

**The Referees' System of Control.** (By Julian Carosi [www.corshamref.net](http://www.corshamref.net) dated 30 March 2005)  
*A system of officiating, which uses a set patrol path, supported by Assistant Referees (ARs), previously known as linesmen. The object is to achieve the most effective cooperation between match officials.*

Referees have used several systems of control throughout football history:

- (1) The Diagonal system is now employed as a standard in most countries, including Britain.
- (2) The Linear system; previously used mainly in Russia and its neighbouring countries.
- (3) Straight-line / Zig-zag / Oval patrol systems; used by referees when no assistants are available.

### **1. The Diagonal System and its origins.**

The Referees' Diagonal was the result of a complete revolution of the match officials' roles in 1891. The Referee, complete with notebook and whistle, made his way for the very first time onto the field of play to take charge of the game. Prior to this, two Umpires who waved sticks around in the air whilst making decisions controlled games. The Sheffield FA Rule No. 12 of 1870 stated: *"Each Umpire shall be Referee in that half of the field nearest the goal defended by the party nominating him"*. An earlier Eton rule of Control, stated, *"Two umpires must be chosen, one by each party; their position is to be at the "goals" of their respective parties."* A similar Cheltenham rule of the same period, read, *"Two umpires are to be chosen before the commencement of the game; they are to stand at opposite corners of the ground, each commanding a view along the side rope and also along the line of the goal nearest him"*. The subservient Referee of those early days would be statically positioned on the boundary, taking a secondary role, and only referred to when the two Umpires were unable to come to a conclusion (following an appeal by players). Very often, the Referee was never called upon to make a decision throughout the whole match! The Umpires' sticks were exchanged for flags, and they became known as 'linesmen', relegated to patrolling the touchlines. The prime duty of these fledgling 'linesmen' was to indicate when the ball went out of play over the boundary lines. They would keep out of the field of play as much as possible, and point their flags to the spot where the ball went 'into touch'; and would stand to one side to monitor the throw-ins.

It was eventually realised that a structured method was required, to enable the three officials to work together in maximising match control in an efficient manner. Judgement of offside was also becoming a major factor, as it became apparent that it was sometimes physically impossible for the Referee alone to make accurate offside judgements. Increased cooperation with his linesmen called for greater positional play between the three officials. When the first *Referees' Chart* was compiled five years later in 1896, a special column entitled, 'Hints to Referees' was included. This contained the first positioning advice for referees. They were recommended to stand near the centre-line at the kick off; to monitor encroachment and to ensure that the ball was kicked forwards. This helpful column also advised referees to keep up with play, and check whether the ball actually passed over the goal line when a goal was in question. It took a few more years yet, before an article appearing in Pickford's, "Association Football" (published in 1905), first mentioned a method that involved a structured positioning system for all the three officials that subsequently became known as the 'Diagonal System' of Control.

*'In practice, the Linesman is entrusted with the oversight of the touchline, the referee the goal-line and goal positions. This is a useful division of the work, but it is not a peremptory one - the linesman should keep an active watch on the ball crossing the goal-line so that he can if required help the referee either by signal or by consultation. The linesman should act as far as he can as a goal-judge. To achieve this, the suggestion is made that one linesman should work more along the touchline on one half of the field of play, and the other conversely.'*

William Pickford went on to become a member of the FA's Rules Committee in England for more than 40 years.

There have been subsequent suggestions throughout the history of football, that control of the game would be improved by abolishing linesmen altogether, and having two referees instead, one in each half of the field. In essence, this would be a return to the (two umpire) methods used prior to 1891. Several experiments have proved the two-referee method to be inferior to the diagonal system, which continues to be very efficient. It was not until the late 1920s and early '30s that the diagonal system actually began to take shape. Stanley Rous (later to become Sir Stanley Rous) developed the diagonal system of control after, according to Belgium Referee John Langenus (1930 World Cup Final referee), he had seen Belgium referees making a similar attempt at scientific positioning on the field of play. This was destined to become the blueprint for all refereeing.

A group of referees, including Rous in particular, used the system with some success when refereeing international matches on the Continent. But the 'Diagonal System' of Control had yet to receive recognition by The Football Association (FA); and there were a number of referees and officials who were opposed to it. The breakthrough came in 1934. Rous used the system when he refereed the Manchester City v Portsmouth 1934 FA Cup Final. Six days after the Cup Final, Rous attended an interview for the post of Secretary of The

Football Association. Two months later he was confirmed in post and continued there for nearly 28 years (1934-62) until he became president of FIFA. Following the Cup Final of 1934, Rous submitted a Memorandum for discussion with the Association, and after the pros and cons had been carefully considered, the FA approved the 'Diagonal System' for use in matches under their jurisdiction.

The system proved to be a success, particularly with The Football League (England) who sent out instructions to all of its referees, stating that they must use this method of control. The Diagonal System of Control was featured in a long article in *Football World* in 1939; and it was nearly 10 years later in 1948, when foreign delegates at the International Conference of Referees held in London, also approved the adoption of the system; which has since been used throughout the footballing World.

### **The Diagonal System of Control explained.**

In the Diagonal System, the referee controls play by patrolling a line roughly diagonally across the length of the field from corner flag to corner flag. The two ARs are positioned on the touchlines on the opposite diagonal, patrolling that half of the touchline farthest from the referee. They assist on the goal line, at corner kicks and at penalty kicks next to their patrol area, and they also act if necessary, as a goal-judge. There are two diagonals that the Referee can choose to run. The most popular diagonal traverses a path from the right corner flag, to the opposite left corner flag at the other end of the field of play (known in the refereeing world as The Right Wing diagonal). The alternative diagonal traverses a path from the left corner flag, to the opposite right corner flag at the other end of the field of play (known in the refereeing world as The Left Wing diagonal). A Right Wing diagonal, places each AR on the touchline, alongside (and monitoring) the attacking team's right wing players. Conversely, the Left Wing diagonal places each AR on the touchline, alongside (and monitoring) the attacking team's left wing players. Other terms used by referees' to describe which touchline position they want their ARs to patrol, are sometimes referred to as "outside rights, outside lefts, left backs or right backs". In other words, the AR patrols that half of the touchline that is adjacent to a left back player's position, and so forth.

The great advantage of the diagonal system when it is properly carried out is that there are always two pairs of eyes, watching every movement on the field of play from opposite sides.

The selection of diagonal (Right Wing, or Left Wing) rests with the Referee, and is based on his observation of the position of the setting sun, the condition of the playing surface touchlines, and the positioning of the technical areas etc; for naturally, he will avoid as many drawbacks as possible. When the Diagonal System was originally introduced into The Football League matches, the Referee changed his diagonal at half-time, with the ARs adjusting their positions accordingly. This was done at the request of the Football clubs, to prevent undue damage to the turf on the sidelines patrolled by the ARs, who used only one half of each touchline length for the whole game. It was not long, before overuse of the touchline areas soon obliterated markings; and in inclement weather, the worn touchlines soon became quagmires devoid of any grass! The modern Referee should train to use either diagonal, depending on circumstances. Modern day playing surfaces are now, less prone to wear and tear. Modern boots are also less prone to damaging playing surfaces, than their hobnailed counterparts.

### **Senior & Junior Assistant Referees**

It is an individual Referee's decision, to decide which touchline his ARs will patrol. There is nothing in the Laws to stipulate otherwise. Some referees prefer to adopt the Right Wing diagonal, and others the Left Wing. Some referees use the Right Wing diagonal in one game, and the Left Wing diagonal in the next. There is a growing tendency these days, for referees to always use the Right Wing diagonal, as keeping a set pattern is seen by some, to be more beneficial to all of the match officials. In theory, this minimises mistakes and uncertainty. But the choice of diagonal should always be based to suit match situations. Therefore, new referees should be encouraged to vary their diagonal, before they become too accustomed at only running in one diagonal direction.

Most referees prefer to keep their ARs patrolling the same touchline in both halves of the game. But some ask their ARs to swap touchlines in the second half - and some referees have been known on the odd occasion, to run the opposite diagonal in the second half, and make their ARs run the far end of the same touchline that they patrolled in the first half. This could lead to confusion! The general method is to keep ARs on the same touchline throughout the game - the senior more experienced AR normally takes the 'Technical Area' side (because he is more experienced in dealing with any unruly 'bench' occupants.) It is also useful for the diagonal to be changed in the second half, to move an AR away from unruly spectators, particularly in the corners, where the close proximity of aggressive spectators could pose a danger. It is also not unknown, for the diagonal to be changed in order to keep a closer eye on first-half feuds developing between opponents. It can sometimes be useful to allow the junior AR to 'have a go' at controlling the technical area side of the field of play in the first half, when tensions are at a lower level. This will allow the Junior AR to gain experience with dealing with the Technical Area occupants, and management of the substitutions.

### The Diagonal System of Control in the Referees' Chart.

It was not until the 1937-1938 season, following a complete new codification of the Laws previously in force, that the Referees' Chart (for the first time) included a full explanation of 'The Diagonal System of Control,' including 11 detailed diagrams and instructions for various positions that the Referee could take during the game.

Diagram 1, and its respective instructions were as follows:

The imaginary diagonal used by the Referee is the line A-B.

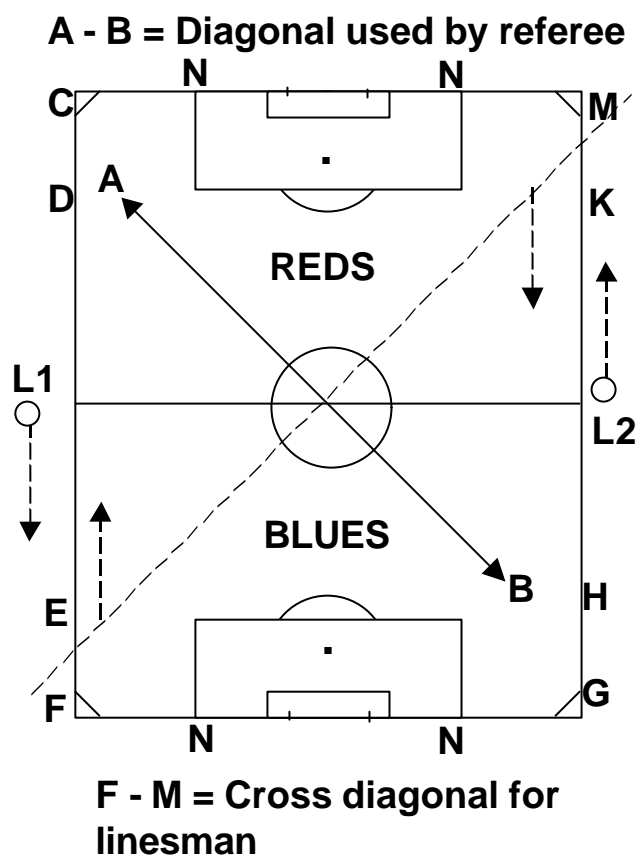
**The Diagonal System of Control  
Diagram 1. (1938-39)**

The opposite diagonal used by the Linesmen is adjusted to the position of the Referee; if the Referee is near A, Linesman L2 will be at a point between M and K. When the Referee is at B, Linesman L1 will be between E and F; this gives TWO officials control of the respective "danger zones," one at each side of the field.

Linesman L1 adopts the REDS as his side: Linesman L2 adopts the BLUES; as Red forwards move toward Blue goal, Linesman L1 keeps up with their foremost man, so in actual practice he will rarely get into Red's half of the field. Similarly Linesman L2 keeps up with the foremost BLUE player, and will rarely get into Blue's half.

At corner-kicks or penalty-kicks the Linesman in that half where the corner-kick or penalty-kick occurs positions himself at N and the Referee takes position (see Diagram 4-corner kick; Diagram 9\_penalty- kick).

The diagonal system fails if Linesman L2 gets between G and H when Referee is at B, or when Linesman L1 is near C or D when the Referee is at A. because there are TWO Officials at the same place. This should be avoided.



In its Memorandum on Refereeing No. 5, dated August 1951, The Football Association (England) provided the following advice:

Normally, efficient control can be exercised by keeping roughly to a line from the corner of one penalty-area to the opposite corner of the other penalty-area, a distance of about 85 yards. When compared with the full distance between the corner-flags, of about 125 yards, it will be seen that to cover the shorter distance only entails quite a substantial saving in energy. It also means, particularly on a holding surface, that the referee is more easily able to reach the vicinity of play.

Following a complete rewrite of the Laws of the Game for season 1997-1998, the diagrams for 'The Diagonal System of Control' no longer appear in the Laws of Associated Football. The system is now established as the single accepted international method used by referees worldwide.

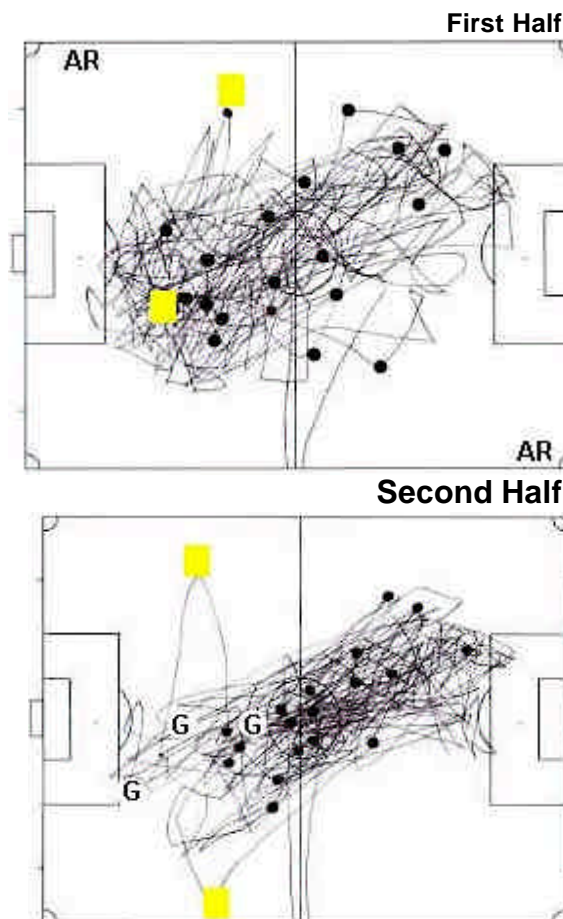
## Modern Methods

When the diagonal originally made its entrance, referees were expected to run the full length from corner flag to corner flag. The modern referee is more astute, and uses his reserves of energy to concentrate on managing the game, rather than unnecessarily wasting energy by reaching the extremities of the diagonal when there is no need to do so. Placing oneself at an extremity, can also lead to Referees losing touch with play in the much faster modern game.

Below are the diagonal paths taken by the experienced FIFA Referee Valentin Ivanov (Russia) during the Euro 2004 Quarter Final game between Czech Republic (3) v Denmark (0) in Portugal on Sunday 27 June 2004. (Analysis by Julian Carosi).

### Notes to consider:

1. The Referee kept out of the penalty area for nearly all of the game. This included the times when corner kicks were taking place.
2. The only times that the Referee went out towards the touchline, was to caution players. (See yellow squares.)
3. The Referee never once placed himself on the goal line.
4. The black dots are where the Referee was positioned when he awarded free kicks. In the second half, these were mostly in or near the centre circle.
5. Three goals were scored in the second half, and the position of the Referee when the goals were scored are shown in the diagram as 'G'. In all cases, the Referee had a very good view of the goals being scored.
6. There were huge areas of the field of play where the Referee never entered. Particularly near the quarter areas where the two ARs were patrolling.
7. The diagonal run by the Referee was 'corner of penalty area to corner of penalty area' ; rather than the traditional 'corner flag to corner flag' full diagonal.
8. Even when the ball was near the goal areas, the Referee tended to stay nearer to the centre of the field, rather than go out wider towards the touchline.



The analysis has proved to be interesting. The diagonal is much flatter than expected. The FIFA Referee was always near incident points and seemed to conserve his energy for the more important parts of the game, rather than expend energy adhering to a strict long diagonal. He obviously had full confidence in the abilities of both of his ARs, as he relied on them to indicate any missed fouls near their quarters. The penalty areas seemed to be a no-go area and rarely did the Referee step inside them.

## 2. The Linear System.

The linear system has several versions where the Referee keeps away from the middle of the field, supposedly avoiding obstruction of play. He governs the game from one side, just within the field of play, with the aid of one or two ARs depending on how many are available for the game.

The diagram illustrates the three versions that have been used.

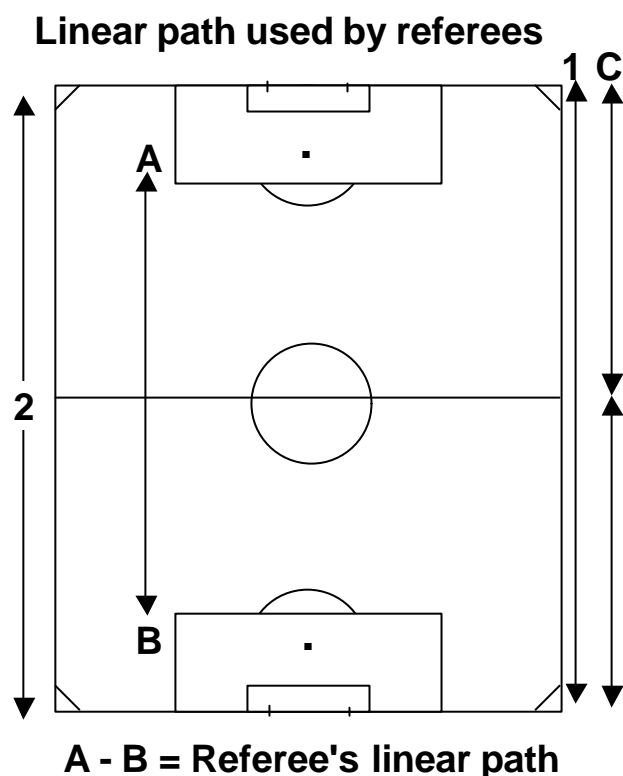
In the linear system, the Referee patrols the path illustrated as A - B in the diagram below. One advantage is that play is in front of the Referee and he maintains a side view of the action. He can monitor the nearby touchline, whilst remaining within reasonable distance from incidents occurring between each penalty area. The linear system calls for good mobility on the part of the linesmen.

Version 1: With the aid of his AR (2) on that side, the Referee oversees some two-thirds of the breadth of the field from his patrol line A - B. The senior AR patrolling the whole of the opposite touchline (1), acts both as linesman and deputy-referee for the one-third of the field nearest to himself.

The system had some merits, but not to the extent claimed; for the Referee is still liable to obstruct play on the wing where he operates, and his chief assistant (1) was given two men's work to do, and had to patrol the whole length of the touchline.

Version 2: In this version, the two ARs patrol one half of the touchline (C) each, whilst the Referee monitors play and the other touchline from his patrol line A - B.

Version 3: When only one AR is available, the Referee monitors play and the nearby touchline from his patrol line A - B, whilst the AR (1) patrols the whole length of the opposite touchline.



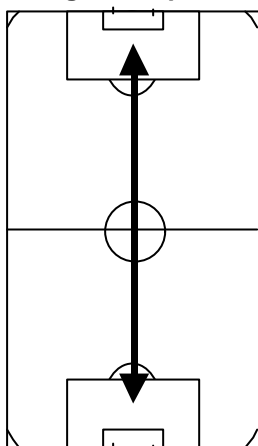
In the linear system, there was also a tendency for the match officials to give opposing decisions in the area where the two spheres of operation conjoined. The AR who runs the whole length of one touchline can also experience difficulties when awarding offside decisions; it was not unknown for players to be wrongly flagged for offside in their own penalty area!

The need to adopt a method of control in international matches has led to the demise of the linear system, in preference to the more efficient diagonal system, which is now the accepted standard worldwide. The recent addition of control of the technical areas by Fourth Officials in top matches, complements the diagonal system of control, resulting in total control of all areas by the match officials.

### 3. Straight-line / Zig-zag / Oval patrol systems.

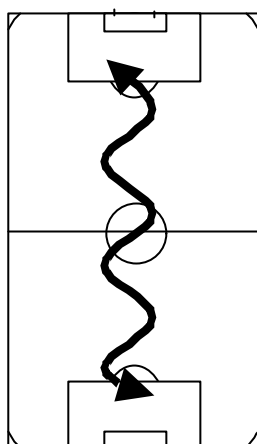
Referees (particularly at the beginning of their careers) will sometimes have to officiate in matches where no ARs or Club ARs are available to patrol the touchlines. The Referee has total responsibility for all decisions. The following three methods have been (and can be) used to patrol the field of play.

**Straight-line patrol**



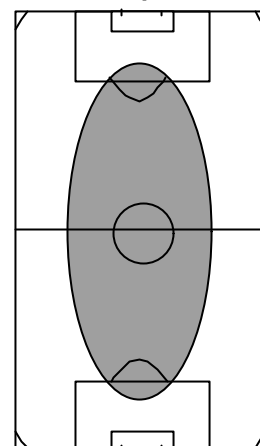
The Referee patrols a path up and down the center of the field of play between the two penalty areas. This gives the Referee the shortest distance (about 70 metres) to reach the penalty areas where most important incidents occur.

**Zig-zag patrol**



The zig-zag patrol allows the Referee to obtain closer views of incidents without having to sprint too far when play switches from one side of the field to the other.

**Oval patrol**



The oval patrol covers a larger area and will prevent the Referee from being isolated in one of the corner areas

In all the three systems above, the Referee will need to come away from the patrol path to monitor corner kicks. In reality, a single Referee in charge of a match without ARs or Club Referees may use a combination of the above three patrol paths in a single game.

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