Harvesting Torque from Permanent Magnets

Jay A Lunke

CONTENTS

Introduction

My name is Jay Lunke. I have been fascinated with magnets since I was a child and I still am as a senior citizen. As I would play with magnets, I had always wondered how to use the pull they have to each other in a motor design. I, like many people, have tried different "all permanent motor" designs that ran into the sticky point problems. After several design failures, I started working on designs that had more permanent magnets than electromagnets with the thought that you have to pay for the electrical energy to operate the electromagnets but not the permanent magnets. I came up with the flow through motor that basically has the electromagnets flowing through the middle of the permanent magnets. Everything needed to be custom made and after getting the quote for the permanent magnet build, I put the design on hold until I came into money to build them. That never happened. So, I now work with designs that people can build with off the shelf magnets. I have developed a new technology that uses up to five permanent magnets to one electromagnet with all positive forward torque through the full rotation of the rotors, having no sticky points. Also, the motors have amazing power so that they will be able to relace the magnetic motors in vehicles and get three times the range. But that is not all, I also have designed different power and control circuits. I power the electromagnet circuits with the electromagnets being one leg of a tank circuit. I use steering diodes to control the direction of the current of the circuit so that the capacitor in the other leg of the tank circuit does not need to operate at the resonant point in the circuit in order to provide high efficiencies in the motor. The modified circuit collects the back EMF into the capacitor in order to use that energy the next time the electromagnet is used again in the motor. It is the combination of these two technologies that I believe I am harvesting enough torque from the system in order to power a generator that will have power left over after powering the motor. I will go step by step through these technologies in this book. I show you many applications. I provide plans for a prototype motor you can build with a parts list of off the shelf parts. Building this prototype motor will provide a test bed that will allow you improve on motor designs using this new technology. Building a prototype motor is the best way to learn how this new technology works and how to enhance it for unlimited applications.

What is Permanent Magnet Torque Harvesting?

It is a method of getting permanent magnets to use there forward torque to produce work by operating in the Three Layer Electromechanical Movement Technology without having reverse torque in the movement (no sticky point). We all can feel the torque from a magnet when we are holding a magnet in our hand and bring the magnet close to a steel object. The magnet will pull itself to that metal object. In order to pull the magnet off the metal object, it takes as much force in the opposite direction to accomplish that task. So, it has been thought by most people that it is not possible to harvest more torque from the magnet than the initial movement of the magnet as it pulls itself to the metal object. After you read how the Three Layer Electromechanical Movement works, I hope that you have a different understand of how permanent magnets can produce work through the usage of the torque they have within them.

What is Three Layer Electromechanical Movement Technology?

This technology creates mechanical movement between two objects having magnetic components on them by reconfiguring the magnetic components on one or both of those objects. These two objects are usually a rotor and a stator assembly. This reconfiguration can be physical movement of physical components, but is more likely to be done by creating a functional magnet being made up of permanent magnets with an electrical device like a coil or electromagnet. This technology will not function without creating a functional magnet through reconfiguration. A functional magnet in this technology is a magnet built with the two adjacent magnets to it, that together perform as one larger magnet. The magnet in the middle of the two adjacent magnets, I call the switching magnet. The switching magnet can be either a permanent magnet or electromagnet. When using electromagnets in the reconfiguration, it is a functional reconfiguration, not a physical reconfiguration. In fact, the technology cycles between two states operating in four segments of movement between the two objects. There will be a lot of demonstrations coming up in how this happens and how the torque harvesting occurs.

The reason I named this new technology into Three Layer Electrical Movement Technology is because I see two-layer technology as a rotor operating with a stator assembly. I consider the third layer of this technology as the stator assembly or rotor continually changing its configuration back and forth during the operation of the motor in order to provide the torque harvesting as it operates.

Why create a functional magnet through reconfiguration?

The normal characteristic of two magnetic objects passing each other is that about 50% of the interaction with each other is positive torque and 50% of the action is negative torque. So, what the Three Layer Electromechanical Movement does is to use the 50% positive torque between these two objects “as is” and then reconfigure usually one of the two objects in order to change the normally negative torque into desired positive torque direction. It does take energy to perform the reconfiguration process using this technology. After the reconfiguration has ended, the device goes back to the normal configuration at a position where the permanent magnets are able to use their built-in torque to create more movement. So forward torque is produced at all times with the technology even though external energy is only required for 50% of the movement. When you compare this to conventional motors, they require power on the motor all of the time.

Now this 50% power reduction is the minimal savings in capturing torque from a permanent magnet in order to perform work because I have designed motor devices that have torque movement ratios of 5 to 1. This is torque from five permanent magnets and one electromagnet used to generate movement in the device. This is like having a long boat with six sets of oars in it and you only have to pay for one man doing the rowing because the other five people are rowing for nothing. This paper will get into details of how that can happen later on. Now re-configuration of the switching magnet can occur either by physically repositioning hardware or without physically moving parts when turning power on to an air core electromagnet that is in the switching position of the device.

How does reconfiguration occur without physically moving parts?

Now a Copper wire without electric current flowing through it is not attracted to a permanent magnet. So, when you wind the wire into a coil having an air core, also the coil is not connected to anything, the Permanent magnet has little to no affect from it. Now when you put a current through the coil of wire, it creates a magnetic field that interacts with the permanent magnet. The Three Layer Electromagnet Movement Technology takes advantage of these characteristics in the design of the devices. The following drawing shows this new technology as it uses the reconfiguration in motor designs.

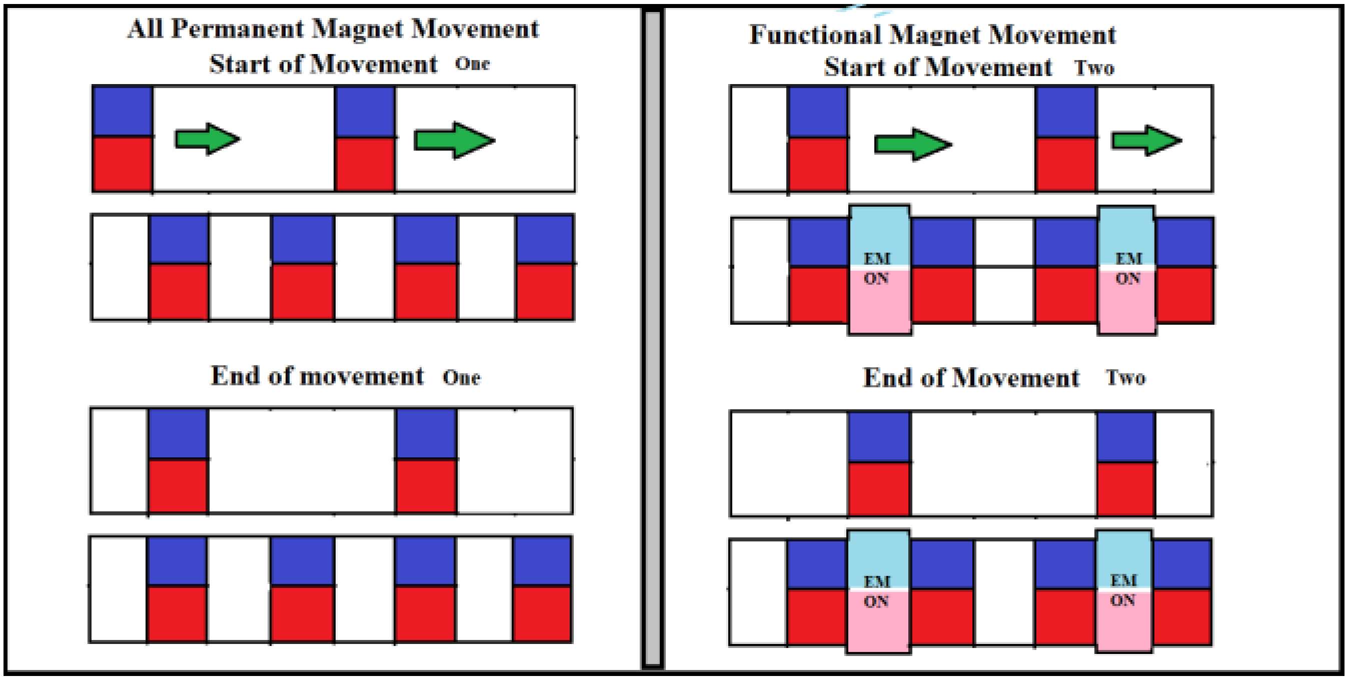


Figure 1:

The all-permanent magnet movement in movement one, has torque without any outside force. It is the torque that is built into each of the permanent magnets that pulls the magnets to align with each other. So, this free movement becomes very important in the Three Layer Electromechanical Movement Technology. Now I did not draw the electromagnets in the all-permanent magnet movement drawing, because the power is off and they do not have a metal core and they are not connected to a circuit like a generator coil would be. The torque during this time will be produced from the interactions of the permanent magnets in the two assemblies. Again, these two objects would normally be a stator and rotor assembly.

Now the right side of the drawing has the reconfiguration that is done by powering every other electromagnet. The electromagnet along with the two adjacent permanent magnets next to it creates the functional magnet. This functional magnet changes the center points of the poles in the functional magnet to the center of the powered electromagnets. Now the blank spot in the stator assembly has an electromagnet with the power off. So, this technology uses two sets of electromagnets each having a 25% duty cycle. Each circuit is on its own switching cycle. Notice that I have the electromagnets larger than the permanent magnets. I have done this by design in order to ensure that the electromagnet has more power with the other assembly in order to ensure the movement of the magnets in that assembly in order to move that assembly into alignment with the electromagnet. Now when you look at the functional magnet, then you will see that only every other electromagnet is turned on. This creates better efficiency because each set of electromagnets will only have a 25% duty cycle. Let's look now at the next two movements of the two objects.

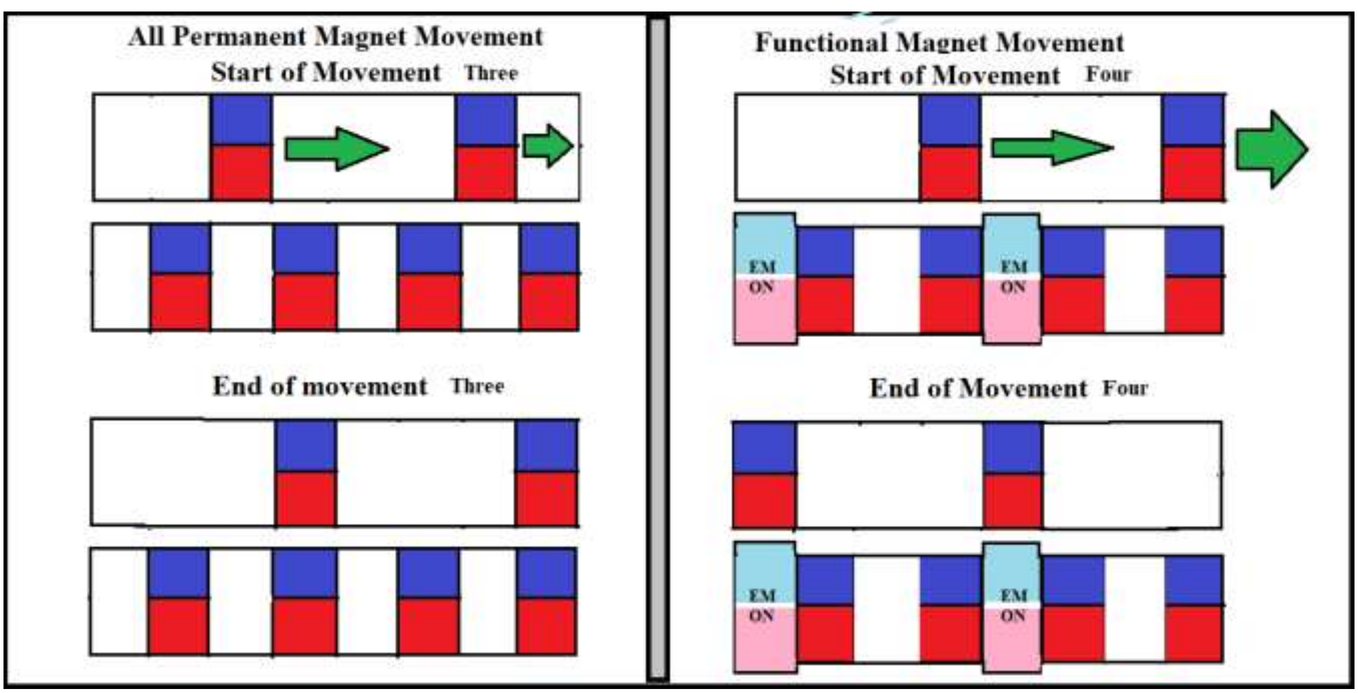


Figure 2:

These are the third and fourth movements used in this new technology. The third movement uses (all permanent magnets) for the torque movement again. This action is the same as the first movement. The fourth movement works like the second movement. It uses a different set of electromagnets for the movement. The electromagnets that were off during the second movement are now on and the ones that were on are now off. So, this circuit of every other electromagnet are operated at a 25% duty cycle. This reduction of electrical energy demand in the electromagnets means better efficiency. These magnets will operate cooler because they will not heat up as much as conventional electromagnets in today's magnetic motors.

These four movements in the new technology can be used for linear or circular motion. The best example of a 3 to 1 permanent to electromagnet torque motor design is in the following torque motor example. Now this motor example is very basic and there are much more productive designs coming later in this paper. There are other disk motor designs, but None that use this new technology that I know of.

With smaller devices, the first two movements can be used in the designs. The two stage devices use the permanent magnet for the common mode operation of the device. The power going to the electromagnet is used to produce the none common movements. An example of this is the operation of a magnet that moves scrapped cars. The permanent magnet would lift and move the car or truck with no power to the permanent magnet. The electromagnet would only come on in order to drop the car at its new location. This saves a lot of power in this operation. There are so many more applications of using these first two stages of operation. There is unlimited designs and applications that save power in these devices.

The following drawing is a simple design using this new technology.

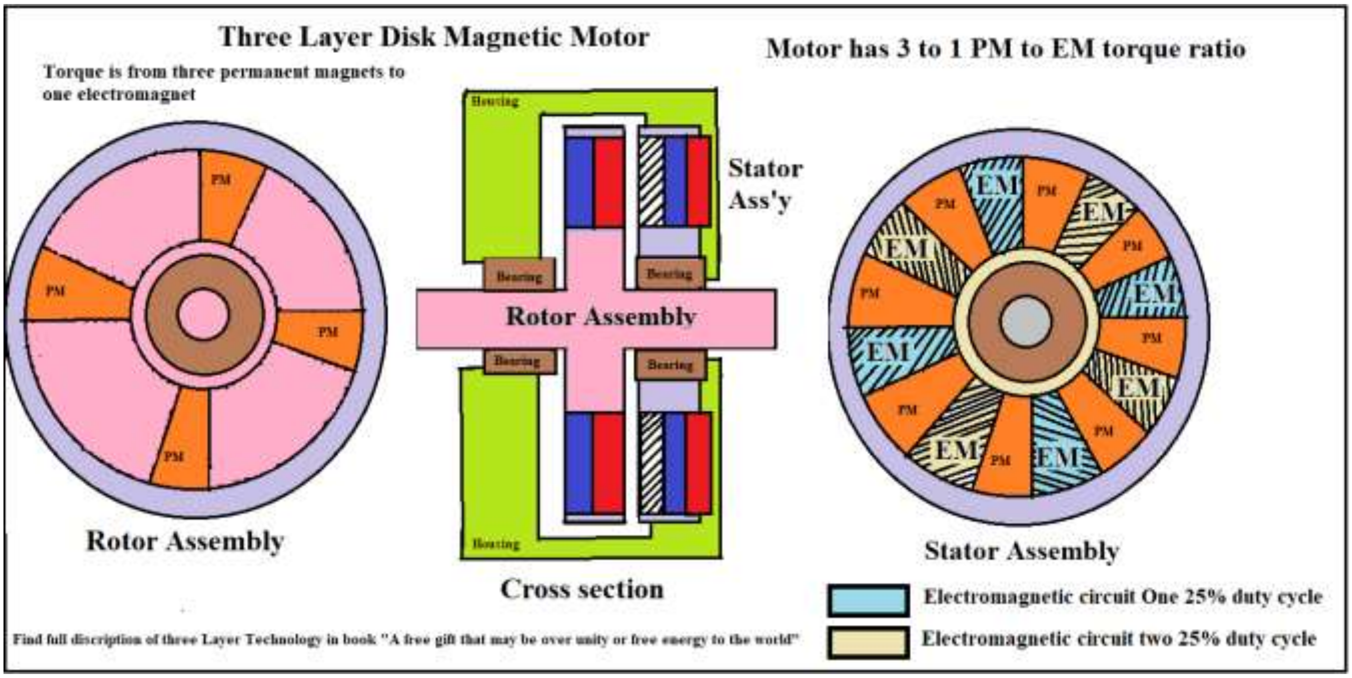


Figure 3:

Now the two electromagnet circuits are shaded with different colors. With the disk magnet configuration there is the ability to stacking them into different layers which places more power into a smaller package. The biggest limiting factor with this new technology is that the rotor permanent magnets can only be placed in one of the four segments of travel in order for the technology to work properly. If you place more permanent magnets in the rotor, this will reduce the efficiency of the motor to the point that it may not function at all. So more is better does not hold true with this technology. This means other motors can produce more power for the size of the motor. Later in this book I show designs using 5 permanent magnets per one electromagnet. So this 3:1 design is more for displaying the technology. This technology has efficiencies that will provide much futher range in cars and trucks and other transportation.

Now permanent magnets produce torque in a motor and electromagnets produce torque in the motor. With this technology, the torque from the permanent magnets are free and you only have to pay for the energy for the electromagnets used in the functional magnets that produce torque in the motor. It makes sence that with more permanent magnets producing torque than electromagnets, that there must be a point that there will be enough torque from the motor in order to power a generator that would feed power to the motors electromagnets and still have power left over to power other things. While magnetic motors have a ratio of 1 to 1, this motor having a ratio of 3:1 is much better. Now when you see the 5:1 motor designs, you will wonder why they are not in cars and trucks today.

How large of a permanent to electromagnet torque ratio does it take to achieve over unity status?

The reason that electric vehicles use magnetic motors is that fact that having magnets in the motor design are superior to all electromagnet motors. So, it only makes sense to increase that ratio in order to bring larger ranges to those vehicles. The drawings we have looked at so far, have a torque ratio of three to one, torque from permanent magnets to electromagnets. So, what can be done to design a motor with a greater torque ratio than that? The next section will show you that.

Five to one, torque from permanent magnets to electromagnets

Permanent magnets have torque within them that do not require any external power to operate them. Remember this new technology only operate the permanent magnets in forward torque modes. The electromagnets are the only components in the motor that use power outside of the control circuit. The control circuits power consumption is low compared to the electromagnets power consumption. The 3 to 1 torque ratio motor designs use two electromagnet circuits each operating at a 25% duty cycle. The 5 to 1 torque ratio motor design use the same electromagnet configuration using a 25% duty cycle in order to power the electromagnets. The way this can happen is that the stator has been slightly modified with wider electromagnets that extend beyond the width of the permanent magnets in order to be able to interact with two rotor assemblies instead of one rotor used in the 3:1 torque ratio design. As you can see in the drawing that since the number of electromagnets stay the same, the addition of another rotor that only has permanent magnets on it will increase the permanent magnet to electromagnet ratio.

Note:

Since electromagnets have a north pole and a south pole, we need to take advantage of both poles in our designs. This is doubling the work performed by the electromagnet. The way I do this is by having two rotors working with one stator. The rotors are all permanent magnets, while my stator is built with 50% permanent magnets and 25% electromagnet circuit one and 25% electromagnet circuit two.

There are a lot of designs out there that could improve their performance just by using both sides of the electromagnet into the design. Look for them and you will find them.

Now it is time to take a close look at the 5:1 torque ratio functionally.

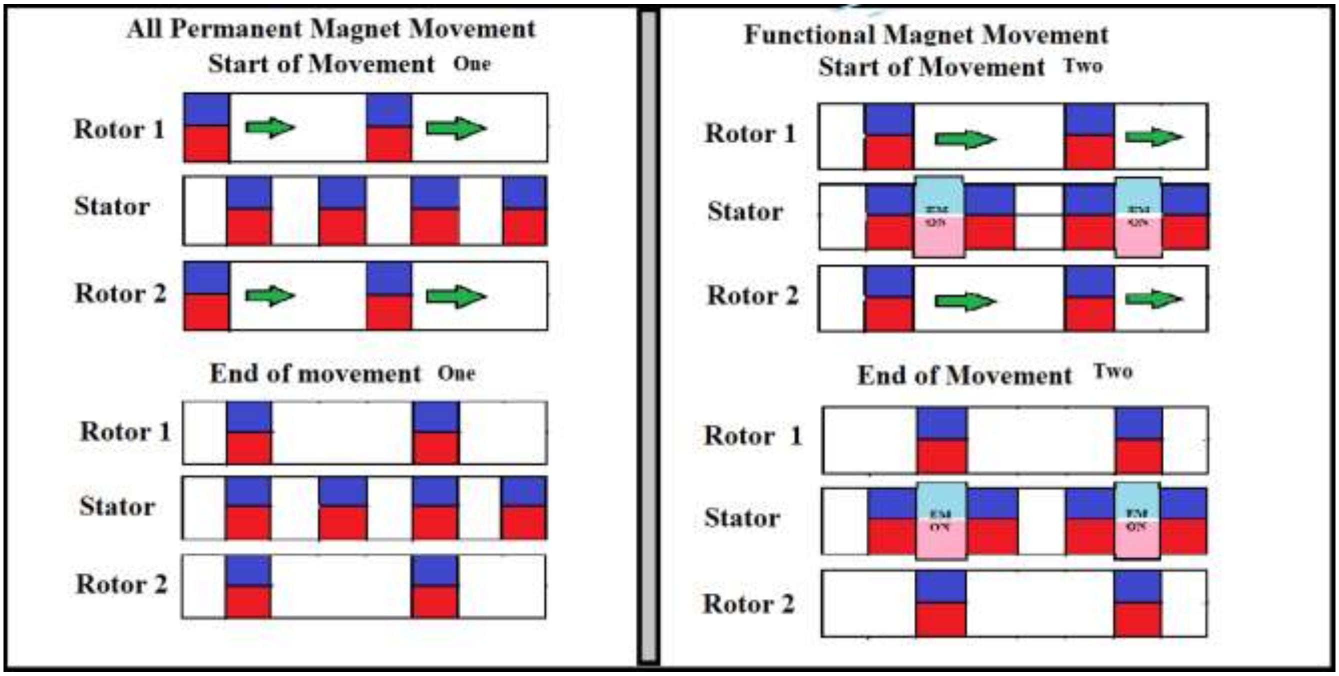


Figure 4:

The torque from permanent magnets is like turning a marrygoround in the playground. There are some trees close to the marrygoround. So a child on the merrygoround can push on the tree to increase the speed of the merrygoroung. A child on the ground can push on the railings on the merrygoround in order to increase the speed of it. Now a magnet on the rotor can pull on the stator magnets in order to provide torque on the motor. At the same time the magnet on the stator can pull on the magnet on the rotor to produce torque. Now on my motor designs, I use attraction rather repulsion for the rotation. I feel this is easier on the magnets in doing this.

Now when you look at the drawings above, movement one has the rotor one magnet pulling on the stator magnet. You have the rotor two pulling on the stator magnet. Then you have the stator magnet pulling on the two rotor magnets. So I see this as a three to zero torque movement. Zero being the fact that there is no power to the electromagnets. This is free torque movement in the motor. Now in the second movement, you have rotor one permanent magnet pulling on the stator functional magnet. You have rotor two permanent magnet pulling on the stator functional magnet. Then you have the stator magnets pulling on the rotor permanent magnets. This is a two to one PM to EM ratio. When you add up movements one and two together, you end up with torque from five permanent magnets to one electromagnet. Segments three and four have the same ratio. In fact the final motor has the 5:1 ratio.

Now in the magnetic motor, the torque does not have a dirrect force of torque to motor movement. A vector analysis shows that the torque to motor movement is less than 50% (this is a rough estimate). This is why the magnetic motor has not reach over unity status because the electromagnet and permanent magnet torque to movement force is less than 100%. Now with my 5:1 torque ratio, if each magnet contributes 25% of its torque into motor movement, then there would be 150% of torque conversion to motor movement. Only building and testing with third party verification will prove this out.

Since this is a new technology, I want to show the four segments of the technology again in a different step by step format. This format is much more informative.

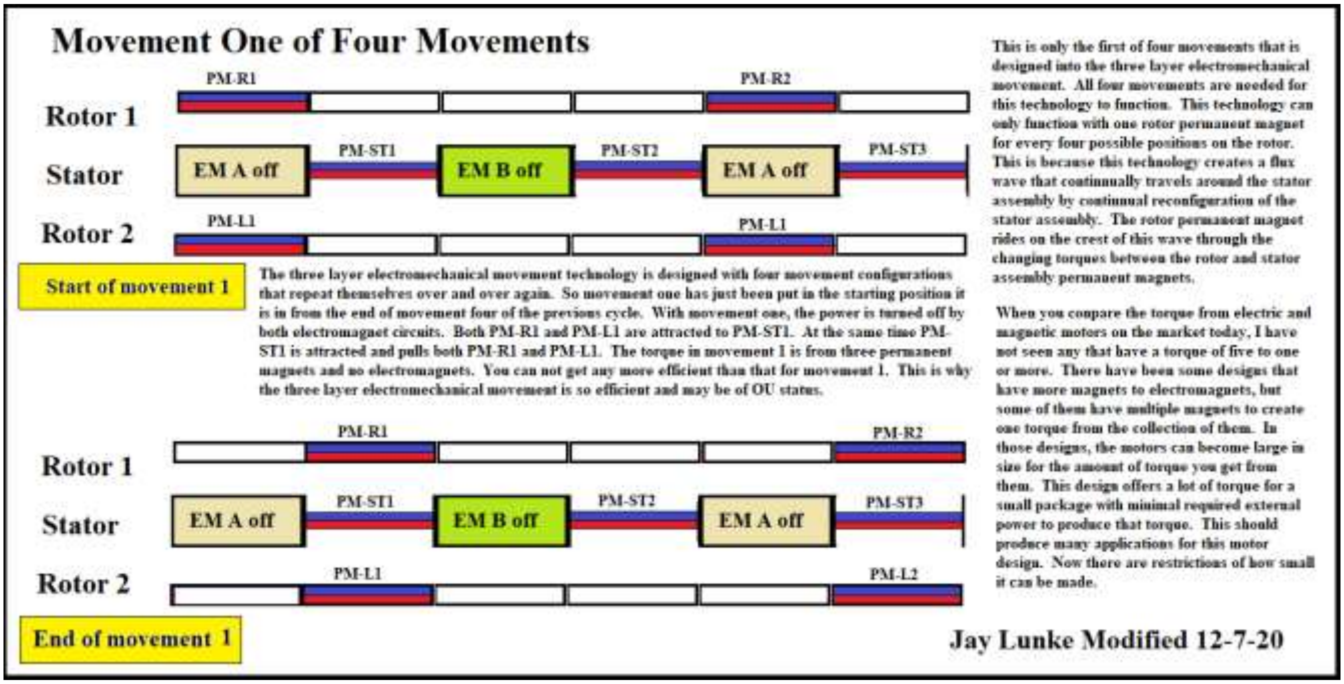


Figure 5:

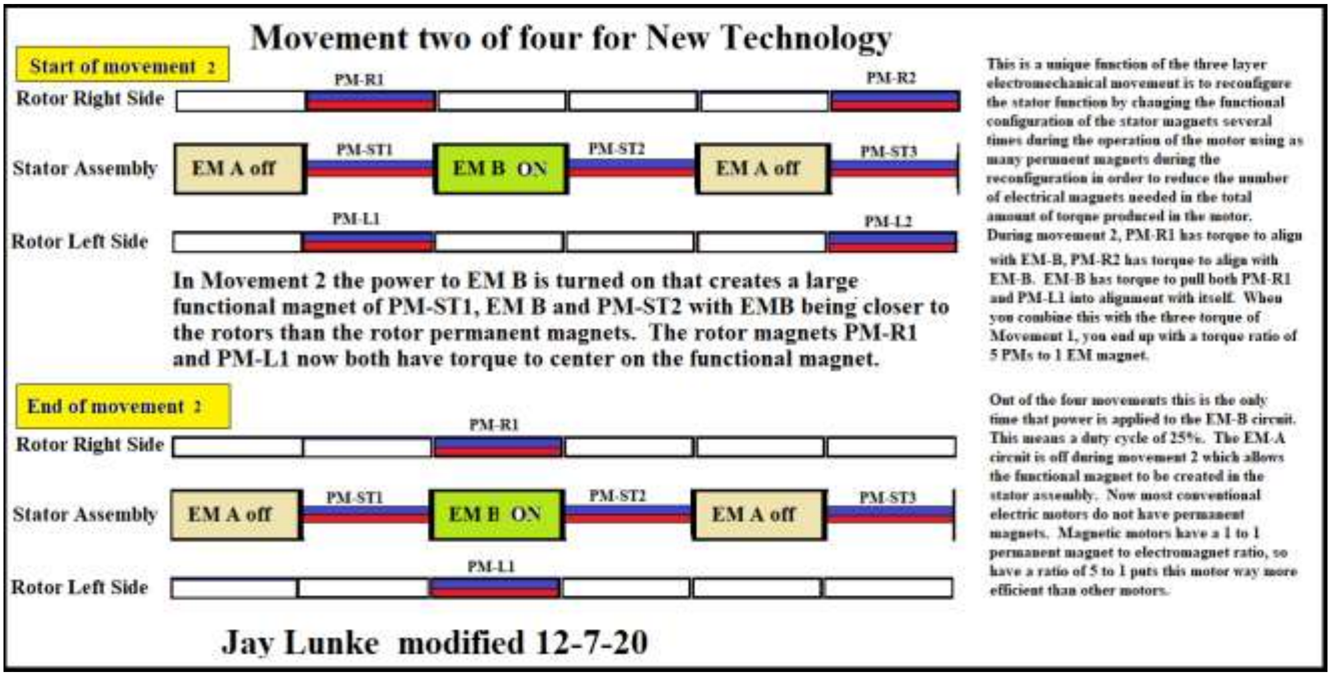


Figure 6:

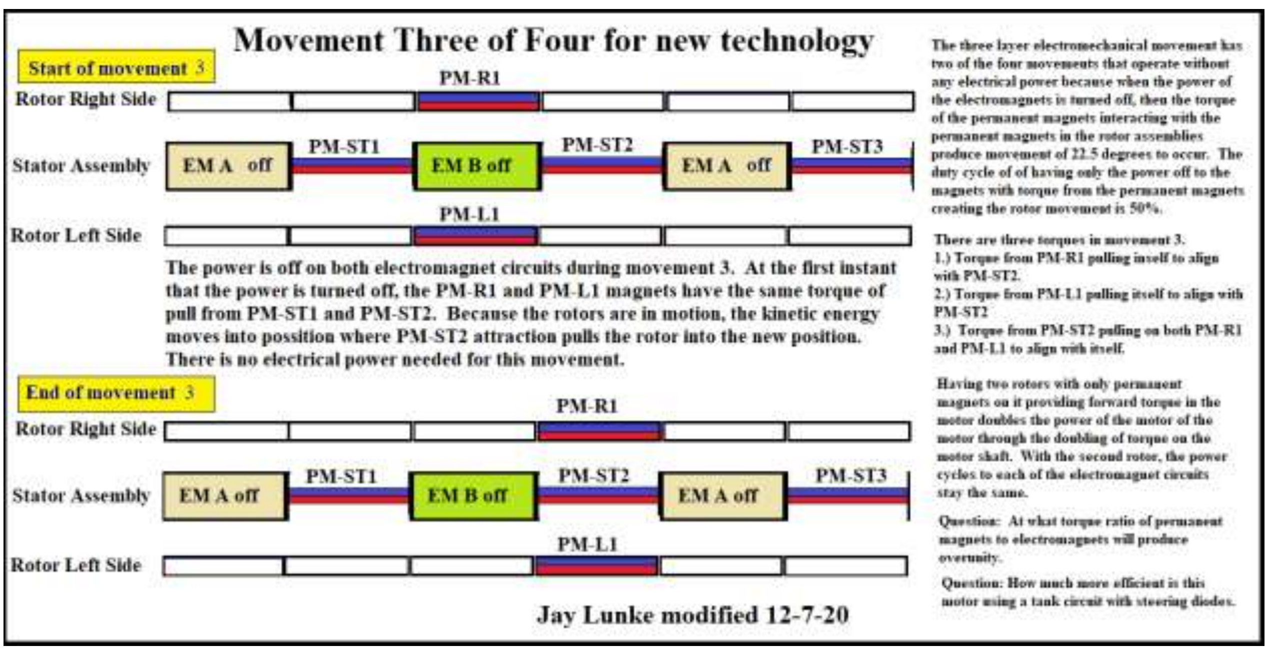


Figure 7:

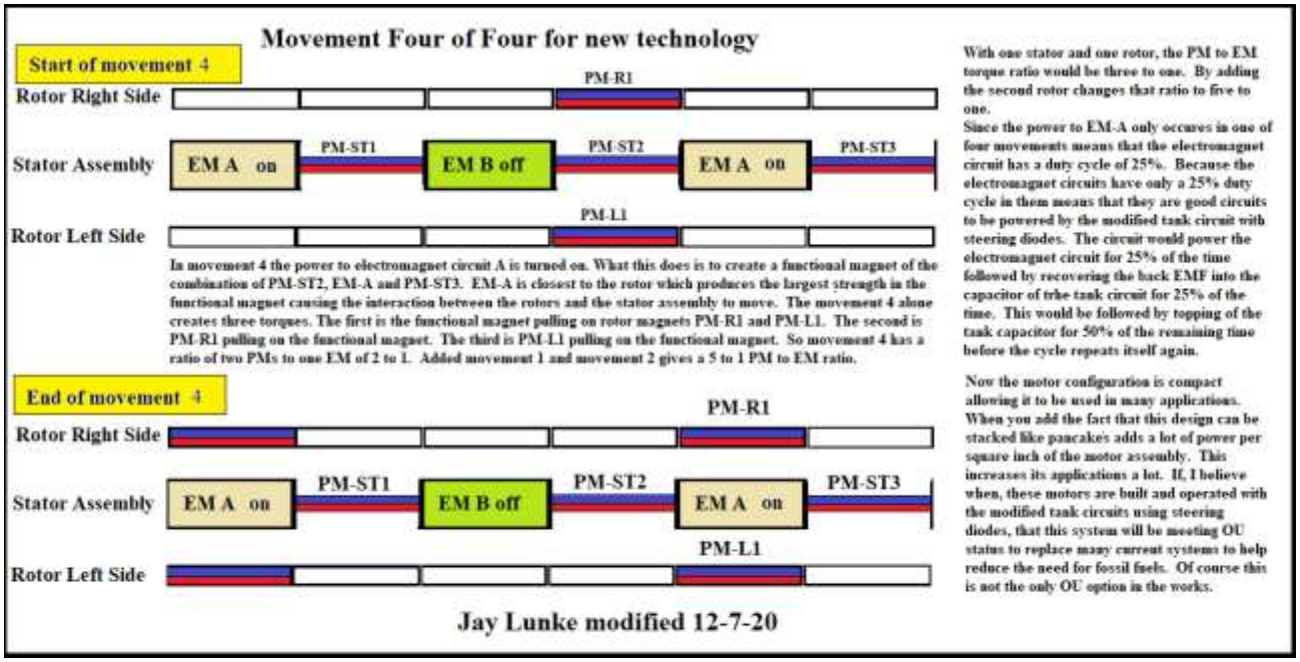


Figure 8:

The reason that this technology is torque harvesting is because if you replaced all the permanent magnets with electromagnets, you would have a motor that has the same performance at the cost of a lot more energy in order to operate it. So, the difference in energy to operate this motor is what is harvested from the permanent magnets. This torque is changed into work that is performed in the motor. Now if you get more work done with less electrical energy used to perform that work, torque has been harvested in that process. There has to be a point in magnetic motor design where the ratio between permanent magnets to electromagnets becomes great enough to run a generator that feeds the motor and have power left over. So, the magnet acts like a battery, instead of providing electrical energy like a battery, it produces torque that can be converted into work.

Now that you have a better understanding of how the technology works, it is time to look at applications of this technology in different designs.

The following 5 to 1 torque ratio of PM to EMs shows the motor design in a simple drawing. Adding hardware to these drawings will not help, but hinder the purpose of showing the operational theory of the Three Layer Electromechanical Movement Technology in applications.

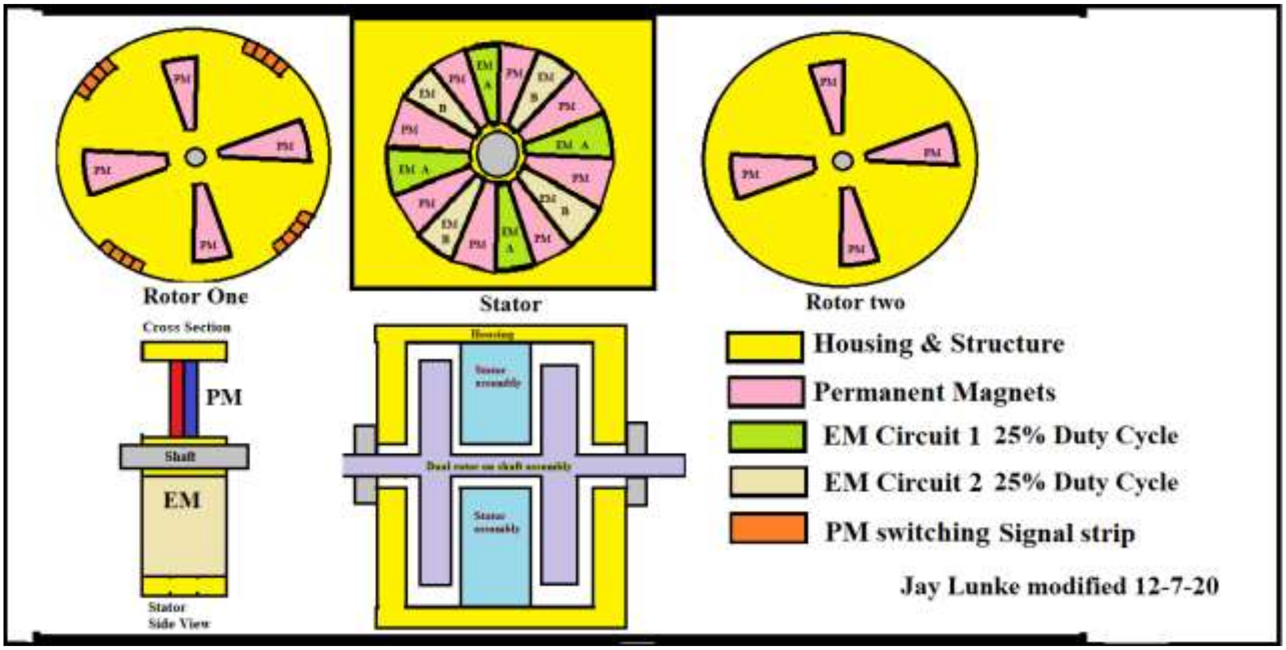


Figure 9:

Let's compare this motor design to current magnetic motor designs used in cars today.

Today's auto magnetic motors use a 1 to 1 ratio of PM to EM torque ratio the electromagnets operate at a 100% duty cycle rate. My 5 to 1 PM to EM torque motor uses a 25% duty cycle on each of the two electromagnet circuits which will operate without creating as much heat. The efficiency of my motor will require a lot less electricity per horse power generated from it. Now the current magnetic motor may have about twice the power per cubic foot of motor. Now that means more room will be needed under the hood for my motor design. The current magnet motors are already smaller than gas engines, so my motor will not be larger than those gas engine and transmission dimensions.

The following motor design stacks the disks. The following motor design is equal to five motors. The package is only two to three times larger than a single motor. This design could produce torque results that would be similar to the magnetic motors placed in cars today.

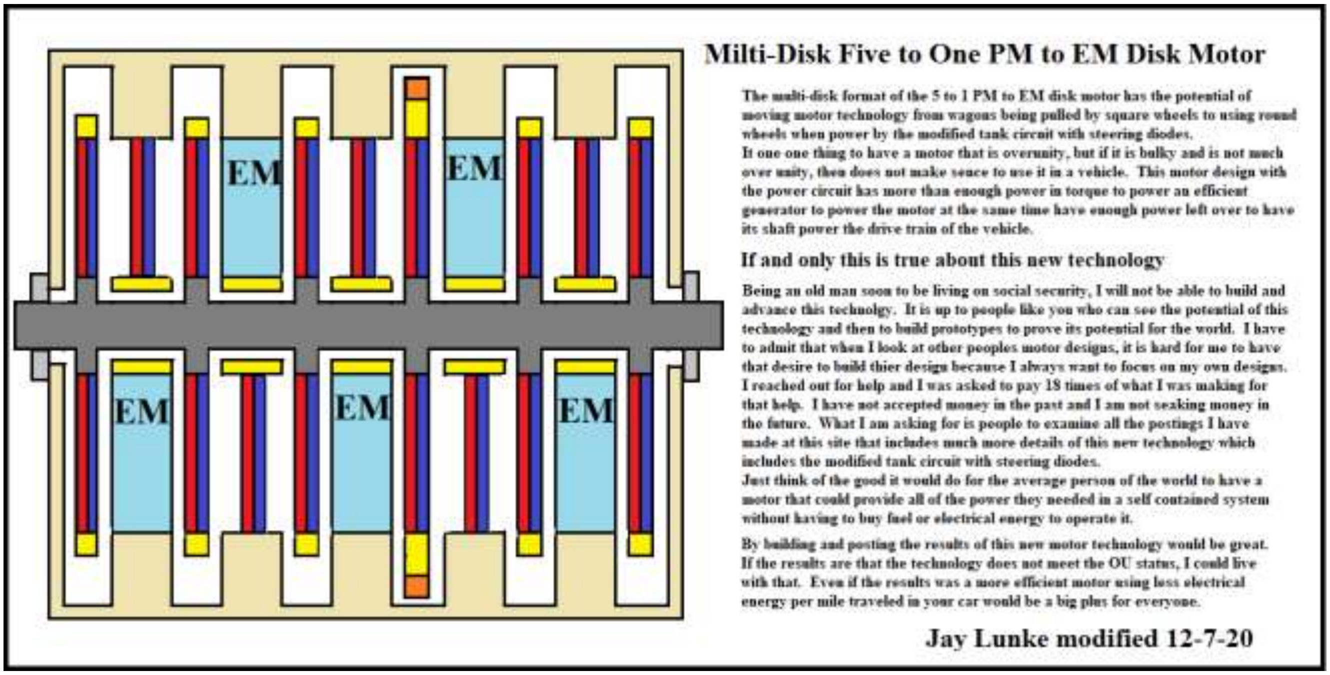


Figure 10:

The Three Layer Electromagnetic Movement Technology can be used in linear applications as well.

Now if you can even get two or three times more range with this new motor design over magnetic motors, then the motor design will likely be worth it in the automotive industry. This is if it still has not reached over unity status. Now if it has over unity status at this point, then changing to these new motor designs is a no brainer.

Now the way this motor could function in an over unity vehicle is that the vehicle would have a battery like it does now and use the battery when you are driving the vehicle. Now when you park the vehicle, then the car would automatically go into the charge mode. It is the charge mode that will recharge the battery. This would be the best way to operate when using an over unity motor in the vehicle. The reason for this is because the motor would have to be too large for the car if it had to move the vehicle at the same time as to produce electrical energy. There is usually time each day to charge a car when not being driven. Now maybe in commercial vehicles you would want the larger motor to provide both the torque and charging of the battery at the same time.

I want to introduce you to the flow though motor. The flow through motor is a design I came up with about 40 years ago. The idea of the flow through motor was to optimize how close the permanent magnets would be to the electromagnets in order to maximize the strength of the motor. It was also the objective to maximize the size of the permanent magnet to the electromagnet.

I have updated the flow through motor design to that of the Three Layer Electromechanical Movement Technology. I have done this with two different designs. The first drawing shows the electromagnets on the stator assembly. The second design shows the electromagnets on the rotor assembly. Each of these designs have their plusses and minuses. Now the second design has better efficiency because the electromagnets use less wire in them because the size requirement is smaller. Now the number of permanent magnets to electromagnets is 3 to 1, the performance could be greater than the 5 to 1 PM to EM motor designs I have made. The reason for this is because the permanent magnets in the stator assembly of the second design, wrap themselves around most of the electromagnet. This maximizes permanent magnet torque coverage to electromagnet coverage. The more push you get from the permanent magnets to electromagnets is getting a stronger free push in the motor design. Which design is better can only be determined by building both motors and comparing the performance of them? So how about building them.

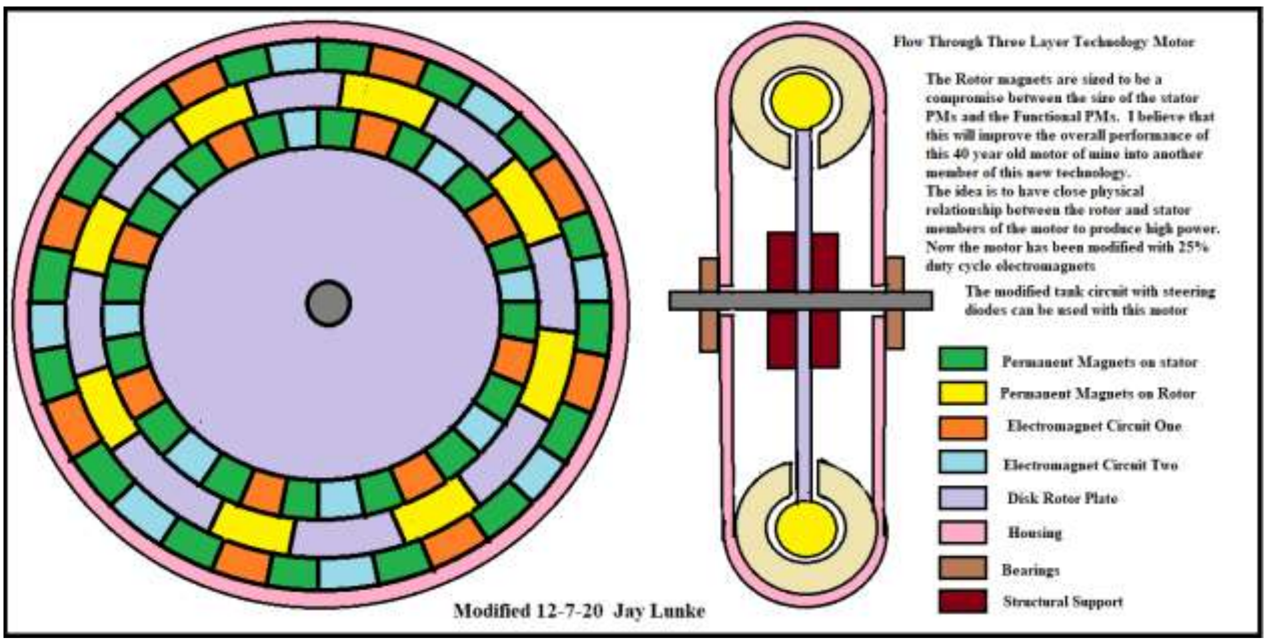


Figure 12:

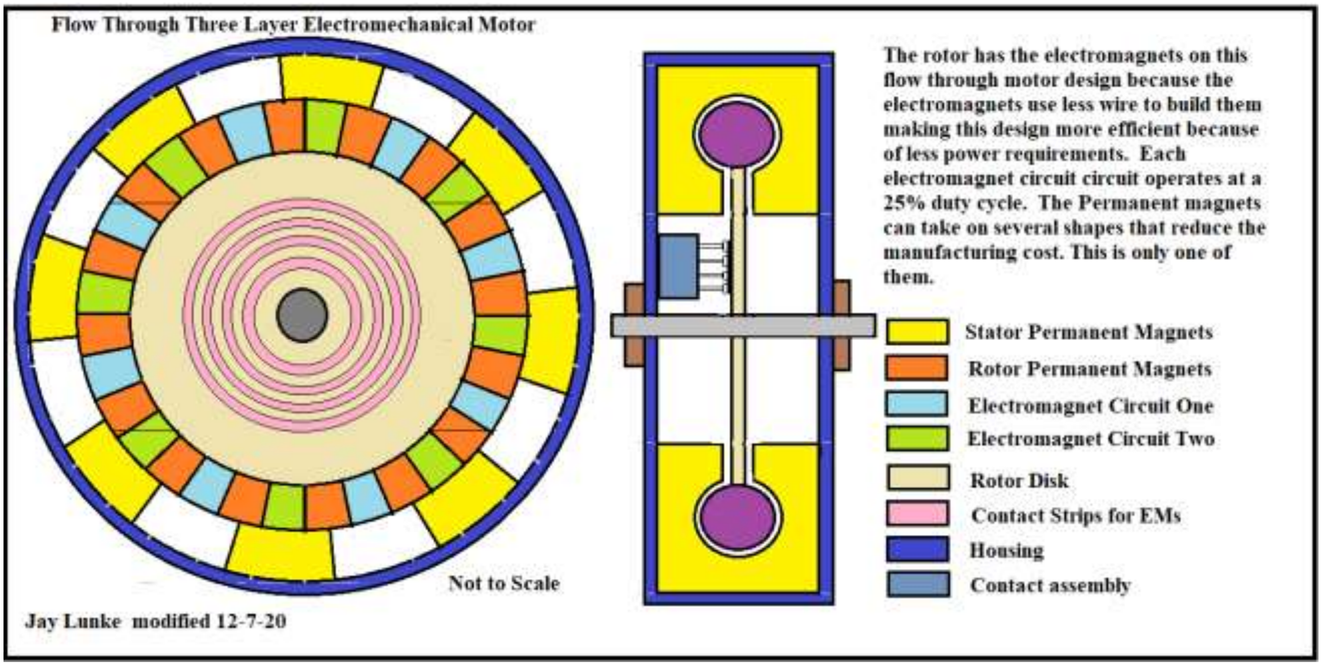


Figure 13:

As you examine the drawings, you can see how close the rotor is to the stator magnets at all times through the operation of the motor. This means a lot of torque between the rotor and stator assemblies. The biggest concern I have is that the permanent magnets in the rotor assembly will have so much torque applied to them, they would reduce the strength of the rotor magnets over time. Now some of the new rear earth magnets may be able to hold up to these forces.

The following illustration shows the linear motor using mechanical switching of permanent magnets instead of the electromagnets performing the switching. With the switching wheels, power will be needed in order to rotate the permanent magnets into and out of the switching position. Instead of the switching wheels, stationary permanent electromagnets could be moved in place and the power to them would be in two circuits on different timing cycles both operating using a 25% duty cycle. The drawings of the linear motor functions do not show the mechanism that rotates the switching wheel into place. That will be needed in order for the linear motors to function.

I have built a different design of a magnetic motor using mechanical switching of permanent magnets into the switching position. That switching included adding magnets that would reverse the polarity the way the switching is done in the two drawing below. It did not operate as a self-running motor because in that prototype it took more energy to move the switching magnet into position than the forward torque that was produced between the rotor and stator. I would remove the reverse torque magnets on the switching wheel before I build another prototype. I show it here and explain what has been tested with the new technology. If I built this motor, I would change the rotation ratio for the four-segment rotation. I would only have one magnet on it so that would reduce the switching resistance in half. Even this change is no guarantee that the energy to turn the switching wheel will be less than the energy produced by the rotor to stator torque movement. At this current point, I would start off building the motors with electromagnets performing the switching, and only try the mechanical switching once the electromechanically switching has been established.

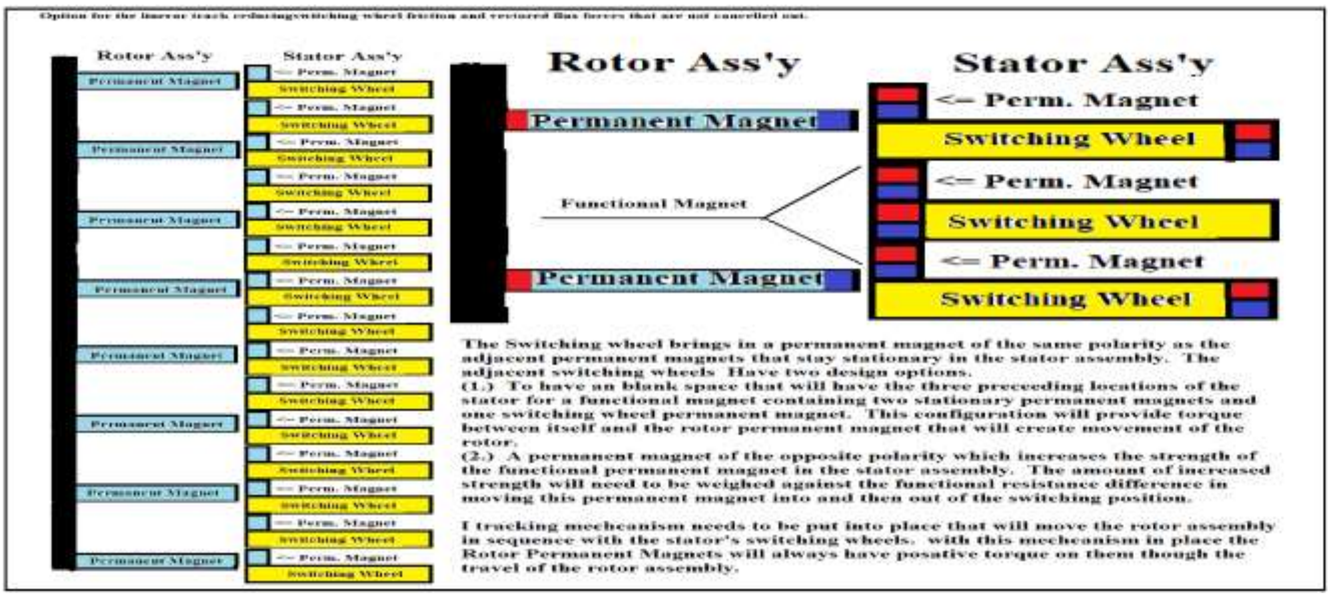


Figure 14:

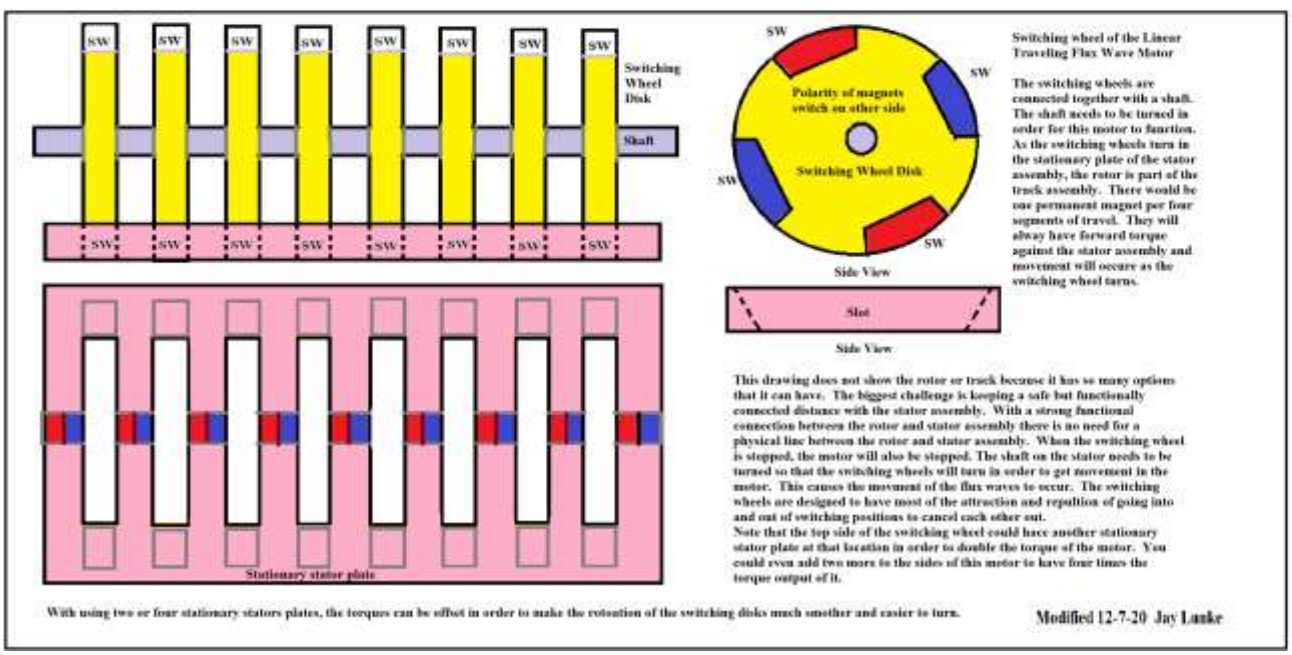


Figure 15:

Now the following drawing shows a linear motor. I think this is a better design than the one above because it uses a 5:1 PM to EM torque ratio in it's operation. This linear approuch takes what I have in the disk motor and stretches it out into a straight line. It also takes advantage of the modified tank circuit with stearing diodes which will be discussed later on in this book. There are so many linear movements that this technology can be used in. This is only one of them.

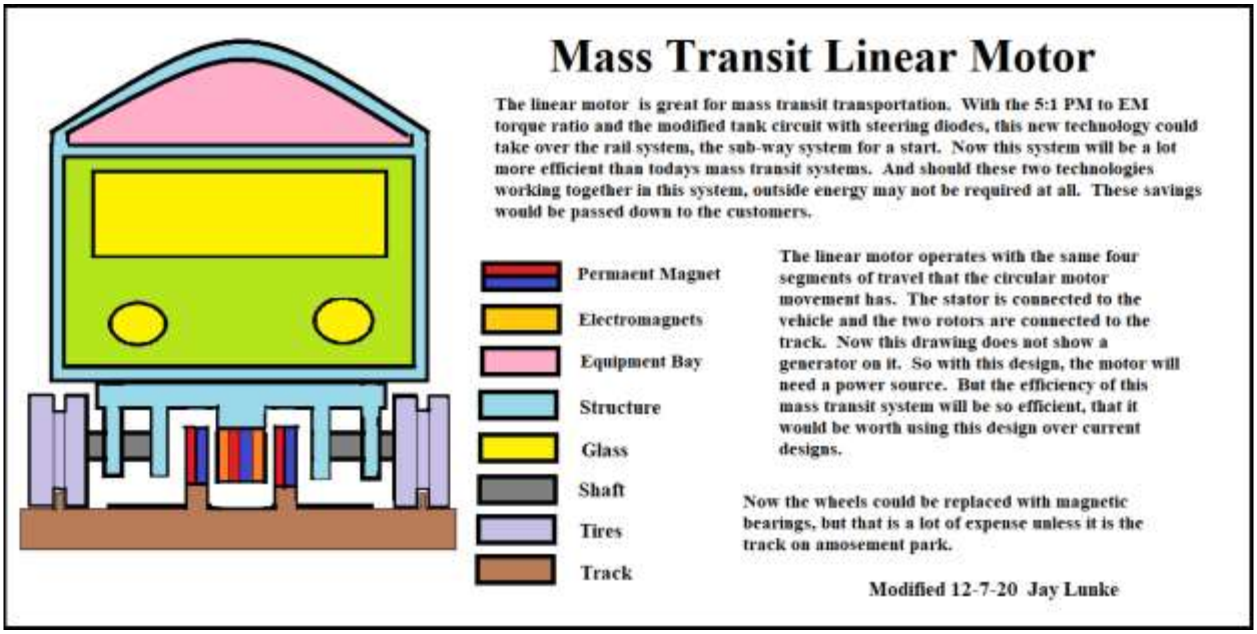


Figure 16:

Now if the 5 to 1 PM to EM ratio does not have enough efficiency over current magnetic motor designs then the incorporation of the modified tank circuit with steering diodes can increase the motor efficiency increasing the range of travel and or reaching over unity status. Instead of saying over unity status, it is better to say that the motor is harvesting the torque from the permanent magnets in order to perform work. The following diagram is an example of the circuit that can be used to accomplish that. This circuit can be used in other people's motor designs with some minor modifications.

The tank circuit was designed about 100 years ago and is used in many circuits today. It is used mostly in transmitteres and recievers because they work very well when at the resonant point. I have modified the tank circuit so that one leg of the tank is the electromagnet circuit and the other leg is the capacitor. The steering diodes is a modification so that the tank circuit does not have to be at the resonant point to operate efficiently with the motor.

A tank circuit is highly efficient because the energy cycles back and forth in the circuit. The tank circuit is topped off in order to allow it to sustain itself. I mimic this activity in the circuit in order to keep the energy used by the electromagnets at a minimum for the system response to power consumption.

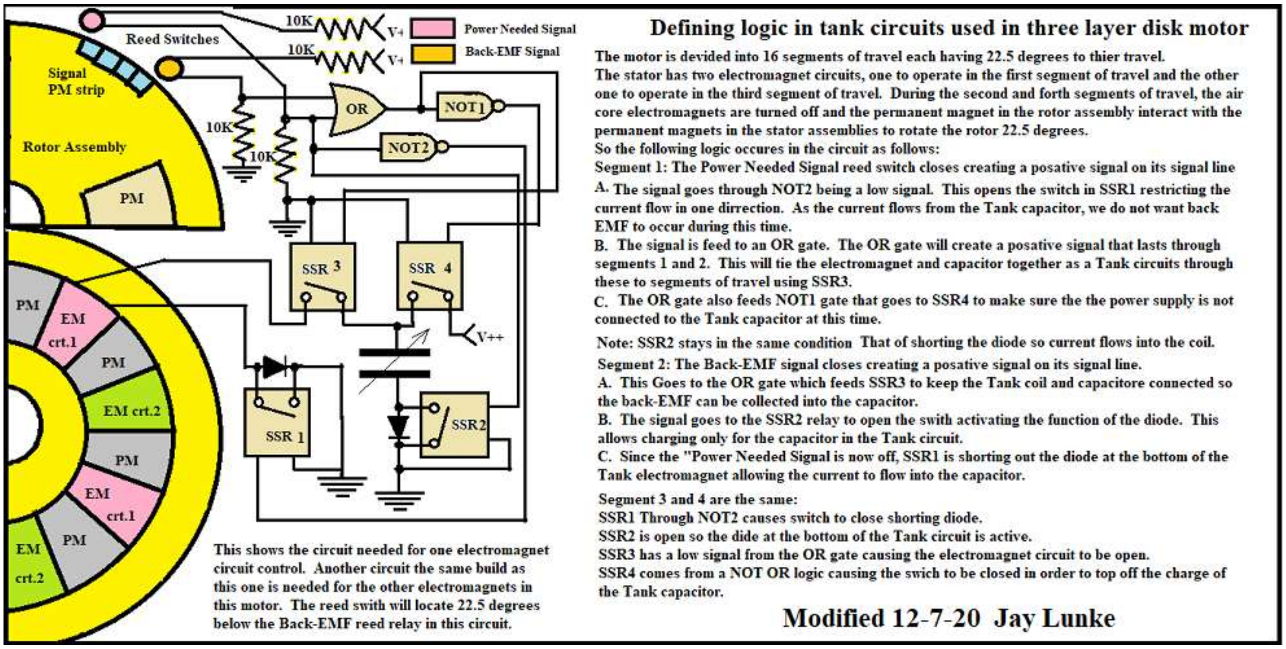


Figure 17:

Since each of the two electromagnets circuits operate at a 25% duty cycle, then this circuit is ideal to reduce the energy usage of the motor. Most Three Layer Electromechanical Movement Motor Designs can use this power circuitry in them.

Now this tank circuit can be used for other motors in order to capture and reuse a lot of the electrical energy that is used to build the magnetic flux in the electromagnets as well. The four drawing are set up to show you what is happening in each segment of travel when used to drive a motor.

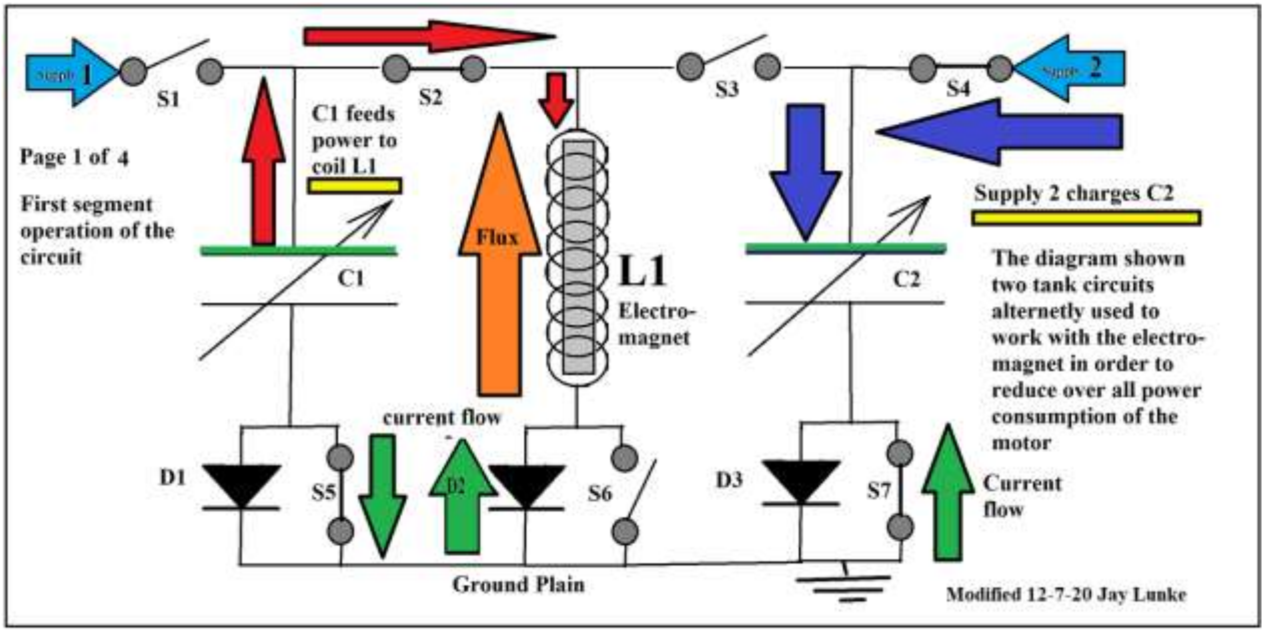


Figure 18:

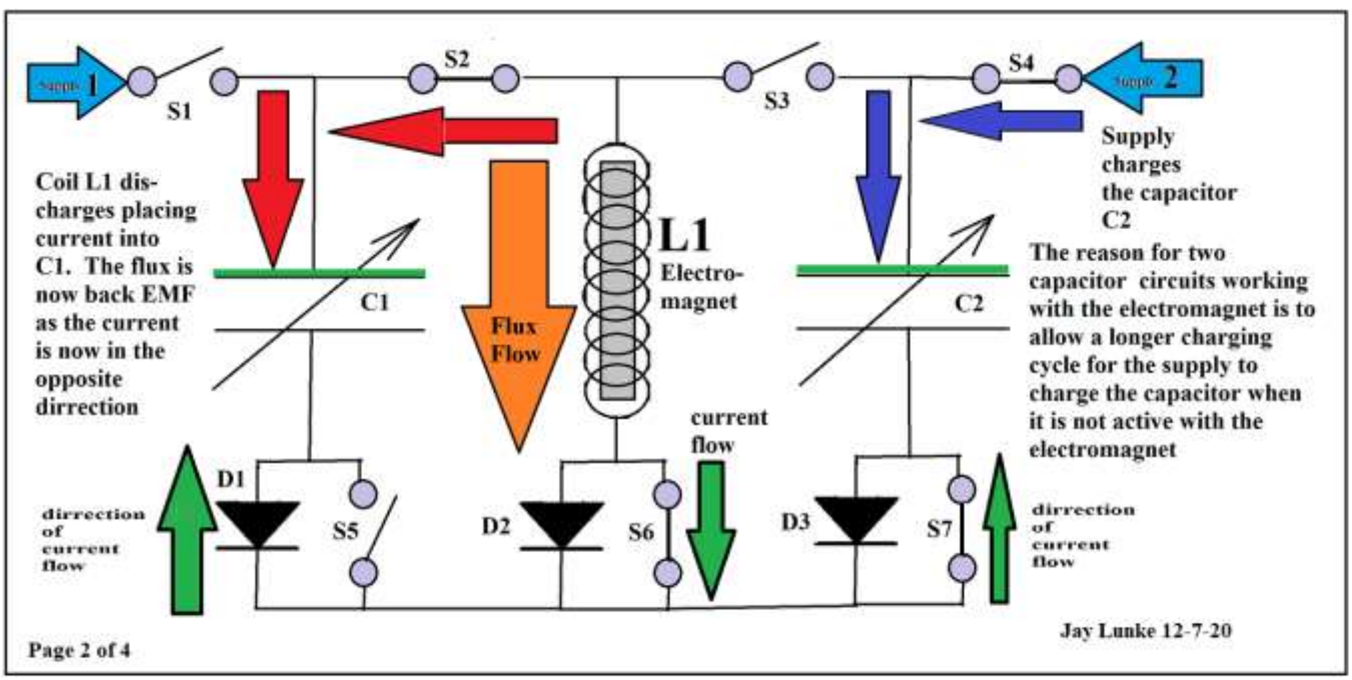


Figure 19:

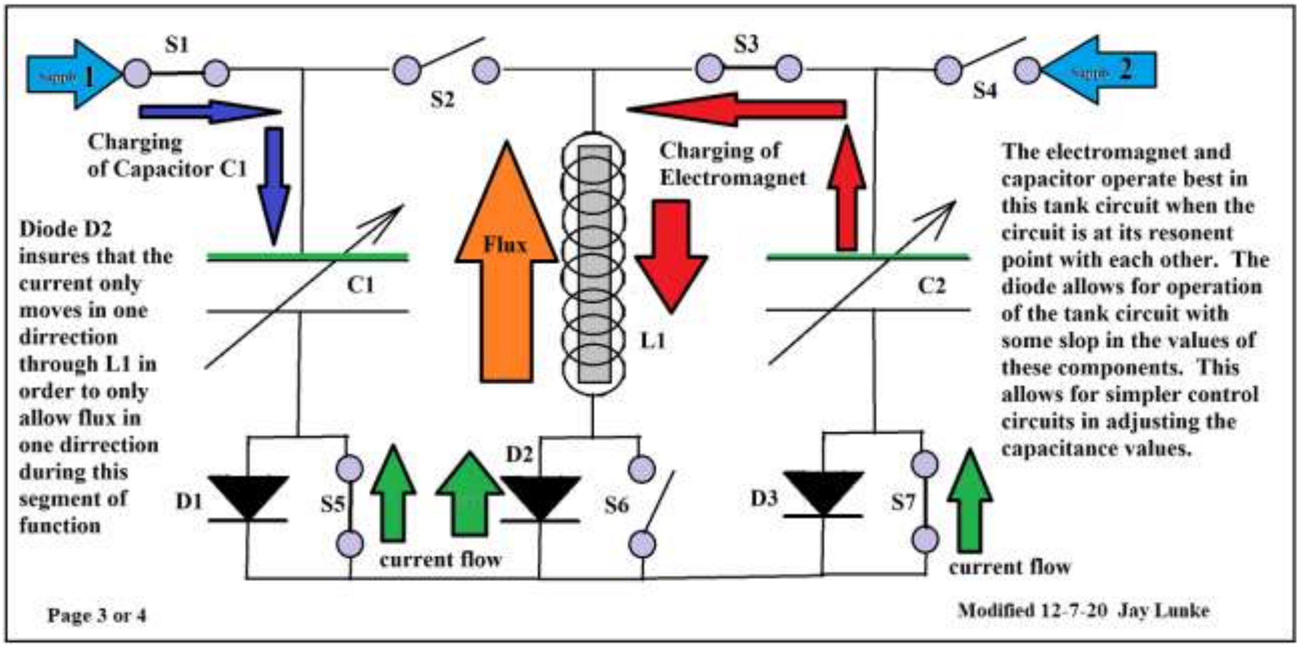


Figure 20:

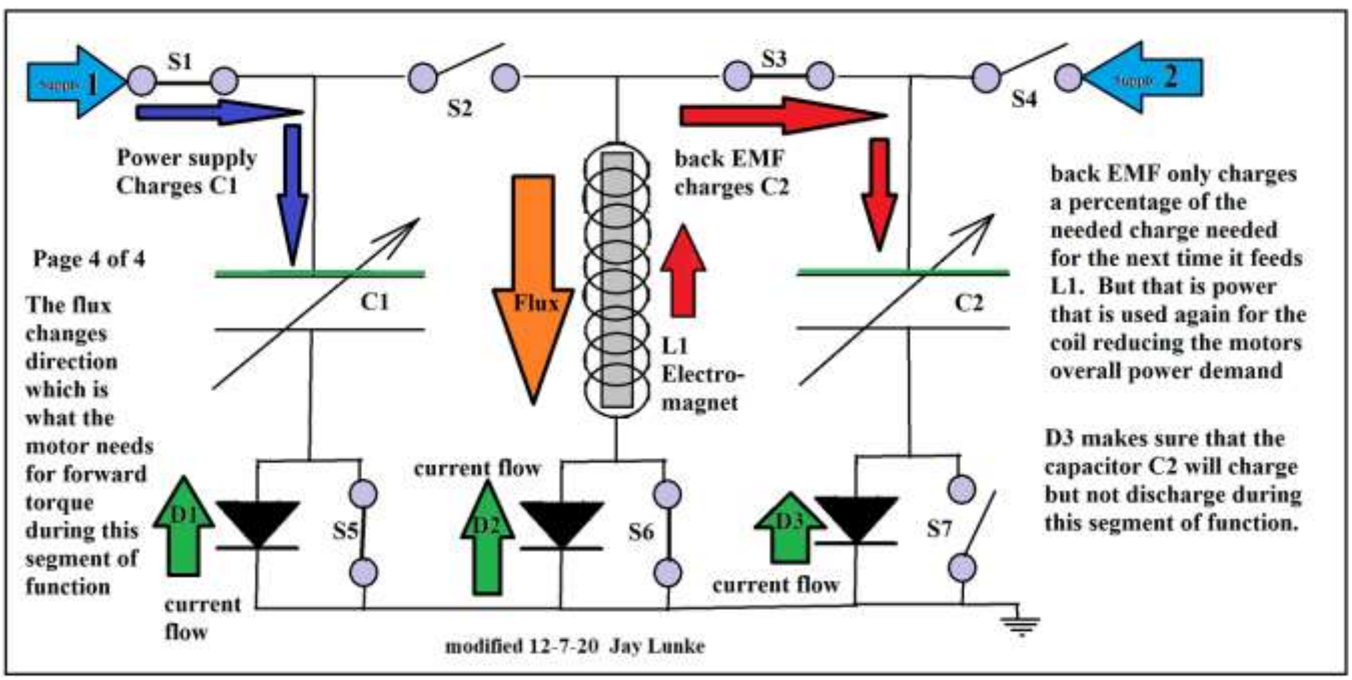
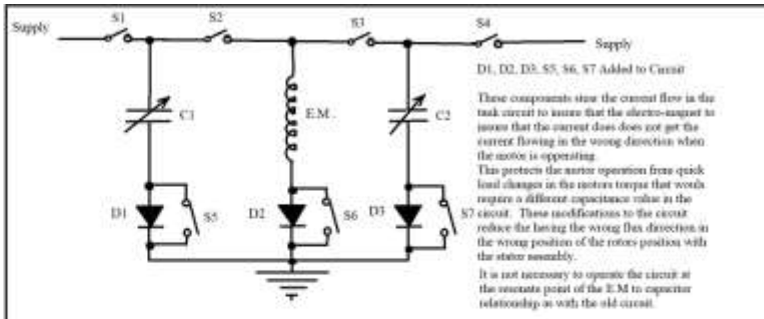


Figure 21:

The following drawing describes the modified tank circuit with steering diodes operating an electromagnet of a motor assembly. It would not be hard for a motor designer to modify this circuit for motor designs that have other duty cycle requirements.



This circuit needs to have a logic circuit to function the seven switches. One mechanical arm can be used to signal the size of the segment. Four pickup devices can be spaced with the mechanical arm in order to have the four segment signals. These four signals will be sent into a simple logic sircuit in order to have a drive out seven switch signals. These signals will drive solid state relays to provide the power requirements of the electromagnets.

There could also be a manual switch that would switch between this circuit shown and a dirrect power circuit that could be used for the start-up sequesnce of the motor in the first proof-of-concept motor. The start up could be incorporated in a more complex power/control module of a production type of motor.

	S1	S2	S3	S4	S5	S6	S7
Segment 1	Open	Closed	Open	Closed	Closed	Open	Closed
Segment 2	Open	Closed	Open	Closed	Open	Closed	Closed
Segment 3	Closed	Open	Closed	Open	Closed	Open	Closed
Segment 4	Closed	Open	Closed	Open	Closed	Closed	Open

Modified 12-7-20 Jay Lunke

Figure 22

The following drawing is one example of a variable capacitor that can be used in the tank circuits.

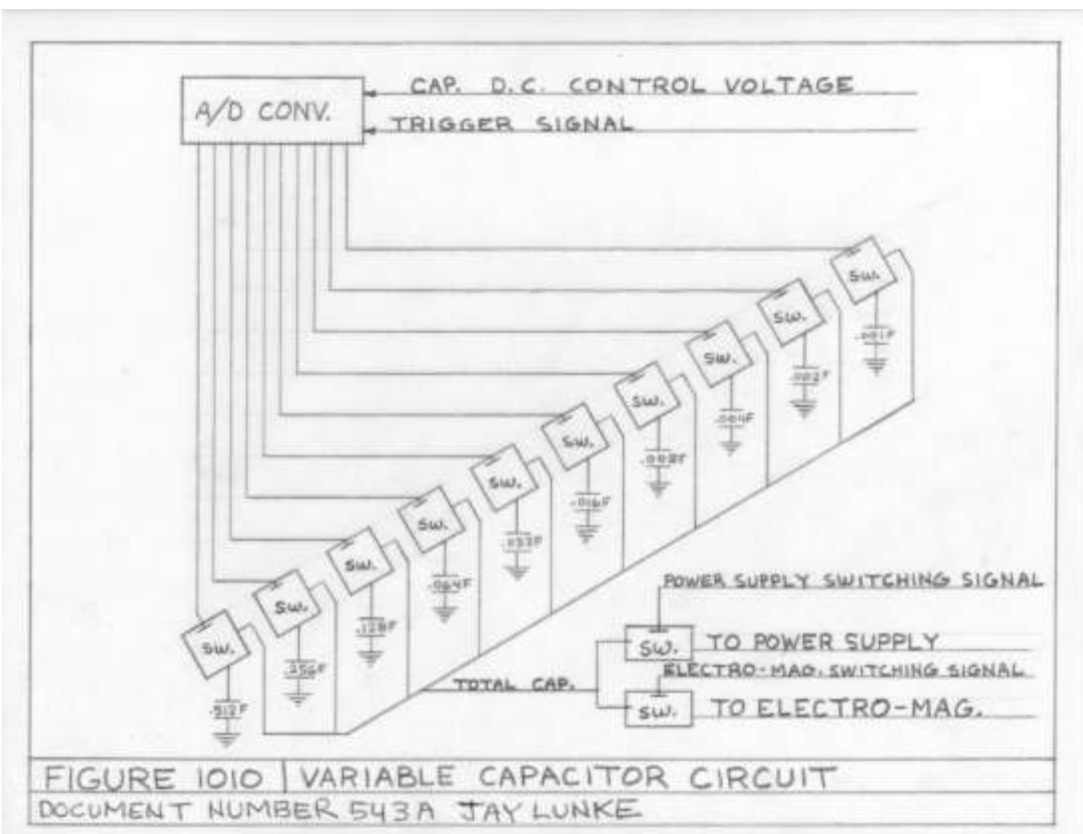


Figure 23:

Now if you want to have a very simple power control of the motors using this new technology, then the following diagram is a good design to do this.

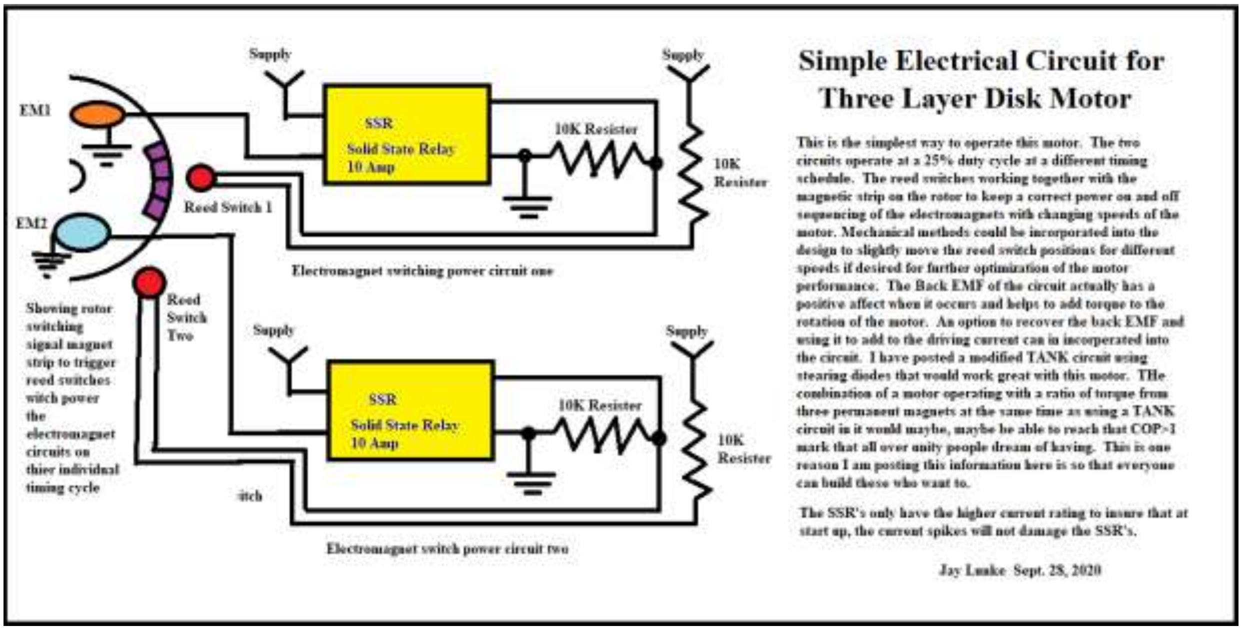


Figure 24:

Now the Three Layer Electromechanical Movement Technology can operate with the other orientations of the rotor permanent magnets in relationship to the stator electromagnets. The next four drawings describe one of these motor options in four segments of rotation travel. These four segments repeat themselves over and over again. Now these drawings are only meant to show you the design concept and function of the technology. If you build a motor at the same dimensions in the drawing, it would be very inefficient. The reason is because a magnets best potential is at the poles. When you have a six-inch magnet with a 1-inch magnet at the middle section of that magnet, there will be little interaction between them. This is because the poles of the two magnets are far apart from each other. So, if you want to use this type of motor configuration, you need to add many more sections of movement into the motor. There is a limit in using this technology because you do not want the opening between the magnets to become too small because you do not want all of the flux to move around in one big loop leaving a rotor that will not interact with the stator assembly.

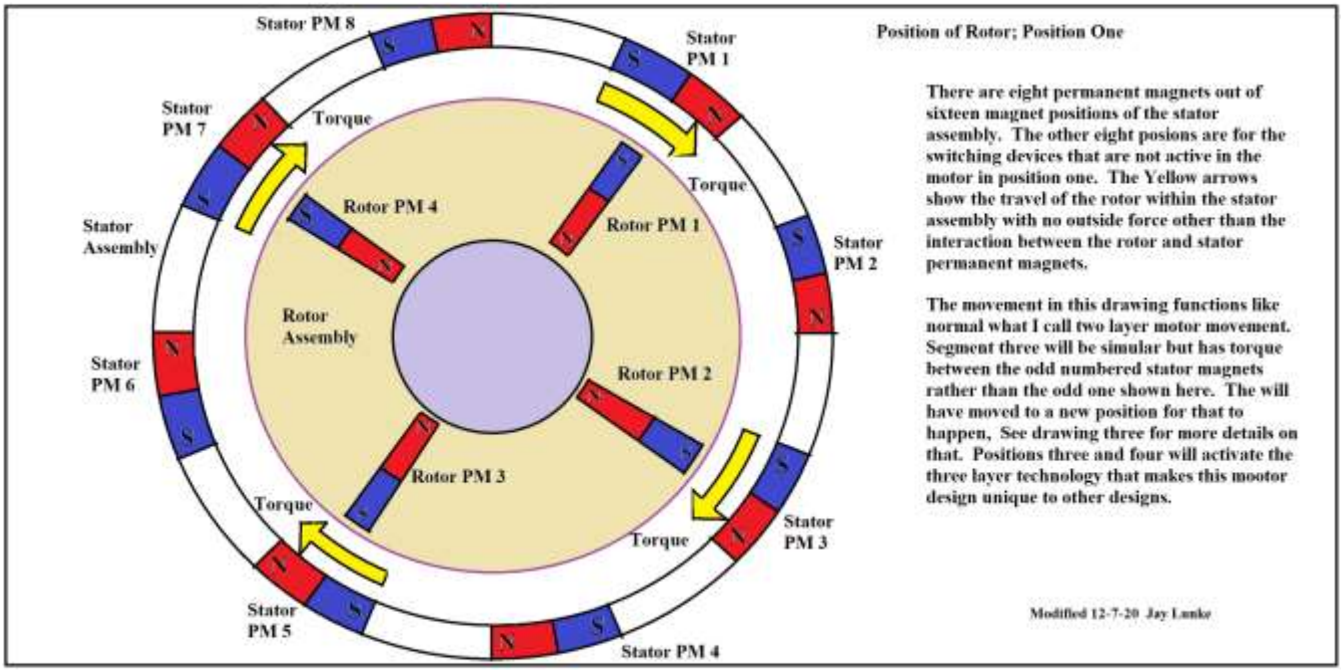


Figure 25:

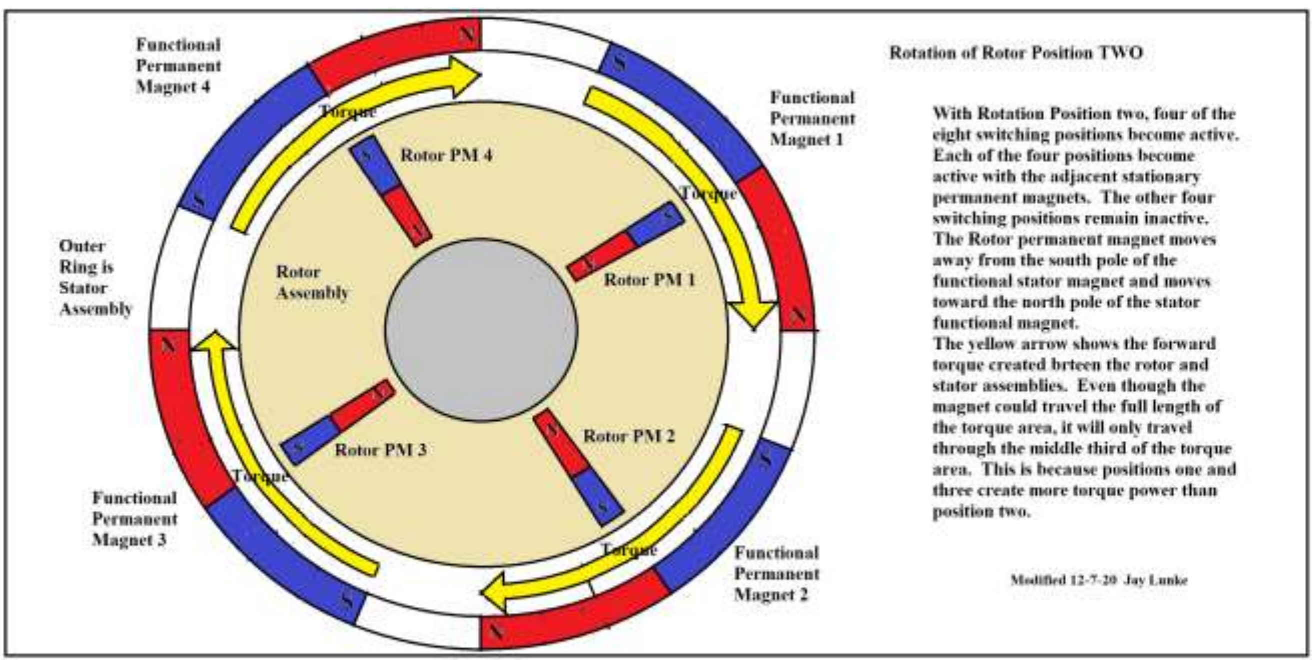


Figure 26:

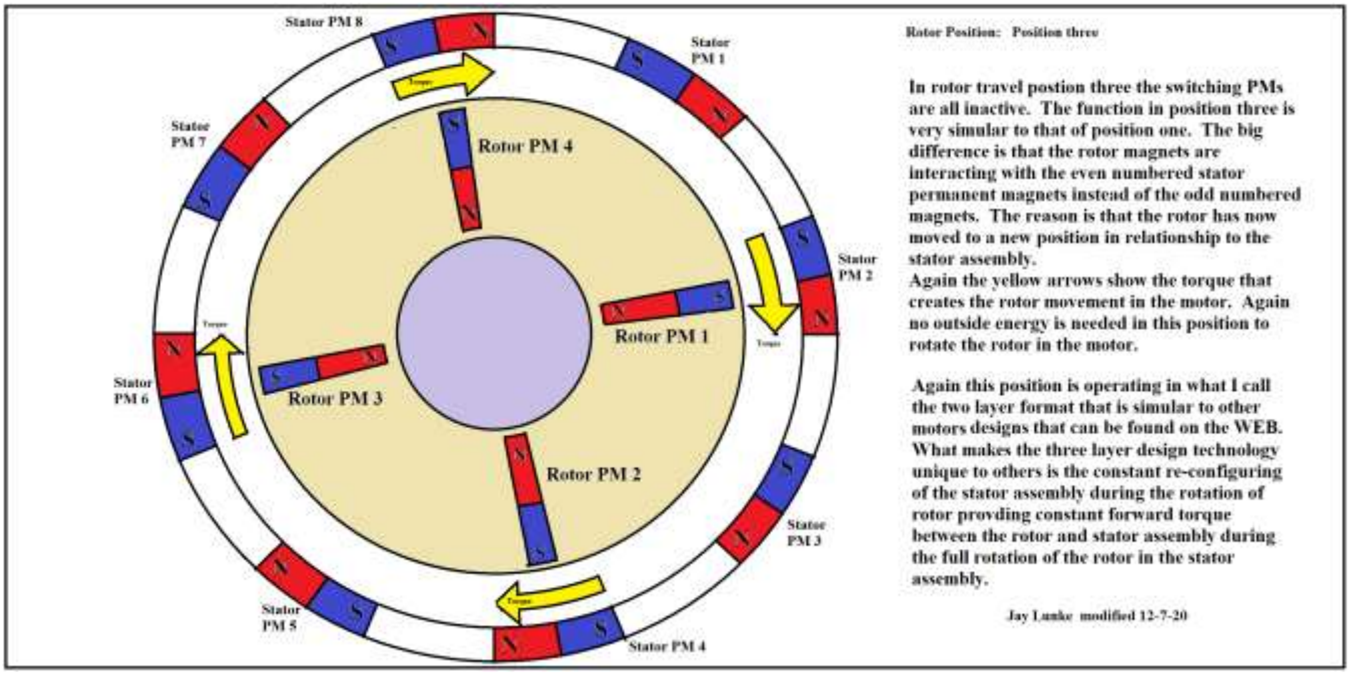


Figure 27:

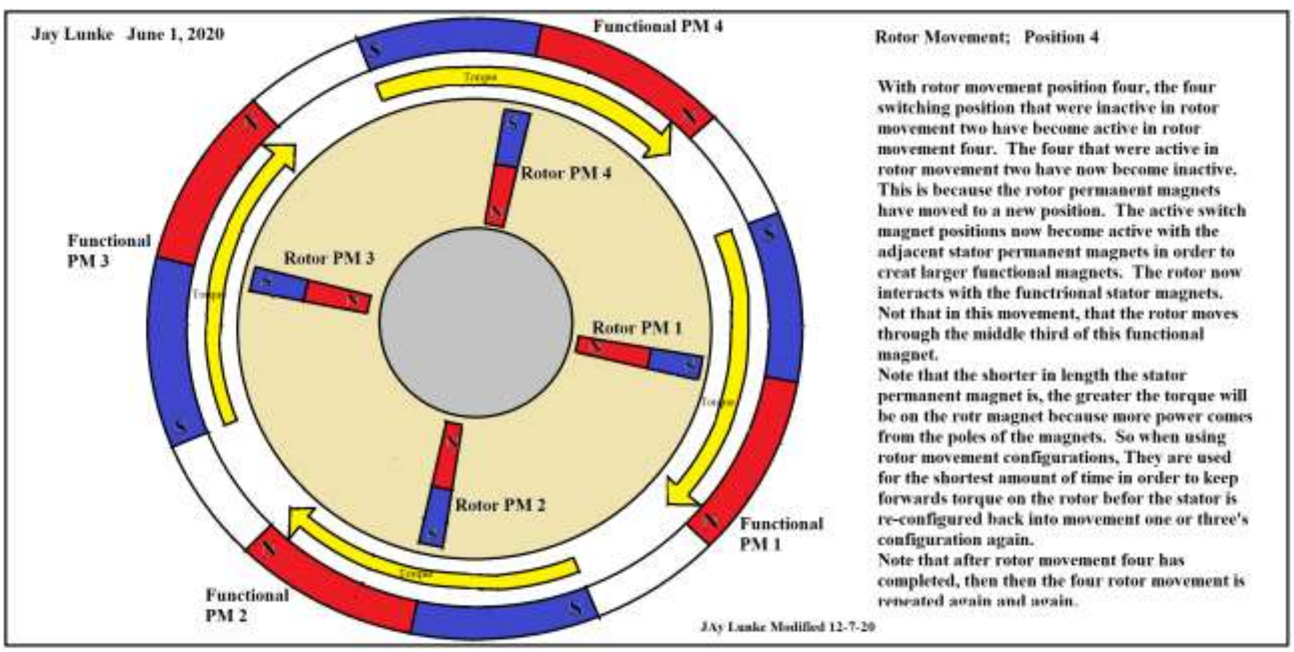


Figure 28:

So, the design we just looked at has the stator at the outside of the rotor magnets where as the disk motor designs have the rotor and stator magnets side by side of each other.   Now both of these designs could use different rotor to stator magnet orientations in them and work with the different configurations. Now each design has their advantages and disadvantages for different applications.

Now another design option has more of a 45-degree angle to it through the rotor.

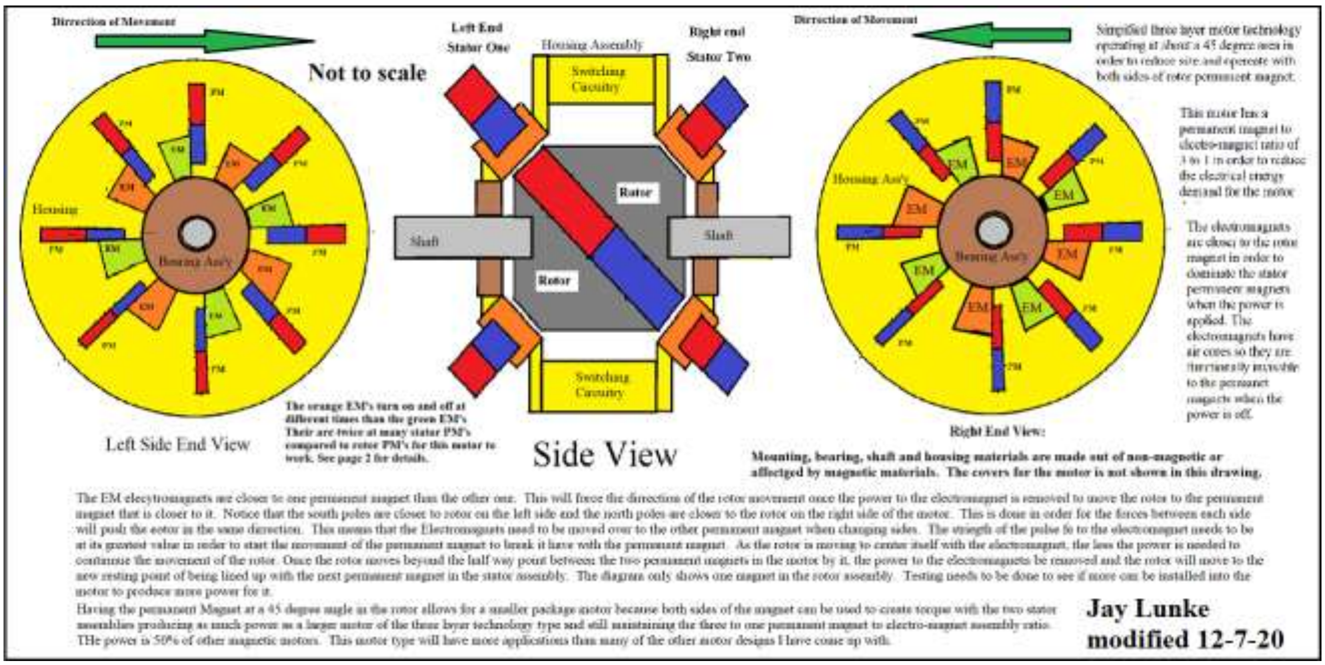


Figure 29:

Now the above drawing shows something that is different than the other motor designs I have shown in this book so far. That is the offset of the electromagnets to the permanent magnets in the stator assemblies. What this does is to ensure that when the power is applied to the motor, that the motor will rotate immediately in the desired direction of rotation. After the power is removed from the electromagnets, the two adjacent permanent magnets will have the same torque on the rotor permanent magnets on some of the motor designs. If there is no kinetic energy in the rotor, then the rotation may go in the wrong direction. This should normally not happen because after the electromagnets are powered down, the kinetic energy moves the rotor in the correct position. This design could have applications over the other motor designs. I have it here in order to show you that this new technology has an almost unlimited design option to it.

Summary of motor Application

Now since the torque from permanent magnets does not require external energy in order to provide torque in motors and since the ratio of permanent magnets are up to five to one and since the energy that generates the flux in the electromagnet is recaptured into the tank circuit and reused again the next time the electromagnet is used in the circuit; the result is most likely to be an over unity system. Again, the energy is from harvesting the torque from the permanent magnets functioning like a battery in this new technology. Now if this is true, then it makes sense to have a highly efficient generator in the system so that the output of the generator will be enough power to power the motor and power circuit at the same time as have torque from the rotor to produce mechanical work. There may even be power left over from the generator to power other devices.

:

Power Generation

There are many generator options that can be used with this new technology that are old and new concepts as well. Pick your own favorite power generation to use.

The first drawing shows how the back side of the rotors can be used in a generator circuit. So, the permanent magnets in the rotors would have dual functions in order to drive the motor at the same time as drive the flux into the generator coils.

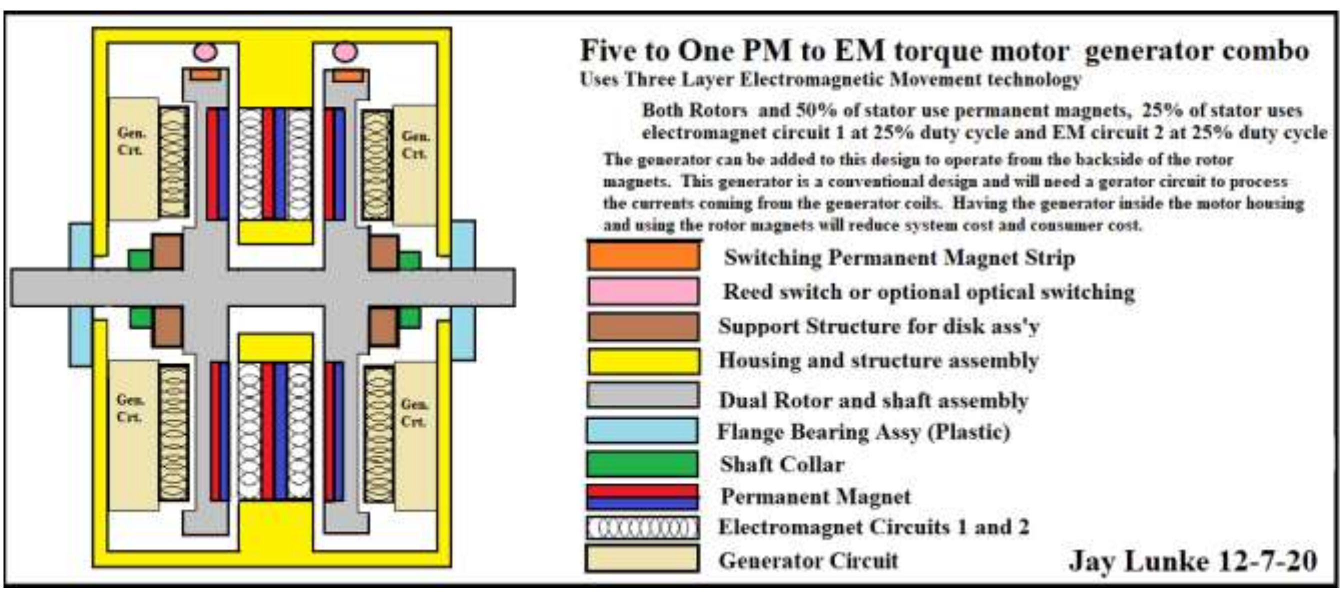


Figure 30:

The following concept is an indirect approach in electrical energy generation. The drawing shows a three-legged transformer in the drawing. A two-legged transformer can be used as well where one leg would be the output coil and the other leg would have the permanent magnets passing through it. Each following permanent magnet would have the poles in the opposite direction from the magnet that proceeded it. It would be best to test both configurations and use the one that performs the best.

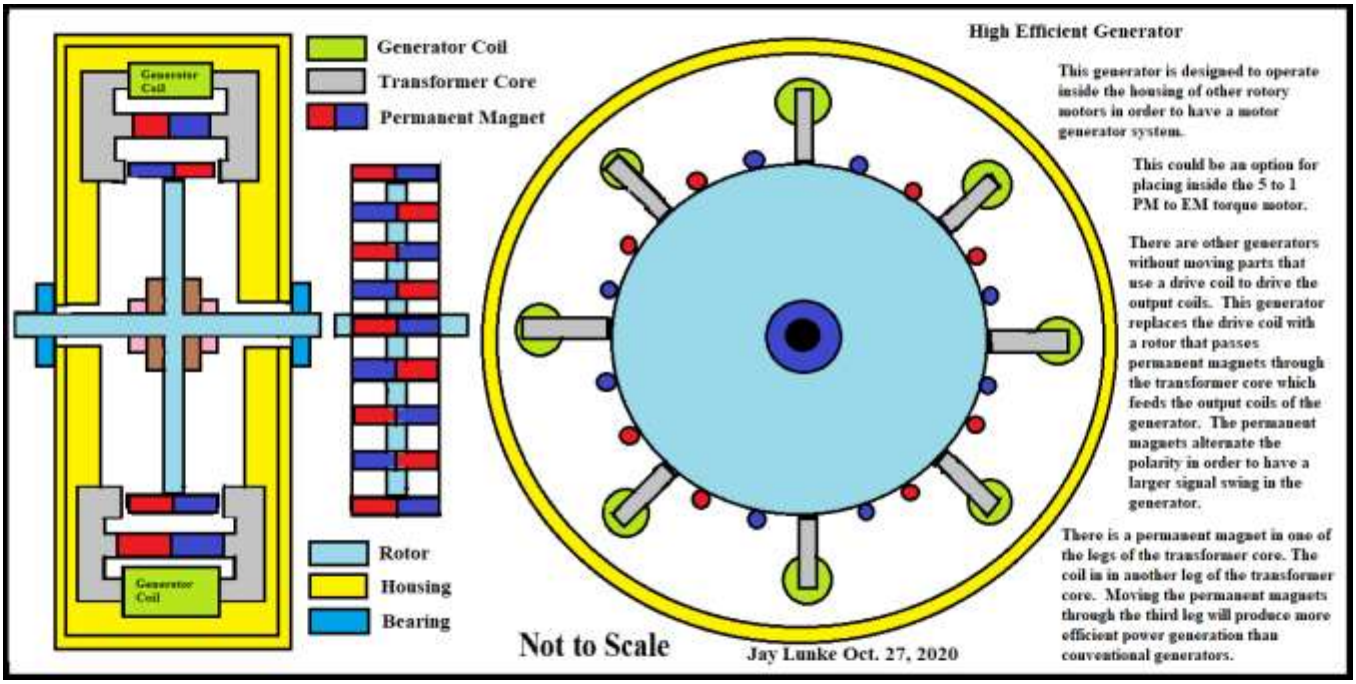


Figure 31

The big question is why use an indirect method to generate electrical power?

The reason is that the interactions between the two systems are different in nature. I will not speak a lot about the conventional generation methods. The coils in conventional electrical generation create a magnetic field that opposes the permanent magnet that is passing the electromagnet. This opposition reduces the efficiency of the power generation. In the indirect design the moving permanent magnet passes between two metal posts creating a third leg of a transformer. Now as a permanent magnet is passed by a metal post, the permanent magnet will have attraction to that post on one side of the post, that attraction creates forward torque on the rotor and on the other side of the rotor it creates negative torque for the rotation of the rotor. So, when a vector analysis is performed on these torques, a large part of the torques cancel themselves out. Not all of it though. So, it would be good for someone to build one and compare the performance of it to other generators. So, in this design, one permanent magnet is already in the three-legged transformer. It has flux going through the generator coil. Now electrical generation occurs only when there is a changing flux through that coil. So, when the permanent magnet passes through the third leg of the transformer, most of the flux in the coil changes in strength producing electrical energy. Depending on the polarity of the rotor permanent magnet, flux will either be added to or taken from the leg of the transformer that has the generator coil in it. Now if the three-legged transformer configuration has no advantage to conventional electrical energy generation, then a two-legged transformer configuration can be used. The two-legged configuration would have the generator coil on one leg and the passing rotor permanent magnet on the other leg. If the two-legged transformer configuration has the same performance as the three-legged transformer, then use the two-legged transformer configuration to save money in the final device.

If the motor and tank circuit system is self sufficient to operate, then using designs that have the motor and generator in them is the way to go to reduce the final cost of the system.

Now once the best on board or in this case on device generator configuration has been developed, then you want to incorporate that design into a motor package that can be mounted into the largest variety of design applications. The following drawing has a motor/generator combination with several mounting surfaces on it in order to provide that flexibility.

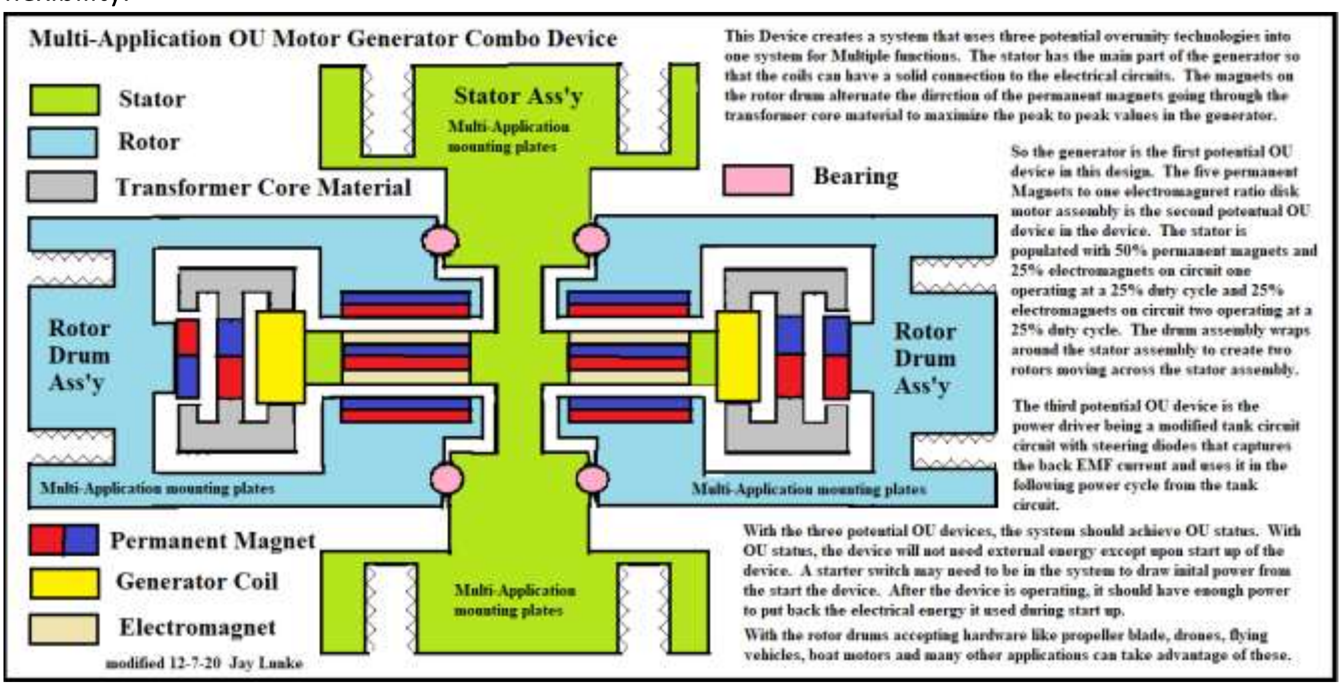


Figure 32:

Notice that the transformer has the coil on the stator assembly. The motor designs should be designed without using commutators in them because they are a mechanical assembly that wears out. This new technology needs to be designed for as low maintenance as possible.

As in the generator drawing, if the three-legged transformer does not demonstraight better performance than the two-legged transformer configuration, then the two-legged configuration should be used in the design.

The following is one example of using the new motor designs.

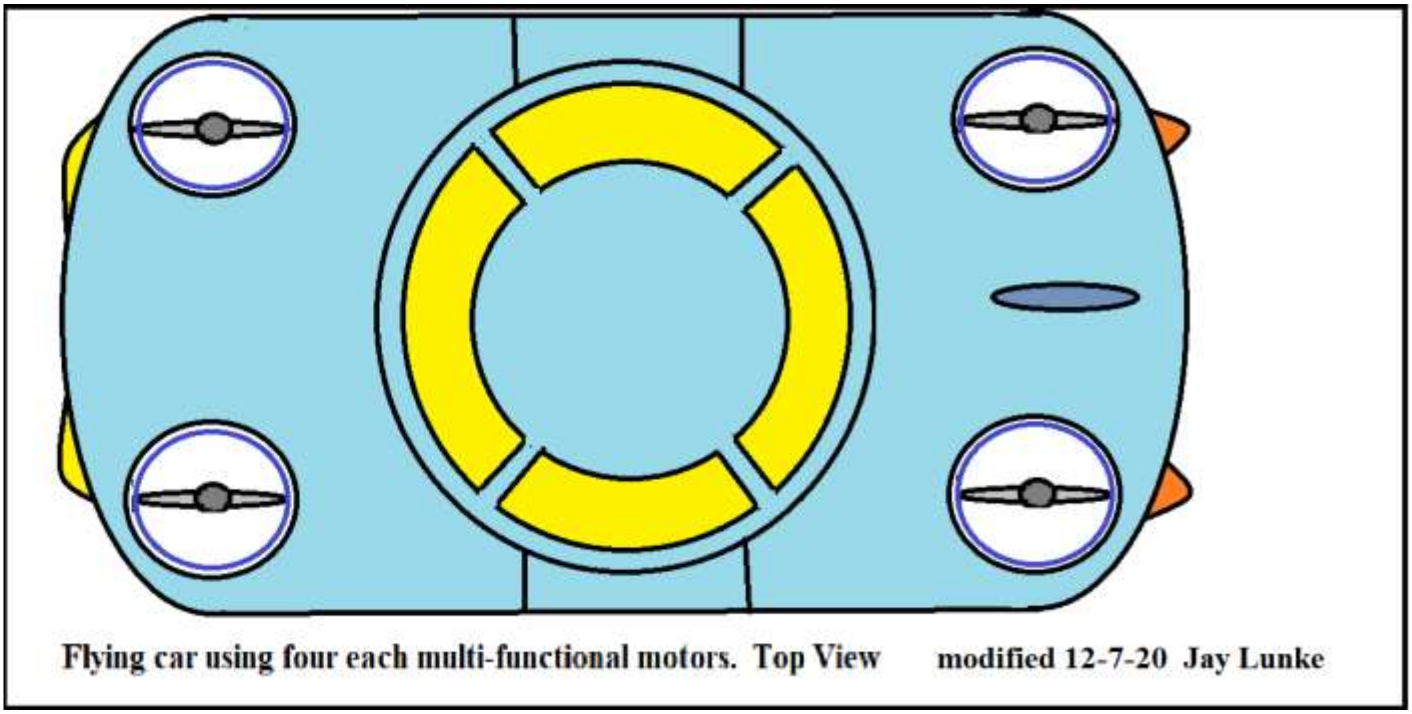


Figure 33:

In reality, the motors would be much larger in order to allow more air to flow through them. This drawing only shows the concept of such a machine. Many other flight devices use the four-motor design configuration.

The following drawing brings us back to earth or even under the earth. The motor design can pipe crude oil where it is needed to be. It can also move water where it is needed as well.

This can be very helpful for farming where water is currently limited. Large ships and submarines can use this type of motor for propulsion.

What is nice about this design, is that it gets away from using the conventional shaft. This means the motor design can be incorporated into the final application. A washing machine or dryer are two appliances that could have the motor as part of the drum assembly. The more you can incorporate the motor into the final product assembly, you are going to save money in building the product. It also means the product build will save the customer money as well.

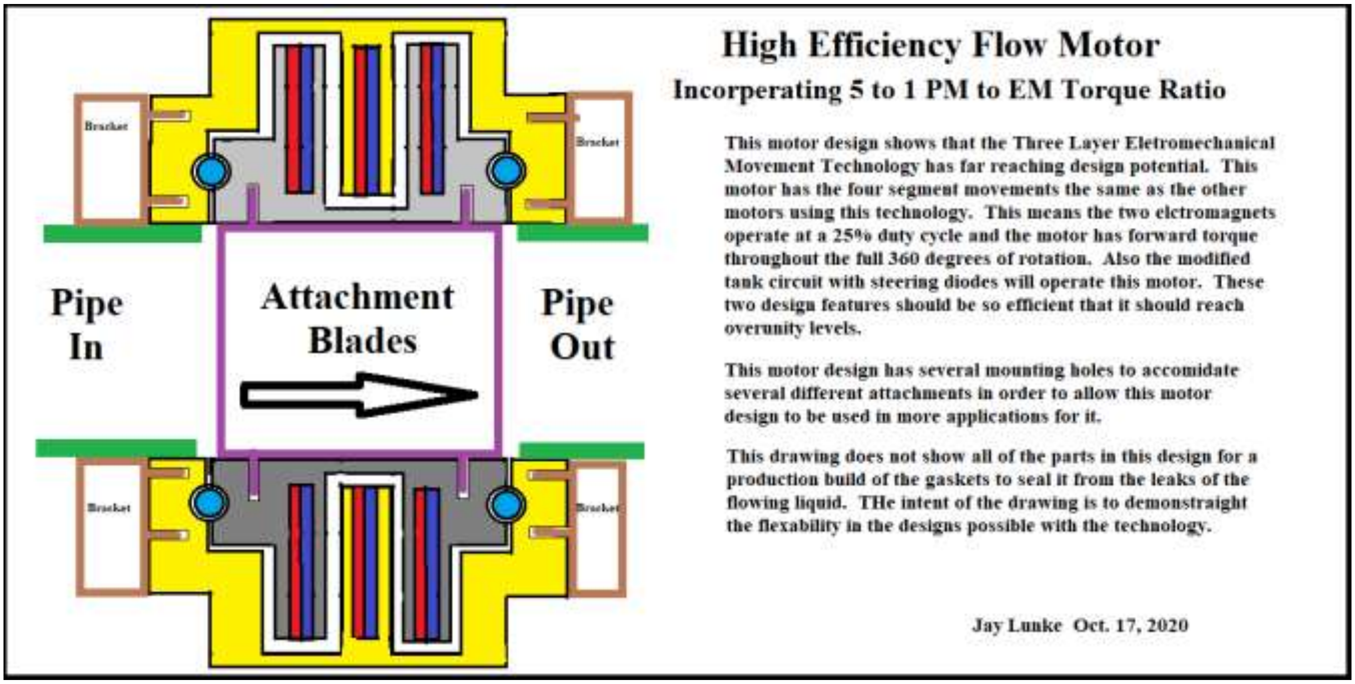


Figure 34:

The next drawing will show how several of these motors put together in a system that can produce a fast either underwater vehicle or they could place the jet engine on airplanes.

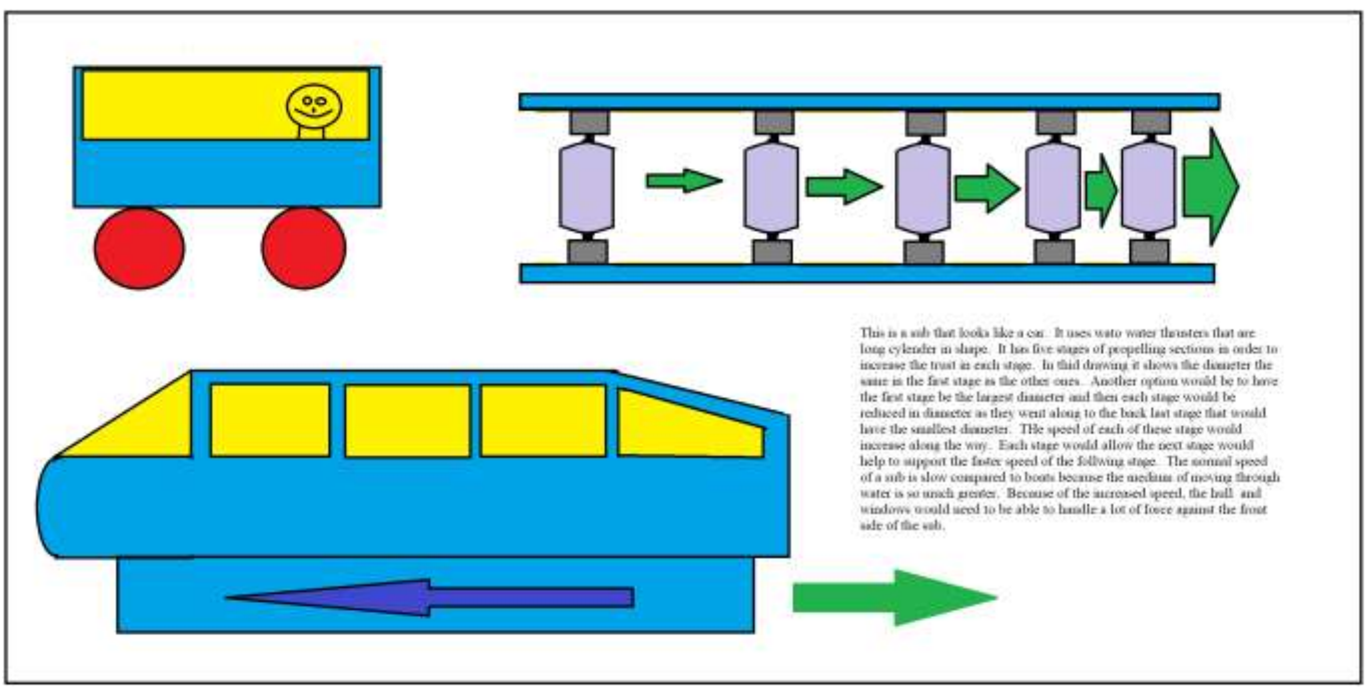


Figure 35:

The inside circumference can become a lot larger for different applications

I got carried away by increasing the inside diameter of the motor when I designed a flying craft that looks like a flying saucer. Now if the flying saucer has not achieved over unity status, then it will need to have the batteries recharged. The next drawing shows you how the wind can be used to recharge the flying craft.

The one nice thing about using electric motors for flying crafts is that with the additions of some seals and water/corrosion protection designed into the motors, then they can move from the air into the water and back into the air again. Just think of how nice that would be on vacation.

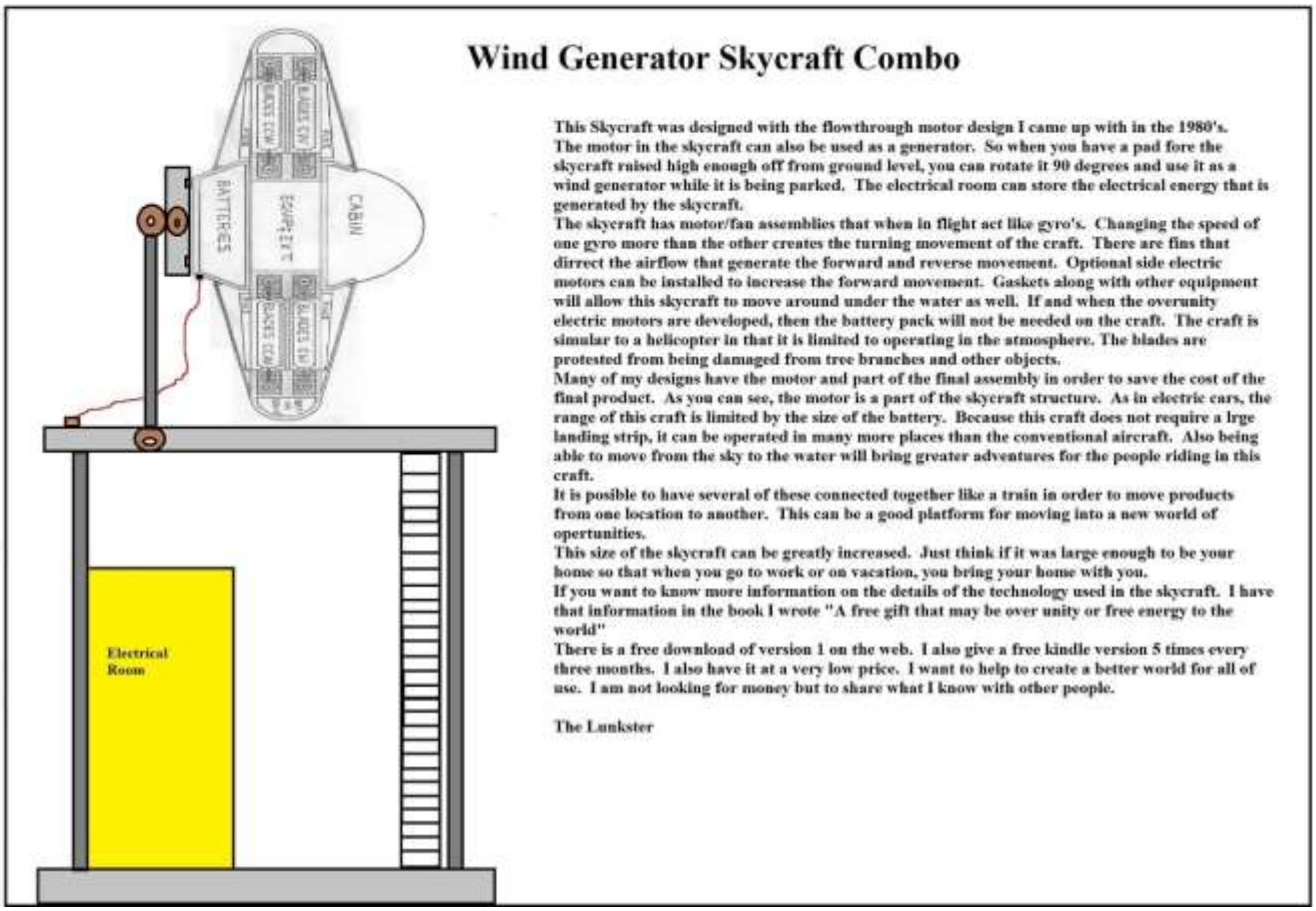


Figure 36:

Now think of the flying craft being much larger in scale and being operating on the torque from the magnets with no need for energy from an outside force to operate it. Think of flying your home to your vacation spot. How nice not having to pack your things for the vacation.

Building a prototype motor for the hobbyist

Now let's get back to this present day. There are things that have to be done first with this technology to prove it out before we can proceed to fly in the sky with it. We need to optimize different aspects of the technology in order to have proper tools and data to build the worlds best motors. One very important thing is the electromagnet design. What size wire gauge to use for the motor. How many times does it need to be wound? The size and shape of the coil. The proper way to attach it to the motor stator assembly. The distance of the coil to the rotor permanent magnets along with the distance of the rotor permanent magnets to the stator permanent magnets needs to be optimized. I have seen people performing copycat designs that are functional, but not the most efficient. So, performing testing all along the way of the design is important. There is also the conflict of the design engineer wanting to build the device to the best it can ever be with the manager wanting the largest profit that can be. With this new technology, I hope the design engineer wins that battle.

So, the following prototype design is mainly to get the correct ratio of the stator electromagnets and stator permanent magnets in the correct placement to the rotor permanent magnets. This is because this new technology does not have this data yet. Many of the other components have been well tested.

This is a design that anyone can build.

I have a parts list with it.

This would be a great way to learn and understand this new technology.

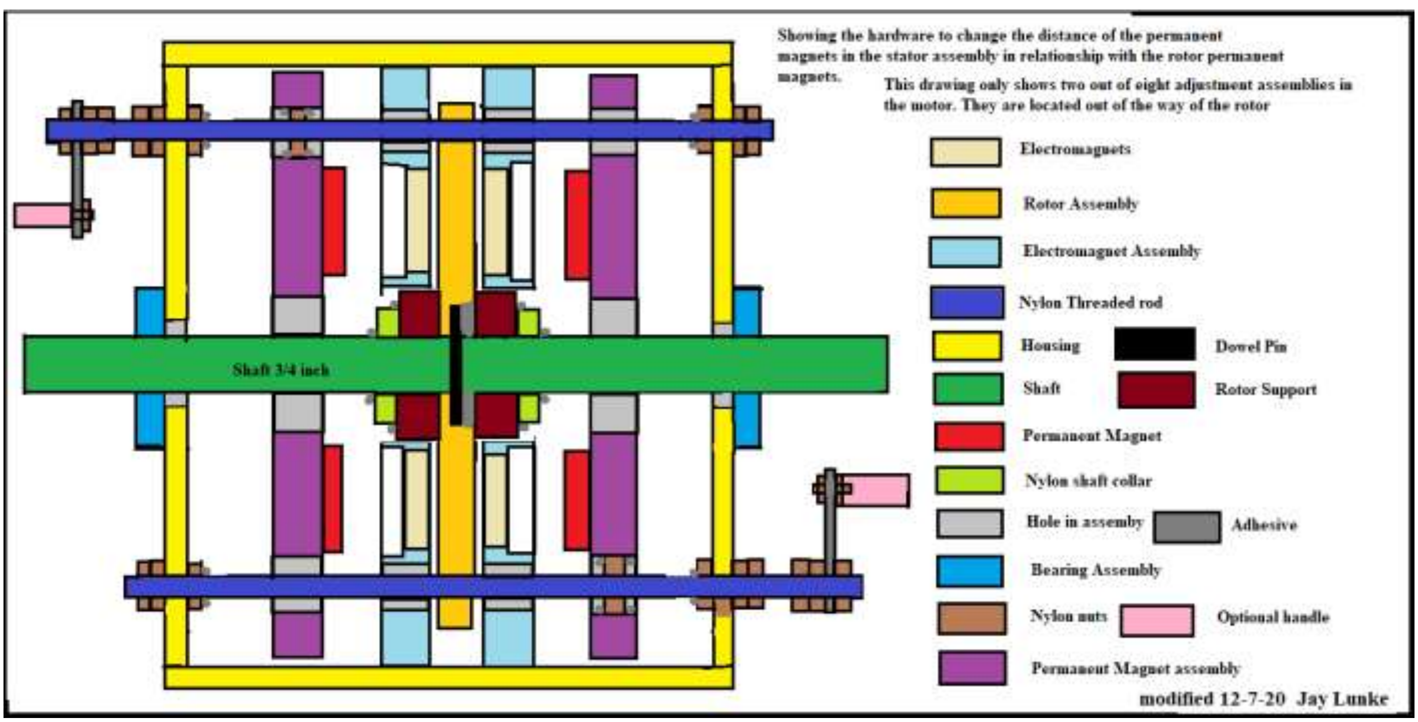


Figure 37:

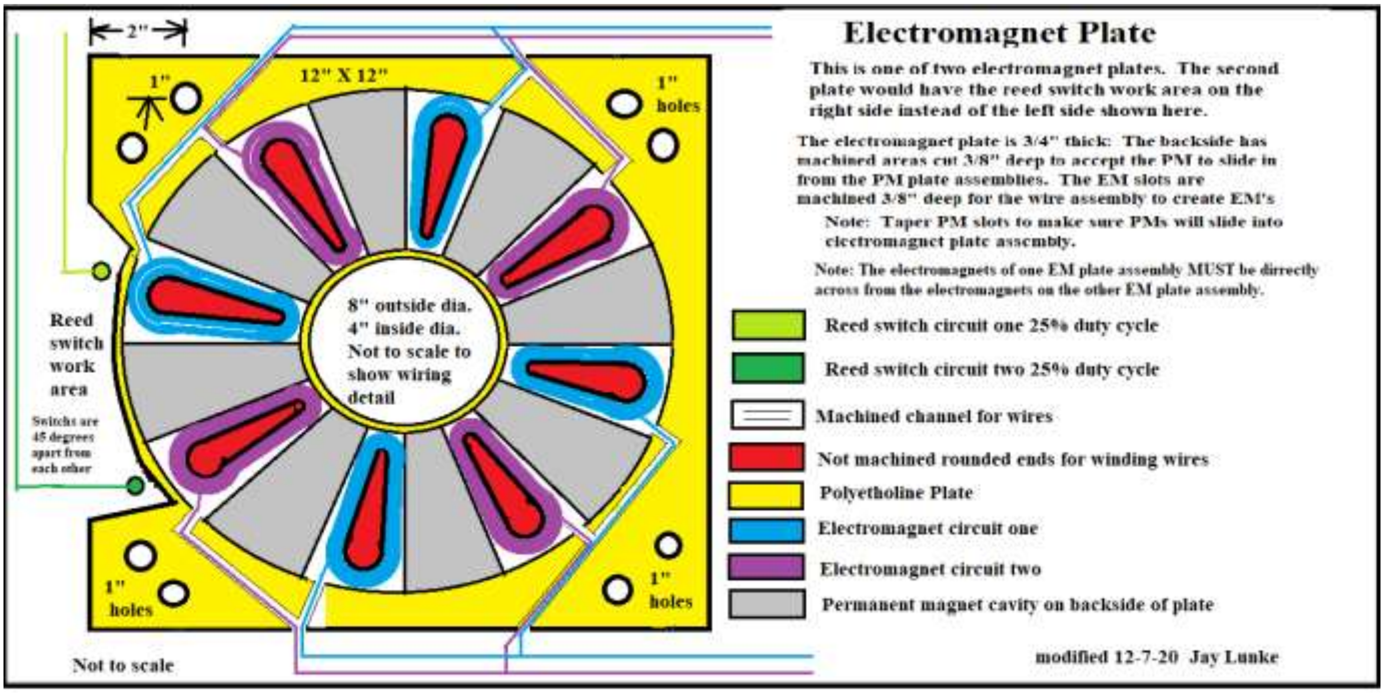


Figure 38:

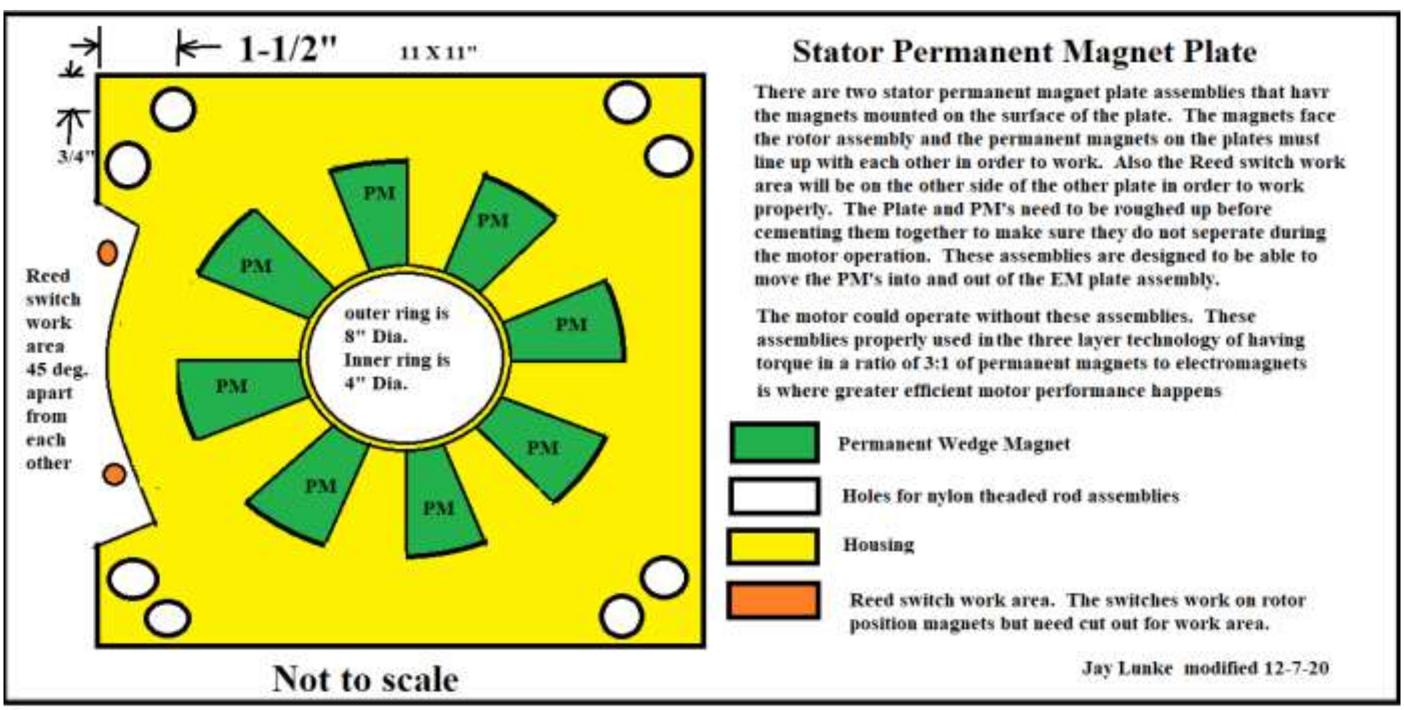


Figure 39:

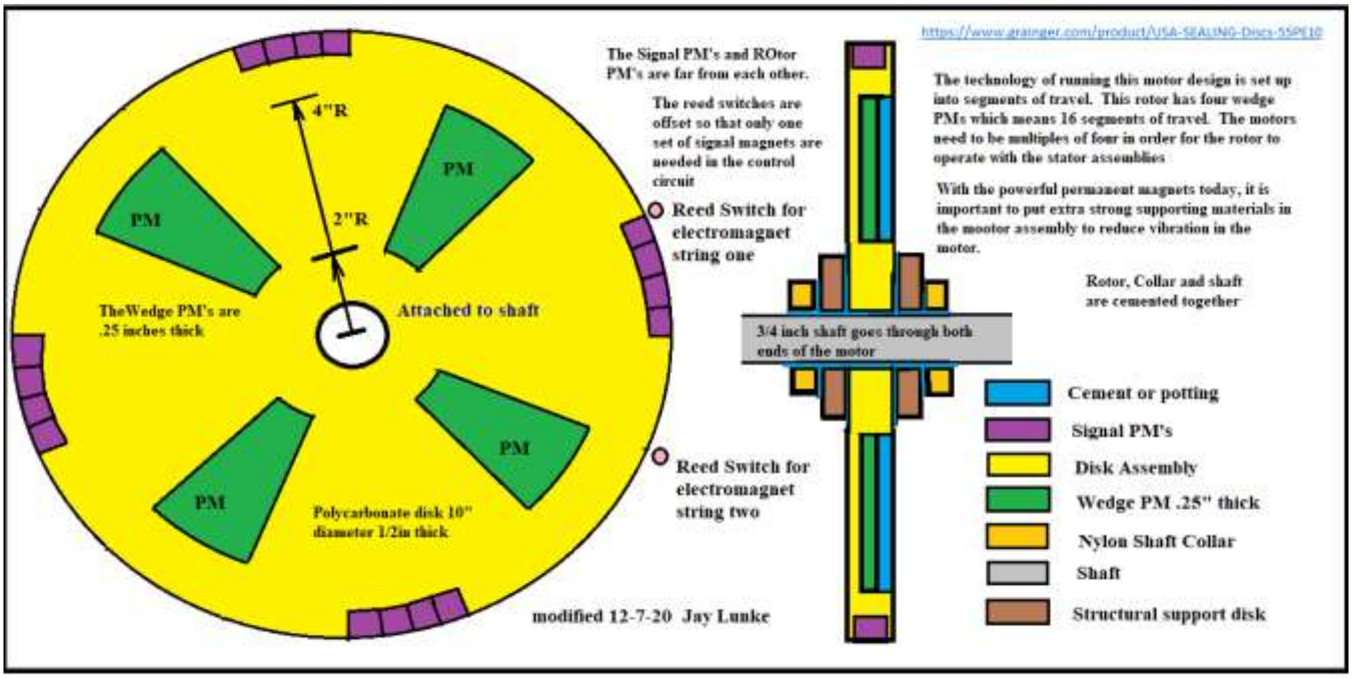


Figure 40:

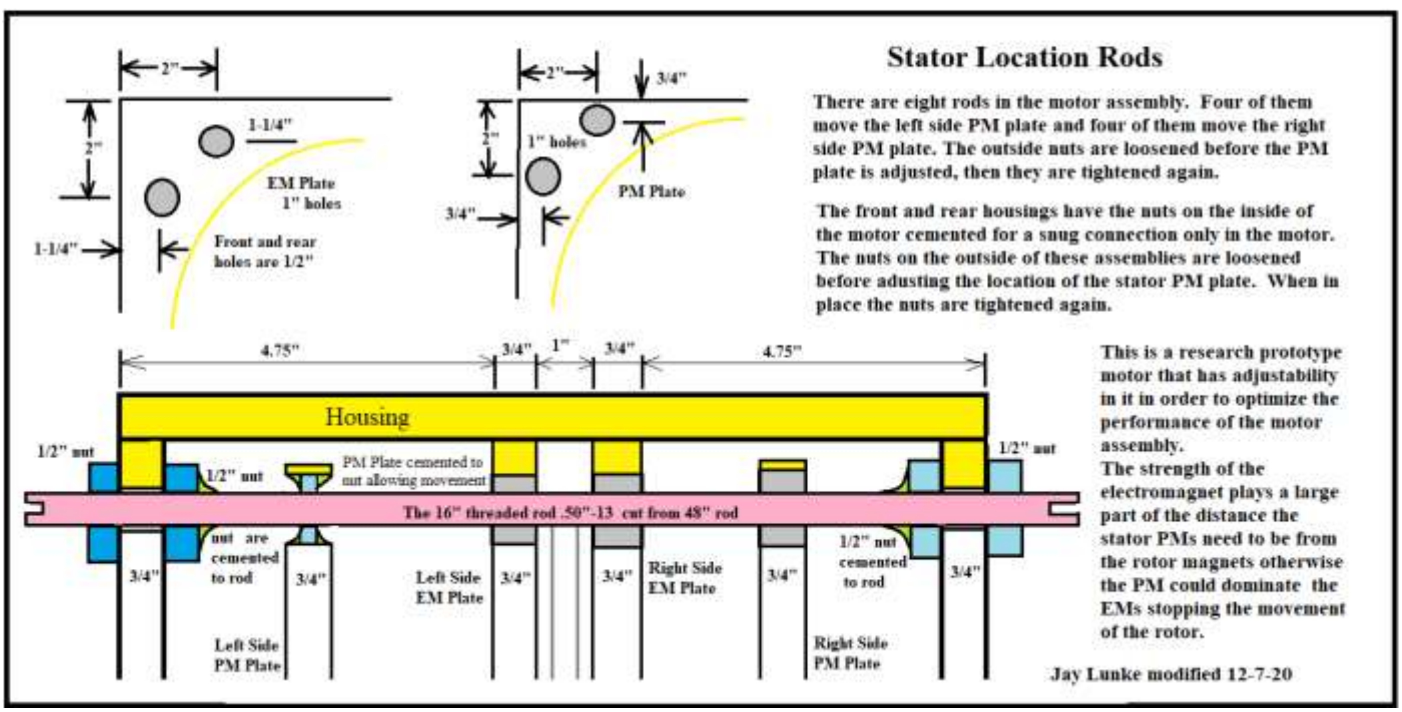


Figure 41:

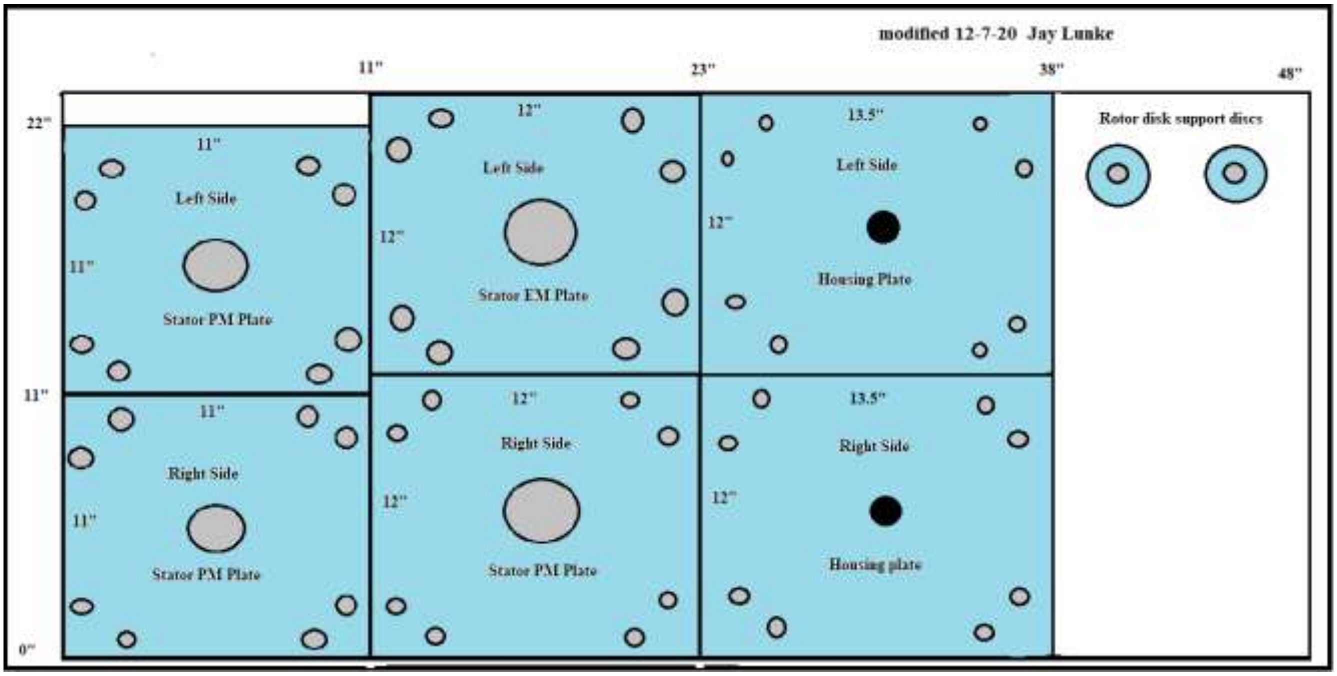


Figure 42:

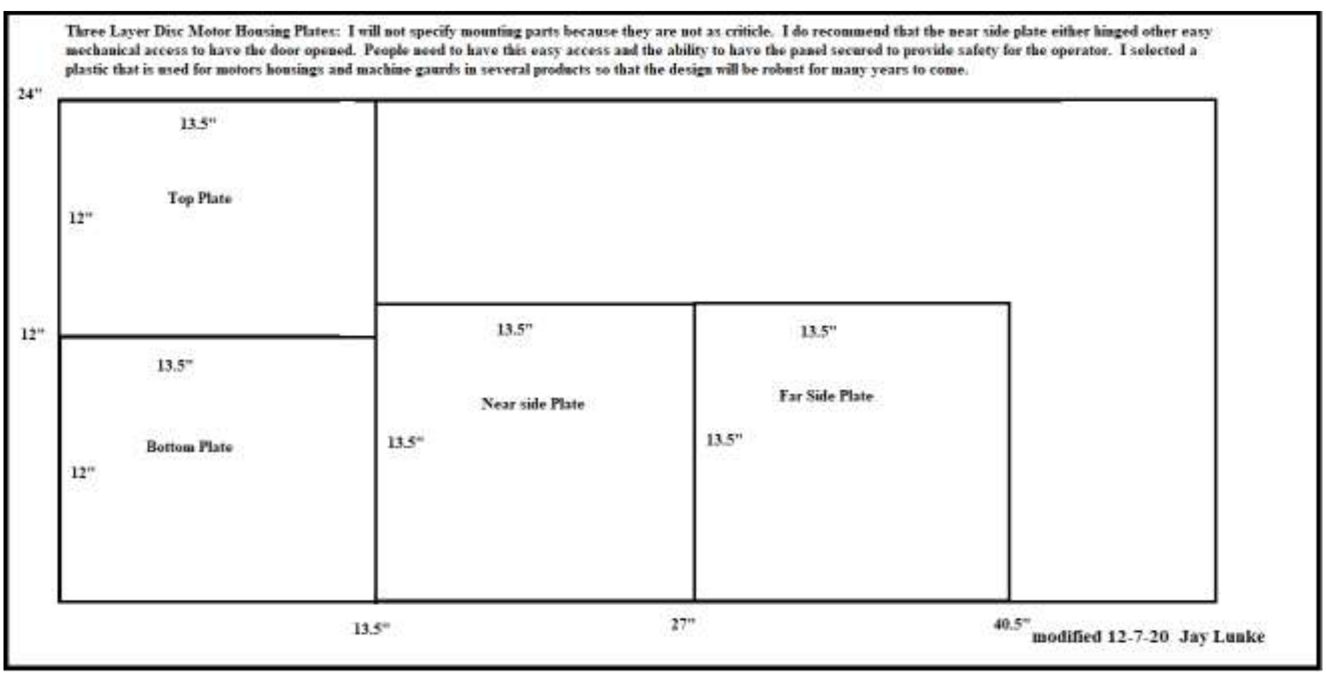


Figure 43:

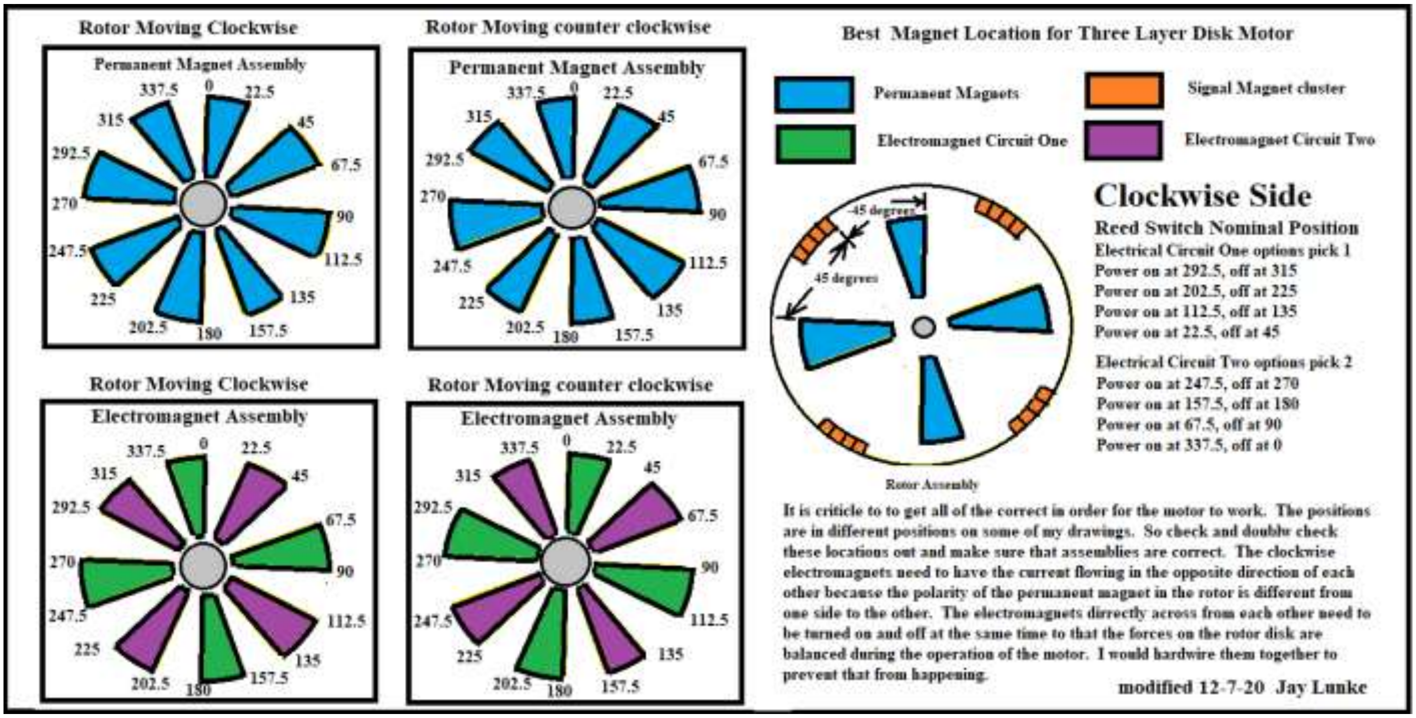


Figure 44:

Three Layer Disk Motor parts list:

Note: The price may have changed since I found these parts on line.

1.) Wedge Magnet (8” outside Dia. 4” inside Dia. 22.5-degree circumference ¼” thick. Note: there are also optional ½” wedge magnets available for more money that can be used as well. There are several places that sell these wedge magnets. The lowest cost I found was about $10 a piece having blemishes on them. A total of 16 are needed.
2.) 2 each: Polyethylene sheets, 24” X 48” ¾” thick. These sheets can be cut up for the housing and plate assemblies. I found these for $102.76 each on Amaon.com
3.) Precision Shaft ¾” Dia. 24” long: I found them at BearingDirect has them for $23.89
4.) Shaft Collar ¾” size bore. Zero has them for $3.38 each
5.) Thermoplastic Flange Bearing ¾” bore; VXB company has them for $17.79 each.
6.) Use Nylon hardware nuts and bolts and washers. Several companies have them.
7.) ½” threaded Nylon rod cut to 16” lengths. United State Plastic Corp. sells them in 4-foot lengths for $17.79. The proto-type needs 8 each at 16”. So, buy 3 each 48” rods.
8.) ½”-13 Nylon nuts. United State Plastic Corp. sells a 100 each package of them for $14.70.
9.) 25-gauge motor wire to build the electromagnets. There are several places that sell copper motor wire. Other gauge sizes are also an option.

Now performing the ground work for this new technology can be very educational for the individual building and testing it. It is there where many more design options and improvements to the technology can be had. Consider building this prototype and go on from there. This new technology will not only help yourself, but it will help other people as well.

Hobbyist Corner:

When designing and building prototype devices, it is best to test out functions in the smaller sub-assembly levels first. This could save you a lot of time and money. I learned things the hard way. I will show you a design I built and failed at later in this book. Yes, it was a learning experience and I learned about magnets that I would not have learned before I built the prototype. But before we get to that, the following drawing is a good tool that can be used in evaluating system components of a generator and motor system.

If your goal is to build an over unity system, you should prove that it is self-running without any outside or hidden power source. The following drawing can test components of such a system without building a full-blown prototype. This could save you a lot of time and money.

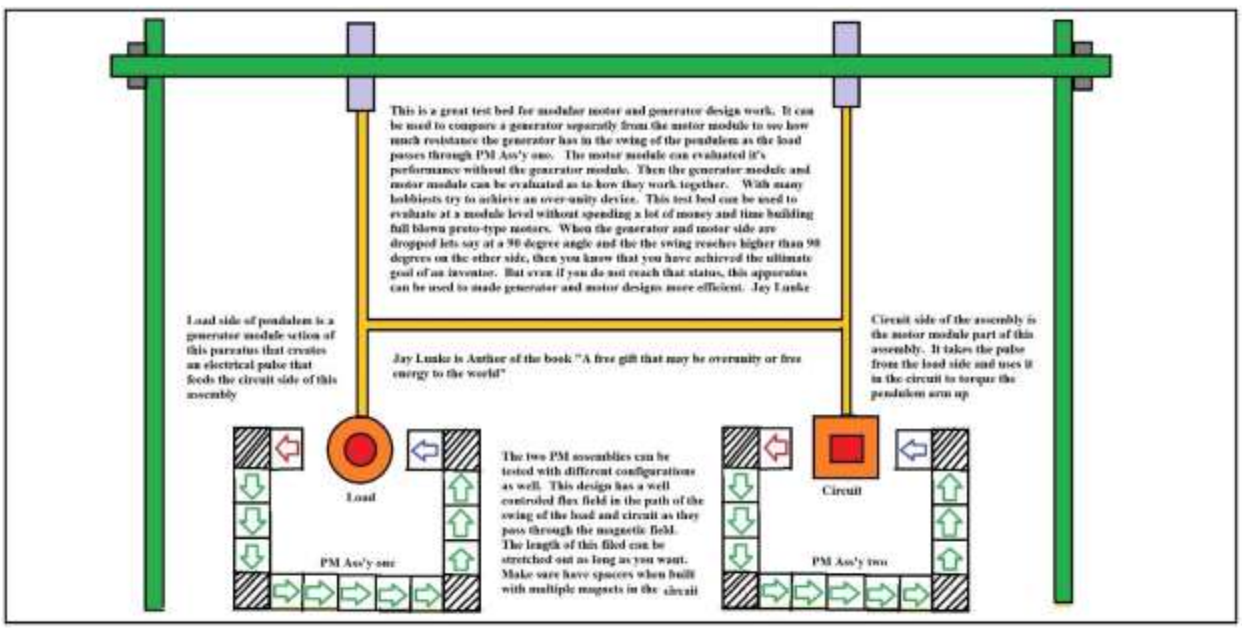


Figure 45:

The base configuration can be anything you want. The drawing only has one example of what can be used. I wish I had used this fixture before I built my last prototype motor. If you get your design sub-assembly to work in this fixture, you will have a much better chance of having a successful prototype.

Now the follow drawing is a device I built for my lab in order to test shielding for motor designs. I did not find a material that could be moved freely between the magnets at the same time cause the distance between the magnets to change. I have not tested all of the materials yet.

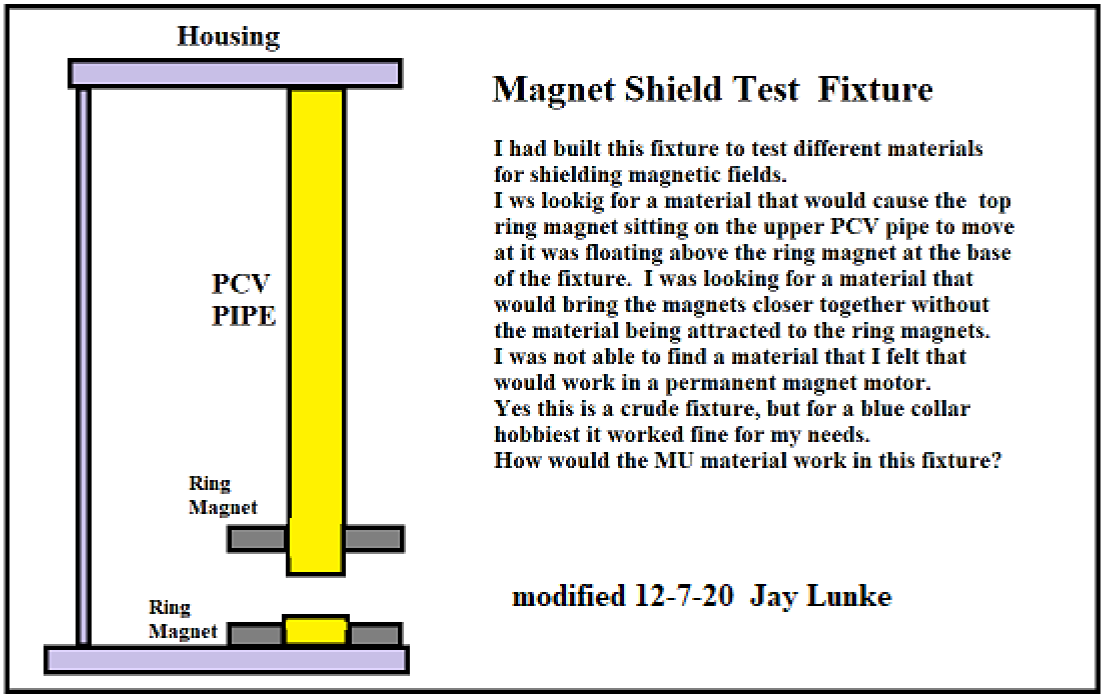


Figure 46

What I am telling you is that it is best to test out the unique functions of your device you want to build at a smaller scale. We want our self-running systems to have both the motor and generator designed into one device in order to save the cost for everyone in the process from building the device to the customer using the device.

I am adding a section on an All-Permanent Magnet design I had spent a lot of time and money on. I want to tell you how it failed me. I want you to feel the excitement I had before I built the motor through the words I had before building the prototype. Then I want you to see how my excitement turned to disappointment. I think that my best designs have come after this failed prototype build. It has been said that Edison built 3000 prototype lightbulbs before he invented a working model. I think an over unity motor is harder than a light bulb to build. Even though many, many people have tried to design a better motor, I still think it is worth the research. I actually like to look at failed over unity devices from the past to see what people were thinking in their designs. With the sharing we can do with the technologies we have today, we can work together to come up with better ways to design things. Hopefully you can learn from my mistakes. Hopefully you can see where I went wrong, pick up the pieces, and actually build a working prototype.

Failed All permanent magnet build, Traveling Hybrid Flux Wave Motor

This motor name comes from the fact that the motor design performs re-configuring of the magnets on the stator assembly on the fly in order to create a moving flux wave in it continually in order to keep the rotor assembly move continuously. With the re-configuring, the rotor never crosses a transition point also known as a sticky point at any time during the motor operation. The prototype I built was unique from every other “All-Permanent Magnet Motor” design I have ever seen before from the research I have done.

I had never built a proto-type motor like this one in the past. Now I am building one after 50 years of working with permanent magnets. Without a working proto-type, I cannot claim over unity or free energy for my new technologies, that is why I say maybe it has a COP>1. I Have built test stations where I could test modules of the motor but what is needed is a fully operational motor for people to see. I am very excited to be able to be build a full-size proof-of-concept proto-type motor. I have chosen to build a motor design that would have no question of a COP>1 when I am done building it. As a picture is worth a thousand words, a working proto-type is worth several thousand words.

Before I start to explain the motor, I want to explain what this motor is similar to. Picture a man riding a train. The train is on a slope so that the gravity allows the train to move down the tracks. Now there is a limited number of tracks in front of the train. As the train moves down the tracks, the man picks up a section of tracks the train had just moved on and moves it to the front of the train so that it can move farther down the tracks. If there was no bottom of the hill this could go on forever because you never reach the bottom of the hill. What my motor design does is to constantly reconfigure the stator assembly as the rotor is moved across it. The magnetism is like the slope is to gravity, magnetism will move other magnets to certain positions to make an easier route of the flux to travel in the magnets. My design reconfigures the magnets on the stator assembly on the fly to keep the rotor magnets trying to line up with the stator magnets moving toward the sweet spot where the south pole of the rotor wants to meet the north pole of the stator magnet, but it never gets there. What my new technology does, is to create a forward torque between the rotor and stator through re-configuring the stator assembly through the full rotation of the motor travel. With the gravity driven train, it will reach the bottom of the hill, but with my motor, since the magnetic poles keep moving because of the constant reconfiguring of the stator assembly, the rotor will never get to the pole it is trying to reach. The rotation of the rotor never ends because of the constant torque between the stator a rotor assembly caused by the continuous reconfiguration of the stator assembly. This book will go into a lot of detail of how this works in later chapters. I will only summarize what is happening with the technology here. This chapter gets more into the details of the proto-type motor and hardware I designed and have now built. My greatest performing motors I have designed will not be used in this proto-type motor because those designs use electromagnets in the stator assembly in order to operate the re-configuration in them. Those designs do not need moving parts for the switching functions that needs to go on in the stator assembly for the reconfiguration of it. But with electric motors, laboratory testing is required in order to evaluate the efficiencies of them. This would be too costly for me to do. With an all-permanent magnet design without using electricity, over unity would be a visual test of its operation. There would be no doubt of its COP>1.

Now every permanent magnet and electro-magnet motor in the world have one or more flux waves in them. This is because it is the changing flux fields that create movement in them. With that being said most of those designs will have stationary PM and or EM components on both the stator and the rotor assemblies. The electro-magnets will have different currents and directions of currents flow through them in order to generate the changing flux to generate the torque to move the rotor inside of the stator assembly. These methods I will call two-layer systems. What I have been working with for the last few years are three-layer motor designs. What is different about three-layer designs is that the configuration of the stator changes while the rotor is rotating inside of the stator. This can be done either mechanically or electrically. If I do it electrically, usually I will use an air core for the electro-magnets or coils I am using in the motor. The reason I have been using an air core is because I want the component to disappear from the functional sight of the permanent magnets in the motor at certain times of the operation of the motor. It is because of the electromagnets appearing and disappearing functionally in the motor, I am able to change the functional make-up of the stator without moving hardware during the operation of the motor assembly. When the electro-magnet comes to life, it becomes a part of a hybrid magnet with the two adjacent permanent magnets next to it. This new hybrid magnet now has a different function with the permanent magnets on the rotor assembly. It is the cycling between the magnet to hybrid magnet arrangements that creates a condition where the rotor permanent magnets will always have a forward torque from the stator assembly to the rotor assembly. In this book, I use this method of design in many of my motor's designs. In my latest designs I have used physical moving parts in order to reduce the number of electro-magnets in the motor. I feel that the fewer electro-magnets I use then the less power will be needed to operate the motor. Now mechanical movement creates more losses that need to be taken into account as to the final performance of the motor. Once the technology is proven with mechanical movement, then the electrical motor designs will be explored with more enthusiasm and expectation of positive results in those motor designs.

Now what I have achieved by using the three-layer motor designs is to reconfigure the stator of the motor on the fly. When working with an all-permanent magnet designs and trying to get continual movement between them there is that hump of "for every attraction there is a repulsion" between the two magnets that needs to be resolved. This is why in a lot of conventional electric motors there is a permanent magnet working in one assembly working with an electromagnet in the other assembly, this design method is used to remove those negative torque points in the motor performance. The cost of doing this is the need for electrical power for the electromagnets at a 100% duty cycle in the motor.

With the three-layer technology, let's say we are using two permanent magnets again, one in the stator and one in the rotor. Now let's assume that attraction is being used to create forward torque in my design. Now I would use the attraction of the two magnets to rotate the rotor half ways through the rotational travel from only the force existing between these two magnets. The magnets would now normally **resist** the movement of the rotor because of the repulsion between those two magnets. I reconfigure the stator assembly with a functional magnet in order to move the rotor one more segment of travel. This means you have torque from 50% permanent magnets and 50% from a switching magnet moved into place created a functional magnet in the stator assembly. So, you end up having torque from the permanent magnets and one hybrid functional magnet for the full rotation of the motor. The functional operation is through 50% of the rotation. You need energy to move the switching magnet into and out of the switching position in the design.

Now as the rotor moves inside the stator assembly using this alternating of hybrid to conventional configurations, then the device will have flux waves that are created and will move the rotor around in a circle during the operation of the motor design. Now there will be one flux wave for every four segments of rotor travel. If the motor has 32 segments to create one full rotation of the rotor, then there will be eight traveling waves in the motor.

Now for designs that use mechanical movement to make up the hybrid configurations, mechanical energy is needed in order for this operation to occur. The stator configurations need to be in sync with the rotor's rotation at the same time. Now there are endless ways to mechanically configure the hybrid and disassembly of it. What I have decided to use in my motor design is a switching wheel with eight segments of configuration on it.

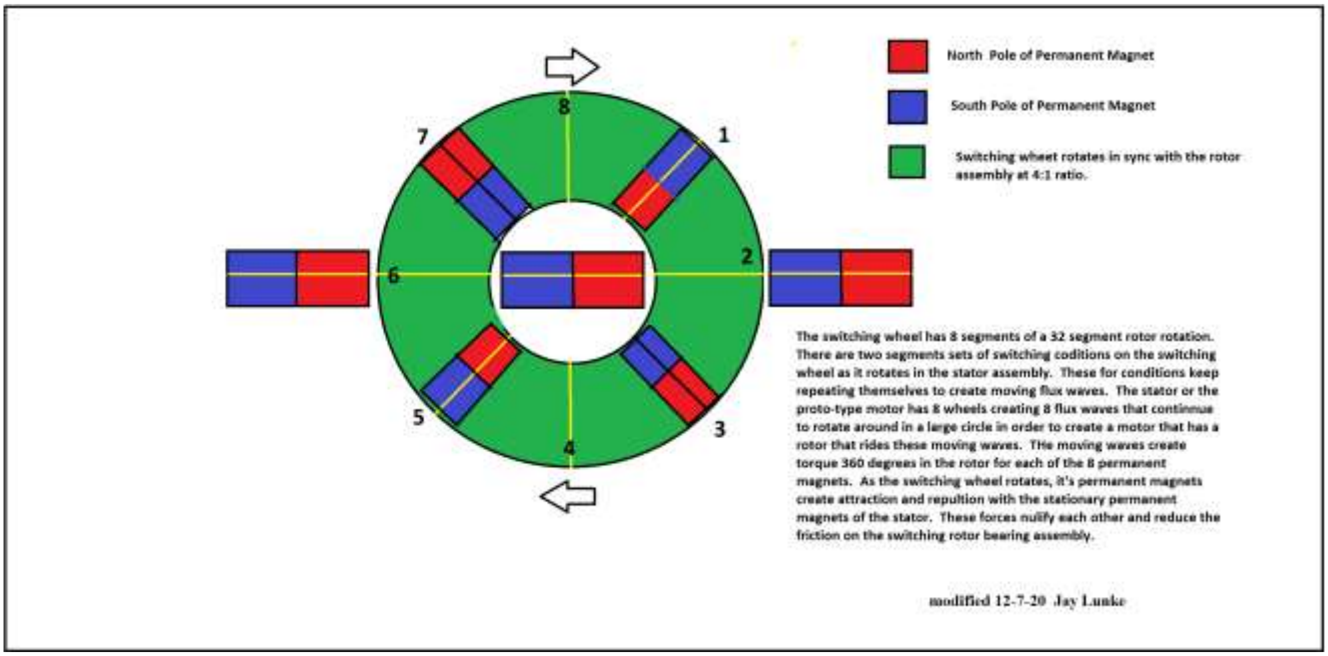


Figure 47:

Each switching wheel works with a pair of switching positions along the stator assembly. I call one segment of travel as the length of one magnet on the stator assembly. The switching rotor is called out in segments of travel as well. There are four segment configurations on the switching wheel that are repeated again to create the eight segments on the switching wheel. Now what I have decided to use for my switching wheel is magnets for the switches. The switches will not only create the hybrid functional magnet on the stator assembly when needed to produce rotor travel but it will also place a magnet of the opposite polarity on the other end of the functional hybrid motor. This should strengthen the interaction of the hybrid with the rotor magnet. The way it is strengthened is that it helps to prevent the stator magnets into becoming one large ring magnet because of the stator permanent magnets close proximity with each other. By pairing two switching magnets going into switch positions having opposite magnetic poles to each other is a big advantage in reducing unwanted torque and friction on the switching wheel. As one switching magnet is being placed into the switching position it will have attraction to move into place. At the same time the other switching magnet will resist being put into place. The net result for the most part will be a cancelation on the switching wheel. Then when the first magnet is being removed from its switching position, it will resist that movement. While this is happening the other switching wheel magnet is being pushed away from the switching position. The forces between the two switching magnets again for the most part cancel each other out. Now the reason I said mostly cancel each other out is because if you perform a vector analysis of these movements, there will be some overall resistance to performing this function along with friction in the bearings, wind resistance of the spinning switching wheel and other misc. performance reductions that become a factor. Now in the final motor assembly, the rotor magnet will also contribute some additional reduction to the performance of the switching wheel.

A series of the switching wheels can be added together to create a track for linear movement. What I do is to bend my switching assembly for the rotor to move in an arc. I put 8 of these assemblies together so that the eighth section connects to the first switching network again. I end up with a high torque rotational motor design. This works good for the traveling flux wave to have a continuous path to travel.

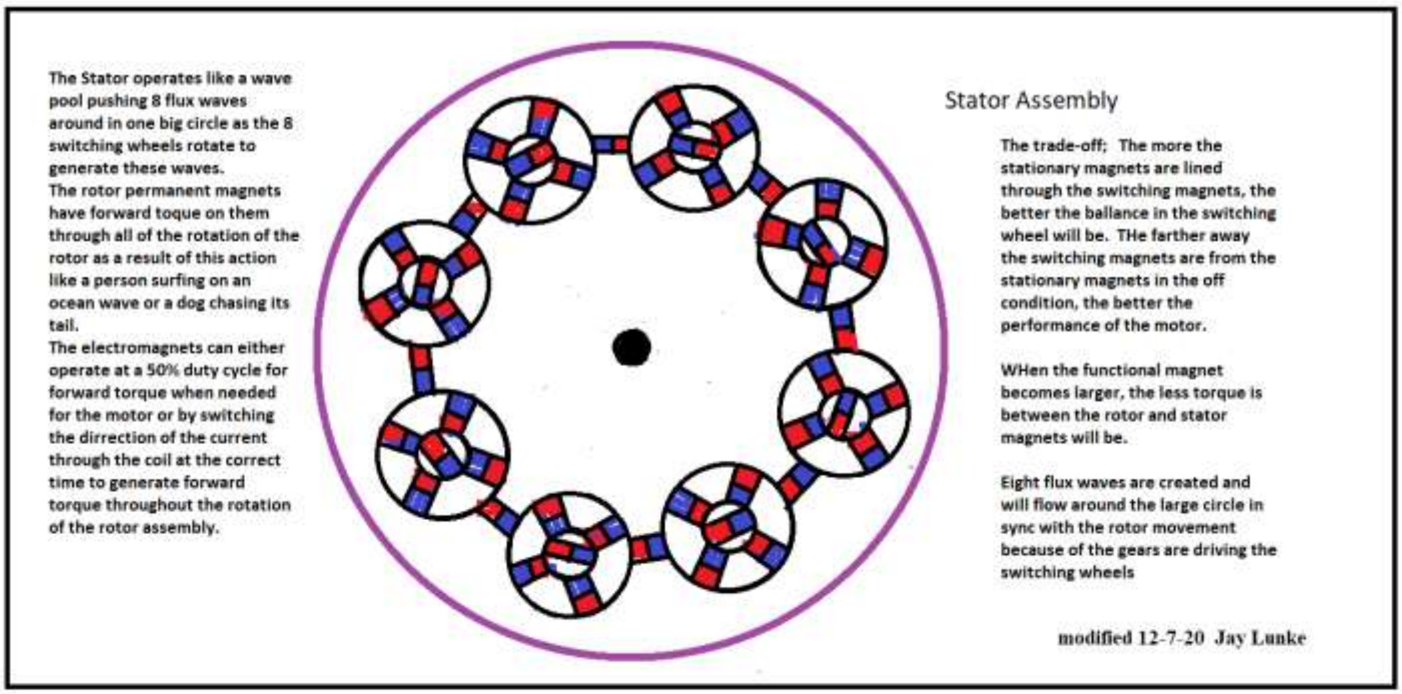


Figure 48:

Now as the rotor moves along the tract of the stator there is always torque between the stator and the rotor assemblies supporting the rotation of the rotor. Now the rotor is connected through a gearing system to each of the switching wheels. Since the stator has 32 segments in one full rotation of the rotor and the switching wheel has eight segments of function on it, the switching wheels will rotate four times around for each rotation of the rotor. So, the four to one gearing ratio between the rotor and switching wheels will create a one-to-one segment movement between the stator and rotor assemblies. The segment positions between the rotor and switching wheels are critical. So that is one reason there can be no slippage of the main shaft to the rotor disk, main shaft gear to main shaft, switching wheel to switching shaft and the switch wheel gear to switching wheel shaft. Since there will be torque on these components, then extra design thought needs to go into them. Now the main 6” gear has 192 teeth in it. The next 3” gear has 96 teeth in it. The 1 ½” gears have 48 teeth in them. This means that gong from the 6” gear to the 1 ½” gear will have a ratio of four to one. The more teeth the better the synchronization will be because there will be less gear slop in the motor. I used 17 gears instead of 9 gears in order to save on cost for this proto-type build. It just so happens that the extra layer of gears causes the rotation of the rotor and switching assemblies to be in the same direction. Functionally, this should not make any difference.

Since a picture tells a thousand words, I am adding pictures of the proto-type here to show how the rotor and stator can work together for this new technology.

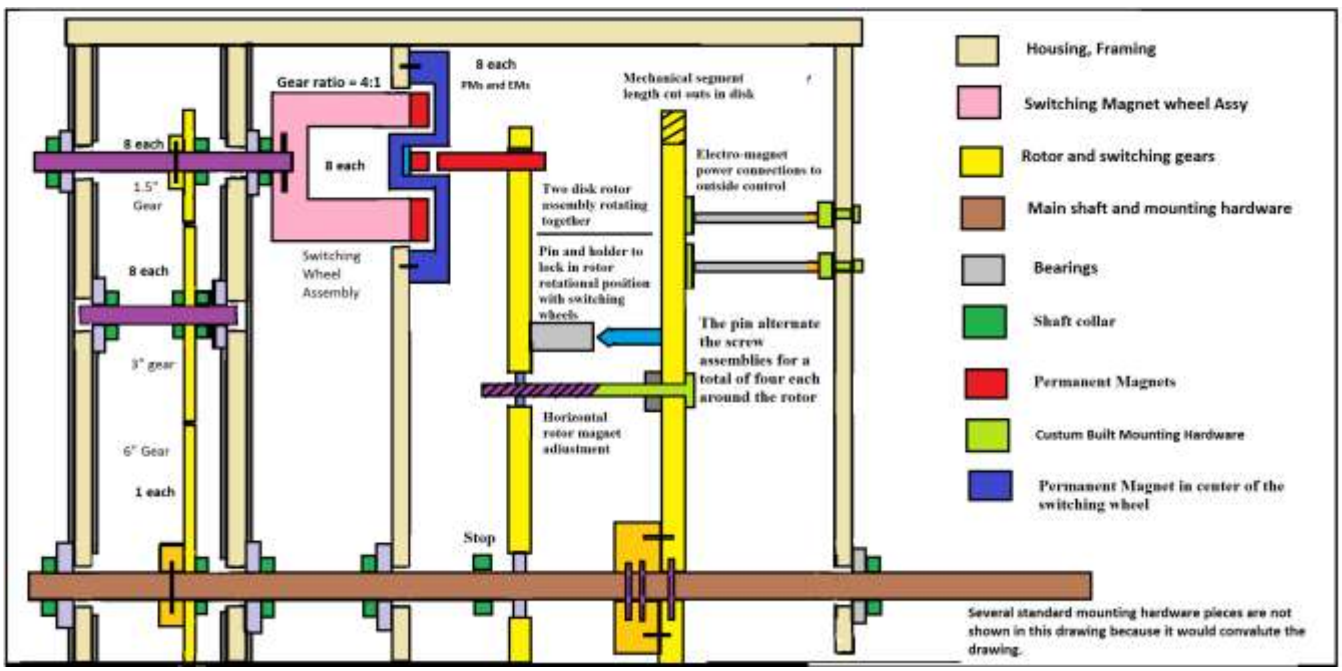


Figure 49:

This drawing shows connection for an external power supply to drive the optional electro-magnets if needed to power the motor. (not to scale)

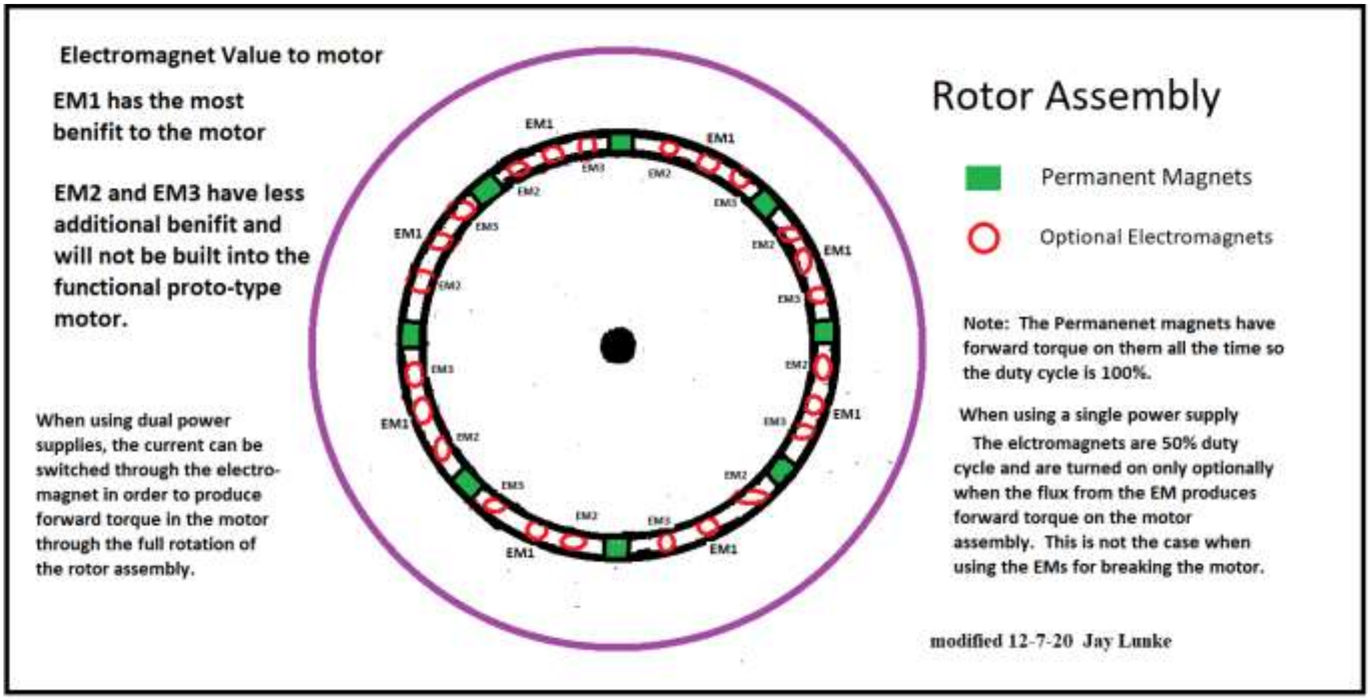


Figure 50:

Since this proto-type will be able to test a few different concepts with it. This drawing above shows the rotor makeup of permanent magnets and electromagnets.

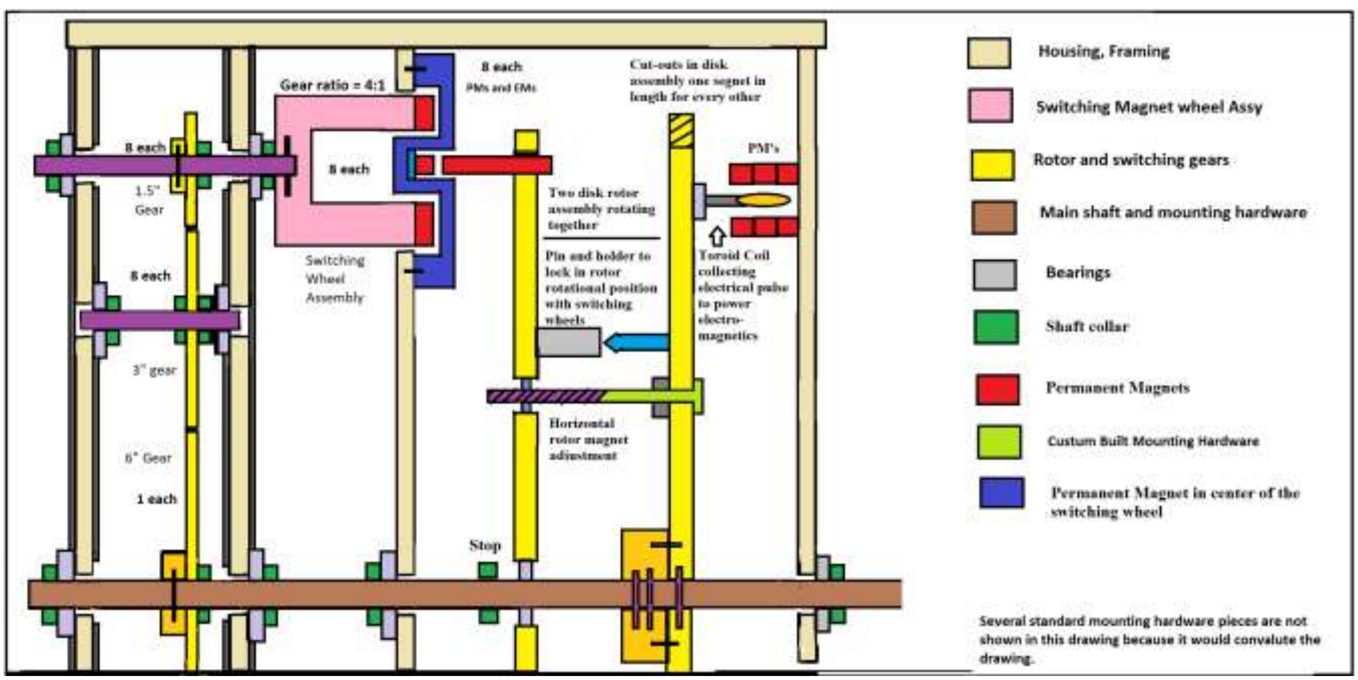


Figure 51

This drawing above shows both the motor and the on-board generator to drive the electromagnets. (not to scale)

Now the design of the on-board generator could be evaluated with the dual pendulum approach in order to reduce the resistance the generator coils would have in the motor. The toroid or partial toroid coils moving through a magnetic field to pulse the rotor electromagnets at the correct timing is the first this I will be testing

Now the dual pendulum will be used to optimize the best on-board generator for me to power the electromagnets of this motor. The final proto-type will have both on-board generator and connections for external power supplies to operate electromagnets. Yes, the first proto-type will be kind of a test platform. Even the rotor is built with two layers to adjust the height of the rotor magnets. All of these things will help to optimize the design for the next level of proto-type that would require a machine shop to build it.

Now even if the all-permanent magnet version operates the motor, I want to add the electromagnets to increase the power of the motor. With the way and amount of power is injected into the electromagnet, the motor can have a wide range from a stopped position to a fast rotation. The rotation cannot be two fast because the switching wheels would fall apart at higher speeds.

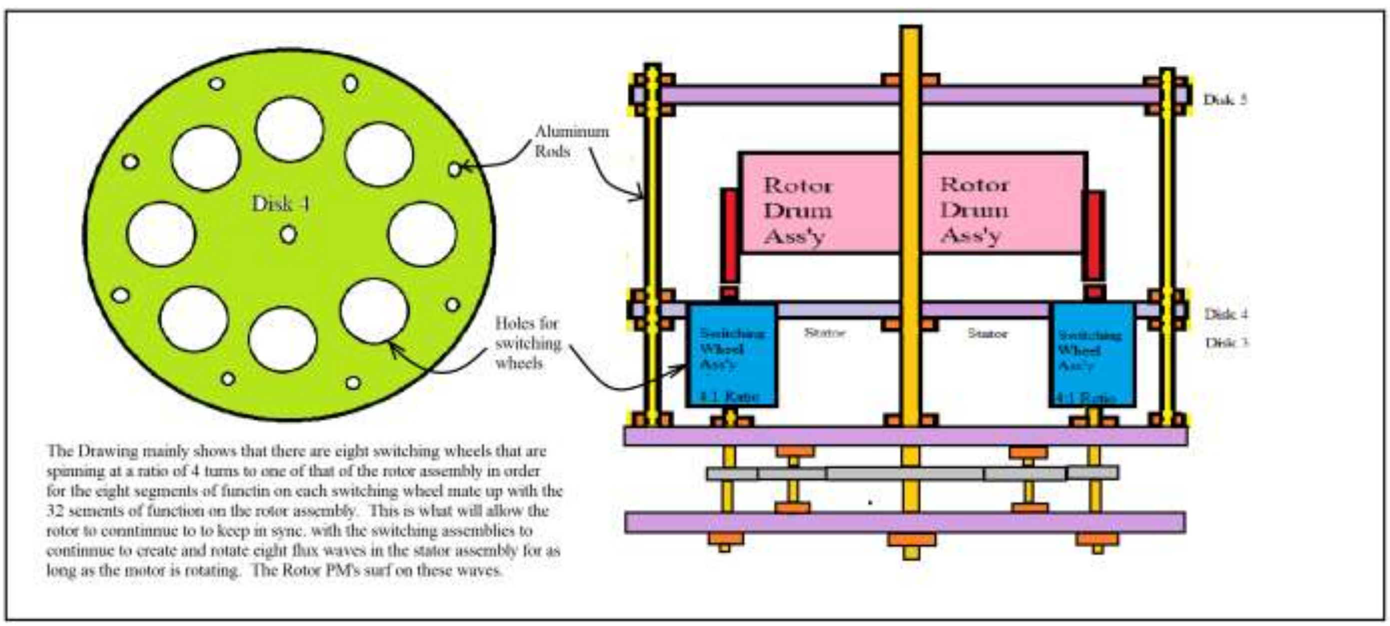


Figure 52: (not to scale)

This drawing shows more information of how the hardware and framing are built in the proto-type.

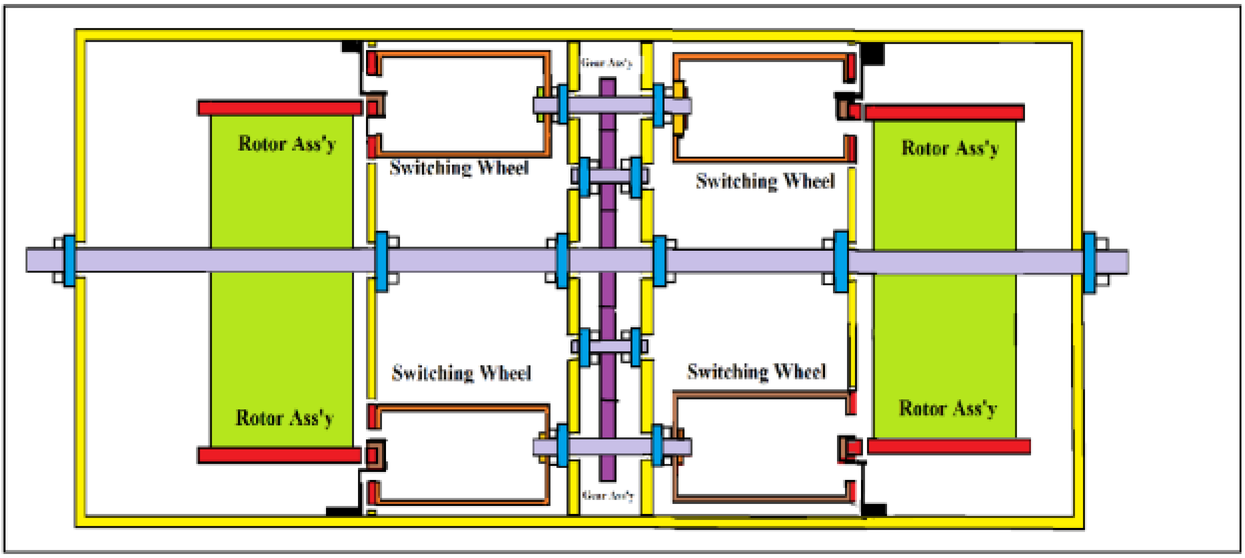


Figure 53:

This drawing above only has the basics to show that a common gear box can be used to drive two motor sections. The polarity on the stator would need to be switched on one of the motors in order to have the torque on the rotor in the same direction. (note to scale)

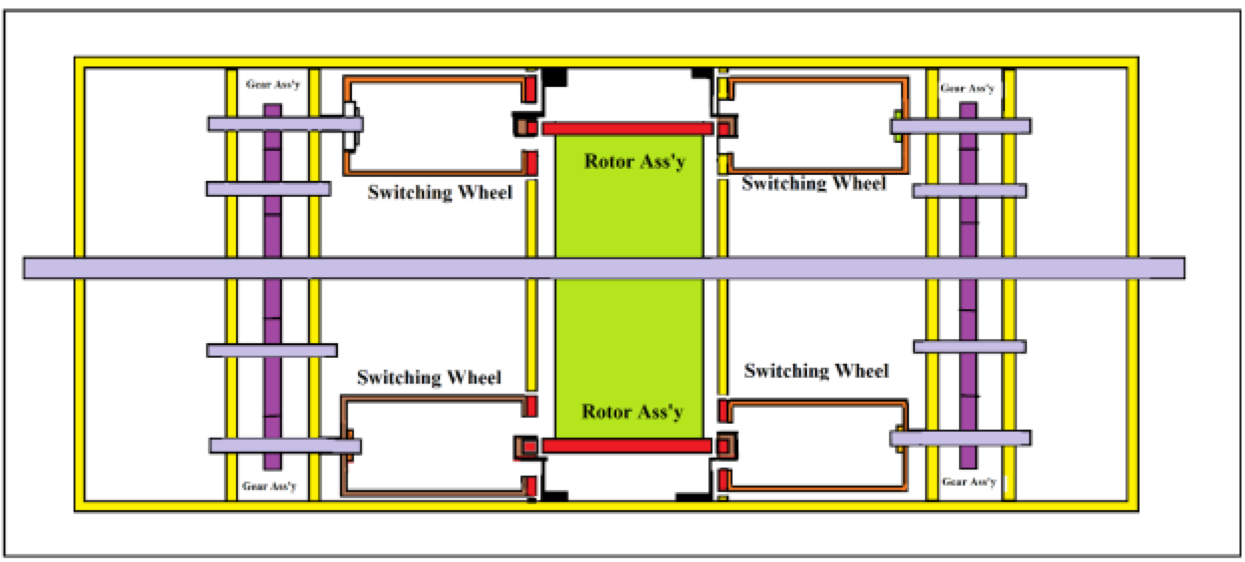


Figure 54:   (not to scale)

This is another option of using a common rotor assembly. This saves on permanent magnets needed if two motors were built to increase power output of the motor.

Now with all of the options shown above, they all have a traveling wave in the stator assembly that the rotor travels along the sweet point of that flux wave generating the movement of the motor. In the following drawings do not let the backwards arrows deceive you as to resistance to the motors movement because it builds the strength of the forward torque of the flux wave.

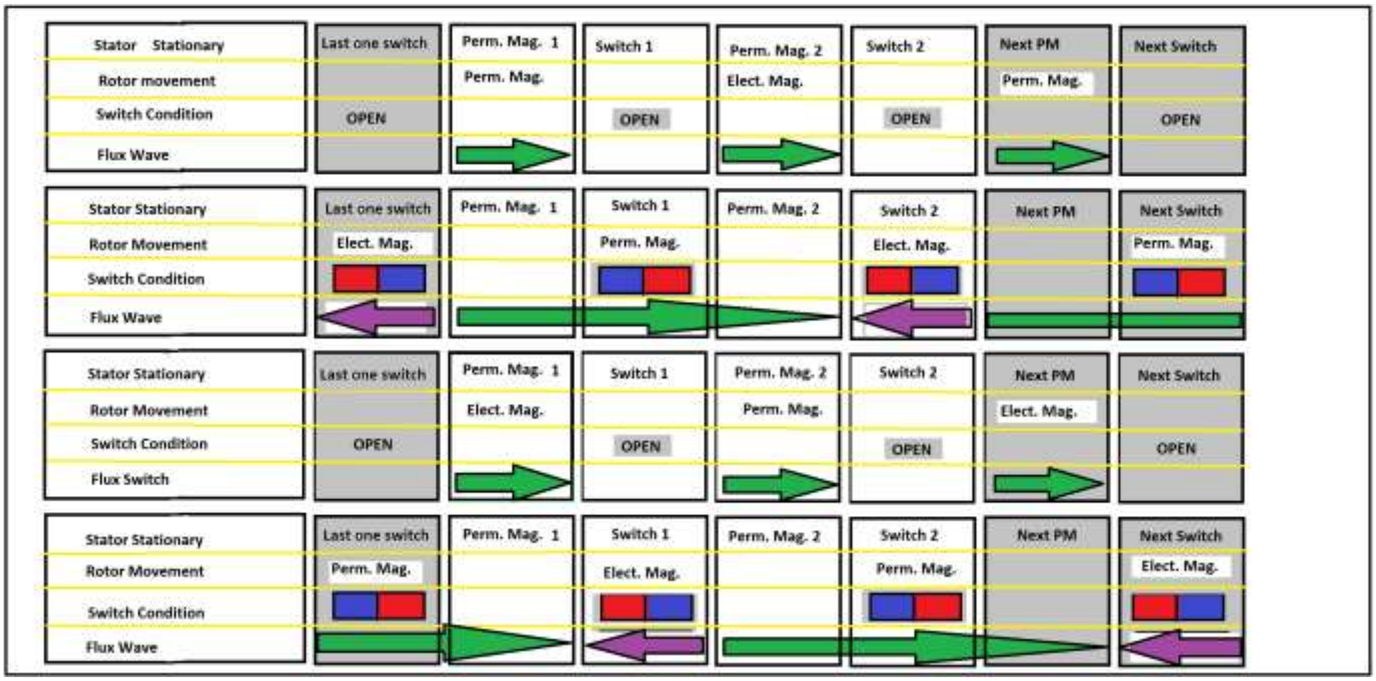


Figure 55:

The rotor PM's ride on the angular green bars of this graph. Between the green bars the electromagnets take advantage of cycling the power of the electromagnet to keep forward torque on the rotor throughout the full travel of the rotor assembly.

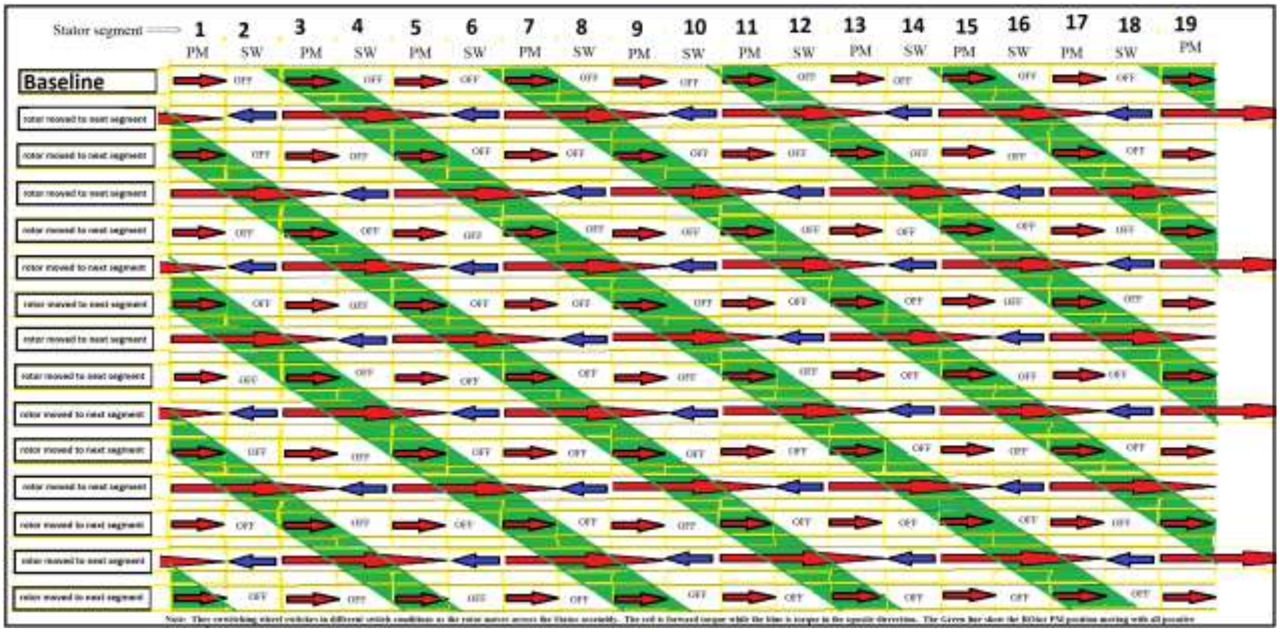


Figure 56:

The next graph is more technical because it summarizes the torques and resistance to the movements of the switching assemblies as they apply to the final overall performance of the motor assembly.

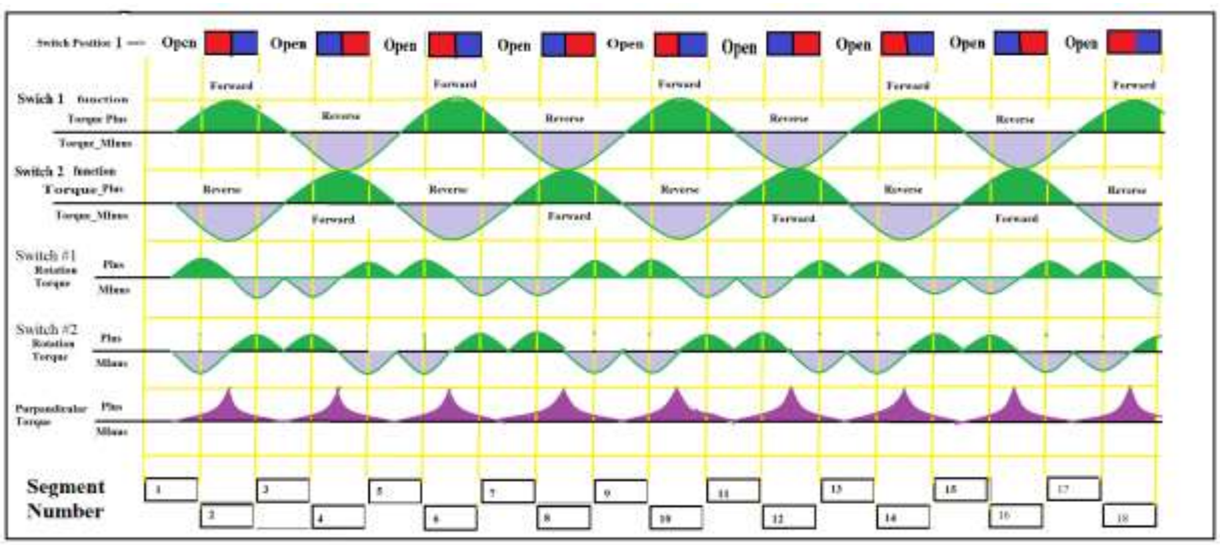


Figure 57:

The top two lines on the drawing show the function of the switches in the stator assembly that are used in generating the traveling flux wave in the stator assembly. The following three lines on the drawing show the forces upon the switching wheel assemblies themselves. These switching wheels to my knowledge have not been used in motor designs before.

Now for the big question? How does the continuous torque the rotor has to turn the rotor compare to the switching wheel losses? If the losses are less than the rotor forward torque, then the rotor will have continuous movement. This is before I add the electro-magnets to the rotor assembly. Since creating a functioning motor on permanent magnets alone is low, building the motor with the alternating electro-magnets into the motor is a must for the proto-type design. Now with that being said I will be looking to the electro-magnets being fed from an on-board generator. The on-board approach will allow me to reduce the hardware and circuitry than the conventional way of having a separate motor and generate to operation in motor in a test system. IF and that is IF the electrical pulses the generator generates on the on-board generator is enough power to power the electro-magnets in the rotor to create continuous movement then I would have a COP>1. This is why I am designing this into the proto-type before building the motor. Even if the on-board generator works on this motor design, the motor would have to have a way to bring the motor up to speed. One option is to start the motor with another motor and once operational, then the external motor could be removed from the circuit. Now another option would be to drive the electro-magnets from an external power supply until the motor comes up to speed and then it could be removed.

I have learned the following lessons from the prototype build so far.

1.) The smaller diameter main shaft along with the length of it creates twisting which is undesirable with the motor design because this changes the switching time between the rotor and stator assembly with load variation. This will work at a compromised level on the proof-of-concept motor but a compromised level will not work in real life applications.
2.) Drilling a hole in the collars and drive shafts using a pin to prevent rotation of the shaft has too much slop in them. I glued assemblies to the shaft to aid in reducing the slop in that connection. A better approach needs to be done in the next level of motor designs.
3.) I used aluminum bases for holding the stationary permanent magnets in the center of the switching wheel assemblies. In reading other papers, the rotation of the magnets will build up some resistance to movement as Eddi currents are produced in the aluminum parts of the motor. It is better to use a 3D-printer to create plastic mounting hardware instead.
4.) I first tried to minimize the distance between the stationary stator magnets and the switching magnets in order to produce the strongest functional magnets in the motor. The problem is that my switching wheel is about 3.5 inches long with one bearing assembly at the bottom of it. The magnets being that close had so much torque of attraction in them that the switching wheel pulled the switching magnet against the stationary stator magnet and would not rotate any more. I had to place shorter switching wheel magnets in the proto-type motor so this would not happen. This works but the creation of the functional magnets is not as powerful and the rotor assembly magnets cannot come as close to the rotor magnets as a result of it. This means less torque in the motor assembly.
5.) I built the proto-type motor where the rotor is permanently mounted on the main shaft. Now I cannot disassembly it from the motor assembly. This will not be acceptable for the next level of proto-type motor assembly. Some of the removeable options could have created more issues with this prototype motor than the fix they would provide with the current motor design.
6.) I used 17 gears, 17 drive shafts and 38 bearings for this proto-type motor in order to reduce the cost of the expensive large diameter gears. I would pay more for the larger gears and then design the prototype motor with nine gears, 9 drive shafts and 22 bearing assemblies.

7.) As the rotor crosses over the stator assembly there is torque that will constantly move the rotor forward. But at the same time, the angle and direction of the torque between the rotor and stator assembly will cycle between a pushing each other apart from each other to that of pulling each other together to each other. There will be a vibration in the motor that is generated because of these forces. Now a design where another stator is installed at the other end of the rotor assembly would cancel the vibration when designed correctly.
8.) The aluminum threaded rods are not as strong as steel ones but non-affected-by-magnetic-material are needed in the design. I would use thicker aluminum rods next time.
9.) I would go to a different switching design in order to reduce all of this issues with the switching wheel. I have listed some other options if someone want to play around with them. For me personally, since the motor does not work with All-permanent Magnets, it is time to put this design on the shelf for now and work with the more promising designs.

Now there may be a way to perform of moving the switching magnet into and out of the area that the rotor rotates passes around the stator assembly perpendicular to it during the operation of the motor assembly.

The following drawings are sone optional ways for the switching to occur. There are for sure many other ways to do it as well. The switching magnet being a permanent magnet, will not work as long as the resistance to the movement of this magnet is more than the torque produced in the rotor to rotate in the motor assembly.

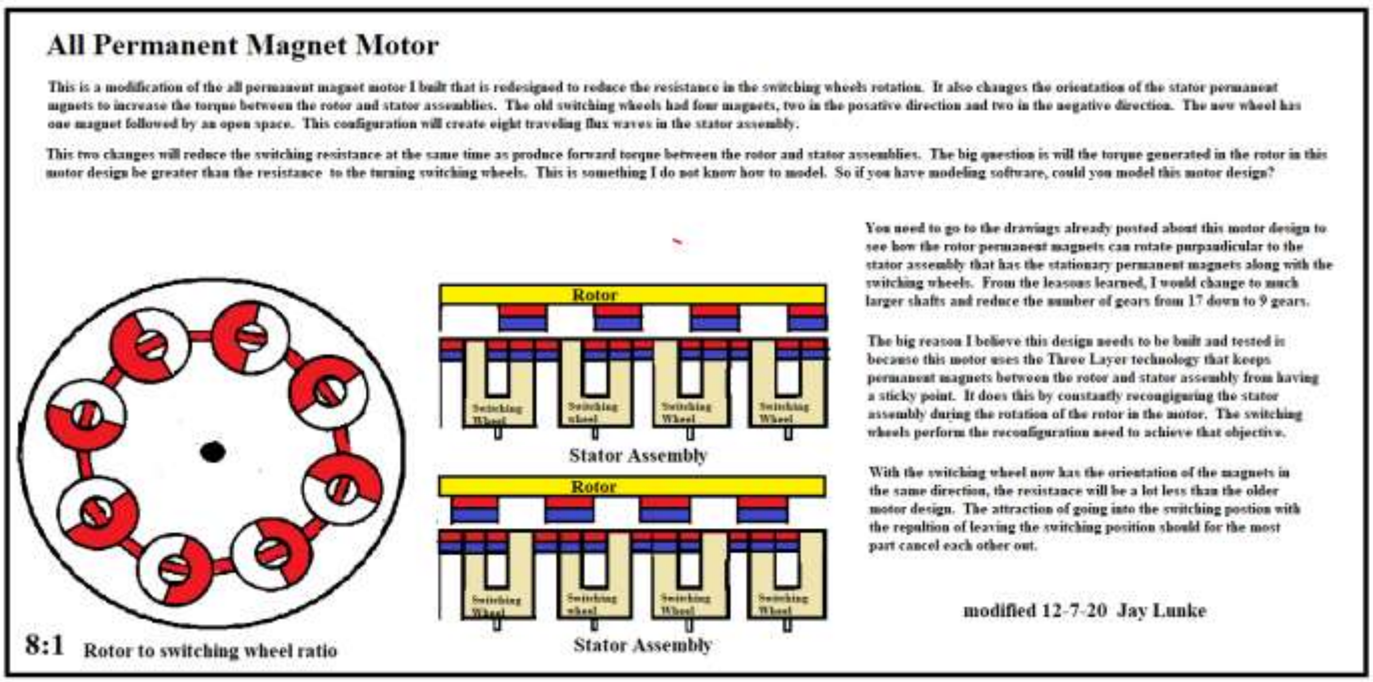


Figure 58:

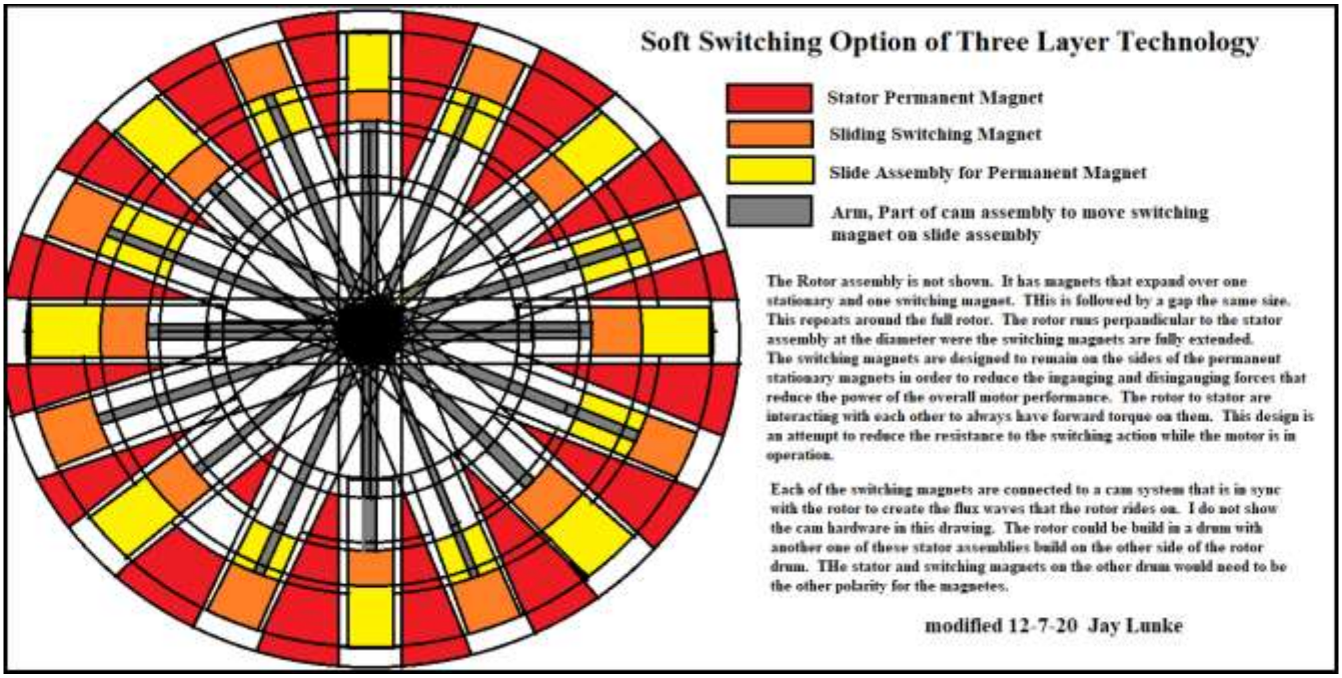


Figure 59:

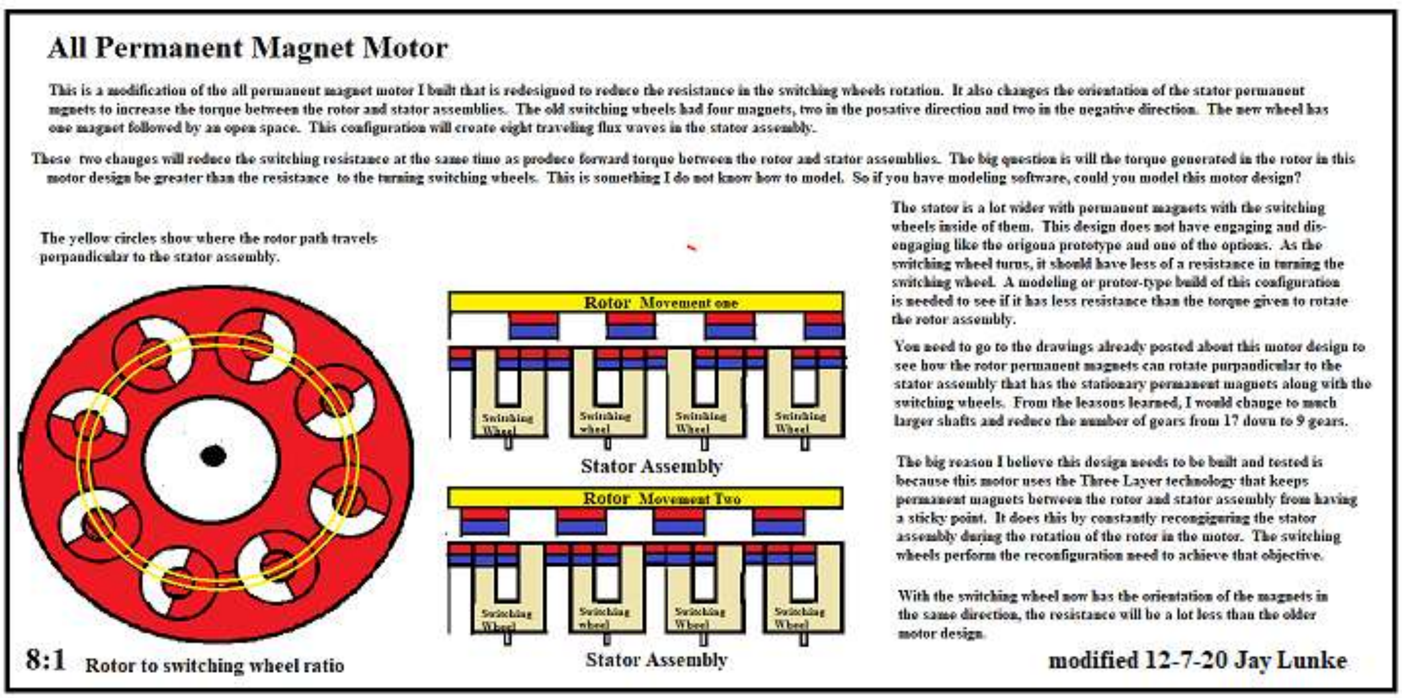


Figure 60:

Now if you can come up with a way of performing the switching movement with less resistance than the torque created in the rotor assembly, you will have a great over unity motor on your hands.

By sharing my failed attempts to build an All-Permanent Magnet Motor, you may see some part of the design that may make sense to you and you can make your own modifications to build a successful motor.

About the Author

I have been an inventor since I was a child. My twin brother is the same way. Both of us would do and build things that we had never seen other people do before. I am not going to share all those stories here. But the greatest interest I have had is what makes a magnet work. In high school I purchased several permanent magnets and would work with them in several ways trying to figure out how to use them in linear movements. Even though all of the engineering books say that permanent magnets cannot by themselves produce continuous movement, something told me that there is something that must have been overlooked about magnets because I can feel the power that they have when I play with them.

Once I learned about electromagnets, I learned that they worked like a light switch that turns the lights on and off in a house. I thought that there must be a way that this characteristic should be able to be used in conjunction with permanent magnets in order to bring out usable work from the permanent magnets. At first, I worked with what I call the two-layer (rotor to stator) assemblies to try to create the most efficient motor. This is where I came up with the flow through motor designs 40 years ago. I include the work of these motors in my book “A Free Gift That May Be Over Unity or Free Energy to The World”. This book has a lot of information about different motor configurations and applications using that technology.

When I tried to patent this technology. I ran into some issues that caused me great difficulty if I designed and patented the technology. It caused me to stop designing motors for several years. I did develop the “Three Layer Electromechanical Movement in the 1980s during that time, but kept it to myself. Then one day a man named Lee at work asked me if I was still working on motor designs. He said that there was a lot of people working on different concepts on the internet. So, I started looking and I started working with my design work again. It was because of my bad experiences in the past and some of my spiritual believes that I decided that instead of trying to get rich on the work I have done with motors, I want to freely share that work with other people. I want everyone to be able to benefit from my work. So, I further developed the new technologies and wrote another book named “Permanent Magnet Torque Harvesting”. But as great as I think these books are, I wrote another book with my wife Paula, that is about the spiritual journey that is so much greater than these two books. In case you have not noticed from this book, I see things differently from everyone else. In the book "Please Pass the Pew", I share some things about the spiritual life that you will never find in any other spiritual book. The Bible is the world's best book and I am trying to live by the teaching of it. What does it benefit Jay, if Jay should gain the whole world, but Jay loses his own soul? If I patented all of my work, the money I would receive from it would rune me. So, I sincerely ask you to please read my book "Please Pass the Pew" before other books, except the Bible. It will be a book that will challenge you more than any secular book you have read before. All of my books are sold on Amazon.

Jay Lunke

Conclusion

If it where possible, and I think that it is, people would want to build an All-Permanent Magnet Motor. But in reality, most of these motors would have very little power to them. They would not be able to be used in most vehicles. With the harvesting torque from permanent magnets into a motor design using the Three Layer Electromechanical Technology design could produce motors that could be superior in efficiency to the current magnetic motors used in vehicles today. With this new technology along with the modified tank circuit with steering diodes could meet the over unity status.

This new technology does not create energy from nothing but is harvesting the torque from permanent magnets. The tank circuit adds more conversion stages of the energy that is already in the system to make sure the highest efficiency is used in producing torque from the electrical energy that is used to power the electromagnets.

Just think of the fossil fuels that can be conserved if this new technology can harvest energy from permanent magnets.

Jay Lunke