FlexClock

Multi-Purpose Time Device

Z18 Setup Guide

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FlexClock Z18 Overview

The FlexClock Z18 is an Ethernet-based time clock with an integrated proximity badge reader. The punch data collected at the clock is transmitted over the Internet to the timekeeping server and is available online nearly instantly.

The Z18 is a versatile time clock that supports a variety of additional options (sold separately), including: a bell system; an add-on biometric device (fingerprint reader); and a third-party proximity badge reader for existing building proximity or security systems.

Punch Data Collection

The Z18 will collect employee punches in two ways, either through a proximity badge card (assigned to an employee) or an employee PIN (Personal Identification Number). If this is desired, the option may need to be activated by your service provider. The PIN option can be helpful if a new employee does not yet have a proximity badge assigned or their badge is temporarily unavailable.

Connectivity

The Z18 transmits employee punch data through an Ethernet Internet connection. This is also commonly referred to as a "digital," Internet-based, or IP-based connection. Punches are sent continuously throughout the day as employees punch IN/OUT to allow for immediate supervisory editing and reporting.

To minimize the time spent by employees at the clock, employees can punch IN/OUT even while punches are being transmitted in the "background" to the timekeeping server.

Quick Setup

The basic installation process involves wall mounting the clock, connecting it to the network and inserting the clock's power supply.

Detailed installation information can be found in the following pages of this manual. The basic installation steps are:

1. Use the included *mounting template* to mark the locations of the mounting screws and where the wires will pass through the wall to the back of the clock.

2. Run the low voltage *power* and *Ethernet cables* in the wall to where the clock will be installed.

3. Mount the clock's *backplate* to the wall.

4. Connect the basic *wire harnesses* (power and Ethernet) to the clock.

5. Connect the *power* and *Ethernet cables* to the clock's *wire harnesses*.

6. Hang the clock on the *backplate* and secure it with the *Torx screw* at the bottom of the clock.

8. Have your network administrator open TCP ports 8288 and 8289 on the network firewall for outbound connections.

9. Configure the clock to reach the Internet. The clock can be configured automatically using DHCP. If it doesn't, or if that is not desired, the clock can be configured manually. To do this, on the clock keypad: press [MENU] twice; type the number ("2663") then [OK]; press [1]; follow the clock prompts to manually enter the network configuration information.

10. The clock will attempt to contact the timekeeping server whenever a punch is made and when the [9] key is pressed on the clock's keypad.

11. Once the clock has completed the initial connection with the timekeeping server, it is ready to use.

12. Employees will need to press [1] to punch IN or press [2] to punch OUT, then waive their badge in front of the clock.

Installation

The Z18 is designed to be permanently mounted, with all the wires and connections concealed in the wall behind the clock. As such, the Z18 typically requires professional-level installation by an electrician or qualified technician.

Caution: Damage to the clock due to improper installation will void the warranty.

Tools and Supplies

Installation of this clock may require some or all of the following tools and items:

- Electrical tape and/or wire ties
- Wire cutter/stripper/crimper
- Philips Screwdriver
- Knife or drywall saw
- Wire pulling tools

The following items are included and packaged with the clock:

- FleckClock Z18
- 12 volt DC Power supply
- Backplate
- Backplate pad
- Mounting template
- Basic installation materials kit:
  - T10 Torx screwdriver
  - Drywall anchors
  - Crimp style wire connectors
  - Ethernet harness
  - Power harness
- Advanced setup kit

Installation

Wall surface →   →   →

rubber wall pad   metal backplate   Z18
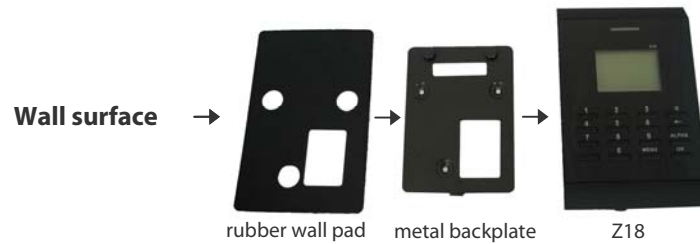
Mounting The Backplate

The clock comes with simple screw-in style *drywall anchors*, though ideally, the *backplate* should be screwed firmly into a stud or some type of sturdy backing.

A *mounting template* is provided to mark the location of the *wall anchors* and the small section of the wall that needs to be cut out for the cables to pass through.

The clock comes shipped with a metal *backplate* attached. Remove the screw from the bottom of the clock with the included *Torx screwdriver* and separate the *backplate* from the clock. The *backplate* must be mounted to the wall while separated from the clock. The included rubber pad should be placed between the *backplate* and the wall.

Wiring The Clock

In order for your clock to function, low voltage power and an Ethernet connection are required inside the wall where the clock will be installed. The 2-pin connector for power and 4-pin connector for Ethernet can be found in the Basic Installation Kit.

2-pin power connector

The *power wire harness* has a 2-pin connector that plugs into the clock and a standard "barrel" style power connector on the other end. The included power supply plugs directly into the barrel end of this harness.

4-pin Ethernet connector

If necessary, the power cable can be extended with

Installation

low-voltage wire (such as 18-gauge speaker wire) to a convenient or hidden power outlet. Care must be taken to ensure proper polarity in order to prevent damage to the clock. The power supply connector is wired with a positive center. If power is connected with reversed polarity, the clock will be damaged. Damage due to improper installation will not be covered under warranty.

The *Ethernet wire harness* has a 4-pin connector that plugs into the clock and a convenient RJ45 jack on the other end that accepts a standard Ethernet cable.

Additional wire harnesses can be found in the Advanced Installation Kit. These wiring harnesses are only necessary if the following will be attached: bell system; external proximity card reader; external fingerprint reader; or external barcode or magnetic stripe card reader.

If any of these wire harnesses are attached during installation, each unused wire end should be taped off separately to prevent damage to the clock through short circuits. It is vital that the wiring harnesses attached to the clock are protected from being tugged out by accident.

Note: If it is not desirable to run cabling through the wall, an option that may be considered is to mount the clock onto a cabinet or furnishing that would allow access to the back of the clock for making connections and running cables.

Hanging The Clock

The clock hangs on the *backplate* in a somewhat reversed fashion. Rather than "hanging" on the mounting posts and sliding downward, the clock must be positioned onto the *backplate's* mounting posts and then pushed **upward**. Once the clock is pushed into its final position, the Torx screw on the bottom of the clock can be installed to secure the clock to the *backplate*.

Torx screw
(bottom of clock)

Network Setup

Once the clock has been "plugged in" to a network, it must be configured before it will communicate properly. If the network is DHCP enabled, the clock will be configured automatically once it is powered on. Alternatively, the clock can be configured manually with information obtained from the network administrator.

For the purpose of setting up this Z18, in simple terms, a network router allows a device (the clock) on a private network to send and receive data over the Internet, while a firewall secures the private network against unauthorized or dangerous connections.

Firewall Information

Sometimes the network firewall must be specifically set up to allow the Z18 to initiate connections to the timekeeping server. In the event of a clock connection problem, contact the Network Administrator and have them make changes to the firewall to allow outbound connections through **TCP ports 8288 and 8289**. Even if no connection problems exist initially, it is recommended that these ports are specifically opened in the firewall to prevent future issues.

Although rare, some networks will also restrict unknown IP addresses. If needed, the IP addresses of the timekeeping servers are: 208.72.167.2 (primary server), and 166.70.147.9 (secondary server).

Note: The Z18 will only make outgoing connections. All communications with the timekeeping servers are done through connections initiated by the Z18 from inside the network.

Manual Network Configuration

This section details the process of manually configuring the Z18 to work on the attached network. Only use this section if the clock can not obtain the network configuration automatically (DHCP is not available), or if setting up the clock with a static IP address is preferable.

In order to configure the clock manually, the following information will need to be provided by the Network Administrator: *static IP address*; *subnet mask;* and *default gateway*.

Network Setup

The network configuration can be viewed or changed from the "TCP/IP Options" menu. Follow the steps below to access the TCP/IP Options menu from the main "Time" and "Date" screen:

1. On the keypad press [MENU] twice to access the "System Info" screen.
2. Type the number "2663" and then press [OK] to access the "Network Setup" menu.
3. Press [1] to access the TCP/IP Options menu.

Once in the TCP/IP Options menu the screen will display whether the clock is currently set up with DHCP or a static IP. This menu has the following options:

[1] to show the current network configuration settings.

[2] to change the network configuration settings.

[3] to enable DHCP (Only available if the clock is configured with a static IP).

The Change Settings option in the Network Setup menu (see instructions below). When typing the IP addresses in the clock, type periods (**.**) using the [MENU] key.

Note: The current static IP settings will be lost whenever DHCP is enabled. Writing down the current settings before making any changes is recommended.

Clock Setup and Use

Clock Setup

The clock must contact the time keeping server for the initial transmit before it can be put to use. This step is necessary to update the settings on the clock to match the settings for the account. After the clock has been connected and configured for your network, press [9] on the clock's key pad to begin the initial transmit (if the clock says "Already Transmitting," just let it finish). As long as the online account setup has been completed, the current time and date, Daylight Saving Time (DST), time zone, and any additional settings needed will be applied to the clock.

Once your clock is set up, it will automatically transmit. There is no need to force it to transmit by pressing the [9] key, although you can do this at any time.

Daylight Saving Time

Your clock automatically adjusts for Daylight Saving Time (DST) as instructed by the server. The adjustment takes place **immediately when the clock reaches the designated time** (e.g., 2:00 a.m.). Adjustments occur on a Sunday. From Sunday through Tuesday the clock will show a "DST checkmark" icon next to the time to remind employees that the DST correction has taken place.

The timekeeping website automatically performs adjustments to ensure everything is correct. There should rarely, if ever, be a need to adjust time cards—even if employees worked overnight during the time change.

If you live in an area that does not observe Daylight Saving Time (such as Arizona), the automatic adjustment is disabled by your payroll provider from the web site.

Clocking In & Out

First designate a punch as an IN or OUT punch by pressing [1] or [2] on the clock's key pad, then enter a PIN number or place a badge close to the clock. If the punch was successful, the clock will beep, and the time and employee number will display on the screen for a few seconds.

Note: If the clock screen prompts for additional information when clocking

Troubleshooting

The clock displays the message "UNKNOWN SERIAL #":

This means that either the clock's serial number has not been associated with this account or was input incorrectly. If a change is made online to fix this issue, please allow up to 10 minutes to pass before attempting to connect again.

Connection Issues

This clock will only be able to connect to the timekeeping server if there is a "good" Internet connection, the clock has been configured with the correct settings to communicate over the network, and the network firewall allows the clock to get through ports 8288 and 8289. If any of these items are not set up correctly, the clock may not be able to transmit punches to the timekeeping server.

Unfortunately, there is no way for the clock to know what is preventing it from making the connection. This is because whether the problem is the Internet connection, a firewall, or static configuration settings, all the clock knows is that it did not receive a response from the timekeeping server.

For all connection problems with a clock that is set up to use DHCP, to retrieve the network configuration follow these simple steps, which will help pin point where the problem may be.

- Power cycle the clock (unplug the clock and then plug it back in).

- Watch the screen; after about 10 seconds after the time and date screen is up, a message should appear at the bottom of the screen.

- If the message says "Can't get DHCP setting from router," this means that there is an issue with the network router settings. Some things to check would be: the router may not be set up properly; or DHCP is not enabled; or perhaps there are no more DHCP IP addresses available.

- A "successful" message may quickly disappear; this means that DHCP was successful.

Additional Questions
If you have any additional questions regarding the installation or use of your Z18, please contact your service provider.