result. Clean it periodically. In addition, insert the plug in the wall outlet securely.
- Switch off the power, and unplug the power supply plug from the AC outlet for safety purposes when cleaning or leaving the unit unused for 10 days or more. Doing otherwise may cause a fire or electric shock.
- Make sure that the volume control is set to minimum position before power is switched on. Loud noise produced at high volume when power switched on can impair hearing.
- Contact your TOA dealer as to the cleaning. If dust is allowed to accumulate in the unit over a long period of time, a fire or damage to the unit may result.

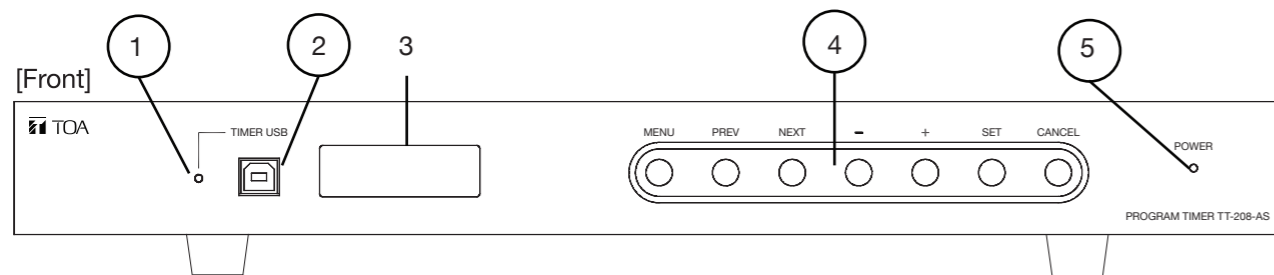
2. FEATURES

- 8 independent channel outputs.
- Weekly program capacity is 80 steps per channel, and each step can be programmed by PC or LCD Menu.
- TT-208-AS can operate according to the program was set or can activate by manual.
- Setting the pause mode allows no program output to be delivered.
- No-voltage output make contact in connection according time was set.
- Built-in buzzer audibly sign the user of key operation.
- Monthly error is ± 10 seconds at 25°C (77°F) of ambient temperature.
- Clock and stored programs can be maintained for approximately 100 hours in the event of power outage.

3. INSTALLATION PRECAUTIONS

- The supplied power supply cord is designed for exclusive use with this unit. Never use it with other equipment.
- Do not switch power on and off frequently because this can shorten the battery lifetime.
- Be sure to set the internal battery switch to ON after installation.
- Do not install the unit close to a warm air vent or in locations where the unit is exposed to the sunlight. Installation in high temperature area like on the amplifier makes a clock inaccurate. Install the unit in the area of which temperature is as close as possible to the room temperature.
- Install the unit as far as possible from a radio tuner or a wireless microphone.
- Be sure to ground the unit.
- Be sure to unplug power cord from the wall outlet when making connections.

4. NOMENCLATURE AND FUNCTIONS



1. Timer USB Indicator

Lights orange when there is a data communication occur in Timer USB terminal.

2. Timer USB

USB connector for setting schedule in program timer memory.

3. LCD Display

LCD 16x2 Character. Use for clock display, menu configuration display, manual key operation display, etc.

4. Key Setting

- MENU KEY
Key to enter TT-208-AS configuration menu.

- PREV KEY

Key for navigation. you can select previous option in menu display.

- NEXT KEY

Key for navigation, you can select next option on menu display.

- - KEY

Key for adjust value, you can decrease value on menu display.

- + KEY

Key for adjust value, you can increase value on menu display.

- SET KEY

Key for execute selected option on menu display.

- CANCEL KEY

Key for cancel operation on menus display.

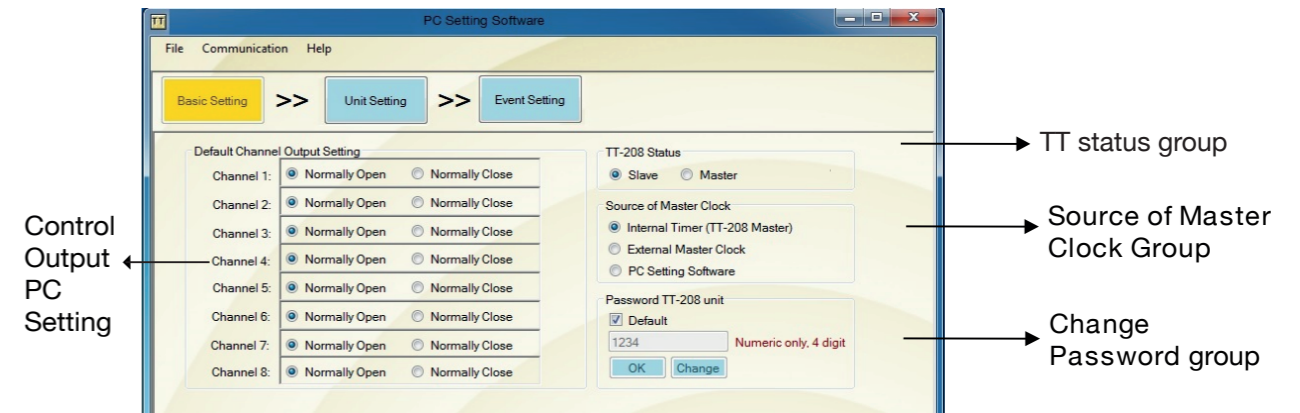
5. Power Indicator

Light green when power turn on.

7. Setting Channel Output

Step for Setting channel output :

Click Unit Setting then click button of Normally Open or Normally Close in each channel. The display of Setting like below.



Normally Open as default

8. Setting Status TT-208

For Setting status TT-208 by PC Setting :

Click Unit Setting, then Choose status for TT-208 on TT-Status group.

- Slave : TT-208 as slave just catch synchronize signal from TT-208 master.
- Master : TT-208 as master, will send synchronize signal to TT-208 slave.

Importance

When device set as master, make sure connection from External master clock is unplug and synchronize function from PC setting software is disable (if USB cable connected to PC setting software).

Default : Master

9. Setting Source Of Master Clock

Function this setting like as function Sinc mode in TT-208. Steps are:

Click Unit Setting then choose option in Source Master Clock group.

- TT Master
- External
- PC Master

Importance

When synchronize mode set to TT Master, make sure connection from External clock is unplug, synchronize function from PC setting software is disable (if USB cable connected to PC setting software) and status of device as master.

When synchronize mode set to External and PC Master, make sure set status of device as slave.

Default : TT Master

10. Change Password by PC

Steps to change password are :

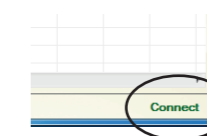
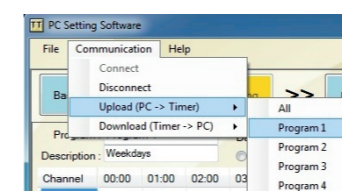
1. Click Unit Setting.
2. Choose Default or No. If choose Default, click in Default checkbox and automatically password is 1234. If No, do not click default, then click change and create numeric password but only 4 digits.
3. Click OK.

Default Password : 1234

11. Upload Program Timer

Steps of upload program timer from PC Setting to TT-208 :

1. Make sure communication status "connect", look at right below program window.
2. Choose Communication → Upload (PC → Timer) → All or Program 1, 2, 3 or 4

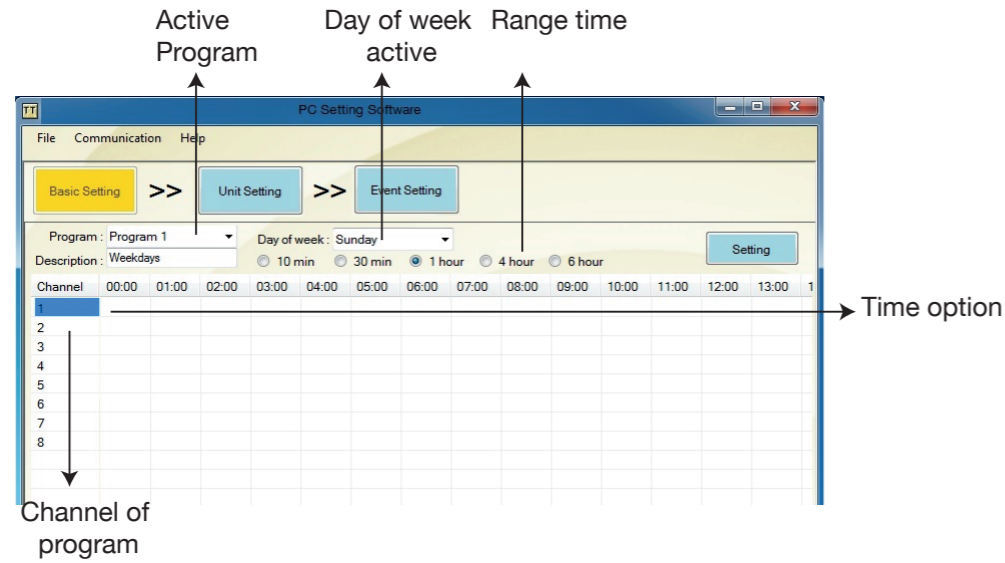


Communication status

6. Make Program By PC

Make program timer by PC use Event Setting . This is menu and function in Event Setting.

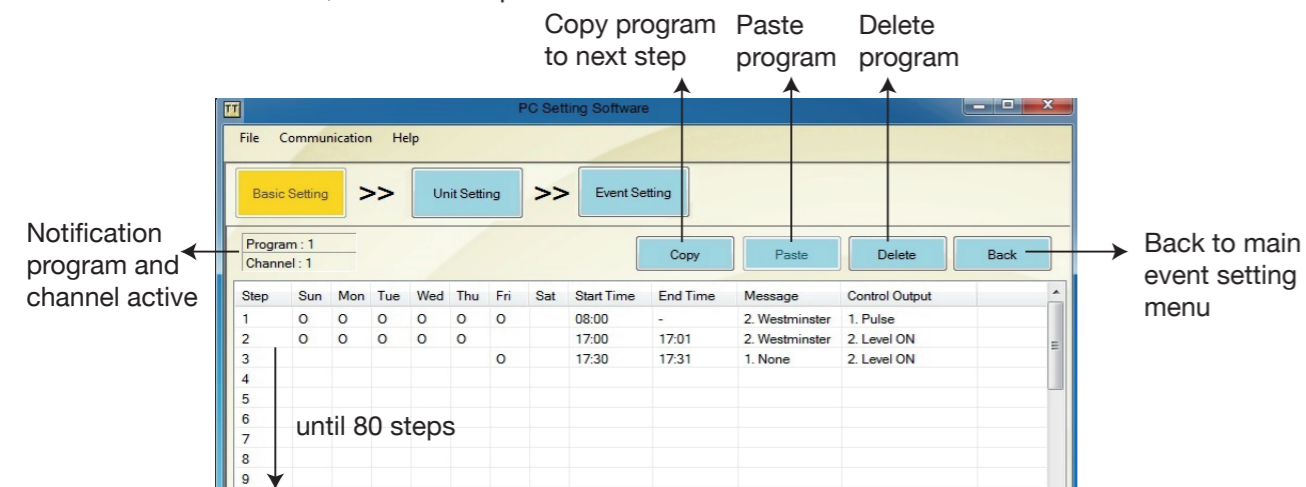
a. Event Setting



- Program : Have 4 programs and each program have 8 channels and 80 steps can be set.
- Day : Have 7 days. Start in Sunday until Saturday. The function to know and arrange program timer (event) in the that day. Ex: choose Sunday in program 1, just event/program in Sunday program 1 can be seen.
- Range : Have 5 options. Minimum → 10 min and maximum → 6 hour. The function is to see detail from Time event according the time.
- Channel : Have 8 active channel.
- Time : Minimum time → 00:00 and maximum time → 23:59.

b. Steps To Make Program :

1. Choose Event Setting → program (program 1 – program 4).
2. Double click in channel column or click channel column then click Setting button.
3. Choose Step and double click in parameter column (days, start time, end time, message and control output) to make the schedule like below.
4. If want to edit schedule, double click parameter column.



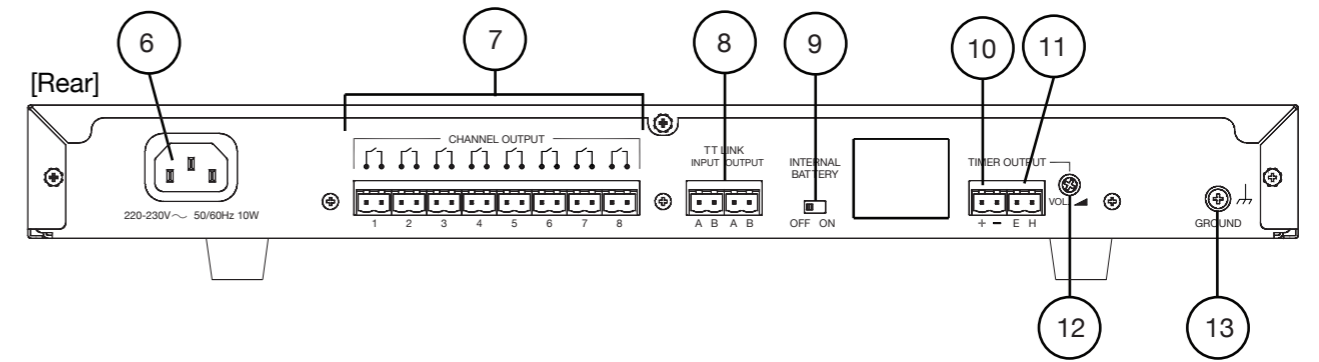
Start time : Start time program active. Range time for hour : 00 – 23 and for minute : 0 - 59.

End time : End time program, where value of end time must more than start time.
Range time for hour : 00 – 23 and for minute : 0 – 59.

Message : Have two options None and westminster.

Control Output : Have two options Pulse and Level On.

- Pulse : Control Output active until 5 second.
- Level On : Control Output minimum active 1 minute maximum active 99 minutes.



6. AC Inlet

Power supply input 220-230V AC, 50/60Hz

7. Channel Output

There are 8 channel output contact switch for activate/trigger other device. Each channel have 50 program time. When 2 or more channels active together in same time, so TT-208-AS will activate both of channel, and TT-208-AS will send out westminster chime audio (setting by software, use PC Setting Software).

Unit has modes: Pulse (active 5 second), level On (can active from 1 minute until 99 minutes), Normally Open (depend of Start Time and End Time), Normally Close (depend of Start Time and End Time).

8. TT LINK

TT-208-AS can be cascade, this connector for synchronize time between TT-208-AS (as master) and TT-208-AS (as slave). Setting master or slave status, can do it from LCD Menu.

TT-208-AS have 3 option for master clock:

- TT Master, pulse for synchronize time will generate from TT-208-AS Master.
- External, pulse for synchronize time will generate from external master clock (External master clock connected to TT LINK INPUT). This mode will shutting down pulse from TT-208-AS Master.
- PC Master, pulse for synchronize time will generate from PC Setting software (Synchronize time via communication data from USB Timer). This mode will shutting down pulse from TT-208-AS Master.

9. Internal Battery Switch

If switch status is ON, battery will active. Function of battery for back up supply RTC internal, so when AC supply turn OFF, RTC internal still running and memory will safe.

Note : Factory Preset is OFF position.

10. Control Output

Control output connector for activate/trigger other device. This output will active during TT-208-AS send out audio message. (Relay output; rated voltage: 30V DC; current capacity 1A; 2P terminal).

11. Audio Output

When some channel active, TT-208-AS will send out audio output. Audio output level; rated: 0dB.

12. Audio Output Volume

For adjust audio level of audio output.
Note : Factory preset is maximum position.

13. Functional Earth Terminal

Connect this terminal to the functional earth terminal of external equipment if excessive noise is generated when the external equipment is connected to the TT-208-AS. This could reduce noise.

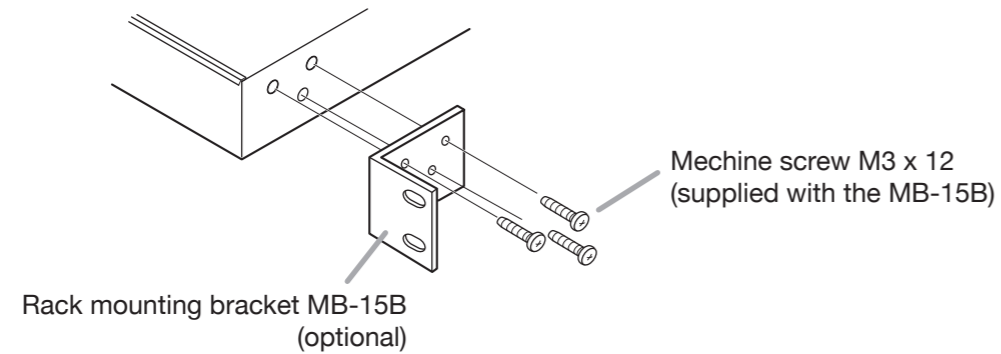
Note: This terminal is not for "Protective Earth".

5. RACK MOUNTING

To mount the unit in a standard 19" equipment rack, the rack mounting bracket MB-15B (optional) is required. Follow the procedures below.

Step 1. Remove the rubber foot from the bottom of the unit.

Step 2. Attach the rack mounting bracket MB-15B to the unit.

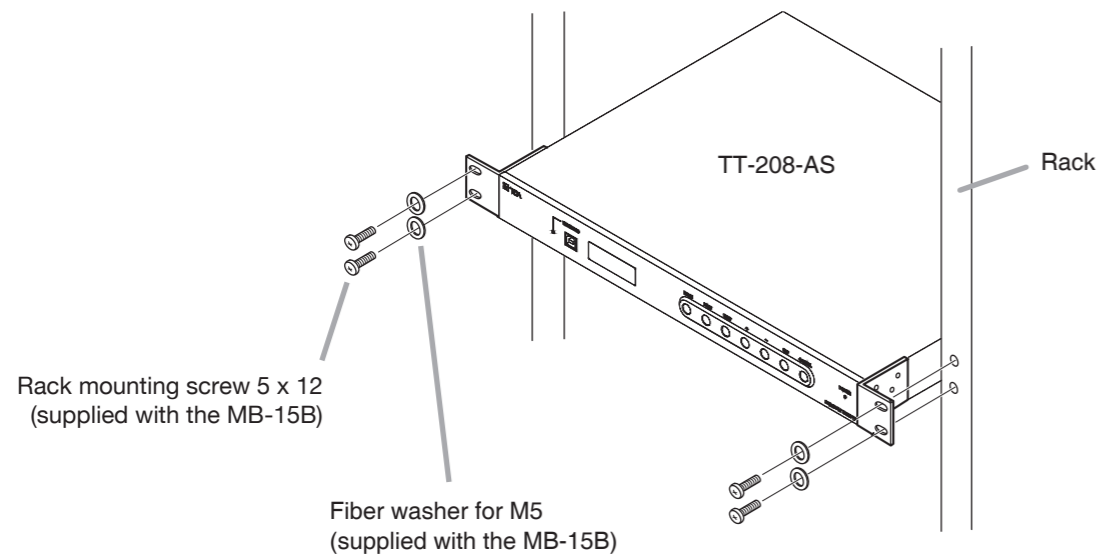


Step 3. Fix the unit in the rack.

Use the rack mounting screws that are appropriate for the rack.

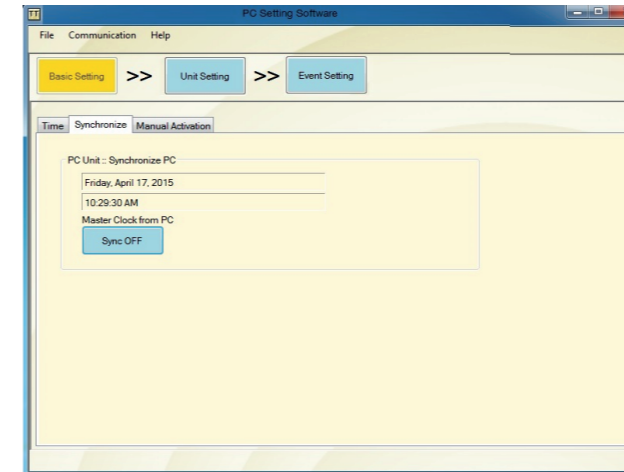
Note:

The rack-mounting screws supplied with the MB-15B can be used for the TOA equipment rack only. Illustrated below is a unit mounting method to the TOA rack.



4. Setting Synchronize Mode

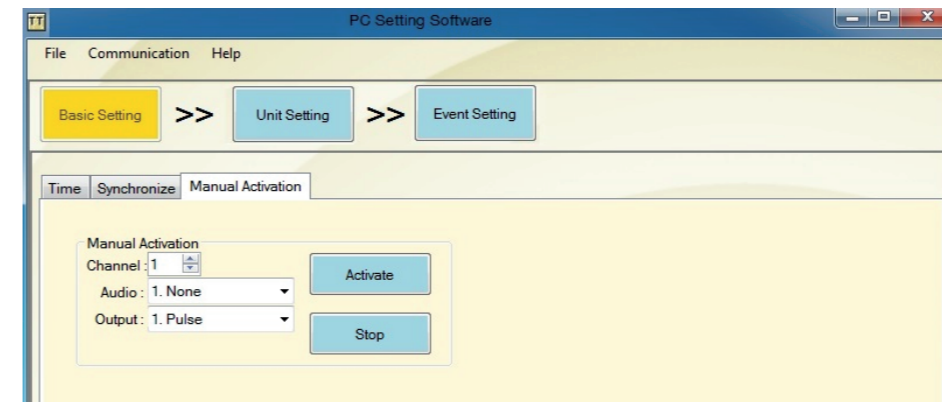
Choose Basic Setting---> Synchronize . Click Sync OFF/ON in button.



Synchronize mode order to synchronize time between TT-208-AS and PC Setting (Master to Slave), so between them time always same.

5. Manual Activation

1. Choose Basic Setting ---> Manual Activation.



2. Set channel want to be activated on TT-208-AS. Channel in PC Software consist of 8 channel according to TT-208-AS.

3. Set audio and output on channel.

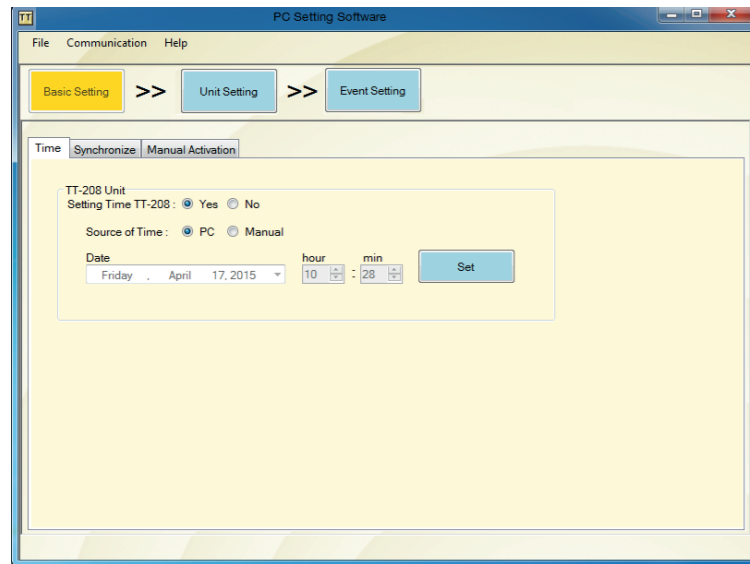
- Audio consist of None and Westminster.
- Output consist of Pulse and Level On.

Difference of Pulse and Level On in length time activation. Length Pulse just active on 5 second (can't modify) and Length Level On can modify 1 minute until 99 minutes.

4. If all setting finish, Click Activate to activate channel. And if want to Stop channel , Click Stop Button if connection OK between PC And TT-208-AS, Contain TT-208-AS automatically update, but if connection bad, please connect again by communication menu.

2. Connect To TT-208-AS

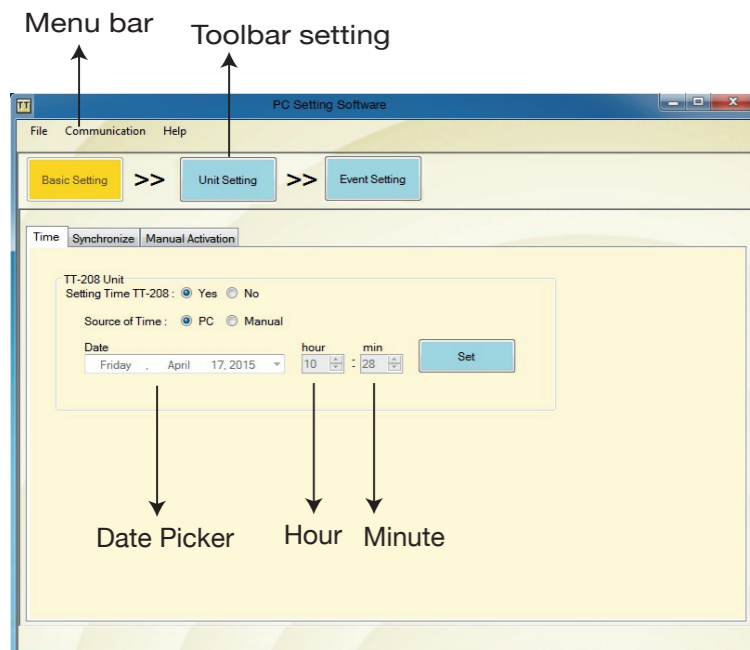
Connect USB cable from PC to USB connector on front panel TT-208, USB indicator of TT-208-AS will blink when plug in USB cable. On PC Setting Software choose Communication menu -> Connect.



3. Setting Current Time

Steps to setting current time are :

- Make sure Connection in TT-208-AS and PC by USB cable is OK.
- Choose Basic Setting---> Time Function. Choose Yes in Setting Time TT-208 to activate time from PC and choose by PC or manual in Source of time. Source of time by PC means TT-208-AS was connected to PC can change time automatically. If choose manual, user can change time manually by date picker, hour and min . if done, Click SET button.



6. TT-208-AS CONNECTIONS

6.1. TT-208-AS Cascade System

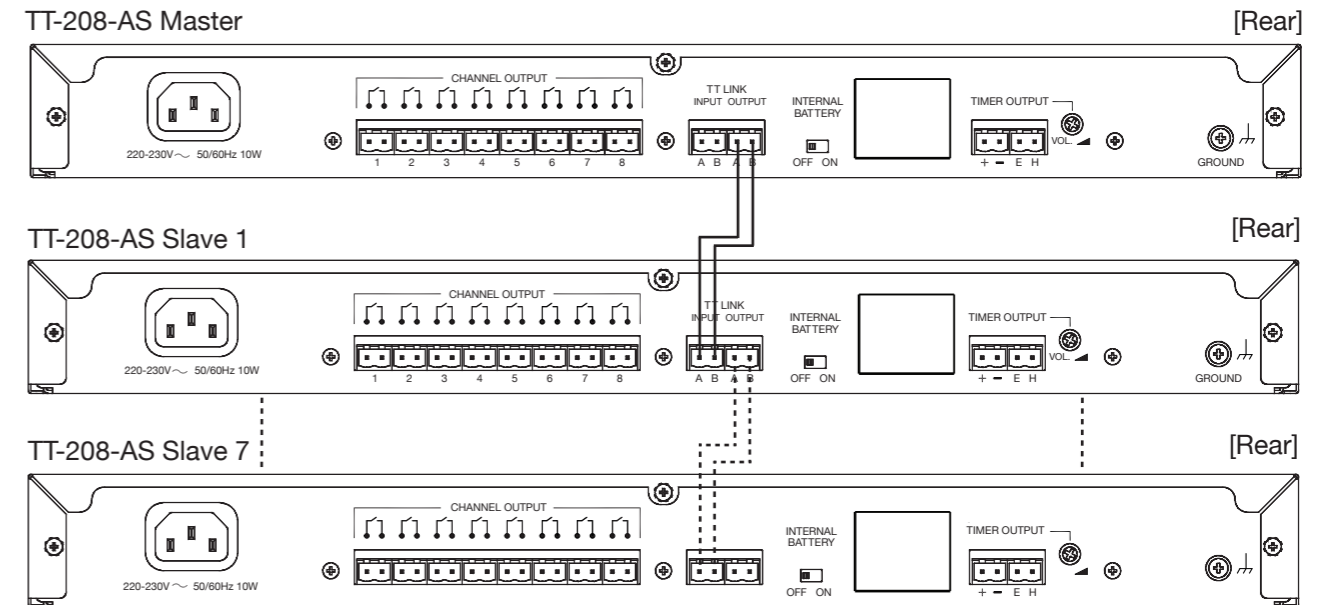
TT-208-AS have 3 modes Cascade for Synchronize time:

- TT Master
- External
- PC Master

Maximum cascading TT-208-AS are 8 unit. A Unit as Master and 7 Units as Slave. This is wiring for Synchronize by TT-208-AS.

a. Synchronize mode : TT Master

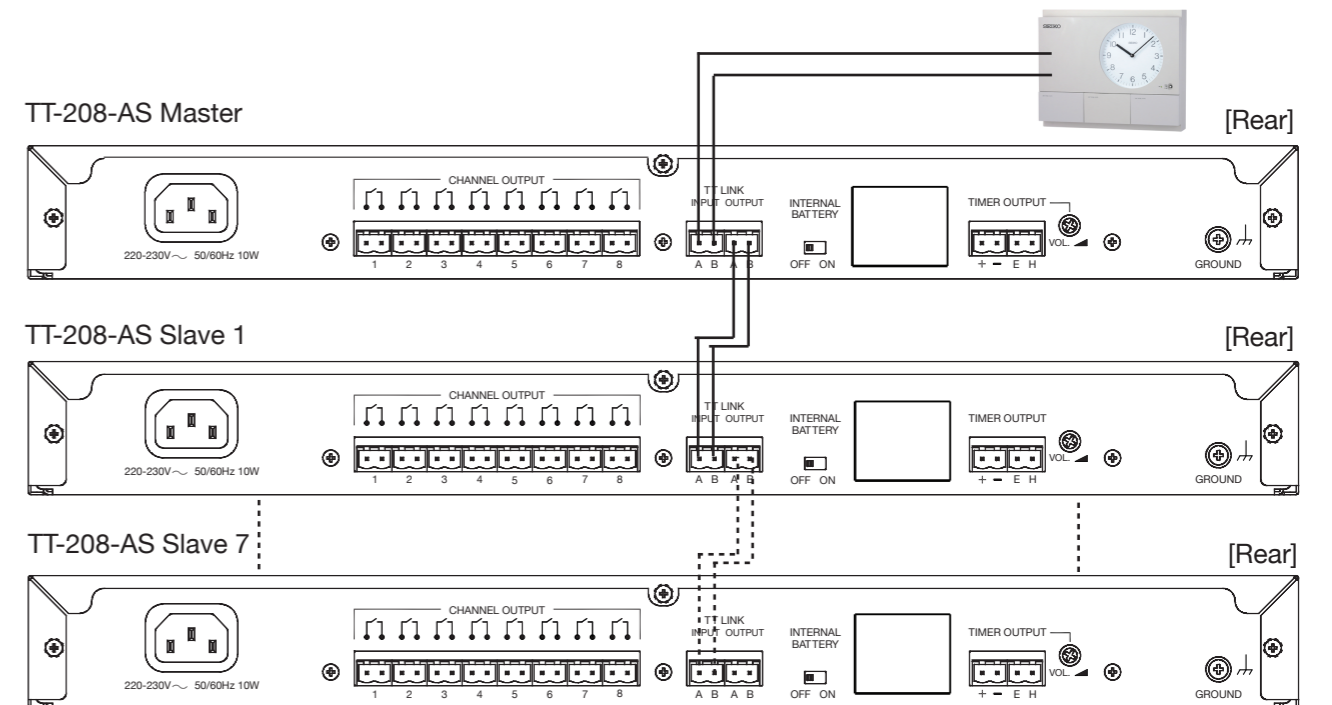
In this Synchronization, pulse can be generated from TT-208-AS as master.



Note :
Cable length : Up to 1200 meter.
Cable type : UL-1007-22-AWG.

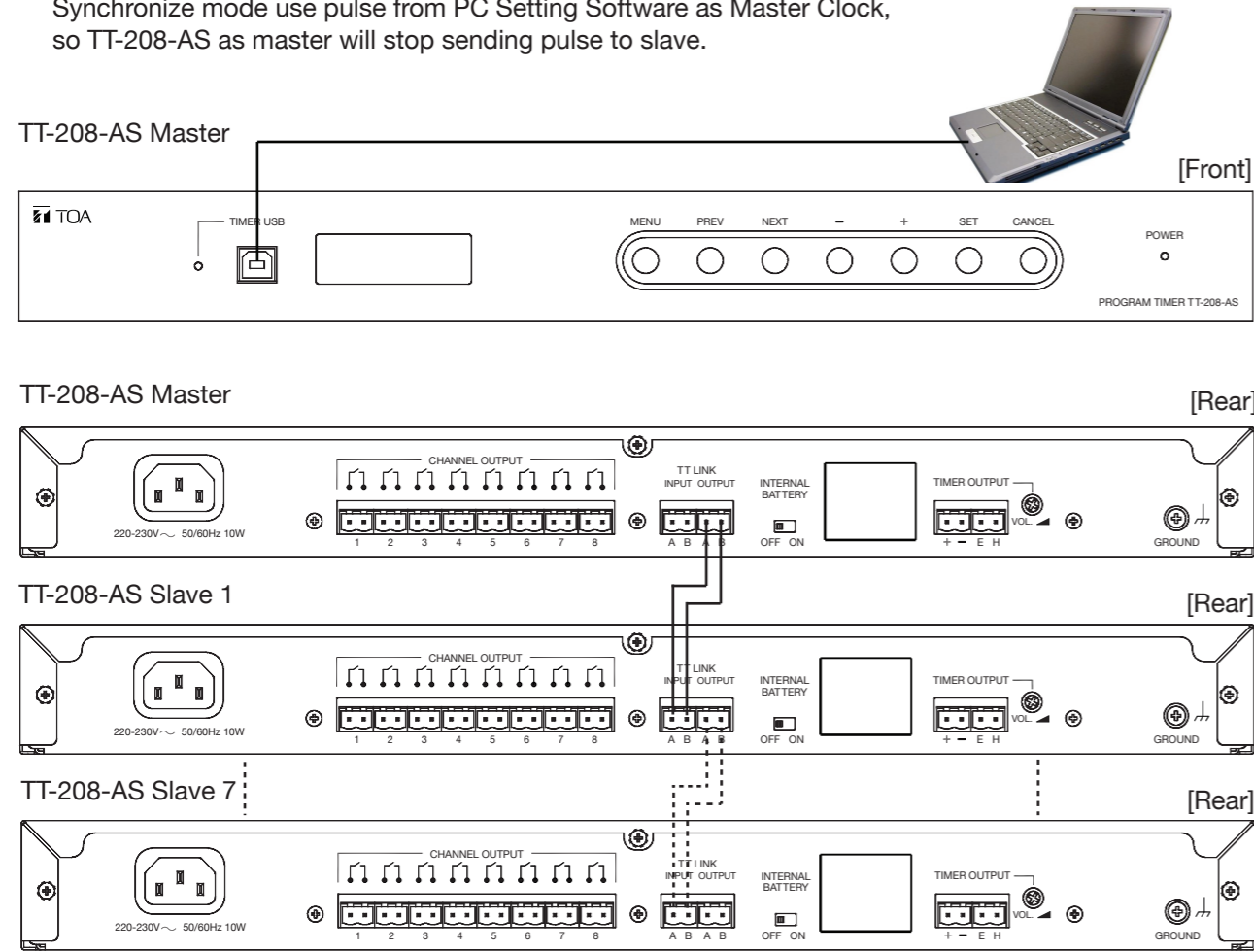
b. Synchronize mode : External Master Clock

This Synchronize mode, use pulse from external master clock (Example : SEIKO Master Clock), so pulse from TT-208-AS can not influence. Installation can see in the below.



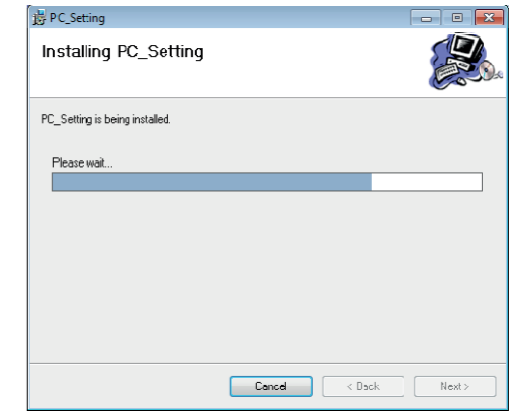
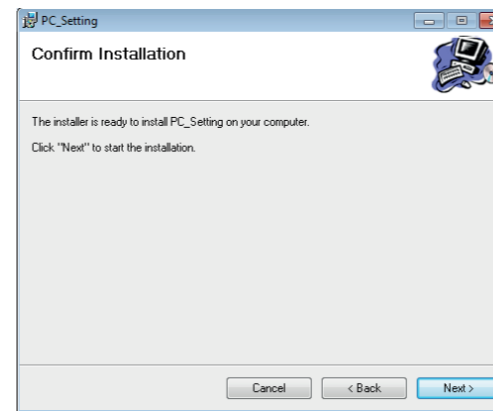
c. Synchronize mode : PC Master

Synchronize mode use pulse from PC Setting Software as Master Clock, so TT-208-AS as master will stop sending pulse to slave.

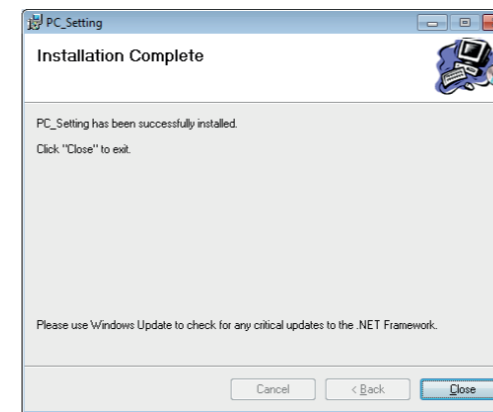


Default directory of PC Setting software is C:\Program Files\TOA\TT-208. (User can change directory if want it) Then click Next > and will show display like below:

Click Next > and then will show display like below:

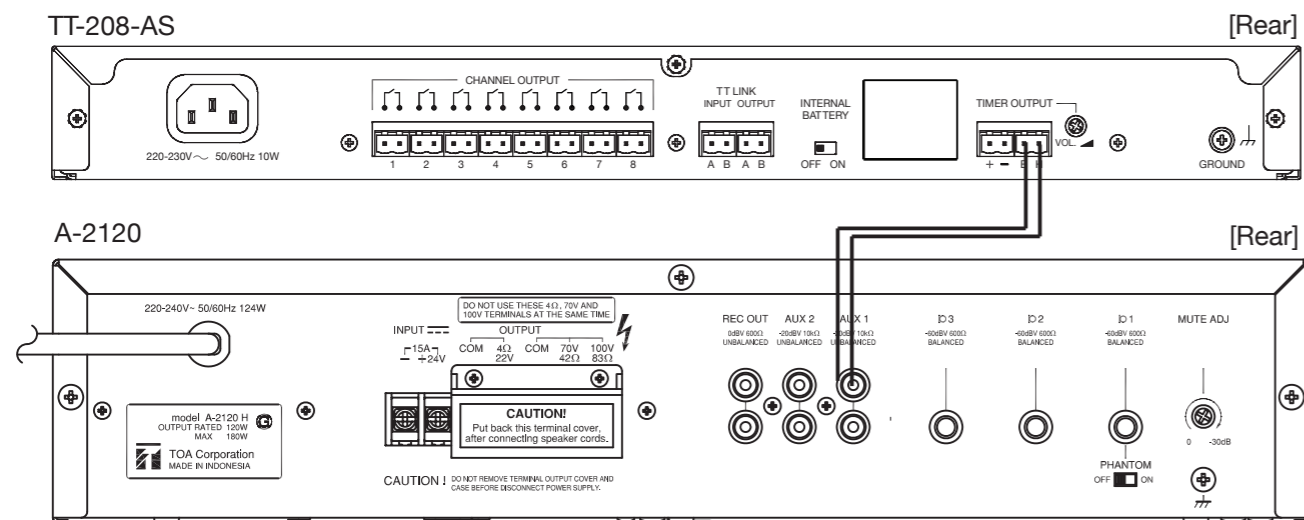


Click Close and PC Setting Software already installed on PC.



6.2. TT-208-AS Connection with A-2000 / A-1700 / A-1800 Series Mixer Power Amplifier

For Example, TT-208-AS connection with A-2120 like below.



Note : For connection between TT-208-AS and A-2120, can use AUX1 or AUX2.

7.2.2. PC Setting Software Instruction

User can configure TT-208 via PC Setting Software, more efficient and quickly for setting parameter and create event of program.

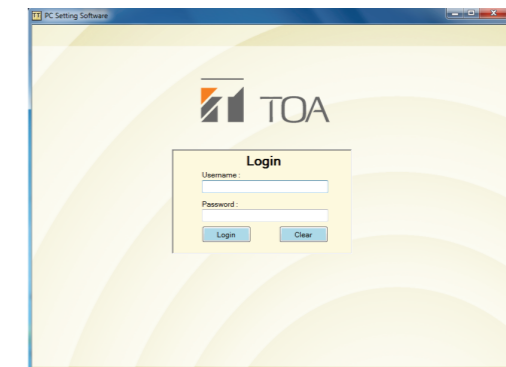
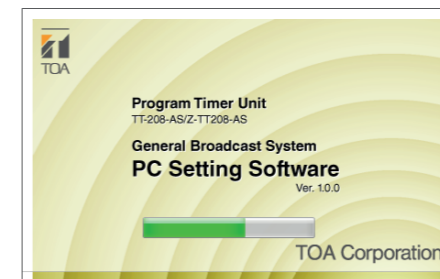
Operating Instruction

1. Open PC Setting Software

Click shortcut of PC Setting Software on the dekstop, icon like below:



PC will show splash window of PC Setting Software and then go to Login menu like below:



Entry username and password, then click Login button.

Username: admin.

Password: admin (Default).

7.2. TT-208-AS Configuration by PC Setting Software

7.2.1. PC Setting Software Installation

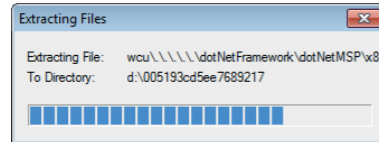
User have to instal application from CD installer with PC/laptop specification are :

- Windows XP 1/2/3, Windows 7/8
- RAM 512 MB

Installation Instruction

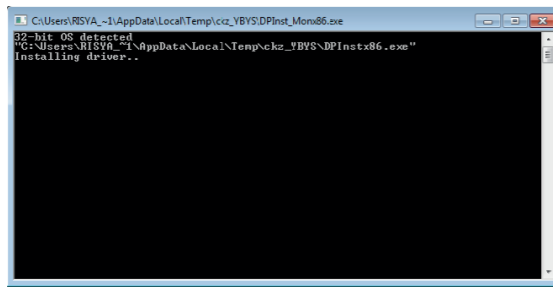
1. The dotNet Framework 3.5 (Windows 7 or later no need install)

Open setup of dotNet Framework 3.5 in folder Application Setup/.Net framework 3.5/dotnetfx35.exe.
Application will extracting files to PC and will show display like below:



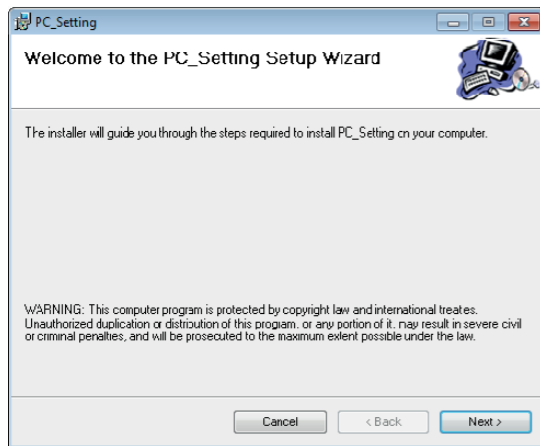
2. FTDI USB Driver

Open setup of FTDI USB Driver in folder Application Setup/FTDI USB Driver/CDM20600.exe.
Double click setup, PC will show display like below:

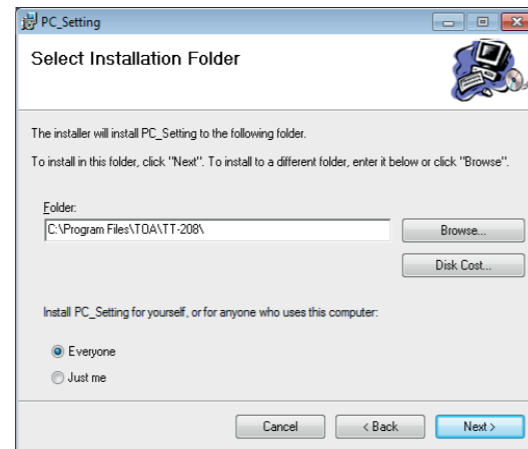


3. PC Setting Software

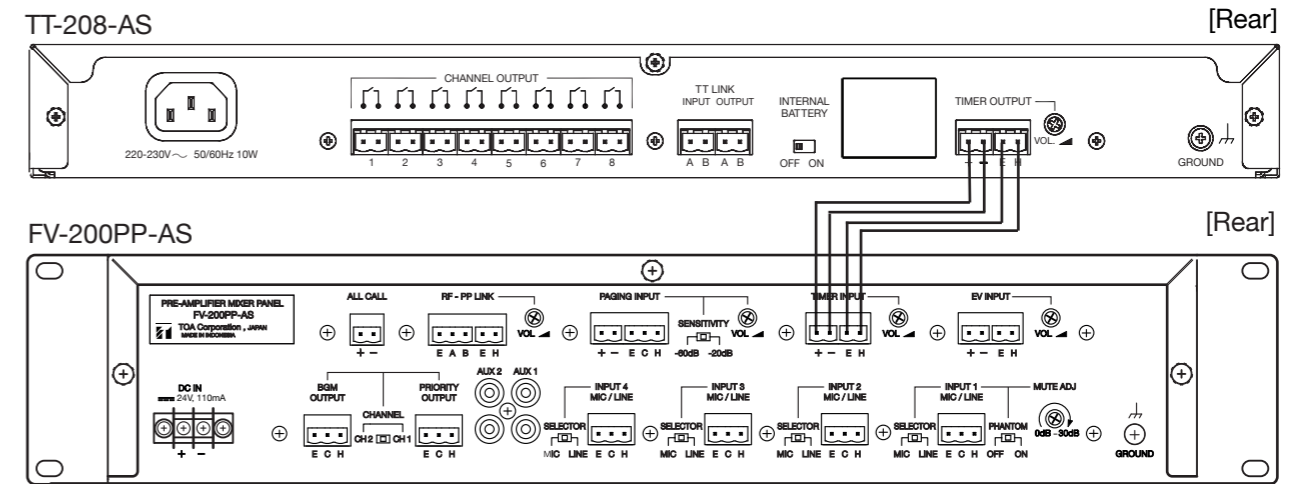
Open setup of PC Setting Software in folder Application Setup/PC Setting Software/PC_Setting.exe.
Double click PC_Setting.exe, PC will show display like below:



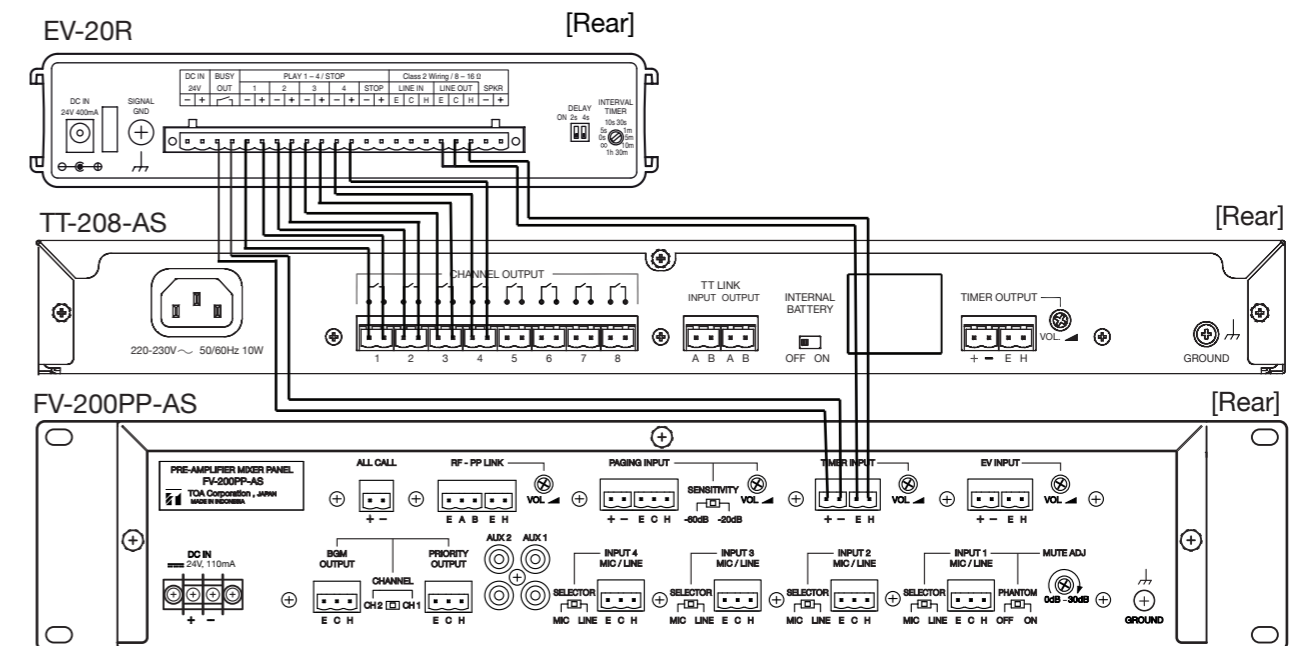
Click Next > and then will show display like below:



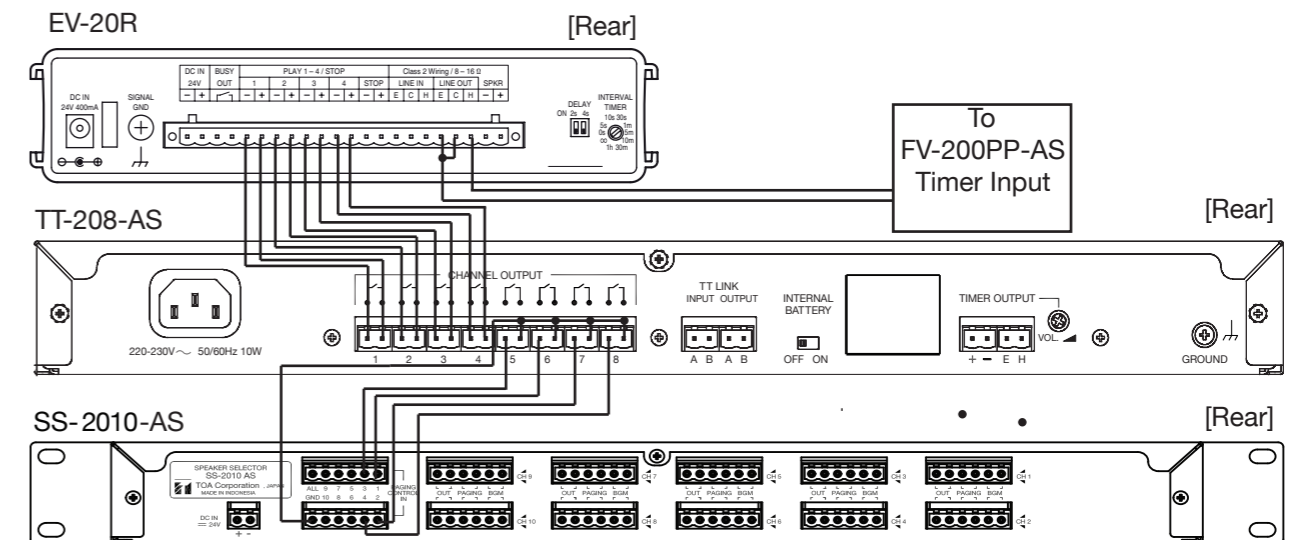
6.3. TT-208-AS Connection with FV-200PP-AS



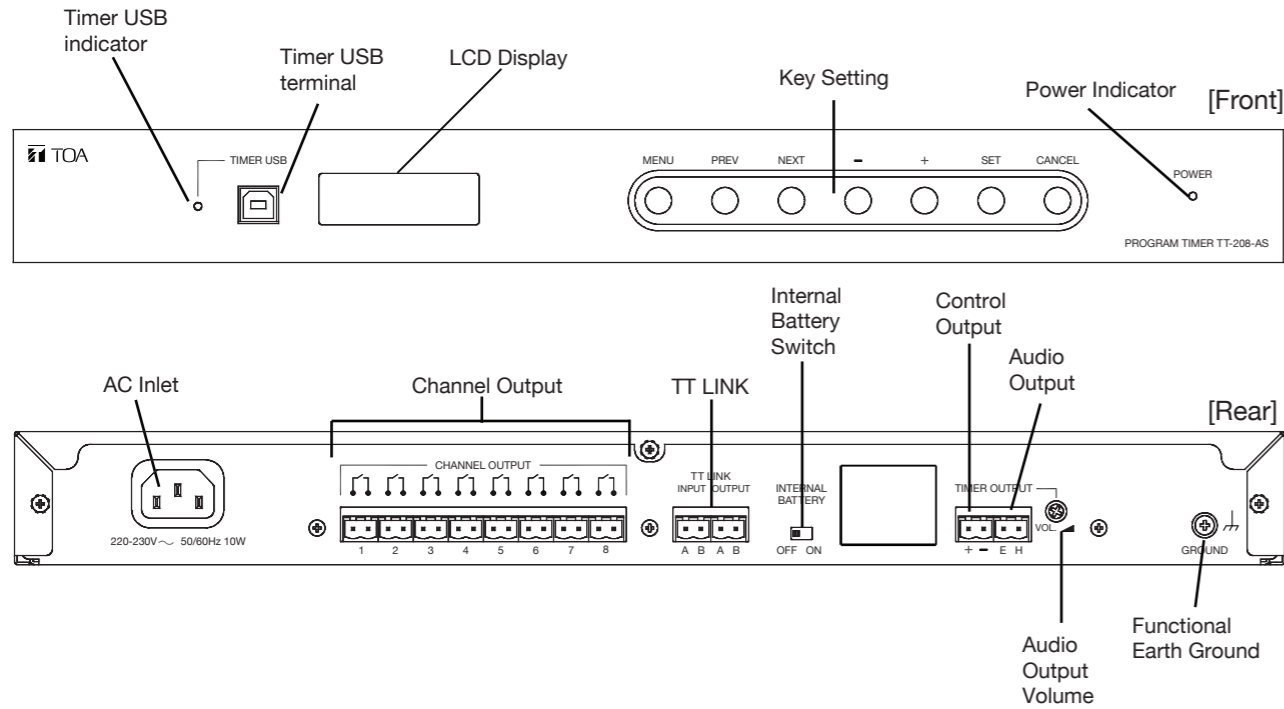
6.4. TT-208-AS Connection with FV-200PP-AS & EV-20R / EV-350R



6.5. TT-208-AS Connection with SS-2010 & EV-20R For Zone Broadcast



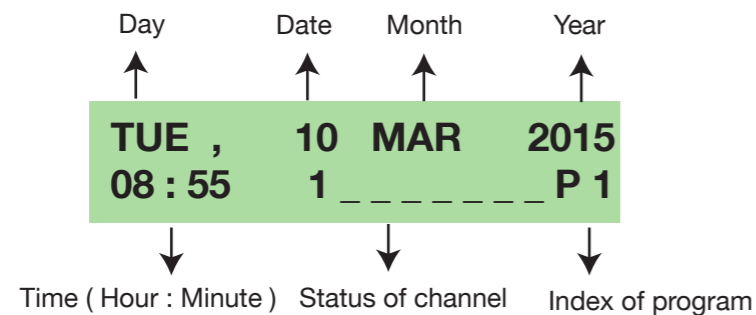
7. CONFIGURATION



7.1. TT-208-AS Configuration by LCD Menu

User can configure TT-208-AS by manual, via LCD dan switch button on the front panel.

1. Current Time And Status Of Channel Display



Display will refresh every 1 minutes and when status of channel change.

Status of channel:

- Active : Will display number of related channel.
- No active : Will display symbol "_".

2. Entry Password

PASSWORD:
[0 _ _ _] [Set]

TT-208-AS have password protection when you want to configure device. Have 4 digit password protection (Factory default: "1234"). In Current time and status of channel display, press "MENU" switch and then will show Password display. Press "PREV" or "NEXT" switch for navigation or move cursor, "-" and "+" switch for change value (decrease or increase). "SET" switch for execute password and "CANCEL" for back to Current time and status of channel display.

10. Setting Channel Output

Configuration menu

>3. Unit Setting
4. Factory Preset

Unit Setting menu

>3. Channel Out
4. New Password

In configuration menu, select item "3. Unit Setting", and in unit setting menu, select item "3. Channel Out". And then will show Setting channel output menu like below:

Setting channel output menu

> Ch 1: NO
Ch 2: NO

Ch 5: NO
Ch 6: NO

Ch 3: NO
Ch 4: NO

Ch 7: NO
Ch 8: NO

Press "PREV" or "NEXT" switch for navigation or select index of channel, "-" and "+" switch for change value (decrease or increase), "SET" switch for save parameter of channel output and "CANCEL" for back to Unit setting menu.

Note:

- NO : Channel output is Normally Open.
- NC : Channel output is Normally Close.

Default : NO (Normally Open)

11. Change New Password

Configuration menu

>3. Unit Setting
4. Factory Preset

Unit Setting menu

>4. New Password

In configuration menu, select item "3. Unit Setting", and unit setting menu, select item "4. New Password", then will show New password menu like below:

New password menu

New Password
[0 _ _ _] [Set]

Press "PREV" or "NEXT" switch for navigation or move cursor, "-" and "+" switch for change value (decrease or increase) "SET" switch for save new password and "CANCEL" for back to Unit setting menu.

12. Factory Preset

Configuration menu

>4. Factory Preset
5. Exit

Factory preset menu

Factory Preset
Confirm? [Set]

In configuration menu, select item "4. FactoryPreset", and then will show factory preset menu. Press "SET" switch for execute preset, and "CANCEL" for back to Configuration menu.

8. Setting Status Device

Configuration menu

```
> 3. Unit Setting
  4. Factory Preset
```

Unit Setting menu

```
> 1. TT-208 Status
  2. Sinc Mode
```

In configuration menu, select item "3. Unit Setting", and in unit setting menu, select item "1. TT-208 Status". And then will show Select status menu like below:

Select status menu

```
> 1. Slave
  2. Master
```

Press "PREV" or "NEXT" switch for navigation or select status of device, "SET" switch for save status parameter and "CANCEL" for back to Unit setting menu.

Note:

- Slave : Device as slave, only catch synchronize signal from master device.
- Master : Device as master, will send synchronize signal to slave device.

Importance

When device set as master, make sure connection from External master clock is unplug and synchronize function from PC setting software is disable (if USB cable connected to PC setting software).

Default: Master

9. Setting Synchronize Mode

Configuration menu

```
> 3. Unit Setting
  4. Factory Preset
```

Unit Setting menu

```
> 2. Sinc Mode
  3. Channel Out
```

In configuration menu, select item "3. Unit Setting", and in unit setting menu, select item "2. Sync mode", then will show select synchronize mode menu like below:

Select synchronize mode menu

```
> 1. TT Master
  2. External
```

```
3. PC Master
```

Press "PREV" or "NEXT" switch for navigation or select synchronize mode, "SET" switch for save parameter of synchronize mode and "CANCEL" for back to Unit setting menu.

Importance

- When synchronize mode set to TT Master, make sure connection from External master clock is unplug and synchronize function from PC setting software is disable (if USB cable connected to PC setting software). And status of device as master.
- When synchronize mode set to External and PC Master, make sure set status of device as slave.

Default: TT Master

3. Setting Current Time

Configuration menu

```
> 1. Basic Setting
  2. Event Setting
```

Basic setting menu

```
> 1. Time Setting
  2. Manual Active
```

In configuration menu, select item "1. Basic Setting" and in basic setting menu, select item "1. Time Setting". And then will show setting current time display like below:

```
Day
↑
TUE [Set]
10/03/2015 08:55
↓ ↓ ↓ ↓ ↓
Date Month Year Hour Minute
```

Press "PREV" or "NEXT" switch for navigation or move cursor. "-" and "+" switch for change value (decrease or increase) and "SET" switch for set new current time and "CANCEL" for back to Basic setting menu.

4. Manual Activation And Stop Activation

Configuration menu

```
> 1. Basic Setting
  2. Event Setting
```

Basic setting menu

```
> 2. Manual Active
  3. Firmware Ver.
```

Activation menu

```
1. Activation
  2. Stop
```

In configuration menu, select item "1. Basic Setting", in basic setting menu, select item "2. Manual Active", and activation menu, select item "1. Activation" for manual activation, or select item "2. Stop" for stop activation.

Manual activation

```
> Channel : 01
  Audio : None
```

```
> Output : Level
  Length : 01
```

```
[Set] / [Cancel]
```

```
> Stop Channel : 01
  [Set] / [Cancel]
```

Stop Activation

Press "PREV" or "NEXT" switch for navigation or move cursor, "-" and "+" switch for change value (increase or decrease), "SET" switch for activate by manual or stop activation and "CANCEL" for back to Activation menu.

Note:

- Channel : Range from channel 1 to channel 8.
- Audio : None (without audio output) or WC (audio output : westminster chime).
- Output : Level (duration time of activation : depend of parameter Length), or Pulse (duration time of activation : 5 second).
- Length : If Output is Level, range of value 1 - 99 minutes.
If Output is Pulse, will show "-". Can't modify, fixed 5 second.

5. View Firmware Version

Configuration menu

> 1. Basic Setting
2. Event Setting

Basic setting menu

> 3. Firmware Ver.

In configuration menu, select item "1. Basic Setting", and in basic setting menu, select item "3. Firmware Ver.", and then will show firmware version display like below:

TT - 208 [Cancel]
Version 1.0.0

Press "CANCEL" for back to Basic setting menu.

6. Make Event Of Program

Configuration menu

> 2. Event Setting
3. Unit Setting

Event setting menu

> 1. Make Program
2. ProgramSelect

In configuration menu, select item "2. Event Setting", and in event setting menu, select item "1. Make Program", then will show select index program and channel menu like below:

Select index program and channel menu

> Program : 01
Channel : 08

[Set] / [Cancel]

Select index of program and channel, press "CANCEL" for back to event setting menu and "SET" for view list of step menu. List of step menu display will show like below:

List of step menu

> Step - 01 : Ready
Step - 02 : Empty

Press "PREV" or "NEXT" switch for navigation or select index of Step, "SET" for select index step of program and "CANCEL" for back to Select index program and channel menu.

Note:

- Ready : Any existing program in related step.
- Empty : New program.

Ready program menu

CH : 01 Step : 80
[Edit] - [Delete]

Empty program menu

CH : 01 Step : 80
[Set]

Press "PREV" or "NEXT" switch for navigation or select Add, Edit or Delete, "SET" for execute Add, Edit or Delete program. If select Add or Edit, display will show like below:

Add or Edit program menu

Output Length Day
LEVEL 01 SMTWTFS
23:59 WC - 00000 -
Hour Minute Westminster Chime Audio message

Press "PREV" or "NEXT" switch for navigation or move cursor, "-" and "+" switch for change value (decrease or increase), "SET" switch for save parameter of program and "CANCEL" for back to Ready or Empty program menu.

Note:

- Output : Level (duration time of activation : depend of parameter Length), or Pulse (duration time of activation : 5 second)
- Length : if Output is Level, range of value 1 - 99 minutes
if Output is Pulse, will show "-". Can't modify, fixed 5 second.
- Hour : range 0 - 23
- Minute : range 0 - 59
- Audio : NO (without audio output) or WC (audio output : westminster chime)
- Day : "-" means not active on related day.
"O" means active on related day.

- S : Sunday
- M : Monday
- T : Tuesday
- W : Wednesday
- T : Thursday
- F : Friday
- S : Saturday

Delete program menu

CH:01 Step:01
Confirm: [Set]

Press "SET" for confirm delete related step of program, "CANCEL" for back to Ready or New program menu.

7. Select Index Of Program

Configuration menu

> 2. Event Setting
3. Unit Setting

Event setting menu

> 2. ProgramSelect

In configuration menu, select item "2. Event Setting", and event setting menu, select item "2. ProgramSelect", then will show program select menu like below:

Program Select menu

Active Program
No. [01] [Set]

Press "-" and "+" switch for change index of program, "SET" switch for save index of program and "CANCEL" for back to Event setting menu.