FASR's Relationship Element Technical Zeros

By Kip Garvey

Technical Zero

A Technical Zero module moves dancers from one Setup to its Technically Equivalent Setup. The module may contain any number of calls, from a single call like 'Bend the Line', 'Circulate', 'Ping Pong Circulate' or 'Spin Chain the Gears', to multiple calls in a specific order.

Every FASR (Formation, Arrangement, Sequence, Relationship) has a Technically Equivalent FASR.

TECHNICALLY EQUIVALENT SETUPS OR FASRS

It is essential to demonstrate a rotational aspect for a complete understanding of Technically Equivalent Setups. The static demonstration is one method used to illustrate the rotational aspect.

From Static Square, have the Heads Pair Off and point out how the outside paired couples are Sides, the inside unpaired couple are Heads, and all dancers face their Corner. The resulting FASR is a Corner Box.

Send dancers back home. Then have the Sides Pair Off. Show that the outside paired couples are now Heads, the inside unpaired couple are Sides, but the resulting FASR is still a Corner Box. The same FASR exists in two different ways. These two variations of the Corner Box are Technically Equivalent.

Both FASRs are nearly identical except that Heads and Sides' roles and positions are swapped or inverted The same Getout, '*Allemande Left*', works in both Setups.

We can use another method to demonstrate the rotational aspect. This is a handy show-and-tell demonstration of dancers moving from a known FASR to a Technically Equivalent Setup in a more general way without using calls. Use checkers or live dancers. Start in any familiar Setup and move checkers (or live dancers) such that each dancer moves one same-sex position either clockwise or counterclockwise around the perimeter of the square. The result is the Technically Equivalent Setup of the initial Setup. Point out the inversion of dancer roles and positions. Note that boys and girls rotate in the same direction in line situations in SAME paired lines and in opposite directions in MIXED paired lines.
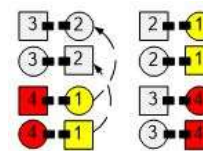
Another use of this method illustrates how the rotational element results in both role inversion and positional inversion. Use live dancers when available. Set dancers up in a Corner Box formed by having the Heads 'Square Thru Four.' Note the paired Side couples on the outside. Manually move all dancers one same sex dancer position clockwise (or counterclockwise) and adjust facing direction to maintain eight chain thru formation. The result is a Corner Box with Heads paired outside and Sides unpaired inside. This is a great follow up to the rotational demonstrations described above. Note that boys and girls rotate in the same direction in MIXED paired situations in these columnar formations, and opposite directions in SAME paired situations.

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By now, all students must be familiar with the concept of *common dancers* (see the section on Relationship.) The Coach should show how:

   a) Common dancers in all collections stay together before arriving at the Technically Equivalent FASR;
   b) Two of the four dancers in the resulting Technically Equivalent FASR are new and are the opposites of the dancers they replaced;
   c) To illustrate the inversion effect where the roles and positions of Heads and Sides are swapped, which results in both role and positional inversion;
   d) A change of 90 degrees in the long axis is not necessary to arrive at the Technically Equivalent setup. Changes in the long axis are coincidental.

CREATING A TECHNICAL ZERO

There are three steps to create a Technical Zero.
   1. Start in a known FASR.
   2. Pair up the *common* dancers. Move them to interact with the two different *common* dancers from the other side of the square.
   3. Re-establish the original FASR.

The best candidate with the most utility for visualizing a Technical Zero is the '**Invert and Rotate'** module from a Corner Box Setup. Learning how this module works is essential for all callers. It is an excellent module for dancers because the module gives dancers a feeling that they are dancing with different dancers and moving from quadrant to quadrant in the process even though, in a Setup sense, dancers go nowhere.

The 'Invert and Rotate' module ('*Star Thru, Pass Thru, Bend the Line, Slide Thru'*) is used anytime the Formation is normally arranged eight chain thru where common dancers are facing each other, whether dancers are IN Sequence or OUT of Sequence. It works whether common dancers are Corners, Partners, Opposite Lady, or Right Hand Lady. The result is a Technical Zero.

Demonstrate by setting up a Corner Box. Note that all boys and girls are facing original Corner. Point out the couples on the outside and inside of the Setup – Heads and Sides. If we pair these facing dancers, then all common dancers are paired and are ready to move together in the square.

The first call in the module, '*Star Thru,*' pairs common dancers. It is important to point out that the dancers have not yet exited their collection of four dancers. Point out that Focal dancer and temporary partner are facing two dancers who are in the initial collection. Adjacent to the Focal couple is another couple (in the Line) who belong in the other collection.

The '*Pass Thru, Bend the Line'* brings these two couples together. The Focal couple is now facing the couple from the other collection. In Group-speak dancers have changed locations, membership, and are in a new collection. Yet, the Group is still a Corner Group because in every case, common dancers remain corners.

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The final '*Slide Thru*' re-establishes the initial Corner Box FASR and therefore completes the Technical Zero. The outside couples are paired, inside couples unpaired, and all dancers are facing Corners. Point out once again that the 90-degree long axis change is coincidental to this specific combination of calls. Some Technical Zeros do not produce a change of axis, and if they do, the change is not always 90 degrees.

An example of a Technical Zero from Corner Box that does not change the long axis is '*Swing Thru, All 8 Circulate, Boys Run, Wheel and Deal*.' The result is a Technically Equivalent Corner Box where the long axis has not changed.

Another example, from normally arranged eight chain thru formed by '*Heads Lead Right*,' is '*Pass Thru, Trade By.*' The result is a Technically Equivalent SAME-paired eight chain thru with no change in the long axis. Take time to walk through both these Technical Zero modules.

TECHNICAL ZERO EFFECT - MOVING COMMON DANCERS

A critical characteristic of Technical Zeros is that they involve the movement of common dancers. As common dancers exit their collection and meet the two common dancers from the other collection, the stage is set for the creation of a Technical Zero. In other words, keep common dancers together, and when they meet two different dancers who were not members of the initial collection, a Technical Zero *Effect* occurs. If the original FASR is re-established, the Technical Zero is complete.

Point out that there are only two possibilities. When common dancers begin moving, they eventually end up facing two other dancers. These two dancers will be either the two dancers from the original collection, or two different dancers who were members of the other collection.

1. If common dancers meet the same dancers with whom they were grouped, and the initial FASR is re-established, the result is a **True Zero**.
2. If common dancers meet two different dancers and the initial FASR is re-established, the result is a **Technical Zero**.

In applying Technical Zeros, it is possible to use an improvised method rather than a fixed-call module. The caller must understand how common dancers interact in the process of executing a Technical Zero. If a caller keeps common dancers together for any number of calls and wants to resolve, the caller can easily re-establish the original FASR. Assuming the initial FASR is a Corner Box, the resolution only requires an outside couple paired and an inside couple unpaired. The resulting FASR is either a True or Technical Zero. Either way, the resolution is at hand.

Common dancers do not have to pair in a side-by-side fashion to move together. In parallel Ocean Waves, the common dancers must be facing the same direction to move together. They are not side-by-side; they are once removed from each other. A call that moves them together is Circulate. They can either be the two dancers who move across to the other collection, or the two dancers who remain

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together on the same side of the square. Regardless, they remain together and can easily be paired together at any time.

CHARACTERISTICS OF TECHNICAL ZERO MODULES

1. Common dancers must move from one collection to another to set up the Technical Zero *Effect*.
2. The resulting FASR contains two common dancers from the initial FASR and swaps the other two dancers from the initial FASR with their opposites.
3. A MIXED Relationship is preserved, but Heads and Sides' roles and positions are swapped or inverted.
4. Techincal Zeros only work in two compatible Arrangements out of the six possible Arrangements.
5. When applied in the Relationship State opposite the one in which they work as a zero, the result is a Transition with the associated Four Ladies Chain *Effect*, which is why they are often referred to as 'sometimes zeros'.
6. A Technical Zero call or module called twice in succession is a True Zero.

TYPICAL TECHNICAL ZEROS AND THE 'SOMETIMES ZERO'

Hundreds of Technical Zero modules exist. Some of the more common ones are shown below.

Point out the importance of the initial pairing state. When called from the *opposite pairing state* of that which a Technical Zero requires, these modules result in a Transition. Getouts that worked well in the correct initial pairing state will now fail. The failure is seen in that the resolution causes all boys to end up with their original Opposite Lady instead of their original Partner. This is the 'Four Ladies Chain *Effect'* associated with Transitions and establishes that Technical Zeros are a form of Transition.

In this inapplicable pairing situation, the Technical Zero does not work. This is the 'sometimes zero' characteristic of Technical Zeros. In this case, the call or module used as a Technical Zero isn't a Technical Zero module but is instead a Transition module.

For example, the 'Invert and Rotate' module requires normally arranged MIXED paired eight chain thru formations to work correctly. Set up the Corner Box and add a 2 Ladies Chain, changing the pairing state from MIXED to SAME. Then apply the 'Invert and Rotate' module. Add another 2 Ladies Chain that seemingly should restore the Corner Box and observe that it does not. Instead, the result is a Transition to a Right-Hand Lady Group. At this point, executing an Allemande Left results in all boys returning to their original Opposite Lady instead of their original Partner. This is the Four Ladies Chain *effect* associated with Transitions that results when Technical Zero modules are applied in the wrong pairing state.

Some common Technical Zero modules.

1. **Invert and Rotate**. From normally arranged eight chain thru formations in a MIXED paired state (common dancers facing:) *'Star Thru, Pass Thru, Bend the Line, Slide Thru'*.

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2. From normal or ½ arranged eight chain thru formations in a MIXED paired state: '*Split the Outside 2 – Separate & go around 1 to a Line, Touch 1/4, Leaders Run*'.
3. From normal or ½ arranged eight chain thru formations in a SAME paired state: '*Pass Thru, Trade By.*'
4. From normal or ½ arranged right or left SAME paired two-faced lines: '*Couples Circulate.*'
5. From normal or ½ arranged right or left MIXED paired parallel waves: '*Circulate.*'
6. From normal or ½ arranged right or left SAME paired parallel waves: '*Spin Chain the Gears.*'
7. From normal or ½ arranged SAME paired facing lines: '*Bend the Line.*'
8. From normal or ½ arranged SAME paired facing lines: 'Fan the Top, Circulate, Swing Thru, Centers Run, Bend the Line.'