



# AARC Systems ABTMP3 Bell Timer/Music Player

## Installation & Operation Manual



### 1.0 OVERVIEW

The ABTMP3 Bell Timer/USB MP3 Music Player incorporates a school bell and a USB MP3 Audio Player controlled by a digital 4 channel 24hr/7-day timer. The timers can be set from 1 second up to 24hrs. This product is primarily aimed at the school market. The unit provides the ability to play an MP3 music track for a set period as a pre-bell time followed by a standard school bell.

The unit is powered by 12VDC and is supplied with a mains plug pack.

The audio output 2 x RCA sockets is a standard auxilliary line level out and is designed to feed into a PA amplifier auxiliary input.

### 2.0 OPERATION

#### 2.1 USB MP3 Player

The USB MP3 player is controlled by Output No. 4. You can load as many MP3 audio files on to a USB stick as required (maximum 32GB). When Output 4 is switched on an audio file will start playing. If Output 4 switches off before the audio file has finished, next time the Output 4 is activated the next audio file in the sequence will start playing. If Output 4 is still running when the audio file finishes, the next audio file in the sequence will start playing etc. until Output 4 times out.

#### 2.2 Bell Audio Player

The Bell audio is controlled by Output No. 1, No. 2 and No. 3. Normally the Bell will be set up to play from Output 1, with Outputs 2 and 3 switched off.

#### 2.3 General Operation

On the front of the timer there are 3 groups of LED's which provide a visual indicator of the status of each of the four output zones. The red LED's indicate a zone is in "Auto" mode and therefore the output of that zone will be controlled by whatever event times have been programmed into the timer. The green LED's indicate that a zone is in "Manual" mode and therefore has been manually set to be either "ON" or "OFF" by the user. Once a zone is in "Manual" mode it will stay in this mode until the user sets it back to "Auto" mode. The amber LED's indicate the output status of the zone.

In order to setup the unit to run automatically, the station (or event) times will need to be programmed. There are five buttons on the front of the timer which are used to program the unit and navigate the various menus.

#### SPECIAL NOTE ABOUT AUTO MODE OPERATION

If the timer is not displaying the main clock screen, where the time is changing, the unit is not running in "Auto Mode". This means it will not be checking any of the programmed events and hence will not activate any outputs automatically. Essentially this means that as soon as the Menu button is pressed the unit is no longer in "Auto Mode".

Make sure to return to the main screen by exiting all menus when not making changes.

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### 3.0 NAVIGATING THE MENUS

When the unit is first powered up, the model number and Chipset will be displayed briefly (Fig. 3.1) before the current time is shown.

Altronics A 1708  
DS3231 Chipset 1

Fig. 3.1

Monday  
07:00:00

Fig. 3.2

The main screen (Current Time Screen) shown in Fig 3.2 displays the current time. When this screen is displayed the unit is running in "AUTO MODE" and therefore all outputs will work as programmed. However if the unit is in any of the sub menu's (Menu Mode) the unit will no longer respond to any event that has been programmed to occur, while the unit remains in menu mode. On exiting the menu, the timer will check all programmed events and update the status of the output zones.

Press the "Menu" button on the front of the timer. The unit is now in "Menu Mode" and the screen should display the Manual Select of Output Zones Screen. This is the first of 5 sub menu screens which are navigated by pressing the up and down buttons as shown in Fig 3.3. Pressing the Menu button again will return the user to the Main Screen. Select the desired sub menu by pressing the "Enter" button.

### 3.1 SUB MENUS

There are 4 options to choose from.

- 1) Manual Selection Of Output Zones
- 2) Add or Edit A Station Time
- 3) Edit Time on Clock
- 4) Clear Memory of ON/OFF Times

#### 3.1.1 Manual Selection of Output Zones

After selecting this option the screen should appear as shown in Fig 3.4. The square brackets indicate the cursor position on the screen.

To set a Zone manually, scroll to the desired zone using the up and down buttons (as shown in Fig 3.5 on Page 3) and then press "Enter" when you reach your selection. When finished scroll to the "Exit Manual Zone Selection" screen and press "Enter" or press the "Menu" button to exit at any time. (**NOTE:** For the unit to continue in "AUTO MODE" you must exit back to the Main Screen.)

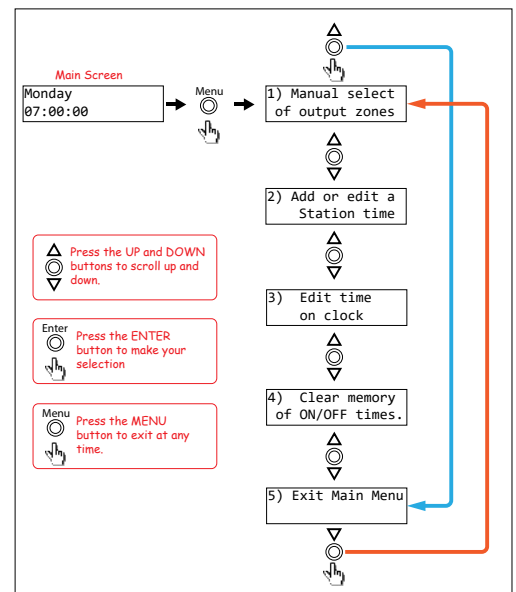


Fig. 3.3

OUTPUT 1  
[AUTO] ON OFF

Fig. 3.4



#### SPECIAL NOTE

If power is removed, all outputs will switch off and all zones will return to Auto Mode once power is restored.

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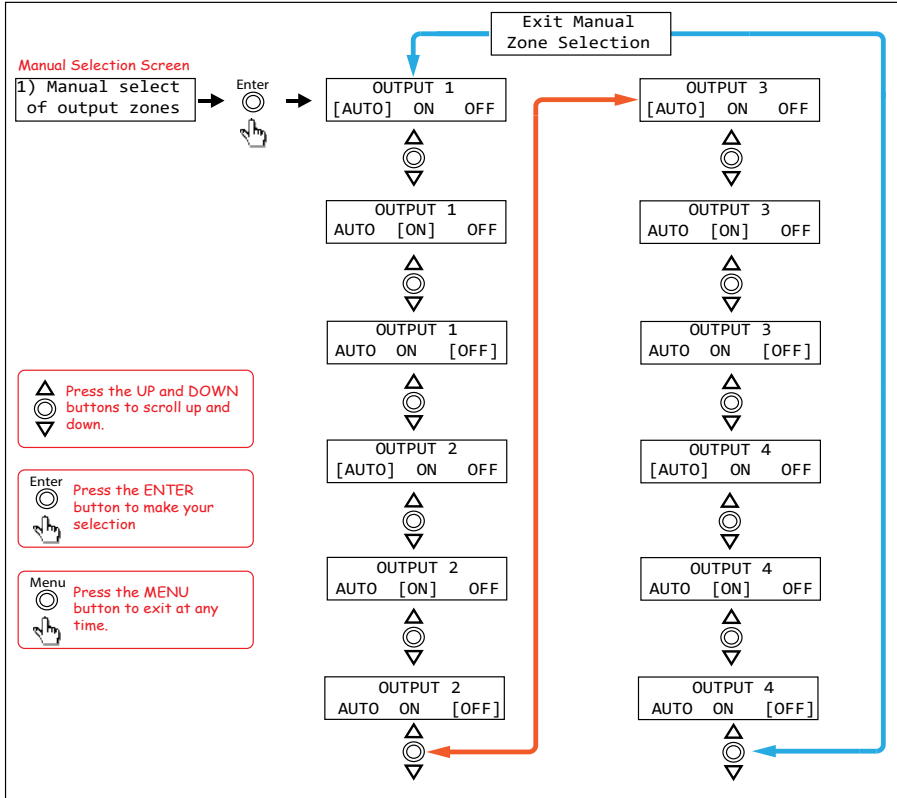


Fig. 3.5

### 3.1.2 Add or Edit A Station Time

This option allows the user to enter the Station (Event) information which includes the event "Turn on time", "Duration" and "Output Zone". If this is the first time an Event has been entered the memory will need to be "Cleared" first. To do this follow the directions in the section 3.1.4 "Clearing the Memory".

**SPECIAL NOTE FOR FIRST TIME USE:**  
When powering up the unit for the first time it will be necessary to clear the memory before entering any Station (Event) times. If this is not done the unit will not operate correctly. To do this use option 4 in the menu. Refer to section 'Clearing the Memory'.

Navigate to the "Add or Edit a Station Time" Sub Menu as shown in Fig 3.3. If this is the first time entering this menu the screen should appear as shown in Fig 3.6. The number "1" shown is the Station (or Event) number which is highlighted by a flashing cursor.

From this point the user can scroll through all 50 stations using the up and down buttons as shown in Fig 3.7. This makes it very easy to view all Station time settings at a glance. Once the station number desired is shown on the LCD press the "Enter" button to confirm and move to the next step which is to make changes to the station "day".

The DAY represents the day of the week that the Event will take place and can be any day from Monday to Sunday or one of many multiple day options which are listed on the next page. Pressing the up and down buttons will scroll through the days Monday to Friday and then through the multiple days as shown in Fig. 3.8.

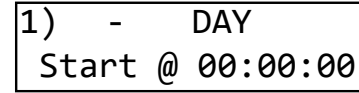


Fig. 3.6

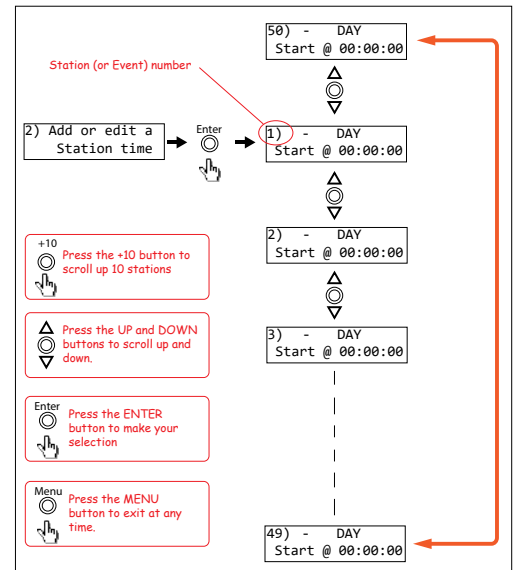


Fig. 3.7

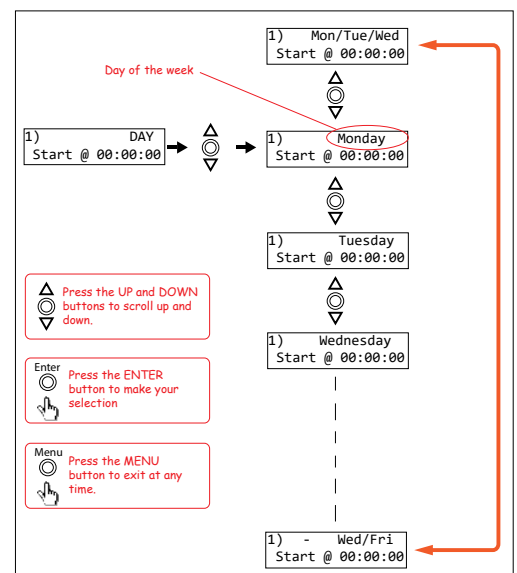


Fig. 3.8

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- |                    |                    |                    |
|--------------------|--------------------|--------------------|
| <b>Mon-Fri</b>     | <b>Tue-Fri</b>     | <b>Tue/Thur</b>    |
| <b>Sat-Sun</b>     | <b>Mon/Fri</b>     | <b>Tue/Wed/Fri</b> |
| <b>Mon/Wed/Fri</b> | <b>Tue/Wed/Thu</b> | <b>Tue/Thu/Fri</b> |
| <b>Tue/Thu/Sat</b> | <b>Mon/Wed</b>     | <b>Wed/Fri</b>     |
| <b>Mon-Thur</b>    | <b>Mon/Thur</b>    | <b>Mon/Tue/Wed</b> |
| <b>Mon-Sun</b>     | <b>Mon/Tue/Thu</b> |                    |

Once the day or multiple days desired is shown on the LCD, press the "Enter" button to confirm. The cursor will now move to the start time. This is the time the "Event" is to take place and is in 24 hour format.

The cursor is now positioned over the hour section of the start time as shown in Fig 3.9. Change the hour by pressing the +10, up and down buttons and press "Enter" when finished. The cursor will now move to the minute section of the start time. Repeat the above procedure to change the minutes and press "Enter" when finished. The cursor will now move to the seconds section of the start time. Repeat the above procedure again to change the seconds and press "Enter" when finished. The start time is now set for this Station (or Event). After completing the start time, the screen will change to the Zone and Duration options screen as shown in Fig 3.10.

From this point the user can scroll through all 50 stations using the up and down buttons as shown in Fig 3.11. This makes it very easy to view all Output Zone settings at a glance. Once the station number desired is shown on the LCD press the "Enter" button to confirm and move to the next step which is to make changes to the zone output.

Fig 3.12 illustrates the Zone Output setup procedure. There are 4 output zones to choose from. Use the up and down buttons to change the zone output and press "Enter" when finished. The zone can also be set to "OFF" which will turn this output off, but not affect the time settings so that it can easily be re-initiated by setting the zone output later.

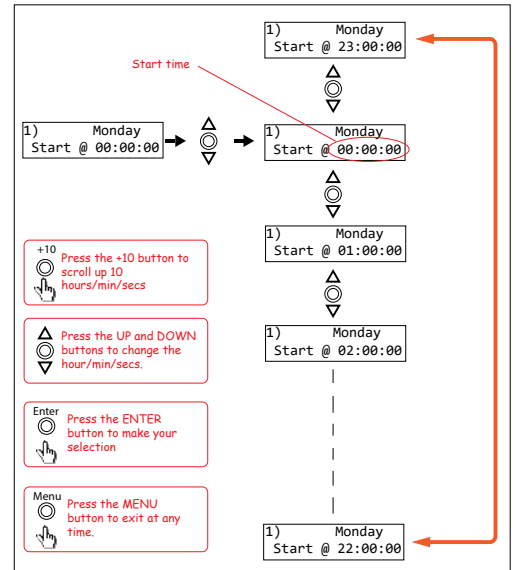


Fig. 3.9

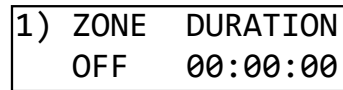


Fig. 3.10

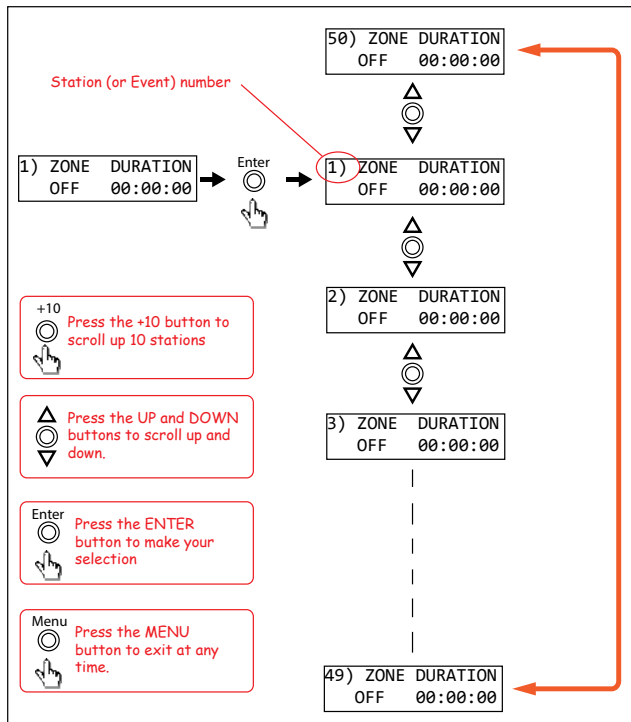


Fig. 3.11

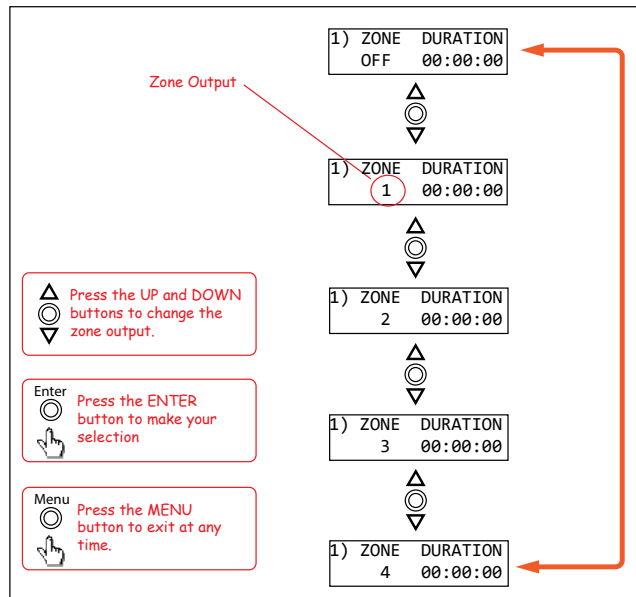


Fig. 3.12



The cursor is now positioned over the hour section of the Zone Duration as shown in Fig 3.13. The duration is the amount of time the event will occur for, after the start time. Change the hour by pressing the +10, up and down buttons and press "Enter" when finished. The cursor will now move to the minute section of the duration. Repeat the above procedure to change the minutes and press "Enter" when finished. The cursor will now move to the seconds section of the duration. Repeat the above procedure again to change the seconds and press "Enter" when finished. The menu button can be pressed at any time to exit the setup. The duration is now set for this Station (or Event). After completing the duration, the screen will change to the next station details.

**NOTE:** IF the duration is set to 00:00:00 the zone output will be set back to "OFF" on exiting the "Set Duration" screen.

### 3.1.3 Edit the Clock Time

This option sets the current time. After selecting the "Edit Time on Clock" option from the menu shown in Fig 3.3 the LCD will display the screen shown in Fig 3.13 where the cursor flashes on the current day. Pressing the up and down buttons will scroll through the days Monday to Sunday. Pressing "Enter" will confirm the day and then move the cursor to the hour option as shown in Fig 3.14. Change the hour by pressing the +10, up and down buttons and press "Enter" when finished. The cursor will now move to the minute section of the clock time. Repeat the above procedure to change the minutes and press "Enter" when finished. The cursor will now move to the seconds section of the clock time. Repeat the above procedure again to change the seconds and press "Enter" when finished. The menu button can be pressed at any time to exit the setup. The clock time is now set. After completing the clock time, the screen will change to the current time.

### 3.1.4 Clearing the Memory

This function will clear the internal memory, erasing any information entered.

**IMPORTANT NOTE**  
The memory must be cleared before using the unit for the first time.

Navigate to the "Clear Memory of ON/OFF times" Sub Menu as shown in Fig 3.3. Press "Enter" to activate this option.

This will clear  
all ON/OFF times

Are you sure?

Then you will be asked to press "Enter" to confirm you want to clear the memory or press "Menu" to exit.

Hold ENTER for Y  
or MENU for No

If you press Menu you will return to the Clear Memory Sub Menu. If you press Enter, the unit will cycle through the memory locations clearing any data stored. This will take a few minutes. Once finished you will return back to the Clear Memory Sub Menu.

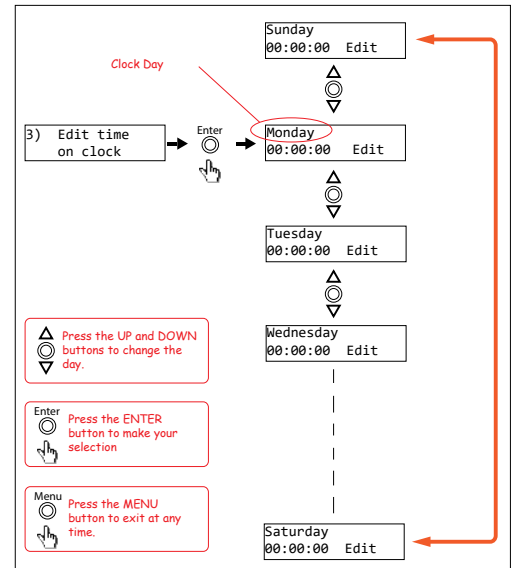


Fig. 3.13

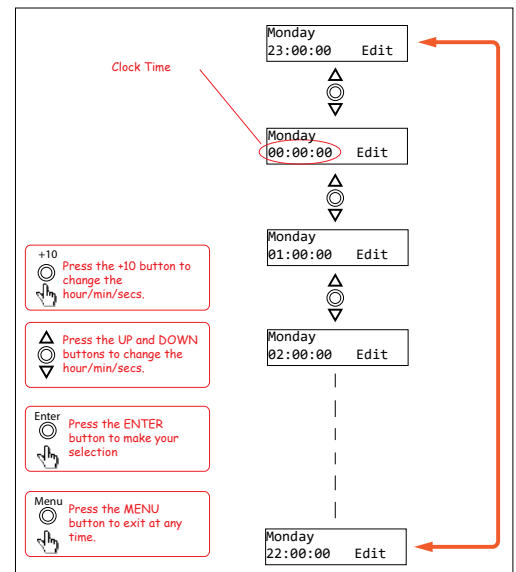


Fig. 3.14

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### 4.0 BATTERY BACKUP

Inside the unit is the battery used to backup the internal clock chip. If the unit fails to keep the correct time after a power failure then it may be possible that the backup battery is flat. To replace the battery, remove the lid and use a CR2032 battery as the replacement. The location of the battery is shown in Fig 4.1.

### 5.0 REAR CONNECTIONS

#### 5.1 12VDC Connection

A DC socket has been provided (Fig. 5.1) for 12VDC input. A 12VDC 1A plug pack has also been provided to power the unit.

#### 5.2 Audio Output

Twin RCA sockets provide line level 500mV audio output suitable for auxiliary input into a PA System amplifier. A twin RCA to twin RCA lead is also provided to connect the unit to the PA amplifier.

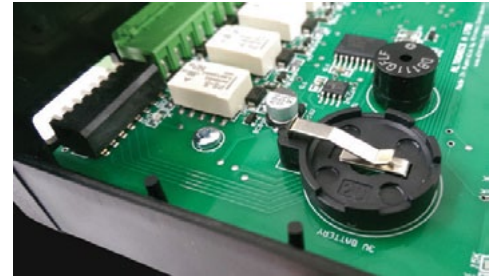


Fig. 4.1: The backup battery is located inside the unit and can be accessed by removing the lid. Battery type CR2032.



Fig. 5.1

### ABTMP3 Components Supplied

- 1x AARC Systems ABTMP3 Bell Timer/Music Player
- 1x 12VDC 1A Plug Pack
- 1x Twin RCA to Twin RCA Audio Cable

### Specifications

<b>USB Music Player</b>	Max. USB 32GB
<b>USB File Format</b>	MP3 Files
<b>Timer</b>	<b>4 Channel</b> 1.0sec to 24hrs; Max. 50 Event/Stations
	<b>Battery Backup</b> 1 x CR2032 Lithium Coin Cell
<b>Power</b>	12VDC 1A (Plug Pack Supplied)
<b>Audio Output</b>	Line Level 500mV (2 x RCA Sockets)

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## 7.0 EVENT TIMES RECORD

A sheet has been provided to record all of the Event(s) information for easy reference.

**OUTPUT 1= BELL**  
**OUTPUT 2= BELL**

**OUTPUT 3= BELL**  
**OUTPUT 4= USB MP3**

Station	Output	Day	Turn On Time	Duration	Turn Off Time
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
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