

CS TimeClock

Access Control Configuration

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TABLE OF CONTENTS

INTRODUCTION	3
HARDWARE	3
Parent and Child Clocks	3
Identifying the Parent Clock	3
Identifying Child Clocks	3
Readers	4
Electronic Door Locks & Turnstiles	4
CONCEPTS	4
Areas	4
Time Zones	5
Access Rights	6
Anti-Passback	6
Pathing	6
ENABLING ACCESS CONTROL IN THE CS TIMECLOCK WEB INTERFACE	8
CHANGING AN EMPLOYEE'S CURRENT AREA	8
CONFIGURING ACCESS CONTROL OPTIONS EXAMPLE	10
1. Configuring the Areas	11
2. Configure the clocks to open the turnstiles / Doors	12
3. Creating an Access Time Zone	16
2. Configuring Employee Access Rights	18
3. Anti-Passback on the Turnstiles	19
4. Pathing between the TNA clocks and the Turnstiles	20
7. Adding Peer clocks	23
SUMMARY	24

INTRODUCTION

The CS TimeClock range of clocks has a number of functions available to you that are helpful in limiting access to your premises. To implement Access Control effectively you will need to either make use of the CS TimeClock Web Interface, or external PC software. Access Control functionality cannot be managed exclusively from the keypad.

This document covers the configuration of the access control features through the CS TimeClock Web Interface. At the date of writing, we would recommend that TNA software is used where a site has more than 20 employees and more than one clock. This is due to the fact that almost all of the information must be manually duplicated on all of the clocks.

HARDWARE

PARENT AND CHILD CLOCKS

A Parent clock is a clock that contains all the functionality of the CS TimeClock and can therefore be used as a single unit. A child clock requires a connection to a parent clock to function and is connected to a parent clock via a RS-485 connection. Up to three child clocks can be connected to a parent clock. Depending on the model of the CS TimeClock, a parent clock may contain a child clock.

IDENTIFYING THE PARENT CLOCK

To identify a clock you can either a) check the serial number on the back of the clock or b) use the keypad to list the clock serial number.

- a) The serial number of the parent clock is the third number on the list – the FOX number.
- b) Press # to enter the keypad menu.
 - i) Press 2 (“Enquiry”).
 - ii) Press 2 (“Clock Status”).
 - iii) The serial number of the parent clock will be the first number displayed on the 2nd line.

IDENTIFYING CHILD CLOCKS

To identify a clock you can either a) check the serial number on the back of the clock or b) use the keypad to list the clock serial number.

- a) The serial number of the child clock is the second number on the list – the TCI number.
- b) Press # to enter the keypad menu.
 - i) Press 2 (“Enquiry”).
 - ii) Press 2 (“Clock Status”).
 - iii) The serial number of the child clock will be the second number displayed on the 2nd line.

READERS

Your clock can be configured with 2 readers, or with a single reader. Many of the Access Control features, such as Anti-Passback and Pathing, are only effective if the clock is configured with 2 readers. For large sites, with many clocks and/or many employees dual readers will dramatically reduce the incidence of incorrect clockings. Extra readers are available if your clock only has 1 reader.

ELECTRONIC DOOR LOCKS & TURNSTILES

Although the clock offers advanced access control functionality, the effectiveness of the access control depends largely on the physical mechanisms used to manage the people flow through the door.

The most effective form of people flow are turnstiles. These are electronically controlled, and only allow a single person through them at a time.

A less effective approach, but still a useful one, is to use a door with an electronic lock. A valid swipe is required to open the door, however an unknown number of people can use the door while it is open.

CS TimeClocks have up to 3 relays capable of driving external devices.

Note: *The number of external devices supported by the clock is dependent on the clock model. If you plan to use external locks, or turnstiles, make sure you select an appropriate clock model.*

CONCEPTS

AREAS

The most fundamental concept around which all access control revolves is the concept of areas.

An area is a physical space bounded by one or more clocks. Even with a single clock there are always 2 areas defined (*Inside*, and *Outside*). As you add more clocks to your system it becomes possible to divide *Inside* into two or more areas. As employees move from one area to another they may, or may not, be required to clock.

Example: You have a clock on your main front door, and another on the cafeteria door. When employees arrive for work they move into area "Office". At lunch time they move from area "Office" to area "Cafeteria". They are now said to be IN the Cafeteria. After lunch they leave the Cafeteria, and move back into the Office. At the end of the day they leave the Office and go Outside.

If you are using access control then the first step you will need to do is draw a physical picture of your site, and identify what distinct areas you wish to have. Remember that you need a clock at every boundary between two areas. In our example above, if the cafeteria had 2 doors, then you would require 2 clocks to form the boundary between the office and the cafeteria.

Don't forget that "Outside" is always one area.

Once you have your diagram, you can assign an "In" area, and an "Out" area to each clock that you have.

If you have 2 or more readers on the clock, then each reader will usually have the same In and Out areas.

If you only have 1 reader on the clock then the clock will "toggle" the direction, depending on the employee's current status. If he is already Out, then he's coming In, if he's already In, then he's going Out, and so on. Please note that some access control functionality is restricted on clocks with only 1 reader, because the clock does not know for sure whether the employee is coming or going.

Tip: *When talking about IN and OUT it's easy to confuse this with the Payroll status of the employee. However the payroll status is completely independent of areas, and should be mentally ignored when setting up the IN and OUT area for the clock.*

Advanced: A clock with a single reader could be set to a specific direction, rather than to toggle. You would use this on a door that only allows employees to flow in one direction, or where they are required to clock IN to an area, but not OUT of it.

Equally, a clock with 2 readers can set BOTH readers to IN or both to OUT. In this case 1 clock can control 2 "one way" doors.

TIME ZONES

Time Zones allow you to limit the times when people can use the clock. For example you may decide that a clock used to access the cafeteria can only be used between 10am and 4pm. A remote depot may only be accessible during weekdays, from 6am to 6pm, and so on.

Note that time zones are set at the clock level, not the reader level.

On Each clock you can set Time zones can be enabled for IN and OUT clockings, or just for IN clockings.

Each clock can be assigned a default time zone. Employees without a specific time zone for this clock will use this default.

Employees can be assigned one (or more) time zones for a particular clock. If assigned to an employee this setting will override the default time zone completely.

An override time zone can be set for a clock. This overrides any time zone settings that may have been assigned to individual employees.

The error that will appear on the clock display, if the employee is outside his time zone, is **Out of Time Zone**.

ACCESS RIGHTS

Access Rights determine if an employee is able to make use of a specific clock. Note that access rights are set at the clock level, not the reader level.

If no specific setting is entered for a specific employee/clock combination then the default setting for this employee is used. If there is no default employee setting then the default setting for the clock is used.

The error that will appear on the clock if the employee does not have access to this clock is **Clock Not Authorized**.

ANTI-PASSBACK

Anti-passback is only used in situations where a turnstile exists. If you do not have a mechanical limit on the entrance then turning this feature on in the clock does have much of a “real” effect.

Anti-passback can be a useful feature, even if you only have a single clock.

The goal of anti-passback is to prevent an employee passing his card to another person, who is outside, while the employee is inside, thus allowing another person to enter on the same card.

This feature only applies if the clock has 2 readers, an IN reader and an OUT reader. If the clock only has 1 reader, then the clock will automatically toggle the user’s direction so there’s no distinction between 2 people coming in, and 1 person coming in, and going out.

Each reader on the clock needs to have the IN area and OUT area for the reader set.

If the Reader is set as an IN reader, then the employee is always moving from OUT to IN when using the reader. The rules for this reader therefore only apply when he is coming IN.

If the Reader is set as an OUT reader, then the employee is always moving from IN to OUT when using the reader. The rules for this reader therefore only apply when he is going OUT.

If the Reader is set as a TOGGLE reader, then the rules apply the same in both directions.

If the employee attempts to clock in, when they are already in, or out when they are already out, then the error displayed will be **Already in TO area**.

PATHING

A good understanding of Areas is necessary before configuring a system for Pathing.

Pathing is the same as Anti-passback except an extra requirement is added. *If pathing is on, the Anti-pass-back effect is on as well.* With pathing an employee is REQUIRED to be in the IN area before they can clock to the OUT area, or they must be in the OUT area before they can go to the IN area.

This is typically used to enforce a “path” through the site for the employee to clock at.

If you have only one clock, then there is no practical difference between anti-passback and pathing.

Example:

An employee should clock in at the gate, cross the courtyard, then clock in to his building. When leaving he has to clock out of his building, and then clock out at the gate. So there are 3 areas involved, Outside, the Courtyard, and the Building. When he arrives he goes from the Outside area into the Courtyard area. He then goes from the Courtyard area into the Building area. If he now forgets to clock out of the building, he will NOT be allowed to go through the gate. Pathing says he can only go through the gate if he is in the Courtyard. Since he forgot to clock out the building, he is not in the Courtyard, and hence he will not be allowed through the gate. He will need to return to his building, clock out there, and then proceed to clock out the gate.

Pathing is most useful in the case where you have a mix of Access Control (only) clocks, and Access Control/Payroll clocks. It ensures that the user has clocked out correctly at the Payroll clock before leaving the site via an Access clock.

Each reader on the clock needs to have the IN area and OUT area for the reader set.

If the Reader is set as an IN reader, then the employee is always moving from OUT to IN when using the reader. The rules for this reader therefore only apply when he is coming IN.

If the Reader is set as an OUT reader, then the employee is always moving from IN to OUT when using the reader. The rules for this reader therefore only apply when he is going OUT.

If the Reader is set as a TOGGLE reader, then the rules apply the same in both directions.

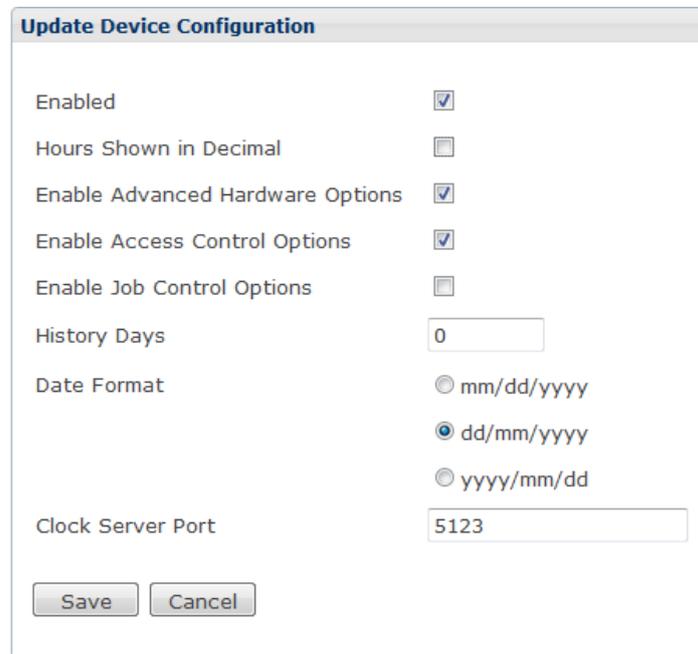
Tip: *Although pathing works with a single reader, humans make mistakes, and will forget to clock from time to time. To minimize the problems caused by missed clockings, we strongly recommend the use of two readers per clock (i.e. a distinct IN and OUT reader) where pathing is activated.*

The error displayed on the clock when the employee is not in the right area is **Not in FROM area**.

ENABLING ACCESS CONTROL IN THE CS TIMECLOCK WEB INTERFACE

Access control features can only be enabled and configured by a web interface user with administrator rights.

In the CS TimeClock web interface, open the “Setup” menu and click on “Clock Setup”.



Enabled	<input checked="" type="checkbox"/>
Hours Shown in Decimal	<input type="checkbox"/>
Enable Advanced Hardware Options	<input checked="" type="checkbox"/>
Enable Access Control Options	<input checked="" type="checkbox"/>
Enable Job Control Options	<input type="checkbox"/>
History Days	<input type="text" value="0"/>
Date Format	<input type="radio"/> mm/dd/yyyy <input checked="" type="radio"/> dd/mm/yyyy <input type="radio"/> yyyy/mm/dd
Clock Server Port	<input type="text" value="5123"/>

Select “Enable Access Control Options”. If you wish to use Anti-Passback and/or Pathing, also select “Enable Advanced Hardware Options”. Click on “Save”.

You will now see a new “Access Control” menu and a “Hardware” Menu (if the Advanced Hardware option was selected).

CHANGING AN EMPLOYEE’S CURRENT AREA

It may be necessary to change an employee’s Current Area to allow them to clock where Anti-Passback or Pathing is enabled.

Click on “Employees” under the “Browse” menu and click on the blue triangle next to the employee you wish to change.

Update Employee

Employee Number:

First Name:

Last Name:

Pay Number:

Supervisor?

Administrator?

Password:

Department:

Payroll Type:

Terminated On:

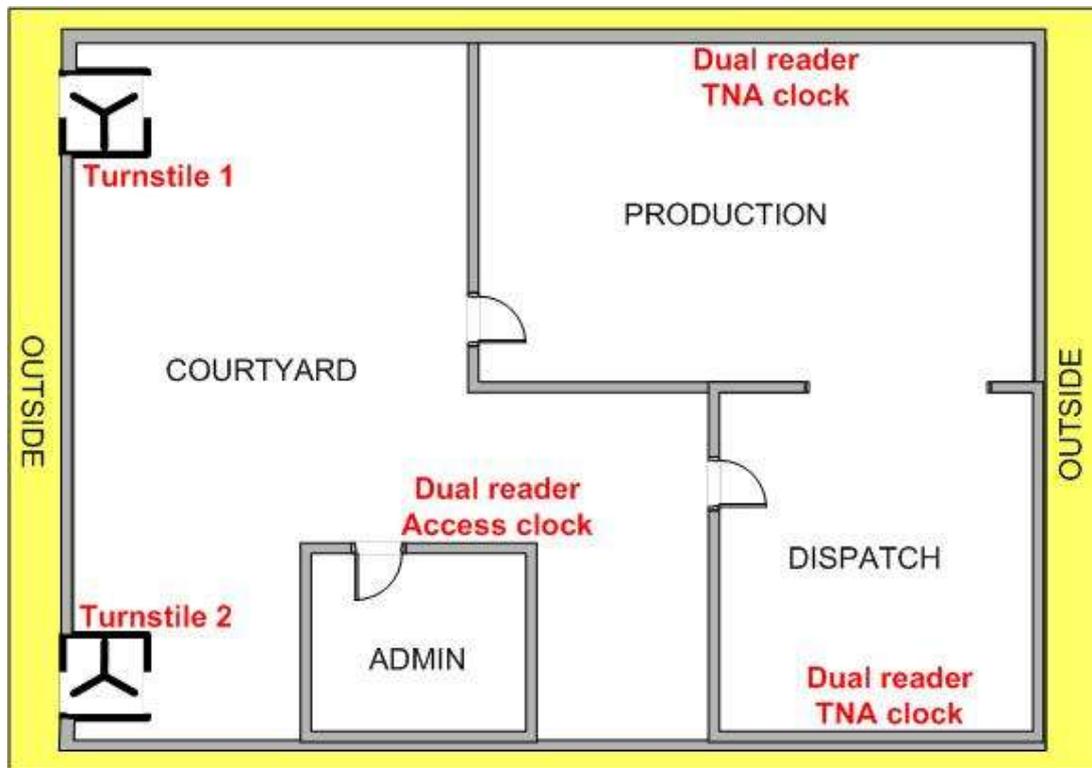
Current Area

TNA Status: In Out

You can change the "Current Area" by selecting one of the defined Areas from the drop down list. Click on "Save" to update the information.

CONFIGURING ACCESS CONTROL OPTIONS EXAMPLE

The configuration of all the access control options will be explained using the following example:



The above picture is a site diagram of a fictitious company. There are two parent clocks - one in each turnstile. Each turnstile has a proximity reader on both sides. The first clock has a child in Production and the second clock has a child in Admin and another in Dispatch. The Admin clock has the integrated keypad and proximity reader on the outside of the Admin building and a proximity reader on the inside. Both of the clocks in Production and Dispatch have two proximity readers and the keypad.

Staff can gain entrance to the site via any of the two turnstiles during weekdays. Only certain employees are allowed to enter the admin area via a reader on the outside of the building. All the employees except the admin staff are required to clock inside the Production and Dispatch areas for time and attendance. These employees are also not allowed to exit the premises unless they have clocked out at a time and attendance station.

To configure access control for this site you need to:

1. Configure the areas
2. Setup the access clock to trigger the electronic door locks when an employee swipes.
3. Create a time zone to only allow access via the turnstiles from 6am Monday morning to 6am on Saturday morning.
4. Setup access control to the admin area.
5. Setup anti-passback on the turnstiles.
6. Setup pathing between the turnstiles and the production and dispatch clocks.
7. Setup the turnstile clocks to exchange (replicate) employee payroll and access status.

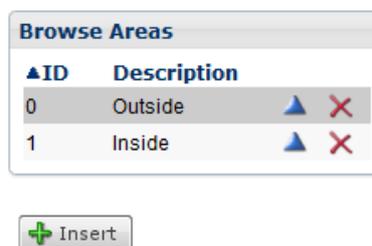
1. CONFIGURING THE AREAS

As stated before, each clock has the two default areas: *Outside* and *Inside*. DO NOT REMOVE THE OUTSIDE AREA! You can rename the *Inside* area and add additional areas.

If you are setting up access control between multiple clocks you need to add the same areas to ALL of the clocks. It is vital that the code for an area will match the code for the same area on another clock.

Now, let's get back to our example. From the diagram we can see that there are 5 areas: *Outside*, *Courtyard*, *Admin*, *Production* and *Dispatch*.

In the web interface of the first clock, open the "Access Control" menu and click on "Areas".



First we need to rename *Inside* to *Courtyard*. Click on the blue triangle next to *Inside*, change the description and click on "Save".

Update Area

ID:

Description:

Save Cancel

To add the other areas, click on the "Insert" button, enter the next sequential number in the "ID" field, enter a description and click on "Save".

Add Area

ID:

Description:

Save Cancel

When you are done your list will look like the picture on the next page.

Browse Areas			
▲ID	Description	▲	×
0	Outside	▲	×
1	Courtyard	▲	×
2	Admin	▲	×
3	Production	▲	×
4	Dispatch	▲	×

Duplicate this list on the second clock. (This would not be necessary if Production employees were only allowed to access the site via the first turnstile and Admin and Dispatch employees via the second turnstile.)

2. CONFIGURE THE CLOCKS TO OPEN THE TURNSTILES / DOORS

To configure the CS TimeClock to trigger the relays you need to enable “Advanced Hardware Options” in “Clock Setup”.

Click on “Child Clocks” under the “Hardware” menu and click on the clock you want to setup. Let’s start with a turnstile first.

Update Child Clock

General | Reader 1 | Reader 2 | Reader 3 | Finger Print

Clock Serial Number:

Description:

Model:

Quiet Mode:

Relay Duration(10ms units):

Default Time Zone:

Override Time Zone:

Time Zone on In Only:

Default Access is No:

Clock is locked:

Rename the clock to make it easier to identify and set the relay duration. The relay duration is in 1 ms units i.e. 1000ms = 1 second and is applicable to all the relays on the clock.

Now we need to configure the behavior of each reader connected to the clock with regards to TNA and access control.

The CS TimeClock can have up to 3 readers connected to it. By default Reader 1 is the integrated keypad. Reader 2 is the first proximity reader (by the default the integrated proximity reader) and Reader 3 is the second proximity reader.

Assuming that proximity reader has been installed on each side of the turnstile, we'll configure Reader 2 and 3. Click on the "Reader 2" tab.

The screenshot shows a software window titled "Update Child Clock" with a tabbed interface. The "Reader 2" tab is selected. The configuration fields are as follows:

Description:	In Reader
Type:	GSC 684-10 or 684-40
TNA Direction:	None
Access Effect:	In (Into In)
Area going In Restriction:	None
Payroll going In Restriction:	None
In Area:	Courtyard
Out Area:	Outside
Display Area:	<input checked="" type="checkbox"/>
TNA IN Relay:	Relay 1: <input type="checkbox"/> Relay 2: <input type="checkbox"/> Relay 3: <input type="checkbox"/> Buzzer: <input type="checkbox"/>
TNA OUT Relay:	Relay 1: <input type="checkbox"/> Relay 2: <input type="checkbox"/> Relay 3: <input type="checkbox"/> Buzzer: <input type="checkbox"/>
Area IN Relay:	Relay 1: <input checked="" type="checkbox"/> Relay 2: <input type="checkbox"/> Relay 3: <input type="checkbox"/> Buzzer: <input type="checkbox"/>
Area OUT Relay:	Relay 1: <input type="checkbox"/> Relay 2: <input type="checkbox"/> Relay 3: <input type="checkbox"/> Buzzer: <input type="checkbox"/>

At the bottom of the window are "Save" and "Cancel" buttons.

- Add a description for identification and select the type. (In this case we're assuming that Reader 2 will be used to gain entrance to the premises.)
- Since the turnstile is only used for access control we can set the "TNA direction" to "None".
- Select "In (Into In)" as the "Access Effect" i.e. the employee will be clocking into the In area of the clock which will be *Courtyard*.
- Set the "Area -" and "Payroll going In Restriction" to None i.e. no rules will be applied for Anti-passback and Pathing.
- Set the "In Area" to Courtyard (i.e. you'll be clocking *into* the Courtyard area if you swipe on this reader) and the "Out Area" to Outside.
- Since a swipe on this reader will only have an effect when coming in you only need to set the relay it should trigger at "Area IN relay".

Click on “Reader 3”. We’ll setup this reader as the one an employee will use to exit the premises.

Update Child Clock

General Reader 1 Reader 2 **Reader 3** Finger Print

Description: Out Reader

Type: Proximity

TNA Direction: None

Access Effect: Out (Into Out)

Area going In Restriction: None

Payroll going In Restriction: None

In Area: Courtyard

Out Area: Outside

Display Area:

TNA IN Relay: Relay 1: Relay 2:
Relay 3: Buzzer:

TNA OUT Relay: Relay 1: Relay 2:
Relay 3: Buzzer:

Area IN Relay: Relay 1: Relay 2:
Relay 3: Buzzer:

Area OUT Relay: Relay 1: Relay 2:
Relay 3: Buzzer:

Save Cancel

- Enter a description, select the type as a “Proximity” reader and set the “TNA direction” to “None”.
- Now select the “Access Effect” as “Out (Into Out)” i.e. an employee will be moving into the Out area of the clock.
- Set the “Area –” and “Payroll going In Restriction” to None i.e. no rules will be applied for Anti-passback and Pathing.
- Set the “In Area” to “Courtyard” and the “Out Area” to “Outside”.
- Set the relay a swipe on this reader must trigger in the “Area OUT” relay.

Click on “Save” and duplicate this setup for the second turnstile.

Now for the clock at Admin: let’s assume that employees can clock using their proximity card or a PIN number. This means that we need to setup Reader 1 as well.

Click on the blue triangle next the admin child clock.

The screenshot shows the 'Update Child Clock' dialog box with the 'General' tab selected. The fields are as follows:

- Clock Serial Number: 19905
- Description: Admin
- Model: Daughterboard with 20x4 LCD 3 relays
- Quiet Mode:
- Relay Duration(10ms units): 5000
- Default Time Zone: No Default Time Zone Restrictions
- Override Time Zone: No Override Time Zone Restrictions
- Time Zone on In Only:
- Default Access is No:
- Clock is locked:

Buttons: Save, Cancel

As with the turnstile, change the description and enter the relay duration. Click on “Reader 1”

The screenshot shows the 'Update Child Clock' dialog box with the 'Reader 1' tab selected. The fields are as follows:

- Description: Keypad reader
- Type: Keypad
- TNA Direction: None
- Access Effect: In (Into In)
- Into Area Restriction: None
- Into Payroll Restriction: None
- In Area: Admin
- Out Area: Courtyard
- Display Area:
- TNA IN Relay: Relay 1: Relay 2:
Relay 3: Buzzer:
- TNA OUT Relay: Relay 1: Relay 2:
Relay 3: Buzzer:
- Area IN Relay: Relay 1: Relay 2:
Relay 3: Buzzer:
- Area OUT Relay: Relay 1: Relay 2:
Relay 3: Buzzer:

Buttons: Save, Cancel

- Enter a description and select “Keypad” as the “Type”.
- Again this clock will only be used for access control and therefore must have the “TNA effect” set to “None”.

- Set the “Access Effect” to “In (Into In)” i.e. staff will always be clocking into the Admin area, never out.
- Set the restrictions to “None”.
- Set the “In Area” to Admin and the “Out Area” to “Courtyard”.
- Select the relay a clocking on this reader must trigger.

Click on “Reader 2”. Type in a description, change the “Type” to “Proximity” and change the rest of the settings to match that of Reader 1, including the relay selected.

Click on “Reader 3” to setup the reader on the inside of the Admin building. Again setup this reader the same as “Reader 2” except for:

- Change the “Access Effect” to “Out (Into Out)”.

Update Child Clock

General Reader 1 Reader 2 **Reader 3** Finger Print

Description: Out Reader

Type: Proximity

TNA Direction: None

Access Effect: Out (Into Out)

Area going In Restriction: None

Payroll going In Restriction: None

In Area: Admin

Out Area: Courtyard

Display Area:

TNA IN Relay: Relay 1: Relay 2:
Relay 3: Buzzer:

TNA OUT Relay: Relay 1: Relay 2:
Relay 3: Buzzer:

Area IN Relay: Relay 1: Relay 2:
Relay 3: Buzzer:

Area OUT Relay: Relay 1: Relay 2:
Relay 3: Buzzer:

Save Cancel

Click on “Save”.

3. CREATING AN ACCESS TIME ZONE

The turnstiles has to be configured to allow access to employees from Monday morning until Friday at midnight.

To add the time zone, click on “Access Time Zones” under the “Access Control” menu.

Browse Timezones														
▲Description	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday	
	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End

 Insert

Click on the “Insert” button.

Update Timezone

Description:

Timezone Schedule

	Start	End
Monday	<input type="text" value="6:00"/>	<input type="text" value="23:59"/>
Tuesday	<input type="text" value="0:01"/>	<input type="text" value="23:59"/>
Wednesday	<input type="text" value="0:01"/>	<input type="text" value="23:59"/>
Thursday	<input type="text" value="0:01"/>	<input type="text" value="23:59"/>
Friday	<input type="text" value="0:01"/>	<input type="text" value="23:59"/>
Saturday	<input type="text" value="0:01"/>	<input type="text" value="6:00"/>
Sunday	<input type="text" value="0:00"/>	<input type="text" value="0:00"/>

Enter a description and the start and end times as above. An employee will be allowed to clock between the Start and End times for the day. Click on “Save”.

Browse Timezones														
▲Description	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday	
	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
Weekdays Only	6:00	23:59	0:01	23:59	0:01	23:59	0:01	23:59	0:01	23:59	0:01	6:00	0:00	0:00

The above time zone can now be assigned to an employee or a clock.

As with the Areas, you will need to duplicate the time zones on any other clocks.

In the example employees should only be able to clock in on the turnstiles during the above time zone. We can therefore set it as the default time zone on the turnstiles and limit access on entering the premises.

Click on “Child Clocks” under the “Hardware” menu and click on the blue triangle next to the turnstile’s child clock to change it.

Update Child Clock

General Reader 1 Reader 2 Reader 3 Finger Print

Clock Serial Number: 19907

Description: Turnstile 2

Model: Daughterboard with 20x4 LCD 3 relays

Quiet Mode:

Relay Duration(10ms units): 10000

Default Time Zone: Weekdays Only

Override Time Zone: No Override Time Zone Restrictions

Time Zone on In Only:

Default Access is No:

Clock is locked:

Save Cancel

Select the “Weekdays Only” time zone from the “Default Time Zone” drop down list. If you want to prevent an “Employee Access Right” to override it, select the same time zone from the “Override Time Zone” drop down list.

Since we only want to prevent entrance to the premises from Saturday morning to 6 o’clock on Monday morning, you can select “Time Zone on In Only”. This will allow anyone to still clock out on the turnstile on Saturday morning.

Click on “Save”.

2. CONFIGURING EMPLOYEE ACCESS RIGHTS

Assuming that the number of staff that requires access to the Admin area is only a small percentage of the total employees, we can setup the child clock at Admin not to allow anyone access by default and give these employees access using Employee Access Rights.

Since the station at Admin is a child clock of the second turnstile, you only need to setup the access rights for these employees on the second clock.

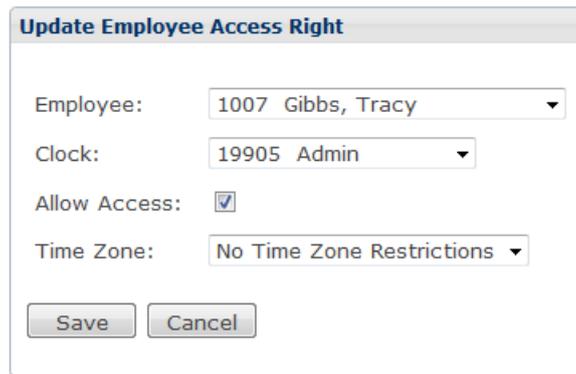
In the web interface of the second clock, under the “Access Control” menu, click on “Employee Access Rights”.

Browse Employee Access Rights

▲Emp No	Surname	First Name	Clock S/no	Clock Description	Access	Time Zone
---------	---------	------------	------------	-------------------	--------	-----------

Insert

Click on “Insert”.

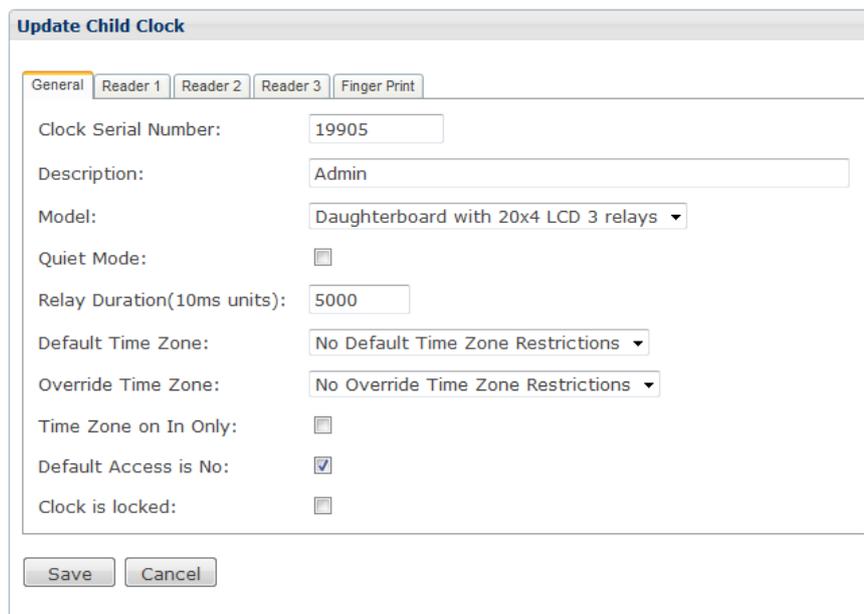


The dialog box titled "Update Employee Access Right" contains the following fields and controls:

- Employee: 1007 Gibbs, Tracy (dropdown)
- Clock: 19905 Admin (dropdown)
- Allow Access:
- Time Zone: No Time Zone Restrictions (dropdown)
- Buttons: Save, Cancel

Select an Admin employee from the employee drop-down list. Select the applicable child clock and confirm that “Allow Access” is selected. You can also add a time zone restriction if necessary. Click on “Save”. Repeat the procedure for the other staff members concerned.

In the web interface of the second turnstile, click on “Child Clocks” under the “Hardware” menu, select the Admin child clock and click on the blue triangle next to it to change it.



The dialog box titled "Update Child Clock" has tabs for General, Reader 1, Reader 2, Reader 3, and Finger Print. The General tab is active and contains the following fields and controls:

- Clock Serial Number: 19905
- Description: Admin
- Model: Daughterboard with 20x4 LCD 3 relays (dropdown)
- Quiet Mode:
- Relay Duration(10ms units): 5000
- Default Time Zone: No Default Time Zone Restrictions (dropdown)
- Override Time Zone: No Override Time Zone Restrictions (dropdown)
- Time Zone on In Only:
- Default Access is No:
- Clock is locked:
- Buttons: Save, Cancel

Select “Default Access is No” and click on “Save”.

3. ANTI-PASSBACK ON THE TURNSTILES

To enable anti-passback on the turnstiles you would need to have Advanced Hardware Options enabled. In the “Hardware” menu, click on “Child Clocks”.



▲Serial Number	Description		
19905	Admin	▲	✖
19907	Turnstile 2	▲	✖

The clock and the child clocks that have been connected to it will show in the list. Click on the child clock belonging to the turnstile and click on the blue triangle to change it.

In the settings of “Reader 2” and “Reader 3” select “Must not be in TO Area (APB)” from the “Area going In restriction:” drop down list and click on “Save”. Repeat the procedure for the second turnstile.

4. PATHING BETWEEN THE TNA CLOCKS AND THE TURNSTILES

First setup the TNA clocks in Production and Dispatch. Employees can clock using a PIN number or clock on the IN and OUT proximity readers.

Click on the blue triangle next to the Production child clock to change the settings. Click on “Reader 1”.

- Change the reader description and the “Type” to “Keypad”.
- Change the “TNA Direction” to “Toggle” and the “Access Effect” to “TNA” i.e. the Access Effect will Toggle between the In and the Out Area according to the employee’s TNA direction.
- Set the “Area going In Restriction” and the “Payroll going In Restriction” to “None” as you don’t want to prevent your employees from clocking IN.
- Set the “In Area” to “Production” and the “Out Area” to “Courtyard”.

Update Child Clock

General **Reader 1** Reader 2 Reader 3 Finger Print

Description: Keypad reader

Type: Keypad

TNA Direction: Toggle

Access Effect: TNA

Into Area Restriction: None

Into Payroll Restriction: None

In Area: Production

Out Area: Courtyard

Display Area:

TNA IN Relay: Relay 1: Relay 2:
Relay 3: Buzzer:

TNA OUT Relay: Relay 1: Relay 2:
Relay 3: Buzzer:

Area IN Relay: Relay 1: Relay 2:
Relay 3: Buzzer:

Area OUT Relay: Relay 1: Relay 2:
Relay 3: Buzzer:

Save Cancel

Click on “Reader 2”.

- Enter the description and type of the reader.
- Set the “TNA Direction” to “In” and the “Access Effect” to “In (Into In)” i.e. if an employee clocks on this reader the TNA direction will always be In and the employee will be clocking Into the Production area.
- Again set the “Area going In Restriction” and the “Payroll going In Restriction” to “None” as you don’t want to prevent your employees from clocking IN.
- Set the “In Area” to “Production” and the “Out Area” to “Courtyard”.

Update Child Clock

General Reader 1 **Reader 2** Reader 3 Finger Print

Description: In Reader

Type: Proximity

TNA Direction: In

Access Effect: In (Into In)

Area going In Restriction: None

Payroll going In Restriction: None

In Area: Production

Out Area: Courtyard

Display Area:

TNA IN Relay: Relay 1: Relay 2:
Relay 3: Buzzer:

TNA OUT Relay: Relay 1: Relay 2:
Relay 3: Buzzer:

Area IN Relay: Relay 1: Relay 2:
Relay 3: Buzzer:

Area OUT Relay: Relay 1: Relay 2:
Relay 3: Buzzer:

Save Cancel

Click on “Reader 3”.

- Enter the description and type of the reader.
- Set the “TNA Direction” to “Out” and the “Access Effect” to “Out (Into Out)” i.e. if an employee clocks on this reader the TNA direction will always be Out and the employee will be clocking Into the Courtyard area.
- Again set the “Area going In Restriction” and the “Payroll going In Restriction” to “None” as you don’t want to prevent your employees from clocking IN.
- Set the “In Area” to “Production” and the “Out Area” to “Courtyard”.

Update Child Clock

General Reader 1 Reader 2 **Reader 3** Finger Print

Description: Out Reader

Type: Proximity

TNA Direction: Out

Access Effect: Out (Into Out)

Area going In Restriction: None

Payroll going In Restriction: None

In Area: Production

Out Area: Courtyard

Display Area:

TNA IN Relay: Relay 1: Relay 2:
Relay 3: Buzzer:

TNA OUT Relay: Relay 1: Relay 2:
Relay 3: Buzzer:

Area IN Relay: Relay 1: Relay 2:
Relay 3: Buzzer:

Area OUT Relay: Relay 1: Relay 2:
Relay 3: Buzzer:

Save Cancel

Click on "Save".

Configure the Dispatch clock similarly (except for that you need to replace "Production" with "Dispatch").

Now we can configure the turnstiles to only allow an employee to clock out if they have clocked into the Courtyard (i.e. out of their respective departments) at their TNA stations.

Select and change the child clock of one of the turnstiles. Click on “Reader 3” (the Out reader).

- Set the “Area going In Restriction” to “Must be in FROM Area (Pathing)” i.e. the employee’s current area must be *Courtyard* before he/she can clock into *Outside*.
- Set the “Payroll going In Restriction” to “Must be Out” i.e. the employee’s TNA status must be *Out* before he/she can clock out on the turnstile. Note: Since the Admin employees are not clocking for TNA, by default their TNA direction will always be “Out” as set in their employee details.

Click on “Save” and setup pathing on the other turnstile.

Update Child Clock

General | Reader 1 | Reader 2 | **Reader 3** | Finger Print

Description: Out Reader

Type: Proximity

TNA Direction: Out

Access Effect: Out (Into Out)

Area going In Restriction: Must be in FROM Area (Pathing)

Payroll going In Restriction: Must be Out

In Area: Courtyard

Out Area: Outside

Display Area:

TNA IN Relay: Relay 1: Relay 2:
Relay 3: Buzzer:

TNA OUT Relay: Relay 1: Relay 2:
Relay 3: Buzzer:

Area IN Relay: Relay 1: Relay 2:
Relay 3: Buzzer:

Area OUT Relay: Relay 1: Relay 2:
Relay 3: Buzzer:

Save Cancel

7. ADDING PEER CLOCKS

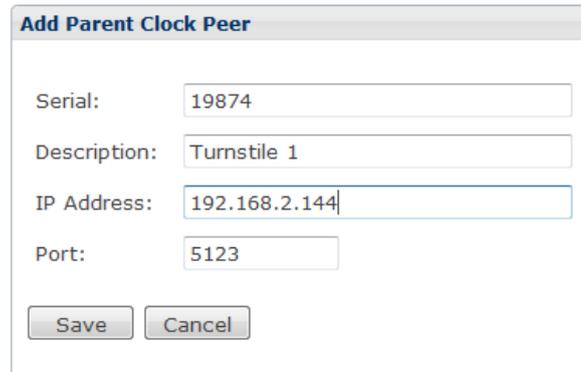
Unless you limit your employee to a set of clocks e.g. Turnstile 1 and the Production clock, or Turnstile 2 and the Admin and Dispatch clocks, you would need to setup the Parent clocks to exchange information on the employees’ current TNA direction and Access status.

You need to duplicate the peers list on ALL the Peer clocks. See page 3 on how to identify the serial numbers of your clocks.

Click on “Peer Clocks” under the “Hardware” menu.

Click on the “Insert” button.

Enter the Parent clock’s Serial number, description and IP address. Click on “Save”.



Add Parent Clock Peer

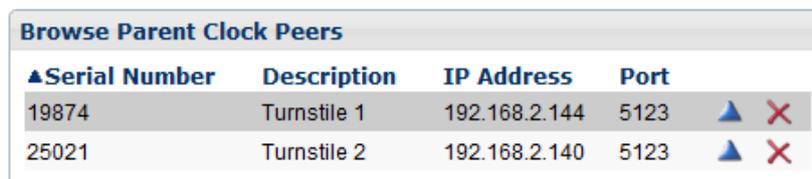
Serial:

Description:

IP Address:

Port:

Insert another record for Turnstile 2. Your list will now have both Parent clocks in. Duplicate this list on the other turnstile.



Browse Parent Clock Peers

▲Serial Number	Description	IP Address	Port		
19874	Turnstile 1	192.168.2.144	5123	▲	✖
25021	Turnstile 2	192.168.2.140	5123	▲	✖

SUMMARY

Configuring access control on the CS TimeClocks can be a confusing exercise, therefore please contact your supplier for assistance if required.