

THE MULTIPLE FORMATION SPREAD OFFENSE



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INTRODUCTION

PHILOSOPHY

Consider this fact: the three highest scoring offenses in NFL history, the 1998 Minnesota Vikings (556 points), the 1983 Washington Redskins (541 points), and the St. Louis Rams (540 points in 2000; 526 points in 1999; 503 points in 2001) employed for the most part the same offensive system: the basic offensive philosophy was to spread the field both horizontally and vertically, often featuring a single back, and often varying the combinations of tight ends and wide receivers. Each of these systems, in turn, are derivatives of Don Coryell's explosive San Diego Chargers offense of the late 1970s and early 1980s that featured Hall of Famers Dan Fouts, Charlie Joiner and Kellen Winslow. The Chargers led the league in passing yardage in seven of eight seasons. Joe Gibbs was an assistant under Coryell at San Diego State University and then again with the St. Louis Cardinals; Brian Billick was later an assistant coach at SDSU. Mike Martz, a tight end at Mesa Community College while Coryell coached at SDSU, admired Coryell and later remarked, "I can't tell you how badly I wanted to play for him."

In my opinion, there are three basic points which demonstrate why this offense is ultimately successful. The first and foremost element of this offense is that it is a proven *winner*. Teams have proven that, up to and including those at the professional level, this offense can take you all the way. Second, as we saw in the initial paragraph, an important element to this offense is *scoring*. As the saying goes, "Offense wins games, defense wins championships." The only way to win games is to put points on the board; the more points you score, the more likely you are to win. Third and finally (and I might add, the most important element), this offense is fun. Run successfully, it is an action-packed, crowd-pleasing system with explosive potential.

While these coaches have employed this type of offensive scheme, it is important to point out that each of them tailored it to their personnel and general philosophy. Each coach made the necessary changes to make the general offensive concept a specific winning scheme for their team. Likewise, I've done the same.

This philosophy can be painted in three broad themes: confusion, exploitation, and domination. While these themes probably overlap, let me separate them so that I can address them individually:

- **Confusion.** The first theme of the offense is *confusion*. This is accomplished primarily through a) multiple formations, shifting, motion, personnel packages and bunching; b) running the same basic plays from many different formations; c) running "systems" or "progressions" of plays; and d) deception, in the form of well-executed play-action passes, boots and waggles, misdirection and counter-plays, and trickery.
- **Exploitation.** The second theme is *exploitation*. This is accomplished in two parts: first by stretching the defense both horizontally and vertically. Should the defense take a man out of the box to defend the pass, this will open up the run, and vice versa. The key here is taking advantage of the entire field: a three-wide set forces the defense to spread out, thus better exposing weaknesses. The second part to exploitation might seem simple but it is nonetheless effective: not only should this offense stretch the field horizontally and vertically, but play calling should take advantage of this fact and use the entire field.

- **Domination.** The third and final theme of the single back offense is *domination*. This can be best explained in three different contexts. First, in the context of the running game, domination means establishing the opportunity for a successful passing game: power football by outnumbering the defense at the point of attack, using every player in every play, and forcing the defense to bring another man into the box . Second, in the content of the passing game, domination means establishing the opportunity for a successful running game: keeping the defense honest with the deep threat (early and hopefully often), releasing 4 or 5 receivers on each play, and forcing the defense to take a man out of the box. Third, domination in a general offensive sense takes into account our previous themes. Overall offensive domination means confusing the defense, finding the weak spots in the defense caused by this confusion, and exploiting them non-stop for four quarters of football.

It should be added that this does not purport to be a philosophy for *guaranteed* offensive success. Certainly, the availability of talent can vary widely and thus have meaningful effects on overall success. Likewise, the presentation herein does not suppose that small variations from this philosophy are somehow less intellectually honest to the base concept; it does not claim to be the be-all and end-all offensive philosophy. The philosophy is meant to be the base concept upon which progressive offensive schemes can be built. To this end, I have presented an offensive system in its entirety, including the philosophy and terminology behind it.

Finally, a point about ideas. A football play is an idea. It can't be copyrighted or protected. Therefore, endless citations of credit are not necessary. However, I think it is important to note that while I consider the themes of this offensive philosophy to be my ideas, the ideas meant to carry them out are certainly not all mine. This system was developed through my experience playing football and the ideas of countless numbers of coaches and teams. Where I felt credit was due, I gave it; otherwise it should be assumed that ideas are sufficiently in the public domain as to not warrant such credit.

Credits. This vast undertaking of mine would not be possible without the help of several people whose ideas, concepts and contributions either directly to me or to the game of football itself are integral parts of my system. I would be remiss not to acknowledge them for their intellectual contributions:

- John Yocum, Head Football Coach, Muhlenberg High School, Laureldale, Pa. My terminology is largely based on his, which I learned while playing for him in high school.
- Andrew Coverdale and Dan Robinson, authors, *Football's Quick Passing Game*. Their route concepts and defensive reads are essential to any short passing game, including mine.
- Ron Jenkins, author, *Coaching the Multiple West Coast Offense*. Excellent all-around contributions, especially to the passing game and understanding defensive coverages. I've borrowed liberally from much of his work.
- Coach Bill Mountjoy, Richmond, Va. A wealth of knowledge and experience from many levels of football. His guidance and expertise are helpful to anyone willing to learn.

- Former or current NFL coaches Don Coryell / Joe Gibbs / Brian Billick / Bill Walsh / Mike Martz. Their ideas and contributions, especially on the offensive side of the ball, are unparalleled and weigh heavily in any serious discussion of football.

LEVELS OF LEARNING

Basic Outline.

Concept Introduction.

Primary.

Philosophy

Basic formationing

Passing - basic series, route tree, basic cadence

Running - basic series, hole numbering

Intermediate.

Basic motion

Modified formationing

Personnel groups

Formation/Play Systems

Passing - play-action, boot, screens

Running - single back, non-standard series

Advanced.

Modified formationing incorporating personnel groups, motions and shifts

Passing - audibles, uncovered receivers, reading the defense

Running - receiver blocking

MEASURES OF EFFECTIVENESS

Measures of Effectiveness, or *Measureable Probabilities* as Brian Billick calls them in *Developing an Offensive Game Plan*, are "a valid shortlist of priorities in which the team winning a game was significantly more productive than the team that lost that particular game...From year to year, four factors have been identified that have a consistently high correlation to a team's winning or losing:

- Turnovers
- Explosive plays
- 1st down efficiency
- Red Zone efficiency

...Keep the *four 'key' measureable categories* in mind when formulating your game plan."

FORMATION / PLAY SYSTEMS

In this day and age of more and more advanced offensive and defensive schemes, a single, isolated play can no longer effectively stand on its own in accomplishing key offensive objectives. If, every time your team lines up in a certain formation, you run off-tackle to the same side, eventually the defense is going to figure it out. If you run from certain formations and pass from others, eventually the defense is going to figure it out. The evolutionary idea in offense has been two-fold, of which I will discuss both here. Likewise, both of these ideas overlap to a certain degree. The first is the *formation system*; the second is the *play system*.

Formation Systems. This is a simple but popular idea in today's offensive philosophies. The idea is to run the same play (or plays) from a variety of different formations. The benefit is two-fold: first, the different formations confuse the defense into changing their basic assignments. Second, running the same basic plays gives the offense the benefit of repetition, which is among the single most important elements in developing a sound offense.

Play Systems. There are a variety of different names for this concept: Coach JJ Allen calls it *Play Calling Progression*, while I prefer the term *Play System*. However, the basic idea is the same: develop a base play and then progress to different options based on that base. A good first-order example of this is the play-action pass. To be most effective, the play-action should result from one of your successful running plays. Thus, while the defense keys on your back, you are confusing him with a pass. But this concept should, and has, been taken further. It is possible, and highly effective, to develop a series of plays that work together. While I played football, our most effective running play was an off-tackle to the tailback. Based on that, our offense ran three play-action passes from this run. Thus, this play system consisted of four plays. I think, as a minimum, at least three plays should be developed to create an effective play system; probably four or five is a better number. Trying to go much higher than this, you will attempt to force plays into the system that don't belong. This could potentially upset the balance of the play and is thus not recommended.

TERMINOLOGY

While there are obvious similarities in most offensive systems, it is important to understand that no two offensives, in terms of terminology, are the same. Terminology, as I see it, is primarily the best compromise of three factors:

- personal preference of the coach
- easy to understand
- adaptability and flexibility

The combination of these factors has led to a wide range of offensive terminologies. Some might call a formation using a name, while others use a color or number. I've come across examples of each of these. Some offenses use a numbered passing tree while others use terms for each route. Running holes are numbered, right to left, left to right, center-out, etc. My point is that it is impossible to gain a complete understanding of an offensive without a brief understanding of the terminology it uses.

Rather than attempt to introduce my offensive lexicon in one fell swoop, I have instead tried to break each bit of terminology into its own compartment, to be presented in turn as each section of the offense is explored. The only element that I will attempt to explain here is the letters that represent the backs and receivers and their locations in the various formations.

Backs and Receivers Terminology. Each of the backs and receivers is represented by a letter for purposes of play-calling.

1. F - running back, a fullback in two-back formations; a halfback/tailback in single back situations
2. H - multi-purpose back, a halfback/tailback in two-back formations; a wing/slot/flanker and lead blocker with motion in single-back formations
3. X - WR, split, sometimes used as a second tight end
4. Y - TE, sometimes used in a "Flex" (split) position
5. Z - WR, wing/slot/flanker

Formation Locations.

1. In all two-back sets, the F is the fullback and the H is the halfback or tailback.
2. In all single-back sets, the F is the single back and the H is the inside wing/slot/flanker receiver on the playside or the weakside wing/slot/flanker.
3. The X is the furthest receiver on the LOS opposite the Y.
4. The Y is the weakside LOS receiver in any no TE formations; the TE in any single TE formations; the playside TE in any double TE formations.
5. The Z is always the wing/slot/flanker receiver on the playside furthest from the ball.

BASIC CONCEPTS

PERSONNEL GROUPS

Personnel Groups refer to the different combinations of running backs, tight ends, and wide receivers. Because different formations require different types of players, it makes sense to substitute the correct personnel rather than play someone at a position in which he is less skilled. Furthermore, personnel groups allow you to directly involve more than your eleven starters into your game plan. While certain players (such as your backup TE) might have a limited role in the offense, these personnel groups allow him to *know* he will be able to contribute to a certain amount of your offense. Additionally, personnel groups help the offense maintain unpredictability.

In this system, personnel groups are referenced by a two-digit number. The first is the number of running backs. The second is the number of tight ends. The number of wide receivers is by definition the difference between the number of skill players (five) and the total number of running backs and tight ends. For ease of play-calling, each personnel group is designated by a name. **Falcon** and **Tiger** are the base single-back formations. **Eagle** is the base two-back formation:

##	RB	TE	WR	Name	Formations
00	0	0	5	Cheetah	Spread
10	1	0	4	Lion	Trips Flex / Bunch Flex / Quads
11	1	1	3	Tiger	Trips / Bunch / Wing Slot / Wing Twins / Deuce Flex / Doubles (p) / Wild
12	1	2	2	Falcon	Ace / Deuce / Double Slot (p) / Double Wing (p) / Doubles (r)
13	1	3	1	Hawk	Double Wing (r) / Wing Ace
20	2	0	3	Zebra	Twins Flex
21	2	1	2	Eagle	Pro / Twins
22	2	2	1	Rhino	Wing (p) / Wing Flex / Flanker
23	2	3	0	Bear	Wing (r)

The personnel group name should be called by the offensive coordinator prior to calling the play as a method of getting the correct personnel into the huddle. Another way of displaying this chart would be to list each formation, followed by the appropriate personnel group, as a means of easily determining which group to send in for the appropriate formation and play:

Formation	Group	Formation	Group	Formation	Group
Spread	Cheetah	Deuce Flex	Tiger	Wing Ace	Hawk
Trips Flex	Lion	Doubles (p) / Wild	Tiger	Twins Flex	Zebra
Bunch Flex	Lion	Ace	Falcon	Pro	Eagle
Quads	Lion	Deuce	Falcon	Twins	Eagle
Trips	Tiger	Double Slot (p)	Falcon	Wing (p)	Rhino
Bunch	Tiger	Double Wing (p)	Falcon	Wing Flex	Rhino
Wing Slot	Tiger	Doubles (r)	Falcon	Flanker	Rhino
Wing Twins	Tiger	Double Wing (r)	Hawk	Wing (r)	Bear

For accountability purposes, the play-calling sheet should include a small matrix which designates which personnel are assigned to each group:

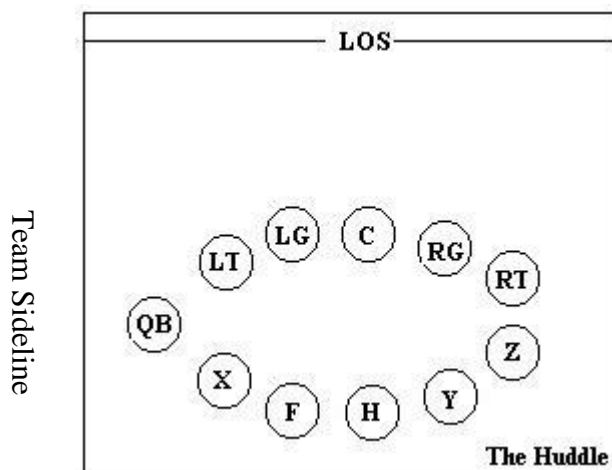
Name	F	H	X	Y	Z
Cheetah					
Lion					
Tiger					
<i>Falcon</i>					
Hawk					
Zebra					
<i>Eagle</i>					
Rhino					
Bear					

THE HUDDLE

The huddle should be called as soon as possible after the whistle by the Center so that his feet are approximately seven yards off the Line of Scrimmage (LOS). The position of the players should be as shown in the diagram. The specific location of each player is important and the significance of this should not be underestimated; these positions are essential to ensure that, not only the offense has eleven players on the field, but the *correct* eleven players. While this might seem elementary, the use of personnel groups requires this practice.

- The huddle is oval-shaped with the QB's back toward his team's sideline. The players should line up as quickly as possible and in position to hear and see the QB.
- The QB has complete control of the huddle. With exception to the player bringing in the play, the QB should be the only player doing the talking.
- The QB will call the play, not limited to, but including: Shifts/Motion, Formation and Strength, Play, and any additional modifiers (the next section will elaborate...)
- Any player who does not hear or does not understand the play should call "Check" so that the play can be repeated

After repeating the play to his team, the Quarterback should say "Ready?" and the team should respond with a simultaneous "Break!" and hand-clap. Players should then run up to the LOS, not walk. Furthermore, the TE(s) should move into a two-point stance until the Quarterback begins his cadence (the importance of which will be described later).



CALLING THE PLAY

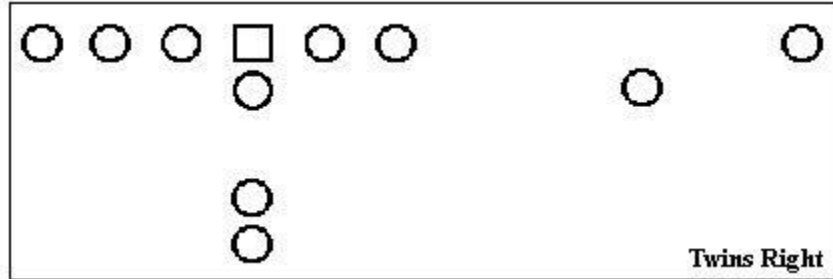
Once the huddle has been called by the Center and the players have assembled, only two people should be speaking: first, the player bringing the play to the Quarterback; and second, the Quarterback repeating the play. If the plays are being called in from the sideline through the use of signals or other means, only the Quarterback should be speaking. If necessary, the play should be repeated (the "Check" call).

Play Terminology. For the most part (with some exceptions), calling the play gives the offense the necessary information to carry out the play, without having to memorize an individual assignment for each play. To understand this, we will look at the basic play calling formula for runs and passes: we'll look at three plays, each at a higher learning level and examine each part to discover the necessary assignments.

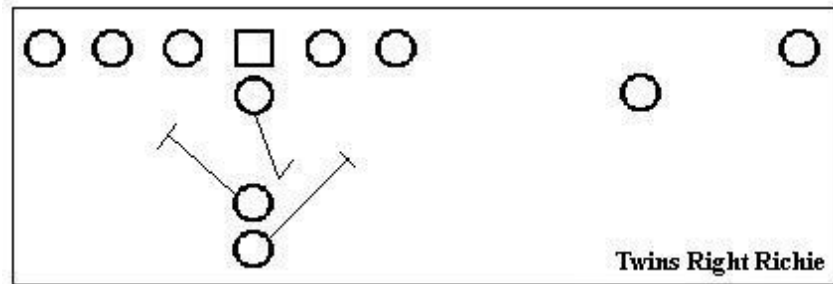
	Shift/Motion	Formation	Strength	Backfield	Modifiers	Drop / Protection	Pass Routes / Hole #	Description / Modifier / Tag
Primary		Twins	Right			Richie	83	
Intermediate	Zip to	Pro	Right	Strong			18	Read-Switch
Advanced	Ace to	Doubles	Right	Strong	Zap 8	Richie	21	Dupe
		Trips	Right			Richie	798	F Swing
		Doubles	Right			Richie	21-83	
		Pro	Right				48	Pitch

PRIMARY: TWINS RIGHT RICHIE 83

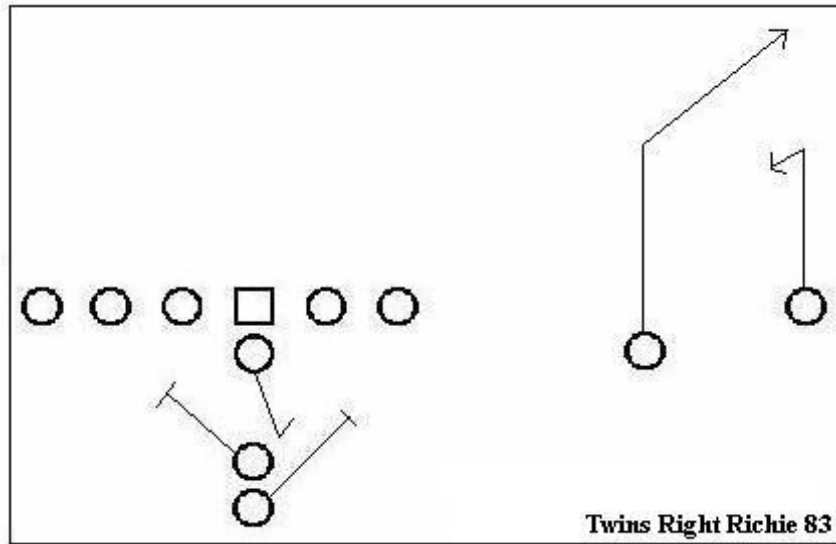
"**Twins Right**" - the first word represents the formation and the second word the strength. Thus, the first two words would give us the look below:



"**Richie**" - a key word that has significance for two specific aspects of the play: first, it signifies to the Quarterback that this play requires a three step drop to the right; second, it signifies a split-back protection scheme with the F-back blocking on the offense and the H-back blocking on the playside:

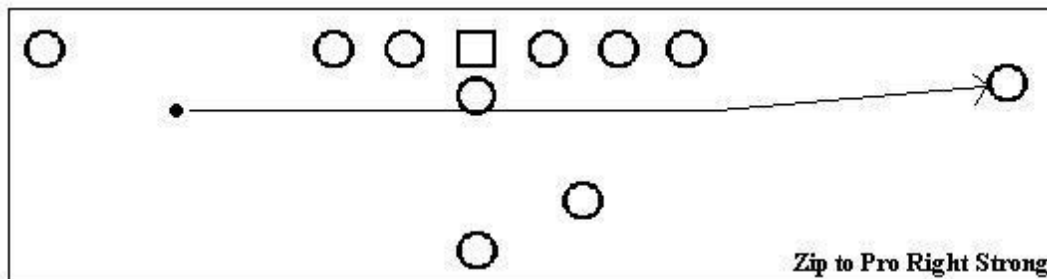


"**83**" - this signifies the routes for the receivers. The routes always begin inside-out on the play side. Thus, the Z runs a "8" ("Flag") and the X runs a "3" ("Hitch"). Our final play, thus, looks as follows:

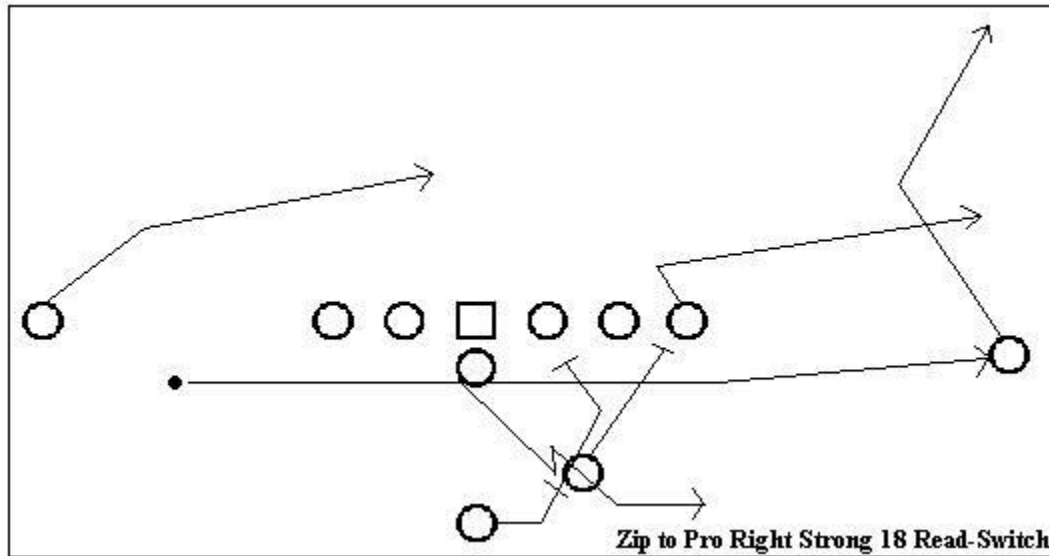


INTERMEDIATE: ZIP TO PRO RIGHT STRONG 18 READ-SWITCH

"**Zip to Pro Right**" - a "motion-to" term for the Z; in other words, the Z should end up in the Pro Right formation. His starting location is often the opposite side. "**Strong**" places the fullback between the outside guard-tackle gap:

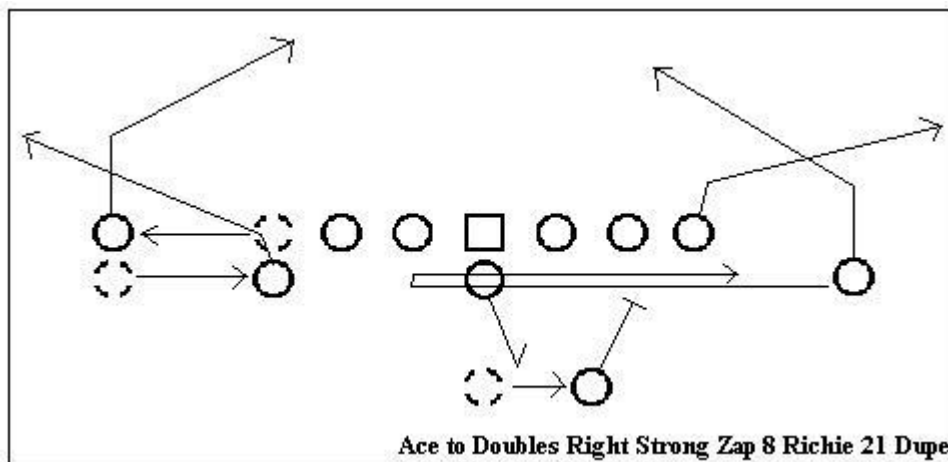


"**18 Read-Switch**" - 18 would normally be a running play, in this case, "**Read**" identifies this as a play-action pass; the play mimics the 16 off-tackle; the "8" gives the option for the QB to keep the ball in the rollout. The "**Switch**" reverses the Y and Z routes. Our final play, thus, looks as follows:



ADVANCED: ACE TO DOUBLES RIGHT STRONG ZAP 8 RICHIE 21 DUPE

The last, and advanced example, is rather cumbersome but it illustrates virtually every part of the play-calling system. Preferably, very few (if any) plays should require this much information. But for purposes of illustration, here is **Ace to Doubles Right Strong Zap 8 Richie 21 Dupe**:



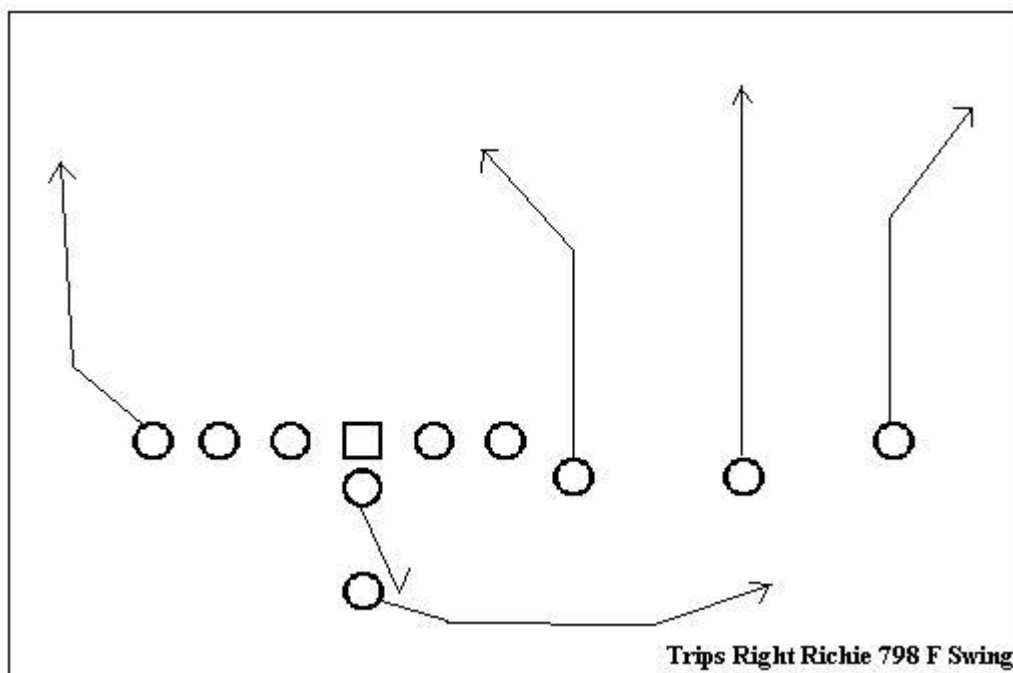
"**Ace to Doubles Right Strong**" indicates the initial formation (Ace Right), the formation to shift to (Doubles Right), and the associated backfield modifier (Strong). "**Zap 8**" is Z motion to the offside guard, reversing and returning to the 8 hole. "**Richie**" is a three step drop with the back blocking on the play side. "**21**" identifies receiver routes; the Y runs a "2" or "quick out" while the Z runs a "1" or "slant". Finally, the modifier "**Dupe**" signifies to the offside receivers to duplicate the route patterns run on the playside.

Calling the Play. Probably the most common way to call a play is for the Offensive Coordinator (or whomever calls the plays) to send in the play with a substitute. This play is then given to the Quarterback, who tells the players in the huddle. I don't have any particular problem with this format, per se. While this terminology system is designed to tell players what to do, it does have the weakness of being a potentially lengthy process when using motion and/or shifts. My solution in some cases would be to use a simple letter-number combination passed from the play caller to the Quarterback. The Quarterback could use a wrist band which tells him the play. This might sound like an unnecessary complication but *it should be understood that this "code" is not meant to be "learned" or "memorized" by any of the players, including the Quarterback.* The Quarterback simply transfers the letter (formation) and number (play) from the wrist sheet into the correct play. This system gives flexibility by effectively allowing two methods of play-calling while avoiding a potentially difficult memorization process.

Breaking the Huddle. After repeating the play to his team, the Quarterback should say "Ready?" and the team should respond with a simultaneous "Break!" and hand-clap. Players should then run up to the LOS, not walk. Furthermore, the TE(s) should move into a two-point stance until the Quarterback begins his cadence (the importance of which will be described later).

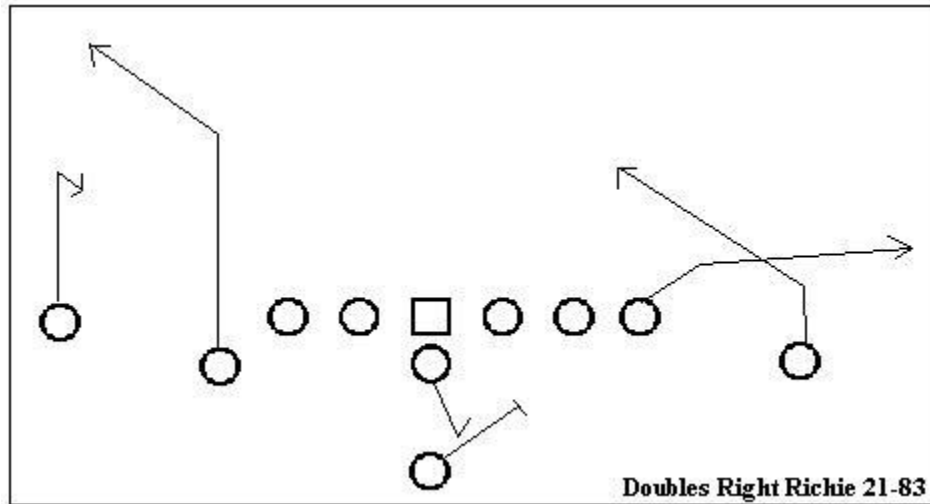
TRIPS RIGHT RICHIE 798 F SWING

Trips Right Richie 798 F Swing. This play demonstrates the use of the "tag" concept. By adding "F Swing" to the end of the called play, the F back switches from a blocking assignment to a swing pattern:



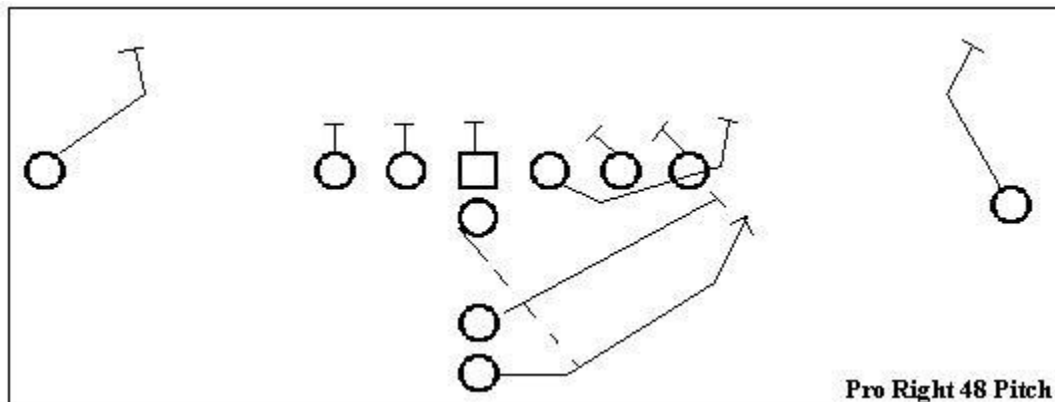
DOUBLES RIGHT RICHIE 21-83

Doubles Right Richie 21-83. This play demonstrates the numbered route calling concept, specifically how it applies to both playside and offside routes. In the play below, the playside receivers (Y and Z) are running the 2 and 1 routes, respectively (inside out); the offside receivers (H and X) are running the 8 and 3 routes, respectively (again, inside out):



PRO RIGHT 48 PITCH

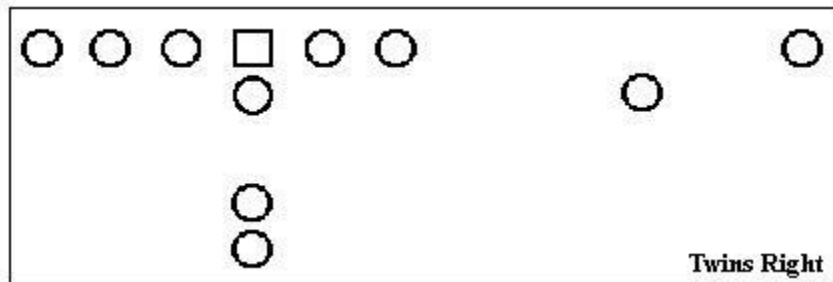
Pro Right 48 Pitch. This play demonstrates the basic run play. "4" designates the 40 series of blocking rules; "8" designates the hole where the play is designed to go. "Pitch" is a simple descriptive tag which identifies the 40 series:



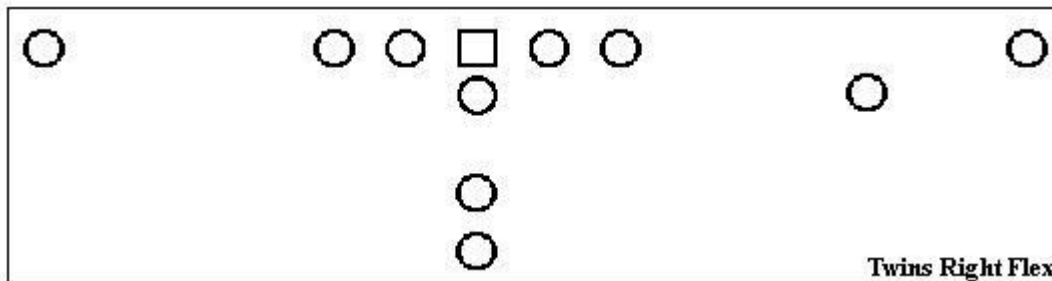
FORMATIONS

The formation is simply how a team lines up to execute a play. The formation notation in its entirety contains several parts (some of which are optional):

- **Motions and Shifts** (to be discussed in a later section)
- **Name:** the basic set for the X, Y and Z receivers (as well as the H and F in some circumstances)
- **Strength:** obviously, designates the strength of the formation; in some balanced formations, strength may not be apparent but will be called to facilitate the proper personnel alignment
- **Modifiers:**
 - a formation followed by "Tight" aligns the inside slot receiver next to the tackle
 - a formation followed by "Flex" changes the tight end on the weakside of the formation into a split end:

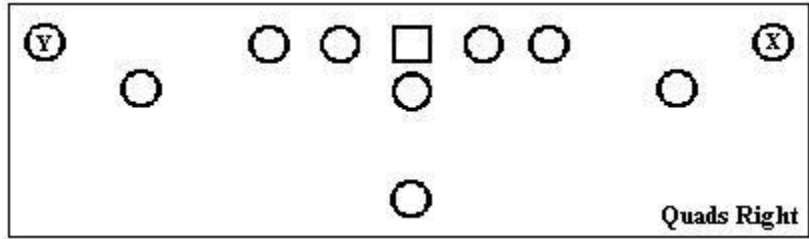


By adding "Flex" to the basic "Twins Right" formation...

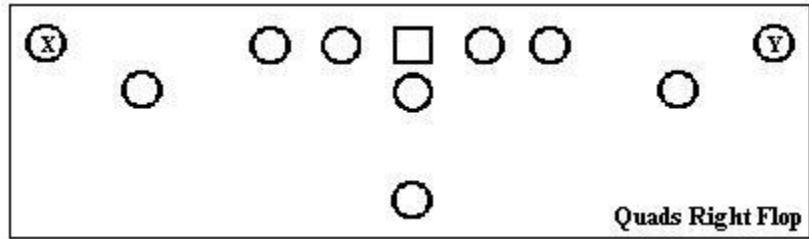


the "Flex" modifier changes the Y to a split rather than a tight position.

- "Flip" switches the **inside** receivers; "Flop" switches the **outside** receivers:

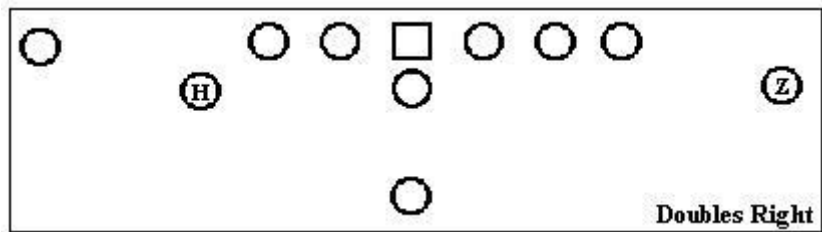


By adding "Flop" to the normal "Quads Right" formation...

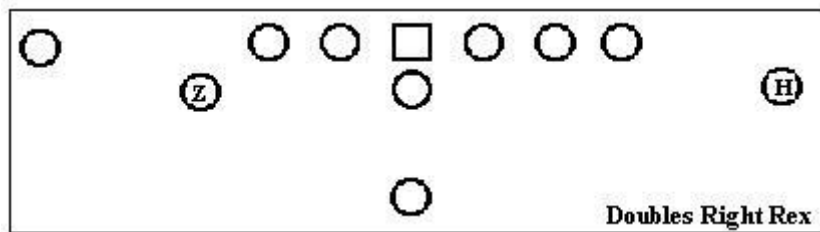


...the X and Y exchange positions.

- In a doubles/quads-type set, "Lex" switches the left receivers; "Rex" switches the right receivers:



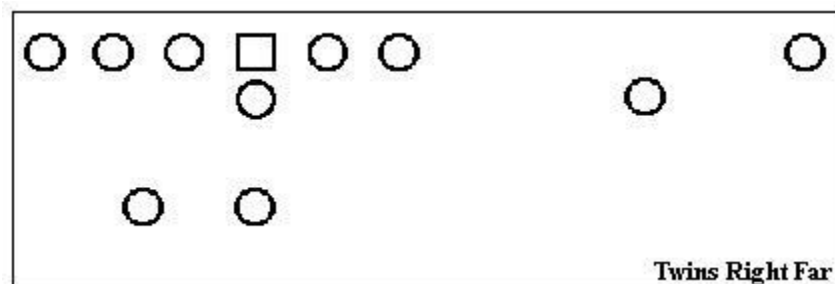
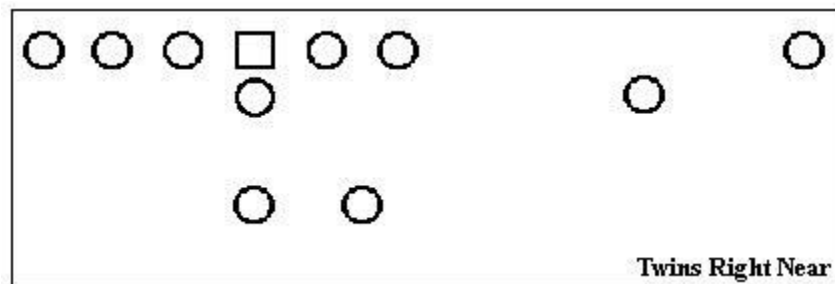
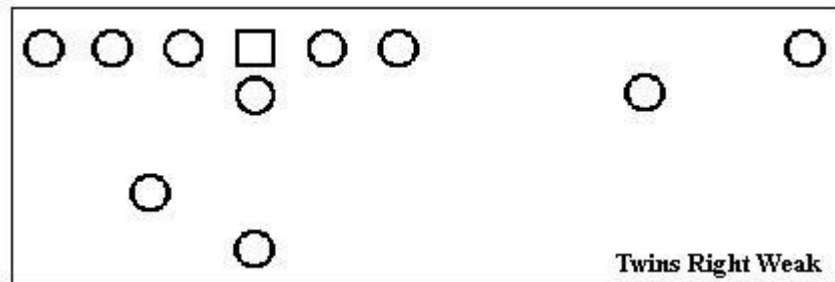
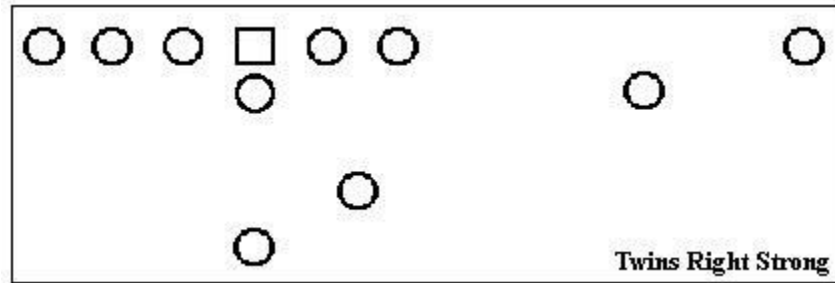
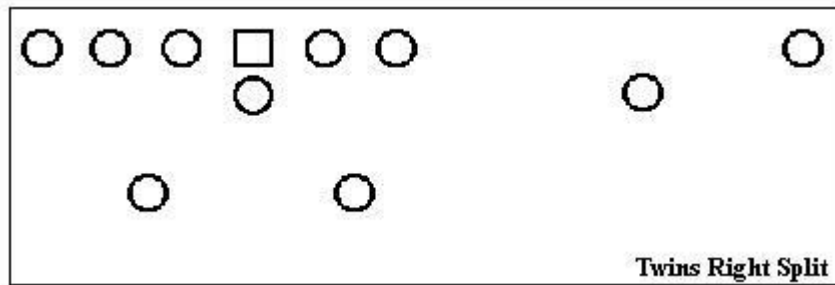
By adding "Rex" to the basic "Doubles Right" formation...



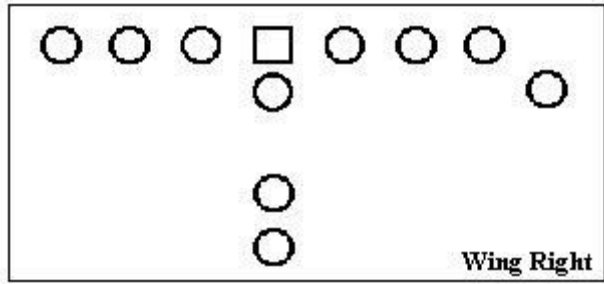
...the Z and H exchange positions.

- **Shotgun:** the name of the formation is simply followed by "Gun"
- **Backfield:** modifier terms to the basic I formation; i.e., split, strong, weak, near, far

- Again, beginning with the basic "Twins Right" formation, we can use the five backfield modifiers:

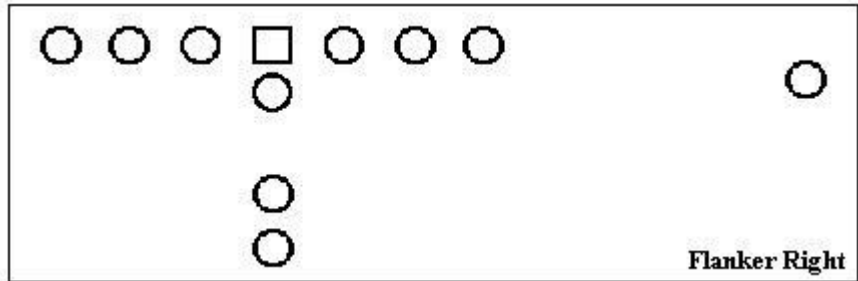


TWO-BACK SETS



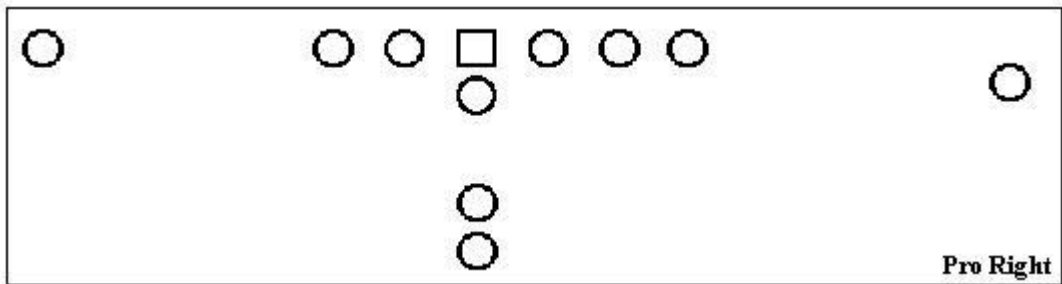
Formation variations: Flex

Backfield variations: Split/Strong/Weak/Near/Far



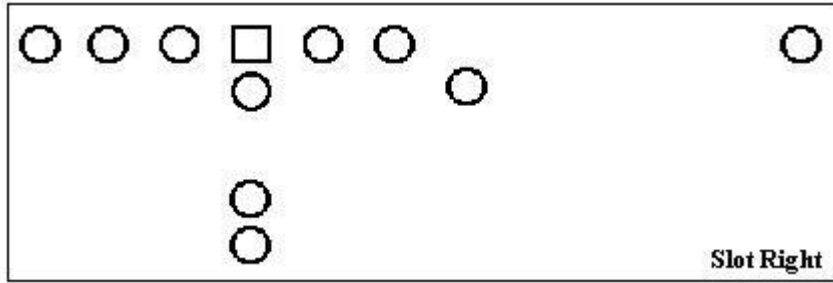
Formation variations: None

Backfield variations: Split/Strong/Weak/Near/Far



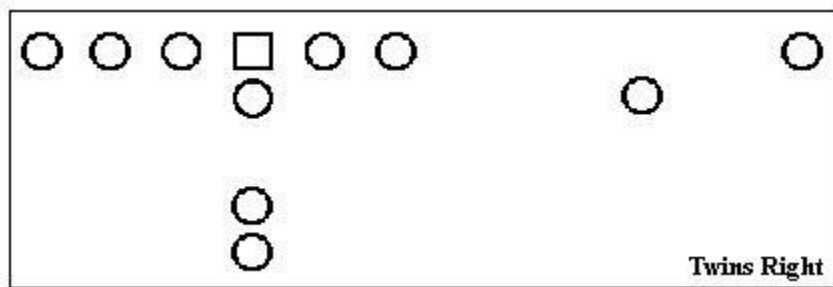
Formation variations: None

Backfield variations: Split/Strong/Weak/Near/Far



Formation variations: None

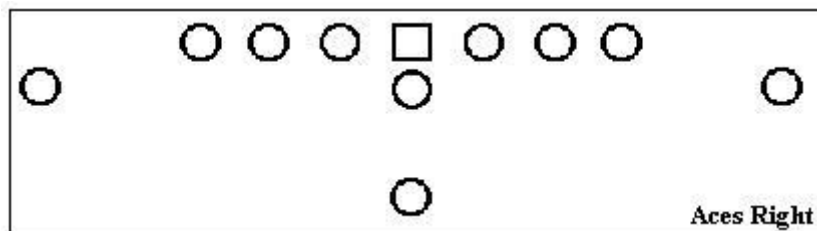
Backfield variations: Split/Strong/Weak/Near/Far



Formation variations: Flex

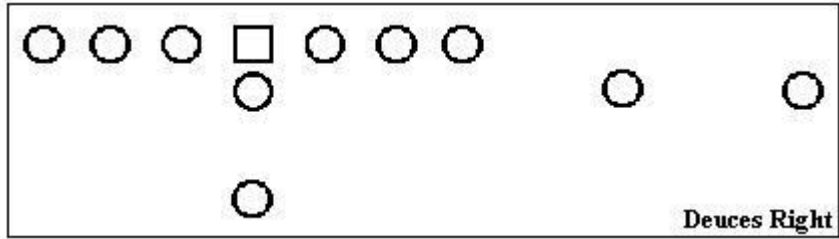
Backfield variations: Split/Strong/Weak/Near/Far

SINGLE-BACK SETS



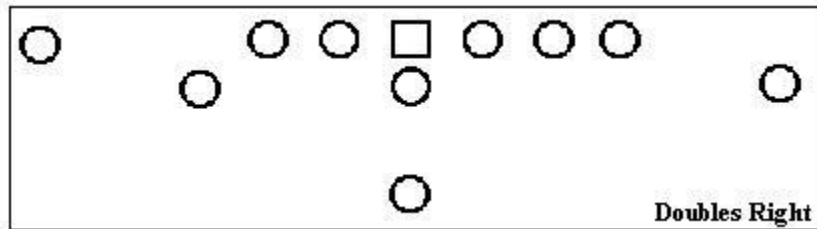
Formation variations: None

Backfield variations: Strong/Weak



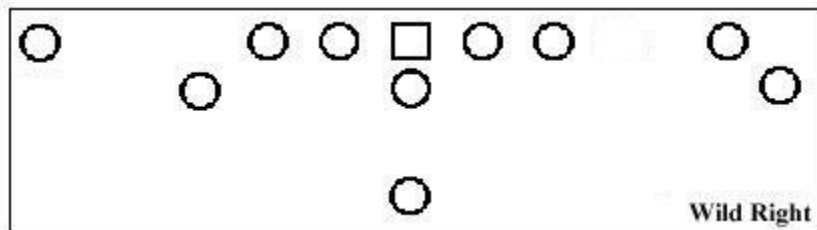
Formation variations: Tight/Flex

Backfield variations: Strong/Weak



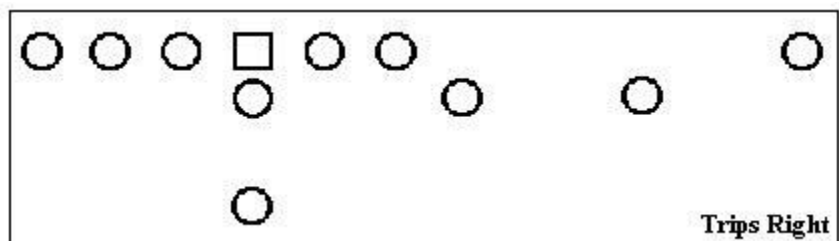
Formation variations: Tight/Flex

Backfield variations: Strong/Weak



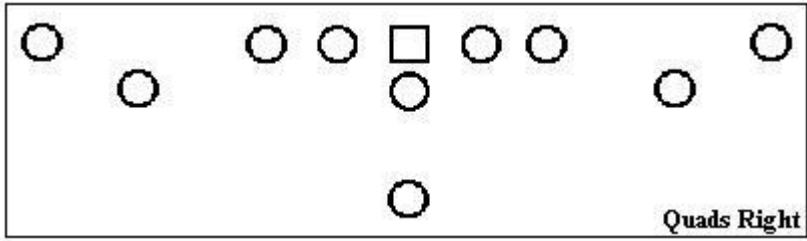
Formation variations: Tight

Backfield variations: Strong/Weak



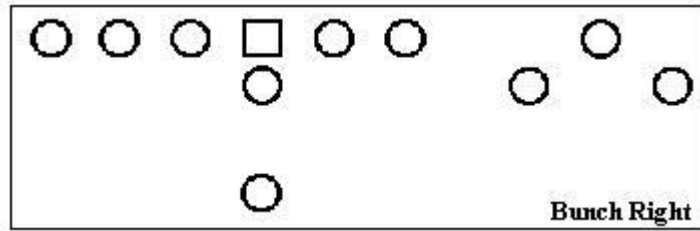
Formation variations: Tight/Flex

Backfield variations: Strong/Weak



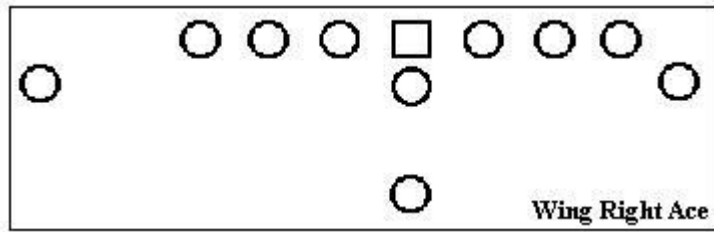
Formation variations: None

Backfield variations: Strong/Weak



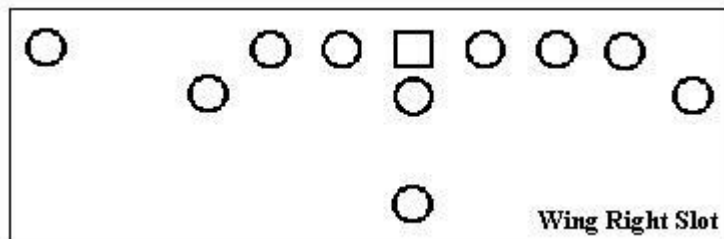
Formation variations: Tight/Flex

Backfield variations: Strong/Weak



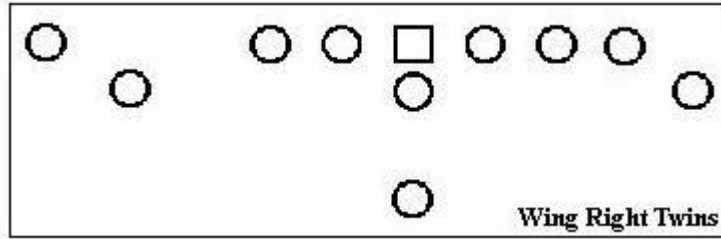
Formation variations: None

Backfield variations: Strong/Weak



Formation variations: None

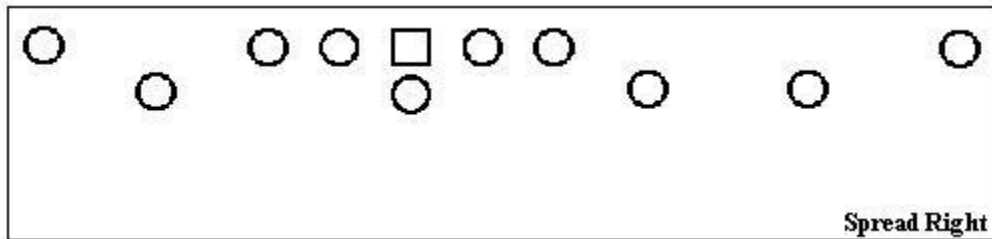
Backfield variations: Strong/Weak



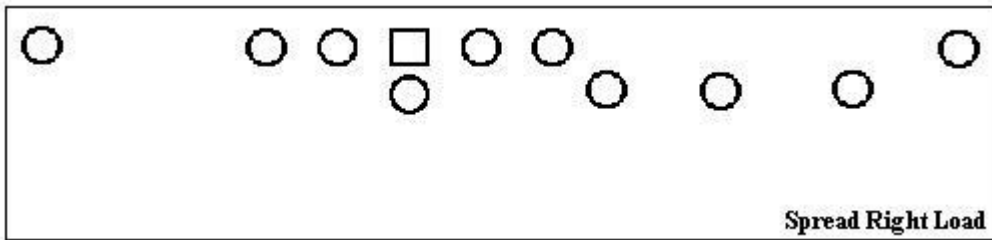
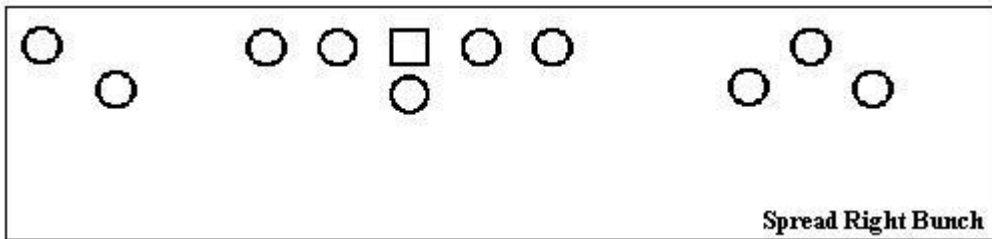
Formation variations: None

Backfield variations: Strong/Weak

EMPTY SET



Formation variations:



CADENCE AND AUDIBLES

Once the Quarterback walks up behind the Center, he is now the nerve center of the offense. He must scan the defense for information about coverage, potential blitzes, and any other important information. Some of these areas will be discussed later in their own sections, because they are worthy of individual attention. But for now, we will concentrate on the Cadence and Audibles.

Cadence

1. He begins his cadence with the word "Move!" upon which several things may happen. In the case of a shift, the players will move to their new locations. If there is no shift, the TE(s) will assume a three-point stance, if applicable.

2. Next, the Quarterback will call a color and number, once to the left side of the formation and once to the right. In most circumstances, this means absolutely nothing. For example, he might call "Blue 16, Blue 16!" However, if the Quarterback calls the predesignated hot color (i.e., "Red!"), one of two things happen: the numbers following the color specify one of several audibles; or the Quarterback can simply call a play out loud.

3. Finally, the Quarterback calls "Set!" followed by "Hut!" Running plays go on different snap counts as determined by their series:

10s - on three ("Hut-hut, hut!")

20s - on two ("Hut, hut!")

30s - on one ("Hut!")

40s - on two

50s - on one

and so on...odd series are on one, even series on two, with exception to the teens (on three). Furthermore, the play-action passes off of these runs also go on the same snap count. All other passing plays go on one.

Here are some examples, followed by the appropriate reaction ("red" being the hot color). All of these plays should be assumed to be passing plays, going on one:

"Move, Blue 24, Blue 24, Set, Hut!" - run the play called in the huddle

"Move, Blue 16, Blue 16, Check, Check, Red 11, Red 11, Set, Hut!" - run audible "11"

"Move, Blue 32, Blue 32, Check, Check, Green 18, Green 18, Set, Hut!" - run the play called in the huddle

"Move, Black 12, Black 12, Check, Check, Rip 919, Rip 919, Set, Hut!" - run Rip 919

Audibles

(coming soon)

MOTIONS AND SHIFTS

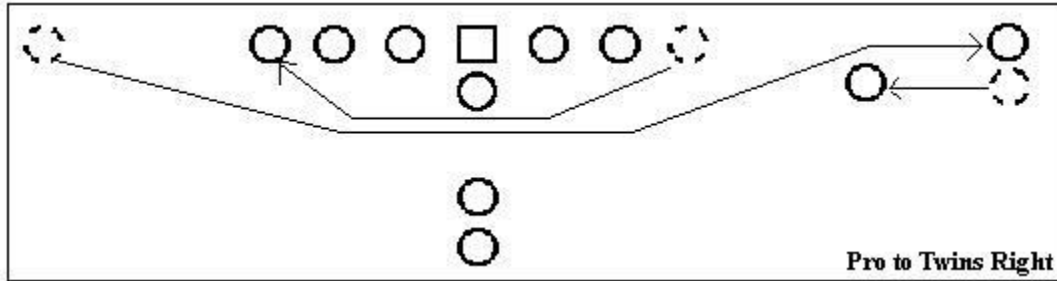
To many coaches, motion and especially shifting may seem to be an unnecessary complication to an offense. Truth be told, time spent on learning various motions and shifts is time not spent on executing plays. However, when a series of ideas such as motions and shifts have the potential to contribute so heavily to an offensive philosophy, I think it's extremely important to allow the time to learn those ideas. Keeping in mind our themes of *confusion*, *exploitation* and *domination*, there are a whole host of reasons to include motion and shifting in your overall offensive game plan:

- Create personnel mismatches (exploitation)
- Force the defense into a certain type of coverage (exploitation)
- Force the defense to tip its hand (exploitation)
- Placing your offensive personnel into the best position to do their job (exploitation/domination)
- Confuse defensive responsibilities and create coverage problems (confusion)
- Disguise the play by breaking a formation tendency; in other words, giving the same play a new concept or look, which in turn gives the defense less time to adjust and react (confusion/exploitation)
- Gain an additional blocker at the point of attack (domination)
- Change the strength of the formation (domination)

In addition to the reasons stated above, shifting also gives the offense the capability of changing the strength of the formation.

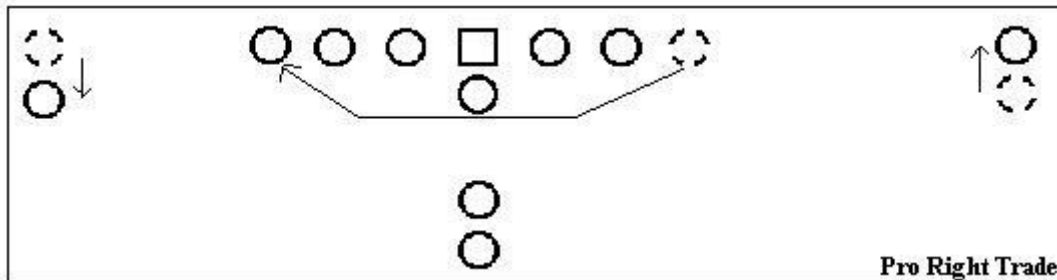
Terminology. Motion and shifting terminology, when combined with the standard lexicon of this offense, has the potential to become a cumbersome process. The terminology that I've developed for shifting and motion uses, for the most part, the terminology already in place for formationing. Obviously, a few specific terms are necessary to learn. But on the whole, it shouldn't be too difficult to learn.

Shifting. If shifting is going to occur, it will occur before motion so let's tackle that subject first. A shift is essentially moving a series of players at the same time in order to change a formation or the look or strength of that formation, for the specific reasons stated above. The primary shift call for this system will be to move from one formation to another. Furthermore, this call will be appended to the beginning of the play. Thus, a shift might be called as such: **Pro to Twins Right**; wherein, the players would start in the Pro formation and upon the QB's "Move" call, shift to Twins Right:



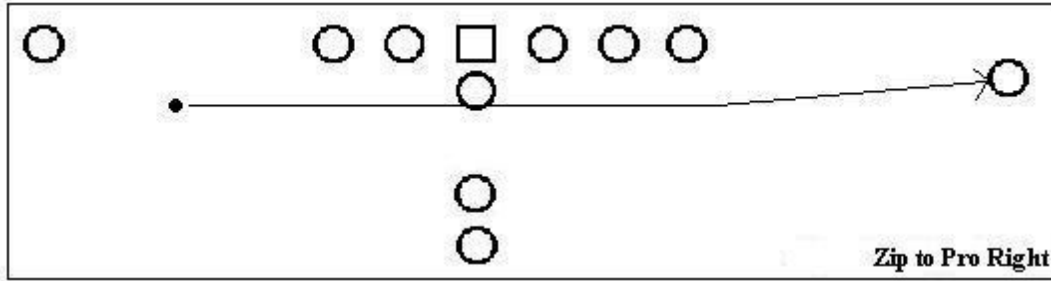
As you can see, the strength of this formation remains to the right, but a few important changes have occurred. In the Pro Right formation, the pass and run strength was to the right, with the Y and Z on the right and X alone on the weak side. Now with this shift, the pass strength is more magnified on the right, with both the X and Z on the strong side, while the run strength shifts to the weakside, where the Y is the extra blocker. The absence of a strength call following **Pro** signifies the same as the shift, therefore, right (otherwise, the call would be **Pro Left to Twins Right**).

The secondary shift is a **Trade** call which allows the strength of the formation to be changed. Trade refers to the position of the Y, and simply requires him to change from the side he started on to the opposite side. All other changes are uncalled, and therefore required of the other players on the field. However, in practice it is very simple:



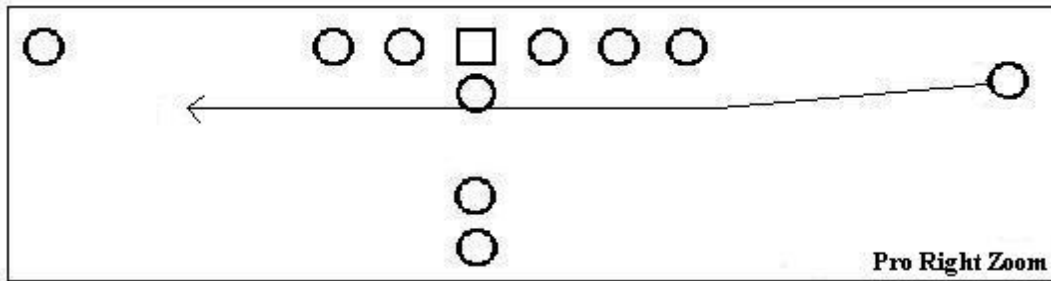
Trade tells the Y to shift from the right side to the left. Necessarily, the X and Z receivers must make adjustments: the weakside X now becomes the strongside Z and must take a step back off the line of scrimmage, and the strongside Z now becomes the weakside X and must step up onto the line of scrimmage.

Motion. Motion sends a single receiver moving to a different position in the formation, and most often still moving as the ball is snapped. These specific movements do require the knowledge of some specific terms which designates a) which receiver is motioning; and b) to where, or from where. Just like shifting, there are different types of motioning. The first is a "motion-to" term, which most often involves the Z receiver. The "motion-to" term is simply appended to the beginning of the play. For our example, we'll use **Zip to Pro Right** - a "motion-to" term for the Z; in other words, the Z should end up in the Pro Right formation. His starting location is often the opposite side.

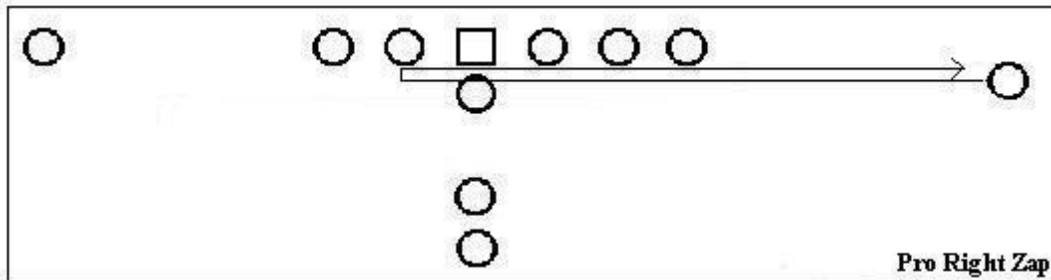


The second type of motion is a method of sending a player in motion from a specific formation; in other words, a "motion-from" term. The available players for this type of motion are the Z, F and H. The Z has some position-specific terms, which we'll cover first.

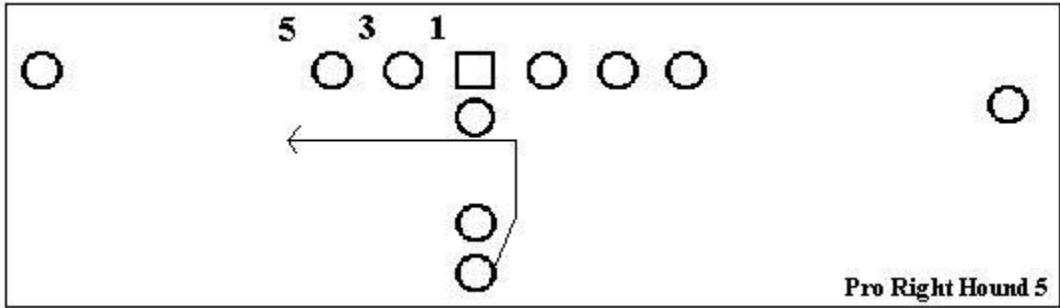
The first Z "motion-from" term is **Zoom**, which tells the Z to start in the called formation and motion across the formation, ending in the appropriate position on the opposite side of the formation:



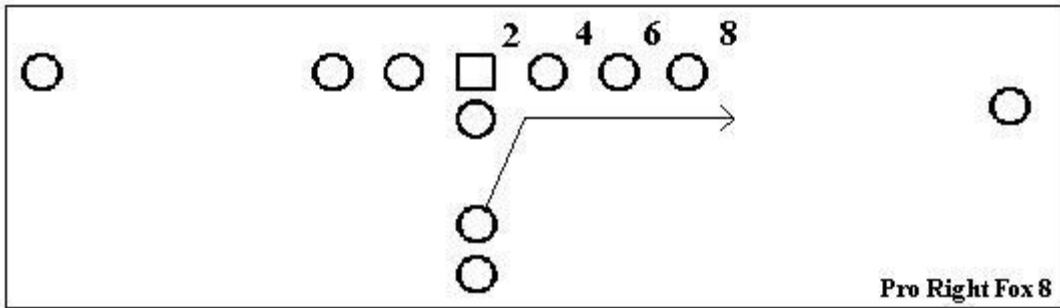
The second Z "motion-from" term is **Zap**, which tells the Z to start in the called formation, motion across the formation to the offside guard, then reverse and return to the original position:



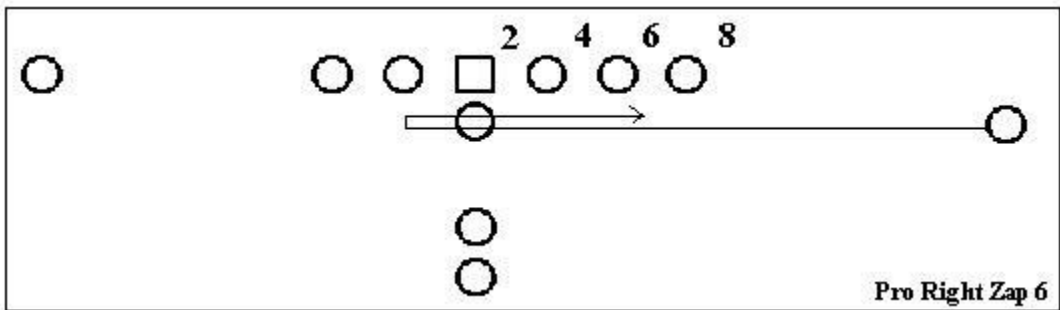
The third type of "motion-from" applies to all three positions: F (the "Fox"), H (the "Hound") and Z. This motion is called simply by using the appropriate letter followed by the hole location where the player should end up (See *Hole Numbering*). Three examples will demonstrate the use of this type of motion, one for each position. The first example of this type of motion is **Pro Right Hound 5**:



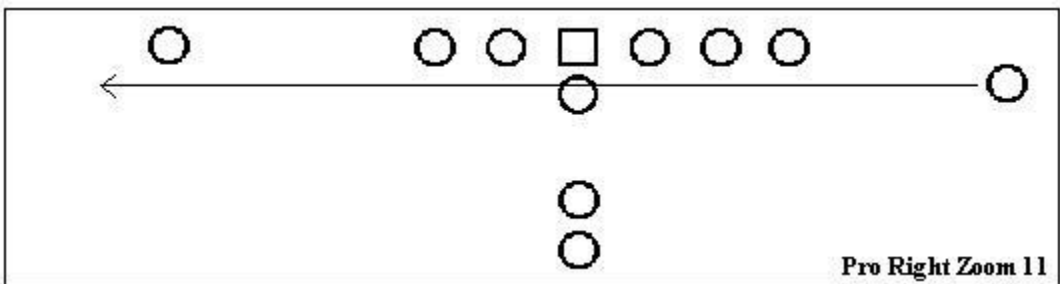
The second example is **Pro Right Fox 8**:



The third and fourth examples are a combination of **Zoom/Zap** terminology and the hole numbering terminology. **Pro Right Zap 6** sends the Z in motion to the offside guard and then back to the 8 hole:



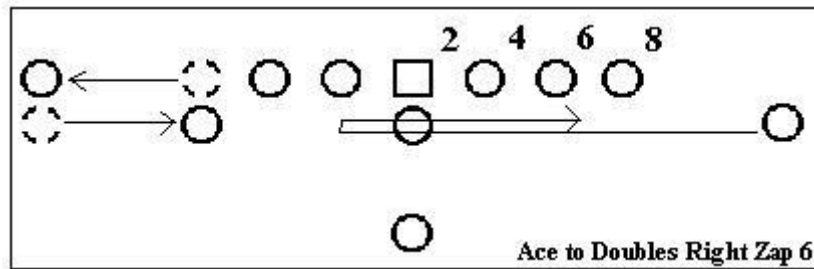
Pro Right Zoom 11 sends the Z in motion across the formation to the "imaginary" 11 hole, which is outside the furthest receiver:



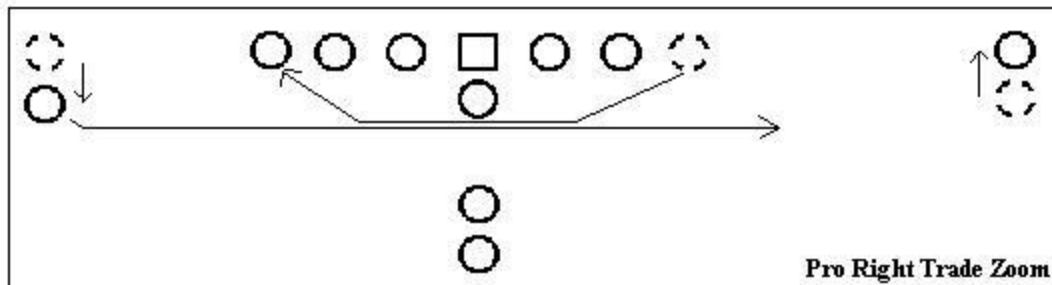
A fifth type of motion takes place in several series of running plays from the single-back sets, where the H motions to block at the point of attack. This motion will be talked about in those specific series since it requires no specific motion terms that are covered here.

Motion and Shifts Together. The final concept in motions and shifts is combining the two together in one play. As previously mentioned, it can become a cumbersome process, but it doesn't have to be. It is the coach's responsibility to ensure motions and shifts are used for the appropriate reasons and not just for cosmetic purposes.

The first combination example is **Ace to Doubles Right Zap 6**. The starting formation is Aces Right, shifting to Doubles Right (the X "flex"es out to the split position while the H moves into the weak slot); the motion is Zap 6, which sends the Z in motion across the formation to the outside guard, then reverses and return to the 6 hole:



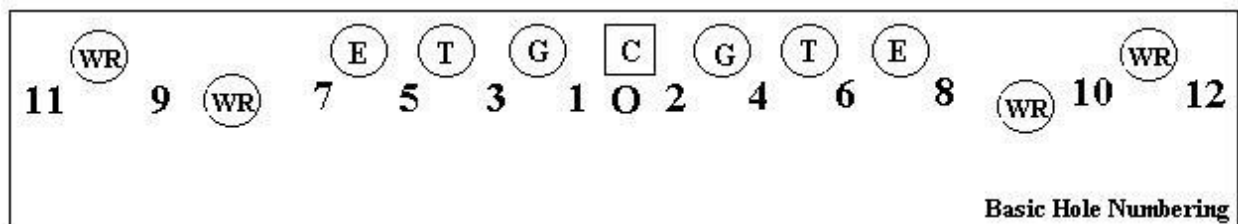
The second combination example is **Pro Right Trade Zoom**. The starting formation is Pro Right, shifting to Pro Left (the Trade call moves the Y to the left side; the X and Z make the necessary adjustments); the motion is zoom, which sends the Z (who started as the X) across the formation. Since there is no hole target, his end position should be somewhere between the slot and the X:



RUNNING THE BALL

HOLE NUMBERING

The hole numbering system is based upon the simple formula that even holes are to the right, while odd holes are to the left. The exception is the zero hole, which is direction over the center. Furthermore, it should be noted that the middle of the gap may not designate the "exact" location of the hole. For each play, the hole may shift slightly. For example, the hole in the "off-tackle" play is generally considered the outside leg of the playside tackle.



Holes 0-8 are the traditional running lanes for running plays.

There are an additional four holes, 9-12, which are "imaginary" holes which exist primarily for the purposes of formationing. These imaginary holes are defined as follows:

- 9: left side, between the tackle/end and the furthest receiver
- 10: right side, between the tackle/end and the furthest receiver
- 11: left side, outside the furthest receiver
- 12: right side, outside the furthest receiver

BASIC SERIES AND LINE BLOCKING

Running the ball in this offense is broken down into different series dependent on the backfield formation. The default backfield formation is the “I”, with “Strong” and “Weak” being modifications of the “I”. The general concept of the running game is based upon rule-blocking. Thus, the running game is designed with the following series and associated rules:

Series	10s		20s	30s	40s	50s	60s		70s
Name	Slam	Off Tackle	Option	Trap / Counter	Pitch	Scissors Trap	Drive	Drive Reverse	Dive
Position				Trap / Drive Trap					
Center	On, S		R, D, B	On, S	R, D, B	On, S	R, D, B	On, S	R, D, B
On. G	S, D, B		R, D, B	Down	PLAE	Down	NMLOSI	S, D, B	R, D, B
On. T	B	S, D, B	R, D, S	B	Down	B	NMLOSI	S, D, B	R, D, B
On. E	On, Out	Down	Down	On, Over	Down	On, Over	NMLOSI	Down	R, D, B
Off. G	PLTFK		R, D, B	PTFMOOH	R, D, B	On, Seal	R, D, B	PK	R, D, B
Off. T	Fill		R, D, B	Fill	R, D, B	PTFMOOH	R, D, B	PLUIGB	R, D, B
Off. E	Fill	Fill, CF	R, D, B	Fill, CF	R, D, B	Fill, CF	R, D, B, CF	R, D, B, CF	R, D, B

B=Backer, **CF**=Center Field, **D**=Drive, **NMLOSI**=Nearest Man at LOS (Inside), **PLAE**=Pull & Lead Around End, **PLTFK**=Pull & Lead Through FB’s Kickout, **PLUIGB**=Pull & Lead Up Inside Guard’s Block, **PTFMOOH**=Pull & Trap First Man On/Outside Hole, **S**=Seal

The blocking rules refer to one of three things: 1) the type of block (Ram, Drive, Seal); 2) the location of the defender to block (On, Over, Outside); or 3) the direction of the block (Pull, Down).

Backer: The nearest linebacker is the blocker’s main objective. The block should isolate the linebacker to create daylight for the running back.

Center Field: The blocker’s main objective is to head in the traditional location where safeties play to execute a download block.

Down: A location block where the blocker’s target is the nearest defensive player inside of him (on or off the LOS).

Drive: The blocker fires out low and hard on the defender hitting him squarely between the numbers, pumping the legs vigorously and driving the defender from a specified area.

Fill: A fill block is designed to fill the void left by a pulling lineman.

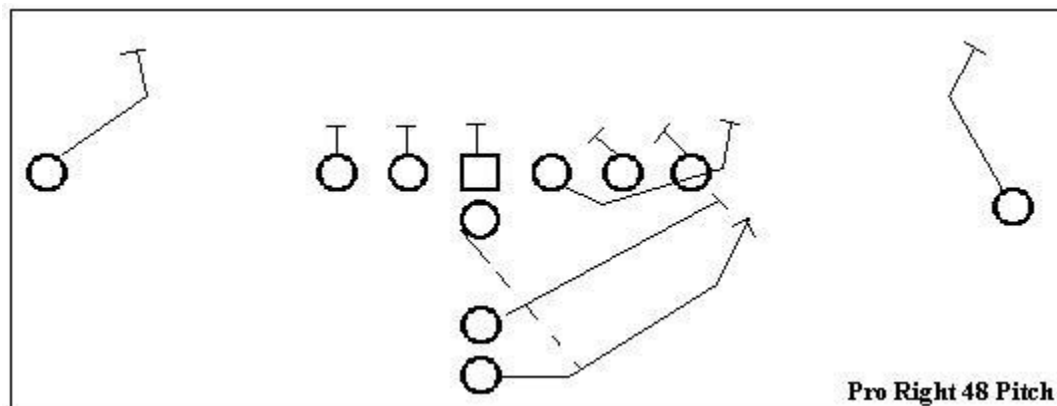
On, Out, Over: The blocker’s target is the defender lined up *on* him, *outside* him, or *over* him (*on* is on the line of scrimmage, *over* is off the line of scrimmage).

NMLOSI: The blocker's target is the nearest man on the line of scrimmage, inside of his current position.

Pull: The pull brings an additional offensive lineman to the point of attack. He will either **Trap** (kickout) or **Lead** (through FB's kickout, up inside the guard's block, or around the end).

Seal: The blocker's main objective is to seal off defensive pursuit from one side of the line of scrimmage to the other.

The following play demonstrates the basic run blocking rules:



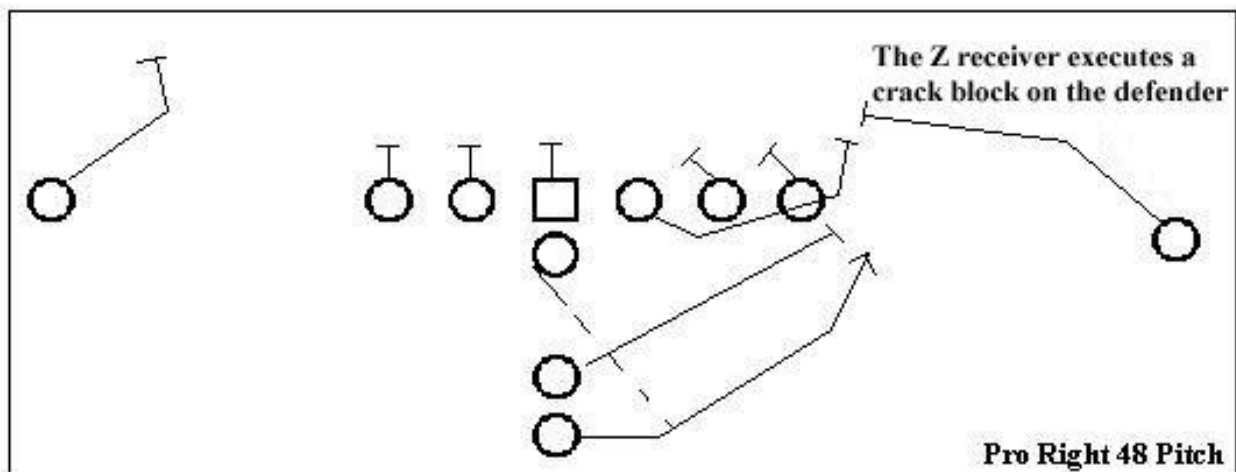
Pro Right designates the formation. **4** designates the 40 series of plays (*Pitch* rules) while **8** designates the hole location (outside the Onside End). The Center, Offside Guard, and Offside Tackle execute the Ram, Drive, Backer rules. The Onside Guard pulls and leads up around the Onside End. Finally, the Onside Tackle and Onside End execute Down blocks (essentially, an onside *Fill* block).

The progressive nature of the run blocking rules allows the offensive line to account for multiple defensive fronts. Rather than being assigned a generic rule or specific defensive individual, the rules create a check-off system that can automatically adapt to multiple fronts without learning new rules for each system.

RECEIVER BLOCKING

Effective blocking from a wideout is often the difference between a good and a great Wide Receiver. Most coaches agree that effective wide receiver blocking is a skill that can be taught to any receiver in a minimal amount of time. The receiver's knowledge of the running game combined with downfield blocking skills can mean the difference between a short gain and a touchdown.

Crack Block: An outside-in block that blindsides a linebacker or defensive end.



Cut Block: The receiver cuts the defender at the defender's thigh.

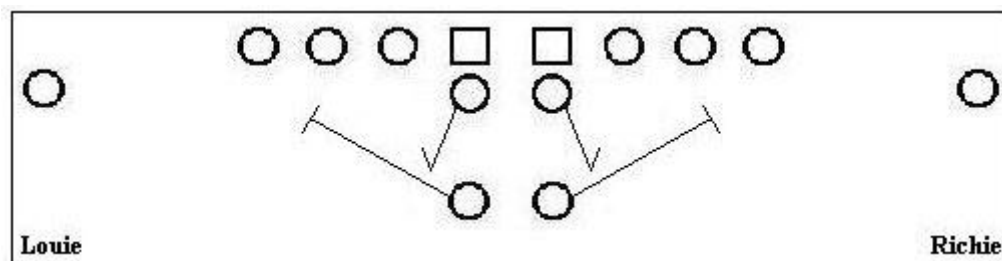
Run Off: Not really a block, per se. The receiver takes off down the field (usually against tight coverage or bump-and-run) and literally runs the defender out of the play.

Stalk Block: The stalk block is essentially a one-on-one drive block in the open field. The receiver drives toward the defensive back and then break down about three yards short of the defender. Hand placement is similar to offensive line pass blocking, but the receiver should not give up ground to the defender.

PASSING THE BALL

QUARTERBACK DROPS AND PASS PROTECTION

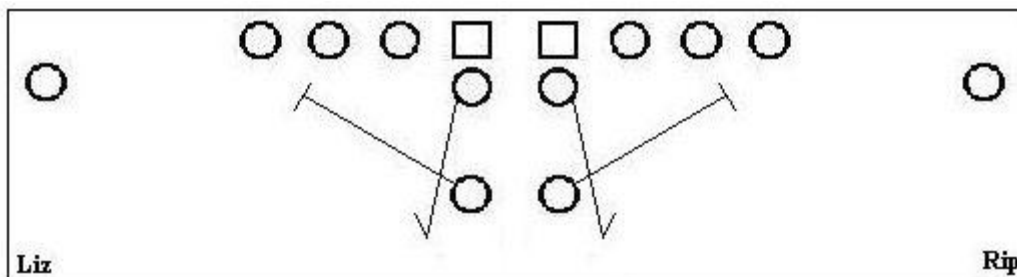
One of the key words in play-calling represents the Quarterback drop and accompanying pass protection. This is signified by a short word starting with 'R' or 'L', depending on the direction of the drop (the drops are essentially straight back, shaded to one side or the other). Each word represents a different drop and pass protection. If the F or H back is not given a specific route tag, they block as specified.



Louie: three step drop to the left; F blocks playside, H blocks offside

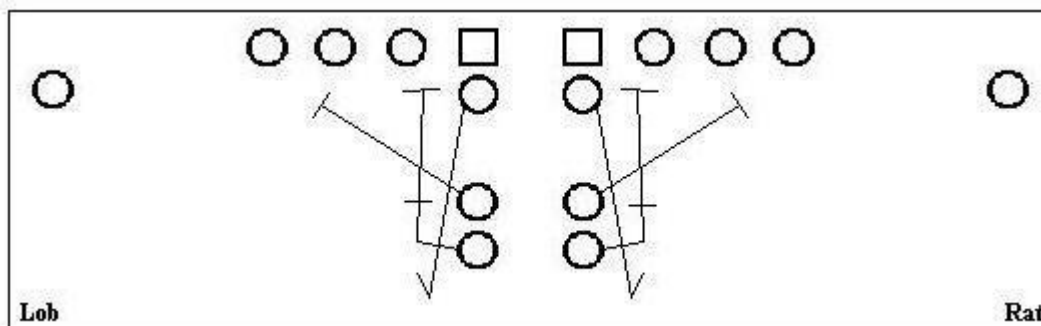
Richie: three step drop to the right; F blocks playside, H blocks offside

The first step is away from the line of scrimmage with the foot on the side of your passing hand. The second step is a crossover step to gain depth. The third step stops your momentum away from the line of scrimmage.

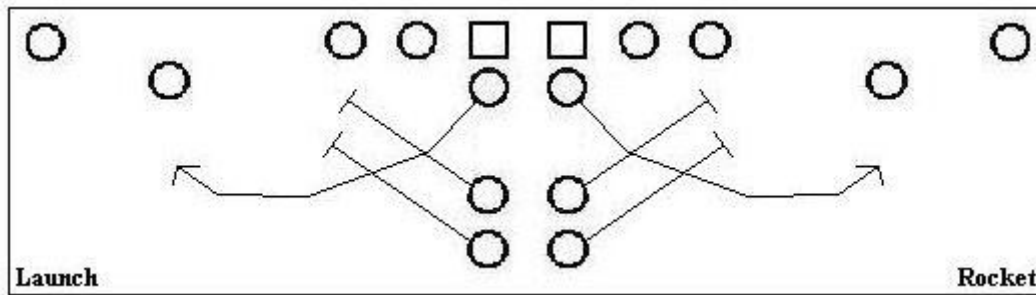


Liz: five step drop to the left; F blocks playside, H blocks offside

Rip: five step drop to the right; F blocks playside, H blocks offside

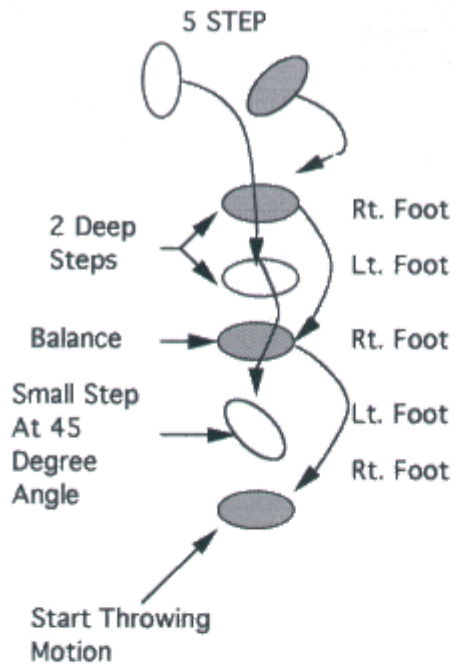


Lob: seven step drop to the left, fake to H; F blocks playside
Rat: seven step drop to the right, fake to H; F blocks playside



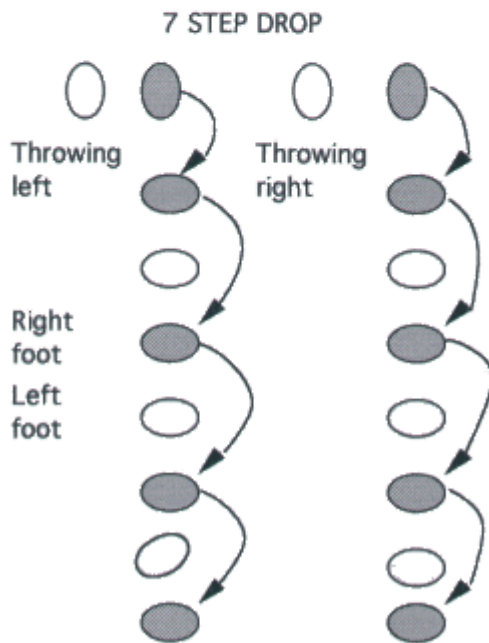
Launch: sprint-out to the left; F and H block playside
Rocket: sprint-out to the right; F and H block playside

The following diagram is courtesy of Jerry Campbell.



The 5 step drop drill starts out like 3 step drop. The first two steps are deep steps and the last three steps are short and choppy. It is important for the quarterback to start his throwing motion by the time he takes his fifth step. You want to use 5 step drop for timed routes which are quick intermediate passes. The drop should be very rhythmic and is controlled by body balance. The first two steps are deep steps. The quarterback's balance should be going away from the L.O.S. On the third step the QB should be balanced on his fourth and fifth steps he should control his hips.

When throwing to the right the QB's hips must stay closed. Again, the first two steps are deep and on the third step QB comes to balance. The fourth step is a smaller step and the foot should hit at a 45 degree angle away from the L.O.S. When the quarterback's fifth step hits the ground he should be in his throwing motion.



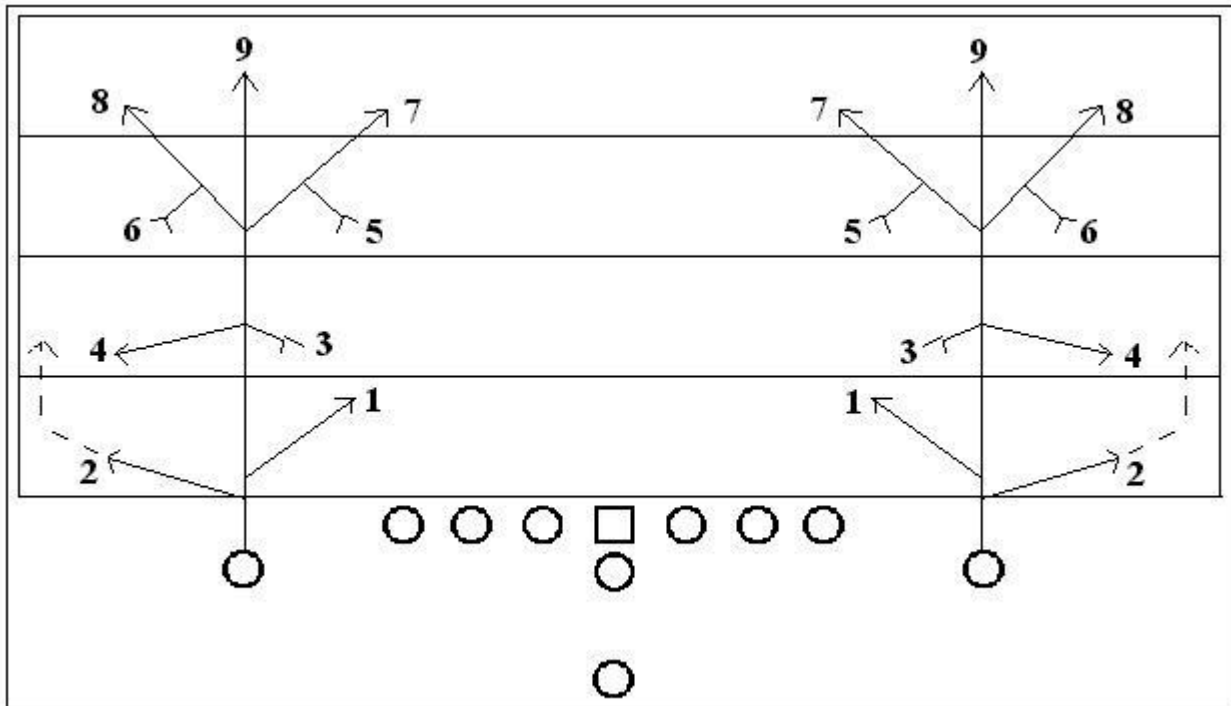
When throwing to the left, the first three steps are the same as throwing to the right except you need to keep a low profile with your left shoulder. The quarterback's fourth step should be a short one and should hit at a 45 degree angle toward the L.O.S. When the quarterback hits his fifth step he should have started his throwing motion.

The 7 step drop is used when you want to run routes that take time to maneuver defenses. The first 4 steps are long steps and the last 3 steps short and choppy. On the fifth step in 7 step drop should be the balance step. The sixth step is either turned at a 45 degree angle away or towards the L.O.S., depending which way the quarterback is throwing.

ROUTE TREES

The routes of this passing system are broken down into three different categories. The primary routes are based on a simple route tree of nine patterns that are numbered for purposes of play calling. By using numbers, a combination of patterns can be easily specified with a few simple numbers. A few key items of interest:

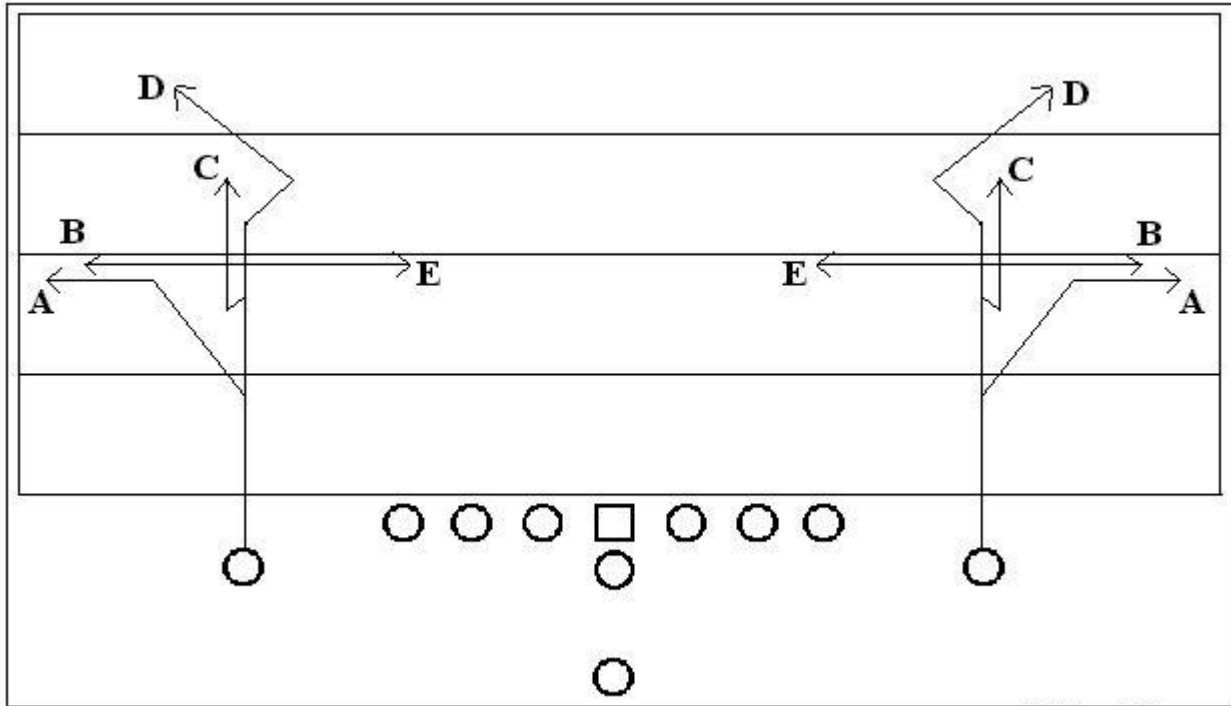
- All odd-numbered patterns break in, that is, toward the inside of the field (with the exception of "9")
- All even-numbered patterns break out, toward the sideline
- The higher the number, the deeper the pattern
- The depth of patterns may vary slightly based on a number of conditions, including depth and style of defense
- Cuts should be squared, not rounded
- The receivers' inside foot should always be forward; this helps with timing



Route Trees

1. **Slant** (2 yards), 2. **Quick Out** (1 yard), 3. **Hitch** (5-7 yards), 4. **Flat** (7-5 yards), 5. **Curl** (10-12 yards), 6. **Comeback** (10-12 yards), 7. **Post** (12 yards), 8. **Flag** (12 yards), 9. **Fly or Go**

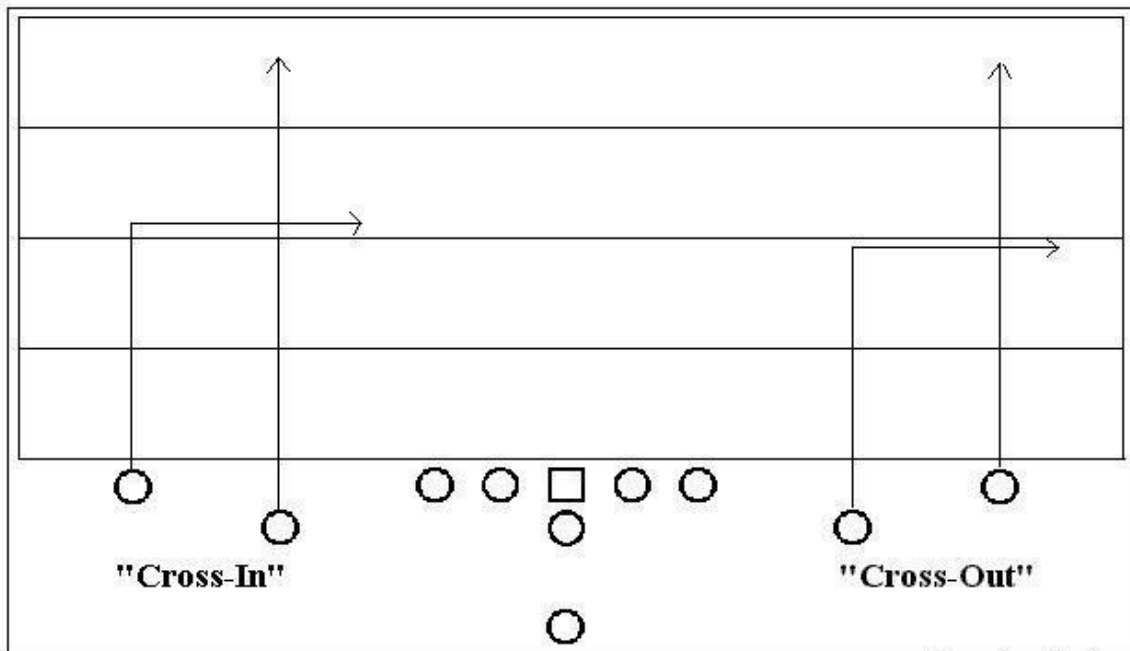
Other Patterns. The secondary routes are other key patterns used by this offense that do not fit into the conventional route tree. These routes are referred to by names and not numbers:



Additional Patterns

A. **Arrow** (5-10 yards), B. **Out** (10 yards), C. **Stop-n-Go** (8-10 yards), D. **Corner** (12-15 yards), E. **In** (10 yards). There are other routes which may be called, i.e., Fade, Cross, Under, etc.

Route Combinations. Finally, the combination of two or more routes, especially when they involve name patterns as opposed to number patterns, can often be quite cumbersome. Thus, some of the more frequent combinations are better served by names of their own:



Route Combinations

BASIC SERIES

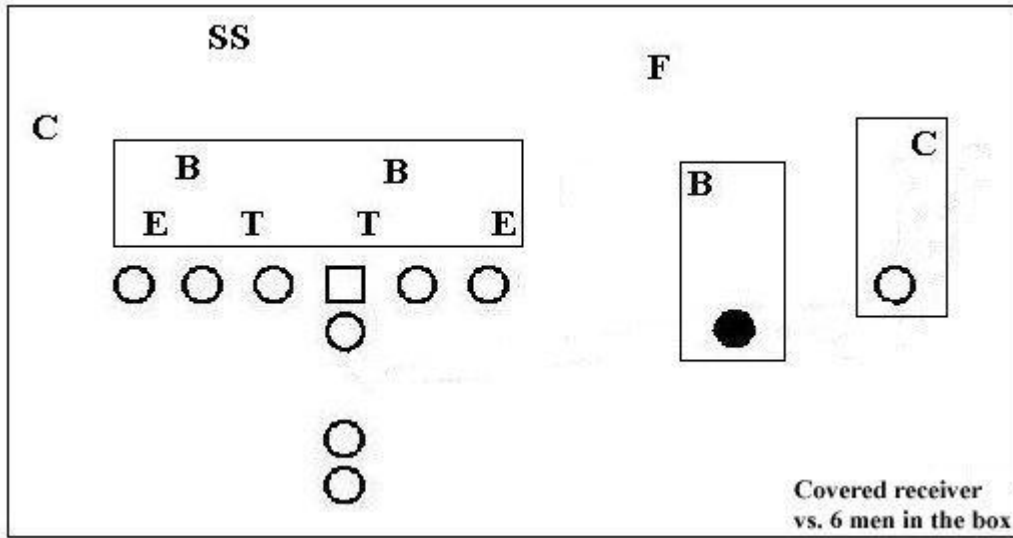
Basic Series.

PLAY ACTION PASS

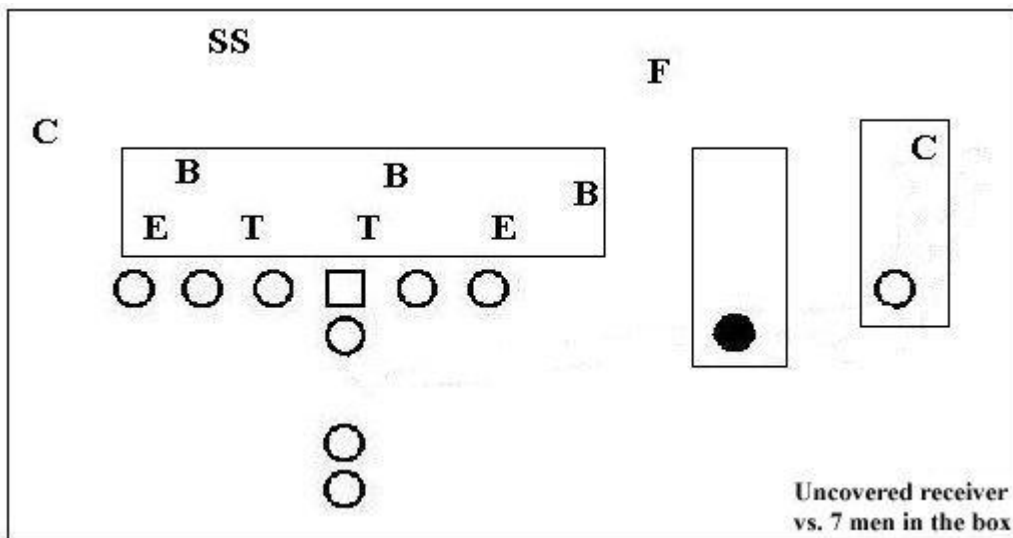
Play Action Pass.

UNCOVERED RECEIVERS

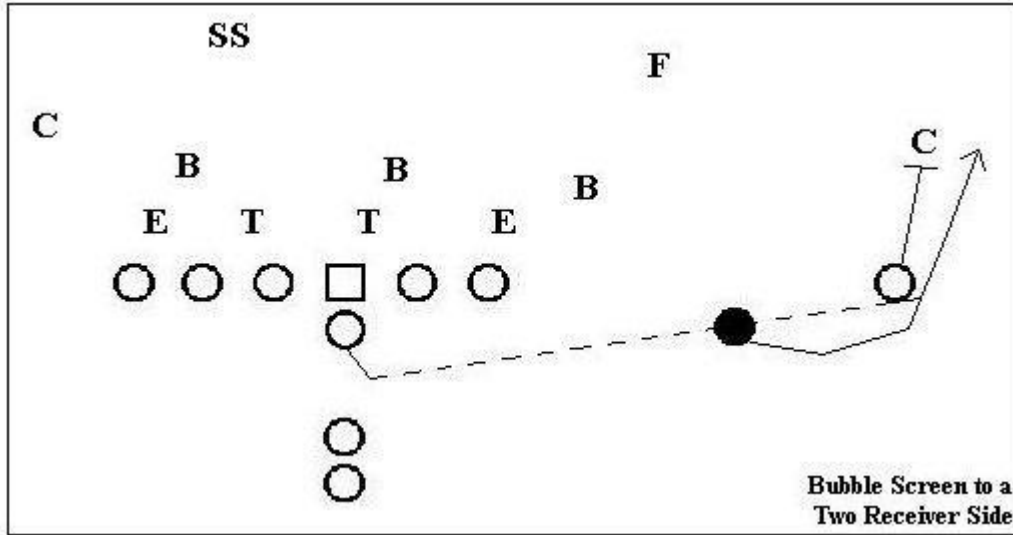
Recognizing uncovered receivers and taking advantage of the defense is a vital component of this offense's passing game. In the diagram below, the outside linebacker has split out to cover the Z (the slot receiver); thus this receiver is said to be covered (though a linebacker covering the Z is another situation to exploit). Likewise, the offside cornerback could move over and cover the Z. In the same way, the Z would be considered a covered receiver. In this case, a called pass might be changed to a run to take advantage of the six men in the box situation.



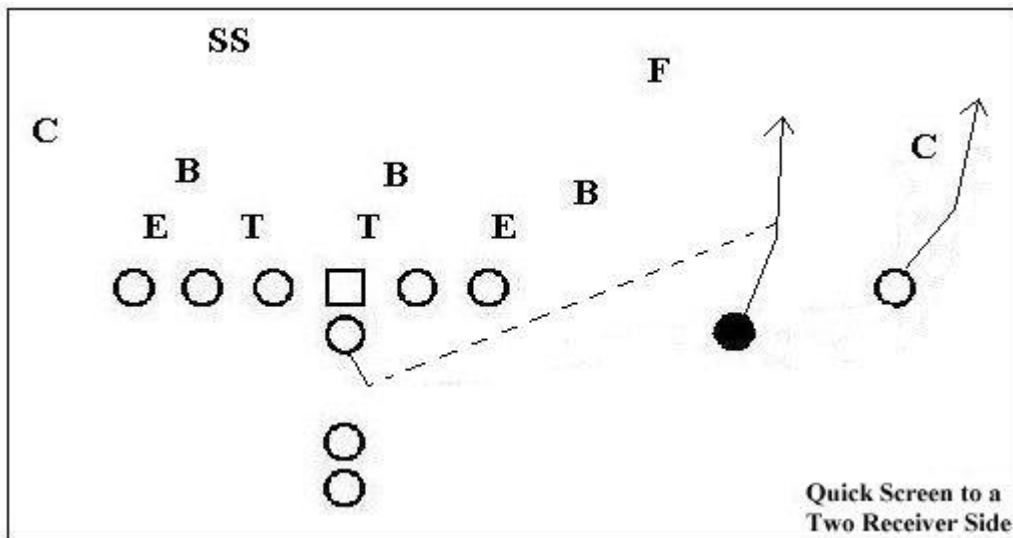
If the linebacker stays in the box to defend the run, the Z is said to be uncovered:



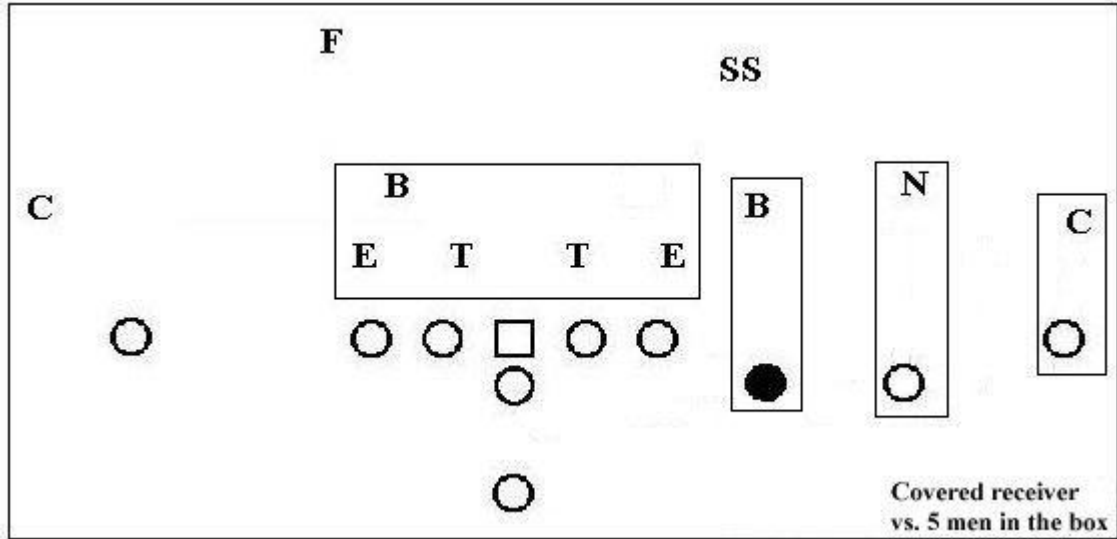
The offense has two ways to take advantage of this defense. Depending on the width and speed of the linebacker, the Z may run a bubble pattern. The X stalk blocks his cornerback. Catching the ball within a yard of the LOS, the Z breaks upfield off the X's block:



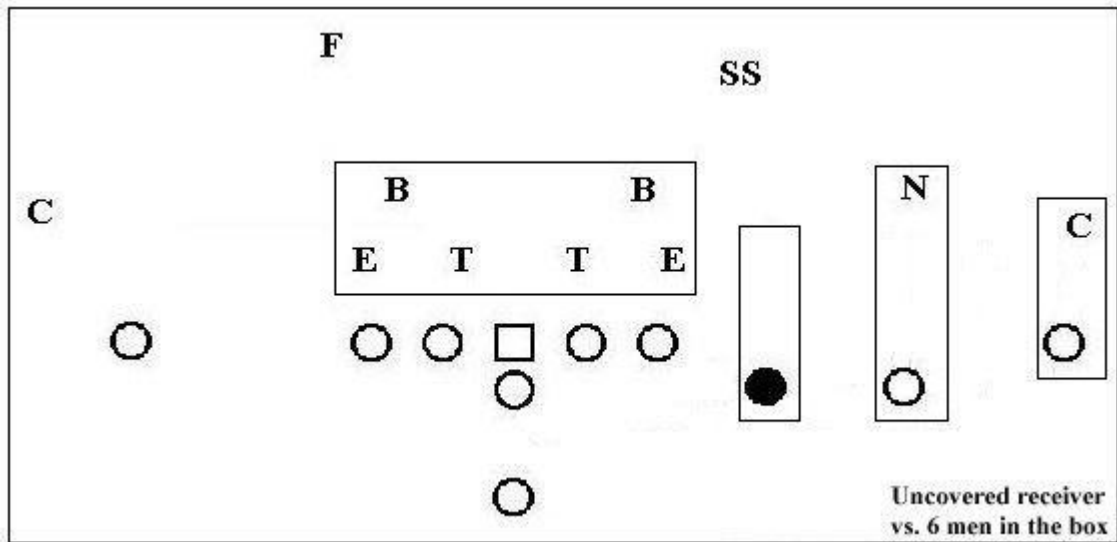
In addition to the bubble screen, the other option is a quick screen to the Z. The X runs off his corner down the sideline while the Z widens a bit and finds the seam between the outside linebacker and the corner:



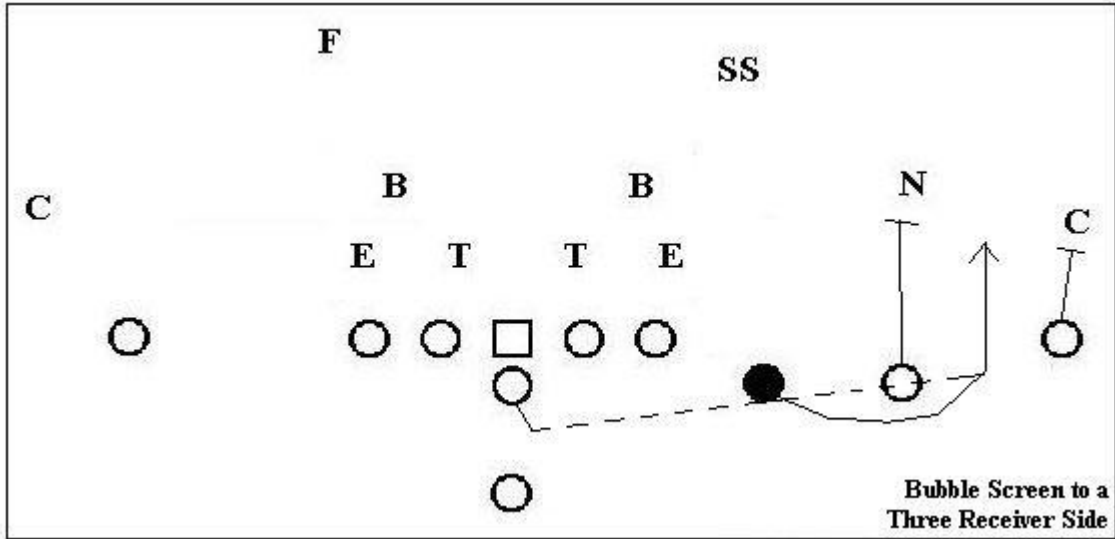
The same situation that exists versus the twins formation above may also occur against a trips formation. In the diagram below, the outside linebacker has widened to cover the H receiver. In doing so, he has left only five men in the box to defend the run:



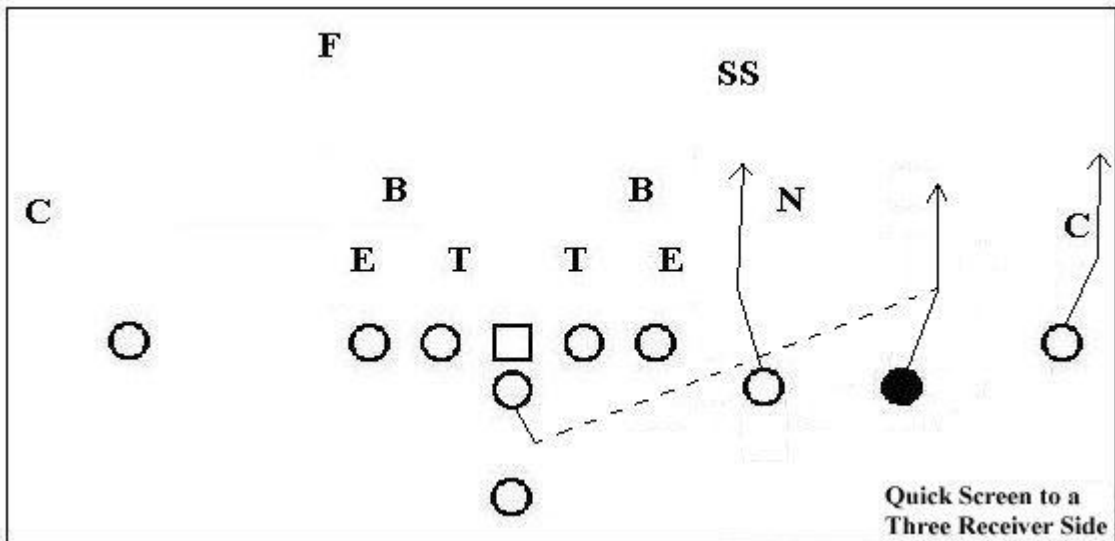
If the linebacker stays in the box to defend the run, the H is said to be uncovered:



Depending on which receiver is uncovered, the same two options are available to the offense. If the Nickel back (N) widens to cover the Z, the bubble screen is available to the uncovered receiver (H), with the Z and X executing stalk blocks on their respective defenders:



If the Nickel back covers the H, the quick screen can be thrown to the Z. The H runs off the Nickel back while the X runs off his cornerback. The Z then finds the seam and looks for the ball immediately:

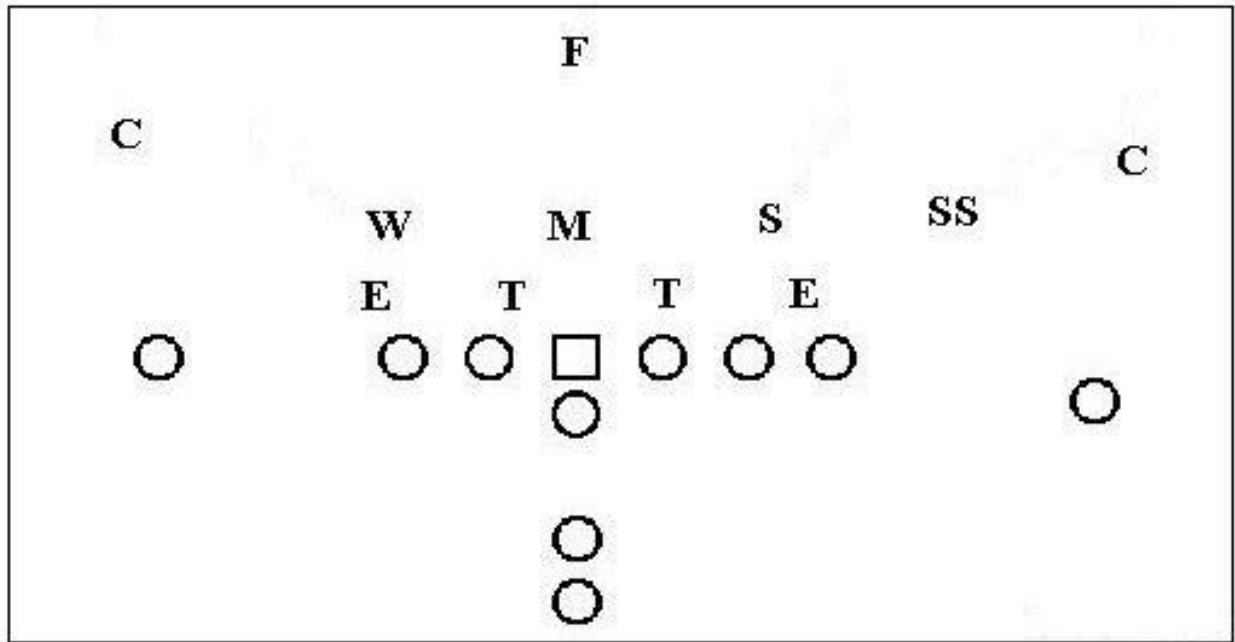


READING THE DEFENSE

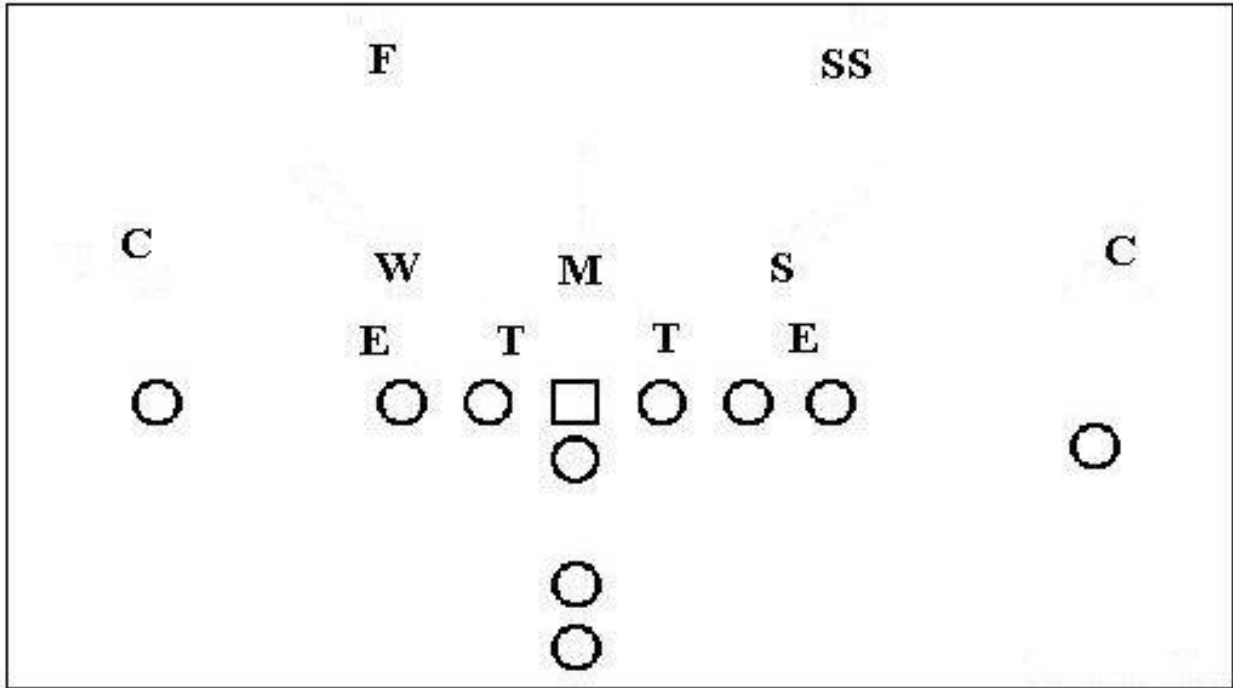
OVERVIEW

Pre-Snap Reads. Once the quarterback is under center, his first pre-snap read should be to determine, to the best of his ability, the coverage of the defense. At the most basic level, MOFO (Middle of the Field is Open) and MOFC (Middle of the Field is Closed) can help a quarterback narrow the possibilities. While rotations are disguises are always possible, the locations of the safeties are our first guide to determining coverage:

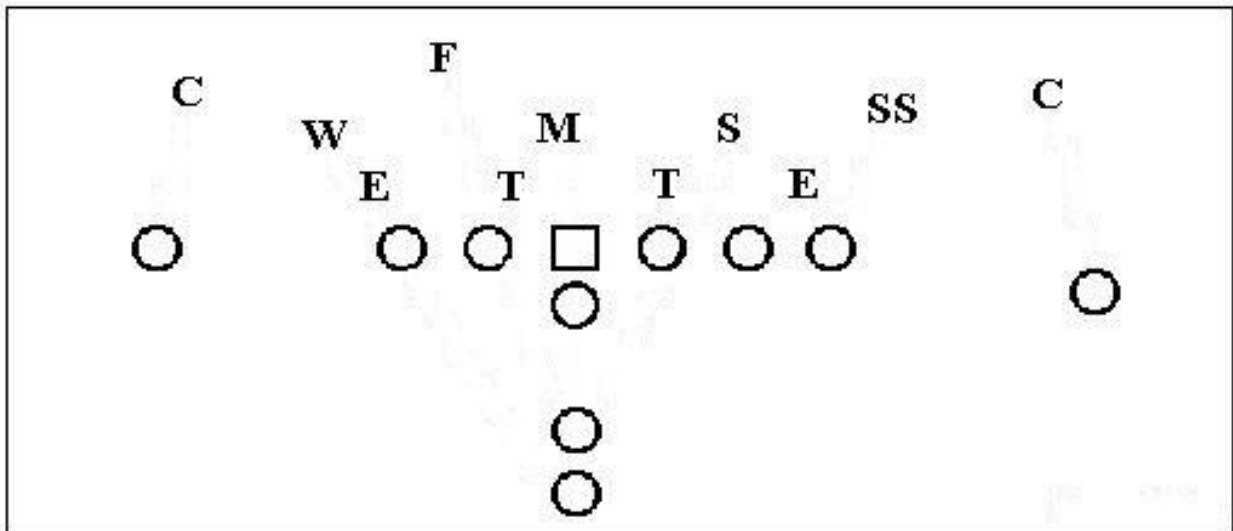
One safety deep generally implies Cover 1 or Cover 3:



Two safeties deep leads toward Cover 2, Cover 4, and Quarters. Cover 2 is also a popular “shell” to disguise other coverages:



Zero safeties deep indicates Cover 0 and potentially a pressure/blitz situation:



While there are other defenses, these basic secondary structures can help the quarterback to narrow down the possibilities. His pre-snap reads continue:

- Are there uncovered receivers? A bubble or quick screens might be appropriate.
- How does the defense react to motion (courtesy Bill Walsh's QB instructional notes from Stanford):
 - Backfield (F/H) motion
 - No defensive movement indicates zone coverage.

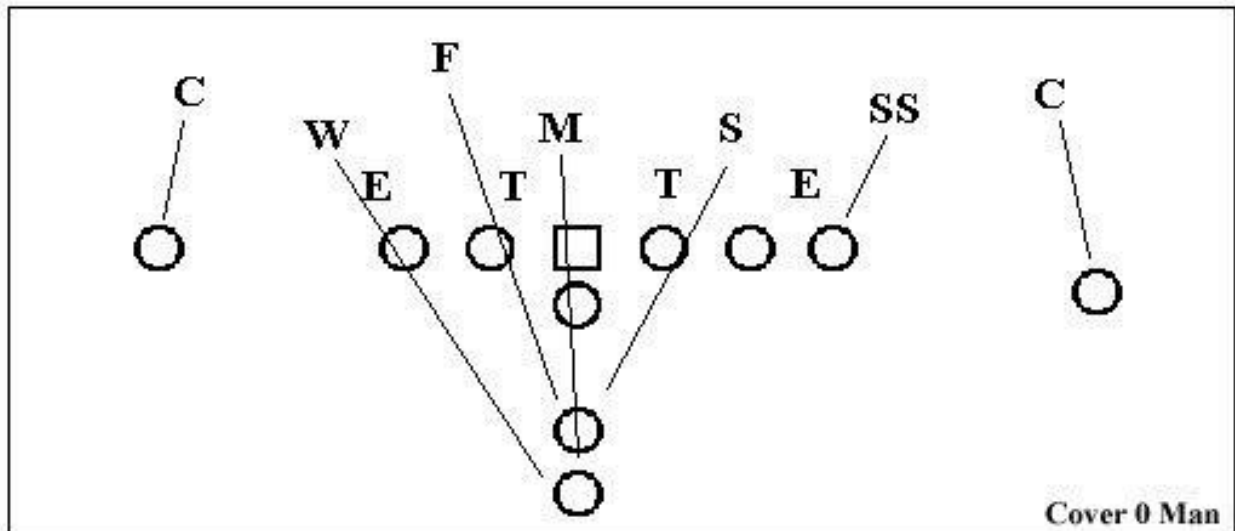
- Linebacker movement indicates man under coverage.
 - Defensive back movement indicates a blitz is coming.
 - Tight End (Y) motion
 - No defensive movement indicates zone coverage.
 - Sam linebacker movement indicates man under coverage.
 - Strong safety movement indicates a blitz is coming.
 - Flanker (Z) motion
 - “Locked” cornerback movement indicates man coverage.
 - Sliding or “bumped” cornerback movement indicates zone.
- Identify the front and potential blitzes.
- Visualize the run or pass routes. Do run-blocking assignments need to be adjusted based on a different look from the defensive front? Are “hot” routes necessary because of a potential blitz?

Based on the accumulation of knowledge to this point, the quarterback should consider changing the play if necessary.

Post-Snap Adjustments. Once the quarterback determines his drop, he should continue with his reads and make adjustments as necessary:

- Read the safeties on the drop. MOFO/MOFC. Confirm or change the pre-snap read depending on how the safeties deploy. Is the defense using the Cover 2 Shell to disguise other coverages or to rotate into another coverage?
- Recognize the defensive front. Where is the pressure or blitz? Where is the “hot” route or outlet receiver?
- Go through his progressions.

COVER 0



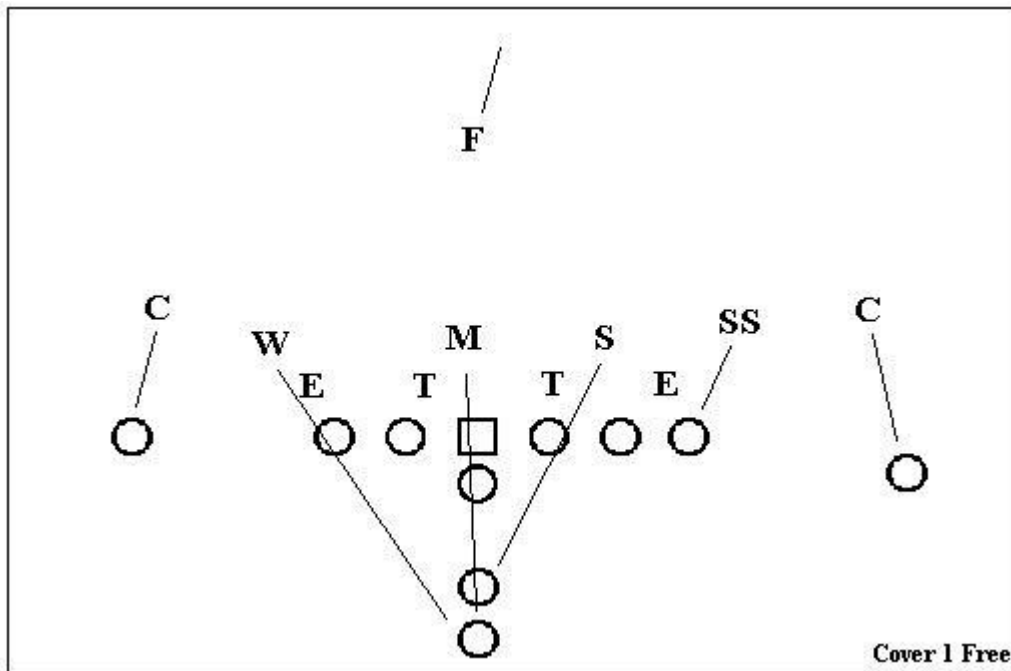
Strengths:

- Pass rush. Defense can bring six or even seven defenders.
- Tight coverage.
- Good run support from safeties.

Weaknesses:

- No underneath help. Susceptible to crossing routes and picks.
- No deep help in the middle. Susceptible to deep posts.

COVER 1



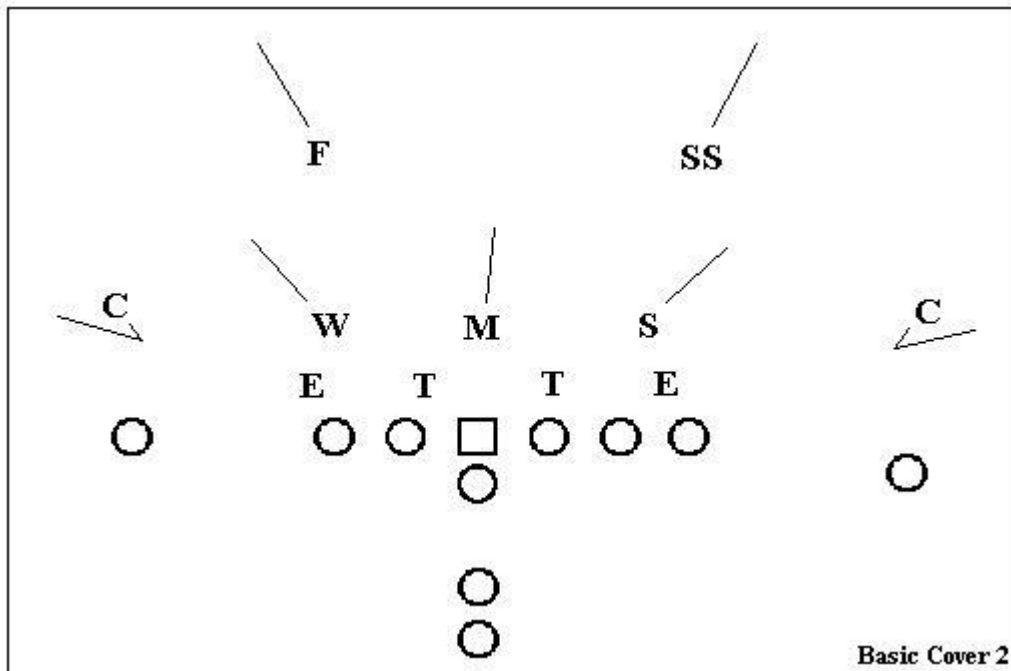
Strengths:

- Pass rush. Defense can bring five or more defenders.
- Tight coverage.
- Good run support to SS side.

Weaknesses:

- No underneath help. Susceptible to crossing routes and picks.
- Play-action passes.
- Out routes.
- Less run support away from SS.

COVER 2



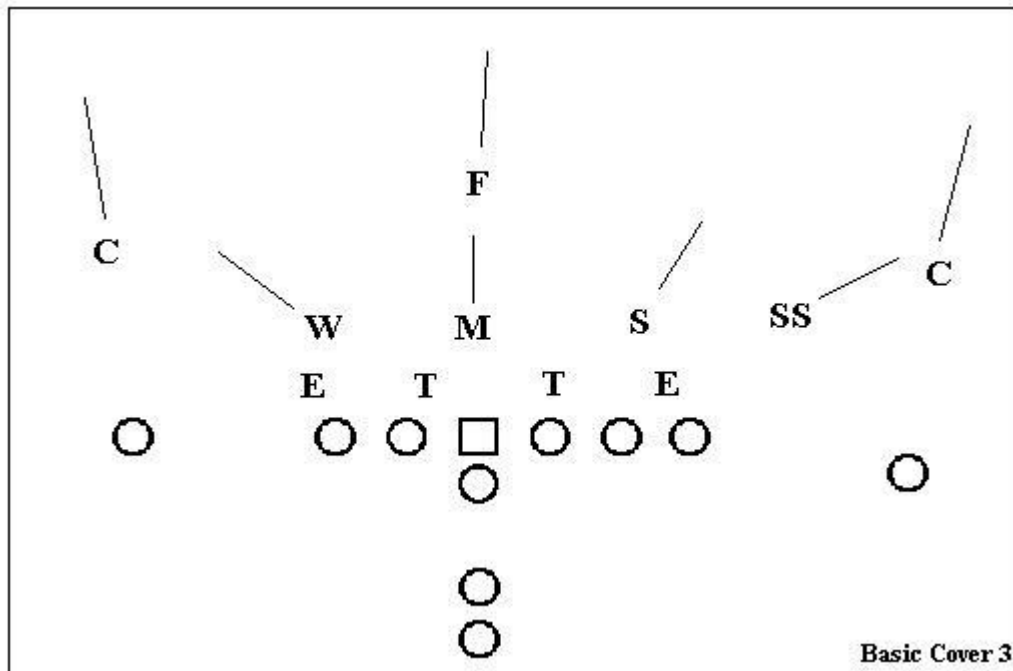
Strengths:

- Pass rush. Defense can bring four or more defenders.
- Five underneath coverage.
- Corners can disrupt timing by jamming receivers.
- Good flat support.

Weaknesses:

- Susceptible to deep middle and fade area.
- Strongside curl.
- Run support off tackle.

COVER 3



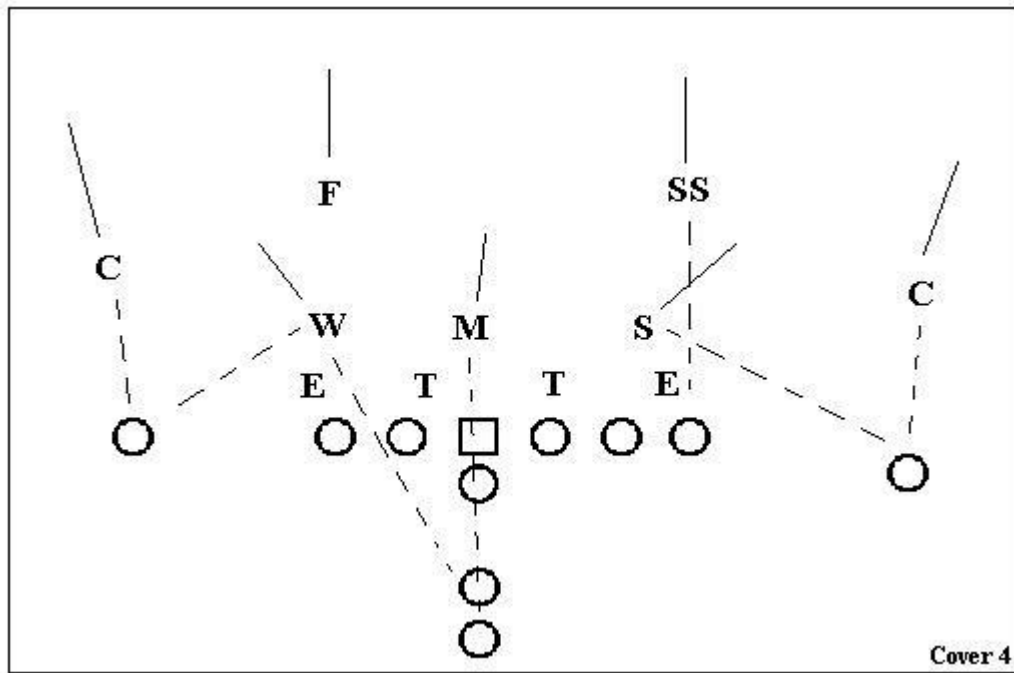
Strengths:

- Pass rush. Defense can bring four or more defenders.
- Three-deep secondary.
- Good run support to SS side.

Weaknesses:

- Weakside curl/flat.
- Strongside curl/flat.
- Limited fronts.
- Flood routes.
- Run support away from SS side.
- Dig (square-in, cross) routes.
- Four verticals.

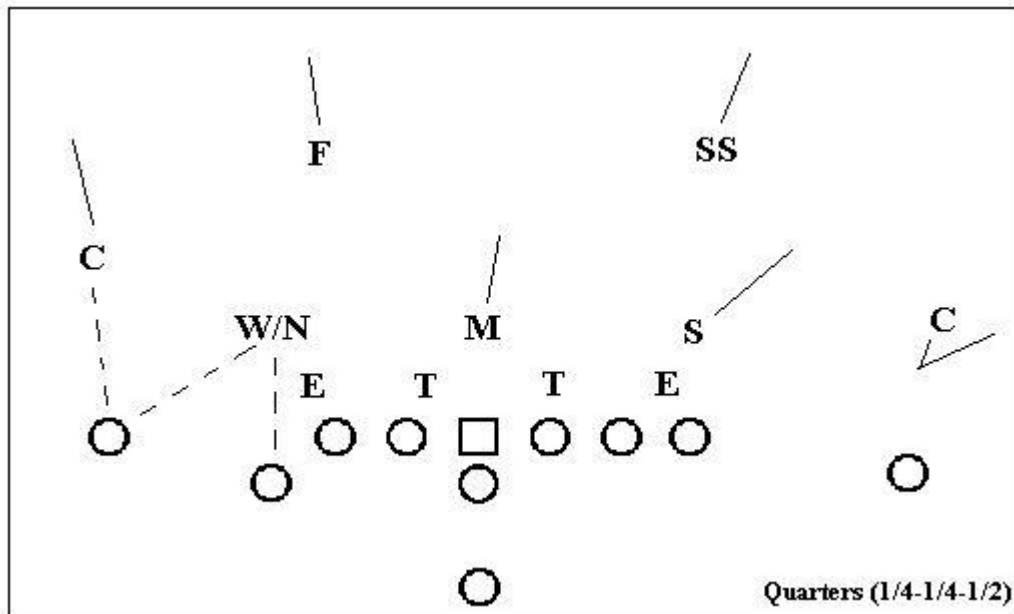
COVER 4



Strengths:

Weaknesses:

QUARTERS

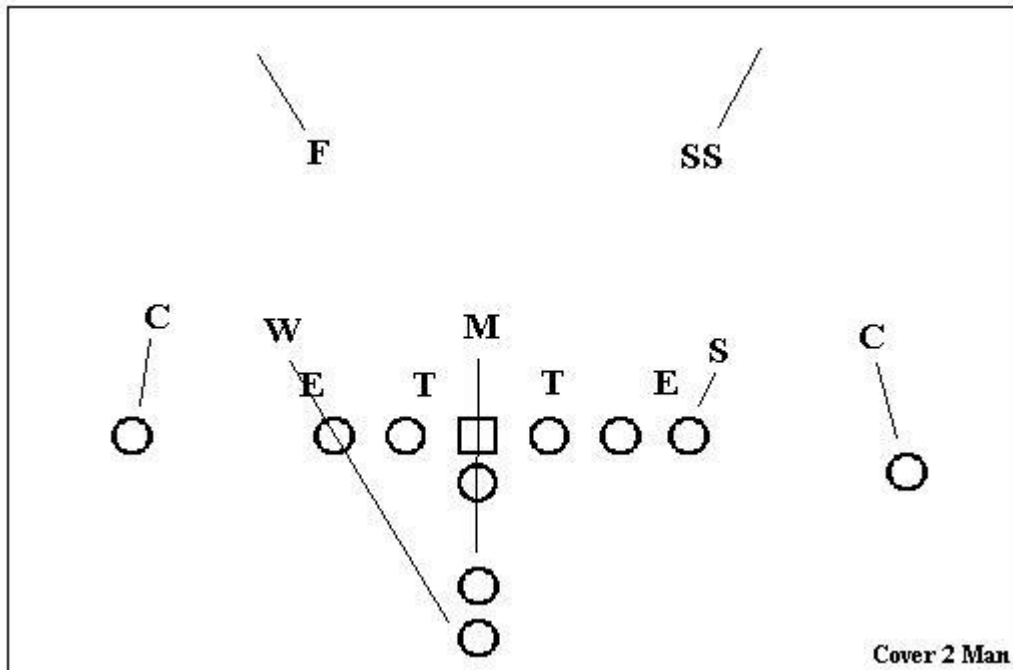


Strengths:

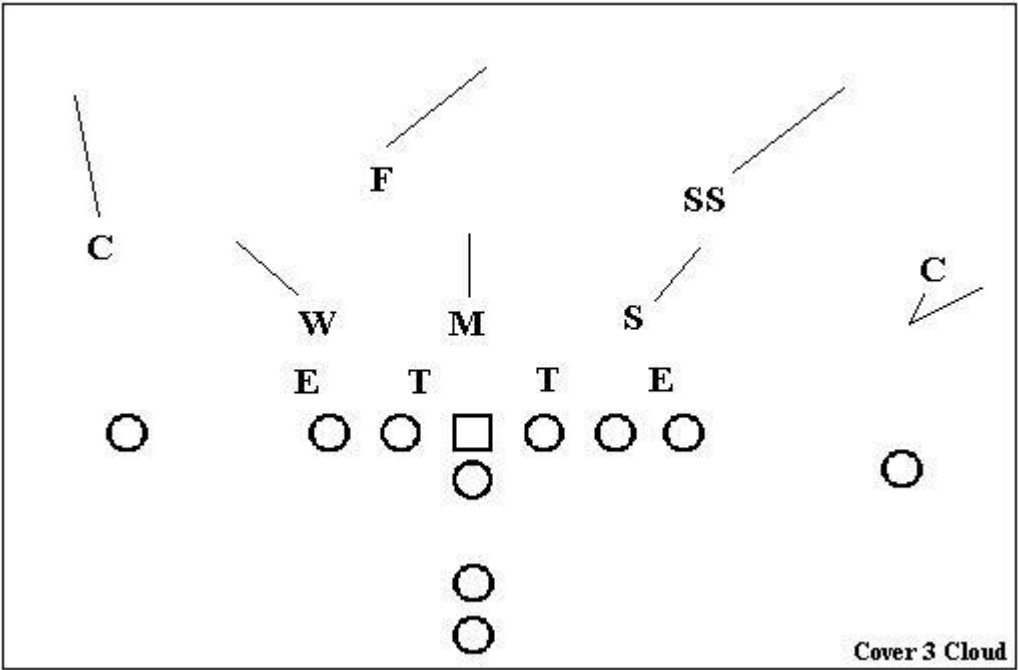
Weaknesses:

OTHER DEFENSES TO CONSIDER

While there are certainly more exotic defenses out there, the majority of them will fall into the categories described above. Beyond that, most defenses are modifications of the basic coverages. Below, the safeties play Cover 2 while the five underneath defenders man up on the wideouts, backs and tight end:



In the next example, the defense is showing a Cover 2 Shell, then rotating to a Cover 3 Cloud. From the basic Cover 3, the strong safety and cornerback are exchanging responsibilities: the SS takes the deep third while the corner plays a hard technique and cover the flat:



FINAL THOUGHTS

Final thoughts.

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