The Flying Saucer

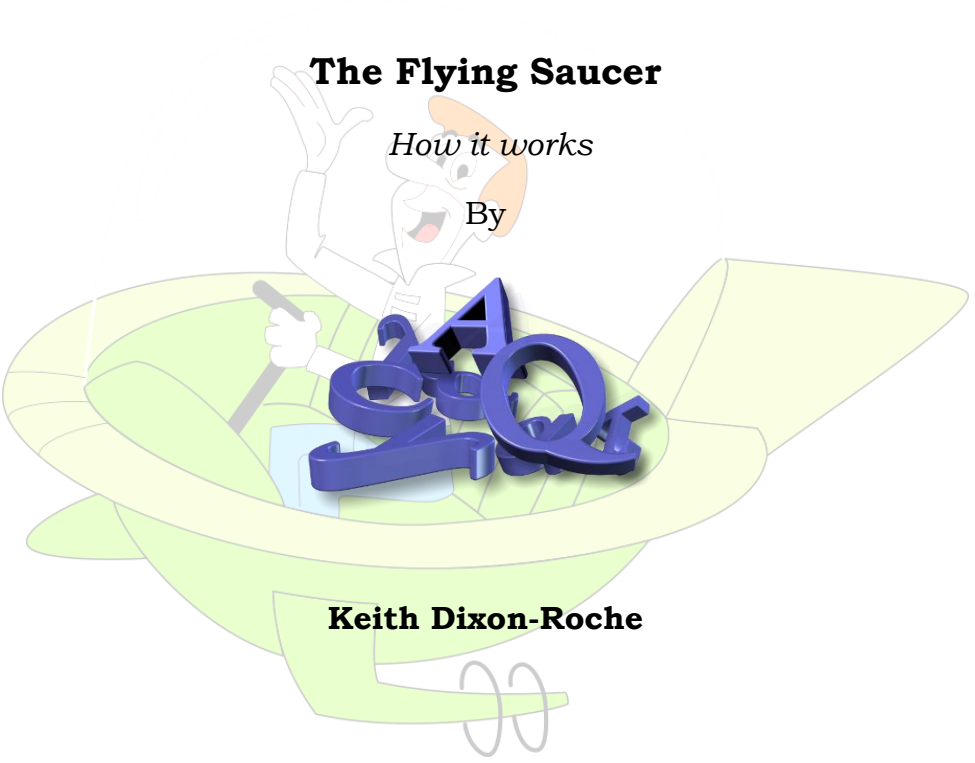
how to build one

Keith Dixon-Roche

The Flying Saucer

How it works

By



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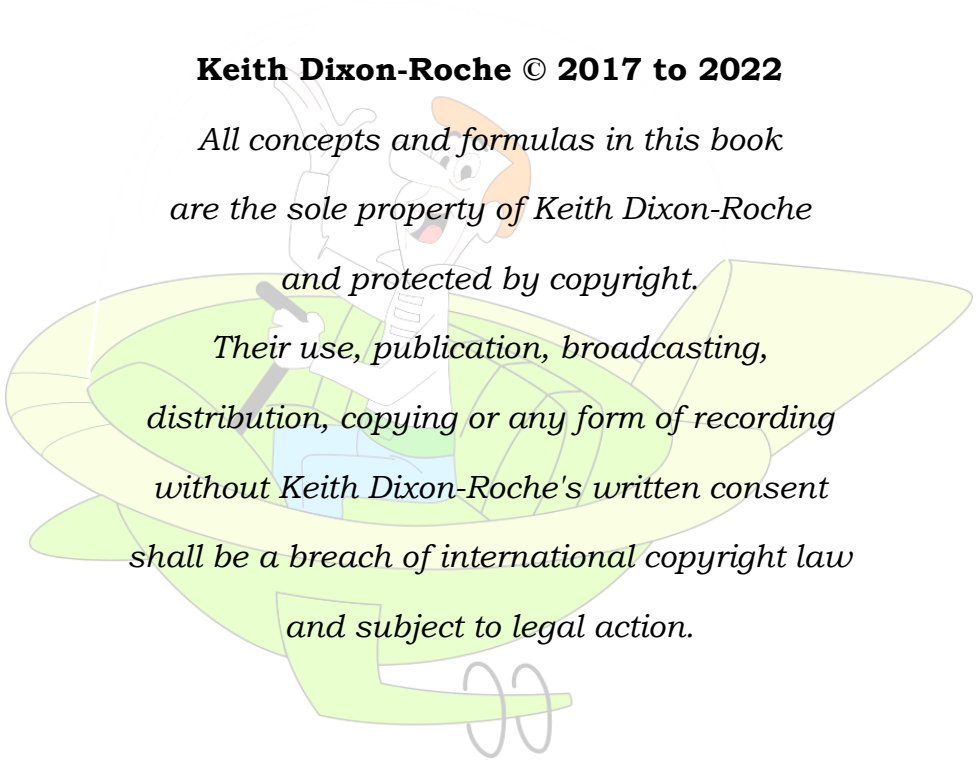

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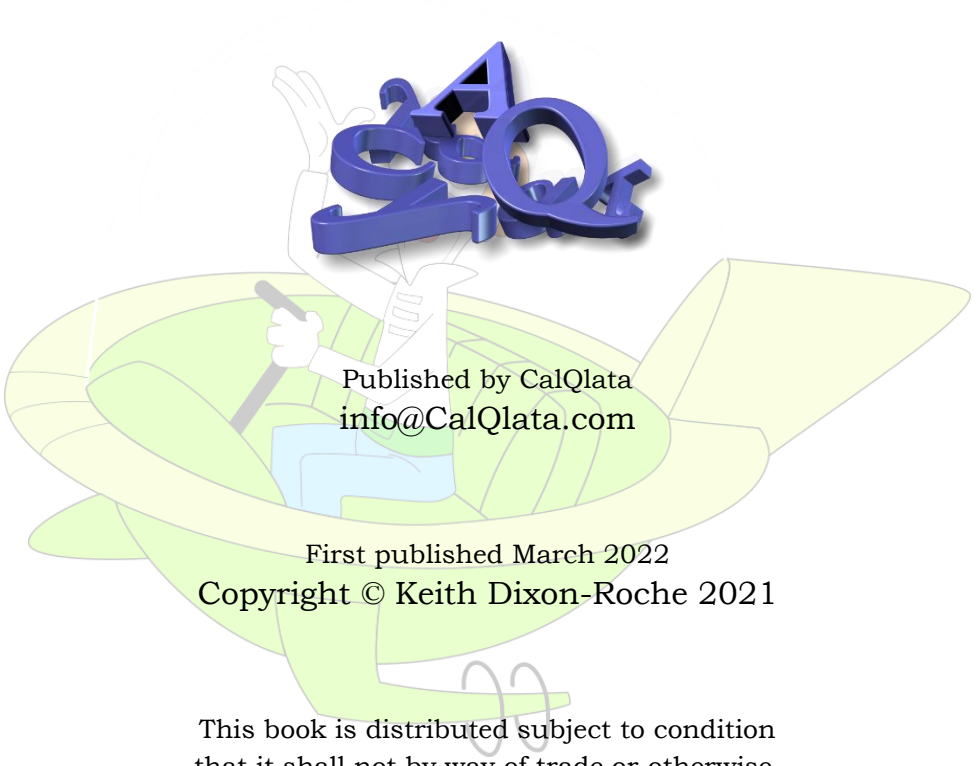

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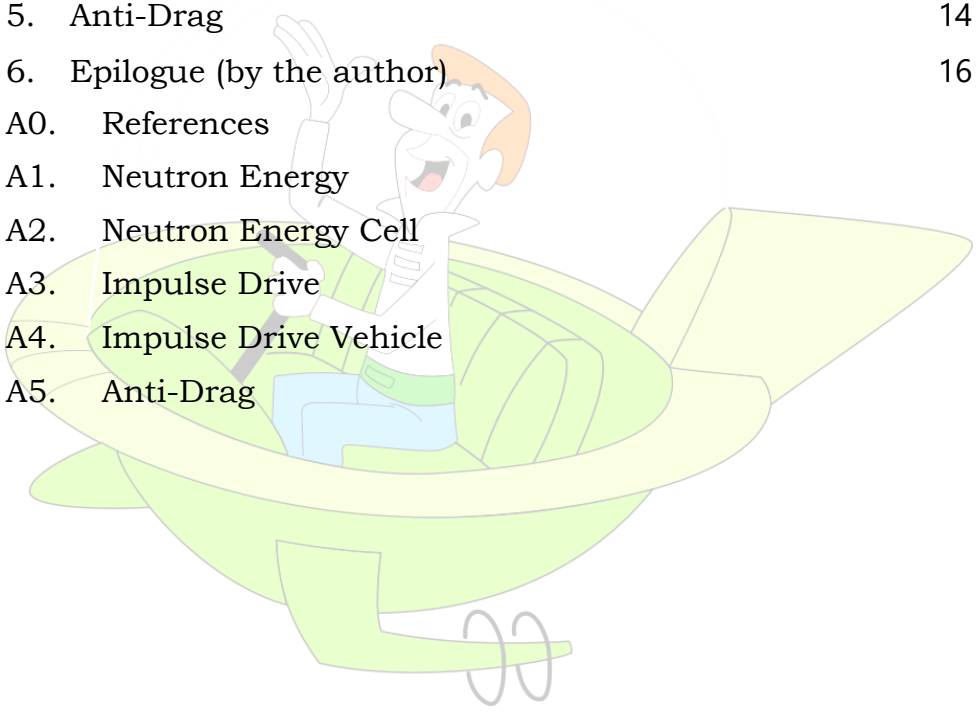


Preface

Whether or not we believe in extra-terrestrial aliens or flying saucers, and regardless of our interest - or otherwise - in science fiction, there are two indisputable facts in our universe:

1) We are not alone

2) We could build a flying saucer today

We've all seen images and heard stories of flat-round spaceships flitting across the sky at incredible speeds leaving no vapour or exhaust trails. Our Sci-Fi illustrators have been portraying such images since the early 20th century.

This begs the question; "*if nobody had ever considered building a flying vehicle of this shape in the early 20th century, from where did these illustrators get such an idea?*"

The reason I find this question so fascinating is, not only *could* we build such a vehicle today; we *should* build it, because it is the cheapest, fastest, most universally versatile vehicle possible. We could encircle our planet in less than an hour - at no cost - and travel to the moon in just three hours, also at no cost. What's more, the technology was available in the 1970s; Professor Eric Laithwaite gave it to us, and the UK politicians rejected it, just as they did the jet-engine six years before the start of World War II.

The concept is based upon Isaac Newton's laws of motion, and it is so simple that if I was asked to invent an ultimate mode of transport for aliens from outer-space, it would have to be a flying saucer. Not like the spaceships we see in blockbuster movies today, but like those we see in the Jetsons.

This book tells you how to build one.

1. Introduction

A flying saucer is a circular ellipsoid with a clear dome, I call it an IDV (impulse drive vehicle). Whilst it can travel in any direction, within an atmosphere it would normally propel itself within its circular plane in order to minimise drag resistance. There are no such constraints in outer-space, which is empty, i.e. there is no atmospheric drag. It can travel dome-first with no loss of energy.

The shape of the flying saucer is dictated by its propulsion system; the impulse-drive, which is circular, and it can be any size, from tiny (drone) to massive (container-ship).

The key components of the flying saucer are; its shell, its propulsion system, and its energy source. It can also be wrapped in anti-drag material (Chapter 5) that will minimise resistance to atmospheric drag when travelling through an atmosphere.

Its principal characteristic is that it travels at constant acceleration - not constant velocity - and because of this, it can oppose gravitational acceleration; i.e. it can lift itself above the ground as quickly or as slowly as you like. If you accelerate at 1g to mid-way through your journey and decelerate at the same rate, this vehicle will traverse the Atlantic in 25-minutes. It can reach Mars in 3-days.

And if powered by neutron energy, it will be quiet and discharge [clean] hydrogen as its exhaust gas. What's more, its fuel can be found anywhere in the universe, just lying around on the surface of any planet or moon, including ours.

The flying saucer must inevitably replace all other forms of transit (except for personal; the Liberty-Belt), and requires no roads, bridges, tunnels, ports, airports, runways, launch-pads, refuelling stations, etc. And because it travels under constant acceleration, it can be redirected almost instantly in any 3D direction, to avoid accidental (or even deliberate) collisions. Proximity sensors could render this vehicle

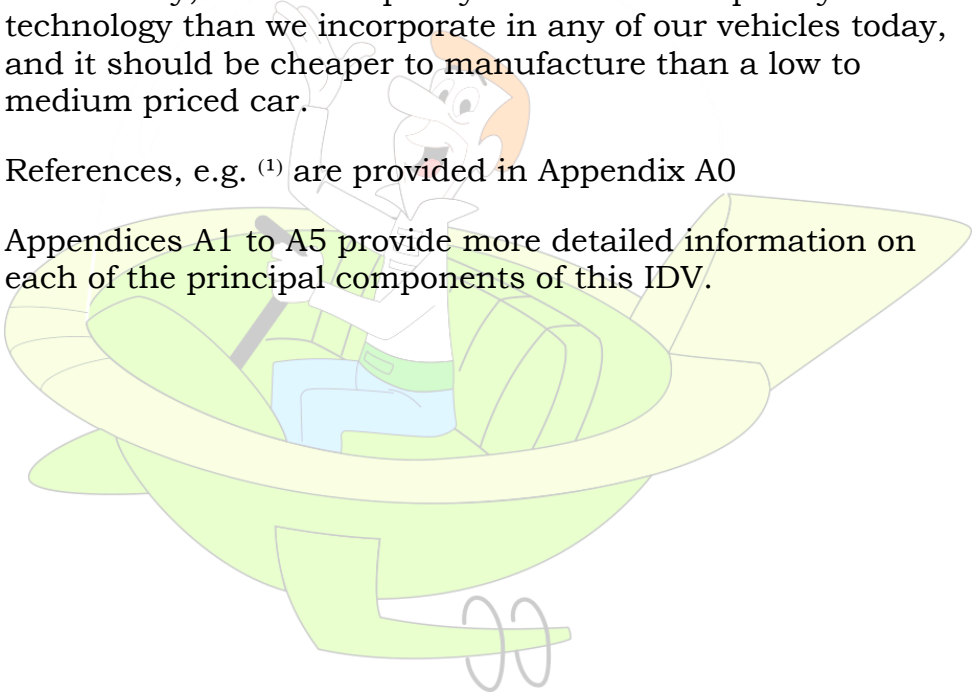
collision proof, meaning that unmanned and machine-driven vehicles will not just become possible, they will be inevitable.

Because everybody can travel so quickly in an unrestricted three-dimensional environment and no possibility of collision, congestion vanishes. I.e. safe vehicles that cost nothing to run and no speeding fines; governments will have lost their excuses to impose them! And unmanned [freight] vehicles can be allowed to travel at rates greater than 1g.

The most extraordinary aspect of this vehicle is not its universality, it is its simplicity. It has less complexity and technology than we incorporate in any of our vehicles today, and it should be cheaper to manufacture than a low to medium priced car.

References, e.g. [1] are provided in Appendix A0

Appendices A1 to A5 provide more detailed information on each of the principal components of this IDV.



2. The Shell

When describing materials from outer space, we frequently hear such descriptions as *unknown elements*, *unobtanium*, etc. to describe materials we believe are impossible for us to make here on Earth. It is of course; all codswallop.

There are only 92 natural elements in the universe, one for each number of protons in an atom. You cannot have an element with an atomic number of '43.3', for example, and any [artificial] element greater than 92 will rapidly degrade to smaller elements. What's more; the upper dozen or so (e.g. mercury to uranium) are actually dangerous; you wouldn't want to make your shell from any of these materials.

Curiously, when the media needs to project the image of an ultimate metal, it always reverts to Titanium, even for '*the doors of a safe!*'. Such statements are due to a total lack of understanding of materials. The only benefits titanium offers over steel are density and corrosion resistance. It is softer, has a lower strength and half steel's tensile modulus; it is actually flexible! And if you need to manufacture a safe-door, you would want it to be hard and strong; e.g. a Stellite-tungsten alloy.

Our primary problem with material selection today is that we have no idea how a specific combination of elements will perform as an alloy unless we squander huge resources developing and testing it, following which, we will understand only that specific alloy created with that specific method. And the reason for this problem is that, until recently, we did not understand how the atom works.

Given that this problem has now been resolved[1], it should be possible to [mathematically] create any alloy we like on a computer using mathematics, accurately predicting all of its properties, instantly. And given that more than 70% of the elements are alloyable, it shouldn't be difficult to create the perfect metal for your purposes.

All of that to say, forget all you have heard about strange and wonderful materials, the shell of a flying saucer can be manufactured from a single sheet of aluminium, titanium or even moulded plastic. It looks like the image in Fig 1, and it is far simpler (and cheaper) than building a car-body today.

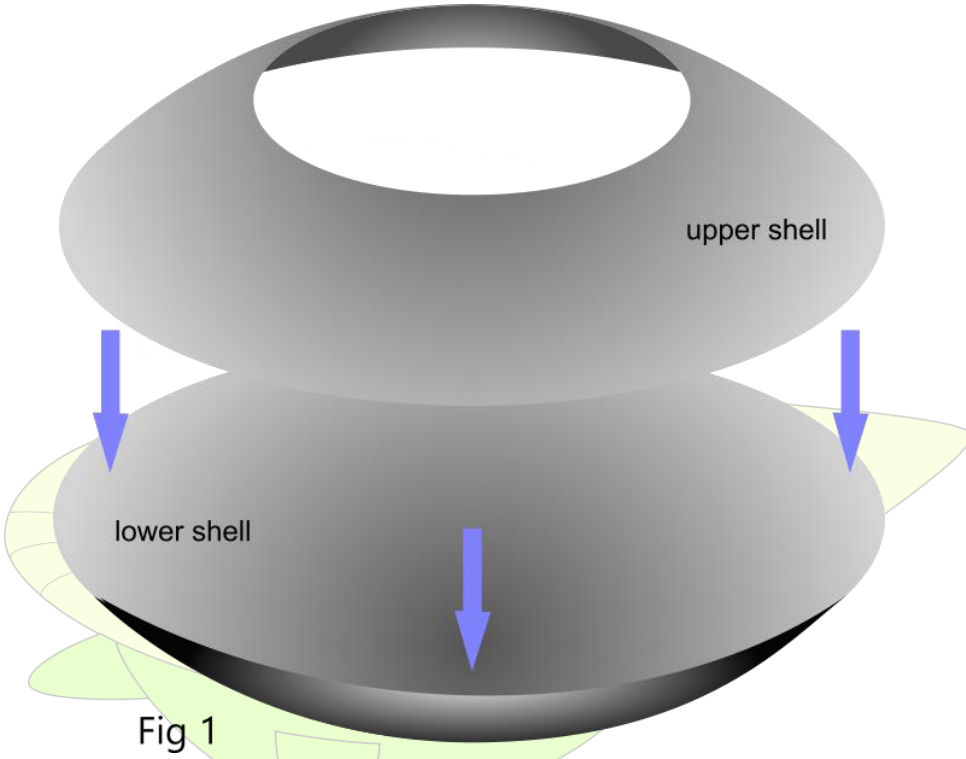


Fig 1

Whilst it will benefit from internal stiffening, this will be very simple to incorporate and comprises multiple internal ribs of exactly the same shape, size and strength. The ellipsoid shape minimises drag-resistance when travelling horizontally through an atmosphere.

The ellipsoid incorporates a sphere, the upper third of which is a transparent dome. This sphere sits inside the two shells with its diameter larger than and below the cut-out in the upper shell (Fig 2). It rotates in a bearing housing about its diameter.

This sphere has a dual function, it; a) provides accommodation; and, b) incorporates the vertical impulse drive. The occupant can rotate the sphere within its central bearing to redirect the vehicle in any direction, whilst always looking straight ahead.

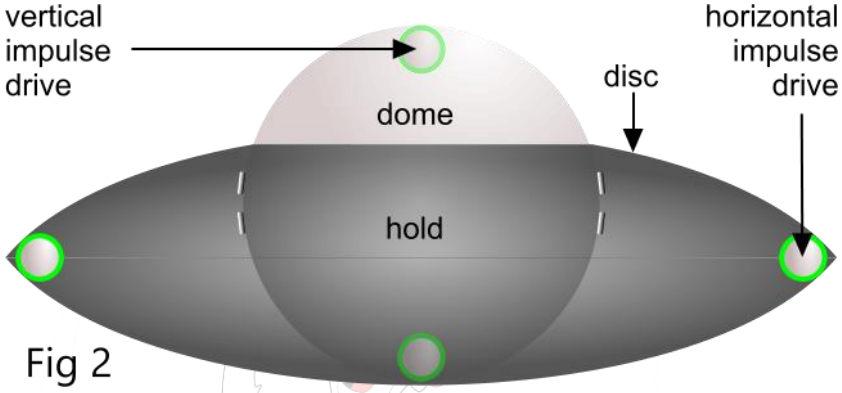


Fig 2

The boot or trunk (hold) of the vehicle is the shell anulus, between the impulse-drive and the sphere, plus the space in the sphere below the occupants. The fuel cell and electricity generator can be mounted anywhere within the shell anulus.

Apart from special requirements, that's all there is to this vehicle. It needs no drive-train, steering gear, suspension, engine, gearbox, axles, brakes, or wheels. It has only five moving parts, four of which never make contact with their containers (no frictional wear).

You can clothe the shell in an anti-drag film (Chapter 5). And because this vehicle has no physical exhaust (Chapter 4), it will never leave a vapour trail. Fitting the entire shell with proximity sensors will eliminate any chance of collision.

Make this vehicle airtight, and fit an O_2 tank & a CO_2 scrubber, and it can transport live occupants above the earth's atmosphere. Afterall, its performance means you need only 7-hours of oxygen for a return journey to the moon!

This shell has numerous purposes;

Carry personnel,

Carry freight,

Protect the occupant(s) from impact (collision),

Seal the occupants from a hostile environment,

Provide directional visibility.

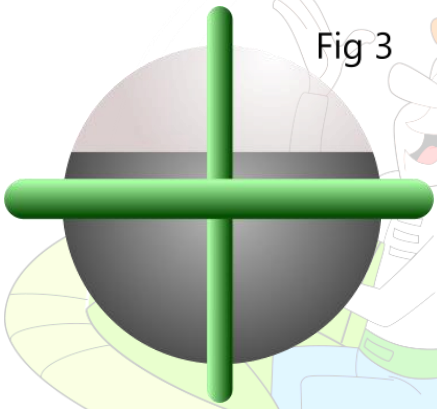


Fig 3

Except in long-distance vehicles - e.g. space-travel - the occupants and their goods will be accommodated in the sphere, so the outer-shell is not necessary. I.e. the impulse drive could be mounted outside the sphere (Fig 3) if preferred. Whilst this option reduces hold-space and complicates the treatment of atmospheric drag, it offers uninterrupted access to all but one of the moving parts.

Large freight vehicles are likely to be constructed in this way due to the expected increased maintenance and the maximisation of available space (a sphere).

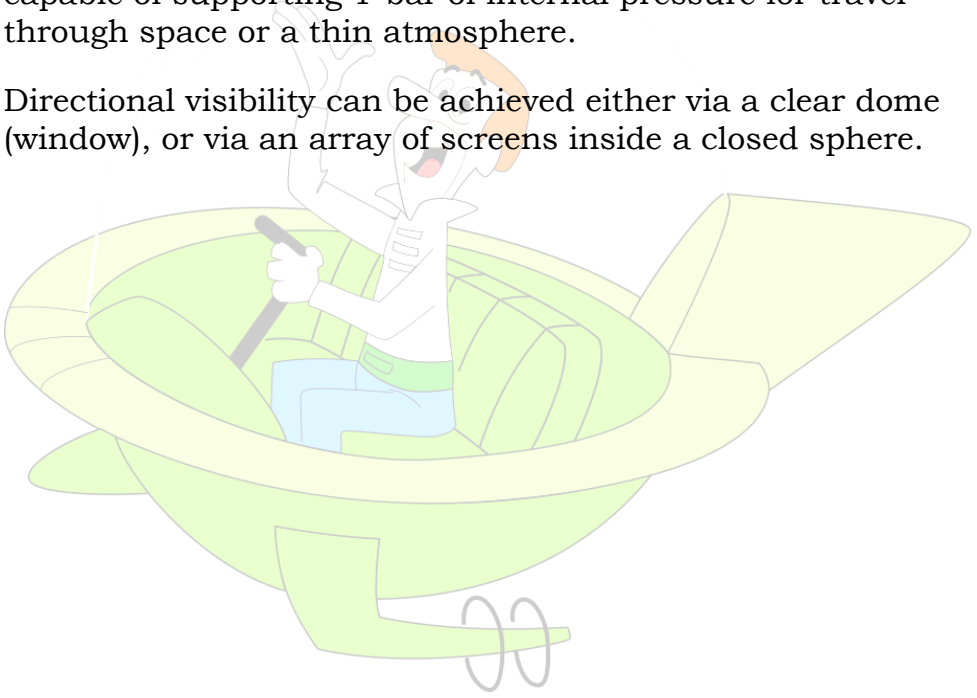
The shell outer skin can be covered in proximity sensors pointing in all directions to detect and avoid any and all obstacles.

As you will see in Chapter 3, the impulse drive issues no exhaust and the release of waste hydrogen from the neutron energy cell can be easily controlled (contained) to ensure that there is no loss of cabin pressure and no ingress of harmful gases.

When travelling close to ground-level, normal airflow through the cabin will provide the occupants with all the oxygen they need. However, the higher the vehicle ventures the less oxygen will be available for its occupants. Therefore, it is anticipated that pressurised oxygen tanks (or bladders) will be fitted inside the shell for the occasional adventure to the higher reaches of our atmosphere.

The shell can be double or even treble-skinned to accommodate penetration by atmospheric dust when travelling at high-speed close to a planet. It must also be capable of supporting 1-bar of internal pressure for travel through space or a thin atmosphere.

Directional visibility can be achieved either via a clear dome (window), or via an array of screens inside a closed sphere.



3. The Impulse Drive

The impulse drive (ID) is a torus, internally lined with a [circular] linear motor, through which a magnetic mass (or bullet) is driven continuously at a variable velocity (Fig 4). It is accelerated from v_1 over a drive-angle ($\alpha \leq 90°$) and decelerated from v_2 over the remaining angle 'theta' ($\theta = \beta + 270°$).

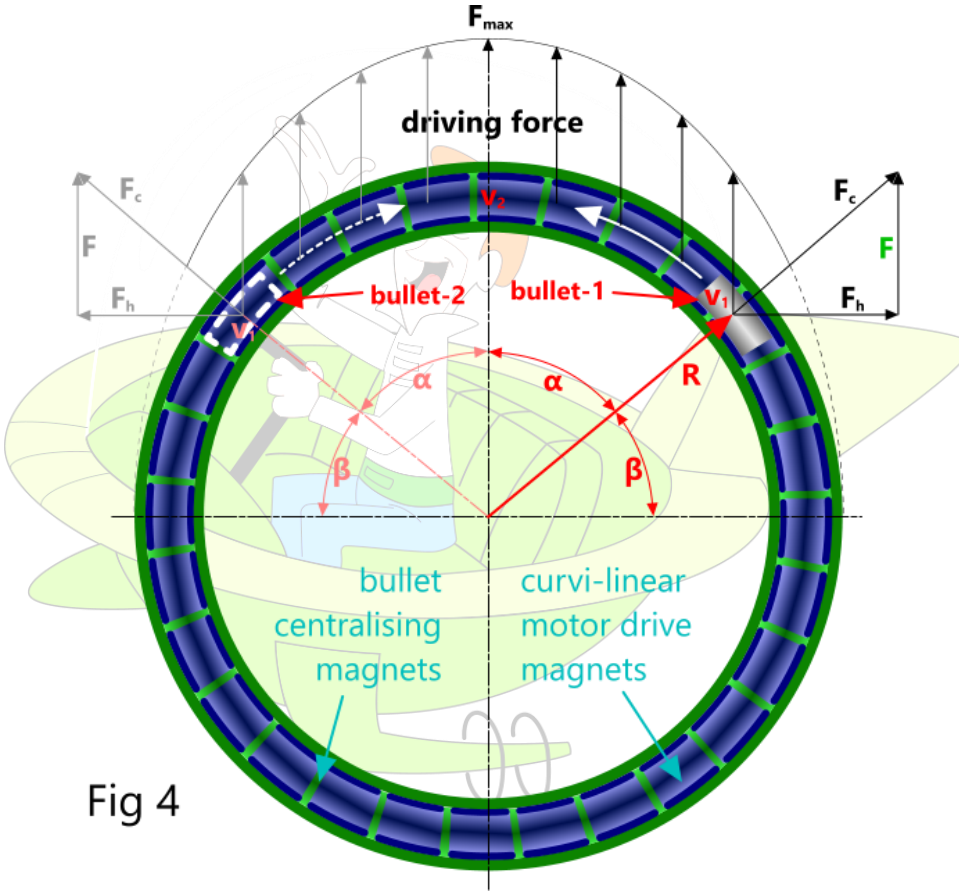


Fig 4

A variable centrifugal force ($F_c = m.a = m.v^2/R$) will be induced in the bullet whilst accelerating through α, and a centripetal force whilst decelerating through θ, both of which must be transmitted into the torus. Mount two counter operating impulse-drives together (bullet's 1 & 2), and the lateral forces (F_h) will cancel out, and the longitudinal forces

F will act together. Alter the positions of α, and the vehicle will alter its direction of travel.

Both bullets are accelerated (through α) and decelerated (through θ) by the same curvi-linear motor causing the torus to move in direction 'F'. Torus acceleration induced by a bullet orbiting through 'α' 100-times a second will feel continuous to a vehicle's occupants.

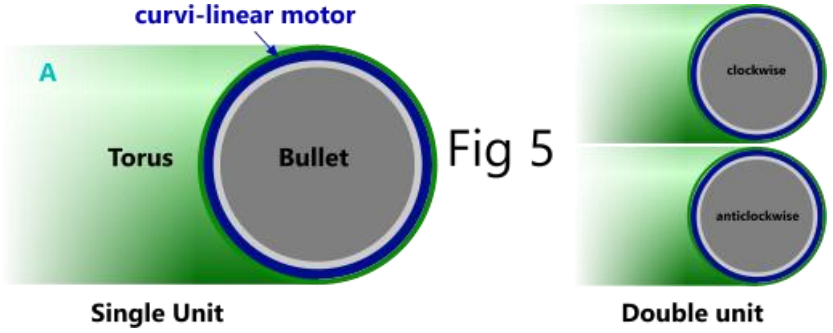
The internal anulus of the torus can be a genuine vacuum (0psi), which can be easily achieved by piloting the vehicle above the earth's atmosphere and opening (and then closing) an exhaust valve. Driving the bullets in a vacuum will use considerably less energy than driving them through air.

The centrifugal (and centripetal) force in the bullet must be transmitted into the torus in order for the drive-system to work. This may be achieved in any number of ways, but the most likely are listed as follows:

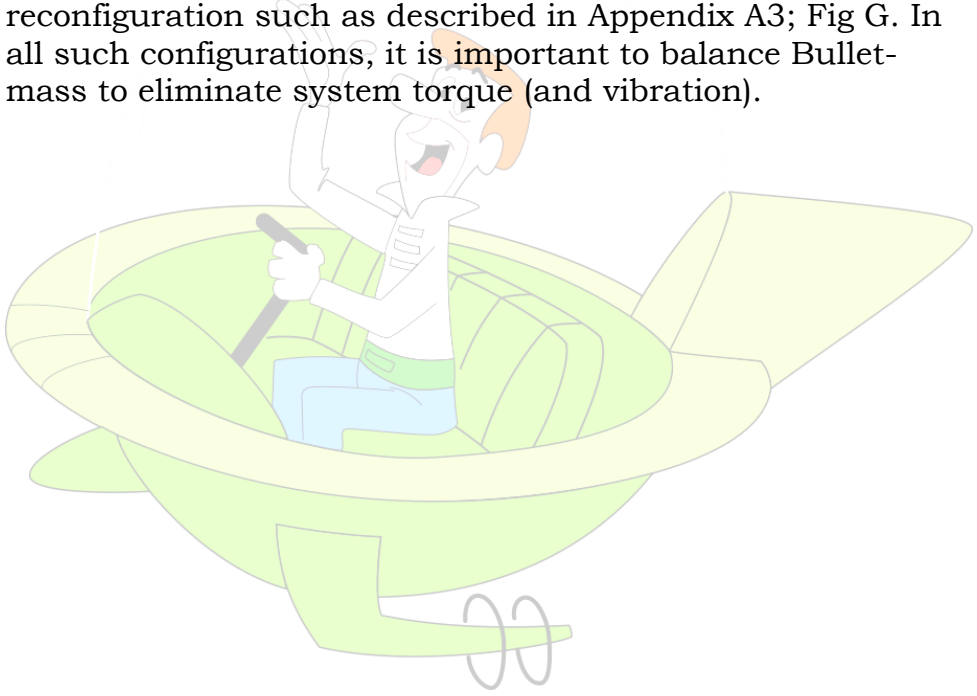
1) Electro-Magnetic repulsion ring magnets interspersed between the curvi-linear motor drive magnets that keep the bullet centrally located in the torus section. In this case, the electro-magnetic force must be greater than the centrifugal force (F_c) in the bullet.
2) Low-friction bearings surrounding the bullet, through which the centrifugal force is transmitted onto the internal surface of the curvi-linear motor via annular rails.
3) Low-friction pads around the bullet.

Option 1) above is the most reliable and efficient load transfer mechanism, but it requires additional energy.

Fig 5 illustrates a single unit, which would not work alone, and a double unit, which would. However, whilst the double unit presented would work, it is not ideal as; a) it occupies too-much height for the unit's ideal location in the rim of the IDV, and; b) it induces a torque between the two tori.



Both of these problems may be avoided by careful reconfiguration such as described in Appendix A3; Fig G. In all such configurations, it is important to balance Bullet-mass to eliminate system torque (and vibration).



4. Energy Source

Contrary to all the misguided efforts of our world *leaders*, clean, safe, unlimited energy is all around us in all matter in the universe and always has been, what's more it is free, and needs no mining or processing. And there is enough of it in one metre of the earth's surface matter to serve mankind for 1E+14 years.

This energy source was actually divulged to us by Isaac Newton and Charles Augustin de Coulomb. If we had followed their work, we would have long ago discovered the proton-electron partnership and thereby the source of all universal energy; the neutron.

Every neutron - in the universe - was created in the core of a bright star and holds the energy it was generating at the time of its creation; 1.63785606465701E-13 Joules. This energy can be extracted from anything; nuclear waste, soil, iron, waste matter, plastic, rock, etc., because neutrons are in every atom.

So how are Neutrons created? The answer is; Spin[1]

Frictional heat is generated inside a satellite by the competing kinetic and potential energies induced by its force-centre and its sub-satellite(s), according to Isaac Newton's laws of orbital motion. The potential energy between the satellite and its force-centre is preventing the satellite's core from rotating. The kinetic energy in its sub-satellite(s) is driving rotation in its mantle matter. This relative spin in the satellite generates internal frictional heat.

This same energy applies to all satellites, including gas planets and stars. Gas planets are simply planets that have collected sufficient sub-satellite mass to generate the internal heat to melt their crust matter. However, bright-stars are satellites that have accumulated sufficient satellite mass to generate and accumulate the heat required to unite proton-electron pairs in their core atoms, creating neutrons. When

an atom's neutronic ratio exceeds 1.6, a controllable# chain reaction will occur releasing electro-magnetic energy (heat) and proton ejection; fission. The ejected protons impact other neutrons, releasing their electro-magnetic energy. This is where the majority of a bright star's heat comes from.
 # controllable means that if the heat source is removed, the chain reaction will stop, just as with a star; remove its satellite mass and it would cool down.

So, all we have to do is generate the neutronic temperature in the atoms in any matter using lasers, converting their innermost proton-electron pairs to neutrons until their neutronic ratio exceeds 1.6
We can convert the energy released to electricity in an energy cell, which can be any size and its fuel can be anything from waste plastic to nuclear waste.

E.g., there is 5.4E+13 Joules of energy in a 100-gramme beach pebble, which is sufficient to run a typical UK house for 75 years and a typical family saloon car for 100 years. What's more, its by-product is clean; hydrogen (just as in a star). Also, the fuel is safe; it won't ignite in an accident.

Detailed calculations show that one-kilogram of rock will fuel a 1-tonne, 4-metre diameter vehicle for 32,260km at 1.133g whilst flying at sea-level. This performance is achieved by accelerating the bullet (through α) from 100m/s to 200m/s and back to 100m/s (through θ). Which relates to a power output of 1500kW (2100hp) Given that this 'engine' is close to 100% efficient, compared with the efficiency of an internal combustion engine today (<33%), this vehicle is the equivalent of a 6300hp vehicle today.

Electricity may be generated from the heat released and/or from the ejected protons rotating an Archimedes screw and/or a combination of the two.

5. Anti-Drag

Pushing any body - irrespective of size or mass - through an atmosphere requires the continual input of power to;

a) displace the atmospheric atoms and molecules (added mass), and;
b) overcome the magnetic attraction between the atoms in the body and those in the atmosphere (drag).

Whilst *added mass* resistance is inevitable, *drag*, which constitutes most of the resistance (≈80%), can be reduced simply by pushing the atmospheric atoms away from the body, which can be achieved by raising the electrical charge (e') in the body's surface protons.

Now that we understand how the atom works[1], we can calculate the forces that attract and repel adjacent atoms:

Atomic [electrical] repulsion is inversely proportional to the distance between adjacent atoms;
$F_E = PE_1 / R.Y$

Atomic [magnetic] attraction is inversely proportional to the cube of the distance between adjacent atoms;
$F_M = h_p^2.m_A / R^3$

Therefore, for every unit of distance increase between adjacent atoms, the magnetic attraction decreases by the cube of that distance. I.e. you need only a relatively small increase in [repulsive] proton electrical charge to achieve a significant reduction in magnetic attraction (drag).

All you need to do to reduce atmospheric drag is raise the electrical charge in an atom's protons by increasing their temperature, or inducing an alternating current.

This can be achieved by covering (or coating) the surface of the IDV shell in an insulating material of any thickness, which you then cover (or coat) in a highly conductive surface

(e.g. gold, silver, copper, etc.) that need be only a few atoms thick, through which is passed an electrical current.

You activate this electrical current only when travelling through an atmosphere, setting its magnitude according to atmospheric density.

By the way, this also works when travelling through water! Although the outer [conductive] coating would need to be thicker and the current considerably greater.

6. Epilogue (by the author)

It's ironic, isn't it? Here we are in the twenty-first century struggling to find a viable solution for transport and energy, and the only viable solutions were given to us by pre-twentieth century physicists and a little-known professor fifty-years ago.

In answer to the fascinating question raised in the Preface of this book, it is my considered opinion that given …

a) the ubiquity of the flying saucer,
b) that the technology to build one exists on earth today,
c) that it is highly improbable we are alone in our galaxy,
d) that our Sci-Fi illustrators were creating such images whilst we were still designing and building the Ford Model-T,
e) that we still associate them with extra-terrestrials,

… it seems highly likely (to me) that other, more enlightened races, must have adopted this mode of transport long ago. And perhaps, many UFO observers may have been right, because the vehicle described in this book, looks and performs exactly as these observers claim!