

AN INQUIRY INTO THE NATURE AND CONSEQUENCE OF RESOURCE FLOW WITHIN THE EMPIRE

INTRODUCTION AND PLAN OF THE WORK

What we reap from our labors returns to us our material comforts and disposable currency. What we consume must not exceed our capacity nor fall below the needs of those who are to consume it.

Economic balance must be regulated by: 1) efficient production, and 2) an understanding of the consequences such production has upon our environment, economy and life cycle.

Efficient production is more relevant than its consequence. Among our savage ancestors, those that labored to harvest sunlight from our depths to feed the others in its Bed were employed in such labor from dusk till dawn. Although rich in basic sustenance, such cultures were so miserably poor that the harvesting of the sun came above all other duties – to the point of abandoning their seed and soil – and others in the Bed suffered as a result to the point where only the naturally able could cultivate the sun. Further, such beds were left defenseless to the elements and were sometimes consumed by herbivorous monstrosities. The whole of the Bed suffered as a result of the devoted, yet myopic efforts of the few vine able to sustain the many. “Too much labor without flow results in poor foliage,” as the old adage goes.

The more civilized and thriving Beds were many and prosperous; a number of which never worked at all yet consumed the cultivation of ten times, frequently a hundred times more than that cultivated by a greater part of those who did labor; yet the cultivation of the whole labor of the society is so great that all are abundantly supplied, and a leafman, even of the lowest and darkest order, if it is frugal and industrious, may enjoy a greater share of the riches and soils of life than its savage counterpart. Our current technology has improved our lifecycle dramatically - allowing us greater strides in comfort and efficiency.

This presentation is to guide the Admiral in his decisions in allocating labors and resources. It is best to be efficient. A thorough understanding of resource flow and consequence of its consumption is vital to overall empirical efficiency.

Please note that the format emphasizes raw resource conversion at this time and I will adapt future variations in response to our industrial advances.

– Captain Lotus Berthelotti
Cycle 3,103,113

AUTOCANNON

Flow Chart

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 3:1 ⇒ **Steel** ➤ 400

Raw Resources ⇒ 10:1 ⇒ Crystals ⇒ 3:1 ⇒ Refined Crystals ⇒ 2:1 ⇒ ⇒ ⚡

Electronics ➤ 100

Raw Resources ⇒ 10:1 ⇒ Gaseous Elements ⇒ 1:1 ⚡

↑

Raw Resources ⇒ 10:1 ⇒ Petrochemicals ⇒ 1:1 ⇒ Synthetic Materials ⇒ 1:1 ↑

Raw Resources ⇒ 10:1 ⇒ Industrial Chemicals ⇒ 1:1 ↗

Requirement List

Major Components: **400 Steel, 100 Electronics**

Minor Components: 1,200 Iron, 200 Refined Crystals, 100 Synthetic Materials

Lesser Components: 600 Crystals, 100 Gaseous Elements, 100 Petrochemicals, 100 Industrial Chemicals

TOTAL RAW RESOURCES REQUIRED: 12,900

Applications

Ship Weaponry (details classified)

*** Admiral, I have categorized each component class according to degree of direct consumption; major components are more easily consumed than lesser. Major components consist of minor components (which can consist of lesser components.) Thus one does not need 400 Steel, 100 Electronics PLUS all of the minor and lesser components. All Major Components consume Minor Components. I have underlined all Minor Components that consume the Lesser Components. Raw Resources are not given a component classification as they are the base resource unit.. All components are more easily consumed than raw resources. I will present a new format as we discover new industrialization methods if necessary.

BLACK MARKET GOODS

Flow Chart

Raw Resources ⇒ 10:1 ⇒ **Rare Herbs and Spices** ➤ 1

Raw Resources ⇒ 10:1 ⇒ Rare Herbs and Spices ⇒ 3:1 ⇒ **Pharmaceuticals** ➤ 2

Requirement List

Major Components: 2 Pharmaceuticals, 1 Rare Herbs and Spices

Minor Components: 6 Rare Herbs and Spices

*** Admiral, this item basically consumes 7 Rare Herbs and Spices.

TOTAL RAW RESOURCES REQUIRED: 70

Applications

Regulated substance. Illegal fertilizers. Used to subjugate less-disciplined cultures. Used directly for **Special Talent** ground units.

CALDARAN CRYSTALS

Flow Chart

Raw Resources ➤ 10

Requirement List

Major Components: N/A

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 10

Applications

Classified. Highly regulated industry. Currently used for high-tech weaponry projects.

CARGO BAY

Flow Chart

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 3:1 ⇒ **Steel** ➤ 5

Requirement List

Major Components: **5 Steel**

Minor Components: 15 Iron

TOTAL RAW RESOURCES REQUIRED: 150

Applications

Holds cargo. Used for ship design.

COLONIAL BERTHING

Flow Chart

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 3:1 ⇒ **Steel** ➤ 50,000

Requirement List

Major Components: **50,000 Steel**

Minor Components: 150,000 Iron

TOTAL RAW RESOURCES REQUIRED: 1.5 Million

Applications

Sustains one pop unit for space travel.

COAL

Flow Chart

Raw Resources > 10

Requirement List

Major Components: N/A

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 10

Applications

Primitive fuel.

COLONIAL SETTLER

Flow Chart

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 3:1 ⇒ **Steel** > 50,000

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 2:1 ⇒ **Weapons** > 100,000

Raw Resources ⇒ 10:1 ⇒ Light Metals ⇒ 1:1 ↑

Population Unit ⇒ 1:1 ⇒ **Colonist** > 1

Raw Resources ⇒ 10:1 ⇒ Fibers ⇒ 3:1 ⇒ **Textiles** > 50,000

Raw Resources ⇒ 10:1 ⇒ Food ⇒ 1:1 ↓↓

Raw Resources ⇒ 10:1 ⇒ Grains ⇒ 1:1 ↓↓

Raw Resources ⇒ 10:1 ⇒ Meats ⇒ 1:1 ⇒ Foodstuffs ⇒ 1:1 ⇒ **Food Concentrates** > 50,000

Raw Resources ⇒ 10:1 ⇒ Fruits/Veg ⇒ 1:1 ↑↑

Requirement List

Major Components: **50,000 Steel, 100,000 Weapons, 50,000 Textiles, 50,000 Food Concentrates, 1 Colonist**

Minor Components: 350,000 Iron, 100,000 Light Metals, 1 Pop Unit, 150,000 Fibers, 50,000 Foodstuffs

Lesser Components: 50,000 Grains, 50,000 Meats, 50,000 Water, 50,000 Fruits and Vegetables

TOTAL RAW RESOURCES REQUIRED: 8 Million

Applications

Specialized colonist unit designed to cultivate alien lands.

COLONY BEACON

Flow Chart

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 3:1 ⇒ **Steel** ➤ 2,000

Raw Resources ⇒ 10:1 ⇒ Crystals ⇒ 3:1 ⇒ Refined Crystals ⇒ 2:1 ⇒ ⇒ ⚡

Electronics ➤ 3,000

Raw Resources ⇒ 10:1 ⇒ Gaseous Chemicals ⇒ 1:1 ⚡

↑

Raw Resources ⇒ 10:1 ⇒ Petrochemicals ⇒ 1:1 ⇒ Synthetic Materials ⇒ 1:1 ↑

Raw Resources ⇒ 10:1 ⇒ Industrial Chemicals ⇒ 1:1 ↗

Requirement List

Major Components: **2,000 Steel, 3,000 Electronics**

Minor Components: 6,000 Iron, 6,000 Refined Crystals, 3,000 Synthetic Materials

Lesser Components: 18,000 Crystals; 3,000 Gaseous Chemicals, Petrochemicals and Industrial Chemicals

TOTAL RAW RESOURCES REQUIRED: 330,000

Applications

Colonial and ground assault operations; marks and establishes new cultivation site.

COMBAT ENGINEER

Flow Chart

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 3:1 ⇒ **Steel** ➤ 50,000

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 2:1 ⇒ **Weapons** ➤ 150,000

Raw Resources ⇒ 10:1 ⇒ Light Metals ⇒ 1:1 ↑

Population Unit ⇒ 1:1 ⇒ Colonist ⇒ 1:1 ⇒ Trooper ⇒ 1:1 ⇒ **Imperial Army Soldier** ➤ 1

Raw Resources ⇒ 10:1 ⇒ Food ⇒ 1:1 ↓↓

Raw Resources ⇒ 10:1 ⇒ Grains ⇒ 1:1 ↓↓

Raw Resources ⇒ 10:1 ⇒ Meats ⇒ 1:1 ⇒ Foodstuffs ⇒ 1:1 ⇒ **Food Concentrates** ➤ 50,000

Raw Resources ⇒ 10:1 ⇒ Fruits/Veg ⇒ 1:1 ↑

Requirement List

Major Components: **50,000 Steel, 150,000 Weapons, 50,000 Food Concentrates, 1 Imperial Army Soldier**

Minor Components: 450,000 Iron, 150,000 Light Metals, 1 Trooper, 50,000 Foodstuffs

Lesser Components: 50,000 Grains, 50,000 Meats, 50,000 Water, 50,000 Fruits and Vegetables

TOTAL RAW RESOURCES REQUIRED: 8 Million

Applications

Ground Unit. (Classified for non-military personnel)

CONSTRUCTION MATERIALS

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow Iron \Rightarrow 3:1 \Rightarrow **Steel** \triangleright 1

Raw Resources \Rightarrow 10:1 \Rightarrow Lumber \Rightarrow 3:1 \Rightarrow **Timber** \triangleright 2

Requirement List

Major Components: **1 Steel, 2 Timber**

Minor Components: 3 Iron, 6 Lumber

TOTAL RAW RESOURCES REQUIRED: 90

Applications

Installation construction. **Fortress. Imperial Palace and all those listed in the game installation supplement.**

Note: Each installation costs a minimum of *45 million* raw resources.

CONSUMER GOODS

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow **Light Metals** \triangleright 2

Raw Resources \Rightarrow 10:1 \Rightarrow Petrochemicals \Rightarrow 3:1 \Rightarrow **Petroleum** \triangleright 1

Requirement List

Major Components: **1 Petroleum, 2 Light Metals**

Minor Components: 3 Petrochemicals

TOTAL RAW RESOURCES REQUIRED: 50

Applications

Various. Domestic use. Believed to hold value to primitive cultures.

CRYSTALS

Flow Chart

Raw Resources \triangleright 10

Requirement List

Major Components: N/A

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 10

Applications

Exclusive use: transformed into Refined Crystals which are used in **Electronics** (see the applications for electronics in its resource file) Refined Crystals are almost always used for Electronics but can be directly used for the construction of **Light Beam Laser**.

DRONE RACKS

Flow Chart

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 3:1 ⇒ **Steel** ➤ 50,000

Requirement List

Major Components: **50,000 Steel**

Minor Components: 150,000 Iron

TOTAL RAW RESOURCES REQUIRED: 1.5 Million

Applications

Supports drones for space combat applications. (Further detail highly classified)

ELECTRONICS

Flow Chart

Raw Resources ⇒ 10:1 ⇒ Crystals ⇒ 3:1 ⇒ **Refined Crystals** ➤ 2

Raw Resources ⇒ 10:1 ⇒ Gaseous Elements ⇒ 1:1 ⇨

Raw Resources ⇒ 10:1 ⇒ Petrochemicals ⇒ 1:1 ⇒ **Synthetic Materials** ➤ 1

Raw Resources ⇒ 10:1 ⇒ Industrial Chemicals ⇒ 1:1 ⇨

Requirement List

Major Components: **2 Refined Crystals, 1 Synthetic Materials**

Minor Components: 6 Crystals, 1 Gaseous Elements, Petrochemicals and Industrial Chemicals

TOTAL RAW RESOURCES REQUIRED: 90

Applications

Autocannon

Colony Beacon

Fuel Shuttle

Intelligence ground unit

Interceptor

Light Beam Laser

Light Magnetic Grapple

Light Stun Beam

Light Thermal Beam

MK I Computers

MK I Jump Survey Sensors

MK I Nuclear Engines

MK I Nuclear Jump Drive

MK I Short Range Sensor

Survey Lander

Type A Defense Screen

Type A Science Lab

**** Admiral, the faster we can streamline the major and minor components for Electronics, the better. Efficient production of Electronics is crucial. (Remainder of report blackened out - limited classification)

ELECTRONICS WARFARE UNIT

Flow Chart

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 3:1 ⇒ **Steel** ➤ 50,000

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 2:1 ⇒ **Weapons** ➤ 150,000

Raw Resources ⇒ 10:1 ⇒ Light Metals ⇒ 1:1 ↑

Population Unit ⇒ 1:1 ⇒ Colonist ⇒ 1:1 ⇒ **Trooper** ➤ 1

Raw Resources ⇒ 10:1 ⇒ Food ⇒ 1:1 ↓

Raw Resources ⇒ 10:1 ⇒ Grains ⇒ 1:1 ↓

Raw Resources ⇒ 10:1 ⇒ Meats ⇒ 1:1 ⇒ Foodstuffs ⇒ 1:1 ⇒ **Food Concentrates** ➤ 50,000

Raw Resources ⇒ 10:1 ⇒ Fruits/Veg ⇒ 1:1 ↑

Requirement List

Major Components: **50,000 Steel, 150,000 Weapons, 50,000 Food Concentrates, 1 Trooper**

Minor Components: 450,000 Iron, 150,000 Light Metals, 1 Colonist, 50,000 Foodstuffs

Lesser Components: 50,000 Grains, 50,000 Meats, 50,000 Water, 50,000 Fruits and Vegetables

TOTAL RAW RESOURCES REQUIRED: 8 Million

Applications

Ground Unit. (Classified for non-military personnel)

FIBERS

Flow Chart

Raw Resources ➤ 10

Requirement List

Major Components: N/A

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 10

Applications

Exclusively synthesized into **Textiles** (see the applications for textiles in its resource file, basically **NBC units** and **Colonial Settlers**)

FIGHTER BAYS

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow Iron \Rightarrow 3:1 \Rightarrow Steel \triangleright 50,000

Requirement List

Major Components: **50,000 Steel**

Minor Components: 150,000 Iron

TOTAL RAW RESOURCES REQUIRED: 1.5 Million

Applications

Supports fighters for space combat applications. (Further detail highly classified)

FOOD CONCENTRATES

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow Food \Rightarrow 1:1 \Downarrow
Raw Resources \Rightarrow 10:1 \Rightarrow Grains \Rightarrow 1:1 \Downarrow
Raw Resources \Rightarrow 10:1 \Rightarrow Meats \Rightarrow 1:1 \Rightarrow Foodstuffs \triangleright 1
Raw Resources \Rightarrow 10:1 \Rightarrow Fruits/Veg \Rightarrow 1:1 \Uparrow

Requirement List

Major Components: **1 Foodstuff**

Minor Components: 1 Grains, 1 Meats, 1 Water, 1 Fruits and Vegetables

TOTAL RAW RESOURCES REQUIRED: 40

Applications

Colonial Settlers and the following Ground Units: All Air Force Units, Armor Units, Artillery Units, Colonial Settler, Combat Engineer, Electronics Warfare Unit, Guerilla, Heavy Air Defense Units, Heavy Armor Units, Heavy Artillery Units, Heavy Infantry Units, Heavy Fanatics, Mechanized Infantry Units, Intelligence, Light Fanatics, Medical, Militia, Naval, NBC, Security, Space Defense, Special Forces Units, Strategic Bomber Units Raiders and the Transport Unit.

FOODSTUFFS

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow Food \triangleright 1
Raw Resources \Rightarrow 10:1 \Rightarrow Grains \triangleright 1
Raw Resources \Rightarrow 10:1 \Rightarrow Meats \triangleright 1
Raw Resources \Rightarrow 10:1 \Rightarrow Fruits/Veg \triangleright 1

Requirement List

Major Components: **1 Grains, 1 Meats, 1 Water, 1 Fruits and Vegetables**

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 40

Applications

Food Concentrates which are used for **all units listed in Food Concentrates resource file.**

FORTRESS

Flow Chart

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 3:1 ⇒ **Steel** ➤ 500,000

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 3:1 ⇒ Steel ⇒ 3:1 ⇒ **Heavy Machinery** ➤ 500,000

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 2:1 ⇒ **Weapons** ➤ 500,000

Raw Resources ⇒ 10:1 ⇒ Light Metals ⇒ 1:1 ↑

Population Unit ⇒ 1:1 ⇒ Colonist ⇒ 1:1 ⇒ **Trooper** ➤ 1

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 3:1 ⇒ Steel ⇒ 1:1 ⇒ **Construction Materials** ➤ 500,000

Raw Resources ⇒ 10:1 ⇒ Lumber ⇒ 3:1 ⇒ Timber ⇒ 2:1 ↑

Requirement List

Major Components: **500,000 Steel, 500,000 Weapons, 500,000 Heavy Machinery, 500,000 Construction Materials, 1 Trooper**

Minor Components: 2 Million Steel, 8.5 Million Iron, 1 Colonist, 500,000 Light Metals, 1 Million Timber

Lesser Components: 3 Million Lumber

** Note: A TOTAL of 2.5 Million Steel is required.

TOTAL RAW RESOURCES REQUIRED: 120 Million

Applications

Super Installation. (Classified for non-military personnel)

FRUITS AND VEGETABLES

Flow Chart

Raw Resources ➤ 10

Requirement List

Major Components: N/A

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 10

Applications

Exclusively processed into **Foodstuffs**, usable in trade and most likely converted into **Food Concentrates**; which feed all **units listed in Food Concentrates resource file**.

FUEL

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow **Gaseous Elements** \triangleright 3

Requirement List

Major Components: **3 Gaseous Elements**

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 30

Applications

The **Transport** ground unit and **Interceptor** unit.

FUEL SHUTTLE

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow Iron \Rightarrow 3:1 \Rightarrow **Steel** \triangleright 2,400

Raw Resources \Rightarrow 10:1 \Rightarrow Crystals \Rightarrow 3:1 \Rightarrow Refined Crystals \Rightarrow 2:1 \Rightarrow \Rightarrow \Rightarrow \Rightarrow

Electronics \triangleright 600

Raw Resources \Rightarrow 10:1 \Rightarrow Gaseous Elements \Rightarrow 1:1 \Rightarrow \Rightarrow

\uparrow

Raw Resources \Rightarrow 10:1 \Rightarrow Petrochemicals \Rightarrow 1:1 \Rightarrow Synthetic Materials \Rightarrow 1:1 \uparrow

Raw Resources \Rightarrow 10:1 \Rightarrow Industrial Chemicals \Rightarrow 1:1 \Rightarrow \Rightarrow

Requirement List

Major Components: **2,400 Steel, 600 Electronics**

Minor Components: 7,200 Iron, 1,200 Refined Crystals, 600 Synthetic Materials

Lesser Components: 3,600 Crystals; 600 Gaseous Elements, Petrochemicals and Industrial Chemicals

TOTAL RAW RESOURCES REQUIRED: 126,000

Applications

Fuel operations, typically around orbitals.

FUEL TANKAGE

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow Iron \Rightarrow 3:1 \Rightarrow **Steel** \triangleright 5

Requirement List

Major Components: **5 Steel**

Minor Components: 15 Iron

TOTAL RAW RESOURCES REQUIRED: 150

Applications

Fuel storage units for space fleet operations.

GASEOUS ELEMENTS

Flow Chart

Raw Resources ➤ 10

Requirement List

Major Components: N/A

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 10

Applications

Either refined into 1) **Fuel** (used for the **Transport** ground unit and **interceptors**) or, 2) **Light Beam Laser** (when combined with gemstones, steel, electronics and refined crystals) or 3) Combined with Petrochemicals and Industrial Chemicals to create **Synthetic Materials** (see resource file on Synthetic Materials - mostly used for **Electronics**)

GEMSTONES

Flow Chart

Raw Resources ➤ 10

Requirement List

Major Components: N/A

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 10

Applications

Applied to **Light Beam Laser** (with Steel, Electronics, Refined Crystals and Gaseous Elements) and **Luxury Goods** (used as tradeable goods or to create **Special Talent** ground unit)

GHURAN DEMONBLOOD

Flow Chart

Raw Resources ➤ 10

Requirement List

Major Components: N/A

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 10

Applications

Highly Classified. Controversy surrounds its existence and application.

GRAINS

Flow Chart

Raw Resources ➤ 10

Requirement List

Major Components: N/A

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 10

Applications

Exclusively processed into **Foodstuffs**, usable in trade and most likely converted into **Food Concentrates**; which feed all **units listed in Food Concentrates resource file**.

GUERRILLA

Flow Chart

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 3:1 ⇒ **Steel** ➤ 50,000

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 2:1 ⇒ **Weapons** ➤ 150,000

Raw Resources ⇒ 10:1 ⇒ Light Metals ⇒ 1:1 ↑

Population Unit ⇒ 1:1 ⇒ Colonist ⇒ 1:1 ⇒ **Trooper** ➤ 1

Raw Resources ⇒ 10:1 ⇒ Food ⇒ 1:1 ↓↓

Raw Resources ⇒ 10:1 ⇒ Grains ⇒ 1:1 ↓↓

Raw Resources ⇒ 10:1 ⇒ Meats ⇒ 1:1 ⇒ Foodstuffs ⇒ 1:1 ⇒ **Food Concentrates** ➤ 50,000

Raw Resources ⇒ 10:1 ⇒ Fruits/Veg ⇒ 1:1 ↑↑

Requirement List

Major Components: **50,000 Steel, 150,000 Weapons, 50,000 Food Concentrates, 1 Trooper**

Minor Components: 450,000 Iron, 150,000 Light Metals, 1 Colonist, 150,000 Fibers, 50,000 Foodstuffs

Lesser Components: 50,000 Grains, 50,000 Meats, 50,000 Water, 50,000 Fruits and Vegetables

TOTAL RAW RESOURCES REQUIRED: 8 Million

Applications

Ground Unit. (Classified for non-military personnel)

HEAVY FANATICS

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow Iron \Rightarrow 3:1 \Rightarrow **Steel** \triangleright 50,000

Raw Resources \Rightarrow 10:1 \Rightarrow Iron \Rightarrow 2:1 \Rightarrow **Weapons** \triangleright 150,000

Raw Resources \Rightarrow 10:1 \Rightarrow Light Metals \Rightarrow 1:1 \Uparrow

Population Unit \Rightarrow 1:1 \Rightarrow ????? \Rightarrow 1:1 \Rightarrow **Fanatical Population** \triangleright 1

Raw Resources \Rightarrow 10:1 \Rightarrow Food \Rightarrow 1:1 \Downarrow

Raw Resources \Rightarrow 10:1 \Rightarrow Grains \Rightarrow 1:1 \Downarrow

Raw Resources \Rightarrow 10:1 \Rightarrow Meats \Rightarrow 1:1 \Rightarrow Foodstuffs \Rightarrow 1:1 \Rightarrow **Food Concentrates** \triangleright 50,000

Raw Resources \Rightarrow 10:1 \Rightarrow Fruits/Veg \Rightarrow 1:1 \Uparrow

Requirement List

Major Components: **50,000 Steel, 150,000 Weapons, 50,000 Food Concentrates, 1 Fanatical Population**

Minor Components: 450,000 Iron, 150,000 Light Metals, ?????, 150,000 Fibers, 50,000 Foodstuffs

Lesser Components: 50,000 Grains, 50,000 Meats, 50,000 Water, 50,000 Fruits and Vegetables

TOTAL RAW RESOURCES REQUIRED: 8 Million

Applications

Ground Unit. Fundamentalist in nature. (Classified for non-military personnel)

HEAVY MACHINERY

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow Iron \Rightarrow 3:1 \Rightarrow **Steel** \triangleright 3

Requirement List

Major Components: **3 Steel**

Minor Components: 15 Iron

TOTAL RAW RESOURCES REQUIRED: 90

Applications

Fortress. Possible application to other installations.

IMPERIAL ARMY: AIR FORCE, HEAVY AIR DEFENSE, HEAVY ARTILLERY

IMPERIAL GUARD: AIR FORCE, HEAVY AIR DEFENSE, HEAVY ARTILLERY

IMPERIAL MARINES: AIR FORCE

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow Iron \Rightarrow 3:1 \Rightarrow **Steel** \triangleright 100,000

Raw Resources \Rightarrow 10:1 \Rightarrow Iron \Rightarrow 2:1 \Rightarrow **Weapons** \triangleright 150,000

Raw Resources \Rightarrow 10:1 \Rightarrow Light Metals \Rightarrow 1:1 \Uparrow

Population Unit \Rightarrow 1:1 \Rightarrow Colonist \Rightarrow 1:1 \Rightarrow Trooper \Rightarrow 1:1 \Rightarrow **Imperial Unit*** \triangleright 1

Raw Resources \Rightarrow 10:1 \Rightarrow Food \Rightarrow 1:1 \Downarrow

Raw Resources \Rightarrow 10:1 \Rightarrow Grains \Rightarrow 1:1 \Downarrow

Raw Resources \Rightarrow 10:1 \Rightarrow Meats \Rightarrow 1:1 \Rightarrow Foodstuffs \Rightarrow 1:1 \Rightarrow **Food Concentrates** \triangleright 50,000

Raw Resources \Rightarrow 10:1 \Rightarrow Fruits/Veg \Rightarrow 1:1 \Uparrow

Requirement List

Major Components: 100,000 Steel, 150,000 Weapons, 50,000 Food Concentrates, 1 Imperial Unit

Minor Components: 600,000 Iron, 150,000 Light Metals, 1 Trooper, 50,000 Foodstuffs

Lesser Components: 50,000 Grains, 50,000 Meats, 50,000 Water, 50,000 Fruits and Vegetables

TOTAL RAW RESOURCES REQUIRED: 9.5 Million

Applications

Ground Unit. (Classified for non-military personnel)

* Imperial Unit = Use appropriate unit, eg Imperial Army Soldier, Imperial Guards Soldier, Imperial Marine Soldiers. All such units are derived from the Trooper Unit.

IMPERIAL ARMY: ARTILLERY, HEAVY INFANTRY, INFANTRY, MECHANIZED INFANTRY, SPECIAL FORCES, STRATEGIC BOMBER
IMPERIAL GUARD: ARTILLERY, SECURITY, HEAVY INFANTRY, INFANTRY, MECH INFANTRY, SPECIAL FORCES, STRATEGIC BOMBER**

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow Iron \Rightarrow 3:1 \Rightarrow **Steel** \triangleright 50,000

Raw Resources \Rightarrow 10:1 \Rightarrow Iron \Rightarrow 2:1 \Rightarrow **Weapons** \triangleright 150,000

Raw Resources \Rightarrow 10:1 \Rightarrow Light Metals \Rightarrow 1:1 \uparrow

Population Unit \Rightarrow 1:1 \Rightarrow Colonist \Rightarrow 1:1 \Rightarrow Trooper \Rightarrow 1:1 \Rightarrow **Imperial Unit*** \triangleright 1

Raw Resources \Rightarrow 10:1 \Rightarrow Food \Rightarrow 1:1 \Downarrow

Raw Resources \Rightarrow 10:1 \Rightarrow Grains \Rightarrow 1:1 \Downarrow

Raw Resources \Rightarrow 10:1 \Rightarrow Meat \Rightarrow 1:1 \Rightarrow Foodstuffs \Rightarrow 1:1 \Rightarrow **Food Concentrates** \triangleright 50,000

Raw Resources \Rightarrow 10:1 \Rightarrow Fruits/Veg \Rightarrow 1:1 \Uparrow

Requirement List

Major Components: 50,000 Steel, 150,000 Weapons, 50,000 Food Concentrates, 1 Imperial Unit

Minor Components: 450,000 Iron, 150,000 Light Metals, 1 Trooper, 50,000 Foodstuffs

Lesser Components: 50,000 Grains, 50,000 Meats, 50,000 Water, 50,000 Fruits and Vegetables

TOTAL RAW RESOURCES REQUIRED: 8 Million

Applications

Ground Unit. (Classified for non-military personnel)

* Imperial Unit = Use appropriate unit, eg Imperial Army Soldier OR Imperial Guards. All such units are derived from the Trooper Unit.

** Not to be confused with a "security" unit. The Imperial Guard Security unit has a more efficient reputation when dealing with civil unrest than the standard "security" unit (listed below)

IMPERIAL MARINES: HEAVY INFANTRY, INFANTRY, RAIDERS, SPECIAL FORCES

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow Iron \Rightarrow 3:1 \Rightarrow **Steel** \triangleright 50,000
Raw Resources \Rightarrow 10:1 \Rightarrow Iron \Rightarrow 2:1 \Rightarrow **Weapons** \triangleright 150,000
Raw Resources \Rightarrow 10:1 \Rightarrow Light Metals \Rightarrow 1:1 \uparrow

Population Unit \Rightarrow 1:1 \Rightarrow Colonist \Rightarrow 1:1 \Rightarrow Trooper \Rightarrow 1:1 \Rightarrow
Imperial Marine \triangleright 1

Raw Resources \Rightarrow 10:1 \Rightarrow Food \Rightarrow 1:1 \downarrow

Raw Resources \Rightarrow 10:1 \Rightarrow Grains \Rightarrow 1:1 \downarrow

Raw Resources \Rightarrow 10:1 \Rightarrow Meats \Rightarrow 1:1 \Rightarrow Foodstuffs \Rightarrow 1:1 \Rightarrow **Food Concentrates** \triangleright 50,000

Raw Resources \Rightarrow 10:1 \Rightarrow Fruits/Veg \Rightarrow 1:1 \uparrow

Requirement List

Major Components: 50,000 Steel, 150,000 Weapons, 50,000 Food

Concentrates, 1 Imperial Marine Soldier

Minor Components: 450,000 Iron, 150,000 Light Metals, 1 Trooper, 50,000 Foodstuffs

Lesser Components: 50,000 Grains, 50,000 Meats, 50,000 Water, 50,000 Fruits and Vegetables

TOTAL RAW RESOURCES REQUIRED: 8 Million

Applications

Ground Unit. (Classified for non-military personnel)

IMPERIAL ARMY: ARMOR

IMPERIAL GUARD: ARMOR

IMPERIAL MARINES: ARMOR**

Flow Chart

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 3:1 ⇒ **Steel** ➤ 150,000

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 2:1 ⇒ **Weapons** ➤ 500,000

Raw Resources ⇒ 10:1 ⇒ Light Metals ⇒ 1:1 ↑

Population Unit ⇒ 1:1 ⇒ Colonist ⇒ 1:1 ⇒ Trooper ⇒ 1:1 ⇒
Imperial Unit ➤ 1

Raw Resources ⇒ 10:1 ⇒ Food ⇒ 1:1 ↓

Raw Resources ⇒ 10:1 ⇒ Grains ⇒ 1:1 ↓

Raw Resources ⇒ 10:1 ⇒ Meats ⇒ 1:1 ⇒ Foodstuffs ⇒ 1:1 ⇒ **Food Concentrates** ➤ 50,000

Raw Resources ⇒ 10:1 ⇒ Fruits/Veg ⇒ 1:1 ↑

Requirement List

Major Components: 150,000 Steel, 500,000 Weapons, 50,000 Food Concentrates, 1 Imperial Unit

Minor Components: 1,450,000 Iron, 500,000 Light Metals, 1 Trooper, 50,000 Foodstuffs

Lesser Components: 50,000 Grains, 50,000 Meats, 50,000 Water, 50,000 Fruits and Vegetables

TOTAL RAW RESOURCES REQUIRED: 21.5 Million

Applications

Ground Unit. (Classified for non-military personnel)

* Imperial Unit = Use appropriate unit, eg Imperial Army Soldier, Imperial Guards Soldier, Imperial Marine Soldiers. All such units are derived from the Trooper Unit.

** NOTE: The Standard Set-Up package lists 50,000 Weapons required for Marine Armor Unit. I'm presuming there is a missing zero...otherwise, the Marine Armor unit would require less weapons than a standard infantry unit.

IMPERIAL ARMY: HEAVY ARMOR
IMPERIAL GUARD: HEAVY ARMOR

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow Iron \Rightarrow 3:1 \Rightarrow **Steel** \triangleright 200,000

Raw Resources \Rightarrow 10:1 \Rightarrow Iron \Rightarrow 2:1 \Rightarrow **Weapons** \triangleright 500,000

Raw Resources \Rightarrow 10:1 \Rightarrow Light Metals \Rightarrow 1:1 \uparrow

Population Unit \Rightarrow 1:1 \Rightarrow Colonist \Rightarrow 1:1 \Rightarrow Trooper \Rightarrow 1:1 \Rightarrow
Imperial Unit* \triangleright 1

Raw Resources \Rightarrow 10:1 \Rightarrow Food \Rightarrow 1:1 \downarrow

Raw Resources \Rightarrow 10:1 \Rightarrow Grains \Rightarrow 1:1 \downarrow

Raw Resources \Rightarrow 10:1 \Rightarrow Meats \Rightarrow 1:1 \Rightarrow Foodstuffs \Rightarrow 1:1 \Rightarrow **Food**
Concentrates \triangleright 50,000

Raw Resources \Rightarrow 10:1 \Rightarrow Fruits/Veg \Rightarrow 1:1 \uparrow

Requirement List

Major Components: 200,000 Steel, 500,000 Weapons, 50,000 Food
Concentrates, 1 Imperial Unit

Minor Components: 1,600,000 Iron, 500,000 Light Metals, 1 Trooper,
50,000 Foodstuffs

Lesser Components: 50,000 Grains, 50,000 Meats, 50,000 Water, 50,000
Fruits and Vegetables

TOTAL RAW RESOURCES REQUIRED: 23 Million

Applications

Ground Unit. (Classified for non-military personnel)

* Imperial Unit = Use appropriate unit, eg Imperial Army Soldier or
Imperial Guards Soldier. All such units are derived from the Trooper
Unit.

INDUSTRIAL CHEMICALS

Flow Chart

Raw Resources ➤ 10

Requirement List

Major Components: N/A

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 10

Applications

Exclusively used to create **Synthetic Materials** which are a key component of **Electronics**. Both Synthetic Materials and Electronics have many uses. Refer to each specific resource file for more information.

IRON

Flow Chart

Raw Resources ➤ 10

Requirement List

Major Components: N/A

Minor Components: N/A

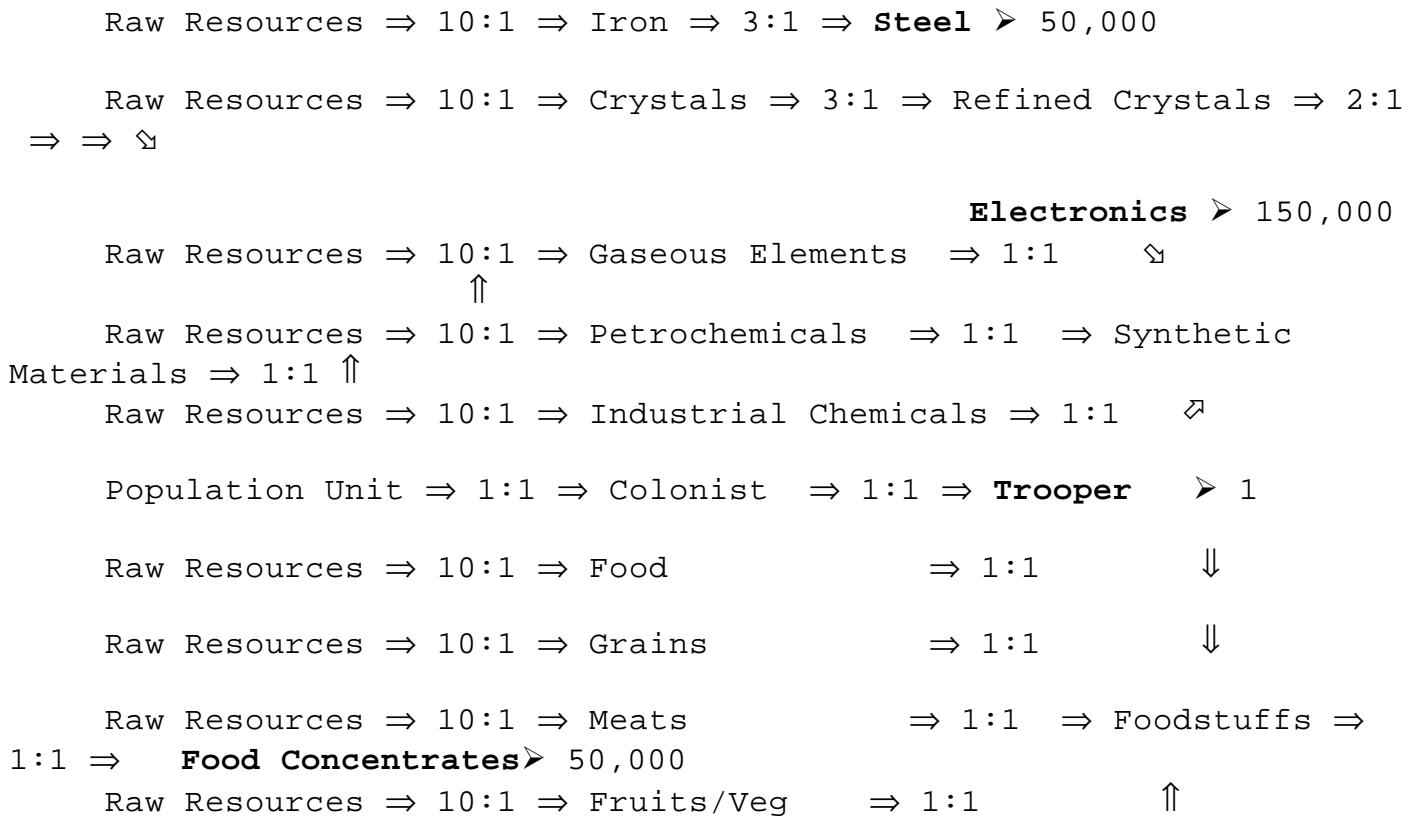
TOTAL RAW RESOURCES REQUIRED: 10

Applications

Used to refine **Steel** (see the resource file on **Steel** for all of its uses)

INTELLIGENCE (REQUIRES TROOPER UNIT)

Flow Chart



Requirement List

Major Components: 50,000 Steel, 150,000 Electronics, 50,000 Food
Concentrates, 1 Troopers

Minor Components: 150,000 Iron, 150,000 Synthetic Materials, 300,000
Refined Crystals, 50,000 Foodstuffs,
1 Colonist

Lesser Components: 50,000 Grains, 50,000 Meats, 50,000 Water, 50,000
Fruits and Vegetables
150,000 Gaseous Elements, Petrochemicals and
Industrial Chemicals, 900,000 Crystals

TOTAL RAW RESOURCES REQUIRED: 17 Million

Applications

Ground Unit. (Classified for non-military personnel)

INTERCEPTOR

Flow Chart

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 3:1 ⇒ **Steel** ➤ 100
Raw Resources ⇒ 10:1 ⇒ Radioactive Elements ⇒ 3:1 ⇒ **Processed Radioactives** ➤ 100
Raw Resources ⇒ 10:1 ⇒ Gaseous Elements ⇒ 3:1 ⇒ **Fuel** ➤ 100
Raw Resources ⇒ 10:1 ⇒ Crystals ⇒ 3:1 ⇒ Refined Crystals ⇒ 2:1 ⇒ ⇒ ⚡
Electronics ➤ 200
Raw Resources ⇒ 10:1 ⇒ Gaseous Elements ⇒ 1:1 ⚡ ↑
Raw Resources ⇒ 10:1 ⇒ Petrochemicals ⇒ 1:1 ⇒ Synthetic Materials ⇒ 1:1 ↑
Raw Resources ⇒ 10:1 ⇒ Industrial Chemicals ⇒ 1:1 ⚡

Requirement List

Major Components: **100 Steel, 100 Processed Radioactives, 100 Fuel, 200 Electronics**

Minor Components: 300 Iron, 300 Radioactive Elements, 300 Gaseous Elements, 200 Synthetic Materials,
400 Refined Crystals

Lesser Components: 1,200 Crystals, 200 Gaseous Elements, 200 Petrochemicals, 200 Industrial Chemicals

NOTE: A total of 500 Gaseous Elements are required

TOTAL RAW RESOURCES REQUIRED: 27,000

Applications

Low-end Fighter for space operations (details highly classified)

LIGHT BEAM LASER

Flow Chart

Raw Resources ⇒ 10:1 ⇒ **Gemstones** ➤ 200
Raw Resources ⇒ 10:1 ⇒ Crystals ⇒ 3:1 ⇒ **Refined Crystals** ➤ 200
Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 3:1 ⇒ **Steel** ➤ 200
Raw Resources ⇒ 10:1 ⇒ **Gaseous Elements** ➤ 200
Raw Resources ⇒ 10:1 ⇒ Crystals ⇒ 3:1 ⇒ Refined Crystals ⇒ 2:1 ⇒ ⇒ ⚡
Electronics ➤ 200
Raw Resources ⇒ 10:1 ⇒ Gaseous Elements ⇒ 1:1 ⚡ ↑
Raw Resources ⇒ 10:1 ⇒ Petrochemicals ⇒ 1:1 ⇒ Synthetic Materials ⇒ 1:1 ↑
Raw Resources ⇒ 10:1 ⇒ Industrial Chemicals ⇒ 1:1 ⚡

Requirement List

Major Components: **200 Steel, 200 Gemstones, 200 Refined Crystals, 200 Gaseous Elements,**
200 Electronics

Minor Components: 600 Iron, 600 Crystals, 200 Synthetic Materials, 400 Refined Crystals

Lesser Components: 1,200 Crystals, 200 Gaseous Elements, 200 Petrochemicals, 200 Industrial Chemicals

NOTE: A total of 1,800 Crystals, 600 Refined Crystals and 400 Gaseous Elements are required.

TOTAL RAW RESOURCES REQUIRED: 34,000

Applications

Ship Weapon (details highly classified)

LIGHT FANATICS (REQUIRES FANATICAL POPULATION UNIT)

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow Iron \Rightarrow 3:1 \Rightarrow **Steel** \triangleright 50,000

Raw Resources \Rightarrow 10:1 \Rightarrow Iron \Rightarrow 2:1 \Rightarrow **Weapons** \triangleright 150,000

Raw Resources \Rightarrow 10:1 \Rightarrow Light Metals \Rightarrow 1:1 \uparrow

Population Unit \Rightarrow 1:1 \Rightarrow Colonist \Rightarrow 1:1 \Rightarrow Trooper \Rightarrow 1:1 \Rightarrow **Unit***
 \triangleright 1

Raw Resources \Rightarrow 10:1 \Rightarrow Food \Rightarrow 1:1 \downarrow

Raw Resources \Rightarrow 10:1 \Rightarrow Grains \Rightarrow 1:1 \downarrow

Raw Resources \Rightarrow 10:1 \Rightarrow Meats \Rightarrow 1:1 \Rightarrow Foodstuffs \Rightarrow 1:1 \Rightarrow **Food**
Concentrates \triangleright 50,000

Raw Resources \Rightarrow 10:1 \Rightarrow Fruits/Veg \Rightarrow 1:1 \uparrow

Requirement List

Major Components: 50,000 Steel, 150,000 Weapons, 50,000 Food

Concentrates, 1 Imperial Army Soldier

Minor Components: 450,000 Iron, 150,000 Light Metals, 1 Trooper, 50,000

Foodstuffs

Lesser Components: 50,000 Grains, 50,000 Meats, 50,000 Water, 50,000 Fruits and Vegetables

TOTAL RAW RESOURCES REQUIRED: 8 Million

Applications

Ground Unit. (Classified for non-military personnel)

*Unit = Use appropriate unit, eg Colonist Unit, Fanatical Population, Trooper as designated above.

LIGHT MAGNETIC GRAPPLE

Flow Chart

Raw Resources ⇒ 10:1 ⇒ **Rare Elements** ➤ 200

Raw Resources ⇒ 10:1 ⇒ Crystals ⇒ 3:1 ⇒ Refined Crystals ⇒ 2:1 ⇒ ⇒ ⚡

Electronics ➤ 400

Raw Resources ⇒ 10:1 ⇒ Gaseous Elements ⇒ 1:1 ⚡

↑

Raw Resources ⇒ 10:1 ⇒ Petrochemicals ⇒ 1:1 ⇒ Synthetic Materials ⇒ 1:1 ↑

Raw Resources ⇒ 10:1 ⇒ Industrial Chemicals ⇒ 1:1 ⚡

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 3:1 ⇒ **Steel** ➤ 200

Raw Resources ⇒ 10:1 ⇒ Gaseous Elements ⇒ 1:1 ⚡

Raw Resources ⇒ 10:1 ⇒ Petrochemicals ⇒ 1:1 ⇒ **Synthetic Materials** ➤ 200

Raw Resources ⇒ 10:1 ⇒ Industrial Chemicals ⇒ 1:1 ⚡

Requirement List

Major Components: **200 Steel, 200 Rare Elements, 200 Synthetic Materials, 400 Electronics**

Minor Components: 600 Iron, 200 Gaseous Elements, 200 Petrochemicals, 200 Industrial Chemicals

400 Synthetic Materials, 800 Refined Crystals

Lesser Components: 2,400 Crystals, 400 Gaseous Elements, 400 Petrochemicals, 400 Industrial Chemicals

NOTE: A total of 600 Synthetic Materials, 600 Gaseous Elements, 600 Petrochemicals and 600 Industrial Chemicals are required.

TOTAL RAW RESOURCES REQUIRED: 34,000

Applications

Ship Weapon (details highly classified)

LIGHT METALS

Flow Chart

Raw Resources ➤ 10

Requirement List

Major Components: N/A

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 10

Applications

Used to create **Consumer Goods**, the **Fortress** and **Weapons** (said weapons are ones used for ground units - **each ground unit that uses weapons is listed in the Weapons Resource File**) Light Metals are also used with the anticipated application of **Transaluminum**, currently used for the **MK I Short Range Sensor, Type A Science Lab** and **Type A Defense Screen**.

LIGHT STUN BEAM

Flow Chart

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 3:1 ⇒ **Steel** ➤ 200

Raw Resources ⇒ 10:1 ⇒ Crystals ⇒ 3:1 ⇒ Refined Crystals ⇒ 2:1 ⇒ ⇒ ⌘

Electronics ➤ 300

Raw Resources ⇒ 10:1 ⇒ Gaseous Elements ⇒ 1:1 ⌘

↑

Raw Resources ⇒ 10:1 ⇒ Petrochemicals ⇒ 1:1 ⇒ Synthetic Materials ⇒ 1:1 ↑

Raw Resources ⇒ 10:1 ⇒ Industrial Chemicals ⇒ 1:1 ↗

Requirement List

Major Components: **200 Steel, 300 Electronics**

Minor Components: 600 Iron, 600 Refined Crystals, 300 Synthetic Materials

Lesser Components: 1,800 Crystals, 300 Gaseous Elements, 300 Petrochemicals, 300 Industrial Chemicals

TOTAL RAW RESOURCES REQUIRED: 33,000

Applications

Ship Weaponry (details classified)

LIGHT THERMAL LANCE

Flow Chart

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 3:1 ⇒ **Steel** ➤ 600

Raw Resources ⇒ 10:1 ⇒ **Shenn Stones** ➤ 200

Raw Resources ⇒ 10:1 ⇒ Crystals ⇒ 3:1 ⇒ Refined Crystals ⇒ 2:1 ⇒ ⇒ ⌘

Electronics ➤ 200

Raw Resources ⇒ 10:1 ⇒ Gaseous Elements ⇒ 1:1 ⌘

↑

Raw Resources ⇒ 10:1 ⇒ Petrochemicals ⇒ 1:1 ⇒ Synthetic Materials ⇒ 1:1 ↑

Raw Resources ⇒ 10:1 ⇒ Industrial Chemicals ⇒ 1:1 ↗

Requirement List

Major Components: **600 Steel, 300 Electronics, 200 Shenn Stones**

Minor Components: 1,800 Iron, 400 Refined Crystals, 200 Synthetic Materials

Lesser Components: 1,200 Crystals, 200 Gaseous Elements, 200 Petrochemicals, 200 Industrial Chemicals

TOTAL RAW RESOURCES REQUIRED: 33,000

Applications

Ship Weaponry (details classified)

LUMBER

Flow Chart

Raw Resources ➤ 10

Requirement List

Major Components: N/A

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 10

Applications

Used to create **Timber** which is used in **Construction Materials** which are used to build many types of **Installations** (see Resource File on Construction Materials for more detail)

LUXURY GOODS

Flow Chart

Raw Resources ⇒ 10:1 ⇒ **Gemstones** ➤ 1

Raw Resources ⇒ 10:1 ⇒ **Precious Metals** ➤ 2

Requirement List

Major Components: **1 Gemstone, 2 Precious Metals**

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 30

Applications

Used to create **Special Talent** unit. Trade Goods used to increase overall illusion of wealth and grandeur.

MEAT

Flow Chart

Raw Resources ➤ 10

Requirement List

Major Components: N/A

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 10

Applications

Exclusively processed into **Foodstuffs**, usable in trade and most likely converted into **Food Concentrates**; which feed all **colonial settlers** and **ground units**.

MEDICAL (REQUIRES TROOPER UNIT)

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow Iron \Rightarrow 3:1 \Rightarrow **Steel** \triangleright 50,000

Raw Resources \Rightarrow 10:1 \Rightarrow Rare Herbs & Spices \Rightarrow 3:1 \Rightarrow
Pharmaceuticals \triangleright 150,000

Population Unit \Rightarrow 1:1 \Rightarrow Colonist \Rightarrow 1:1 \Rightarrow **Trooper** \triangleright 1

Raw Resources \Rightarrow 10:1 \Rightarrow Food \Rightarrow 1:1 \Downarrow

Raw Resources \Rightarrow 10:1 \Rightarrow Grains \Rightarrow 1:1 \Downarrow

Raw Resources \Rightarrow 10:1 \Rightarrow Meats \Rightarrow 1:1 \Rightarrow Foodstuffs \Rightarrow 1:1 \Rightarrow **Food Concentrates** \triangleright 50,000

Raw Resources \Rightarrow 10:1 \Rightarrow Fruits/Veg \Rightarrow 1:1 \Uparrow

Requirement List

Major Components: **50,000 Steel, 150,000 Pharmaceuticals, 50,000 Food Concentrates, 1 Troopers**

Minor Components: 150,000 Iron, 450,000 Rare Herbs & Spices, 50,000 Foodstuffs

Lesser Components: 50,000 Grains, 50,000 Meats, 50,000 Water, 50,000 Fruits and Vegetables

TOTAL RAW RESOURCES REQUIRED: 8 Million

Applications

Ground Unit. (Classified for non-military personnel)

MILITIA (REQUIRES COLONIST UNIT)

Flow Chart

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 3:1 ⇒ **Steel** ➤ 50,000

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 2:1 ⇒ **Weapons** ➤ 150,000

Raw Resources ⇒ 10:1 ⇒ Light Metals ⇒ 1:1 ↑

Population Unit ⇒ 1:1 ⇒ Colonist ⇒ 1:1 ⇒ Trooper ⇒ 1:1 ⇒ **Unit***
➤ 1

Raw Resources ⇒ 10:1 ⇒ Food ⇒ 1:1 ↓

Raw Resources ⇒ 10:1 ⇒ Grains ⇒ 1:1 ↓

Raw Resources ⇒ 10:1 ⇒ Meats ⇒ 1:1 ⇒ Foodstuffs ⇒ 1:1 ⇒ **Food**
Concentrates ➤ 50,000

Raw Resources ⇒ 10:1 ⇒ Fruits/Veg ⇒ 1:1 ↑

Requirement List

Major Components: 50,000 **Steel**, 150,000 **Weapons**, 50,000 **Food**

Concentrates, 1 **Imperial Army Soldier**

Minor Components: 450,000 Iron, 150,000 Light Metals, 1 Trooper, 50,000 Foodstuffs

Lesser Components: 50,000 Grains, 50,000 Meats, 50,000 Water, 50,000 Fruits and Vegetables

TOTAL RAW RESOURCES REQUIRED: 8 Million

Applications

Ground Unit. (Classified for non-military personnel)

*Unit = Use appropriate unit, eg Colonist Unit, Fanatical Population, Trooper as designated above.

MINERAL FERTILIZERS

Flow Chart

Raw Resources ➤ 10

Requirement List

Major Components: N/A

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 10

Applications

Exclusively processed into **Plantfoods**, usable in trade and for consumption.

MK I COMPUTER SYSTEMS

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow Crystals \Rightarrow 3:1 \Rightarrow Refined Crystals \Rightarrow 2:1 $\Rightarrow \Rightarrow \curvearrowright$
Electronics \triangleright 500
Raw Resources \Rightarrow 10:1 \Rightarrow Gaseous Elements \Rightarrow 1:1 \curvearrowright \uparrow
Raw Resources \Rightarrow 10:1 \Rightarrow Petrochemicals \Rightarrow 1:1 \Rightarrow Synthetic Materials \Rightarrow 1:1 \uparrow
Raw Resources \Rightarrow 10:1 \Rightarrow Industrial Chemicals \Rightarrow 1:1 \curvearrowright

Requirement List

Major Components: **500 Electronics**

Minor Components: 1,000 Refined Crystals, 500 Synthetic Materials

Lesser Components: 3,000 Crystals; 500 Gaseous Elements, Petrochemicals and Industrial Chemicals

TOTAL RAW RESOURCES REQUIRED: 45,000

Applications

Ship Design Component (Details classified)

MK I JUMP SURVEY SENSOR

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow Crystals \Rightarrow 3:1 \Rightarrow Refined Crystals \Rightarrow 2:1 $\Rightarrow \Rightarrow \curvearrowright$
Electronics \triangleright 20,000
Raw Resources \Rightarrow 10:1 \Rightarrow Gaseous Elements \Rightarrow 1:1 \curvearrowright \uparrow
Raw Resources \Rightarrow 10:1 \Rightarrow Petrochemicals \Rightarrow 1:1 \Rightarrow Synthetic Materials \Rightarrow 1:1 \uparrow
Raw Resources \Rightarrow 10:1 \Rightarrow Industrial Chemicals \Rightarrow 1:1 \curvearrowright
Raw Resources \Rightarrow 10:1 \Rightarrow Gaseous Elements \Rightarrow 1:1 \curvearrowright
Raw Resources \Rightarrow 10:1 \Rightarrow Petrochemicals \Rightarrow 1:1 \Rightarrow **Synthetic Materials** \triangleright 5,000
Raw Resources \Rightarrow 10:1 \Rightarrow Industrial Chemicals \Rightarrow 1:1 \curvearrowright

Requirement List

Major Components: **20,000 Electronics, 5,000 Synthetic Materials**

Minor Components: 40,000 Refined Crystals, 20,000 Synthetic Materials, 5,000 Gaseous Elements, Petrochemicals and Industrial Chemicals.

Lesser Components: 120,000 Crystals; 20,000 Gaseous Elements, Petrochemicals and Industrial Chemicals.

NOTE: A total of 25,000 Synthetic Materials, Gaseous Elements, Petrochemicals and Industrial Chemicals are required.

TOTAL RAW RESOURCES REQUIRED: 1.95 Million

Applications

Ship Design Component (Details classified)

MK I NUCLEAR ENGINE

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow Crystals \Rightarrow 3:1 \Rightarrow Refined Crystals \Rightarrow 2:1 $\Rightarrow \Rightarrow \Rightarrow \Rightarrow$ **Electronics** \triangleright 100

Raw Resources \Rightarrow 10:1 \Rightarrow Gaseous Elements \Rightarrow 1:1 \Rightarrow \uparrow

Raw Resources \Rightarrow 10:1 \Rightarrow Petrochemicals \Rightarrow 1:1 \Rightarrow Synthetic Materials \Rightarrow 1:1 \uparrow

Raw Resources \Rightarrow 10:1 \Rightarrow Industrial Chemicals \Rightarrow 1:1 \nearrow

Raw Resources \Rightarrow 10:1 \Rightarrow Iron \Rightarrow 3:1 \Rightarrow **Steel** \triangleright 200

Raw Resources \Rightarrow 10:1 \Rightarrow Gaseous Elements \Rightarrow 1:1 \Rightarrow

Raw Resources \Rightarrow 10:1 \Rightarrow Petrochemicals \Rightarrow 1:1 \Rightarrow **Synthetic Materials** \triangleright 100

Raw Resources \Rightarrow 10:1 \Rightarrow Industrial Chemicals \Rightarrow 1:1 \nearrow

Raw Resources \Rightarrow 10:1 \Rightarrow Radioactive Elements \Rightarrow 3:1 \Rightarrow **Processed Radioactives** \triangleright 100

Requirement List

Major Components: 100 Electronics, 200 Steel, 100 Synthetic Materials, 100 Processed Radioactives

Minor Components: 600 Iron, 200 Refined Crystals, 100 Synthetic Materials, 100 Gaseous Elements, Petrochemicals and Industrial Chemicals, 300 Radioactive Elements

Lesser Components: 600 Crystals; 100 Gaseous Elements, Petrochemicals and Industrial Chemicals.

NOTE: A total of 200 Synthetic Materials, Gaseous Elements, Petrochemicals and Industrial Chemicals are required.

TOTAL RAW RESOURCES REQUIRED: 21,000

Applications

Ship Design Component (Details classified)

MK I NUCLEAR JUMP DRIVE

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow Crystals \Rightarrow 3:1 \Rightarrow Refined Crystals \Rightarrow 2:1 $\Rightarrow \Rightarrow \curvearrowright$
Electronics \triangleright 100

Raw Resources \Rightarrow 10:1 \Rightarrow Gaseous Elements \Rightarrow 1:1 \curvearrowright \uparrow

Raw Resources \Rightarrow 10:1 \Rightarrow Petrochemicals \Rightarrow 1:1 \Rightarrow Synthetic Materials \Rightarrow 1:1 \uparrow

Raw Resources \Rightarrow 10:1 \Rightarrow Industrial Chemicals \Rightarrow 1:1 \curvearrowright

Raw Resources \Rightarrow 10:1 \Rightarrow Iron \Rightarrow 3:1 \Rightarrow **Steel** \triangleright 100

Raw Resources \Rightarrow 10:1 \Rightarrow Gaseous Elements \Rightarrow 1:1 \curvearrowright

Raw Resources \Rightarrow 10:1 \Rightarrow Petrochemicals \Rightarrow 1:1 \Rightarrow **Synthetic Materials** \triangleright 100

Raw Resources \Rightarrow 10:1 \Rightarrow Industrial Chemicals \Rightarrow 1:1 \curvearrowright

Raw Resources \Rightarrow 10:1 \Rightarrow **Rare Elements** \triangleright 100

Requirement List

Major Components: **100 Electronics, 200 Steel, 100 Synthetic Materials, 100 Rare Elements**

Minor Components: 300 Iron, 200 Refined Crystals, 100 Synthetic Materials, 100 Gaseous Elements, Petrochemicals and Industrial Chemicals

Lesser Components: 600 Crystals; 100 Gaseous Elements, Petrochemicals and Industrial Chemicals.

NOTE: A total of 200 Synthetic Materials, Gaseous Elements, Petrochemicals and Industrial Chemicals are required.

TOTAL RAW RESOURCES REQUIRED: 16,000

Applications

Ship Design Component (Details classified)

MK I SHORT RANGE SENSOR

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow Crystals \Rightarrow 3:1 \Rightarrow Refined Crystals \Rightarrow 2:1 $\Rightarrow \Rightarrow \curvearrowright$
Electronics \triangleright 400

Raw Resources \Rightarrow 10:1 \Rightarrow Gaseous Elements \Rightarrow 1:1 \curvearrowright \uparrow

Raw Resources \Rightarrow 10:1 \Rightarrow Petrochemicals \Rightarrow 1:1 \Rightarrow Synthetic Materials \Rightarrow 1:1 \uparrow

Raw Resources \Rightarrow 10:1 \Rightarrow Industrial Chemicals \Rightarrow 1:1 \curvearrowright

Raw Resources \Rightarrow 10:1 \Rightarrow Light Metals \Rightarrow 3:1 \Rightarrow **Transaluminum** \triangleright 400

Requirement List

Major Components: **400 Electronics**

Minor Components: 800 Refined Crystals, 400 Synthetic Materials

Lesser Components: 2,400 Crystals; 400 Gaseous Elements, Petrochemicals and Industrial Chemicals

TOTAL RAW RESOURCES REQUIRED: 39,000

Applications

Ship Design Component (Details classified)

NAVAL (REQUIRES IMPERIAL MARINE UNIT)

Flow Chart

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 3:1 ⇒ **Steel** ➤ 50,000

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 2:1 ⇒ **Weapons** ➤ 150,000

Raw Resources ⇒ 10:1 ⇒ Light Metals ⇒ 1:1 ↑

Population Unit ⇒ 1:1 ⇒ Colonist ⇒ 1:1 ⇒ Trooper ⇒ 1:1 ⇒ **Imperial Marines Soldiers** ➤ 1

Raw Resources ⇒ 10:1 ⇒ Food ⇒ 1:1 ↓

Raw Resources ⇒ 10:1 ⇒ Grains ⇒ 1:1 ↓

Raw Resources ⇒ 10:1 ⇒ Meats ⇒ 1:1 ⇒ Foodstuffs ⇒ 1:1 ⇒ **Food Concentrates** ➤ 50,000

Raw Resources ⇒ 10:1 ⇒ Fruits/Veg ⇒ 1:1 ↑

Requirement List

Major Components: 50,000 Steel, 150,000 Weapons, 50,000 Food Concentrates, 1 Imperial Marine Soldier

Minor Components: 450,000 Iron, 150,000 Light Metals, 1 Trooper, 50,000 Foodstuffs

Lesser Components: 50,000 Grains, 50,000 Meats, 50,000 Water, 50,000 Fruits and Vegetables

TOTAL RAW RESOURCES REQUIRED: 8 Million

Applications

Ground Unit. (Classified for non-military personnel)

NBC (Ground Unit)

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow Iron \Rightarrow 3:1 \Rightarrow **Steel** \triangleright 50,000

Population Unit \Rightarrow 1:1 \Rightarrow Trooper \Rightarrow 1:1 \Rightarrow **Imperial Army Soldier** \triangleright 1

Raw Resources \Rightarrow 10:1 \Rightarrow Fibers \Rightarrow 3:1 \Rightarrow **Textiles** \triangleright 50,000

Raw Resources \Rightarrow 10:1 \Rightarrow Rare Herbs and Spices \Rightarrow 3:1 \Rightarrow **Pharmaceuticals** \triangleright 100,000

Requirement List

Major Components: **50,000 Steel, 100,000 Pharmaceuticals, 50,000 Textiles, 1 Imperial Army Soldier**

Minor Components: 150,000 Iron, 300,000 Rare Herbs and Spices, 1 Trooper, 150,000 Fibers,

Lesser Components: N/A

TOTAL RAW RESOURCES REQUIRED: 6 Million

Applications

Specialized ground unit designed for NBC attacks (Details classified)

PETROCHEMICALS

Flow Chart

Raw Resources \triangleright 10

Requirement List

Major Components: N/A

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 10

Applications

Refined directly into **Petroleum**, and a key component for **Synthetic Materials** (used in **Electronics** and **MK I Nuclear Jump Drive, Nuclear Engine and Jump Survey Sensor**) Petroleum is used to create **Consumer Goods**.

PETROLEUM

Flow Chart

Raw Resources \Rightarrow **Petrochemicals** \triangleright 3

Requirement List

Major Components: **3 Petrochemicals**

Minor Components: NA

TOTAL RAW RESOURCES REQUIRED: 30

Applications

Fuel applications. Used to create **Consumer Goods**.

PHARMACEUTICALS

Flow Chart

Raw Resources ⇒ **Rare Herbs and Spices** ➤ 3

Requirement List

Major Components: **3 Rare Herbs and Spices**

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 30

Applications

Used directly for the **NBC** and **Medical** ground units and used for **Black Market Goods**.

PLANTFOODS

Flow Chart

Raw Resources ➤ 10

Requirement List

Major Components: N/A

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 10

Applications

Food item for consumption or trade.

PRECIOUS METALS

Flow Chart

Raw Resources ➤ 10

Requirement List

Major Components: N/A

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 10

Applications

Used to create **Luxury Goods** and woo connoisseurs of fine metal trinkets. **Luxury Goods** are also used to create the **Special Talent** ground unit.

PROCESSED RADIOACTIVES

Flow Chart

Raw Resources ⇒ **Radioactive Elements** ➤ 3

Requirement List

Major Components: **3 Radioactive Elements**

Minor Components: NA

TOTAL RAW RESOURCES REQUIRED: 30

Applications

Used for **Interceptor** and **MK I Nuclear Jump Drive**.

RADIOACTIVE ELEMENTS

Flow Chart

Raw Resources ➤ 10

Requirement List

Major Components: N/A

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 10

Applications

Used to create **Processed Radioactives** which are applied to **Interceptor** and **MK I Nuclear Jump Drive**.

RARE ELEMENTS

Flow Chart

Raw Resources ➤ 10

Requirement List

Major Components: N/A

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 10

Applications

Applied to **Light Magnetic Grapple**, **Type A Defense Screen** and **MK I Nuclear Jump Drive**.

RARE HERBS AND SPICES

Flow Chart

Raw Resources ➤ 10

Requirement List

Major Components: N/A

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 10

Applications

Applied to **Black Market Goods** (used for **Special Talent** unit) and **Pharmaceuticals** (Pharms are used in Black

Market Goods and for **NBC and Medical** Units.)

REFINED CRYSTALS

Flow Chart

Raw Resources \Rightarrow **Crystals** \triangleright 3

Requirement List

Major Components: **3 Crystals**

Minor Components: NA

TOTAL RAW RESOURCES REQUIRED: 30

Applications

Integral part for creation of **Electronics** and its myriad of uses (refer to resource file on Electronics.) The only component that Refined Crystals are directly applied is the **Light Beam Laser**.

SECURITY (REQUIRES TROOPER UNIT)

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow Iron \Rightarrow 3:1 \Rightarrow **Steel** \triangleright 50,000

Raw Resources \Rightarrow 10:1 \Rightarrow Iron \Rightarrow 2:1 \Rightarrow **Weapons** \triangleright 150,000

Raw Resources \Rightarrow 10:1 \Rightarrow Light Metals \Rightarrow 1:1 \Uparrow

Population Unit \Rightarrow 1:1 \Rightarrow Colonist \Rightarrow 1:1 \Rightarrow **Trooper** \triangleright 1

Raw Resources \Rightarrow 10:1 \Rightarrow Food \Rightarrow 1:1 \Downarrow

Raw Resources \Rightarrow 10:1 \Rightarrow Grains \Rightarrow 1:1 \Downarrow

Raw Resources \Rightarrow 10:1 \Rightarrow Meats \Rightarrow 1:1 \Rightarrow Foodstuffs \Rightarrow 1:1 \Rightarrow **Food Concentrates** \triangleright 50,000

Raw Resources \Rightarrow 10:1 \Rightarrow Fruits/Veg \Rightarrow 1:1 \Uparrow

Requirement List

Major Components: **50,000 Steel, 150,000 Weapons, 50,000 Food Concentrates, 1 Trooper**

Minor Components: 450,000 Iron, 150,000 Light Metals, 1 Trooper, 50,000 Foodstuffs

Lesser Components: 50,000 Grains, 50,000 Meats, 50,000 Water, 50,000 Fruits and Vegetables

TOTAL RAW RESOURCES REQUIRED: 8 Million

Applications

The more tame of the Security units designed to handle civil unrest. (Classified for non-military personnel)

SHENN STONES

Flow Chart

Raw Resources ➤ 10

Requirement List

Major Components: N/A

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 10

Applications

Integrated into advanced weaponry. Used for **Light Thermal Lance**.

SPACE DEFENSE (REQUIRES IMPERIAL GUARDS UNIT)

Flow Chart

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 3:1 ⇒ **Steel** ➤ 50,000

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 2:1 ⇒ **Weapons** ➤ 150,000

Raw Resources ⇒ 10:1 ⇒ Light Metals ⇒ 1:1 ↑

Population Unit ⇒ 1:1 ⇒ Colonist ⇒ 1:1 ⇒ Trooper ⇒ 1:1 ⇒
Imperial Guards ➤ 1

Raw Resources ⇒ 10:1 ⇒ Food ⇒ 1:1 ↓

Raw Resources ⇒ 10:1 ⇒ Grains ⇒ 1:1 ↓

Raw Resources ⇒ 10:1 ⇒ Meats ⇒ 1:1 ⇒ Foodstuffs ⇒ 1:1 ⇒ **Food Concentrates** ➤ 50,000

Raw Resources ⇒ 10:1 ⇒ Fruits/Veg ⇒ 1:1 ↑

Requirement List

Major Components: 50,000 **Steel**, 150,000 **Weapons**, 50,000 **Food**

Concentrates, 1 **Imperial Guards Units**

Minor Components: 450,000 Iron, 150,000 Light Metals, 1 Trooper, 50,000 Foodstuffs

Lesser Components: 50,000 Grains, 50,000 Meats, 50,000 Water, 50,000 Fruits and Vegetables

TOTAL RAW RESOURCES REQUIRED: 8 Million

Applications

Specialized troop unit designed to defend orbits (Classified for non-military personnel)

SPECIAL TALENT (Requires Imperial Guards Soldier Unit)

Flow Chart

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 3:1 ⇒ **Steel** > 50,000

Population Unit ⇒ 1:1 ⇒ Colonist ⇒ 1:1 ⇒ Trooper ⇒ 1:1 ⇒ **Imperial Guards Soldier** > 1

Raw Resources ⇒ 10:1 ⇒ Rare Herbs and Spices ⇒ 1:1 ⇒ ⇒ **Black Market Goods** > 100,000

Raw Resources ⇒ 10:1 ⇒ Rare Herbs and Spices ⇒ 3:1 ⇒ Pharmaceuticals ⇒ 2:1 ↑

Raw Resources ⇒ 10:1 ⇒ Gemstones ⇒ 1:1 ⇒ **Luxury Goods** > 50,000

Raw Resources ⇒ 10:1 ⇒ Precious Metals ⇒ ⇒ 2:1 ↑

Requirement List

Major Components: **50,000 Steel, 100,000 Black Market Goods, 50,000 Luxury Goods, 1 Imperial Guards Soldier**

Minor Components: 150,000 Iron, 100,000 Rare Herbs and Spices, 200,000 Pharmaceuticals, 1 Trooper, 50,000 Gemstones, 100,000 Precious Metals

Lesser Components: 600,000 Rare Herbs and Spices

NOTE: A total of 700,000 Rare Herbs and Spices are required.

TOTAL RAW RESOURCES REQUIRED: 10 Million

Applications

Special ground unit. (Classified for non-military personnel)

STANDARD HULL PLATE

Flow Chart

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 3:1 ⇒ **Steel** > 5

Requirement List

Major Components: **5 Steel**

Minor Components: 15 Iron

TOTAL RAW RESOURCES REQUIRED: 150

Applications

Basic space fleet armor. Used for ship design.

STEEL

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow Iron \triangleright 3

Requirement List

Major Components: **3 Iron**

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 30

Applications

Autocannon

Cargo Bay

Colonial Settlers

Colony Beacon

Colonial Berthing

Construction Materials

Fighter Bays

Fortress

Fuel Shuttle

Fuel Tankage

Heavy Machinery

Interceptor

Light Beam Laser

Light Magnetic Grapple

Light Stun Beam

Light Thermal Lance

MK I Nuclear Engines

MK I Nuclear Jump Drive

Special Talent

Standard Hull Plate

Survey Lander

Troop Berthing

The following Ground Units: All Air Force Units, Armor Units, Artillery Units, Colonial Settler, Combat Engineer, Electronics Warfare Unit, Guerilla, Heavy Air Defense Units, Heavy Armor Units, Heavy Artillery Units, Heavy Infantry Units, Heavy Fanatics, Mechanized Infantry Units, Intelligence, Light Fanatics, Medical, Militia, Naval, NBC, Security, Space Defense, Special Forces Units, Strategic Bomber Units Raiders and the Transport Unit.

SURVEY LANDER

Flow Chart

Raw Resources ⇒ 10:1 ⇒ Iron ⇒ 3:1 ⇒ **Steel** ➤ 2,400

Raw Resources ⇒ 10:1 ⇒ Crystals ⇒ 3:1 ⇒ Refined Crystals ⇒ 2:1 ⇒ ⇒ ⌘

Electronics ➤ 600

Raw Resources ⇒ 10:1 ⇒ Gaseous Elements ⇒ 1:1 ⌘

↑

Raw Resources ⇒ 10:1 ⇒ Petrochemicals ⇒ 1:1 ⇒ Synthetic Materials ⇒ 1:1 ↑

Raw Resources ⇒ 10:1 ⇒ Industrial Chemicals ⇒ 1:1 ↗

Requirement List

Major Components: **2,400 Steel, 600 Electronics**

Minor Components: 7,200 Iron, 1,200 Refined Crystals, 600 Synthetic Materials

Lesser Components: 3,600 Crystals, 600 Gaseous Elements, 600 Petrochemicals, 600 Industrial Chemicals

TOTAL RAW RESOURCES REQUIRED: 126,000

Applications

Used for planetary exploration missions (details classified)

SYNTHETIC MATERIALS

Flow Chart

Raw Resources ⇒ 10:1 ⇒ Gaseous Elements ➤ 1

Raw Resources ⇒ 10:1 ⇒ Petrochemicals ➤ 1

Raw Resources ⇒ 10:1 ⇒ Industrial Chemicals ➤ 1

Requirement List

Major Components: 1 Gaseous Elements, Petrochemicals and Industrial Chemicals

Minor Components: N/A

Lesser Components: N/A

TOTAL RAW RESOURCES REQUIRED: 30

Applications

Several useful applications, most notably **Electronics**. (See the Electronics resource file for more detail.) Applied directly to **Typa A Defense Screen, MK I Nuclear Jump Drive, Nuclear Engine and Jump Survey Sensor**.

TEXTILES

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow **Fibers** \triangleright 3

Requirement List

Major Components: **3 Fibers**

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 30

Applications

Used in special units such as **Colonial Settlers** and **NBC Units**.

TIMBER

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow **Lumber** \triangleright 3

Requirement List

Major Components: **3 Lumber**

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 30

Applications

Used in **Construction Materials** which are used to build many types of **Installations** (see Resource File on Construction Materials for more detail)

TRANSALUMINUM

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow **Light Metals** \triangleright 3

Requirement List

Major Components: **3 Light Metals**

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 30

Applications

Currently used for the **MK I Short Range Sensor**, **Type A Science Lab** and **Type A Defense Screen**

TRANSPORT (REQUIRES TROOPER UNIT)

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow Iron \Rightarrow 3:1 \Rightarrow **Steel** \triangleright 150,000

Raw Resources \Rightarrow 10:1 \Rightarrow Gaseous Elements \Rightarrow 3:1 \Rightarrow **Fuel** \triangleright 50,000

Population Unit \Rightarrow 1:1 \Rightarrow Colonist \Rightarrow 1:1 \Rightarrow **Trooper** \triangleright 1

Raw Resources \Rightarrow 10:1 \Rightarrow Food \Rightarrow 1:1 \Downarrow

Raw Resources \Rightarrow 10:1 \Rightarrow Grains \Rightarrow 1:1 \Downarrow

Raw Resources \Rightarrow 10:1 \Rightarrow Meats \Rightarrow 1:1 \Rightarrow Foodstuffs \Rightarrow 1:1 \Rightarrow **Food Concentrates** \triangleright 50,000

Raw Resources \Rightarrow 10:1 \Rightarrow Fruits/Veg \Rightarrow 1:1 \Uparrow

Requirement List

Major Components: **150,000 Steel, 50,000 Fuel, 50,000 Food Concentrates, 1 Troopers**

Minor Components: 450,000 Iron, 1 Colonist, 150,000 Gaseous Elements, 50,000 Foodstuffs

Lesser Components: 50,000 Grains, 50,000 Meats, 50,000 Water, 50,000 Fruits and Vegetables

TOTAL RAW RESOURCES REQUIRED: 8 Million

Applications

Ground support unit. (Classified for non-military personnel)

TROOP BERTHING

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow Iron \Rightarrow 3:1 \Rightarrow **Steel** \triangleright 50,000

Requirement List

Major Components: **50,000 Steel**

Minor Components: 150,000 Iron

TOTAL RAW RESOURCES REQUIRED: 1.5 Million

Applications

Sustains one troop/ground unit for space travel.

TYPE A SCIENCE LAB

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow Crystals \Rightarrow 3:1 \Rightarrow Refined Crystals \Rightarrow 2:1 $\Rightarrow \Rightarrow \Rightarrow \Rightarrow$ **Electronics** \triangleright 4,000

Raw Resources \Rightarrow 10:1 \Rightarrow Gaseous Elements \Rightarrow 1:1 \Rightarrow \Rightarrow \uparrow

Raw Resources \Rightarrow 10:1 \Rightarrow Petrochemicals \Rightarrow 1:1 \Rightarrow Synthetic Materials \Rightarrow 1:1 \uparrow

Raw Resources \Rightarrow 10:1 \Rightarrow Industrial Chemicals \Rightarrow 1:1 \Rightarrow \Rightarrow

Raw Resources \Rightarrow 10:1 \Rightarrow Light Metals \Rightarrow 3:1 \Rightarrow **Transaluminum** \triangleright 1,000

Requirement List

Major Components: **4,000 Electronics, 1,000 Transaluminum**

Minor Components: **8,000 Refined Crystals, 4,000 Synthetic Materials, 3,000 Light Metals**

Lesser Components: **24,000 Crystals, 4,000 Gaseous Elements, Petrochemicals and Industrial Chemicals**

TOTAL RAW RESOURCES REQUIRED: 390,000

Applications

Ship Design Component (Details classified)

WEAPONS

Flow Chart

Raw Resources \Rightarrow 10:1 \Rightarrow **Iron** \triangleright 2

Raw Resources \Rightarrow 10:1 \Rightarrow **Light Metals** \triangleright 1

Requirement List

Major Components: **2 Iron, 1 Light Metals**

Minor Components: N/A

TOTAL RAW RESOURCES REQUIRED: 30

Applications

Refers to smaller weapons used with ground units. Used for **Fortress**.

Used for the following Ground Units: All Air Force Units, Armor Units, Artillery Units, Colonial Settler, Combat Engineer, Electronics Warfare Unit, Guerilla, Heavy Air Defense Units, Heavy Armor Units, Heavy Artillery Units, Heavy Infantry Units, Heavy Fanatics, Mechanized Infantry Units, Intelligence, Light Fanatics, Militia, Naval, Security, Space Defense, Special Forces Units and the Strategic Bomber Units Raiders.