



Operating Manual

Version 5.1



SYSTEMS

P. O. Box 936
Lancaster, OH 43130
1-800-432-3977
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Important Safety Information

This manual has been written to help you install and use EZ Bells laser disc carillon. Every precaution has been taken to ensure that it is correct. However, we assume no liability for errors or omissions. All specifications and features are for reference only and are subject to change without notice. For exact specifications contact

CMS, Co.
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Lancaster, OH 43130
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This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment can generate, and radiate radio frequency energy. If not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications.

Operation of this equipment in a residential area may cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Grounding

This carillon must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This carillon is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local rules and ordinances.

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the carillon is properly grounded. Do not modify the plug provided with the carillon - if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

Lightning

The EZ Bells carillon is provided with surge protection circuits. Lightning strikes near, or directly to nearby power lines can cause an excessive surge of voltage that can damage the unit.

Lightning damage is uncommon, but it can occur to any electronic device. We suggest that you unplug all electronic products during storms, especially if you are concerned about it or if you live in an area with frequent and/or severe electrical storms.

As with any valuable equipment purchase, you should review your insurance policy to be sure that your EZ Bells carillon is covered for fire, theft, vandalism or damage due to electrical storms.

WARNING

When using this electric product, basic precautions should always be followed, including the following:

1. Read all instructions before use.
2. Do not use this carillon near water - for example, near a bathtub, washbowl, sink, wet basement, swimming pool, or the like.
3. This carillon, either alone or in combination with a PA amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.
4. This carillon should be located away from heat sources such as radiators, heat registers, or other products that produce heat.
5. Care should be taken so that objects do not fall and liquids do not spill into the enclosure through openings.
6. The carillon should be serviced by qualified service personnel when:
 - a. The power supply cord has been damaged; or
 - b. Objects have fallen, or liquid has been spilled onto the carillon; or
 - c. The carillon has been exposed to rain; or
 - d. The carillon does not appear to be operating normally or exhibits a marked change in performance; or
 - e. The product has been dropped, or the enclosure damaged.
7. Do not attempt to service this carillon beyond that described in the user-maintenance instructions. All other servicing should be referred to qualified service personnel.

Radio Interference

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

The above instructions apply only to units that will be operated in the United States

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Introduction to the System

The EZ Bells™ carillon system is a product of digital audio technology. This system combines musical selections recorded on digital discs. A unique control program provides unparalleled flexibility when used in churches, town halls, banks, cemeteries, colleges, etc. You may select any of over 600 musical selections that can be loaded into the system for playing at any time and in any order.

The EZ Bells™ carillon system is designed to be used in a variety of environments. To configure the system to meet the requirements of your particular needs, we have provided an installation menu on page 8. It allows you to make selections for automatic settings for everything from Daylight Saving Time adjustments and time strike options, to selecting the music you wish the carillon to play from several random selection lists (that are described in the Selections Catalog).

Bell functions, such as swinging, striking, pealing, tolling and Angelus bells; are provided with the system. These bells can ring manually or automatically at preset times. Included with the bell functions are time strike functions. These functions include the Westminster quarter hour and hour strikes. Any quarter hour of the day may be programmed to use the Time Strike function.

CD's from other sources may also be utilized in this system. (See "To Play a Standard Disc" p. 19.

Care of the Discs

When holding discs, do not touch the signal surfaces. Hold by the edges, or by one edge and the center hole. Do not affix gummed labels or tape to the label surfaces. Also, do not scratch or damage the label. Discs rotate at high speed inside the unit. Do not use damaged (cracked or warped) discs. Return any warped or damaged CMS disc to EZ Bells™ for replacement. These discs have a lifetime warranty and will be replaced when they become unusable. Contact our Customer Service Department for assistance.

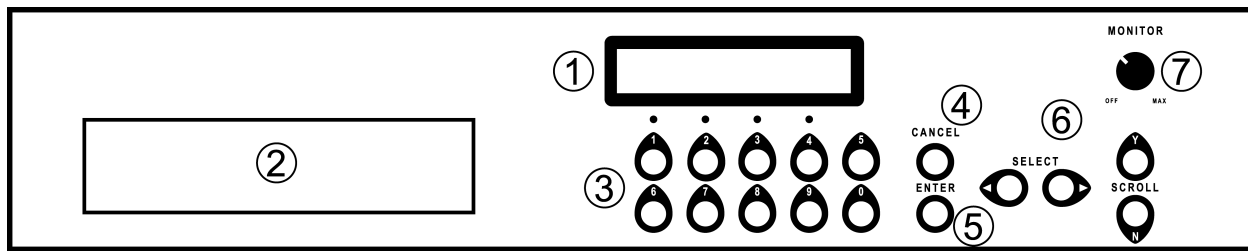
Cleaning discs: Since the discs are stored in the unit, dust and dirt should not accumulate on them unless the unit is installed in a very dusty area. The presence of fingerprints or smudges on the discs, may make them unreadable by the system. Always keep your discs clean by wiping them gently with a soft cloth from the inner edge toward the outer periphery. If a disc becomes dirty: dip a soft cloth in water, wring out excess water, wipe the dirt away gently, and remove remaining water drops with a soft dry cloth.

Do not use record cleaning sprays or anti-static agents on the discs. Also, never clean the disc with benzene, thinner, or other volatile solvent, since damage to the disc surface may result.

General Maintenance

Clean the cabinet as you would any fine furniture with a soft cloth. The control panel is acrylic and should be cleaned with only a soft moist cloth. A cleaning solvent or abrasive cleaner will scratch the surface of the panel.

Operator Controls



1. **Display.** The display shows data and messages from the system.
2. **Disc Magazine.** Take care to gently insert the magazines into the slot for proper engagement.
3. **Black Buttons.** All of the numeric buttons are black. They are for entering selection numbers and other data into the system. The 1- 4 buttons double as function keys. They duplicate the four function buttons on the programmable remote control unit.
4. **Red Button.** The red button is the [CANCEL] button. It aborts certain system operations and modes. It duplicates the [STOP] button on the remote control to reject and fade bells away when they are ringing.
5. **Green Button.** The green or [ENTER] button initiates actions selected by selection keys, or confirms changes to the program. It also duplicates the [PLAY] button on the remote control.
6. **Gray Cursor Buttons.** The gray buttons with [◀cursor] and [cursor▶] arrows are used to make menu selections, or select portions of programming displays to change. The gray buttons with [cursor▲] and [cursor▼] arrows are used to scroll through lists, as well as allow the user to answer questions that the system prompts for a YES or NO response. In certain program modes, the [cursor▲] button is used to provide an 'R' for random selection groups and 'P' for pauses. When the display is in the screen saver mode, press any button to light the display.
7. **Volume Control Knob.** Controls the volume of the built-in monitor speaker located in the rear of the case.



Note: The flashing portion of the display screen is represented by bold print in the display illustrations.

ON/OFF Switch - Power must be on for the system to work. See page 34 for the location of the power switch on the rear panel. When the power is turned on, the display will show the EZ BELLS™ software version number. A copyright notice follows during a brief initialization period.

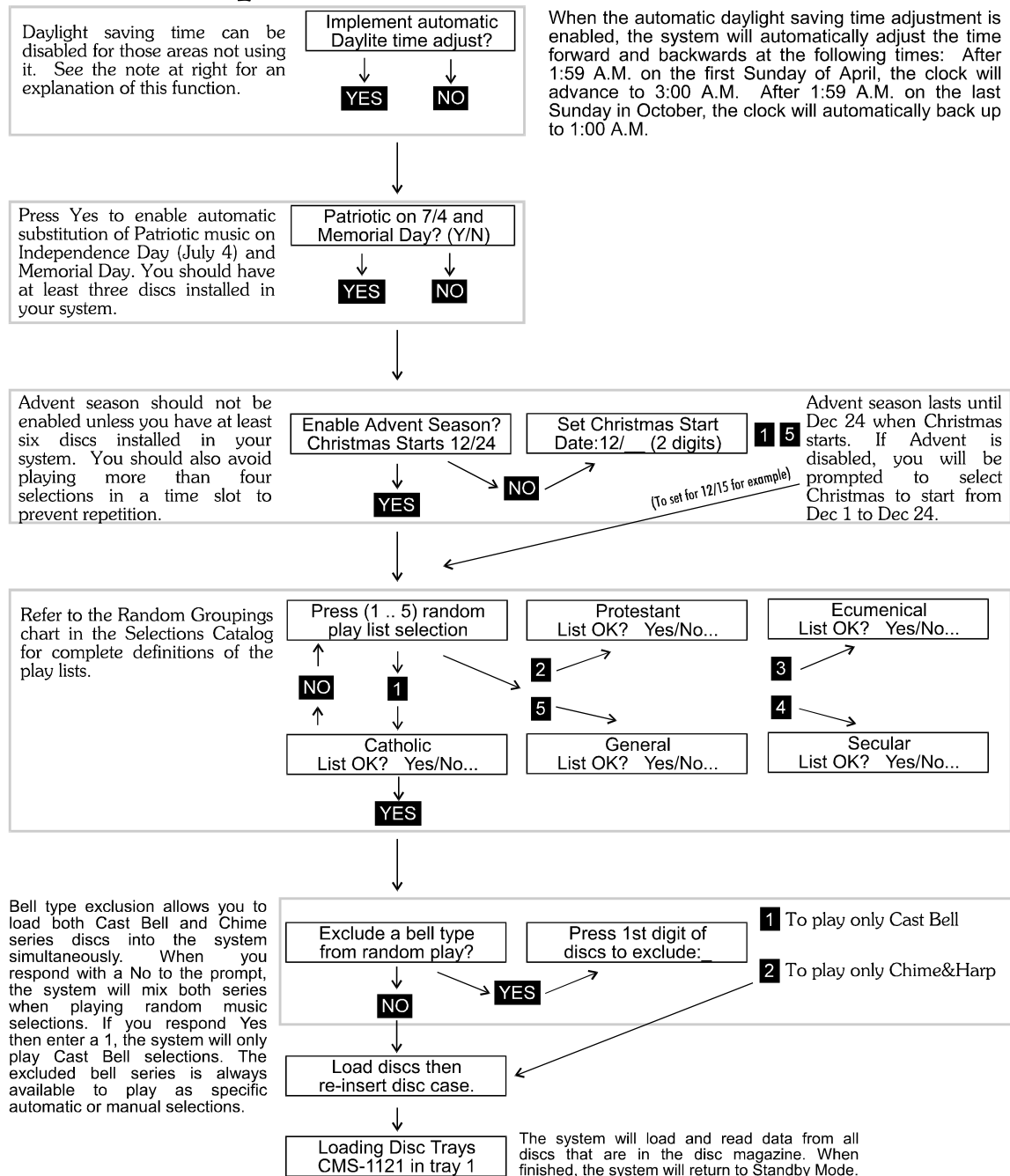
EZ Bells Carillon
Ver 5.1 P/N 0430401

If the display does not light up after turning the unit on, check the power cords, and connections.

Program Installation

Whenever the carillon is turned on without the disc pack installed, it will ask a series of questions for you to answer. New systems have their setup memory cleared, so they will enter the installation mode regardless of the disc pack status.

Installation Option Menu Screens



(Clear Memory)

Use this procedure to completely reset the system, or to verify the installation settings.

1. Switch OFF the power and wait five seconds.
2. Turn the power back ON while holding the red **[CANCEL]** button. A configuration screen will appear (see configuration examples below).
3. Continue to hold the red **[CANCEL]** button to view the configuration screen.
4. Release the red **[CANCEL]** button. The system will ask if you want to clear the program memory (see flow chart below).

Clearing the program memory assures that the ringing schedule is totally cleared. If you don't clear system memory, the system will perform a "sanity" check on the schedule. If you wish to abort the installation process without performing the schedule check, power the system off then back on without holding the red **[CANCEL]** button.

Configuration Screen Examples:

Cfg-P:Y CS:15 Tst000
DST:Y DENOM:2 EXCL:0

This configuration screen shows the Patriotic enabled, Christmas starts on Dec. 15 (no Advent). Daylight Saving time enabled, Protestant (2) play list and no bell types are excluded.

Cfg-P:N Advnt Tst000
DST:Y DENOM:1 EXCL:1

This configuration screen shows the Patriotic disabled, Advent enabled, Daylight Saving time enabled, Catholic (1) play-list selected and Chime and Harp bell type excluded.

P: Patriotic on July 4 and Memorial Day enabled (Yes or No)

CS: Christmas start date (in December if Advent disabled)

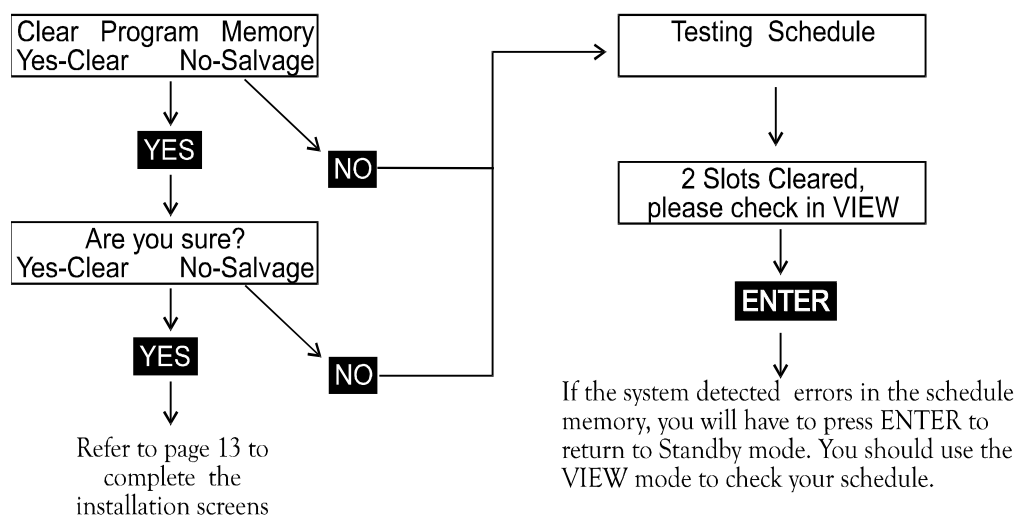
Advnt: will be displayed instead of CS: If Advent enabled

DST: Automatic Adjust Daylight Saving Time (Yes or No)

DENOM: 1 (Catholic), 2 (Protestant), 3 (Ecumenical), 4 (Secular), 5 (General)

EXCL: Exclude bell type 0 (None), 1 (Chime and Harp), 2 (Cast Bell)

Tst: Manufacturer's reference



Entering Installation (Configuration) Menu

(Non Destructive, Saves Previous Schedule)

Use this method to change configuration parameters (Daylight Saving Option, Patriotic Option, Advent Option and Christmas Start Date, Denomination Play List, Excluding Bell Voices) without clearing the programmed schedule. Make certain that the system is on and the display shows the Standby mode.

N 3:07 PM MON 07-25
Swng Peal Toll Hymn

Step 1 Press the **[ENTER]** button

Select Menu
View Manual <i>Setup</i>

Step 2 Select **Setup** by pressing the **[cursor▶]** button twice and pressing the **[ENTER]** button.

Time Strike Set Time
<i>Change Disc</i> Function

Step 3 Select **Change Disc** by pressing the **[cursor▶]** button twice then press **[ENTER]** to eject the disc pack.

Turn the power switch off, then back on to enter the configuration menu.



Note: Whenever the EZ Bells™ carillon system is powered ON without the disc magazine installed, the unit will enter the installation mode (page 8).

Standby Mode

Automatic Play

Standby mode is the normal operating mode of the system. Programmed selections and bell functions will not play automatically unless the system is in Standby mode.

When it is time for a programmed sequence to play the screen will show what is playing and the selection numbers playing will be shown on the lower line of the display.

N 12:25 PM WED 09-14
Swng Peal Toll Hymn

This is the nonseasonal Standby mode Display. The system is ready to play an automatic selection.

Automatic Reset

If the system is left in a menu for more than two minutes or an editing screen for more than five minutes, a warning will appear on the screen that the system will reset to Standby Mode in 99 seconds. The seconds will count down on the screen until either the count reaches zero and the system resets, or you press any key to return to the previous screen.

Seasonal Almanac

The seasonal almanac automatically substitutes seasonal music during appropriate times of the year. The letter in the top left corner of the standby screen indicates the seasonal music currently in use. Note that if the secular play list is selected, the religious seasons will not always result in substitutions. The display, however, will always show the special seasons.

L 12:25 PM THR 04-01
Swng Peal Toll Hymn

During the Lenten Season, the display will show that Lenten (L) selections will be substituted when seasonal random selections are programmed.

Please refer to this complete listing to determine when seasonal music will be automatically substituted for non-seasonal random music. The letter in the left column will be shown with the time in Standby Mode when the season is active.

N	Non-seasonal Times	Defaults to general hymn selections.
L	Lent	Begins Ash Wednesday and Ends on Good Friday
G	Good Friday and Holy Saturday	Will play a more meditative set of the Lenten Selections.
E	Easter	Protestant, General and Ecumenical Systems will play from Easter Sunday through the following Sunday. Catholic systems will play from Easter Sunday through the end of April.
M	Marian	Catholic systems will play Marian selections in May, August 15 th and 22 nd and December 8 th .
P	Patriotic	Patriotic music will play on Independence and Memorial Day if the Patriotic season is enabled on the system
T	Thanksgiving	Thanksgiving Day and the Preceding Sunday.
A	Advent	First Sunday in Advent until December 23 rd if the Advent season is enabled on the system
C	Christmas	If Advent is enabled Christmas will start on December 24 th . If Advent is disabled, Christmas will start on the day in December that the user selects. Christmas selections will play through January 5 th .

E 12:25 PM SAT 04-03
Swng Peal Toll Hymn

On Easter Sunday (make sure that the Time Clock is set to the correct day of the week), Easter selections will be substituted for the seasonal program.

Selecting Other Modes

Pressing [ENTER] will replace the standby screen with the main menu. Three mode options are available from the main menu.



Press the [◀cursor] or [cursor▶] button until your selection flashes, then press [ENTER] to go into that menu. The three option menus are described in the next three sections.

View Mode allows you to look at the program schedule. It is also the gateway to the Program mode where you may make modifications to the program schedule.

Manual Mode allows you to play specific or random selections whenever you choose without adding them to your weekly schedule.

Setup Mode allows you to adjust the time clock, program changes to the Time Strike function and volume levels, change the discs in the magazine and enter the Installation program.

Pressing [CANCEL] from this menu will return the system to the Standby mode.

Setup Mode

From standby mode, press [ENTER], then press the [cursor▶] button **TWICE**, and [ENTER] to bring up the main setup menu. The **Setup** mode menu display offers four items that enable you to configure your system. **Time Strike** is used to set up the **Time Strike** functions, and to set up the volume level for certain periods. **Set Time** is used to adjust the time clock. **Change Disc** allows the discs to be changed in the disc magazine. **Function** provides for programming of the four function buttons.



To enter Setup mode, press the [ENTER] button to get the main menu selection display. Use the [◀cursor] or [cursor▶] button to cause Setup to flash, then press [ENTER]



Use the [◀cursor] and [cursor▶] buttons to select Time Strike, Set Time, Change Disc or Function.

Installing the Discs

To change the discs, please follow these simple instructions.



Use the [◀cursor] or [cursor▶] buttons to select Change Disc.

To eject the disc magazine, select the **Change Disc** sub-menu from the **Setup** menu and press [ENTER]. The magazine will be ejected. Remove pack from the unit.

Please review *Care of Discs* on Page 6 prior to loading discs. Insert up to six discs into the magazine. If any bell functions are desired, either disc 1121 or 1111 **must** be installed in tray #1. Tray #1 is the top tray.

Loading the Disc Magazines:

1. Pull out only one disc tray at a time. (**Pulling out more than one tray at a time can damage the magazine.**) Tabs on the side of the magazine help in selection of the trays.
2. Install the discs with the label side faced down in the tray.
3. Return the disc tray back to its original position.
4. Insert other discs by repeating steps (1) to (3).



Caution!

- Only pull out one disc tray at a time. (When a disc tray has been pulled out, do not pull out other disc trays.)
- Insert discs label side downward. If discs are inserted label side upward, it will not be possible for them to be played.
- Do not touch the playing surface of discs (the plain iridescent side) with hands or fingers.
- The label side of the disc is actually more susceptible to damage from scratches. Handle the discs carefully.

Once the disc magazine is replaced, the system will read each disc and fill the random play lists. The display will show the catalog number of the disc in each tray.

One of the features of the EZ Bell™ carillon is its ability to play standard music CDs. These CD's can be loaded into any tray location (except #1). Due to the condition of the discs and the source of mastering/manufacturing, we cannot guarantee the playability of all CD's.

Setting the Time Clock

The latest temperature compensated crystal clock circuitry gives the clock accuracy greater than +/- one minute per year. Periodic checks and settings of the clock may be necessary to insure accurate operation of the system. The clock is factory set to your local time before shipment and should not require setting at the time of installation



Use the [**◀cursor**] and [**cursor▶**] buttons to select the Set Time set up menu.

Choosing **SET TIME** allows you to set the current time, day of the week and the date. Use the [**◀cursor**] and [**cursor▶**] buttons to select the digit(s) to change, then the [**cursor▲**] and [**cursor▼**] buttons to effect the change.



Note: The [**cursor▲**] button subtracts one from the selected digit and the [**cursor▼**] button adds one to selected digits.

Once all settings are correct, select the **Set Time** on the lower line of the display (it will be blinking when selected), press [ENTER]. When [ENTER] is pressed, the real time clock will be updated to the displayed settings. Pressing the [CANCEL] button will abort the Set Time menu without making any changes to the actual time settings.



Note: Be certain to properly set all of the time parameters, including: AM, PM, day and date. Easter Sundays and Leap Year adjustments will only work properly if the Year is correctly set.

11:05 AM	TUE 09-21
Year=01	Set Time

Use the [◀cursor] and [cursor▶] buttons to choose the parameter to change. Since minor adjustments are more frequently made, the minute digit is flashing on entry.

11:06 AM	TUE 09-21
Year=01	Set Time

Use the [cursor▼] button to increase settings, and [cursor▲] button to decrease settings.

11:06 AM	TUE 09-21
Year=01	Set Time

Move to "Set Time" with the [◀cursor] or [cursor▶] button. Pressing the [ENTER] button will set the clock to the displayed time. [CANCEL] will abort changes. In either case, the display will return to the Setup menu.

Programming the Time Strike Parameters

Please read over this entire section prior to making any settings. Several decisions need to be made at this time concerning the time of day you wish the clock to sound, how loud you want the clock to sound, and what sound you want the clock to make!

Time Strike	Set Time
Change Disc	Function

Use the [◀cursor] or [cursor▶] button to select the Time Strike setup menu. Press [ENTER].

12A to 12A	LEVEL:6
SUN .. SAT	SET PROG

Use the [◀cursor] and [cursor▶] buttons to move around the screen. Use the [cursor▲] and [cursor▼] buttons to change times, days, volume level, and strike option. Changes may be made to the item that is flashing.

Upon entering the Time Strike menu, the displayed time shall appear as the example shown above. '12A to 12A' shows that all 15-minute intervals of the 24-hour day are selected. 'SUN .. SAT' shows that all the days of the week are selected. Therefore, the initial display covers all periods in the program schedule. This default setting will always appear when you enter this screen. This does not mean that those are the current settings. The only way to check current settings is to go into the "View" mode and check individual times. This is explained on page 20.

It is helpful to set the largest blocks of time first. Set the starting time field (to the left of 'to') to the time that you want to start the time strike mode. From 12A you will use [cursor▼] to select a starting time. Next, press [cursor▶] to get to the ending time field. From 12A you will use [cursor▲] to select an ending time.



Note: Each hour specified in this screen represents only four quarter-hours. So, '01PM to 02PM' specifies the range including 1:00 P.M., 1:15 P.M., 1:30 P.M. and 1:45 P.M. 2:00 P.M. is not included in the range and will not be programmed. If '10A to 09P' is displayed, 10:00 A.M. to 8:45 P.M. is selected (to but not including 9:00 P.M.).

The system will not allow you to reverse the starting and ending times. Once the ending time is set to the hour following the starting time it will go no earlier. Attempting to set the starting time past the ending time will push the ending time ahead so that it is always at least an hour after the starting time.

Press [**cursor▶**] to select the starting day. Pressing either [**cursor▲**] or [**cursor▼**] will allow you to set the starting day to any day of the week. Press [**cursor▶**] to select the ending day. Pressing either [**cursor▲**] or [**cursor▼**] will allow you to set the ending day to any day of the week. When the starting day and ending day are the same, only that day will be programmed. If 'SUN .. SUN' are set, only Sunday will be programmed. If 'FRI .. MON' are set, Friday, Saturday, Sunday and Monday will be programmed. 'SUN .. SAT' will program every day of the week.

To select a **TIME STRIKE** option, use the [**◀cursor**] or [**cursor▶**] button to make **LEVEL:6** flash.

The Time Strike Setup menu allows you to program the manner in which the system chimes the time. There are three basic modes for the time strike: **OFF**, **STRIKE (STK)**, and **WESTMINSTER(WMN)**. There are eight options for these features.

07A to 11P	FULL WMN
MON .. FRI	SET PROG

When the upper right portion of the display is flashing, the [**cursor▲**] and [**cursor▼**] buttons sequence through the menu of volume levels and time strike options.

The three basic modes will act differently, depending on the quarter of the hour being chimed. These modes are:

OFF, the clock chime system is off, no chimes or clock strikes will occur on the hour.

STRIKE, in which at the top of the hour, a chime shall strike the hour, and on all other quarters may strike once.

WESTMINSTER, in which on the top of the hour, the full Westminster melody shall play, followed by striking of the hour. On all other quarters, the appropriate Westminster melody will play.

These modes are displayed in the **View mode** for each quarter hour as **OFF**, **STK** and **WMN**. The eight options take the three modes and apply them to each quarter hour, as follows:

TS OFF (Time Strike OFF) No chimes or bells for time strike	FULL WMN (Full Westminster) :00 – WMN (sixteen chimes and bell tolls the hour) :15 – WMN (four chimes) :30 – WMN (eight chimes) :45 – WMN (twelve chimes)
FULL STK (Full Strike) :00 – STK (one bell toll) :15 – STK (one bell toll) :30 – STK (one bell toll) :45 – STK (one bell toll)	HALF WMN (1/2 Westminster) :00 – WMN (Sixteen chimes and bell tolls the hour) :15 – OFF :30 – WMN (eight chimes) :45 – OFF
HALF STK (Half Strike) :00 – STK (bell tolls the hour) :15 – OFF :30 – STK (one bell toll) :45 – OFF	TOP WMN (Top Westminster) :00 – WMN (sixteen chimes and bell tolls the hour) :15 – OFF :30 – OFF :45 – OFF
TOP STK (Top Strike) :00 – STK (bell tolls the hour) :15 – OFF :30 – OFF :45 – OFF	WMN STK (Westminster 1/2 Strike) :00 – WMN (sixteen chimes and bell tolls the hour) :15 – OFF :30 – STK (one bell toll) :45 – OFF

Using the [**cursor▲**] and [**cursor▼**] buttons will rotate through the level settings and the **Time Strike** option settings. Continue pressing the [**cursor▲**] or [**cursor▼**] button until the desired time strike option is visible. Since the block of time does not change after setting the program for the time strike, you may set the volume level as well for the same block of time. The volume level setting function is described in the next section.

Any programs displayed in the upper right corner of the display will be written into the program schedule when **SET PROG** is selected and the [**ENTER**] button is pressed for the times and days shown on the left side of the display.

Select **SET PROG** and press [**ENTER**] for each change you wish to make.

07A to 11P	FULL WMN
MON .. FRI	SET PROG

This display shows that when SET PROG is selected and [**ENTER**] pressed, the Full Westminster function will be programmed from 7:00 A.M. until 10:45 P.M. on Monday through Friday.



IMPORTANT: Double check the settings made to see that they are correct before pressing [**ENTER**].

The program modifications available in the Time Strike menu are ongoing in nature. They will continue on as scheduled until the program is changed. To make program changes to specific times on the program schedule, refer to page 20, “Setting/Changing the Program Schedule”.

What you see is set in memory. Both the Time strike option and Level setting may be made over the same time period. Select **SET PROGRAM** and press **[ENTER]** each time. Different time strike types and level settings may be entered for different times and days.

After all settings are completed, press **[CANCEL]** twice to return to Standby mode.

Programming Loudness (Volume Level)

The loudness of your EZ Bells™ carillon may be preset to specific levels for various times of the day. This is accomplished by using the **Time Strike** menu. Eight preset levels are available, **Level:1** being the softest and **Level:8** the loudest. **Level:6** is pre-programmed at the factory to be the normal play level. Select the desired level by using the **[cursor▲]** and **[cursor▼]** buttons to index through the Time Strike types. The loudness levels follow the time strike types. Select **SET PROG**, press **[ENTER]** then exit with **[CANCEL]** button, if finished.



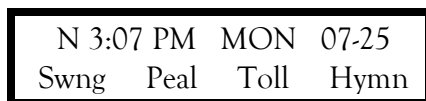
Example display showing a reduction in level for the night hours. Depending on the location of the installation, Time Strikes may be played all night at reduced levels.

The attenuation for each level setting is:

8 +2 dB (maximum)	5 - 1 dB	2 - 6 dB
7 + 1 dB	4 - 3 dB	1 - 8 dB (minimum)
6 0 dB (nominal)	3 - 5 dB	

Programming Function Buttons

You may select a swinging, pealing, tolling bell or play a Hymn by making your selection with the function buttons, ([1], [2], [3] or [4]) directly below the label on the screen. After making your selection, the screen will prompt you to press **[ENTER]** to play or, **[CANCEL]** not to play.



This is displayed when the system is ready to play automatically.

Buttons [1] through [4] on the front panel become programmable function buttons when the system is in standby mode. These four buttons are duplicated on the optional remote control unit. The **FUNCTION** option in the setup menu allows you to reprogram the function buttons. These come factory programmed for Swing, Peal, Toll and Hymn.

Each function button may be programmed to play up to four selections, or repeat a single selection up to 199 times. In addition, the four letter label above the function button can be customized to describe the function performed.

Select Menu:
View Manual *Setup*

To enter the Setup mode, press the [ENTER] button to get the main menu selection display. Use the [◀cursor] or [cursor▶] button to cause Setup to flash, then press [ENTER].

Time Strike Set Time
Change Disc *Function*

Use the [◀cursor] or [cursor▶] button to select Function then press [ENTER].

F1 Swng NOW! NONSTOP
1123 001 Time(s)

The first function button program will be displayed. To view the other three functions, press the [cursor▼] button while the function button number is flashing.

F1 *Swng* NOW! NONSTOP
1123 001 Time(s)

Press [ENTER] to make changes to the function program. This screen shows a single selection programmed to play once.

The [ENTER] button switches the flashing cursor between the function button number and the programming fields to the right of it. When the [ENTER] button is pressed, the first selection will flash, showing that changes can be made to the program. As long as the function number is not flashing, the [◀cursor] and [cursor▶] buttons move the flashing selection cursor around the screen. Changes can be made to any function button by inserting preferences from the “Selection Catalog”. Note: If changes are made to the function buttons, you may want to re-label the onscreen display. This is done by highlighting the individual letters and changing them using the [cursor▼] and [cursor▲] buttons.

Pressing [ENTER] while a programming field is flashing, commits any changes made to memory. Pressing the [CANCEL] button instead of [ENTER] will abort modifications and retrieves the original settings to the screen from memory. Whenever the function button number is flashing, the [cursor▲] and [cursor▼] buttons move from one function button to another.

WAIT/NOW! Function

In the WAIT mode, the function button loads the selection and keeps it ready to play (for up to one hour) until the PLAY or ENTER button is pushed.

ENT: Play CAN: Quit
Ready to Play Hymn

If you are in the NOW! mode, only the function button needs to be pushed. The selection will begin to play as soon as it is loaded.

STOP/NONSTOP function

In the stop mode, the carillon will play one selection and then stop until it is told to play another, or to repeat itself. In the Non-stop mode it will play until all the selected music is completed.

To Enter More Than One Selection

When only one selection is currently programmed, press the [cursor▶] button to select the number of times to play the single selection. Pressing zero then [ENTER] will clear this field and allow up to three more selections to be programmed.

F4	Hymn	WAIT	NONSTOP
1225	0000	0000	0000

This screen demonstrates what a multiple selection program looks like. The four selections will be queued to play when either the [ENTER] button is pressed.

To Repeat a Single Selection

If a single selection is entered into a function which had multiple selections previously programmed, enter zeros into the second selection location until the second, third and fourth selections are zeros. Press the [ENTER] button to make '001 Time(s)' display. The number of times to repeat (one to 199) may now be entered.

To Play a Standard (Non-CMS) Disc

Some standard discs have been cataloged into the internal computer and are available to play by inserting the disc and entering the code supplied from the CMS list. Individual selections from these discs may also be chosen using the “Online Title Lookup” page 21.

A standard disc that has not been cataloged into the system may also be used by following these codes:

1. Identify the tray the disc is in preceded by a 0 (e.g. 03 would be the disc in tray 3).
2. Then identify the track (e.g. 11 would be the eleventh song on the disc, 08 would be the eighth song, etc.).

If you have a unit with a separate amp, you may turn the power switch off and the selection will play through the monitor speaker in the rear of the unit. If the unit has an internal amp, you will need to disconnect the exterior speakers to prevent outside play.



Reminder: Discs purchased from sources outside CMS must be installed in the #2-#6 trays. Due to the condition of the discs and the source of manufacturing, we cannot guarantee the playability of these CD's.

View Mode/Set Program

View mode enables you to see what has been programmed to play at various times of the week. Besides viewing the program schedule, you may modify it at specific periods. The EZ Bells™ carillon is programmable at 15-minute intervals. We will call these intervals time slots. If you wish to play a selection at a time not falling on an even quarter-hour time, up to three pauses from one to five minutes in length may be programmed to precede the selection. This allows you to position the time that a selection plays at any minute of the hour. These possibilities are explored in this section.

N 12:25 PM WED 09-14			
Swng	Peal	Toll	Hymn

This is the non-seasonal Standby mode display. The system is ready to play an automatic selection. You may also select preset bells to play or play a random Hymn by pressing the black button directly under your choice, then pressing [ENTER] to play.

Select Menu		
View	Manual	Setup

To enter the View mode, press the [ENTER] button to get the menu selection display. Use [◀cursor] or [cursor▶] button to cause View to flash, then press enter.

Viewing the Program

Before making changes to the program schedule, you will probably want to look at it. When entering **View** mode, the selections programmed for the quarter hour in the next time slot are displayed. For example, if it is 11:08 A.M. Wednesday when you enter the View mode, you will see the program for 11:15 A.M.. This is the next programmable 15-minute time slot. When entering the View mode, you will always see the next time slot to play.

WE 1:15P	SRCH	L6	WMN
0000	0000	0000	0000

This display shows that the quarter hour Westminster time strike will play Wednesday at 1:15 P.M. at volume level six, with no other selections to follow.

The flashing **WE** shows that pressing the [**cursor▲**] or [**cursor▼**] button will show you what is programmed at 1:15 P.M. Tuesday or Thursday. Using the [**◀cursor**] or [**cursor▶**] buttons, you can cause the hours, the minutes or **SRCH** to flash. When the day is flashing pressing the [**cursor▲**] or [**cursor▼**] buttons will move the displayed time backward or forward a 24-hour period at a time. If the Hour is flashing, the display is moved an hour at a time. If the minutes are flashing, the display moves 15 minutes (one time slot) at a time.



NOTE: Make sure you are on the proper day, stepping through hours and minutes may change the day. Always check the display before pressing [**ENTER**] to make certain the selections and the time are correct.

Checking the Program Schedule

It is a tedious operation to step through the program schedule 15 minutes at a time to see if any selections are programmed. If the [**◀cursor**] button is pressed while the day of the week is flashing, **SRCH** will begin to flash. Pressing the [**cursor▲**] and [**cursor▼**] button will search backward or forward for programmed selections. We call this the **View Search mode**. If the day and time do not change, there are **NO** automatic selections programmed. There may be time strike functions programmed, but only selection numbers are searched for in this mode.

WE 1:15P	SRCH	L6	WMN
0000	0000	0000	0000

This display shows the times and days that selections are programmed to play. When **SRCH** is flashing, press the [**cursor▲**] and [**cursor▼**] buttons to show the program times and days of the week along with the selection numbers.



Note: When **SRCH** is blinking, only time slots that have selections programmed will be scanned. Time slots with time strike functions programmed without other selections will be skipped.

Setting/Changing the Program Schedule (Program Mode)

When you want to set up or change the current time slot settings, press the [**ENTER**] button to cause the first selection number to flash. You may use the [**◀cursor**] or [**cursor▶**] button to select the setting you wish to change. Whenever the program settings are flashing, the system is in the Program mode.

MO 8:00P	SRCH	L6	OFF
0000	0000	0000	0000

Any selection number from any disc in the magazine can be programmed to play at a specific time on a given day of the week. Up to four selections can play at any 15-minute period. The lower line of the display in View mode shows the four selections that are programmed for the selected time slot. Unless it is a random selection or a pause, four digits represent each selection number. All zeros show that no selections are programmed.

After you have made changes to the time slot program settings, and you are sure that they are correct, pressing the **[ENTER]** button will save them into the program schedule memory. The time of the slot (or **SRCH** if in View Search mode) will again flash. The system is again in the View mode. The settings viewed at this time reflect what is in the program schedule memory.

When the time strike selection is flashing on the display, depressions of the **[cursor▲]** button will select between Westminster and Strike options. The **[cursor▼]** button will select OFF.

After the time strike option is set, pressing the **[ENTER]** button will exit the Program mode so that you may select another time slot. If you have made a mistake and wish to restore the original setting, pressing the **[CANCEL]** button instead of **[ENTER]** will restore the previous settings and exit the Program mode. If you wish to change additional parameters, the **[◀cursor]** or **[cursor▶]** button will select additional parameters to change, and the system remains in the Program mode.

MO 8:15P	SRCH	L6	WMN
0000	0000	0000	0000

When the time strike field is flashing, pressing the **[cursor▲]** and **[cursor▼]** button selects between Westminster (WMN), Strike (STK), and OFF.

Online Title Lookup

In the **VIEW** and **MANUAL** editing screens, whenever a selection is flashing you may access a catalog of selections. Press the **[cursor▼]** or **(NO)** button. The “Select Series” screen will appear with the library option listed. Depending on the discs that are installed, the options may include:

Chime and Harp – Pre-recorded two part arrangements

Cast Bell Carillon – Pre-recorded full carillon arrangements

Special Functions – Bugle call, different bell ringing sizes/options, random groups, etc.

You may access these options by pressing the **[cursor▲]** or **[cursor▼]** buttons. When the library desired is listed press the **[ENTER]** button. Use the **[◀cursor]** or **[cursor▶]** button to select the initial position in the alphabetical listing and press **[ENTER]**. Use the **[cursor▲]** or **[cursor▼]** buttons to browse through the listing until you find the selection you wish to use. Only selections available with the discs currently loaded will be shown. When the title you wish to use is on the display, pressing **[ENTER]** will return the screen to the edit menu and the number of the selection will have been programmed, and the next selection field will blink.

To delete a selection, press the zero button four times. Selections to the right of the deleted selection will move left to fill the gap. Consequently, be careful not to delete a selection that you want to keep. To replace one selection with another selection, simply key in the new selection on top of the old.

If you enter an invalid number, or a selection that is not loaded into the system, a warning screen will appear. Press any button to re-enter the number.

MO 8:15P	SRCH	L6	OFF
1123	0000	0000	0000

To program a specific selection, use the number buttons to enter the four digit selection number.

MO 8:15P	SRCH	L6	OFF
1123	0000	0000	0000

The next available position in the selection sequence begins to flash when all four selection digits are keyed in.

MO 8:15P	SRCH	L6	OFF
1123	1234	1345	0000

To delete a selection from a sequence, use the [◀cursor] or [cursor▶] button to cause it to flash. Then key in four zeros to delete the selection.

MO 8:15P	SRCH	L6	OFF
1123	1456	1234	1345

The selections to the right of the deleted selection move left so that the sequence is continuous. To replace a selection, enter the new selection number over the old.

To program a standard selection that is not catalogued, you must follow directions on page 19. “To Play a Standard Disc)

Selection Carry Forward

When you program several time slots with the same selections, the carry forward feature will greatly reduce the amount of button pushing required. Whenever you program selections into a time slot that previously had none, these selections are also stored into a temporary memory bank.

After you move to a new time slot, with no previously programmed selections, and press the [ENTER] button, the selections from the temporary memory bank are copied into the display. If you wish to carry these selections to another time slot, move to that slot and press [ENTER] again. If you would rather program a different set of selections, press the [CANCEL] button and then the [ENTER] button again to clear them.

If you are modifying time slots with existing selections programmed, the Selection Carry Forward feature is disabled so that selections will not be disturbed.

As an example (assuming no other programming has been done), let's say that Sunday morning at 9:00 A.M. we want to ring the Call to Worship swinging bell. In addition, every day at noon, we want to play two general hymn selections. At 6:00 P.M., we want to play two meditative hymn selections. Press the [ENTER] button to get the Main menu. Press it again to enter the View mode.

Use the [cursor] buttons, as described previously, to select SU 9:00 A.M. and press the [ENTER] button to go into the Program mode. Press 1123 then [ENTER] to program the Call to Worship bell. Press [ENTER] to save that entry and return the screen to the View mode.

Use the [cursor] buttons to select 12:00 P.M. Pressing the [ENTER] button will copy the 1123 into the selection list, but that is not what we want. The '1123' should be flashing. Now press the numbered selections desired or 'YES' 'I' 'YES' 'I' then the [ENTER] button to program two R1 (random) elections.

Press the [◀cursor] button to make SU flash and press the [cursor▼] button to select Monday. Press the [ENTER] button twice. The two selections are programmed into Monday. Press the [cursor▼] button then [ENTER] twice for Tuesday. Press the [cursor▼] button then [ENTER] twice for Wednesday. Repeat until Saturday is programmed.

Press the [cursor▼] button to select Sunday again, then press the [cursor▶] button to make the hour flash. Press the [cursor▼] button until 6:00 P.M. is selected. Press the [◀cursor] button to make the day flash. Pressing the [ENTER] button will copy two R1 selections into this time slot, but we want two R3 selections. Press YES, 3, YES, 3 and then [ENTER] to program two R3 selections.

Press the [◀cursor] button to make SU flash and press the [cursor▲] or [cursor▼] button to select Monday. Press [ENTER] twice. Repeat the [cursor▼] button then [ENTER] twice" sequence until Saturday is programmed.

Programming Random Selections

The ability to play selections at random and substituting appropriate seasonal selections, is the hallmark of the Chime Master® carillon system. When your system was installed, it was programmed to play from one of five random play lists. Consult page 41, **Installation Notes** in the front of this manual to verify which Random Play List has been selected for your system.

There is a table in the **Selections Catalog** that describes the random music groupings (R numbers) for all possible installations and seasons. The following table summarizes these groupings for Protestant and Catholic installations during non-seasonal times.

Protestant	Catholic
R1 Groups R2 to R4 below	R1 All groups below
R2 Traditional Hymns	R2 Traditional Hymns
R3 Meditative Hymns	R3 Eucharist Hymns
R4 Evangelical Hymns	R4 Marian Hymns
R5 Revival/Camp-meeting	R5 Contemporary Hymns

When a random selection is programmed to play, it is shown on the View mode display with an 'R' and a number (R1 through R5). This number represents the random category from which the selection will be randomly chosen. Note that the selections are randomly sequenced, and that all selections available for a category will be played equally as often.

To program a random selection, follow the instructions in the previous section, except press the [cursor▲] button instead of the first digit of the selection. One depression of the [cursor▲] button will cause a 'R' to appear on the display. Pressing the [cursor▲] button a second time will cause a 'P' to appear. This is used to program pauses, as described in the next section.

Once the 'R' is on the display, pressing a number button from one to five will select the random category from which to sequence the selection.

MO 8:15P SRCH L6 OFF
0000 0000 0000 0000

To program a random selection, press the [cursor▲] button to cause an 'R' to be displayed.

MO 8:15P SRCH L6 OFF
R_ 0000 0000 0000

Then press a number button to show which random category the selection is to be sequenced from. This is a number from one to five.

MO 8:15P SRCH L6 OFF
R2 0000 0000 0000

The next position in the selection sequence will begin to flash when the random selection is entered.

For a detailed seasonal listing of Random Group Categories, please refer to the **Selections Catalog** included with the system.



Note: Using 0701 and 0702 allows automatic selection of non-seasonal music during Lent, Easter, Thanksgiving and Christmas seasons.



Note: Standard (non-CMS) discs (including accompaniment) will not load into the Random selections. They must be programmed individually.

Random Selection Block Functions

Special music functions allow the carillon to play for a predetermined length of time. The listing below shows 10, 15 and 30-minute modes. This is not the length of play, but refers to what time the music will stop. The next selection will not begin if there is less than one minute of play time remaining. If a selection is still playing at the stop time, it will fade out before stopping.

- :10** Plays until 5 minutes before next quarter hour (h:10, h:25, h:40 or h:55)
 - :15** Plays until next quarter hour (h:15, h:30, h:45 or h:00)
 - :30** Plays through present quarter hour and an additional quarter hour period, and if the clock is set to strike during the period, it will not strike.
- | | |
|--|--|
| <ul style="list-style-type: none"> 0701 :15 Group R1 (Non-seasonal only) 0702 :30 Group R1 (Non-seasonal only) 0703 :15 Group R1 0704 :30 Group R1 0707 :10 Group R1 0708 :10 Group R2 0709 :15 Group R2 | <ul style="list-style-type: none"> 0710 :30 Group R2 0711 :10 Group R3 0712 :15 Group R3 0713 :30 Group R3 0714 :10 Groups R4 and R5 0715 :15 Groups R4 and R5 0716 :30 Groups R4 and R5 |
|--|--|



Note: Using 0701 and 0702 provide random selections of non-seasonal music during Lent, Easter, Thanksgiving and Christmas seasons.

Documenting Your Schedule

We have provided an Input Sheet that you should use to decide what you want to play each week. The Input Sheet allows you to document the day and time that a particular selection is to play. There is also a place to write the title of the selections. When the selection is a random selection, write out the group type, such as Hymns in the title column.

As you enter each selection into the program schedule, make a check in the OK column. Documenting your program this way will make things easier for the next person who needs to make a change.

Loudness Program Parameters

Usually the loudness is set for blocks of time, using the time strike setup mode (See: *Setup Mode Programming Loudness (volume Level)*, on page 17). You may wish to adjust the loudness for a particular time, such as ringing the noon bell for the whole community. The Loudness setting can also be modified with the Program mode.

To do this, use View mode to find the time slot you wish to modify. Then enter the Program mode for the time slot you wish to change, by pressing the [ENTER] button. Use the [cursor▶] button to cause the current loudness setting to flash. This is an 'L' followed by a number. 'L8' is the loudest setting, and 'L1' is the quietest setting. The installer of your system preset the amplifier level controls to allow a normal setting of 'L6.' To change the setting, press a number button between '1' and '8', or use the cursor buttons.

MO 8:15P SRCH L6 OFF
0000 0000 0000 0000

Pressing a number button from 1 to 8 selects a respective volume level. The [◀cursor] or [cursor▶] buttons select the other parameters in the program mode. The [CANCEL] button aborts changes, and the [ENTER] button saves changes. This changes loudness only for the time shown.

Other Special Bell Functions

The following 0700 series Special Bell Function selection numbers may also be used. 0700 series functions may not be followed by any other selections.

0705 - 15 Second Swinging Bell **0706** - 15 Second Pealing Bells

Because 0700-series numbers finish out the quarter hour, they must be entered as the only or last selection. Specific selections or pauses may be used prior to the 0700-series numbers.

Pauses and Playing at Non Quarter Hour Times

A program pause may be inserted (one to five minutes) before selections for special programming effects or to set the specific number to play.

Enter a pause by pushing the "YES" button twice to select "P", followed by the length of the pause (in minutes) by pressing a numeric button. "P" and "R" alternate when you press the scroll-up button for the first digit of the selection number.

For example, let's say you wish to play a selection at 9:55 A.M. At the 9:45 A.M. time slot, program two five-minute pauses ahead of the selection. At 9:45 the system will wait 10 minutes before playing the selection.

Pauses may cause unexpected results when inserted between selections. A programmed pause merely waits for the minute that is one to five minutes ahead of the time that the pause is encountered in the sequence. If at 8:30 a selection plays which is three and one-half minutes in length, followed by a programmed two-minute pause, the selection following the pause will play at 8:35:00, not 8:35:30 or 8:37, but at the nearest full minute.

MO 8:15P SRCH	L6	OFF	
P_	0000	0000	0000

To program a Pause, press the [cursor▲] button to cause an 'R' to be displayed. Press it again to cause a 'P' to be displayed.

Then press a number button to specify the length of time in minutes the system is to pause. This is a number from one to five.

MO 8:15P SRCH	L6	OFF	
P2	0000	0000	0000

The next position in the sequence will begin to flash when the pause is keyed in. Whatever selection is entered here will play at 8:17 P.M.

EXAMPLE:

MO 8:15P SRCH	L6	OFF	
1123	P5	0703	0000

In this example, the Call to Worship Bell will ring, pause for five minutes and then play random selections from the seasonal catalog for the remainder of the quarter hour.

Manual Mode

The Manual mode allows you to suspend the automatic play mode to use the system during special events. Appropriate music for events such as weddings or graduations can be found in the Selections Catalog. Manual mode can be programmed ahead of time, because it remembers the selections programmed to play. It is like a programmable function button that you can play immediately.

N 12:25 PM WED 09-14
Swng Peal Toll Hymn

This is the Standby mode display. Press the [ENTER] button to reach the Main Menu display.

Select Menu
View Manual Setup

To enter the Manual mode, press the [◀cursor] or [cursor▶] button to cause Manual to flash, then press [ENTER].

Edit Play NONSTOP
1148 001 Time(s)

The initial display for Manual mode has Edit flashing. Use the [◀cursor] or [cursor▶] button to choose between Edit and Play, followed by [ENTER]. The lower line shows the selections programmed to play.

Use the [◀cursor] or [cursor▶] button to select between 'Edit' and 'Play'. When 'Play' is flashing, pressing [ENTER] will retrieve and cue the first selection. Note that pressing [PLAY] on the remote control while 'Play' is flashing will not cause the selection to play. You must see 'ENT: Play CAN: Quit' on the display for the [PLAY] button to work.

When 'Edit' is flashing, press [ENTER] and the first selection will flash, make desired changes to the program. Press [ENTER], the changes will then be entered into memory. "Play" should be flashing.

If you do not wish to play the selections at this time, you can abort the performance by pressing [CANCEL]. When the display says 'ENT: Play CAN: Quit.', pressing the [CANCEL] button will return you to the “Manual Mode” screen. If you do not play the selection, the program will hold your selection for one hour (During this time, all other programming is suspended). Your settings will be saved.

Manual Play Mode
Retrieving...

Pressing [ENTER] after programming the selections to play, or when 'Play' is flashing if you wish to repeat a previous performance, causes the system to retrieve the selections for playing.

ENT: Play CAN: Quit
Ready to Play 1234

When the selection is ready to play, you may press [ENTER] (or PLAY on the remote control) to start the performance, or press [CANCEL] to abort the performance

2:13 PM SAT 07-23
Playing 1234

The current time will be displayed with the selection number as the selection plays

To Enter More Than One Selection

(See page 18)

<i>Edit</i>	<i>Play</i>	NONSTOP	
1543	1156	1438	0000

This screen demonstrates what a multiple selection program looks like. The three selections will be queued to play when the [ENTER] button is pressed.

To Repeat a Single Selection

(See page 18)

Programmable Toller

The selection repeat feature may be used to cause a tolling bell to ring a specific number of times. The single strike (selection 1105) is typically used for funeral tolls, which is a heavier bell than the one-minute tolling bell. The number of repeats may be set to the age of the deceased. You may also use the single strike to strike for a specific length of time. A repeat value of 35 will ring for five minutes, 70 for 10 minutes, etc.

STOP or NONSTOP

(See page 18)

Using the Remote Control

Programmable Functions of the Remote Control

The four function selection buttons on the remote duplicate the buttons labeled [1], [2], [3], [4] on the front panel of the EZ Bells™ carillon. When the unit is in the Standby mode, these four buttons allow special functions to be played. The base unit does not need to be unlocked (key in slot and turned) for the remote to work.

The red **STOP** button on the remote duplicates the **[CANCEL]** button on the front panel. Whenever the system is playing, pressing stop will cause the selection to fade away. If a function with multiple selections is programmed, then the next selection in the sequence may play after the current one is canceled. To cancel all selections, press **[STOP]** at least two times.

When a function selection is ready to play, the green **[PLAY]** button on the remote duplicates the action of the **[ENTER]** button on the front panel.

The Function Labels

The lower part of the remote transmitter allows the function selection buttons to be labeled. A label corresponding to the factory default function programs is shipped installed in the transmitter. Spare labels, which can be typed on, are also included so that you may label your own custom functions.

To remove the label card, push it toward the top slot with the eraser end of a pencil, while curling the top of the card outward with a letter opener or other sharp flat object, being careful not to scratch the finish.

Operational Tips

The remote provides a line of sight transmission of about 100 feet. Any mass of metal between the transmitter and receiver will inhibit proper operation. You may also discover a few dead spots where the unit may not operate, even though you are closer than 100 feet.

For best results, the transmitter antenna should be hanging vertically when transmitting. If it must lay horizontally, it should be oriented so that it is perpendicular to the direction of the receiver. Operation from metal cabinets or tables will probably not be satisfactory.

If the transmitter is operated next to microphones or microphone cables, it is possible that the PA system will pick up a noise, similar to a telephone ring tone. Avoid operation in close proximity to PA equipment and wiring.

Troubleshooting Guide

In Standby mode, the system is continuously performing diagnostics. If it detects something out of the ordinary, it will attempt to correct itself without operator intervention. If that is not possible, it locks up and displays a message. Although this can be an inconvenience, it is better than having to get out of bed in the middle of the night and race to the church to shut the bell system down. Rarely, one of the following messages may appear on your display. If this happens, follow the procedure listed below the message.

If your system is doing any other strange things that are not described below, turn the power switch off for about 10 seconds, then back on.

Error in Program Schedule Detected

Program is corrupted
Yes-Clear No-Salvage

If a power outage that surges on and off rapidly occurs (which often accompany high winds and storms), program memory may be affected. The corruption is usually minor and so we have provided a way to salvage as much of it as possible.

Should you select **YES** to reinitialize the program, or select **NO** to salvage? The answer depends on how complex your program is to key in, or if you have an adequate record of it at all. The least amount of time and effort will be spent if you press **NO** to salvage what you can. When you elect to salvage, each time slot is checked and will be cleared if any invalid selections are found. Also any slots programmed between **11:00 P.M.** and **6:00 A.M.** will be cleared. Be sure to check the schedule with View mode after resetting (refer to *View Mode, Checking the Schedule* on page 20).

If you say **YES**, you must answer many questions from the installation menu. You may wish to refer to *Program Installation, Entering the Installation Menu (clear memory)* on page 8.

Blank Screen



Due to rare interruptions of program process, the screen may appear blank for a period which should not exceed 15 minutes. If it exceeds this period of time, turn off the power to the system or unplug it from the wall receptacle for about 10 seconds, then power back on or plug the system back into the wall receptacle. The program should resume after resetting itself to normal.

Time Clock Errors

Clock Error (E)
View Manual Setup

A clock error means that invalid data has been found in the time clock registers. Set the clock from the **Setup, Set Time** menu, then check system operation manually. If you get a Clock Error (S), showing that the clock has stopped, and you can't restart it by setting the time, the clock's battery may be low. Call the factory for service information.

Disc Drive Error

Disc Drive Error
Reset and Test

This message shows that the disc drive has had several consecutive failures trying to play. This may show that the disc drive needs a full reset.

1. Turn the power off and wait five seconds.
2. Turn the power back on while holding in the red **[CANCEL]** button on the front panel.
3. Continue to hold the **[CANCEL]** button until a **Configuration** display appears (or about fifteen seconds).
4. Release the **[CANCEL]** button.
5. Turn the power off and wait five seconds and turn power back on (without pressing any buttons).
6. When the standby mode screen comes on, eject the disc magazine and reinstall it (see page 12).
7. After all discs have loaded, test that system is operational by pressing **4** to play a random hymn.

If the discs do not load properly in step 6, make sure they are installed correctly with the label side down. If the unit still will not accept the disc magazine, call the factory for service information.

Standard Disc Does Not Play

Check disc:

1. It must be loaded label side down.
2. The disc must be in tray 2 through 6.
3. Codes must be entered correctly (02 for the second tray, 03 for the third, and so on).
4. Make certain the disc is in good condition (scratches and warping will make the disc unreadable).
5. Some discs may not be compatible with this system. Try another disc.

Disc Reading Error

Unable to read discs
Unlock to check

This message occurs when the system has failed in an attempt to read the discs. It will not eject the disc magazine if the system is locked. Unlock the key lock to eject and inspect the discs, then replace the magazine.

No Sound

If no sound is heard either from the tower or from the monitor speaker when the display shows that a selection is playing, follow this checklist.

1. Determine that the system is actually playing properly. Is the colon on the time display flashing? If not turn the power off and then back on. Try playing a selection manually or with a function button.
2. Are connections to the amplifier at fault? Make sure that all cables are plugged in completely.
3. Is the amplifier at fault? Try plugging the amplifier power cord into a wall socket. Does the red or green power light come on? While the amplifier is plugged into the wall socket, remove the audio cable from the back of the main disc drive unit. Tap on the tip of the connector at the end of this cable. You should hear a faint hum or thump from the monitor speaker as you do so.
4. When the unit is playing, the green **PLAY** light on the front of the disc drive unit should come on. Also, you should have a power indication on the amplifier (green or red, depending on the position of the tower switch).

If sound can be heard from the monitor speaker, but not from the tower follow this checklist.

1. Make sure that the tower switch is in the on position and that the green light comes on while the system is playing.
2. Check that the tower speaker cable is properly attached to the amplifier output terminals.
3. Check the tower speaker cable for shorts between the conductors.

Returning the System for Service

Call for Return Authorization. Do not return equipment without calling (800) 344- 7464 for return authorization. We probably can help you avoid returning the equipment. Should your equipment need to be returned, the customer service representative will provide you with the address of the service station.

Follow these steps to make your system ready for shipment.

Ready The Unit for Packing

Eject the Disc Magazine. Important! The unit may be damaged if shipped with the magazine installed. Skip this step ONLY if unit is unresponsive.

Turn the key to the unlocked position (fully clockwise) and press the **[ENTER]** key to get the main menu on the screen. Press the **[cursor▶]** button twice, or until SETUP blinks, then press **[ENTER]**. The setup menu will be displayed. Press the **[cursor▶]** button twice again, or until CHANGE DISC blinks, then press **[ENTER]**. The disc magazine will eject.

Turn the System Off. Turn the key to the locked position (fully counter-clockwise) and remove the key. The main power switch is on the rear of the unit.

Put the disc magazine and key where they will be safe until your unit is returned to you. Unless it is requested that you send it with the unit!!!

Disconnect Cables. Unplug the power cord from the wall receptacle. Unplug the audio cables from the rear of the unit. Do not send any of the cables with the unit.

Use Only Original EZ Bells™ Packaging

Locate original packing. Your warranty will be voided if your system arrives with shipping damage due to improper packing. If you cannot find your original boxes with foam packing materials as described below, call us to order a new box with packing. A \$25.00 charge is made for the shipping package.

Address the unit to be returned for upgrades or service to:

Service Department
EZ Bells, CMS
6312 Goss Road
Sugar Grove, OH 43155

For any further questions or assistance, please call 1-800-344-7464.

Reinstalling After Repair

To prepare system for operation:

Reconnect the cables to the rear panel of the system.

We make every effort to reprogram your schedule and settings after servicing your carillon. Insert the disc magazine before turning on system to avoid clearing the program schedule. If all of the disc trays do not cycle after the copyright message, go to the **SETUP** and then **CHANGE DISC** menus to eject the disc magazine. All trays should cycle after reinserting the pack.

Angelus Prayer Bells

Angelus (3-3-3) followed by a Four-Bell Peal

MO 12:00P SRCH L6 OFF
1120 0000 0000 0000

Angelus (3-3-3) followed by a Swinging Bell

MO 12:00P SRCH L6 OFF
1120 1123 0000 0000

Standard one-minute Angelus

MO 12:00P SRCH L6 OFF
1117 0000 0000 0000

Angelus DeProfundus

MO 8:00P SRCH L6 OFF
1124 0000 0000 0000

Slower 3-3-3 With a larger bell (can be followed by a Peal or Swinging Bell)

MO 8:00P SRCH L6 OFF
1107 1107 1107 0000

See the Selections Catalog for other bell functions.

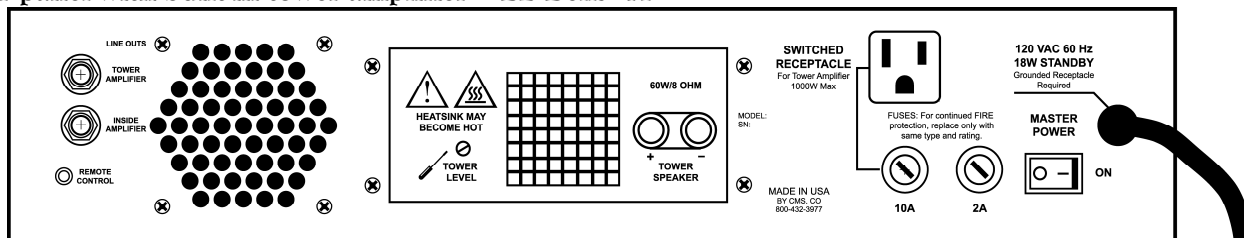
Installing the EZ Bells Carillon

Before you install or hookup the tower speakers, you can simply plug in the system, configure it (see page 8), and play it through the built-in monitor speaker. Familiarity with the carillon operation, before finishing the installation, will make the first test (below) more satisfying.

There are several options that are available concerning the hookup and operation of the EZ Bells Carillon System. The remainder of the manual is dedicated to the **RECOMMENDED** installation and connection procedures. There are other options that are addressed in the enclosed “RMX Series Amplifier” manual. There is also information on the rear of the amplifier. As always, if you have questions concerning installation or operation, please call our customer service line, 1-800-432-3977.

EZ Bells Carillon Connection Details

Rear panel with built-in tower amplifier – EZ Bells–A



1. Connect the speaker cable from the tower speakers to the **Tower Speaker** binding posts. Strip wire insulation to expose 3/8 of an inch of copper. Loosen the binding posts by turning counter-clockwise. Insert the wires into the openings at the bottom of the binding posts and retighten. Under no circumstances should either speaker wire be connected to a ground or conduit.
2. Connect the remote receiver to the control unit with the supplied 6 ft. cable with a 1/8 in. plug on the end. Push the connector all the way into the **Remote Control** jack. Fully extend the antenna and orient vertically.
3. If connection to the PA system is desired, purchase a connecting cable with a 1/4" TRS audio jack to insert into the **Line Out – Inside Amplifier** jack on the control unit (below the tower output plug).
4. Plug the power cord into a grounded AC receptacle.

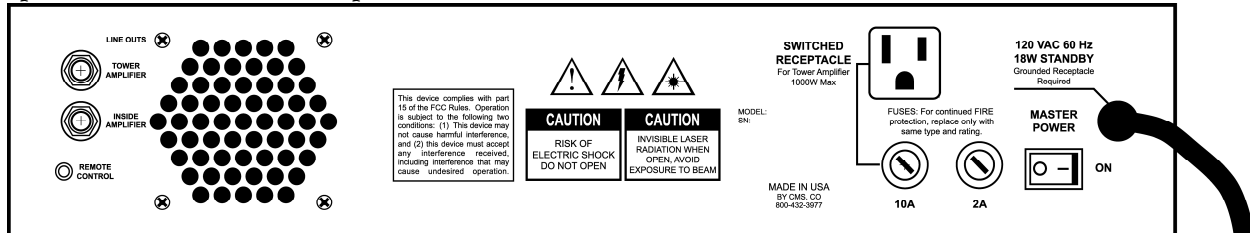
Operation – Built-in Amplifier

First Test - Set the front panel monitor level control and the rear panel master level control (screwdriver adjustment on the built-in amplifier is to the left of the heat sink) to their midpoints. Turn the system on with the power switch on the rear panel of the system control unit. When the display shows the time and date (the Standby mode), press **1** then **Enter**. A swinging bell should play.

Now that the system function has been verified, turn the monitor level control fully counterclockwise (OFF). Play the swinging bell again and *gradually* increase the master level control to obtain a normal sound level outside.

(end of built-in amplifier instructions)

Rear panel without built-in amplifier – EZ Bells



1. Connect the speaker cable from the tower speakers to the power amplifier as detailed in the amplifier's documentation. For the RMX series amplifier, use the two RED binding posts (near the middle of the amplifier rear panel), as the amplifier is used in the Bridged Mono mode. Strip wire insulation to expose 3/8 of an inch of copper. Loosen the binding posts by turning counter-clockwise. Insert the wires into the openings at the bottom of the binding posts and retighten. Under no circumstances should either speaker wire be connected to a ground or conduit.
2. Connect one end of the audio cable to the **Line Out – Tower Amplifier** output jack on the back of the control unit (top plug on upper left). Push the connector all the way into the jack. Plug the other end into the CH 1 input jack (left rear of RMX amplifier). You may choose to bundle the excess audio cable with the twist tie to make the installation neat.
3. Connect the remote receiver to the control unit with the supplied 6 ft. cable with 1/8 in. plug on the end. Push the connector all the way into the **Remote Control** jack. Fully extend the antenna and orient vertically.
4. If connection to the PA system is desired, purchase a connecting cable with a 1/4" TRS audio jack to insert into the **Line Out – Inside Amplifier** jack on the control unit (below the tower output plug) and a suitable connector for you PA system line level input on the other end.
5. Plug the power cord from the power amplifier into the **Switched Receptacle** located above and to the left of the power switch on the back panel of the carillon control unit
6. Plug the power cord into a grounded AC receptacle.

RMX Amplifier Instructions

Configuration Switches - The diagram at right shows the recommended switch settings for carillon use.

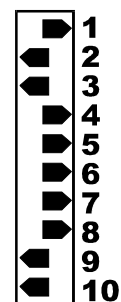
Speaker Voltage - Because of the amplifier's high power capability there is a possibility of shock hazard at the speaker terminals. Always make connections with the power off, observe good wiring practice and avoid stray wire strands.

Speaker Cables - A minimum of 14-gauge speaker cable should be used. 14/2 SJTO cable is available from EZ Bells Systems. If the speaker cable has to run more than 250 feet, consider 12 gauge cable or constant-voltage speaker drivers. Under no circumstances should either speaker wire be connected to a ground or conduit.

Constant-Voltage Systems - The amplifier can drive 70-volt lines at 200 watts. This makes it particularly suitable for upgrading older systems that have speaker drivers with transformers. Transformer speaker drivers must be wired in parallel, not parallel-series as shown for low impedance drivers.

Low Impedance Systems - The best sound quality will be obtained with speakers that use low impedance drivers. This is because the matching transformers filter high frequencies, and the damping factor provided by low impedance reduces low frequency distortion. A typical system consists of four 16-ohm speakers that, when wired parallel-series as shown below, paralleled present a load impedance of 16 ohms to the amplifier.

The amplifier is capable of driving a 4-ohm load, but will run hotter. Wiring four 16-ohm speakers in parallel will present a load impedance of 4 ohms to the amplifier. Make sure that the amplifier has adequate ventilation.



Operation

First Test - Switch the tower switch on the front of the amplifier OFF, set the front panel **Monitor** level control to its 12 o'clock position. Turn the amplifier's Channel 1 and Channel 2 Gain controls fully counterclockwise. Turn the system on with the power switch on the rear panel of the system control unit. When the display shows the time and date (the Standby mode), press 1 then **Enter**. A swinging bell should play through the monitor speaker only.

Now that the system function has been verified, turn the monitor level control fully counterclockwise. Turn the amplifier's Channel 1 Gain control to about the 8 o'clock position. Play the swinging bell again and *gradually* increase the Channel 1 Gain control to a normal sound level.

Amplifier Front Panel Controls

Tower On/Off Switch - This switch enables or disables the tower speakers by turning the amplifier power off.

Channel 1 Gain - Controls the level to the tower speakers.

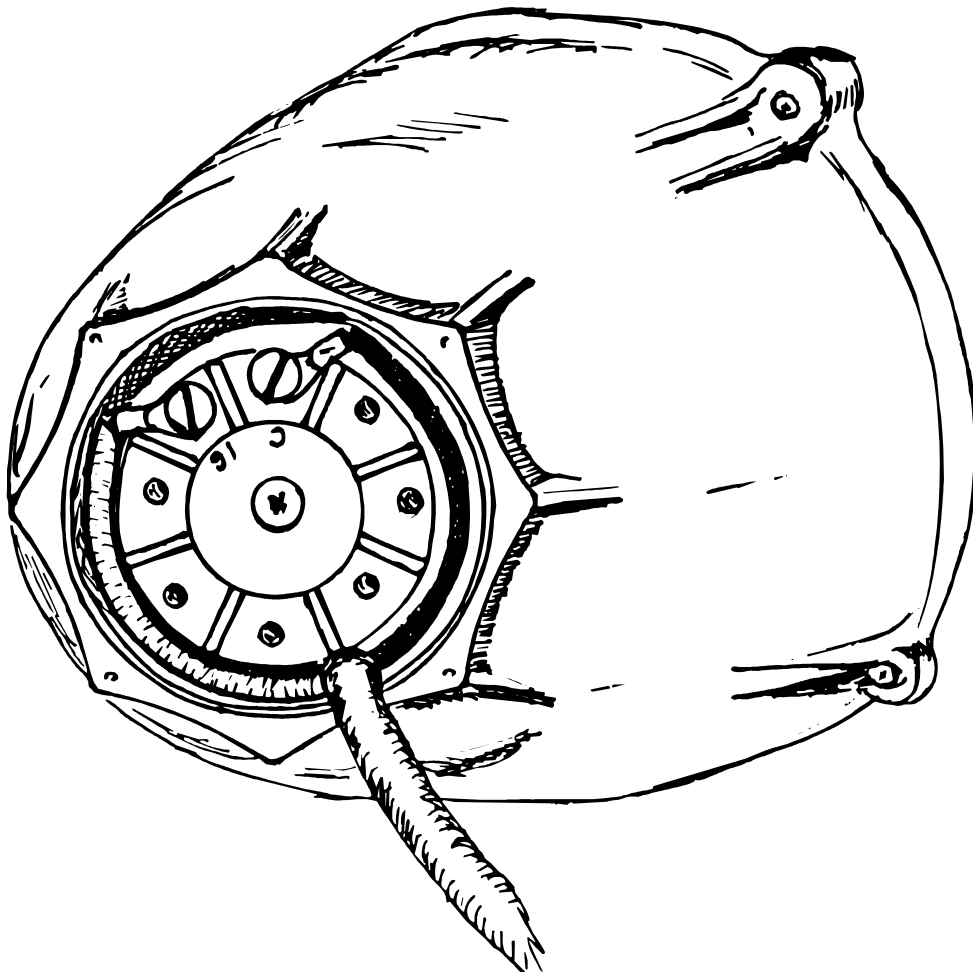
Channel 2 Gain - Should always be set fully counterclockwise.

Installation Instructions for Atlas PD-60, 100 Watt Speaker Driver

- 1 - Remove red plastic thread protector from the threaded throat of the driver and screw driver into the horn. Hand tighten only.
- 2 - Remove the clear plastic dust cover from the rear of the driver.
- 3 - Attach the WHITE wire to the 16 OHM terminal.
- 4 - Attach the BLACK wire to the C (common) terminal.
- 5 - Route the wires around the perimeter of the terminal area on the rear of the driver so that the cable exits through the slot in the dust cover opposite the two terminals used. The outer jacket of the cable should fit inside the dust cover.

WARNING!

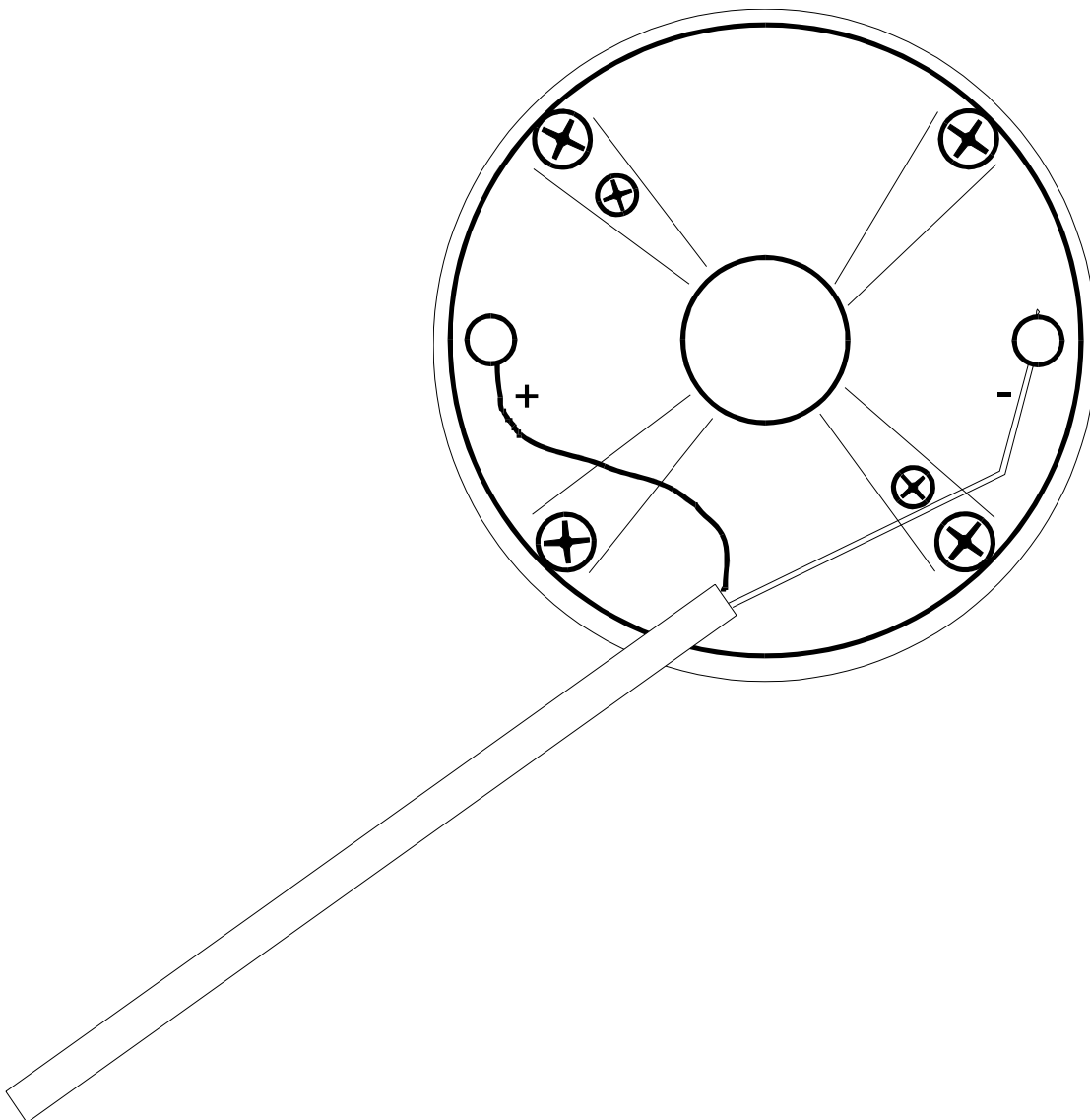
Wiring screws on speaker drivers are brass. Overtightening will damage the screws or threaded inserts.



Installation Instructions for SD-60/ 60W Speaker Drivers

1. Remove plastic thread protector from the threaded throat of the driver and screw driver into the horn. Hand tighten only.
2. Attach the BLACK wire to the terminal marked “+” (red washer). Hand tighten only.
3. Attach the WHITE wire to the terminal marked “-” (white washer). Hand tighten only.
4. Use supplied wire ties to dress the cable to the speaker bracket. Leave some slackness between the wire tie and the driver terminals to eliminate strain on the terminal connections.

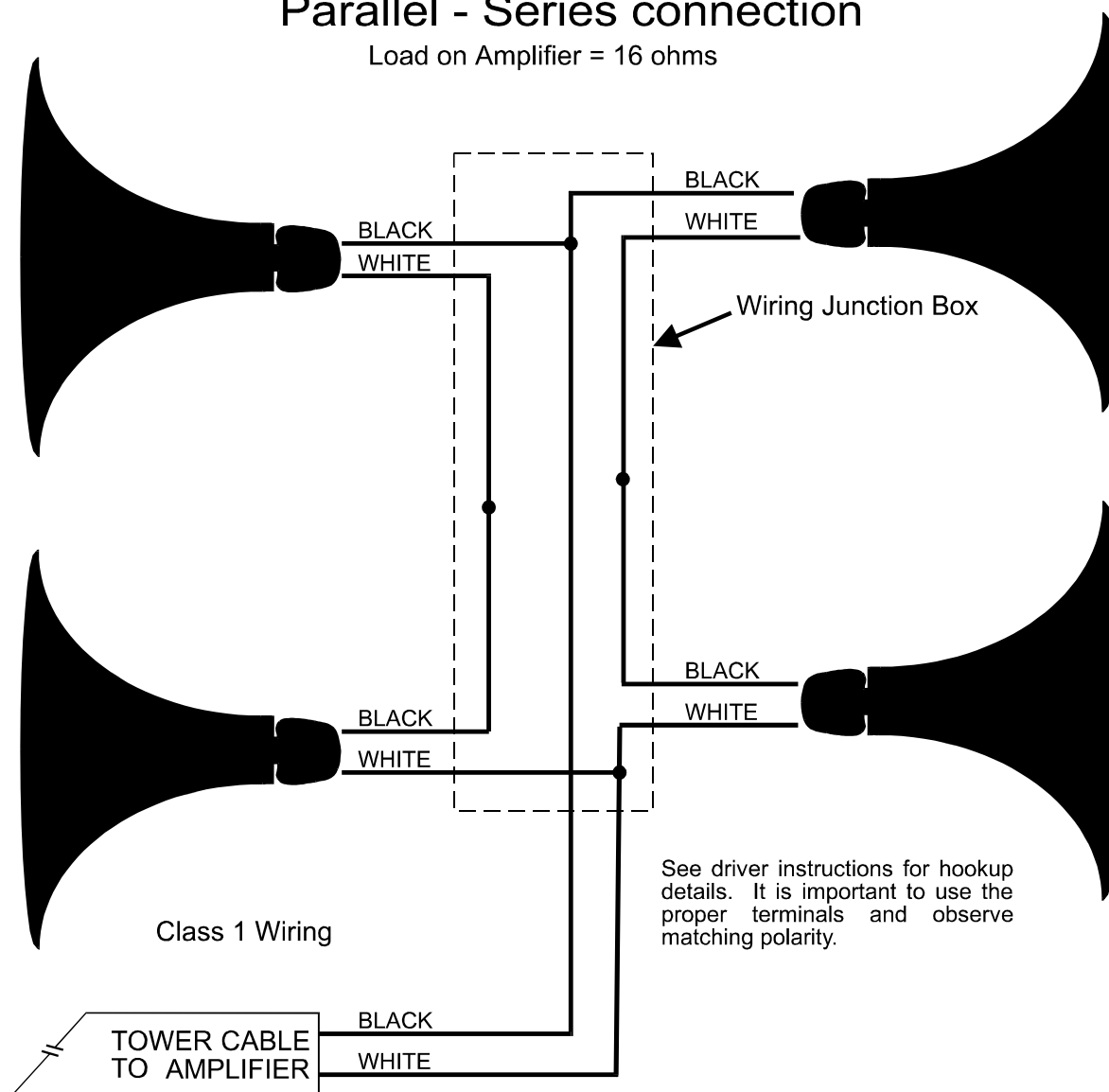
NOTE: If wire pigtails (less than 10 feet) are to be connected to the driver, it may be easier to connect them to the driver before mounting the driver to the horn. Connection of the pigtails to the main cable in the junction box is made after the horns are mounted.



Four Speaker Installation - Speaker Wiring Diagram

Parallel - Series connection

Load on Amplifier = 16 ohms



Wiring Junction Box

Enter the junction box through the top opening. Strip the cable jacket back about four inches from the end of each cable coming into the box. Twist the black and white wires of each cable together, being careful not to damage the threads, while tightening the set screw. Cut off the extra length of wire extending past the brass connector finger tight. A note points to the junction box: 'See driver instructions for hookup details. It is important to use the proper terminals and observe matching polarity.' Secure the cover to the box with four of the phillips head screws provided.

able from the amplifier are brought x inch length extends out of the box and twist wires together each set of twisted wire ends, non ing careful not to damage the threads, while tightening the set screw. Cut off the extra length of wire extending past the brass connector finger tight. A note points to the junction box: 'See driver instructions for hookup details. It is important to use the proper terminals and observe matching polarity.' Secure the cover to the box with four of the phillips head screws provided.

Doc. 10227

EZ Bell Warranty

Golden Warranty

Three Years Parts

Three Years Labor

Chime Master® Systems, dba EZ Bells™, warrants to the original consumer purchaser (Buyer) that this EZ Bells™ laser disc carillon shall be free from defects in material and workmanship for a period of three (3) years after the original date of shipment to the buyer. This is a limited warranty limited to its terms. This warranty is void if the product has been altered, misused, taken apart or otherwise abused. **ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED ARE EXCLUDED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE.**

Buyer's Remedies: EZ Bells obligations and liabilities under the foregoing warranty are limited to repair or replacement, at the option of EZ Bells, of the product without charge, provided it is shipped prepaid to a EZ Bells Factory-Authorized Service Center. The product must be accompanied by proof of the date of purchase satisfactory to EZ Bells, and by a Return Merchandise Authorization (RMA) number issued by EZ Bells. It is the responsibility of the Buyer to properly pack the unit for safe return, using the packing provided with the system. For an RMA number and the location of the nearest authorized service center contact EZ Bells, CMS, 6312 Goss Rd., Sugar Grove, OH, (800) 344-7464. A charge is made for repairing after the expiration of the warranty. **IN NO EVENT SHALL EZ Bells BE LIABLE FOR CLAIMS BASED UPON BREACH OF EXPRESS OF IMPLIED WARRANTY OR NEGLIGENCE OR ANY OTHER DAMAGES WHETHER DIRECT, IMMEDIATE, FORESEEABLE, CONSEQUENTIAL OR SPECIAL OR FOR ANY EXPENSES INCURRED BY REASON OF THE USE OR MISUSE, SALE OR FABRICATIONS OF PRODUCTS WHICH DO NOT CONFORM TO THE TERMS AND CONDITIONS OF THIS CONTRACT.**

The provisions of the foregoing warranty are valid in the United States only.

Excluded from this warranty are defects caused by wear and tear, misuse, neglect, shipping damages, alterations or modifications, or any act of nature. EZ Bells will make such determinations.

It is the Buyer's responsibility to program this carillon to play at reasonable sound levels, and at appropriate times. Buyer agrees to hold EZ Bells harmless from, defend, and indemnify EZ Bells against damages, claims and expenses arising out of subsequent use of this product and based upon personal annoyance, discomfort, injuries, deaths, property damages, lost profits and other matters for which buyer, its employees and members are or may be to any extent liable.

Every reasonable effort has been made to ensure that EZ Bells product manuals and promotional materials accurately describe the product's specifications and capabilities at the time of publication. However, because of ongoing improvements and updating of EZ Bells products, EZ Bells cannot guarantee the accuracy of printed materials after the date of publication and disclaims liability for changes, errors or omissions.

IMPORTANT NOTICE: THIS WARRANTY IS IN EFFECT, ONLY IF SYSTEM IS CONNECTED WITH AN APPROVED SURGE PROTECTOR WITH A PROPERLY GROUNDED 120 VOLT 60 CYCLE ALTERNATING CURRENT RECEPTACLE WITH AT LEAST 8 AMPERES DESIGNATED FOR THE EZ BELLS SYSTEM.

Installation Notes

Date Installed _____

Installed By _____

See Section II for installation procedure. Refer to the Selections Catalog for further information on Random Play Lists and Groups.

Auto Daylight Savings Adjust? Yes No

Patriotic Season Enabled? Yes No

Advent Season Enabled? Yes No

If Advent Not Enabled, Christmas Starts December _____

Standard (non-CMS) Discs installed in tray:

2. Name of disc: _____

3. Name of disc: _____

4. Name of disc: _____

5. Name of disc: _____

6. Name of disc: _____

Random Play List (circle one):

1 - Catholic

2 - Protestant

3 - Ecumenical

4 - Secular

5 - General

Exclude a Bell Sound: No Yes Exclude: _____

Input Sheet

Weekly Schedule (View)

Circle all that apply	Time	Sel 1	Sel 2	Sel 3	Sel 4	TS	Remark
SU - MO - TU - WE - TH - FR - SA							
SU - MO - TU - WE - TH - FR - SA							
SU - MO - TU - WE - TH - FR - SA							
SU - MO - TU - WE - TH - FR - SA							
SU - MO - TU - WE - TH - FR - SA							
SU - MO - TU - WE - TH - FR - SA							
SU - MO - TU - WE - TH - FR - SA							
SU - MO - TU - WE - TH - FR - SA							
SU - MO - TU - WE - TH - FR - SA							
SU - MO - TU - WE - TH - FR - SA							
SU - MO - TU - WE - TH - FR - SA							
SU - MO - TU - WE - TH - FR - SA							
SU - MO - TU - WE - TH - FR - SA							
SU - MO - TU - WE - TH - FR - SA							
SU - MO - TU - WE - TH - FR - SA							

Time Strike/Level (Set-Up)

FROM		TO		Time Strike Mode or Level
Day	Time	Day	Time	

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