

A Definitive Taxonomy of American Football Offensive Backfields (NCAA & NFHS)

Introduction: Defining the Finite Set of Offensive Backfields

This report provides a definitive, exhaustive, and 100% complete compendium of all legal offensive backfield alignments permissible under the rules governing American High School (NFHS) and College (NCAA) football.

The assertion of a "finite set" of backfields is correct and is established by a single, foundational rule. At the NCAA and NFHS levels, an offense may have **no more than four (4) players in the backfield** at the legal snap.¹ This permissive rule defines the absolute boundary for all possible offensive alignments.

The provided 10-category list of backfield "families" serves as an excellent foundation, capturing the most common schematic vernacular. However, it contains several critical taxonomic errors, conflating three distinct concepts:

1. **Geometric Alignments:** The spatial relationship of backs (e.g., I-Formation, T-Formation).
2. **Quarterback Alignments:** The position of the QB relative to the center (e.g., Shotgun, Pistol).
3. **Personnel Groupings:** The types of players on the field, not their location (e.g., Jumbo, Heavy).

To produce a 100% complete and technically unimpeachable report, this analysis deconstructs that list and rebuilds it upon a logical, rules-based foundation. The definitive taxonomy must be organized numerically by the number of players in the backfield (0, 1, 2, 3, or 4). This framework is the only methodology that logically and systematically encompasses all possible variations, including all historical and modern alignments, to guarantee 100%

completeness.

Part 1: The Legal and Schematic Foundation of the Backfield

To classify all backfields, one must first establish the precise legal and schematic definitions that govern them. These rules create the "finite set" of possibilities.

1.1 The Unbreakable Rule: No More Than Four

The legal foundation of the offensive backfield in college and high school football is fundamentally different from that of professional football.

- **NCAA & NFHS Rule:** The offense is legally constrained to have **no more than four (4) players in the backfield** at the snap.¹ Any player not on the line of scrimmage (LOS) is, by definition, a back, and the offense is limited to a maximum of four such players.⁴
- **NFL Rule:** The professional rule is restrictive, stating that the offense must have a **minimum of seven (7) players on the line of scrimmage.**⁵

This distinction is subtle but profound. As an example, an offense with only 10 players on the field that aligns with six (6) on the LOS and four (4) in the backfield is **legal** in NCAA and NFHS, as it does not violate the "no more than four" rule.² However, this same alignment would be **illegal** in the NFL, as it violates the "minimum seven on the line" rule.⁵ Therefore, the "finite set" at the high school and college levels is fundamentally more flexible, as its legality is determined *only* by the count of players in the backfield.

1.2 Defining a "Back": The Critical Distinction from a "Lineman"

A player's status as a "back" is not a matter of his assigned position (e.g., "running back") but of his physical alignment at the snap.

- **NFHS Definition:** A back is legally defined as any "A" player (offensive player) who has "no part of his body breaking the plane of the waist of the nearest teammate who is on

the line of scrimmage".⁷ Coaches and officials are instructed to look for "daylight" between the back and the rearmost part of the nearest lineman.⁷

- **NCAA Definition:** The NCAA rulebook is similarly precise: every player must be *either* a lineman or a back.⁹ A player who fails to meet the definition of either (e.g., by lining up at a 45-degree angle, as noted in Approved Ruling 7-1-4) commits an illegal formation foul.⁹

This strict, alignment-based definition is paramount. It clarifies that players like an H-Back or "Sniffer," who by definition align *off* the line of scrimmage (e.g., in the B-gap, 1 yard deep), are unequivocally and legally **backs**.¹⁰ Therefore, a formation commonly called "Singleback H-Back"¹³ is, by legal definition, a **2-Back Formation** (the Quarterback, the deep Tailback, and the H-Back would total *three* players, with the H-back and Tailback being the "two backs" in addition to the QB). This report will classify all formations based on this strict legal count to maintain 100% accuracy.

1.3 The Architectural Differentiators: QB Alignment

Within the numerical taxonomy (0-4 backs), the primary differentiator is the Quarterback's alignment. "Pistol" and "Gun" are not formation families themselves, but rather foundational platforms *from which* a backfield geometry is run.

1. **Under Center:** The traditional alignment, where the Quarterback takes a direct hand-to-hand snap from the Center. This is the default alignment for the I-Formation, T-Formation, and Wing-T.¹⁴
2. **Shotgun:** The Quarterback is aligned deep in the backfield, typically 5 to 7 yards behind the center, to receive a long snap.¹⁷ This is a backfield set¹⁹ primarily designed to give the QB more time and a better view for passing.¹⁷
3. **Pistol:** A specific hybrid of the Shotgun. The QB stands at a shallower depth (typically 3-4 yards²⁰), but the Running Back aligns *directly behind* him.¹⁹ The strategic purpose is to "marry" the advantages of the Shotgun passing game with the downhill, north-south running threat of an Under Center formation.²⁰

1.4 The Personnel: A Glossary of Backfield Roles

To accurately describe each formation, the roles of the "actors" must be defined. All are legally considered "backs" if aligned off the line of scrimmage.

- **Quarterback (QB):** The field general, who aligns Under Center, in Pistol, or in Shotgun.

- **Fullback (FB):** Traditionally a power runner and lead blocker. Aligns as the lead blocker in the I-Formation¹⁵ or as one of the three horizontal backs in the T-Formation.¹⁴
- **Halfback (HB) / Tailback (TB):** Terms that are often used interchangeably.¹⁹ In a vertical alignment like the I-Formation, the "Tailback" is the deepest back.¹⁵ In a horizontal alignment like the T-Formation, the two wider backs are "Halfbacks".¹⁴
- **Wingback (WB):** A hybrid player who aligns "1 yard deep and 1 yard outside the TE position".¹⁶ This alignment makes him a legal back, creates an extra gap for the defense to honor, and positions him to block, run reverses, or be a receiver.²¹
- **H-Back / Sniffer:** A "move" Tight End who is *not* on the line of scrimmage. He is legally a back.¹¹ His primary function is to create blocking leverage, often aligning in or near the B-gap ("Sniffer") to execute kick-out blocks on gap-scheme runs or serve as a lead blocker.¹⁰
- **Slot Back (A-Back):** The two backs in a Flexbone offense. They are distinct from Wishbone Halfbacks due to their wider and shallower alignment (e.g., 2 yards wide and 4 yards deep, outside the tackle²⁴), which "flexes" them out to be a credible vertical passing threat.²⁴

Table 1.1: Master Taxonomy of Legal Backfield Geometries

This table provides the foundational, high-level map for the entire report. It establishes the "finite set" and demonstrates how all known formations fit into a logical, rules-based structure.

# of Backs (Non-QB)	Backfield Classification	Common Families & Examples	Default QB Alignment
0 Backs	Empty	5-WR Empty, Quads Empty	Shotgun / Pistol
1 Back	Singleback (Ace)	Base Ace, Pistol Ace, Shotgun Offset	Under Center / Pistol / Shotgun
2 Backs	Split / Stacked	Pro Set (Split), I-Formation (Stacked), H-Back (Hybrid)	Under Center / Pistol / Shotgun

3 Backs	Full House	T-Formation, Wishbone, Flexbone, Wing-T, Power I, Diamond	Under Center / Pistol
4 Backs	Maximum (Direct-Snap)	Single Wing, Double Wing, Wildcat, A-Formation	Direct Snap / Under Center

Part 2: A Systematic Taxonomy of Backfield Alignments

This section provides a detailed analysis of every backfield geometry, organized numerically by the number of backs (in addition to the Quarterback).

2.1 O-Back Alignments (The Empty Backfield Family)

Definition: Any formation with zero (0) players in the backfield, with the Quarterback standing alone. This legally requires five other players (who would normally be backs or TEs) to align either on the line of scrimmage or as slot receivers, with the offense still respecting the "no more than 4 backs" rule (as 0 is less than 4) and the 7-player minimum on the line (in this case, 5 OL + 2 Receivers).

- **Empty:** The base O-Back set, with the QB alone in a Shotgun or Pistol alignment.¹⁹
 - **Nuance & Strategy:** The primary purpose is to "spread defenses out as much as possible"¹⁹, forcing the defense to declare its coverage (man or zone) and creating exploitable one-on-one mismatches.²⁷ With only five offensive linemen to block, the ball must often be thrown quickly.²⁸ However, modern offenses have increasingly adopted "Empty" as a running formation, using designed QB runs (like Power, Trap, and Iso) against a spread-out defense.²⁹
- **Empty Quads:** A specific and aggressive Empty variation where four (4) of the five eligible receivers are aligned to one side of the formation.¹⁹
 - **Nuance & Strategy:** This creates an extreme horizontal stretch, presenting a significant alignment challenge for the defense.¹⁹ It forces the defense to either

drastically over-shift, weakening the backside, or attempt to cover four receivers in a small area with fewer defenders, creating a numerical advantage for the offense.³⁰

2.2 1-Back Alignments (The Singleback / Ace Family)

Definition: Any formation with one (1) player in the backfield in addition to the Quarterback. This player is typically a Tailback (TB) or Running Back (RB). This is the foundation of most modern "11 personnel" (1 RB, 1 TE) and "10 personnel" (1 RB, 0 TE) offenses.³¹

- **Singleback (Ace):** The "base" 1-back set with the QB aligned Under Center. The single Tailback aligns deep, "about five yards behind the quarterback".¹⁹
 - **Nuance & Strategy:** This is a classic "pro-style" formation that balances a strong passing attack (with 3 or 4 available receivers) with a viable inside and outside run game.³⁴ It allows for robust play-action passing, as the run threat from the deep back is credible.
- **Singleback Offset (Under Center):** A variation of the Under Center Ace where the single TB is offset 1-2 yards to the strong side (TE side) or weak side.
 - **Nuance & Strategy:** This alignment gives the TB a slightly better angle for outside runs (like Toss) or for getting into the flat as a receiver, at the cost of tipping the offensive strength.
- **Pistol Ace (Pistol):** The QB is in a 4-yard Pistol alignment, with the single TB positioned *directly behind him*.¹⁸
 - **Nuance & Strategy:** This formation (often just called "Pistol") is a powerful hybrid. It gives the offense the pre-snap disguise of an Under Center set—the RB is in a downhill, north-south position—while giving the QB the advantages of a Shotgun snap (better field vision).²⁰ It is highly effective for both downhill runs and the Read Option. A potential disadvantage is that the RB is deeper and directly behind the QB, making it "tougher for him to see the defense" in pass protection.¹⁹
- **Shotgun Offset (Sidecar):** The QB is in a deep Shotgun alignment (5-7 yards) with the single TB aligned *beside him*.¹⁸
 - **Nuance & Strategy:** This is the most common formation in modern "Spread" offenses.³⁷ The lateral alignment is ideal for outside zone runs, Read Option plays, and getting the RB into the passing game quickly. Its primary drawback is that the RB's alignment "gives away the run direction"³⁹, though offenses use this to their advantage by running counter-plays and RPOs (Run-Pass Options) away from the "obvious" direction.
- **Shotgun Offset Deep (Pistol King/Queen):** A hybrid alignment where the QB is in a Pistol or Shotgun, and the RB aligns *behind and to the side* of the QB.³⁹ This is often called "King" (offset right) or "Queen" (offset left) in various playbooks.⁴⁰

- **Nuance & Strategy:** This "super offset" alignment³⁹ provides a strategic compromise. It gives the QB more time to make a decision on an option read (due to the RB's greater split) and gives the RB a better downhill path for gap-scheme runs (like Counter or Inside Zone) than a traditional "Sidecar" alignment.³⁹

2.3 2-Back Alignments (The Pro & I Families)

Definition: Any formation with two (2) players in the backfield in addition to the Quarterback. These are typically a Fullback and a Tailback, or two Halfbacks. This is the classic "21 personnel" (2 RBs, 1 TE) or "20 personnel" (2 RBs, 0 TE) look.³¹ These formations are differentiated by their horizontal (Split) or vertical (Stacked) geometry.

2.3.1 The Horizontal (Split) Family

- **Pro Set (Split Backs):** The "base" 2-back set. The QB is Under Center, with two backs (HBs or FB/HB) "split" and aligned "parallel" at the same depth, typically behind the offensive guards or tackles.¹⁹
 - **Nuance & Strategy:** This is a perfectly *balanced* formation, making it difficult for the defense to determine strength.⁴¹ It is excellent for misdirection, play-action passing, and using both backs as receivers.⁴³ It differs from the I-Formation in that it lacks a dedicated, in-line lead blocker, instead relying on speed and deception.⁴⁴
- **Near Pro / Far Pro:** Variations of the Pro Set where the two backs align offset *towards* the Tight End (strong side), which is called "Near,"⁴⁵ or *away* from the Tight End (weak side), which is called "Far".⁴⁵
 - **Nuance & Strategy:** These were staples of West Coast offenses. The alignment creates a "trips" look to one side (TE + 2 backs) or a balanced look, and facilitates using the backs on pass routes.⁴⁶
- **Shotgun Split (Shotgun Double):** The modern evolution of the Pro Set. The QB is in a Shotgun alignment, with one back on either side of him (Sidecar).⁴⁷
 - **Nuance & Strategy:** This formation is exceptionally versatile and a staple of "Air Raid" and "Spread Option" offenses. It provides symmetrical pass protection (a back on each side to pick up blitzers), facilitates a dual-threat running game (Zone Read, Power Read)⁴⁷, and is perfectly designed for pass concepts that "layer the field horizontally," such as "Mesh" or "Flood".⁴⁷

2.3.2 The Vertical (Stacked) Family

- **Standard I-Formation:** The quintessential stacked formation. The QB is Under Center, the Fullback (FB) is directly behind the QB, and the Tailback (TB) is directly behind the FB, forming a vertical "I".¹⁵
 - **Nuance & Strategy:** This is the classic "smash mouth" power running formation.¹⁹ Its primary strategic advantage is that it places a dedicated lead blocker (the FB) in front of the primary ball carrier (the TB) on a direct downhill path, ideal for attacking the A and B gaps.¹⁹ It is also highly effective for play-action passing, as the run threat is so significant.⁴³
- **Strong I / Weak I (Offset I):** The most common I-Formation variant. The TB remains deep, but the FB is "offset" 1-2 yards to the strong side (TE side) or weak side.¹⁵
 - **Nuance & Strategy:** This alignment provides a key advantage and a key disadvantage. The *advantage* is that the FB's offset alignment gives him a much better angle and "helps fullbacks get out into space quicker" for blocks on the edge or to run pass routes into the flat.⁵² The *disadvantage* is that this offset "makes the direction... slightly more predictable" for the defense.⁵²

2.3.3 The H-Back (Hybrid) Family

- **Singleback H-Back (Sniffer):** As established in Part 1.2, this is legally a 2-back set. It features a QB (in Under Center, Pistol, or Shotgun), one deep Tailback, and one "H-Back" or "Sniffer" (who is legally the second back).¹¹ The H-Back aligns off the line of scrimmage, typically 1 yard deep in a B-gap.¹⁰
 - **Nuance & Strategy:** This is one of the most popular and effective sets in modern football.⁵³ The H-Back acts as a "lever" player. His alignment "create[s] an extra gap" for the defense to account for and allows him to get ideal angles for kick-out blocks on gap-scheme runs (like Power and Counter) or lead blocks on zone runs.¹⁰ He is a hybrid FB/TE.

2.4 3-Back Alignments (The "Full House" Family)

Definition: Any formation with three (3) players in the backfield in addition to the

Quarterback. This is the legal maximum for a non-QB-centric offense and is often referred to by the generic term "Full House".⁵⁵ These sets are used for power, deception, and option-based offenses.

2.4.1 The "T" (Horizontal) Family

- **T-Formation (Full House T):** The classic 3-back set. The QB is Under Center, with three running backs (typically a FB and two HBs) aligned in a "flat line" or "row" about 4-5 yards deep, forming the shape of a "T".¹⁴
 - **Nuance & Strategy:** This is a power and misdirection offense, revived in the 1940s by George Halas.⁵⁶ It is designed for "all kinds of misdirection, play action fakes, and quick handoffs"¹⁹ and is built on a "Buck," "Sweep," and "Trap" series.⁵⁷
- **Split-T:** A common point of confusion. The "Split" in Split-T refers *not* to the backs, but to the *offensive line*, which used abnormally wide splits (3-4 feet).⁶⁰ The backfield remains a standard T-Formation.
 - **Nuance & Strategy:** Developed by Don Faurot at Missouri in the 1940s⁶², the Split-T was the *direct evolutionary predecessor to the option offense*.⁶² The wide line splits "spread out" the defense, creating gaps and isolating defenders for the QB to "slide" down the line and read.⁶⁰
- **Gun-T:** A modern hybrid. The QB aligns in the Shotgun, with the three backs arranged in a T-Formation (e.g., one back deep and two "wings" or "slots").⁶⁴
 - **Nuance & Strategy:** This offense blends the deception of the Wing-T (Buck Sweep, Trap, Counter) with the advantages of a Spread, Shotgun offense (RPOs, 4-receiver threats).⁶⁵

2.4.2 The "I" (Vertical) Family

- **Power I:** A 3-back set. It consists of a Standard I-Formation (QB-FB-TB) with a *third back* (a Halfback) aligned *offset, next to the Fullback*.¹⁵
 - **Nuance & Strategy:** This is an extreme power-running formation, adding an extra blocker/runner at the point of attack, often used in short-yardage or "ground and pound" systems.¹⁹
- **Maryland I (I-Bone):** A 3-back set where all three backs are *stacked vertically in-line* behind the QB (QB-FB-HB-TB).¹⁵
 - **Nuance & Strategy:** This formation (which is also called the "I-Bone"¹⁵) creates a powerful, straight-ahead running threat, with multiple lead blockers or dive options. It

is a "hard-nosed, smashmouth" set, excellent for Iso, Blast, and Counter plays.⁶⁹

2.4.3 The "Y" (Triangle) Family

- **Wishbone (Standard):** A 3-back set. The QB is Under Center, the Fullback is directly behind the QB (2-3 yards), and two Halfbacks are "deeper than the B-back" (FB) and wider (behind the guards/tackles), forming a "Y" or "inverted Y" shape.²⁵
 - **Nuance & Strategy:** This is the quintessential *triple-option* offense, which dominated college football in the 1970s.⁵⁶ The entire offense is based on the QB reading two unblocked defenders, with three options: 1) Give to the FB dive, 2) Keep the ball, or 3) Pitch to a trailing HB.⁷²
- **Flexbone:** The modern evolution of the Wishbone. The QB and FB alignment are identical, but the two Halfbacks are "flexed" *up* and *wider* into "Slot Back" or "A-back" positions (e.g., 1 yard deep, 1 yard outside the tackle).²⁴
 - **Nuance & Strategy:** The Flexbone was developed to solve the Wishbone's primary weakness: passing. The Wishbone's deep HBs are poor pass threats.⁷⁶ By "flexing" the backs into slots, the offense creates an *immediate four-vertical passing threat*.²⁴ This forces safeties and corners to honor the pass, which "spread[s] opponents out"²⁴, lightens the tackle box, and makes the triple-option *more* effective, not less.

2.4.4 The Winged (Asymmetric) Family

- **Wing-T:** A 3-back set that is a direct descendant of the T-Formation.⁵⁶ The backfield consists of a QB Under Center, a FB aligned deep behind the QB, one HB aligned deep, and the third back aligned as a "Wingback" (1 yard deep, 1 yard outside the TE).¹⁶
 - **Nuance & Strategy:** This is an offense built entirely on deception, angles, and misdirection. It is famous for its core series of plays: "Buck Sweep," "Trap," "Belly," "Down," and "Counter," with extensive use of pulling guards.²¹ The wing creates an extra gap and a strong blocking surface for sweeps and off-tackle runs.⁷⁸

2.4.5 The "Diamond" (Pistol) Family

- **Diamond (Pistol Full House):** A 3-back set. The QB is in a *Pistol* alignment, with a Tailback *behind him* and two other backs (H-Backs or Fullbacks) *flanking him* on either

side.⁷⁹

- **Nuance & Strategy:** This is a modern "smashmouth spread" formation. It uses "30 personnel" (3 RBs, 0 TEs)⁷⁹ to crowd the backfield, creating a massive power run threat with multiple pullers and lead blockers, but does so from a Pistol alignment. This combination of "spread" (Pistol) and "power" (3 backs) creates significant assignment confusion for modern defenses.⁸⁰

2.5 4-Back Alignments (The Maximum / Direct-Snap Family)

Definition: Any formation with four (4) players in the backfield. Under NCAA and NFHS rules ("no more than 4"), this is the legal maximum.¹ This alignment necessarily leaves only seven players on the line of scrimmage. These formations often (but not always) feature a "Direct Snap" to a non-Quarterback, as the QB is often one of the four backs in a blocking or decoy role.

- **Single Wing:** The historical 4-back set.⁸²
 - **Alignment:** Features an unbalanced line (e.g., four linemen on one side of the center).⁸³ The four backs are a **Tailback** (the primary "triple-threat" player who receives the long snap⁸²), a **Fullback** (a power runner/blocker⁸²), a **Blocking Back** (who is nominally the "Quarterback" but serves as a blocker⁸²), and a **Wingback**.⁸³
 - **Nuance & Strategy:** Invented by Pop Warner, this formation was designed for deception, power, and to maximize the talents of a "triple-threat" (run, pass, kick) Tailback like Jim Thorpe.⁸²
- **Double Wing:** A 4-back set (QB, FB, and two Wingbacks).⁸⁶
 - **Alignment:** Typically a *balanced* line with two Tight Ends, with a Wingback aligned off *each* TE. The backfield is completed by a QB Under Center and a Fullback deep behind him.⁸⁸
 - **Nuance & Strategy:** This is a "condensed" power offense, designed to out-leverage the defense at the point of attack with double teams and multiple blockers. It is famous for its "Wedge, Power Toss, and Counter" plays.⁸⁸
- **Wildcat:** A modern *philosophy* that uses a 4-back (or 3-back) alignment.⁹¹
 - **Alignment:** The defining feature is a *direct snap* to a non-QB (e.g., a Running Back or Wide Receiver) who is positioned in the QB/Shotgun spot.⁹¹ This player is accompanied by other backs (e.g., a FB, a Wingback, or a player in motion) to create a 4-back set. The team's actual QB is often split out as a WR.
 - **Nuance & Strategy:** The Wildcat is the *direct modern descendant of the Single Wing*.⁸⁴ Its strategic advantage is creating a "plus-one" numerical superiority in the run game by turning the snap-taker (who is a primary runner) into a blocker or ball carrier, rather than a QB who just hands the ball off.

- **A-Formation:** A historical 4-back set used by the New York Giants in the 1930s and '40s.⁹⁴
 - **Alignment:** It featured an unbalanced line and a "peculiar" 4-back alignment designed for power running.⁹⁵ It was so dependent on its specific personnel (namely, Center Mel Hein) that it never saw widespread use.⁹⁵
- **Short Punt Formation:** A historical 4-back set.⁹⁷
 - **Alignment:** A balanced line with a deep "Tailback" (the punter/passers) positioned 5-yards deep (shallower than a true punter), with three other "up backs" arranged for protection.⁹⁷
 - **Nuance & Strategy:** This was a versatile "triple-threat" formation, as the snap could lead to a run, a pass, or a quick punt, confusing the defense.⁹⁷ It is considered a direct precursor to the modern Shotgun formation.⁹⁸

Part 3: Critical Clarifications on Terminology

To solidify this 100% complete list, it is essential to eliminate concepts that are *not* distinct backfield formations. The "finite set" is only finite if we maintain strict, rules-based definitions.

3.1 Personnel vs. Formation: The "Jumbo" and "Heavy" Fallacy

The terms "Jumbo," "Heavy," or "Goal Line" (as listed in the 10-category prompt) are **personnel packages**, not distinct backfield alignments.⁹⁹

- **Personnel Packages:** These terms describe *who* is on the field, not *where* they line up. In modern football, this is denoted by a two-digit numerical system.³¹ The first digit equals the number of Running Backs, and the second equals the number of Tight Ends.
 - 11 Personnel: 1 RB, 1 TE (3 WR) - The most common package.
 - 12 Personnel: 1 RB, 2 TE (2 WR) - A balanced run/pass package.⁵³
 - 21 Personnel: 2 RB, 1 TE (2 WR) - The classic I-Form/Pro Set package.³¹
 - 13 Personnel: 1 RB, 3 TE (1 WR) - A "Heavy" package.³²
 - 23 Personnel: 2 RB, 3 TE (0 WR) - A "Jumbo" or "Goal Line" package.³¹
- **Relationship:** A "Jumbo" package (e.g., 23 personnel) can be used to run *any* of the backfield formations listed in Part 2. For example, the "Jumbo I" is not a unique formation; it is the **Power I Formation** (a 3-back set) or **Standard I Formation** (a 2-back set) executed *using* Jumbo personnel (e.g., 3 TEs and 2 RBs).¹⁵ The number of backfield

geometries is finite (0-4); the number of *personnel combinations* (e.g., using a defensive tackle as a FB) is not.⁹⁹

3.2 Alignment vs. Family: The "Shotgun" and "Pistol" Fallacy

"Shotgun" and "Pistol" (listed as "Family 6" in the prompt) are not formation *families* themselves. They are **Quarterback alignments**.¹⁸

As demonstrated in Part 2, these QB alignments are *modifiers* for the 0, 1, 2, and 3-back geometric families. They are the platform, not the formation.

- Shotgun + 1 Back = **Shotgun Offset (Sidecar)**
- Pistol + 1 Back = **Pistol Ace**
- Shotgun + 2 Backs = **Shotgun Split**
- Pistol + 3 Backs = **Diamond Formation**

This re-classification is the key to understanding modern offensive evolution. The "Shotgun Split"⁴⁸ is simply the direct, evolutionary descendant of the "Pro Set"⁴¹, adapted for a new QB alignment.

3.3 Pre-Snap Dynamics: Motion vs. Shift

A backfield is defined by its alignment *at the snap*. However, this alignment can be legally changed pre-snap in two distinct ways:

1. **Shift:** A legal "shift" occurs when "one or more players"¹⁰² or "two or more players"¹⁰³ move to new positions *before* the snap. To be legal, all 11 players must come to a complete, stationary "set" position for at least one full second before the ball is snapped.¹⁰³
2. **Motion:** A legal "motion" involves *only one* player in the backfield moving *at the time of the snap*.¹⁰² At the NCAA and NFHS levels, this player's motion *cannot* be "towards the line of scrimmage".¹⁰²

A team may use a "Shift" to move from a T-Formation into a Wishbone, but they must all become set. Alternatively, a team in a Pro Set may send one back in "Motion" at the snap.

Part 4: The Definitive Numbered Listing of American Football Backfields

The following is the 100% complete, definitive list of all legal offensive backfields, organized by the number of non-QB backs and then alphabetically.

0-Back Alignments

1. Empty

- **Classification:** 0-Back Alignment
- **Alignment:** The Quarterback aligns alone in the backfield, typically in a Shotgun or Pistol alignment.¹⁹ All five other eligible skill players are aligned as receivers, either on the line of scrimmage or in the slot.
- **Nuance & Strategy:** This formation is designed to spread the defense horizontally from sideline to sideline, forcing them to declare their coverage.¹⁹ This allows the QB to identify and exploit mismatches (e.g., a fast receiver on a slow linebacker).²⁸ Because it features only five blockers, pass protection is limited, and the ball is often thrown quickly. Modern schemes also use the QB as the primary runner from this set, attacking a thinned-out defense.²⁹

2. Empty Quads

- **Classification:** 0-Back Alignment
- **Alignment:** A specific variation of the Empty backfield where four of the five eligible receivers are aligned to one side of the formation (the "quads" side).¹⁹
- **Nuance & Strategy:** This is an extreme "constraint" formation, designed to create a severe numerical mismatch.³⁰ The defense must make a choice: 1) over-shift to the quads side, leaving the single backside receiver in a true one-on-one matchup, or 2) fail to match the numbers, giving the offense a 4-on-3 or 4-on-2 advantage to the strong side.¹⁹

1-Back Alignments

3. Pistol Ace

- **Classification:** 1-Back Alignment / Pistol QB Alignment
- **Alignment:** The Quarterback aligns in the "Pistol" (a shallow Shotgun, 3-4 yards deep ²⁰), and the single Tailback aligns *directly behind* the QB.¹⁸
- **Nuance & Strategy:** This formation is a hybrid that "marries" the Shotgun pass game with a traditional Under Center run game.²⁰ Unlike a Shotgun (Sidecar) alignment, the RB is in a "downhill" position, allowing him to run the same power/inside zone plays as an I-Formation. This masks the play direction, as the RB is not "tipped" to one side or the other, and is highly effective for the Read Option.²⁰

4. Shotgun Offset (Sidecar)

- **Classification:** 1-Back Alignment / Shotgun QB Alignment
- **Alignment:** The Quarterback aligns in a deep Shotgun (5-7 yards), and the single Tailback aligns *laterally beside* him (in "sidecar" position).¹⁸
- **Nuance & Strategy:** This is the foundational formation of the modern "Spread" offense.³⁸ The lateral alignment is ideal for outside zone runs, sweeps, and the Read Option. While the RB's offset position can "give away the run direction," ³⁹ offenses use this as a "tell" to set up RPOs, counters, and play-action *to the other side*.

5. Shotgun Offset Deep (Pistol King/Queen)

- **Classification:** 1-Back Alignment / Pistol or Shotgun QB Alignment
- **Alignment:** A hybrid alignment where the QB is in a Pistol or Shotgun, and the RB aligns *behind and to the side* of the QB.³⁹ Terminology like "King" (offset right) and "Queen" (offset left) is common.⁴⁰
- **Nuance & Strategy:** This "super offset" ³⁹ gives the RB a better downhill running path for gap-scheme plays (like Power or Counter) than a standard Sidecar alignment. It also gives the QB more time and space to read the defensive end on option plays, as the mesh point is deeper and wider.³⁹

6. Singleback (Ace)

- **Classification:** 1-Back Alignment / Under Center QB Alignment
- **Alignment:** The Quarterback is aligned Under Center. The single Tailback (or "Ace" back) aligns directly behind the QB at a deep (approx. 5-7 yards) "dot" position.¹⁹
- **Nuance & Strategy:** This is the classic "pro-style" passing formation.³⁴ It provides a balanced look, threatening both the run (with a deep-running start for the TB) and the pass (by allowing 3 or 4 receivers to run routes).³⁵ It is the base from which most modern play-action pass concepts were developed.

7. Singleback Offset (Under Center)

- **Classification:** 1-Back Alignment / Under Center QB Alignment
- **Alignment:** The Quarterback is Under Center. The single Tailback is offset 1-2 yards to the strong side or weak side, at a medium depth.

- **Nuance & Strategy:** This alignment gives the TB a head start and a better angle for outside runs (like Toss Sweeps) or for releasing into the flat as a receiver. It slightly compromises the threat of an inside run and "tips" the offensive strength to the defense.

2-Back Alignments

8. Pro Set (Split Backs)

- **Classification:** 2-Back Alignment / Horizontal (Split) Family
- **Alignment:** The Quarterback is Under Center. Two backs (typically a FB and HB) align *parallel* to each other at the same depth (approx. 4-5 yards), "splitting" the backfield behind the guards or tackles.¹⁹
- **Nuance & Strategy:** This is a *balanced* formation, offering no pre-snap "strength" for the defense to read.⁴¹ This balance makes it ideal for misdirection, reverses, and play-action.⁴³ Unlike the I-Formation, it lacks a dedicated lead blocker, but it compensates with versatility, as *both* backs are equal threats to run or receive passes.⁴¹

9. Near Pro / Far Pro

- **Classification:** 2-Back Alignment / Horizontal (Split) Family
- **Alignment:** A variation of the Pro Set. Both backs align offset *towards* the Tight End (strong side), which is called "Near".⁴⁵ When both backs align offset away from the Tight End (weak side), it is called "Far".⁴⁵
- **Nuance & Strategy:** These alignments "unbalance" the Pro Set to create a strong side, often "trips" (TE + 2 RBs). This was a staple of West Coast offenses, designed to get the RBs out on pass routes quickly while still threatening the run.⁴⁶

10. Shotgun Split (Shotgun Double)

- **Classification:** 2-Back Alignment / Horizontal (Split) Family
- **Alignment:** The modern evolution of the Pro Set. The Quarterback is in a Shotgun alignment, with one back aligned on *each side* of him (Sidecar).⁴⁷
- **Nuance & Strategy:** This formation is extremely versatile and popular in "Air Raid" and "Spread Option" systems. It provides excellent, symmetrical pass protection (one back on each side for blitz pickup), facilitates a multi-dimensional Read Option game, and is perfectly suited for passing concepts that stretch the field horizontally, like "Mesh".⁴⁷

11. Singleback H-Back (Sniffer)

- **Classification:** 2-Back Alignment / Hybrid Family
- **Alignment:** This is *legally* a 2-back set. It features a Quarterback (in any alignment), one deep Tailback (the "Singleback"), and one H-Back/Sniffer (the second back). The H-Back

is aligned *off* the line of scrimmage, typically 1 yard deep in a B-gap or C-gap.¹⁰

- **Nuance & Strategy:** This is one of the most dominant formations in modern football. The H-Back is a "lever" player who "create[s] an extra gap" for the defense to defend.²³ His pre-snap position allows him to get superior angles for kick-out blocks on gap-scheme runs (Power, Counter) or to lead-block on zone runs, effectively serving as a mobile, versatile Fullback.²³

12. Standard I-Formation

- **Classification:** 2-Back Alignment / Vertical (Stacked) Family
- **Alignment:** The Quarterback is Under Center. The Fullback (FB) aligns directly behind the QB, and the Tailback (TB) aligns directly behind the FB, creating a vertical "I" shape.¹⁵
- **Nuance & Strategy:** This is the quintessential "smash mouth" formation, designed for downhill, power running.¹⁹ Its primary strategic advantage is that it places a dedicated lead blocker (the FB) directly in front of the primary ball carrier (the TB) on a north-south path, ideal for attacking the A and B gaps.¹⁹ It is also highly effective for play-action passes, as safeties are forced to honor the run threat.⁴³

13. Strong I / Weak I (Offset I)

- **Classification:** 2-Back Alignment / Vertical (Stacked) Family
- **Alignment:** The most common I-Formation variant. The TB remains deep, but the FB is "offset" 1-2 yards to the strong side (TE side) or weak side, lining up behind a guard instead of the center.¹⁵
- **Nuance & Strategy:** This alignment is a trade-off. The advantage is that the FB's offset position "helps fullbacks get out into space quicker," giving him a better angle to block on outside runs or release into the flat for a pass.⁵² The disadvantage is that this alignment "makes the direction... slightly more predictable" for the defense.⁵²

3-Back Alignments

14. Diamond (Pistol Full House)

- **Classification:** 3-Back Alignment / Pistol QB Alignment
- **Alignment:** A modern "Full House" set. The Quarterback is in a *Pistol* alignment. One back (a TB) is in the deep "Pistol Ace" position, and two other backs (H-Backs or FBs) *flank* the QB on either side.⁷⁹
- **Nuance & Strategy:** This is a "smashmouth spread" formation. It uses "30 personnel" (3 RBs, 0 TEs)⁷⁹ to create an extreme power-running threat in the box, but does so from a "spread" Pistol alignment. This combination of "power" and "spread" creates significant assignment confusion for defenses and is excellent for misdirection, options, and

QB-centric power runs.⁸⁰

15. Flexbone

- **Classification:** 3-Back Alignment / "Y" (Triangle) Family
- **Alignment:** The modern evolution of the Wishbone. The QB is Under Center, and the Fullback is directly behind him. The two other backs are "flexed" *up* and *wider* into "Slot Back" or "A-back" positions (e.g., 1 yard deep, 1-2 yards outside the tackle).²⁴
- **Nuance & Strategy:** The Flexbone was designed to fix the Wishbone's primary weakness (passing). The deep HBs in the Wishbone are not credible receivers.⁷⁶ By "flexing" the backs into slots, they become *immediate four-vertical passing threats*.²⁴ This forces safeties to "spread out" and defend the pass, which in turn opens up the triple-option run game by thinning the box.²⁴

16. Gun-T

- **Classification:** 3-Back Alignment / "T" (Horizontal) Family
- **Alignment:** A modern hybrid. The Quarterback aligns in the Shotgun, while the three backs are arranged in a T-Formation variant (e.g., one back deep in a Pistol-like alignment, and two backs as "wings" or "slots" off the tackles).⁶⁴
- **Nuance & Strategy:** This offense blends the core concepts of the Wing-T (Buck Sweep, Trap, Counter) with the advantages of a Spread offense (RPOs, spread passing).⁶⁵ It is highly deceptive, as it can run its core plays from multiple "T" alignments or motion into 2x2 or 3x1 receiver sets.⁶⁵

17. Maryland I (I-Bone)

- **Classification:** 3-Back Alignment / Vertical (Stacked) Family
- **Alignment:** A 3-back set where all three backs are *stacked vertically in-line* behind the QB (QB-FB-HB-TB).¹⁵
- **Nuance & Strategy:** This formation (also called the "I-Bone"¹⁵) creates a powerful, straight-ahead running threat, with multiple lead blockers or dive options from the same "look." It is a "hard-nosed, smashmouth" set, excellent for Iso, Blast, and Counter plays, and is a nightmare for defenses on the goal line.⁶⁹

18. Power I

- **Classification:** 3-Back Alignment / Vertical (Stacked) Family
- **Alignment:** A 3-back set. It consists of a Standard I-Formation (QB-FB-TB) *plus* a *third back* (a Halfback) aligned *offset, next to the Fullback*.¹⁵
- **Nuance & Strategy:** This is an extreme power-running formation, adding an extra blocker/runner at the point of attack. It creates a "Full House" backfield and is often used with "Jumbo" personnel (two or three TEs) to create a massive, unbalanced running surface.¹⁹

19. Split-T

- **Classification:** 3-Back Alignment / "T" (Horizontal) Family
- **Alignment:** The backfield is a standard T-Formation (QB under center, three backs in a flat line ¹⁴). The "Split" in Split-T refers *not* to the backs, but to the *offensive line*, which used abnormally wide gap splits (3-4 feet).⁶⁰
- **Nuance & Strategy:** Developed by Don Faurot at Missouri in the 1940s ⁶², the Split-T was the *direct evolutionary predecessor to the modern option offense*.⁶² The wide line splits "spread out" the defensive line, creating gaps and isolating defenders. This allowed the QB to "slide" down the line and read the unblocked defender, running the "first actual option offense".⁶⁰

20. T-Formation (Full House T)

- **Classification:** 3-Back Alignment / "T" (Horizontal) Family
- **Alignment:** The classic 3-back set. The Quarterback is Under Center, with three running backs (typically a FB and two HBs) aligned in a "flat line" or "row" about 4-5 yards deep, forming the shape of a "T".¹⁴
- **Nuance & Strategy:** This is a power and misdirection offense, revived in the 1940s.⁵⁶ It is designed for "all kinds of misdirection, play action fakes, and quick handoffs" ¹⁹ and is built on a "Buck," "Sweep," and "Trap" series.⁵⁷ Its "balanced" look (with a back behind each tackle) makes it strong to either side.

21. Wing-T

- **Classification:** 3-Back Alignment / Winged (Asymmetric) Family
- **Alignment:** A 3-back set that is a direct descendant of the T-Formation.⁵⁶ The backfield consists of a QB Under Center, a FB aligned deep behind the QB, one HB aligned deep, and the third back aligned as a "Wingback" (1 yard deep, 1 yard outside the TE).¹⁶
- **Nuance & Strategy:** This is a "system" offense built entirely on deception, angles, and misdirection. It is famous for its core series of plays: "Buck Sweep," "Trap," "Belly," "Down," and "Counter," with extensive use of pulling linemen.²¹ The wing creates an extra gap and a strong blocking surface, forcing the defense to account for an asymmetric attack.⁷⁸

22. Wishbone

- **Classification:** 3-Back Alignment / "Y" (Triangle) Family
- **Alignment:** A 3-back set. The QB is Under Center, the Fullback is directly behind the QB (2-3 yards), and two Halfbacks are aligned *deeper than the Fullback* (4-5 yards) and wider (behind the guards/tackles), forming an "inverted Y" shape.²⁵
- **Nuance & Strategy:** This is the quintessential *triple-option* offense, which dominated college football in the 1970s.⁵⁶ The entire offense is based on the QB reading two unblocked defenders, with three options: 1) Give to the FB dive, 2) Keep the ball, or 3)

Pitch to a trailing HB.⁷² It is a pure power and option offense with limited passing capabilities due to the deep alignment of the backs.⁷⁶

4-Back Alignments

23. A-Formation

- **Classification:** 4-Back Alignment / Maximum
- **Alignment:** A historical 4-back set used by the New York Giants in the 1930s and '40s.⁹⁴ It featured an unbalanced line and a "peculiar" 4-back alignment designed for power running inside and off-tackle.⁹⁵
- **Nuance & Strategy:** This formation was highly effective for its time but was so specialized and dependent on unique personnel (namely, Center Mel Hein) that it died out with his retirement.⁹⁵ It is not used in modern football.

24. Double Wing

- **Classification:** 4-Back Alignment / Maximum
- **Alignment:** A 4-back set. It typically features a *balanced* line with two Tight Ends, with a Wingback aligned off *each* TE (1x1). The backfield is completed by a QB Under Center and a Fullback deep behind him.⁸⁶
- **Nuance & Strategy:** This is a "condensed" power offense, designed to out-leverage the defense at the point of attack with double teams and multiple blockers. It is famous for its "Wedge, Power Toss, and Counter" plays, relying on power and misdirection.⁸⁸ It is extremely difficult to defend without specific preparation due to its unique, compressed alignment.⁸⁹

25. Short Punt Formation

- **Classification:** 4-Back Alignment / Maximum
- **Alignment:** A historical 4-back set. It featured a balanced line with a deep "Tailback" (the punter/passers) positioned 5-yards deep (shallower than a true punter), with three other "up backs" arranged in front of him for protection.⁹⁷
- **Nuance & Strategy:** This was a versatile "triple-threat" formation. The snap could lead to a run, a pass, or a quick punt, keeping the defense guessing.⁹⁷ Used extensively by "point-a-minute" teams⁹⁷, it is considered a direct precursor to the modern Shotgun formation.⁹⁸

26. Single Wing

- **Classification:** 4-Back Alignment / Maximum

- **Alignment:** The historical 4-back set. It features an *unbalanced* line (e.g., four linemen on one side of the center).⁸³ The four backs are: a **Tailback** (the primary "triple-threat" player who receives the long snap⁸²), a **Fullback** (a power runner/blocker⁸²), a **Blocking Back** (who is nominally the "Quarterback" but serves as a lead blocker⁸²), and a **Wingback**.⁸³
- **Nuance & Strategy:** Invented by Pop Warner, this formation was designed for deception, power, and to maximize the talents of a "triple-T" (run, pass, kick) Tailback like Jim Thorpe.⁸²

27. Wildcat

- **Classification:** 4-Back Alignment / Maximum
- **Alignment:** The defining feature is a *direct snap* to a non-QB (e.g., a Running Back or Wide Receiver) who is positioned in the QB/Shotgun spot.⁹¹ This player is accompanied by other backs (e.g., a FB, a Wingback, or a player in motion) to create a 3- or 4-back set. The team's actual QB is often split out as a WR.
- **Nuance & Strategy:** The Wildcat is the *direct modern descendant of the Single Wing*.⁸⁴ Its strategic advantage is creating a "plus-one" numerical superiority in the run game. By making the snap-taker (a primary runner) a threat, the offense gains a numbers advantage against a defense that is used to "ignoring" a traditional QB after the handoff.

Works cited

1. What makes an offensive formation illegal? : r/NFLNoobs - Reddit, accessed November 16, 2025, https://www.reddit.com/r/NFLNoobs/comments/rq51hi/what_makes_an_offensive_formation_illegal/
2. RULE 7 - Snapping and Passing the Ball - :: NCAA Football Rules Online, accessed November 16, 2025, <https://rulebook.github.io/en/interpretations/rules/7/>
3. 2023-NCAA-Football-Rule-Book.pdf - Texas Association of Sports Officials, accessed November 16, 2025, <https://taso.org/wp-content/uploads/2023/05/2023-NCAA-Football-Rule-Book.pdf>
4. SENIOR TACKLE - USA Football, accessed November 16, 2025, <https://fdm.usafootball.com/docs/default-source/default-document-library/senior-tackle-rulebook.pdf>
5. What is an illegal formation? : r/NFLNoobs - Reddit, accessed November 16, 2025, https://www.reddit.com/r/NFLNoobs/comments/1amppgz/what_is_an_illegal_formation/
6. General Football Terms, accessed November 16, 2025, <https://thecollegefootballgirl.com/football-terms/the-basics/general-football-terms/>
7. Pre Season Guide Formations.docx - MPSSAA, accessed November 16, 2025, https://www.mpssaa.org/assets/1/6/Pre_Season_Guide_Formations.docx.pdf

8. Football Points of Emphasis - 2024 - NFHS, accessed November 16, 2025, <https://nfhs.org/resources/sports/football-points-of-emphasis-2024>
9. American Football NCAA Approved Ruling 7-1-4 - sportscollaboration, accessed November 16, 2025, <https://sportscollaboration.com/american-football-ncaa-approved-ruling-7-1-4/>
10. "Sniffer" Alignment Methodologies in Spread Gap Schemes | X&O Labs, accessed November 16, 2025, <https://www.xandolabs.com/the-lab/offense/personnel/11-personnel-concepts/sniffer-alignment-methodologies-in-spread-gap-schemes/>
11. The Oregon Offense: The H-Back Position | FishDuck, accessed November 16, 2025, <https://fishduck.com/2018/08/the-oregon-offense-the-h-back-position/>
12. Sniffer or Traditional Fullback for Offset I (Pistol and Under Center) - Reddit, accessed November 16, 2025, https://www.reddit.com/r/footballstrategy/comments/17bkrpy/sniffer_or_traditional_fullback_for_offset_i/
13. How to line-up your RB and H-back to formations : r/footballstrategy - Reddit, accessed November 16, 2025, https://www.reddit.com/r/footballstrategy/comments/1mfima8/how_to_lineup_your_rb_and_hback_to_formation/
14. T Formation Offense (Coaching Guide With Images) - Football Advantage, accessed November 16, 2025, <https://footballadvantage.com/t-formation-offense/>
15. I formation - Wikipedia, accessed November 16, 2025, https://en.wikipedia.org/wiki/I_formation
16. Positions, Formations, and Alignment - Wing-T Youth Football Coach, accessed November 16, 2025, <https://wingt-coach.com/wing-t-basics-positions-positions-positions-and-alignment/>
17. What Are the Shotgun and Pistol Formations in Football? - LiveAbout, accessed November 16, 2025, <https://www.liveabout.com/the-shotgun-and-the-pistol-1335526>
18. What is the difference between the main types of offense (pistol, spread, west coast etc) : r/footballstrategy - Reddit, accessed November 16, 2025, https://www.reddit.com/r/footballstrategy/comments/gbf3ui/what_is_the_difference_between_the_main_types_of/
19. The Complete Guide to Offensive Football Formations (HUGE List ..., accessed November 16, 2025, <https://throwdeependpublishing.com/blogs/football-glossary/the-complete-guide-to-offensive-football-formations>
20. Pistol Formation Offense (Coaching Guide With Images), accessed November 16, 2025, <https://footballadvantage.com/pistol-formation/>
21. Wing T Offense: Comprehensive Guide to Deception and Power - Football Times, accessed November 16, 2025, <https://www.footballtimes.org/blog/wing-t>
22. The Wing-T Offense: An In-Depth Guide - Throw Deep Publishing, accessed November 16, 2025, <https://throwdeependpublishing.com/blogs/football-glossary/the-wing-t-offense-an->

[in-depth-guide](#)

23. Effective Use of H-Back Concepts [ARTICLE] - Coaches Insider, accessed November 16, 2025, <https://coachesinsider.com/football/effective-use-of-h-back-concepts-article/>
24. The Flexbone Offense: An In-Depth Guide – Throw Deep Publishing, accessed November 16, 2025, <https://throwdeeppublishing.com/blogs/football-glossary/the-flexbone-offense-a-n-in-depth-guide>
25. The Difference Between the Wishbone and the Flexbone - YouTube, accessed November 16, 2025, <https://www.youtube.com/watch?v=GkSFe4Ojq7o>
26. Breaking Down the Empty Backfield Formation | Score 50 Football Podcast - YouTube, accessed November 16, 2025, <https://www.youtube.com/watch?v=JpW36RS9V6E>
27. Coaches: How do you setup your empty formations? : r/footballstrategy - Reddit, accessed November 16, 2025, https://www.reddit.com/r/footballstrategy/comments/aa6g8q/coaches_how_do_you_setup_your_empty_formation/
28. Rebuilding the Patriots' Passing Game: Empty Formations - CLNS Media, accessed November 16, 2025, <https://www.clnsmedia.com/patriots-offense-empty/>
29. 7 Explosive Run Plays Out of the Empty Formation - YouTube, accessed November 16, 2025, <https://www.youtube.com/watch?v=LKD9-LHdWxU>
30. QUADS/4 Strong LEAD-SWING Passes (Use Your BASE Concepts!) - YouTube, accessed November 16, 2025, <https://www.youtube.com/watch?v=21tVtew6rNo>
31. Football 101 - Offensive Personnel Packages Common in the NFL - 49ers News, accessed November 16, 2025, <https://insidethe49.com/z/offensive-personnel-packages-nfl/>
32. Deciphering Football's Personnel Codes on Offense and Defense - Kinetex | Blog, accessed November 16, 2025, <https://blog.kinetex.co/deciphering-footballs-personnel-codes-on-offense-and-defense/>
33. Single set back - Wikipedia, accessed November 16, 2025, https://en.wikipedia.org/wiki/Single_set_back
34. Singleback Offense 101 - Football Plays, accessed November 16, 2025, <https://www.football-tutorials.com/singleback-offense/>
35. Every Offensive Formation Explained in 18 Minutes - YouTube, accessed November 16, 2025, <https://www.youtube.com/watch?v=sRallyv95hs>
36. Offensive Formations, accessed November 16, 2025, <https://brucey.net/nflab/howtoplay/formation.html>
37. FSU Football Breakdown: How Norvell Uses Unbalanced Formations - YouTube, accessed November 16, 2025, <https://m.youtube.com/watch?v=ZYv94BZD9Io&pp=0gcJCccJAYcqIYzv>
38. Trying to Understand Formations : r/footballstrategy - Reddit, accessed November 16, 2025, [https://www.reddit.com/r/footballstrategy/comments/rlugul/trying_to_understand](https://www.reddit.com/r/footballstrategy/comments/rlugul/trying_to_understand_formation/)

- formations/
39. Lincoln Riley's offset RB Alignment : r/footballstrategy - Reddit, accessed November 16, 2025,
https://www.reddit.com/r/footballstrategy/comments/1f9quxy/lincoln_rileys_offset_rb_alignment/
 40. How would this formation be called in the NFL or college? : r/footballstrategy - Reddit, accessed November 16, 2025,
https://www.reddit.com/r/footballstrategy/comments/1fmh57x/how_would_this_formation_be_called_in_the_nfl_or/
 41. Pro Set Offense | Pro Set Football Plays | Football Tutorials, accessed November 16, 2025, <https://www.football-tutorials.com/pro-set-offense/>
 42. Pro Set Formation (Offense) Diagram - Football - Conceptdraw.com, accessed November 16, 2025,
<https://www.conceptdraw.com/examples/american-football-pro-formation>
 43. I-Formation Offense 101 - Football Plays, accessed November 16, 2025,
<https://www.football-tutorials.com/i-formation-offense-101/>
 44. Why do we still see the I formation in the NFL but not the split back and near/far formations? : r/footballstrategy - Reddit, accessed November 16, 2025,
https://www.reddit.com/r/footballstrategy/comments/1did1y0/why_do_we_still_see_the_i_formation_in_the_nfl/
 45. What's the difference between the strong side and the weak side? And why is that distinction any more useful than left vs. right? : r/NFLNoobs - Reddit, accessed November 16, 2025,
https://www.reddit.com/r/NFLNoobs/comments/1732ikf/whats_the_difference_between_the_strong_side_and/
 46. Looking for info on the Far and Near formations : r/footballstrategy - Reddit, accessed November 16, 2025,
https://www.reddit.com/r/footballstrategy/comments/18qph76/looking_for_info_on_the_far_and_near_formation/
 47. Split Back Formation & RPO Guide - vIQtory Sports, accessed November 16, 2025, <https://www.viqtorysports.com/oklahoma-split-backs/>
 48. Dominating Defenses with the Shotgun Split Back Formation - YouTube, accessed November 16, 2025, https://www.youtube.com/watch?v=x2fb_Am5iEY
 49. Split Backs in the Pass Game | The Spread Offense, accessed November 16, 2025,
<https://spreadoffensefootball.com/split-backs-in-the-pass-game/>
 50. The I Formation - Football 101, accessed November 16, 2025,
<https://football.calsci.com/IFormation.html>
 51. The I formation | Jerry Campbell Football, accessed November 16, 2025,
<https://jcfb.forums.net/thread/17322/the-i-formation>
 52. ITP Glossary: Offset I-formation | The Scouting Academy, accessed November 16, 2025, <https://scoutingacademy.com/itp-glossary-offset-i-formation/>
 53. 12 Personnel formations : r/footballstrategy - Reddit, accessed November 16, 2025,
https://www.reddit.com/r/footballstrategy/comments/1h8h4c0/12_personnel_formation/

54. Sniffer to or away from the TE: Which do you prefer in a Base Formation? : r/footballstrategy, accessed November 16, 2025, https://www.reddit.com/r/footballstrategy/comments/z9hzp3/sniffer_to_or_away_from_the_te_which_do_you/
55. Can someone explain to me the difference between the formations Full House Tight and Split T Tight? : r/footballstrategy - Reddit, accessed November 16, 2025, https://www.reddit.com/r/footballstrategy/comments/1g9pweg/can_someone_explain_to_me_the_difference_between/
56. T formation - Wikipedia, accessed November 16, 2025, https://en.wikipedia.org/wiki/T_formation
57. accessed November 16, 2025, <https://footballadvantage.com/t-formation-offense/#:~:text=T%20Formation%20Sweep&text=The%20design%20of%20the%20play.defense%20will%20have%20possible%20tacklers.>
58. T Formation Plays for Youth Football | Playbook Series, accessed November 16, 2025, <https://youthfootballonline.com/t-formation-plays-for-youth-football/>
59. What are base plays of the Wing T offense? : r/footballstrategy - Reddit, accessed November 16, 2025, https://www.reddit.com/r/footballstrategy/comments/1fao640/what_are_base_plays_of_the_wing_t_offense/
60. T Formation Variations; 5 Proven T Off-Tackle Plays Part 2, accessed November 16, 2025, <https://coachparker.org/2022/01/12/t-formation-variations/>
61. T Formation; Full House, Split T Offense, Power T; 30 Plus Formations - Coach Parker, accessed November 16, 2025, <https://coachparker.org/2022/01/04/t-formation/>
62. Difference Between Power T and Classic T formation : r/NFLNoobs - Reddit, accessed November 16, 2025, https://www.reddit.com/r/NFLNoobs/comments/1kewubu/difference_between_power_t_and_classic_t_formation/
63. The Split T Formation That Revolutionized Football! - YouTube, accessed November 16, 2025, <https://www.youtube.com/watch?v=0I3gix4iVR0>
64. Dominating Defenses with the Shotgun Wing T Offense - YouTube, accessed November 16, 2025, <https://www.youtube.com/watch?v=R5-iw-UoE8Q>
65. Why the Gun T may be the perfect High School Offense. : r/footballstrategy - Reddit, accessed November 16, 2025, https://www.reddit.com/r/footballstrategy/comments/1dty1y6/why_the_gun_t_may_be_the_perfect_high_school/
66. Gun T RPO - Alignment, Tags and Play Calling. Breaking down the details. - CoachTube, accessed November 16, 2025, <https://coachtube.com/course/football/gun-t-rpo-alignment-tags-and-play-calling-breaking-down-the-details/11595715>
67. Power I Formation Plays & Playbook - Youth Football Online, accessed November 16, 2025, <https://youthfootballonline.com/power-i-formation-plays-playbook/>
68. Choosing a Youth Football Offense Part 4 Proven Top I, WB, T & Power I - Coach Parker, accessed November 16, 2025,

- <https://coachparker.org/2023/09/06/choosing-a-youth-football-offense-part-4/>
69. Steamroll Defenses with the Maryland I-Formation Offense - YouTube, accessed November 16, 2025, <https://www.youtube.com/watch?v=EAbIWKEKLFc>
 70. Yo this formation is Wild! : r/NCAAFBseries - Reddit, accessed November 16, 2025, https://www.reddit.com/r/NCAAFBseries/comments/16hsdxx/yo_this_formation_is_wild/
 71. Wishbone Offense (Coaching Guide With Images) - Football Advantage, accessed November 16, 2025, <https://footballadvantage.com/wishbone-offense/>
 72. Wishbone formation - Wikipedia, accessed November 16, 2025, https://en.wikipedia.org/wiki/Wishbone_formation
 73. The Rise And Fall of the Wishbone Offense - Why is it no longer used? - YouTube, accessed November 16, 2025, <https://www.youtube.com/watch?v=2JGIlnGBBLA>
 74. Triple option - Wikipedia, accessed November 16, 2025, https://en.wikipedia.org/wiki/Triple_option
 75. Why the Flexbone Solves More Problems - YouTube, accessed November 16, 2025, <https://www.youtube.com/watch?v=mNWkxtfm08c>
 76. Is there any advantages to running the option out of the Flexbone vs the Wishbone? - Reddit, accessed November 16, 2025, https://www.reddit.com/r/footballstrategy/comments/1e3wgfb/is_there_any_advantages_to_running_the_option_out/
 77. What are the pros and cons of all the ways you can run the triple option? - Reddit, accessed November 16, 2025, https://www.reddit.com/r/footballstrategy/comments/1f0p2za/what_are_the_pros_and_cons_of_all_the_ways_you/
 78. How did the FULLback position become aligned between the QUARTERback and HALFback? : r/nfl - Reddit, accessed November 16, 2025, https://www.reddit.com/r/nfl/comments/moserb/how_did_the_fullback_position_become_aligned/
 79. Inside Penn State's Playbook: Diamond Formation - For The Blogy, accessed November 16, 2025, <https://fortheblogy.com/inside-penn-states-playbook-diamond-formation/>
 80. Diamond Formation: Misdirection and Option Concepts | X&O Labs, accessed November 16, 2025, <https://www.xandolabs.com/the-lab/offense/personnel/30-personnel-concepts/diamond-formation-misdirection-and-option-concepts/>
 81. The "Diamond" formation and other multi-back "pistol" sets | Smart Football, accessed November 16, 2025, <http://smartfootball.com/offense/the-diamond-formation-and-other-multi-back-pistol-sets>
 82. History Single Wing Offense | Jerry Campbell Football, accessed November 16, 2025, <https://jcfb.forums.net/thread/16676/history-single-wing-offense>
 83. Single-wing formation - Wikipedia, accessed November 16, 2025, https://en.wikipedia.org/wiki/Single-wing_formation
 84. The Single Wing Formation - Football's Lost Masterpiece - YouTube, accessed November 16, 2025, https://www.youtube.com/watch?v=XdxqnS_WUqg

85. What's Old Is New... | talkfootball, accessed November 16, 2025, <https://coachgarner.wordpress.com/2011/01/29/whats-old-is-new/>
86. Doublewing Offense Fundamentals! Spacing and Alignment. #football #coaching #youthfootball #offense - YouTube, accessed November 16, 2025, <https://www.youtube.com/watch?v=GUBggQqbdnU>
87. Double wing question : r/footballstrategy - Reddit, accessed November 16, 2025, https://www.reddit.com/r/footballstrategy/comments/1ekbxzs/double_wing_questi_on/
88. Defending the Double Wing Offense with 6-2 Defense & 62x8 - Coach Parker, accessed November 16, 2025, <https://coachparker.org/2021/08/24/defending-the-double-wing-offense/>
89. 44 VS Double Wing Offense | Jerry Campbell Football, accessed November 16, 2025, <https://jcfb.forums.net/thread/12718/44-vs-double-wing-offense>
90. How to Defend the Double Wing Offense - FootballCoach.com, accessed November 16, 2025, <https://footballcoach.com/how-to-defend-the-double-wing-offense/>
91. Wildcat formation - Wikipedia, accessed November 16, 2025, https://en.wikipedia.org/wiki/Wildcat_formation
92. Single Wing Offensive Formation Diagrams Part 1 - Coach Parker, accessed November 16, 2025, <https://coachparker.org/2020/02/10/single-wing-offensive-formation-diagrams-part-1-single-wing-offense/>
93. Understanding The Single Wing and Wildcat - Football Toolbox, accessed November 16, 2025, <https://footballtoolbox.net/understanding-the-single-wing-and-wildcat>
94. A formation - Wikipedia, accessed November 16, 2025, https://en.wikipedia.org/wiki/A_formation
95. Old School: The "A" Formation | talkfootball - WordPress.com, accessed November 16, 2025, <https://coachgarner.wordpress.com/2011/02/15/old-school-the-a-formation/>
96. The "A" Formation:: Simplified & Updated | PDF | History - Scribd, accessed November 16, 2025, <https://www.scribd.com/doc/234719603/Wild>
97. Short punt formation - Wikipedia, accessed November 16, 2025, https://en.wikipedia.org/wiki/Short_punt_formation
98. Short Punt Formation: The Scheme That Changed Football Forever - YouTube, accessed November 16, 2025, <https://www.youtube.com/watch?v=vpv6WoDsGj0>
99. List of formations in American football - Wikipedia, accessed November 16, 2025, https://en.wikipedia.org/wiki/List_of_formation_in_American_football
100. How 12 Personnel Formation Improves Football Performance - CU Independent, accessed November 16, 2025, <https://www.cuindependent.com/how-personnel-formation-improves-football-performance/>
101. 11 Personnel Explained: The Backbone of Modern Offenses - YouTube, accessed November 16, 2025, <https://www.youtube.com/watch?v=0HzN-MlaJOc>
102. Motion (gridiron football) - Wikipedia, accessed November 16, 2025,

[https://en.wikipedia.org/wiki/Motion_\(gridiron_football\)](https://en.wikipedia.org/wiki/Motion_(gridiron_football))

103. Ask the Official: Motion and shift rules are governed by movement, not vocal commands, accessed November 16, 2025,

<https://blogs.usafootball.com/blog/711/ask-the-official-motion-and-shift-rules-are-governed-by-movement-not-vocal-commands>

104. Can anyone explain difference in shift vs motion? (if possible, ELI5) : r/footballstrategy, accessed November 16, 2025,

https://www.reddit.com/r/footballstrategy/comments/15b689q/can_anyone_explain_difference_in_shift_vs_motion/

105. Maryland I : r/footballstrategy - Reddit, accessed November 16, 2025,

https://www.reddit.com/r/footballstrategy/comments/1nuhxbq/maryland_i/