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AEXX-273 SERIES

WIRELESS CONTROLLED PACE CLOCKS

APPLIED TECHNICAL SYSTEMS

AEXX-273 SERIES WIRELESS CONTROLLED PACE CLOCK
REV 09/18/00

DESCRIPTION

AEXX-273 Series Wireless Controlled Pace Clocks are available in with 1", 2.3", 4", 8", or 12" high digits, visible from 5 feet to 500 feet away. They are available in 4 and 6 digit versions. These clock/timers are similar to the standard AE Series Multi-Function Clock/Timers and can run multiple functions simultaneously, such as 12 or 24 hour time of day and presettable up or down counting elapsed time. Built-in controls provide for easy set-up and control. Option remote switch panels are also available. With Option 273 installed, they are equipped with an RF remote control interface that allows the user to control one timer, a group of timers with the same address. The user can start, stop, resume, and reset the timer or group of timers with the AERFTX2 hand-held transmitter. On some versions the RF interface can be disabled by a built-in LOCAL/REMOTE toggle switch, allowing the timer to be used independently from other timers that are being controlled by the RF remote, hand-held transmitter.

This manual covers all AE Series displays with four digits or six digits, including two-sided versions with the Wireless Control Pace Clock option (273) installed. To simplify the manual the term “AE Device” may be used to cover any of the specific models.

The model numbers of the AEXX-273 Series are derived from the digit size and the number of digits in the display, followed by the 273 suffix. For example the AE24-273 is 2.3 inch, four-digit display and the AE126-273 is a twelve-inch, six-digit display. For two-sided versions, the model number would have /2. For example: AE84/2-273 would be the model number for a Two-Sided, Eight-Inch, Four Digit, Wireless Control Pace Clock. Each AE Display can be configured in a number of ways. Some will have different enclosures including wall mount, rack mount, two sided wall or ceiling mount, and NEMA type enclosures for all applications. For your specific model number and hardware configuration refer to the drawings at the back of this manual.

For multiple display system the Master/Driver Option (348) can be added. This option allows you to connect up to 40 remote displays to the AEXX-273 Series Wireless Control Pace Clock for displaying the same elapsed time in many locations.

The AE Series Wireless Control Pace Clocks are configured from standard modules to provide specific size, number of digits, color, brightness, enclosure type, mounting, wiring, and power requirements.

See the drawings at the back of this manual for your specific configuration.

SPECIFICATIONS

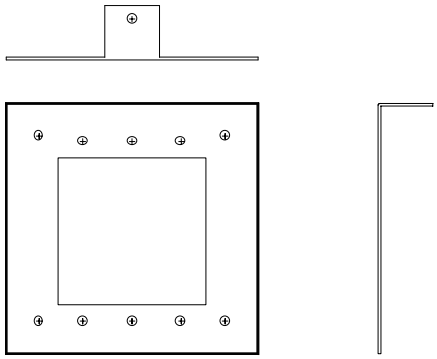
Digits:	1, 2.3, 4, 8 and 12 Inch High, Seven Segment Digits are available. For additional digit specifications, see the drawings at the back of this manual for your specific model.
Number of Digits:	Models are available with 4 or 6 digits. See the drawings at the back of this manual for your specific model.
Functions:	Display time of day in 12 or 24-hour format. Count up elapsed time to a preset value and hold. Count down elapsed time from a preset value and hold at zero.
Controls:	Built-in Switch Panels and RF remote control interface are included. The RF remote transmitter can be operated up to 500 feet away and can be disabled from the switch panel. The up and down elapsed timers can be started, stopped, resumed and reset from the built-in switch panel or with the hand held RF remote transmitter. Up and down elapsed timer preset values can be set from the built in switch panel. Some models may be configured to use a remote switch panel such as the 2101 Remote Switch Panel. The remote switch panel can be located up to 100 feet away. On these versions the built-in controls are not included.
Power:	120 VAC – The power required varies with the size and number of digits. Optional power includes 50 HZ, 12 VAC, 12 to 15 VDC and 220 VAC.
Accuracy:	Synchronous with the AC power line when power is applied. On battery backup a 0.005% crystal time base is used. Operating temperature is 0 to 50 Degrees C.
Battery standby:	Self-charging, 9V Ni-Cad.
Enclosure:	Black anodized aluminum with .118" thick red acrylic lens. The back panel is .125" thick black, ABS plastic. The size varies with the size and number of digits. See the drawings at the back of this manual. A 1210-0101 mounting bracket is provided for wall mounting to a single or double gang box. Optional enclosures are available.
Wiring:	Clearly labeled, pigtail lead wires (#18 AWG) are provided. Optional terminal blocks, power cords, and connectors are available.
Options:	There are numerous options available for the AEXX-273 Series Wireless Remote Pace Clocks. Some include: (/2) Two Sided Version, (348) Master/Driver Output, (376) Relay Output, and (PC8) Add 8 FT. Power Cord. When options are ordered, supplemental information is provided with addenda and additional drawings.

For all other options refer to the drawings at the back of this manual for additional specifications.

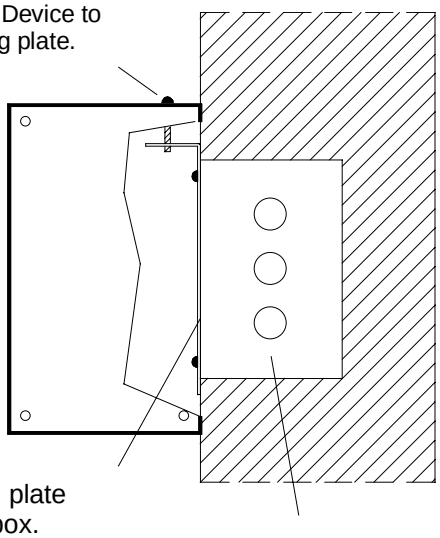
INSTALLATION

MOUNTING

The AE Series Displays can be mounted in a variety of ways. Things to consider for mounting include ambient light, viewing area, ambient temperature, dirt or dust. Most models are supplied with one or more 1210-0101 mounting brackets for wall mounting to a single or double gang box. See the detail below. For other mounting options, such as ceiling mounts or double-sided mounts, refer to the specific drawings.



1210-0101
mounting plate detail



WIRING

There are many wiring configurations for the AEXX Series Pace Clocks, depending on the functions used and the options installed. On most units the AC power has been pre-wired and clearly labeled pigtail leads are provided at the back panel for termination in a single or double gang box as shown above. Some models come with AC power cords or 12 VAC power modules. These can be plugged into a standard 120 VAC outlet. For any other power configurations, refer to the specific wiring diagrams provided.

OPERATION

Before applying power, be sure all wiring is completed, place the SET/RUN switch to the RUN position and the UP/CLOCK/DOWN switch to the CLOCK position. If you model includes the built-in LOCAL/REMOTE switch, set it to LOCAL. Apply power to the unit. The displays will rotate during the power on self-test and then a version number will appear for a few seconds. The clock will display 1:00 if it is a four digit version, or 1:00:00 with the seconds running if it is a six digit version.

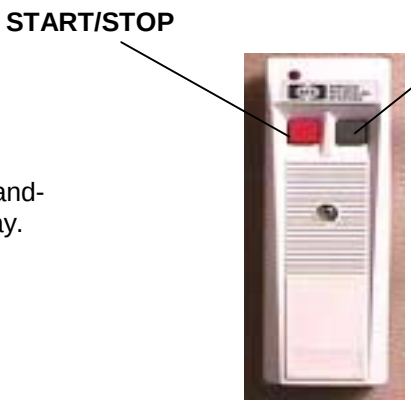
Standard versions will have built-in controls on the top panel for programming and controlling the clock/timer functions. Shown to the right.

If your clock/timer has the option for the remote switch panel, a model 2101 or 2102 Switch Panel will be required. Shown below.

Typical built-in controls on the top panel. With the LOCAL/REMOTE in the LOCAL position, the AERFTX2 is locked out and will not control the timer. Set it to the REMOTE position for RF wireless control.

2101 Remote Switch Panel

The user can start, stop, resume, and reset the timer or a group of timers with the AERFTX2 hand-held transmitter at distances up to 500 feet away. Shown to the right.



AERFTX2

SETTING TIME

Be sure the LOCAL/REMOTE switch is in the LOCAL position. With the UP/CLOCK/DOWN switch still in the CLOCK position, place the SET/RUN switch to the SET position. The clock will now prompt for a 12 or 24 hour format. To change formats press the INCREMENT switch until the desired format is shown and then press ENTER. The clock will now prompt for time. The hour's digits will be flashing. Using the INCREMENT switch, set the hours for the desired hours, then press ENTER. The minute's digits will now be flashing. Set the desired minutes the same way, then press ENTER. The second's digits will then be flashing. Set the desired seconds the same way, then press ENTER. On four digit units, the display will not prompt for seconds. Press ENTER until the display flashes dONE. Set the SET/RUN switch back to the RUN position the instant you want time keeping to begin at the time you just entered. The clock will now keep time as a free running clock or as a slave if connected to a master clock and in 12-hour format.

SETTING THE UP COUNTER PRESET TIME

If you want to use the count up and hold feature with the UP timer, you will have to set a preset time for the UP timer. A preset of all zeroes (00:00:00 or 00:00) allows the timer to be used as a standard elapsed timer with a maximum count of 59:59 for a four digit model and 99:59:59 for a six digit model. When the maximum count is reached, the elapsed time will roll over to all zeroes and continue counting.

Be sure the LOCAL/REMOTE switch is in the LOCAL position. Set the UP/CLOCK/DOWN switch to the UP position. Set the SET/RUN switch to the SET position. The hour's digits will be flashing. Using the INCREMENT switch, set the desired hours for the preset time, then press ENTER. The minute's digits will now be flashing. Using the INCREMENT switch, set the desired minutes for the preset time, then press ENTER. The seconds will now be flashing. Set the desired seconds the same way, then press ENTER. On four digit units, the display is normally configured for Minutes and Seconds and only minutes and seconds will be prompted. Some are configured for Hours and Minutes and will only prompt for hours and minutes. In each case after your preset is entered, press ENTER until the display flashes dONE. Set the SET/RUN back to the RUN position.

UP COUNTER ELAPSED TIME OPERATION

Once the desired preset value has been set, the unit is now ready to function as an UP count elapsed timer.

Be sure the SET/RUN switch is in the RUN position. Press RESET to display all zeros. Press the START/STOP switch to begin counting elapsed time. Press the START/STOP switch again to stop and hold the count. Press the START/STOP switch again to resume elapsed time counting. To start over press RESET to display all zeros again. When the timer reaches the preset value, it will stop and hold, flashing the time count (six-digit and Hours and Minutes versions will not flash). To acknowledge, press START/STOP. Press RESET to return to zeros.

If you are using the RF remote, hand-held transmitter to control the timer, all set up must be done using the programming switches on the built-in switch panel, or the remote switch panel. Then set the LOCAL/REMOTE switch is in the REMOTE position. After set up, the remote transmitter's START/STOP and RESET buttons perform the same functions as the START/STOP and RESET buttons on the built-in switch panel.

During an UP count elapsed time operation, you can display other time functions using the UP/CLOCK/DOWN switch on the built-in switch panel as desired.

SETTING THE DOWN COUNTER PRESET TIME

If you are using clock/timer as a down counting, elapsed timer, you will have to set a preset time to count down from. In this mode the stop and hold will occur at zero.

Be sure the LOCAL/REMOTE switch is in the LOCAL position. Set the UP/CLOCK/DOWN switch to the DOWN position. Set the SET/RUN switch to the SET position. The hour's digits will be flashing. Using the INCREMENT switch, set the desired hours for the preset time, then press ENTER. The minute's digits will now be flashing. Using the INCREMENT switch, set the desired minutes for the preset time, then press ENTER. The second's digits will now be flashing. Set the desired seconds the same way, then press ENTER. On four digit units, the display is normally configured for Minutes and Seconds and only minutes and seconds will be prompted. Some are configured for Hours and Minutes and will only prompt for hours and minutes. In each case after your preset is entered, press ENTER until the display flashes dONE. Set the SET/RUN switch back to the RUN position.

DOWN COUNTER ELAPSED TIME OPERATION

Once the preset time to count down from is set, the unit will be ready to function as a DOWN count elapsed timer.

Be sure the SET/RUN switch is in the RUN position. Press RESET to display the preset value, which was set previously. Press the START/STOP switch to begin counting down elapsed time. Press the START/STOP switch again to stop and hold the count. Press the START/Stop switch again to resume elapsed time counting. To start over press RESET to display the preset value again. When the timer reaches 00:00 it will stop and flash 00:00. On six digit units it will stop and hold at 00:00:00 without flashing.

If you are using the RF remote, hand-held transmitter to control the timer, all set up must be done using the programming switches on the built-in switch panel or the remote switch panel. Then set the LOCAL/REMOTE switch is in the REMOTE position. After set up, the remote transmitter's START/STOP and RESET buttons perform the same functions as the START/STOP and RESET buttons on the built-in switch panel.

During a DOWN count elapsed time operation, you can display any of the other time functions using the UP/CLOCK/DOWN switch on the built-in switch panel as desired.

TECHNICAL SUPPORT

For any questions concerning installation and operation of this product, contact our factory at:

PHONE (800) 444-7161
OR
FAX (318) 797-4864

SERVICE POLICY

It is recommended that all service for this product be done by the factory or by a factory authorized service representative. Applied Technical Systems will provide ongoing service support in and out of warranty. Send your repairs to:

APPLIED TECHNICAL SYSTEMS
849 KING PLACE
SHREVEPORT, LA 71115

APPLIED TECHNICAL SYSTEMS WARRANTY POLICY

ATS warrants its products to be free of defects in material and workmanship for a period of 24 months from the date of purchase. ATS will repair or replace any product returned to its authorized factory service center within the warranty period so long as there is no evidence that the product has been abused, misused, damaged by lightning, overloads of any kind or water, or altered in any way.

Products returned for warranty must be returned with freight prepaid. ATS will pay normal freight charges to return the product to the customer. Special premium freight requested by the customer will be charged to the customer.

ATS disclaims any warranties expressed or implied, including merchantability and/or fitness for a particular purpose. In no event shall ATS be held liable for incidental or consequential damages.