Planning effective serve-receive formations for lower skill level teams

Maximizing your success in the serve/serve-receive battle

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Sport: Junior Volleyball

Introduction

For a lower skill level volleyball team the proper selection, training, and competitive use of carefully chosen serve-receive formations can have a large positive impact on team performance in the execution of a team's serve-receive performance and therefore the outcome of their matches.

At this level of skill proper player placement on the floor for serve-receive often has a larger impact on the match results than any offensive or defensive systems that a coach might implement with his/her team. The first touch on an opponent's serve and the quality of the passing result has a large impact on points scored in the serve/serve-receive battle.

Too often beginning and intermediate level players are asked to pass in a 2 or 3 person serve-receive formation when they do not yet have the ability to move to the ball in a timely manner. This leads to many opponent aces which are combined with the receiving team often poorly passing balls that put their team into a subsequent team error or a free ball return to their opponent.

If a coach can carefully implement appropriate serve-receive patterns alongside his or her passing skill training, the level of passing success will rise and also allow the setting and attacking parts of the team to improve.

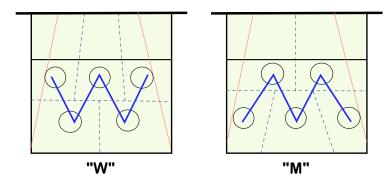
Premises for designing serve-receive defense at the lower skill levels

- Players on these teams will have or are developing a basic knowledge of the rules of the game and have started training proper movement footwork and the corresponding techniques for both over and underhand passing. They have begun to get more consistent on passing to target.
- The players will be introduced to or have a basic understanding of how to work together in handling serves that arrive in the seams between them, both side to side and front to back, and they also have an understanding of the "W" and "M" 5-person serve-receive patterns.
- The players on the team will have a widely diverse set of capabilities for passing consistently (i.e. proper and consistent execution of passing technical skills) nor will all players have an equal ability to anticipate and read the direction and speed of the serve over the net.
- Communication and cooperation between the players are still in the early stages of development (e.g. talking to each other and loudly calling the ball, passers covering the seams between each other).
- Only basic setting skills will or are being used by the team (i.e. forward and back sets but not first tempo sets).
- Team hitters know how to hit a down ball and in many cases can attack a medium to high set at either antenna.
- Few opponent servers will consistently serve to a particular serve-receive formation pattern (e.g. serving to an open area of court, or serving short 3x in a row).
- You or your team's other coaches will be able to make serve-receive pattern adjustments to deal with an opponent's occasional powerful or tactically advanced server.

Overview of serve-receive formations and patterns

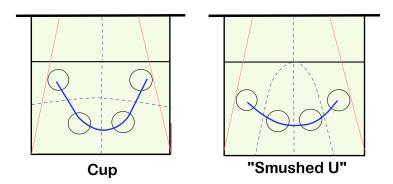
The 5 person serve-receive formation is a generally accepted choice for beginning level volleyball teams. All beginning teams can learn to effectively pass within these formations as each passer has a relatively small area of responsibility and required movement is reduced.

The classic "W" pattern is a good method of receiving varying and reasonably uncontrolled serves, while an "M" formation can be used when playing teams who can serve short and long consistently. Note that although the "W" pattern is more widely known and accepted, the "M" pattern can fit very well within a front row setter offense and the serve-receive angles.

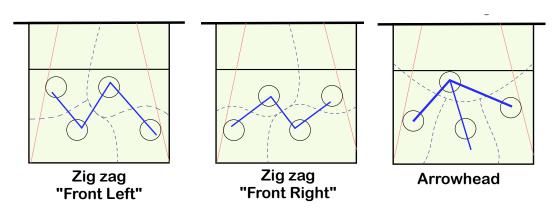


Utilizing a 4 person serve-receive formation has several advantages for an intermediate level team. It can hide a weak front or back court service reception player, increase the available number of serve reception patterns, and can also position a hitter with no passing responsibilities to be ready to attack after a good pass and subsequent set.

The half-circle (Cup) 4 player pattern is a good response to varying or unpredictable serves. The 4 player line pattern (i.e. a 'smushed' U') helps for passing serves that are fast and low and are served deep into the back court area.



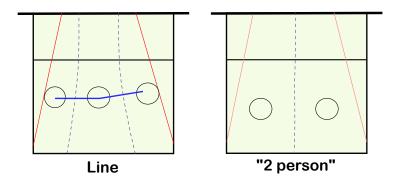
The zigzag pattern, both the front left or front right (sometimes called foward or reverse "N"), is effective at handling both short and deep serves and allows easier placement of the team's better passers to the most likely served-to areas. The arrowhead, a modified 3 passer line pattern with the 4th passer covering the 3 meter line, has not been used as often by coaches but can be an effective interim step to a 3 person serve-receive formation.



More detailed discussions of the 4 person serve-receive patterns will be discussed later in this article.

A 3 person serve-receive formation, also commonly known as a "Line" pattern, is the most commonly used serve-receive formation today. It minimizes the number of seams and also allows a team to be more focused and efficient during practice by assigning 3-4 primary passers for all serve-receive rotations.

Use of the 2 person serve-receive pattern has only been implemented successfully at the highest levels of elite play, especially given the increased usage of the jump serve at all but the lowest levels of competition.



Why 3 or 2 person serve-receive formations aren't best for a lower skilled team

There are several tactical reasons for considering the reduction of passers for serve-receive:

Offensive

- Free up the setter(s) from receiving the pass and/or shorten their routes to target
- Free up one or more hitters to be ready to receive a first tempo set

Defensive

- Reduce the number of seams that must be covered
- Focus a smaller player group on serve-receive in practice to develop better teamwork
- Remove mediocre to poor passers from serve-receive formations
- Assigning a player for calling serves "in" or "out" at the baseline

Combinations of the above reasons

The use of a 3 or 2 person serve-receive is not appropriate at this volleyball skill level however as the negatives of players' slow reactions to the ball and inconsistent passing execution will outweigh any other tactical positives of these formations.

Many coaches comment that they introduce a 3 person serve-receive at this volleyball skill level to begin teaching them what they will need to play as they get older (e.g. High School play). But a team learning to successfully pass to target within a serve-receive formation and then performing a consistent set and attack is much more important to learn at this skill level than learning to play a 3 person serve-receive formation.

A 3 person formation leaves a lower skilled team open to being aced more often or having a team's setter(s) chasing down errant passes caused by the players' inability to move and get a proper platform to the ball. These issues will consistently minimize the chance for a good set and attack attempt.

Although facing tough serves in matches does give more repetitions and experience to passers in a true game-like situation, it also often gives away points while lowering the confidence level of the passers and the team overall, ultimately limiting the team's performance.

One or more opponent servers who can serve either short or fast, deep serves can also easily exploit a lower skilled passing team when there are only 2 or 3 passers.

Another reason often given for early use of a 3 person formation is to make a hitter available for a first tempo attack. This offense tactic is only effective if the pass is consistently delivered accurately to the setter target area while also achieving a level of sophisticated timing between the setter and hitter. If your passers are slow arriving to the ball and can't pass consistently or the setter and quick hitter haven't perfected their timing yet, a hitter being available for the first tempo set doesn't really give a team any advantage.

Meanwhile the increased amount of court coverage required of all the team's 3 passers will increase player match stress and is likely reduce the effectiveness of the team's overall passing results, significantly lowering its ability to run a successful first tempo offense.

A coach should not reduce the number of passers on the court until the players can demonstrate they can read, move to the ball's arrival, and pass tough serves accurately on a regular basis. As a team's players get better at passing, a coach can look into removing a player from the 5 player serve-receive formation to a 4 person receive pattern. This should be an earned journey, backed by facts.

Each formation change a coach makes which will use a smaller number of players (e.g. 4 passers versus 5, 3 versus 4, 2 versus 3) should only be implemented if the team can demonstrate that fewer passers provides the same or improved team passing efficiency and effectiveness as before. Reducing passers should never be made to improve offensive options if the overall quality or consistency of the team's passing degrades compared to the use of a larger number of passers.

A coach must observe, record, and know how much better or worse the passing becomes with each reduction in the number of passers on the court. Most coaches at this skill level will find their team statistics will not support a 3 passer serve-receive formation.

Advantages and Issues to implementing a 4 person serve-receive formation

A 4 person serve-receive pattern is a good intermediate step between the 5 person beginner formations and the 3 person "line" pattern used by more advanced teams. However, there are both advantages and issues that must be understood when looking at the 4 person serve-receive formation.

Advantages

Compared to a 3 person receive formation, a 4 person formation allows a passer to have a relatively smaller area of court responsibility where each player is able to reach most serves in their area of responsibility within 2 steps from his or her base position. This smaller responsible passing area increases the players' ability to arrive at the ball path quickly and have more success passing the serve, thereby bringing more success and confidence in subsequent play by both the passing players and the team overall.

Many 4 person patterns can also position the setter and either a front row hitter or a lesser skilled passer in more advantageous locations. Using various 4 person patterns across a team's 6 rotations will also make the serving zone choices more difficult for the opponent's servers while also allowing the coach to have more options in placing the team's best passers near the center of the court more often.

Issues

Depending on the team's level of specialization, using a four person serve-receive formation may require a differing serve-receive formation pattern for each rotation depending on the setter's position in the rotation, the location of that rotation's best passers, and the location of some primary hitters. This means more work on and off the court to successfully plan and implement the correct patterns for the team.

As a consequence of these additional complexities and considerations, more preparation time will be required by the coach to determine his/her serve-receive patterns for each rotation. Multiple patterns are also more complex for the players to learn and therefore may limit the coach's ability to make rapid lineup changes in emergency situations or as the season progresses.

Various 4 person serve-receive patterns

As there are several 4 person formation patterns that can be deployed, it is important to understand the area of the court with the highest probability of the serves' arrival, either in general or from a particular server, and then position the team to best handle those serves.

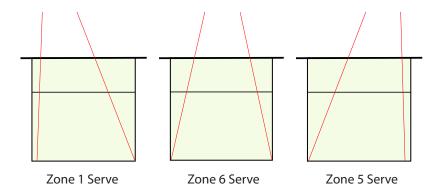
By making the primary defensive court smaller in this way, each passer's primary court area will also be greatly reduced. Each passer can then concentrate on ensuring he or she can pass consistently from their relatively smaller primary area of responsibility. The "lower risk" areas of the court must still be defended by the passer, but (s)he can be encouraged to use a less accurate pass toward the mid-court when receiving serve in those court areas.

When reducing areas of primary coverage on the low probability serve arrival areas, the team must also understand the danger areas¹ of each receive pattern and spend time practicing passing serves specifically to those areas.

Implementing your serve-receive formation and patterns

Step 1- Align the serve-receive pattern to the opponents' serve angles

The first thing to consider in positioning the passers is the angle of the serve from Zones 1, 6, and 5. By considering these general angles of serve, it is much clearer where the passers should position themselves on the court as the areas outside of the serving angles are highly unlikely to receive serves from that zone.



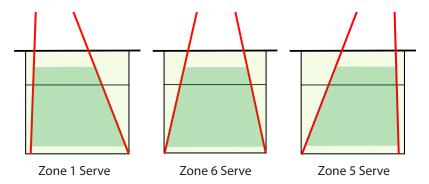
As the areas outside the lines of these serving angles have a relatively low percentage of having a serve arrive that is in bounds, the placement of the serve-receive passers should be within these receive serve angles and facing the server when (s)he contacts the ball.

¹ Serve-receive formation danger areas are court areas that are relatively far away from a passer's base position (e.g. more than 2 steps) and the passing seams between two or more passers.

Step 2 - Further reduce the primary focus area, both at the net and also at the baseline

The other "low risk" serve-receive areas of the court includes the front 5 feet (aprox 1.5m) of the court area next to the net and the last meter (3 feet) inside the team's baseline. At this skill level of play few opponent servers can consistently place their serves in these areas.

The placement of the passers should always be inside those low risk areas. By focusing on the serve angles and the most likely serve area of the court, the passers have reduced their primary coverage areas of the court by over 20% (See the green shaded areas below).



This reduced court focus area does not minimize defensive effort, but it does allow the players to understand where they need to focus and the court areas from where they must pass consistently to the target.

The coach should set high standards for passing success when players pass from the team's "green zone". The passers should also defend serves that arrive in lower risk areas (i.e. outside the green shaded areas) but they should understand that getting the ball up to the center of the court around the 10 foot line is what will be accepted by the coach until their anticipation and movement skills are further developed.

So by focusing serve-receive toward the high probability serve arrival areas, a team's chances of being in a position to pass successfully will increase, which will lead to a higher level of play in other aspects of the game.

In summary, I am proposing to have the passers focus on a reduced court area where over 85% of the passes will arrive. The players will feel more confident if they can focus on a smaller court area while also being held accountable for a consistently higher level of execution from those areas.

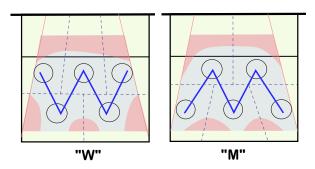
Step 3 - Pick the serve-receive formation and patterns that optimizes your passing success

Five person formations

The lowest skill level teams will often use the two primary variations of a five-person serve reception formation which aims at improving the serve reception capabilities of all the players while giving 5 of the 6 players a chance to be involved in receiving serve in each rotation.

These two patterns, the "W" and the "M", allows a team's players to learn passing as a unit: calling for the ball, managing parallel movement to cover seams, judging serve angle, ball direction and speed, using efficient footwork, and passing to target.

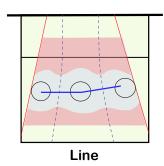
The areas of the court that are both most likely to have a serve arrival and to give the team's passer trouble should be understood by the team and who is responsible for them. The following graphics highlight the danger areas in red shading and the dotted seam lines. These examples show a serve coming from zone 6; a team's passing angles and associated passing seams should be adjusted left or right if the serve originates from either zone 1 or 5.



Three person formation

As mentioned earlier, the 3 person line formation should only be implemented only if the team passes better (i.e. less aces against, higher passing averages at the individual and team level, etc) then they do when in a 4 or 5 person formation. Only when your team can pass consistently should you think about quick sets and optimizing for first ball offense from a 3 person serve-receive formation.

The significant size of the danger zones for this formation are shown below.

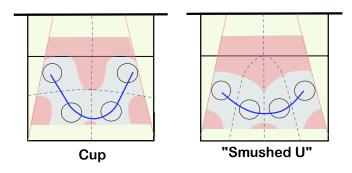


Four person formations

Once a team's passers have started to master reading the servers, anticipating the flight and speed of the ball, and properly covering the seams, a coach can consider a 4 person formation with team passers responsible for a larger court area.

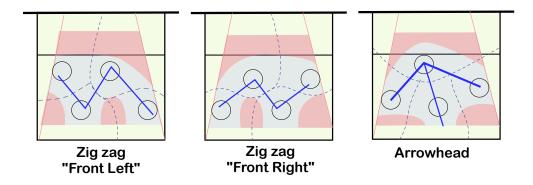
Each 4 person receive pattern (i.e. cup, zig zag, ,etc.) leaves open different "danger" areas, requiring additional focus and regular practice by the team's passers.

The Cup/"U" pattern and it's line-like variation, the "Smushed U", leave a large red danger zone in the center and front of the court. The center court is the very location many lower level opponents are aiming their serves and these particular patterns also require a lot of communication and proactive reaction by passers when receiving a fast serve down the middle. I don't recommend these patterns for an intermediate passing skill level team except in special circumstances in a particular rotation.



The zig zag patterns, both front left and front right, do not leave the middle of the court open and also fit nicely within the court area most likely to receive the serve. The red danger areas for these patterns are ahead of the attack line, one corner and the baseline seam between the two back row passers.

The arrowhead pattern has danger areas in both corners, in the opposite court side of the 4th passer's location, and the seam between the passer postioned at the attack line and the 3 passers behind him/her.



Tactical considerations

When a team chooses to use different patterns in each rotation, opposing servers will find it more difficult to consistently exploit the danger areas within these formations with their serve. Changing the formations even slightly (e.g. "N" versus "reverse N") between subsequent rotations will make it more difficult for the opponent to draw a conclusion on who to serve to in each rotation.

As the team's season progresses and the opponent's serving becomes even faster and more difficult to handle, being able to tactically vary differing danger areas of the court can become a good defensive weapon.

Step 4 - Always place your best passers in the most strategic locations for each rotation

The placement of your passers in each serve-receive rotation should be determined by the passing proficiency of the players. This is done by analyzing passing statistics at both the individual and group levels by recording results of various groups of passers in serve-receive formations during competitive drills and play during practice. Taking passing statistics in game-like drills or in practice matches is preferred over simple passing drills to best understand how well various players perform when under pressure.

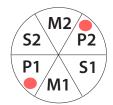
When deciding a team's "who is defending where" for each serve-receive rotation, work very hard to get your best passers covering the largest court areas and also placing them in the center of the court as often as possible. This will help your team's results, both for passing and the team's subsequent touches.

A starting point I recommend is to identify the team's primary setter, the primary middle, and two hitter athletes who are also the best passers on the team. The next step is to designate the two passer/hitters as the team's primary passers and then supplement those players with other players to form the 4 person serve-receive group for each rotation.

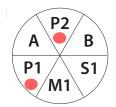
After those decisions are made, select the proper pattern (e.g. N, reverse N, arrowhead, etc) for each rotation to optimize the placement of those two players in the receive pattern while putting your lesser skilled passers in areas of less probable serve arrival areas.

One analysis (Handbook for Competitive Volleyball, by A. Papageorgiou and W. Spitzley) proposed that when running a two setter offense the best placement of a team's two primary passers would be in zones 2 and 5 for rotation 1 (i.e. Setter #1 is in zone 1). That passer placement is often seen in all levels of play today as many coaches place their outside (left side) hitters in those zones for serving rotation 1 while also designating those two players as passers in all their primary serve-receive formations.

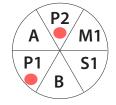
More interestingly, Papageorgiou and Spitzley advocated that when running a single setter offense a coach should consider placing the team's primary passers in zones 3 and 5 for rotation 1 as this rotation order would create the best balance for serve-receive across all rotations.



Primary Passer in Zones 2/5 2 setter system (4-2, 6-2)



Primary Passer in Zones 3/5



Primary Passer in Zones 3/5 5-1 system Middle **leads** Setter 5-1 system Middle **follows** Setter

Although this is a seemingly unconventional idea, my experience implementing it in intermediate skill club volleyball play has been very positive. Many intermediate level team coaches consider themselves fortunate if they have a single good middle blocker to specialize around both offense and defense. Many coaches then must find a second middle who is tall, interested in the position, and someone who can be trained to start with offensive tips and setting up a block. So putting a higher skilled passer/hitter directly across from the team's #1 middle player is not usually a significant negative for the team, and can provide significant benefits to being in a passing and digging role while the team's primary middle is in the front.

So designating a primary setter, a primary middle who can either lead or follow the primary setter in the lineup, 2 primary passer/hitter "all around" players, and the rest of the lineup made up of a combination of hitters and defenders who have support passing responsibilities during serve-receive, can increase the team's overall play by improving the passing part of the game. A second setter can also be designated if needed.

If desired, a libero can also be deployed as a 3rd primary passer to further increase performance in the serve-receive patterns by replacing the team's primary middle hitter and one or two other players. I personally do not recommend designating a libero on younger teams (e.g. 14 and younger) in lieu of defensive specialist substitutions as I believe all younger players should have some chances to serve.

Following this article (pages 12-13) are two examples of specific serve-receive patterns using these concepts which I implemented with club teams ranging from low to high intermediate skill levels. They show differing receive patterns given each team's passing situation during a particular season. For those coaches who are interested in positioning their teams to eventually migrate from initial 4 person patterns to a future 3 person serve-receive formation, I have included some patterns for all 6 rotations to use as a reference point (pages 14-15).

At the very back (pages16-19), I have put more comprehensive serve-receive pattern possibilities for assigning various players in 4 or 5 person formation patterns. Think of these graphics as starting ideas for your own team and how you might design the team's serve-receive with your specific players.

None of these patterns should be implemented dogmatically without thinking about what is best for your particular team. For instance, younger teams should not have to worry much about overlap issues on serve-receive as they may be penalized for committing a rotation error when playing patterns with close alignments. In these cases simple player positioning where the chance of overlap is small would be much better, even if your best passers aren't in ideal positions on the court for every rotation.

Lastly, please note that if you are interested in placing your primary passers in the traditional zones 2 and 5 for rotation 1 while running a 5-1 offense, you only need to refer to the 6-2 offense diagrams for rotations 1-3 and then the 4-2 offense diagrams for rotations 4-6 to see how it might be implemented.

Summary

Hopefully you can see the possibilities you have as a coach to teach your players how to pass effectively while also maximizing your team's success in the serve/serve-receive battle.

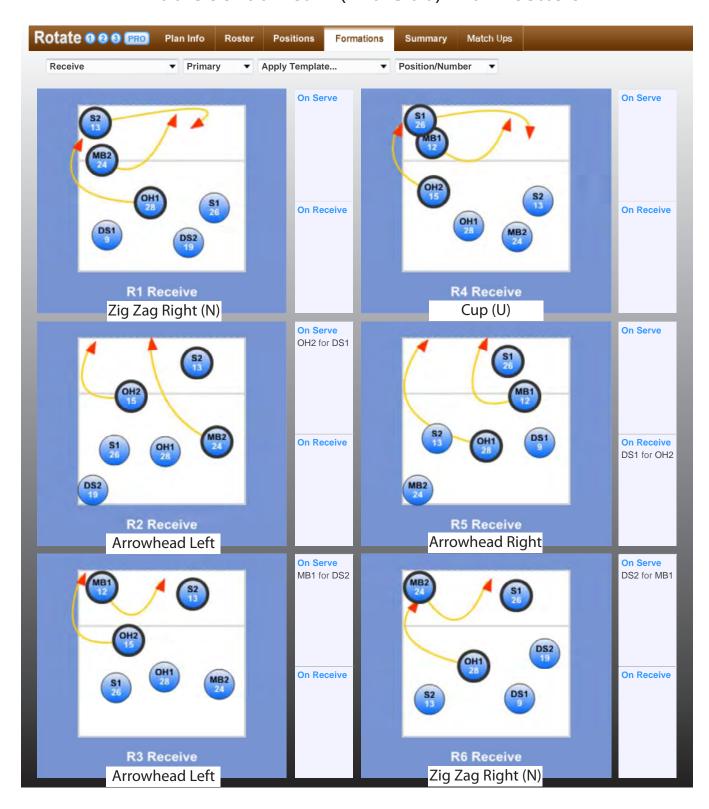
When planning and deploying serve-receive patterns for a team always remember to:

- Align each pattern to the opponents' serve angles,
- Reduce the serve-receive focus area, both at the net and also at the baseline,
- Pick the serve-receive patterns that will optimize your passing success, and
- Place your best passers in the most strategic locations for each rotation.

And don't be afraid to try these formations to improve your team's passing results, even if they are outside your comfort zone. You and your players may just find the challenge and the resultant success very rewarding!

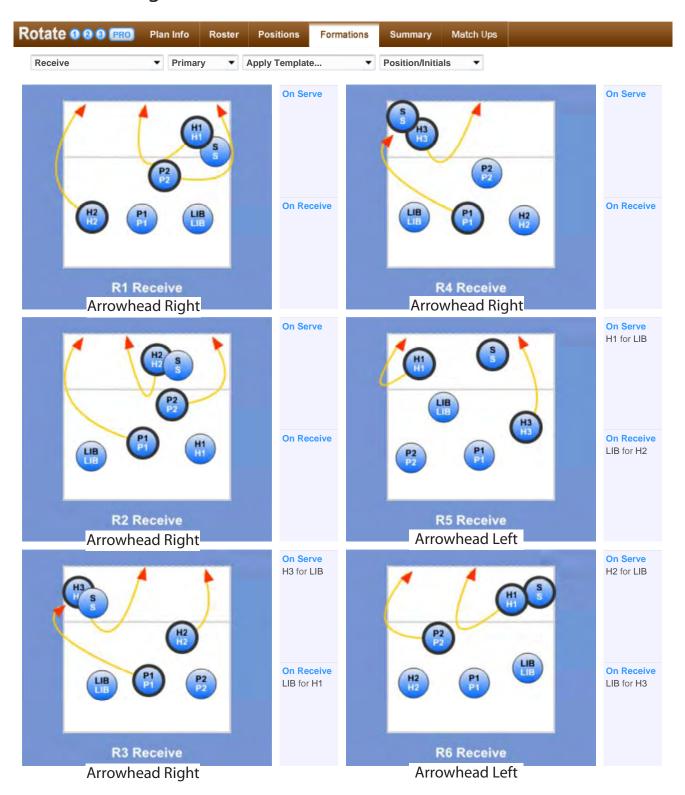
Serve-Receive Patterns - No Libero

Middle School Team (14u Club) with 2 setters



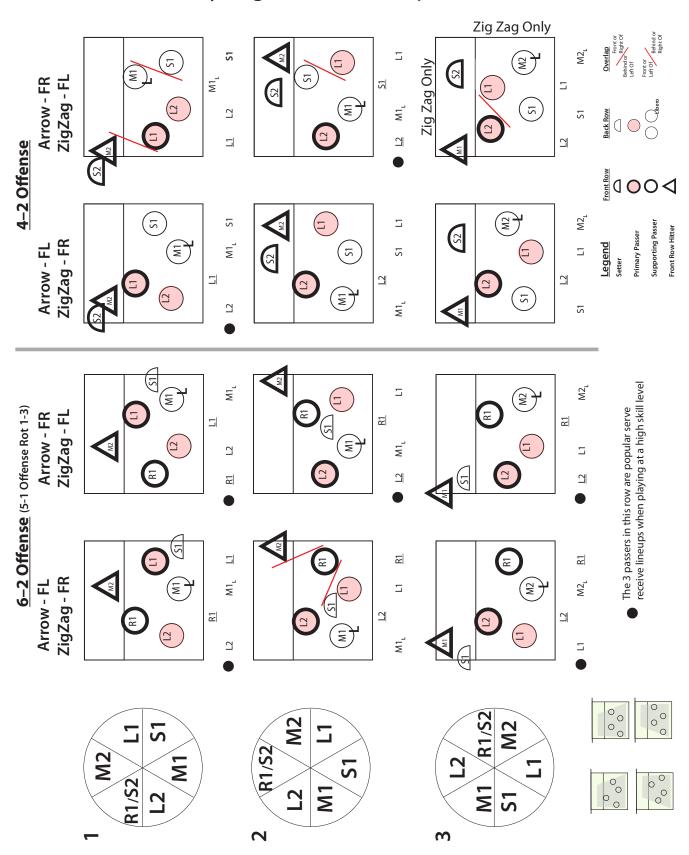
Serve-Receive Patterns - with Libero

High School JV Team (15u Club) with 1 setter



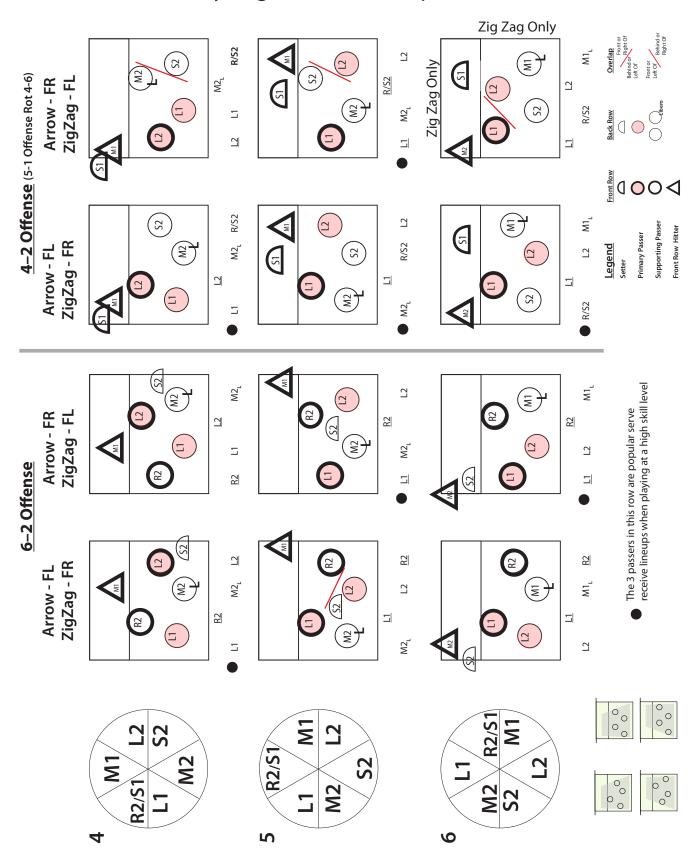
Some Four Person Serve-Receive Patterns

that can be easily migrated later to 3 person formation (1 of 2)

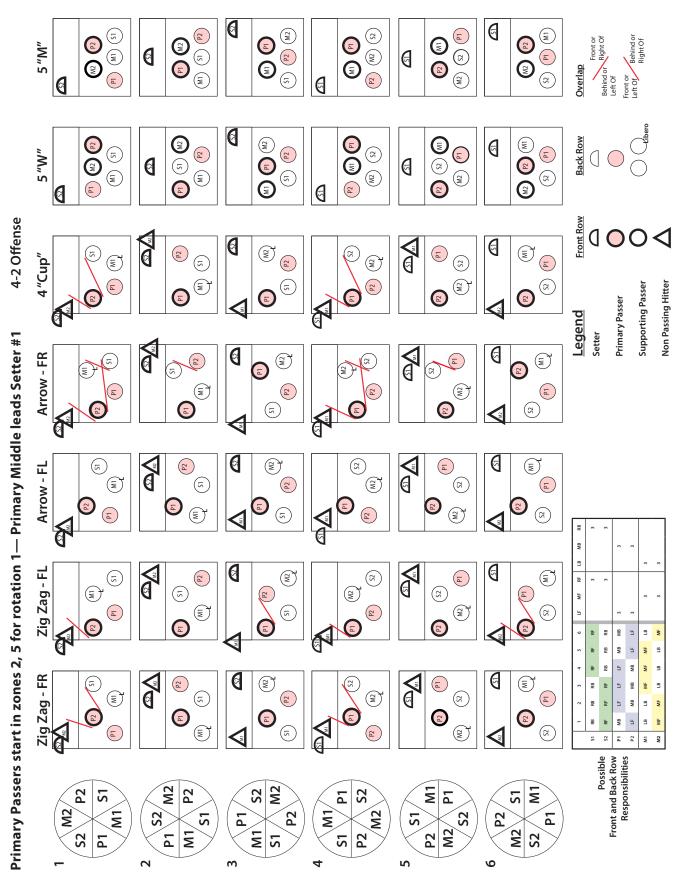


Some Four Person Serve-Receive Patterns

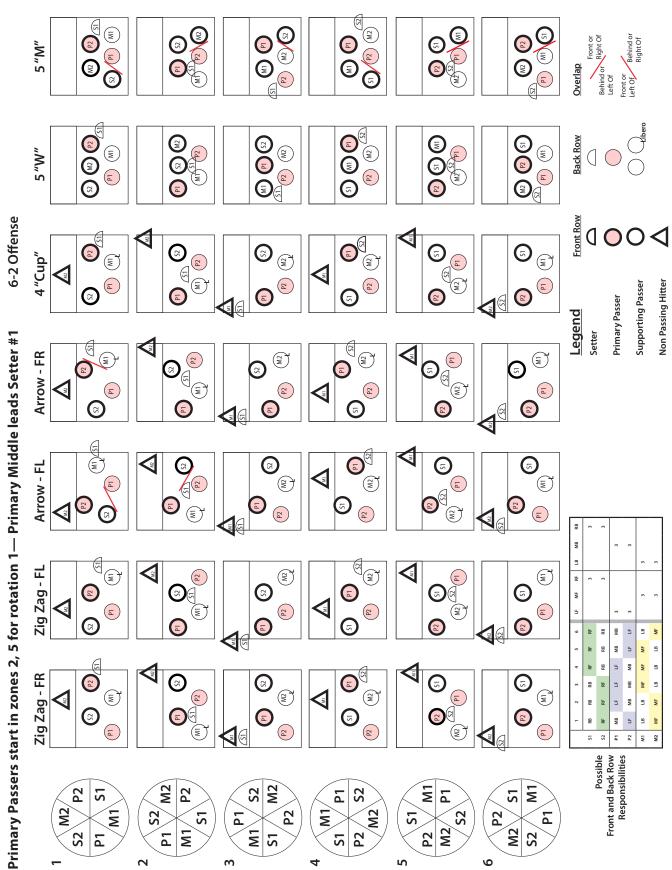
that can be easily migrated later to 3 person formation (2 of 2)



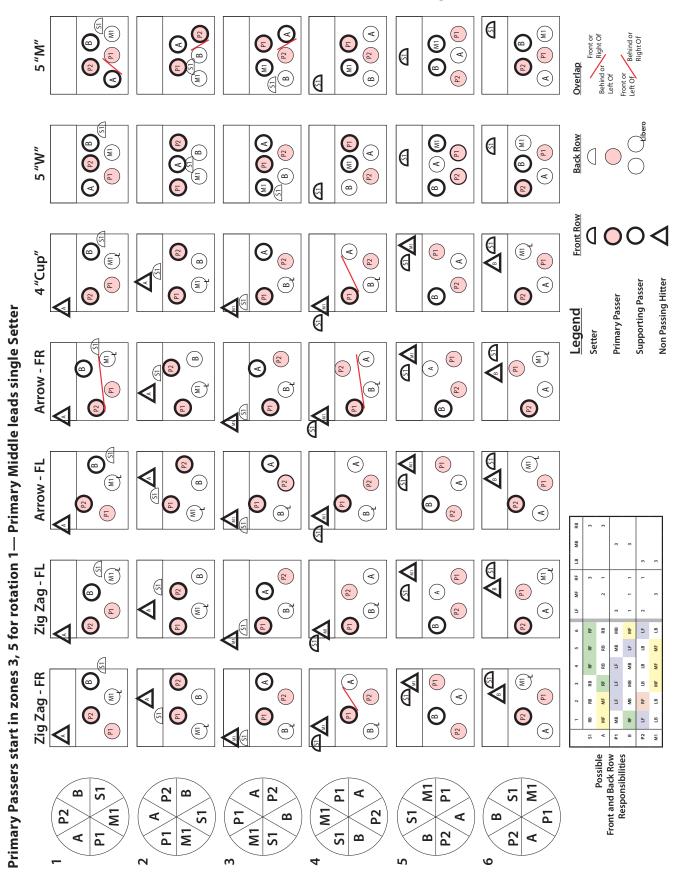
for a 4-2 Offense



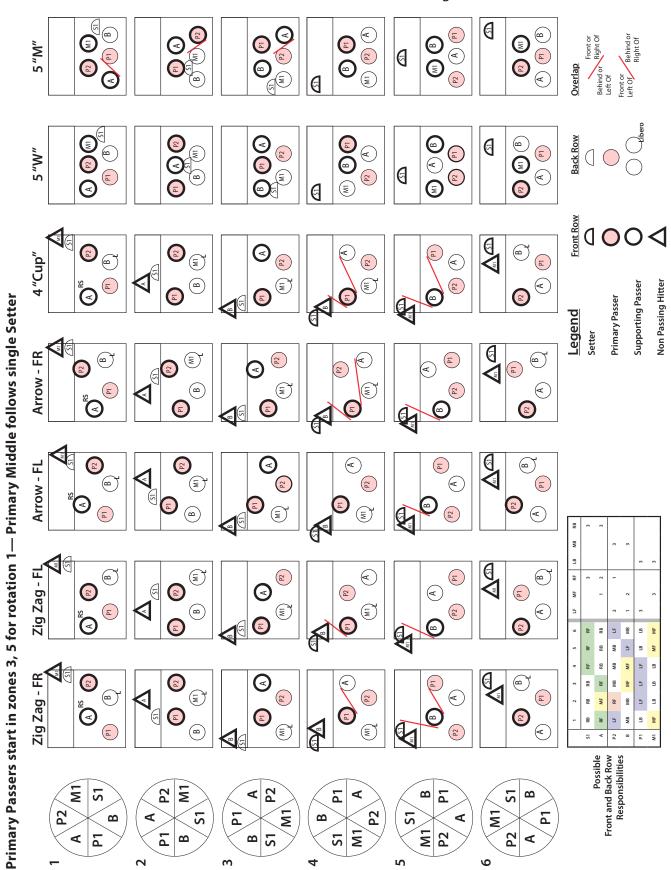
for a 6-2 Offense

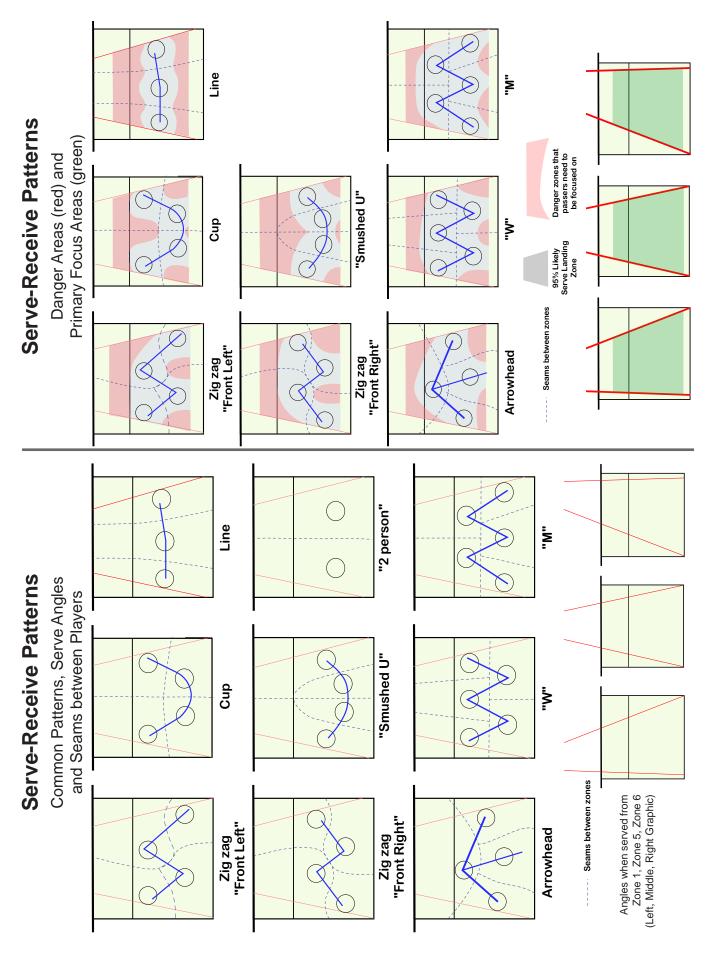


for a 5-1 Offense with Middle Hitter leading the Setter



for a 5-1 Offense with Middle Hitter following the Setter





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