

GateWatch Turnstile Monitoring Programme Manual

GateWatch (Turnstile Monitoring) Manual

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Introduction

A brief guide to the programme

GateWatch is a Turnstile Monitoring System which is used to count the number of people entering through the turnstiles only. It cannot be used to count people who enter by other means, such as the Directors Area.

GateWatch runs on a Pentium PC running Windows NT with up to 2 Specialised Interface boards fitted

Normally up to 80 turnstiles can be counted, although it can be increased to 120 or 160 but the computer needed is somewhat more expensive, and the information is graphically displayed split into separate stands with total figures in the central 'Pitch' area.

Each stand gives the following information

1. Stand Name
2. Space left in stand (decremented as people come into stand)
3. Flow rate (no of people per minute)
4. The time left to fill the stand in minutes
5. The total number of people in the stand
6. A graphical display of the fullness of the stand

The Central Area gives the same information but for the whole stadium

After the gates are closed a summary can be printed which lists the following:

1. Basic information about the present match
2. The total no of people in each stand
3. The total no of people through each turnstile

A turnstile summary can also be called up during counting to show usage of turnstiles

The stands can be moved to the positions that suit the user but the initial layout is based on the stand positions.

Different set-ups can be included if different stand layouts are used, i.e. stand split for home and away supporters, and the set-up must be chosen before the gates are opened.

Also a Start Count can be input to cover the initial staff who are in the stands area of the stadium. This is to give a more accurate count of the number of people in the stadium seating area.

Starting the programme

The programme should start automatically when the PC is switched on, but if the PC is already on and GateWatch is not running then it can be started from the desktop.

When the programme is started, after the initial start-up screen, the following screen should appear. The picture below shows a standard basic setup and may appear different to the one displayed.

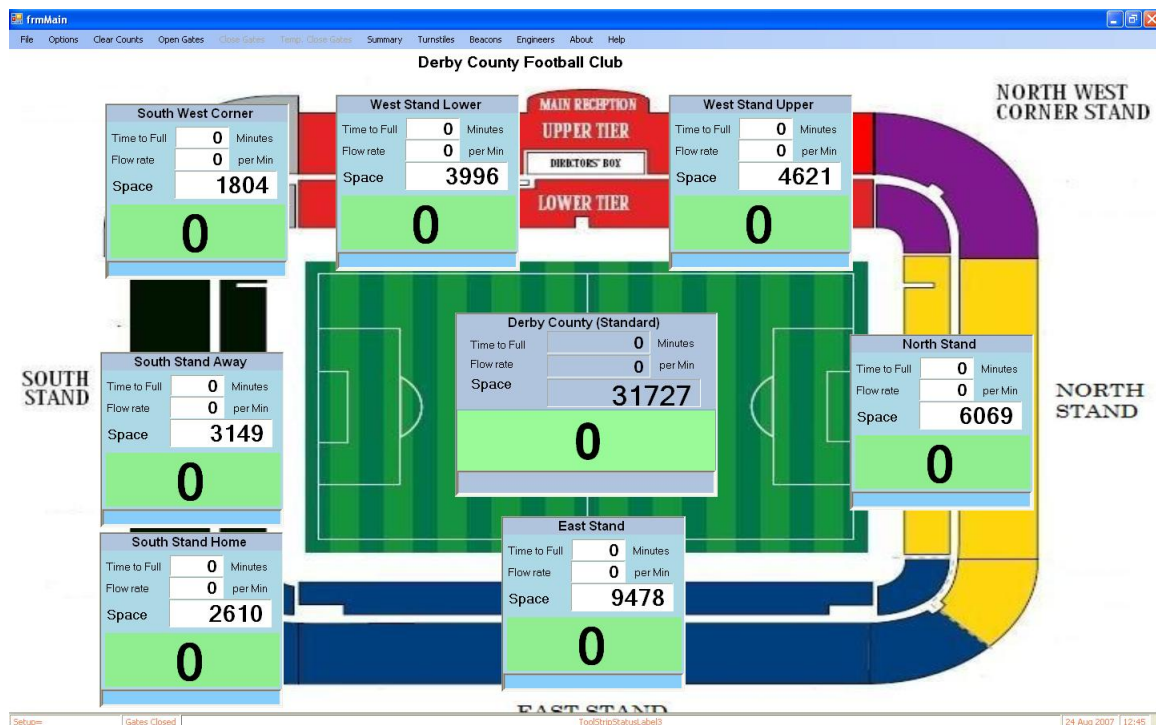


Figure 1 The opening screen

It shows the various stands and the central pitch area that will display the counts.

All stands should read zero with the pitch showing the start crowd.

Before the gates are opened the Setup and type of game should be selected. This is done by selecting **Options - Select Stadium Setup**.

This will a list of the Stadium Setups. After choosing a setup the screen will alter to display the selected setup.

The Match Details can be entered by **choosing Options – Select Match Type**.

This will display the following form:

A Windows-style dialog box titled "Match Details". It contains several input fields: "Game Type" (empty), "Home Team" (empty), "Away Team" (empty), "Date" (28/11/2007 14:11:25), "Kick-Off Time" (15:00), "Base Crowd" (0), and "Match Type" (First Team, with a dropdown arrow). At the bottom are "OK" and "Cancel" buttons.

Figure 2 Match Details

Here match details can be entered which will appear on the Match Summary.

Do not use this form to alter the start crowd as the base crowd is something quite different and is not used here.

To alter the Start Crowd select **Options – Set Start Crowd**. This will display the following form

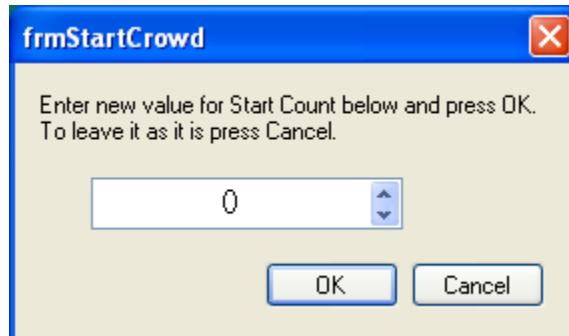
A Windows-style dialog box titled "frmStartCrowd". It contains a text box with the value "0". Above the text box is the text: "Enter new value for Start Count below and press OK. To leave it as it is press Cancel." At the bottom are "OK" and "Cancel" buttons.

Figure 3 Start Crowd

The new value should be entered into the box and **OK** Pressed.

If the New Value box is cleared an error message will be displayed which acts as a reminder to put a value in.

Open the gates

Once all relevant data has been entered and stadium setup selected the programme is ready to start counting.

Selecting **Open Gates** will start the programme looping through all the inputs from the turnstiles, counting any that are turning, and displaying the results on the screen.

Some of the menu items are disabled at this point so that the counting cannot be interrupted accidentally.

The only items enabled are:

- **Close Gates** – to stop counting and save information to hard disc. This is normally done at the end of a game and will also format the summary to be viewed and printed. If the gates are closed before the end of the game and then opened again the summary will not be correct but the count display will reflect the correct count minus the count for the time the gates were closed.
- **Temporarily Close Gates** – this enables the counting to be temporarily suspended. Selecting **Open Gates** will resume counting. The summary will be correct at the end of the game. Any turnstiles which are turned during the lull in counting will not be counted.
- **Turnstile Summary** – this will display a summary of the turnstile counts on the screen. It is not updated automatically but is updated by selecting **Turnstile Summary – Update Summary**
- **Beacons** – displays the state of beacons on each turnstile group or anywhere else. These can be used to tell the operator to open/close the turnstiles or inform stewards of something
- **About** – displays a form which shows information about GateWatch.

Counting

The System checks every turnstile four times a second to check if it has turned. It verifies if a cycle has occurred by setting a flag when a turnstile starts to turn and resetting it at a certain point in the cycle based on the output from the turnstile switch or circuitry. The count for each turnstile is incremented for each complete cycle of the signal from the turnstile. The counts of the turnstiles that feed a particular stand are then added together to give the total count for the stand. The

counts for all stands are then added to give the total for the stadium plus the start crowd.

Each stand displays the following information:

- **Stand name** – at the top of each stand
- **Flow** – the number of people entering the stand per minute.
- **Time To Full** – the time, in minutes, that it will take to fill the stand based on the current space and flow rate.
- **Space** – the number of people the stand can still accommodate. This figure is decremented as the count increments.
- **Count** – the total number of people in the stand. This figure is a direct total of all the turnstile counts that feed this stand.
- **Progress Bar** – a graphical representation of the count and space in the stand

In the centre of the pitch are the figures for the stadium. The sections are the same as each stand except that the figures are for the whole seating/standing area of the stadium. The Count figure only includes the total for each stand plus the stewards etc on duty within the stadium. It does not include the figures for Corporate Hospitality or Directors Area as these people do not enter through a turnstile.

The **Flow Rate** and **Time to Full** are calculated every 20 seconds so that a proper value can be calculated. If it was calculated for a shorter time the figures would not reflect the true values. So there will be a delay before any figures appear.

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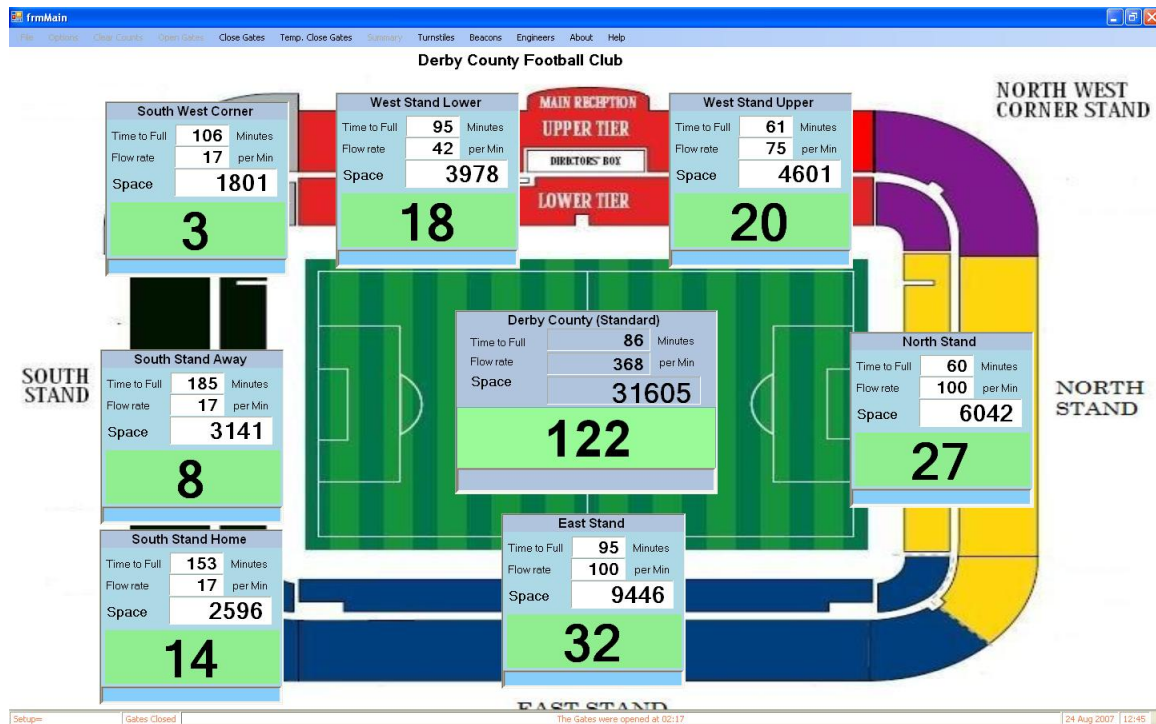


Figure 4 Counting

Turnstile Summary

Selecting **Turnstile – Show Turnstiles** will bring up the following screen which is displayed to the right of the counting screen. This will display the Turnstile list and put a tick next to **Show Turnstiles**

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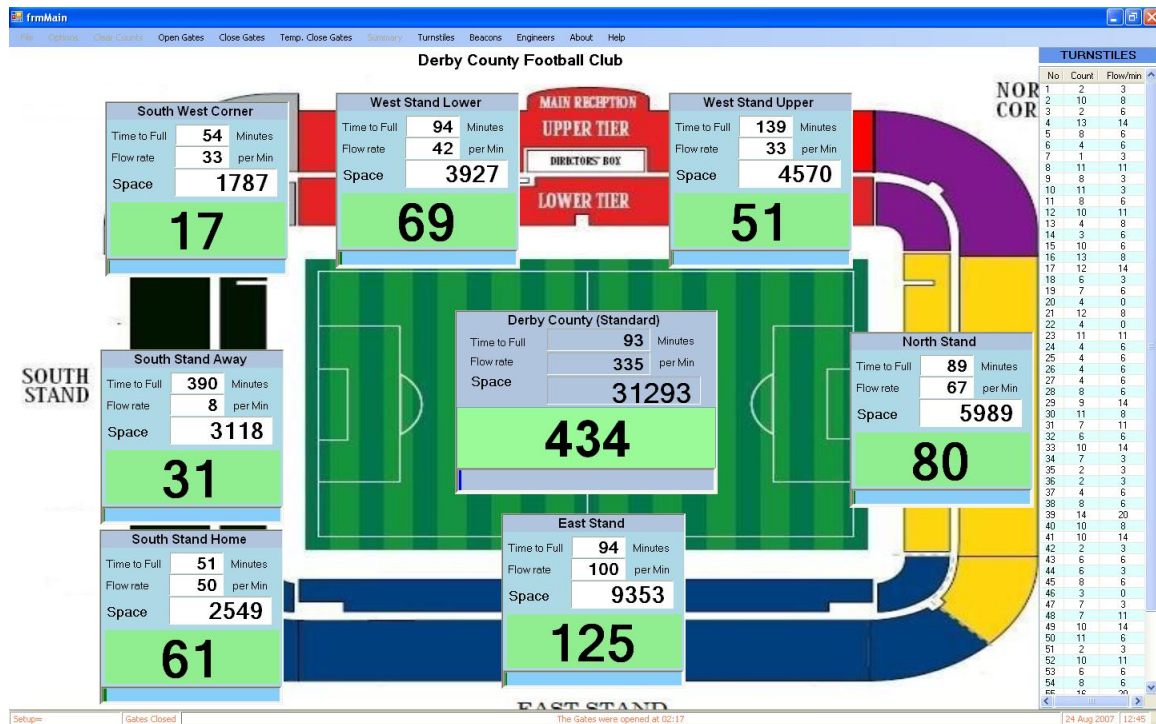


Figure 5 Turnstile Summary

This shows all the turnstiles showing:

1. The turnstile name
2. The number of people entered through the turnstile
3. The Flowrate for the turnstile

The count is automatically updated every 20 seconds.

The form can be closed by selecting **Turnstile – Show Turnstiles** again which will hide the Turnstiles and delete the tick next to **Show Turnstiles**.

Stadium Nearly Full

In order to give some aid to judge when to close turnstiles a the display is altered at stages throughout the count.

When a stand, or stadium count reaches 70% of its maximum capacity the area under the count turns orange. This can be seen below for the South Stand.

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Figure 6 East stand showing 70% full

The counting continues until 90% of capacity is reached.

The count area changes to red to indicate that some turnstiles should be closed to try to limit the number of people entering the stand so that the stand is not overfilled.

If the stand, or stadium, capacity is reached and people are still entering through turnstiles the whole stand or pitch area will turn red to indicate a problem.

Under normal circumstances this should never happen but indicates either the turnstiles should have been closed or there may be a problem with the turnstile's counting mechanism, it may be counting twice for each turn.

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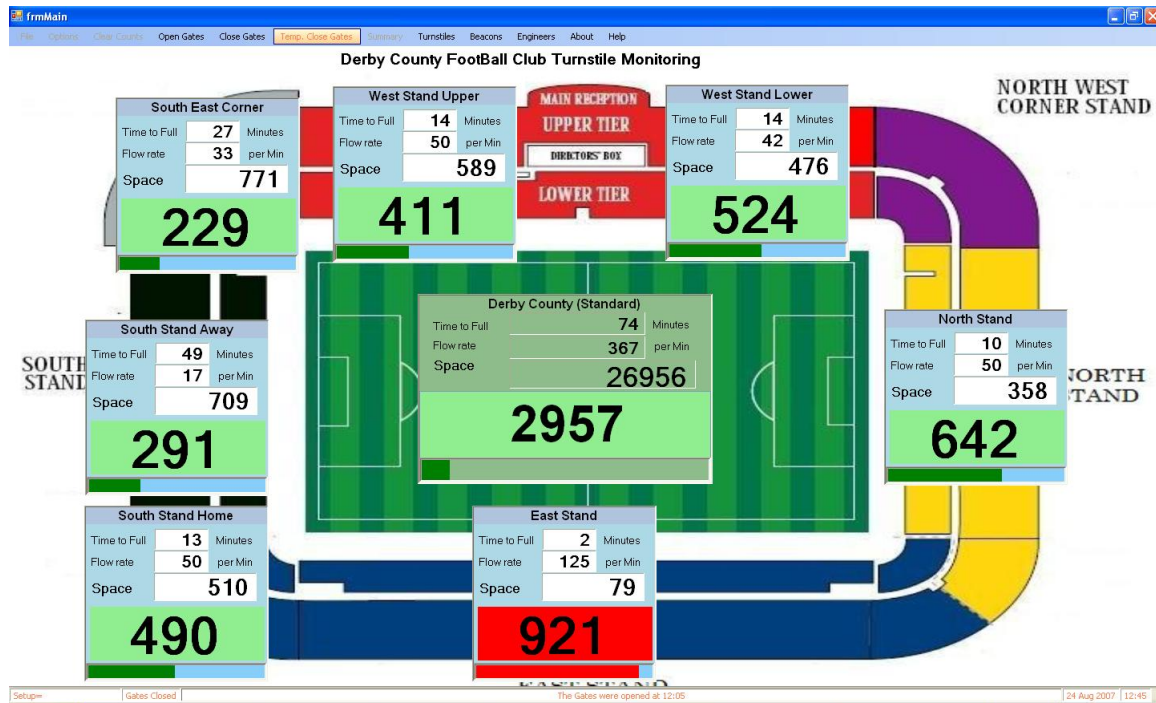


Figure 7 East stand showing 90% full

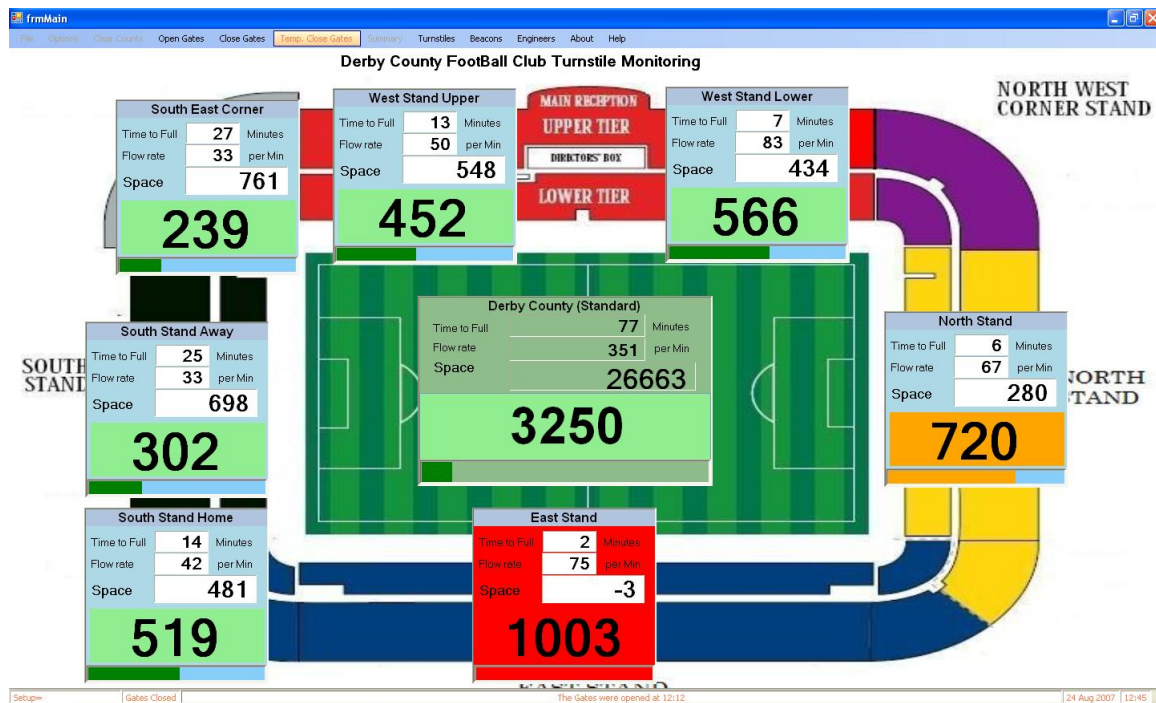


Figure 8 East Stand has gone over capacity

Close the gates

When the number of people in the stadium has reached maximum or no-one else is entering the gates can be closed.

The counting is stopped by selecting **Close Gates**.

This does several things within the programme.

1. The counting is stopped – any more people entering the turnstiles are not counted in the totals
2. A summary is created for the game – this summary includes information about the game
3. Various menu items are re-enabled:
 - a. **File** – to enable the programme to be unloaded
 - b. **Options** – to enable various options to be selected
 - c. **Clear Counts** – this clears all the counts back to zero, except the pitch count which clears to the Stat Crowd number.
 - d. **Print Summary** – this brings up the summary to be viewed and printed on a local printer.

Game Summary

By selecting **Print Summary** the summary form is displayed. This shows information entered through the **Select Stadium Setup** form and all counts split into the various stands for all the turnstiles.

Leicester City League

Date: Thursday 22 August 2002

Game Type: Friendly

Match Type: League Game

Home Team: Leicester City Wives

Away Team: The World Cup '66 Squad

Total Capacity of Ground: 29980, Total Gate: 1764

Starting Crowd: 34

Stand Name: West A, Capacity: 1822
Total In: 91

	Turnstile	Count
West A	- T01	33
West A	- T02	28
West A	- T03	30

Stand Name: West B, Capacity: 2819
Total In: 171

	Turnstile	Count
West B	- T04	35
West B	- T05	26
West B	- T06	27

Figure 9 Game Summary

The information shown in order is:

- The Stadium Setup Used
- Date of Match
- Game Type
- Match Type
- Name of Home Team
- Name of Away Team
- Capacity, Total Crowd
- Start Crowd
- Stand Information
- Turnstile Information

Stand and Turnstile information given for each stand

The data on the form is printed by selecting **Print**.

The form is closed by selecting **File – Exit** or the X in the top right hand corner.

It is important to print the summary out now but it can be printed later by manoeuvring to the directory 'C:\Program Files\GateWatch\Logs ' where it can be found. The file name will be of the format "Summary" + "Date" + Time + ".txt".

An example would be '**Summary05-08-02-13-42-18.txt**' is the summary for the game on 5th August 2002 at 1:42 pm. (the time is the time of the summary).

After the game

When the game has finished the summary printed the programme can be closed down and the computer switched off.

To close the programme down select **File – Exit**.

If a summary has not been printed the option to do one now is given.

If yes is chosen then the summary is shown on the screen and can be printed. When the form is closed the programme will continue terminating.

If no is chosen the programme terminates.

There is also the option to clear the counts, select new stadium setup, or continue with the same one, and start all over again with a new game.

Options Menu

Under the **Options** menu there are a few items that need mentioning.

1. **Set Start Crowd** – as shown earlier is used to set the start crowd for a game
2. **Reposition Stands** – this allows the screen layout to be altered to suit the user.
3. **Save Stand Settings** – saves the current position of the stands if they have been move
4. **Input Match Types** – displays a form so that the list of match types can be altered
5. **Select stadium setup** – allows different setups to be used for different games – described earlier
6. **Log game** – switches on/off logging. If switched off then no game summary is produced

7. **Test Mode** – allows testing of turnstiles without creating logs and disables various other programme functions
8. **Demo Mode** – this allows the programme to be demonstrated. The counting is enabled without any turnstiles turning, so that when the gates are opened in the programme the counts increment on their own.
9. **Remote Setup** – allows selection of communication method with remote computers which will mimic the operation of the master. Not used at present

Repositioning of Stands

If the position of the stands and pitch area need to be altered for some, then the positions can be altered.

This is done by selecting **Engineers – Move Stands**

When this is selected the stands and pitch are enabled to be moved. The stands and centre become 'greyed out'

The stands and pitch area can now be moved to their new positions.

The initial positions are based on the actual stand locations and would be too confusing if they were altered drastically.

Note: Do not exit the programme while moving stands as the results would be unpredictable.

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Figure 10 Stands ready to move

Selecting **Save Stand Settings** will save the new positions for this stadium setup only. If the stands are to be moved in every setup then each setup must be selected and the stands moved and save for each.

Changing or adding Setups

If the standard setup is not sufficient then new setups can be added.

To add a setup then select **Engineers – Stadium Setups**

This will bring up the following screen:

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Figure 11 starting a new setup

Once this screen is up Stands can be added by selecting **Add Stand**. The total number of stands can all be added and will appear on top of one another in the top left of the screen.



Figure 12 A Stand added

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The stands can be moved to their correct position by selecting **Move Stands**. When they are in the correct position (or roughly in position as they can be moved to the correct location on the main screen) they can be enabled again by selecting **End Move Stands**.

If too many stands have been added then the last one added can be removed by selecting **Remove last added Stand**. You can only remove the stands in the reverse of the order they were added.



Figure 13 Stands added and moved to their location

Now it is time to select which turnstiles will be added to each stand.

The turnstiles can be moved singly or in a group.

To move a single turnstile just select a turnstile and drag it to the correct stand.

To move a group of turnstiles then select the first turnstile and hold down the SHIFT and select the last of the group.

To move turnstiles that are not in a group then select each turnstile while holding down the CTRL key.

Drag your selection to the correct Stand. If a turnstile is moved to the wrong stand then it can be moved from Stand to Stand.

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Figure 14 some turnstiles selected



Figure 15 some turnstiles moved to their stand

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The Stands and centre need a title to display and these cannot be left blank. If **Save Setup** is selected and any stand name has not been filled in then the following notice will appear. Check the names and fill in any that are missing.

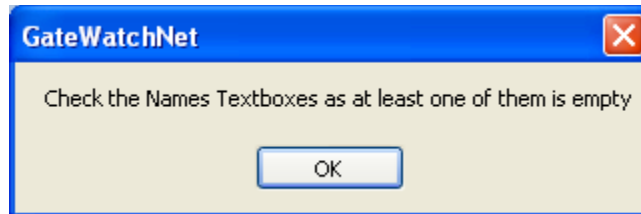


Figure 16 not all Stands have names

Once the names have been added and the Capacity and Start Crowd have been added for each Stand then the setup can be saved by selecting **Save Setup**.

The setup is saved and can be recalled to alter at a later date.

To use the new setup then close this form and, on the main form, select **Options – Select Stadium Setup**. Choose the required setup from the options.

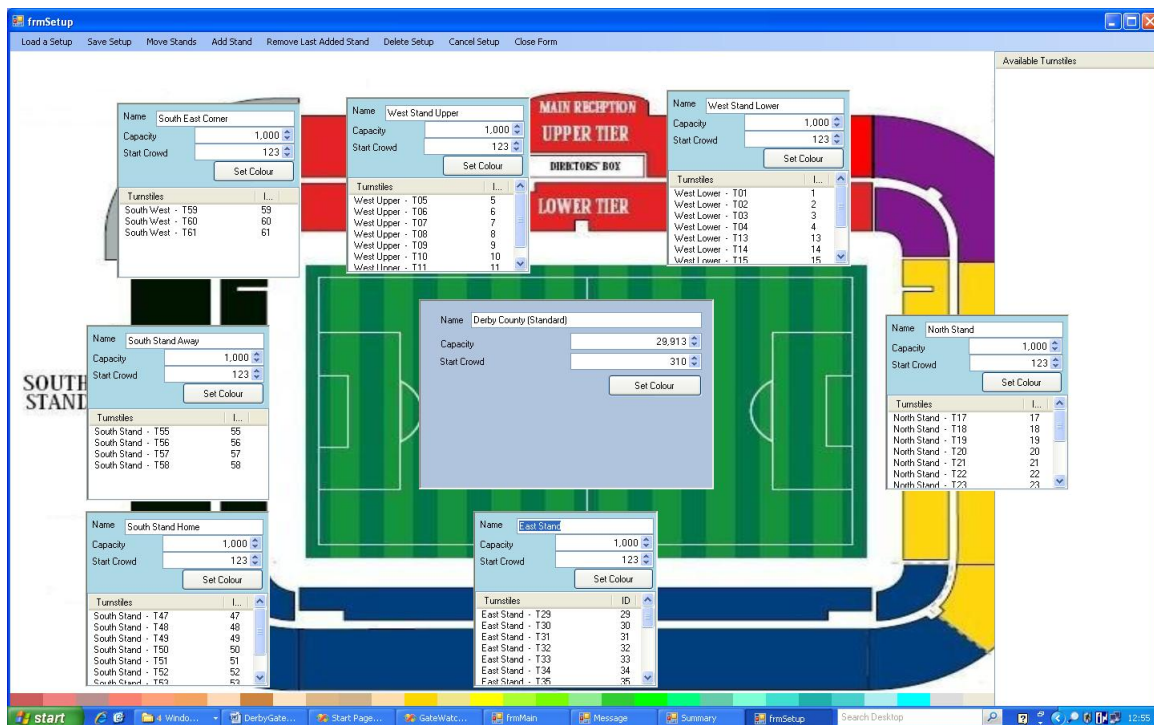


Figure 17 Setup Finished and ready to be saved

Setups can be added, altered or deleted at will but only 16 setups can be present.

Other points to note

Selecting **Clear Counts** will reset everything back to the start counts. Do not do this in the middle of a proper game count as the figures would be totally wrong for the game including the summary.

This item is disabled when the gates are open but can be re-enabled by closing the gates.

It is very important that nothing is changed during a game session. Once the gates are opened and counting has started then do not attempt to close the gates and alter things. The following would cause unpredictable results and may result in the programme crashing.

Altering

1. start crowd
2. stadium setup
3. logging
4. test mode
5. demo mode

Support

Support is limited only to the incorrect operation of the programme or computer and should be made to:

(Company Address)

Eiger Solutions Limited
92 Christchurch Drive
Blackwater
Camberley
Surrey
GU17 0HN

(Office address)

Eiger Solutions Limited
111 Chiltern Drive
Berrylands
Surrey
KT5 8LS

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Tel: 07801 921735

Email: jamesbartlett@eigersolutions.co.uk

Email: jamestbartlett@hotmail.co.uk

Any alterations or additions that that you feel could be made to the programme should be sent to jamesbartlett@eigersolutions.co.uk with as much information about the alteration or addition that you can give.