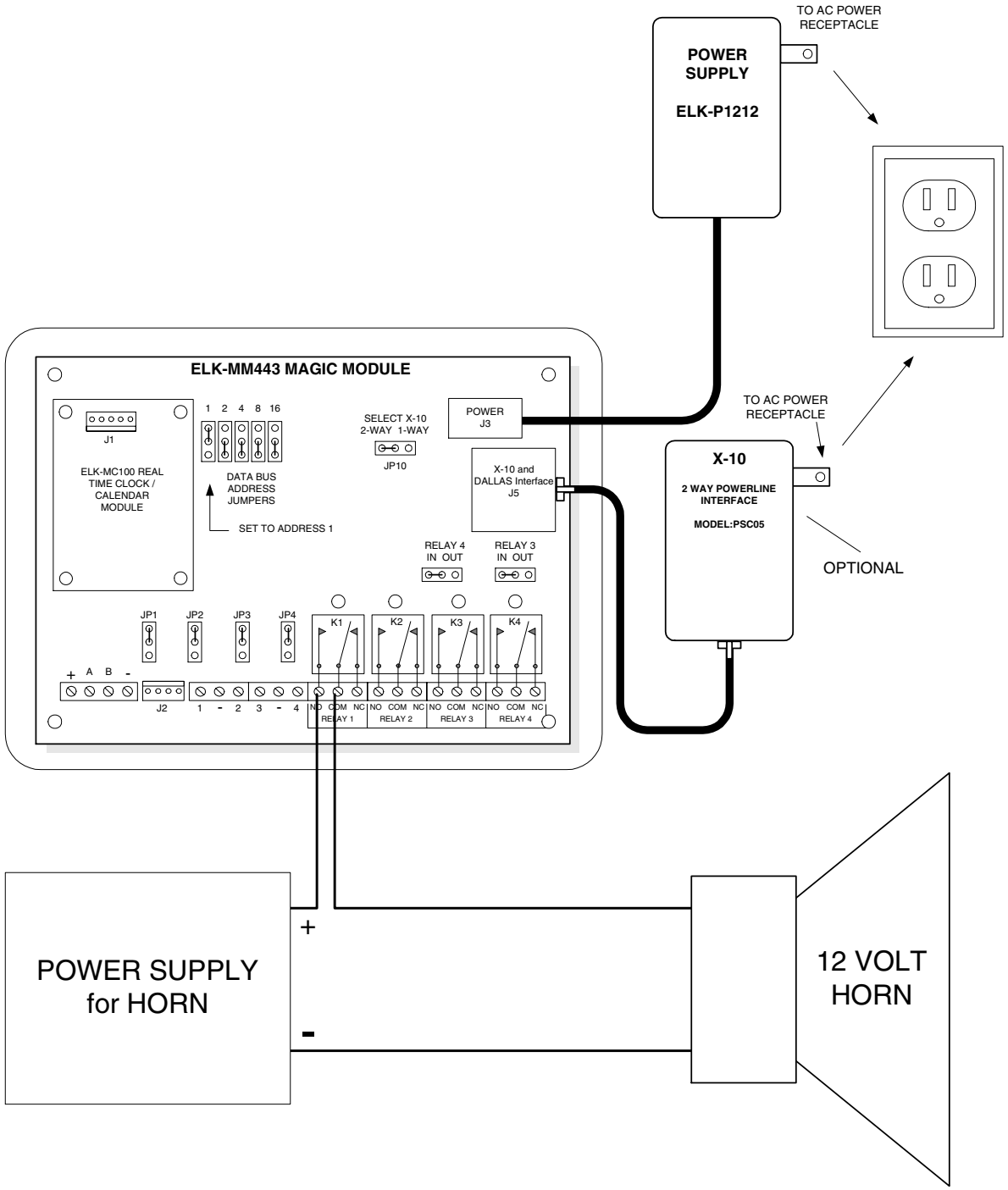
## Break Bell

For any business that desires to sound a “Break Bell” for employees at predetermined intervals daily. This application uses an ELK-MM443 with the Clock/Calendar accessory module(ELK-MC100) programmed to momentarily close relay 1 to sound a bell and optionally to transmit an X-10 signal to a remotely located X-10 chime unit. This program will sound the bell for 3 seconds and the X-10 chime (if connected) at 7:00, 9:00, 9:15, 12:00, 12:30, 3:00, 3:15 and 5:00 daily except Saturday & Sunday.

# Break Bell Hookup Diagram



This is the Break Bell program written with the ELK Magic Module Code Editor.

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ELK Magic Module Compiler - C:\Program Files\MagicModuleExt\Break Bell Example.txt
Addr Code   Label   Command Directive  cmp/=to  Goto      Comment
-----------------------------------------------------------------
0000                        ;                                       ;NOTE : Requires an ELK-MC100 Real Time Clock Module
0000                        ;                                       ;optional X-10 output to an X-10 chime
0000                        ;                                       ;
0000                        ;                                       ;Break Bell
0000   EF0D00               title  titleend                         ;Goto end of Title Data
0003   42                   data   66                               ;B
0004   72                   data   114                              ;r
0005   65                   data   101                              ;e
0006   61                   data   97                               ;a
0007   6B                   data   107                              ;k
0008   20                   data   32                               ;
0009   42                   data   66                               ;B
000A   65                   data   101                              ;e
000B   6C                   data   108                              ;l
000C   6C                   data   108                              ;l
000D   00          titleend  null                                   ;End of Title
000E                        ;                                       ;
000E                        ;                                       ;Description Area
000E                        ;                                       ;*Timer1 = Timer 1
000E                        ;                                       ;
000E                        ;                                       ;--Put Code Description here--
000E                        ;                                       ;program to ring a break bell via OU1 for .....
000E                        ;                                       ;begin work, break times, lunch, end work
000E                        ;                                       ;end of Description Area
000E                        ;                                       ;
000E                        ;                                       ;Setup Area
000E   0B7A00               set    EvtTMR1       Tmr1Evt            ;Timer 1 - Timer1 Event
0011                        ;                                       ;
0011                        ;                                       ;Real Time Clock
0011   4A1800               set    EvtRTC        RTCStart           ;set Real Time Clock Event
0014                        ;                                       ;
0014                        ;                                       ;--Put Initialization here--
0014                        ;                                       ;end of Setup Area
0014                        ;                                       ;
0014   00          main      null                                   ;Main Program
0015                        ;                                       ;--Put main program here--
0015   081400               goto   main                             ;end of Main Program
0018                        ;                                       ;
0018                        ;                                       ;Subroutine Area
0018                        ;                                       ;
0018   00          RTCStart  null                                   ;Real Time Clock, this routine is performed each minute
0019   8A067900             if     Rwdy =        Saturday     RET    ;Skip Saturday
001D                        ;                                       ;
001D   8A007900    RTCEvt1   if     Rwdy =        Sunday       RET    ;Skip Sunday
0021                        ;                                       ;
0021   CB072C00    RTCEvt2   if     Rhrs not=     7            RTCEvt3  ;Begin Work    7:00 oclock AM
0025   BB002C00              if     Rmin not=     0            RTCEvt3  ;
0029   077D00                call   BELL                                ;ring break bell for time duration set in BELL subroutine
002C                        ;                                       ;
002C   CB093700    RTCEvt3   if     Rhrs not=     9            RTCEvt4  ;Morning Break   9:00 oclock AM
0030   BB003700              if     Rmin not=     0            RTCEvt4  ;
0034   077D00                call   BELL                                ;ring break bell for time duration set in BELL subroutine
0037                        ;                                       ;
0037   CB094200    RTCEvt4   if     Rhrs not=     9            RTCEvt5  ;Mourning break over   9:15 oclock AM
003B   BB154200              if     Rmin not=     15           RTCEvt5  ;
003F   077D00                call   BELL                                ;ring break bell for time duration set in BELL subroutine
0042                        ;                                       ;
0042   CB124D00    RTCEvt5   if     Rhrs not=     12           RTCEvt6  ;Lunch Time    12:00 oclock Noon
0046   BB004D00              if     Rmin not=     0            RTCEvt6  ;
004A   077D00                call   BELL                                ;ring break bell for time duration set in BELL subroutine
004D                        ;                                       ;
004D   CB125800    RTCEvt6   if     Rhrs not=     12           RTCEvt7  ;Lunch over   12:30 oclock PM
0051   BB305800              if     Rmin not=     30           RTCEvt7  ;
0055   077D00                call   BELL                                ;ring break bell for time duration set in BELL subroutine
0058                        ;                                       ;
0058   CB156300    RTCEvt7   if     Rhrs not=     15           RTCEvt8  ;Afternoon Break   3:00 oclock PM
005C   BB006300              if     Rmin not=     0            RTCEvt8  ;
0060   077D00                call   BELL                                ;ring break bell for time duration set in BELL subroutine
0063                        ;                                       ;
0063   CB156E00    RTCEvt8   if     Rhrs not=     15           RTCEvt9  ;Afternoon Break over   3:15 oclock PM
0067   BB156E00              if     Rmin not=     15           RTCEvt9  ;
006B   077D00                call   BELL                                ;ring break bell for time duration set in BELL subroutine
006E                        ;                                       ;
006E   CB177900    RTCEvt9   if     Rhrs not=     17           RET      ;End of Work   5:00 oclock PM
0072   BB007900              if     Rmin not=     0            RET      ;
0076   077D00                call   BELL                                ;ring break bell for time duration set in BELL subroutine
0079                        ;                                       ;
0079   03          RET       return                                   ;RTCEnd
007A                        ;                                       ;
007A                        ;                                       ;
007A                        ;                                       ;
007A   00          Tmr1Evt   null                                   ;Timer 1 - Timer1 Event
007B   02                    set    OUT1          Off                ;Turn off relay 1 after time out, relay 1 to rings the bell
007C   03                    return                                   ;return from timer 1 event
007D                        ;                                       ;
007D                        ;                                       ;
007D   4603        BELL      set    T1SEC         3                  ;Wiz- What is Break Bell ringing duration in seconds
007F   42                    set    OUT1          On                 ;Turn on relay 1 to ring the bell, connect relay 1 to a bell
0080   0F8400                csub   TX-10         X10TX1             ;Transmit X-10 - Play Chime
0083   03                    return                                   ;
0084                        ;                                       ;end of Subroutine Area
0084                        ;                                       ;
0084                        ;                                       ;
0084                        ;                                       ;No Program Below Here, Only Data!
0084                        ;                                       ;
0084                        ;                                       ;Data Area
0084                        ;                                       ;Play Chime
0084   A6          X10TX1    data   H                                ;H - X-10 House Code to transmit
0085   69                    data   _1                               ;_1 - X-10 Unit Code to transmit
0086   59                    data   On                               ;On - X-10 Function Code to transmit
```