WL-BELL

Sound output for QWTIME Master Clocks
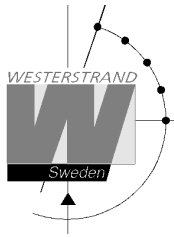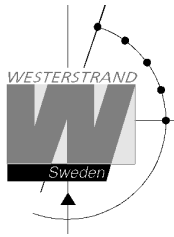
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WL-BELL

General description

Westerstrand WL-BELL is a part of Westerstrand Wireless Clock System for flexible installations. WL-BELL is a fully automatic sound generator with built in audio player, amplifier and loudspeaker. The device has built in microcontroller and UHF receiver. It is battery operated or fed from mains using an external ad/dc power supply (wall adapter).

WL-BELL can be used in schools for class change, in industries for break signalling or for sending out general messages or melodies. The unit is delivered with a SD memory card containing 16 pre-programmed sounds including bells, ringtones and melodies. The customer can easily add or replace the sounds on the card.

WL-BELL is controlled from a Master Clock in the QWTIMEIII product range. It is possible to create up to 8 zones with different break times and/or other messages. Start time, zone and melody number is programmed in the Master Clock and is sent wireless to the unit prior to the play.

Alternatively, if the wireless feature is not supported by the Master Clock, the device can be connected via wire.

Technical data

Article number: 123392-00
UHF-receiver
Frequency: 869.525 MHz
Sensitivity: 1µV (-107 dBm)
Modulation: FSK +/- 25 kHz
Ambient temperature: Between 0°C and +40°C.
Power supply: 3 x 1.5V (D-cell) alkaline batteries or 12VDC from external ad/dc power supply (wall adapter)
Remark: The wall adapter is an option

Installation

Before the WL-BELL is mounted on the wall some settings must be done. To open the casing of the WL-BELL, loosen the 4 screws and remove the cover.

1. Work Mode

Choose work mode, wired or wireless by setting the WM-jumper in correct position. Factory default is wireless (jumper open).

2. Melody selection

The unit is delivered with a SD memory card containing 16 pre-programmed sounds. In wired work mode the selection of melody is done using four DIP-switches. In wireless mode the selection is done in the Master Clock.

To facilitate melody selection, and test of the volume, the device is equipped with a manual playback button. To test a melody press the button the same number of times as the melody number. For example, to play melody no. 5 press the button 5 times.

3. External Play active / passive

In wired work mode set also if the External Play signal is active or passive*.
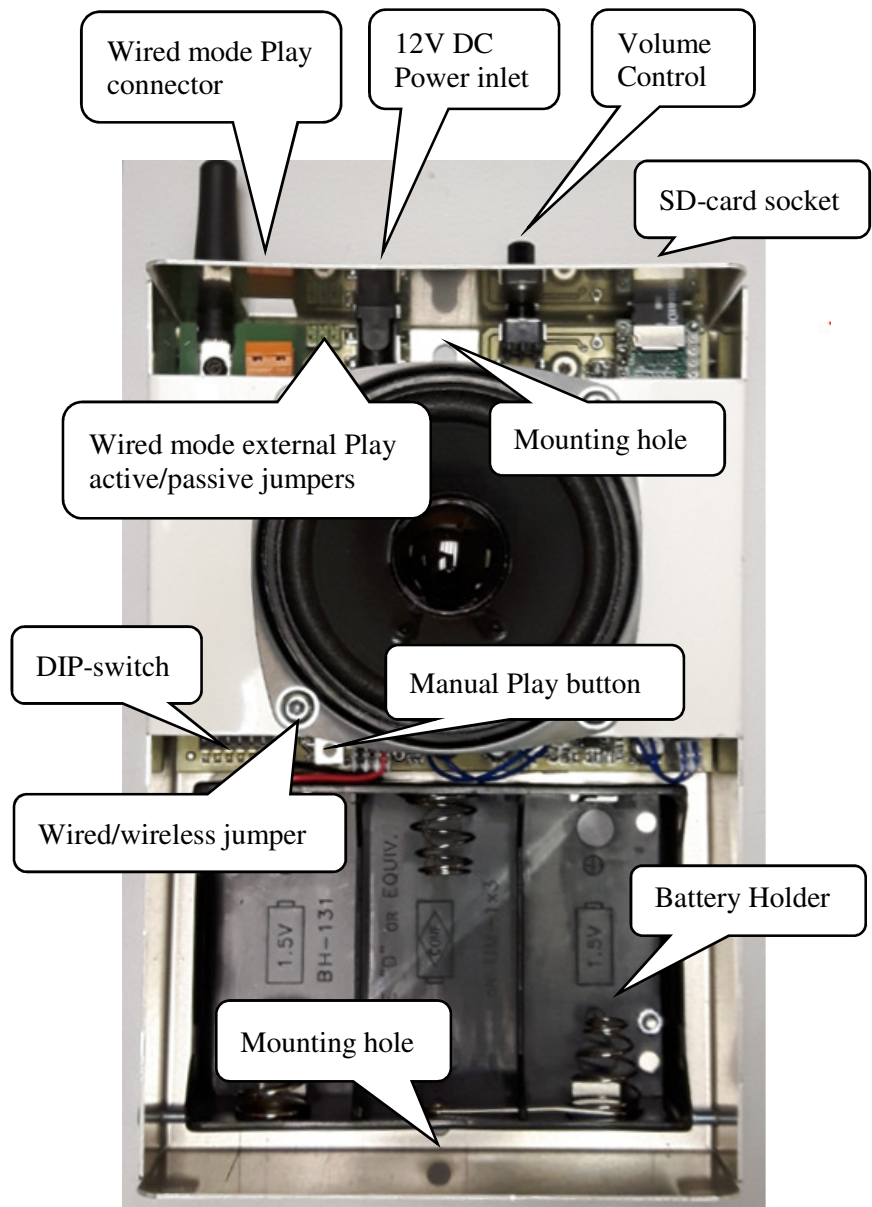
*Remark: for the moment only active mode can be used.

4. Power supply

No configuration needed. The unit can work either from 12VDC or alkaline batteries.

5. Mechanical Installation

Mount the unit on the wall using the two mounting holes and suitable screws (screws are not included).

Wired mode Play connector

12V DC Power inlet

Volume Control

SD-card socket

Wired mode external Play active/passive jumpers

Mounting hole

DIP-switch

Manual Play button

Wired/wireless jumper

Battery Holder

Mounting hole

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Configuration Wireless

1. Set the work mode jumper to wireless = jumper open (factory default).

2. Select zone by using the DIP-switch

DIP-switch

Wired/wireless jumper

ON

OFF

1   8
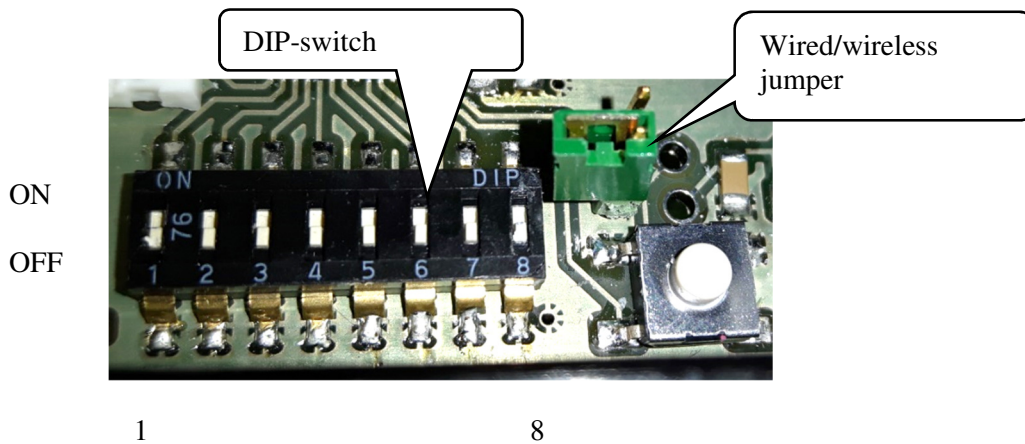
|	Wireless work mode, zone selection			
	Dip 5	Dip 6	Dip 7	Dip 8
Z1	OFF	OFF	OFF	OFF
Z2	ON	OFF	OFF	OFF
Z3	OFF	ON	OFF	OFF
Z4	ON	ON	OFF	OFF
Z5	OFF	OFF	ON	OFF
Z6	ON	OFF	ON	OFF
Z7	OFF	ON	ON	OFF
Z8	ON	ON	ON	OFF
Z9	OFF	OFF	OFF	ON
Z10	ON	OFF	OFF	ON
Z11	OFF	ON	OFF	ON
Z12	ON	ON	OFF	ON
Z13	OFF	OFF	ON	ON
Z14	ON	OFF	ON	ON
Z15	OFF	ON	OFF	ON
Z16	ON	ON	ON	ON

Configuration Wired

1. Set the work mode jumper to wireless = jumper closed

2. Select melody by using the DIP-switch

	Wired work mode, melody selection			
	Dip 1	Dip 2	Dip 3	Dip 4
M1	OFF	OFF	OFF	OFF
M2	ON	OFF	OFF	OFF
M3	OFF	ON	OFF	OFF
M4	ON	ON	OFF	OFF
M5	OFF	OFF	ON	OFF
M6	ON	OFF	ON	OFF
M7	OFF	ON	ON	OFF
M8	ON	ON	ON	OFF
M9	OFF	OFF	OFF	ON
M10	ON	OFF	OFF	ON
M11	OFF	ON	OFF	ON
M12	ON	ON	OFF	ON
M13	OFF	OFF	ON	ON
M14	ON	OFF	ON	ON
M15	OFF	ON	OFF	ON
M16	ON	ON	ON	ON

3. Select external Play active or passive. Remark: for the moment only active mode can be used.

	J5	J6	J7
ACTIVE	CLOSED	OPEN	CLOSED
PASSIVE	OPEN	CLOSED	OPEN

Wired mode external Play active/passive

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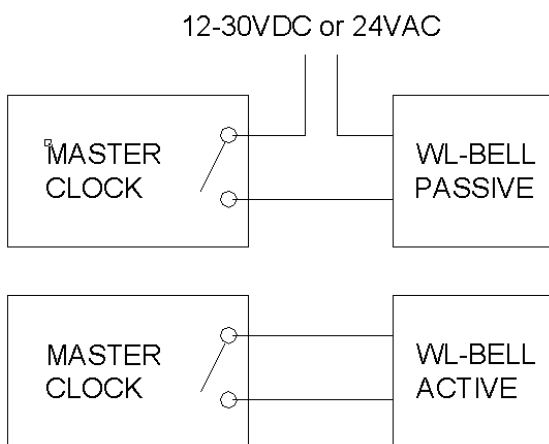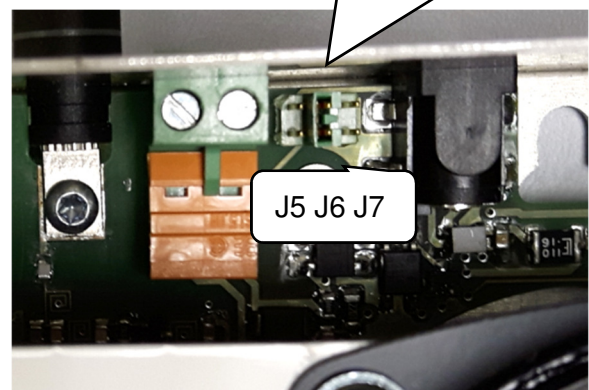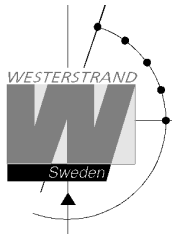
SD memory card

The enclosed SD memory card contains16 pre-programmed sounds including bells, ringtones and melodies.
The audio files are in OGG Vorbis format. OGG Vorbis, or just OGG, is a compressed digital audio format like MP3.
Unlike the patented MP3, OGG is not constrained by any patents, since it is open source and free to all.

New sounds/melodies can be added by the user. Conversion from MP3 to OGG can be done online or by using dedicated audio conversion software.

On the SD memory the sounds/melodies are numbered in the following way:

Melody no. 1: 0001.ogg
Melody no. 2: 0002.ogg
Melody no. 3: 0003.ogg
Etc..

To create a new melody, do the following:
1) Convert the file audio file to OGG format.
2) Rename the file to the wished melody number.
3) Save the file on the SD memory card.

Example:
Assume that you have an audio file you want to use. The name is School Bell.mp3 and you want to use it as melody no. 10.
- Convert the audio file to OGG e.g. using the online converter media.io.
- Rename the file to 0010.ogg
- Save the file on the SD card.
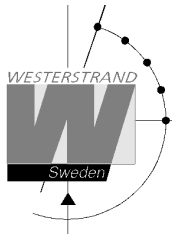
Master Clock

Configuration

To activate the wireless play function in a QWTIMEIII Master Clock the protocol PLAY must be selected in the serial port setup menu. The Master Clock must also have software version QW3-A253 or later.

Procedure

MON 12 MAR 2018 09:07:00 LTw	Select function using ↓ .
SPEC.-FUNCTIONS	Accept with YES. Press NO until wished function is shown.
SPEC.-FUNCTIONS SETUP	Accept with YES.
SETUP SERIAL PORT	Press NO until wished input/output is shown. Accept with YES.
RS232 PLAY LT 9600 8N1	Choose, by using the arrows, protocol PLAY, baudrate 9600 and data format 8N1. Accept with YES.
SETUP SERIAL PORT	Return to running mode press ←.
SPEC.-FUNCTIONS SETUP	←
SPEC.-FUNCTIONS	←
MON 12 MAR 2018 09:07:00 LTw	
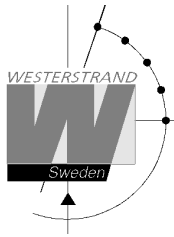
Week Program, example 1

Example: Melody no. 1 shall be played in zone 1, Monday – Friday at 09.00.

```
MON 12 MAR 2018
09:07:00   LTw
```
Select function using ↑↓.

```
WEEK PROGRAM
```
Enter programming mode using YES.

```
WEEK PROGRAM
NEW       GROUP A
```
Select new program using YES.

```
WEEK PROGRAM
NEW       GROUP A
```
Select group of programs using ↑↓, accept using YES.

```
ZONE 1     MEL 01
------- 08:00:00
```
Select Zone using ↑↓. Move to the right using →.

```
ZONE 1     MEL 01
------- 08:00:00
```
Choose melody number using ↑↓.

```
ZONE 1     MEL 01
MTWTF-- 08:00:00
```
State the days the program shall function using ↑↓.
Move to the right using →.

```
ZONE 1     MEL 01
MTWTF-- 09:00:00
```
State the time of the program using ↑↓.
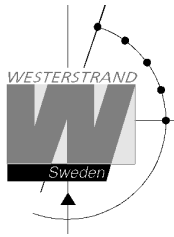Move to the right using →.
Accept using YES.
If the program is approved the text "Program saved" is displayed quickly.

```
ZONE 1     MEL 01
MTWTF-- 09:00:00
```
Continue with the next program or leave programming by pressing ←
several times.

```
WEEK PROGRAM
```

```
MON 12 MAR 2018
09:07:00   LTw
```

Week Program, example 2

Example: Melody no. 1 shall be played in all zones, Monday – Friday at 09.00.

```
MON 12 MAR 2018
09:07:00   LTw
```
Select function using ↑↓.

```
WEEK PROGRAM

```
Enter programming mode using YES.

```
WEEK PROGRAM
NEW        GROUP A
```
Select new program using YES.

```
WEEK PROGRAM
NEW        GROUP A
```
Select group of programs using ↑↓, accept using YES.

```
ZONE ALL  MEL 01
------- 08:00:00
```
Select Zone ALL using ↑↓. Move to the right using →.

```
ZONE ALL  MEL 01
------- 08:00:00
```
Choose melody number using ↑↓.

```
ZONE ALL  MEL 01
MTWTF-- 08:00:00
```
State the days the program shall function using ↑↓.
Move to the right using →.

```
ZONE ALL  MEL 01
MTWTF-- 09:00:00
```
State the time of the program using ↑↓.
Move to the right using →.
Accept using YES.
If the program is approved the text "Program saved" is displayed quickly.

```
ZONE ALL  MEL 01
MTWTF-- 09:00:00
```
Continue with the next program or leave programming by pressing ←
several times.

```
WEEK PROGRAM

```

```
MON 12 MAR 2018
09:07:00   LTw
```