LORDS OF THE EARTH

The Modern Era

A Post-Medieval Rules Supplement

A Throne Enterprises LLC Production

Credits

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Lords of the Earth on the Internet

The main Lords of the Earth site can be found at:

http://www.throneworld.com/lords/index.jsp

The Lords of the Earth mailing list can be joined by going to:

http://www.yahoogroups.com/group/LOTE-L

…and filling out the appropriate information.

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1. INTRODUCTION

1.1 THE MODERN PERIOD

This booklet is a supplement to the **Lords of the Earth** Basic Rulebook, which is required for play.

The title of this supplement uses the very broad definition of "modern" as used by historians, who use it to cover a period from roughly the sixteenth to the nineteenth century. Even so, the supplement covers a longer period than indicated in the title, running from the fifteenth century and the advent of the Renaissance to the development of steam power four centuries later. The main foci of these rules are two new culture types: Renaissance (**R**) and Industrial One (**I1**). There are references to more advanced Industrial cultures beyond I1 throughout these rules. This is intentional and represents the initial framework of simulating the highly advanced cultures of the post-modern period. In sum, this supplement should be seen as a work in progress and more material will be added to it as input from players and GMs accrue over time.

In **Lord of the Earth,** the 'arrival' of nations at Renaissance and Industrial culture status and the levels of Technology prevalent in these periods is governed by their accumulation of Tech Points during the previous periods. During the Renaissance it is very likely that there will be a mix of national types — Nomadic, Civilized, Barbarian, Renaissance, Seafaring, even pre-Columbian. As things progress, however, the nations less well endowed with technological prowess will find themselves facing a stiff struggle to survive in the face of nations that will gain the capability to span the seas, field armies of musket-armed infantry backed by artillery capable of smashing cavalry opponents and bringing down the walls that once guarded the cities of the Medieval Age. This trend will be even more pronounced during the Industrial period, as nations with access to steam and internal combustion technology will have a dramatic advantage over their less advanced brethren.

These are times of tremendous change; of the birth of world-girdling trade empires, of the first vestiges and then the dramatic development of colonialism, of empires that initially span continents and then encounter difficulties in ruling over vast polyglot peoples. Warfare and economics change, banking changes — becoming international in scope. A worldwide web of interconnected economies form, develop and metastasize.

It is a time of new dreams, hopes and disasters. Of new philosophies, sciences and political thinking: the beginnings of revolutionary changes in how humanity both perceived and interacted with the world. Players will have the opportunity to exploit these changes or may fall victim to them.

1.2 GLOSSARY OF TERMS

The following terms are pertinent to this Supplement. A further list of more general terms and concepts is found at the beginning of the **Basic Rulebook**.

- **Aerial Trade:** A new Trade Route type available to Industrial Merchant Houses with airship technology.
- **Airships:** A class of units for Industrial nations, representing lighter-than-air craft. Airship units run the gamut from small scout craft to giant *Graf Zeppelin* style aerial passenger ships.
- '**Anchor' Cities**: A controlled port city that forms one end of a Trade Conduit connecting it to one or more other controlled port cities.
- **Artillery**: A new unit type, composed of cannons, bombards and other field pieces firing shot or canister with gunpowder propellant.
- **Branch Office**: Represents a substantial economic interest in a given location (a city or region) by a Merchant House.
- **Cartel City**: A city that is under the direct economic and political domination of a Merchant House.
- **Conduit Limit**: The maximum number of Trade Conduits that can comprise a single Sea Trade Route. Not a limit on the total number or length of Trade Routes a Nation may have, however.
- **Engineering**: The ability of Industrialized nations to use Siege Engineer units to assist in the construction of various national projects.
- **Factories** and **Yards:** The facilities that enable Industrialized nations to build modern steam and diesel powered air, warship and submarine units.
- **Home Office**: The center of the trade empire controlled by a Merchant House. Usually in a very rich city.
- **Mercantile Construction**: The capability of Industrial Merchant Houses to build units outside their HBZ.
- **Merchant House**: A new kind of nation devoted to the discovery and economic exploitation of new markets, continents and trade routes.
- **Merchant Agent**: The initial level of business interest that a Merchant House can maintain in a city or region.
- **Merchant Factory**: A representative of a Mercantile Combine in a specific location (usually a port city). Represents a degree of local interest and market control.
- **Merchant Shipping Points (MSPs)**: Representation of the actual trade ships used to move goods. Created by each Nation and Merchant House to carry their trade.
- **Monopoly**: A trade concession or resource solely controlled by a Merchant House, usually at the expense of the nation that normally has access to it.
- **Navigation Rating**: A rating expressing the ability of the seamen of the Nation or House to handle seagoing merchant vessels and warships. Affects the movement capacity of ship units.
- **Railroads**: A new Megalithic Construction Project for Industrial nations, allowing them to ship units and goods much more quickly.
- **Research Projects** A new form of investment for Industrial nations, allowing them to develop new kinds of units, factories and capabilities (once they have achieved certain pre-requisites, particularly minimum tech level). Research projects are measured in numbers of "Advances", and are governed by an investment die roll, much like Quality Ratings.
- **Sea Trade Route**: A sequence of Trade Conduits that allow two nations to trade with one another.

- **'Specialized' NFP**: National Force Points that are "recruited" by Industrialized nations to assist in non-unit construction.
- **Steamships**: A new class of naval units for Industrial nations with the requisite technology. There are several different types of steamships, ranging from Transports to Dreadnoughts.
- **Submarines:** A new class of units for Industrial nations with the requisite technology. There are two types of submarine units: the manually operated *Submersible* (the *Hunley*, for example), and early diesel/electric *Submarine* units themselves.
- **Tech Level**: A numeric rating, ranging from one to twenty-five, that expresses the level of technological sophistication and industrial development of a given nation.
- **Tech Points**: An accumulated value that expresses the technological advancement and sophistication of the nation.
- **Trade Conduit**: An established and regular route for the MSP of a nation traveling from one 'anchor' city to another 'anchor' city.
- **Trade Range**: The maximum number of regular Sea Zones that a Trade Conduit can extend from one 'anchor' city to another 'anchor' city.
- **Universal Weights and Measure (UW&M)**: A new Societal Project representing the implementation of a set of international standards of weights, measurements and machine parts. Industrial nations that adopt UW&M will get a bonus to their tax rate.
- **Yard Capacities:** a limit on the number of certain units and projects that can be built by a nation in any given turn. There are two different types of Yard Capacity: First, *Intrinsic*, which is based on cities and trade centers and represents the number of *Heavy*-type combat units that can be built at that location and apply to *all* culture types. Railroad Projects by industrial cultures are also counted against this capacity. Second, *Specific Capacity* which is based on Factories and Yards built by Industrial cultures and apply to the construction of Steamship, Airship and Submarine units.

1.3 THE NEW MAP

Concomitant with the introduction of steam-powered sailing vessels comes an overlay of sea hexes to regulate the movement of Airships and Steamships. Both types of unit may move using the hex-grid, though normal (wind-powered) shipping must continue to use the sea zones and current arrows as before.

2. THE STAT SHEET

2.1 THE MERCHANT HOUSE

The **Merchant House** nation can be added to any campaign currently in the Renaissance or beyond. Merchant Houses represent multi-national economic concerns (like the historical British East India Company) that involve themselves in trade, exploration, opening new markets and exploiting the natives of far-off lands. See section [7.0] on page 29 for more details.

Note: The Merchant House was previously called a Mercantile Combine.

2.2 TECH LEVELS

This statistic describes how advanced your nation is. At this point in time, pre-Colombians are (generally) at the lowest level of technology, Nomads and Barbarian are above that, Seafaring, Civilized, and Renaissance nations are at a middle level and Industrial nations are at the top of the heap.

As the game progresses, the level of technology will increase, and a nation will be able to exploit new opportunities. The advance of technology is the vehicle to change Culture Types and improve military capabilities.

Tech Level affects the following national statistics or ratings specific to the Renaissance and Industrial eras.

- It determines your maximum Trade Range and Conduit Limit ratings.
- It determines your maximum military Quality Ratings.
- It helps define the maximum number of Leaders that your nation can have.

2.2.1 Tech Level Bonus to Tax Rate (Optional)

This change adds the current Tech Level as a modifier to the Base Tax Rate for the nation according to the following formula

(Years per Turn % ×
TaxRateAdjustment × AgroModifier ×
InfraModifier × UW&M (if any) ×
(1.0 + TechLevel/100) = Tax Rate

So for a nation with a TL of 11 the base rate will be multiplied by 1.11 to get the final rate.

Table 2-1. Technology Levels

TechLevel	Culture Types
001	Pre-Columbian / Seafaring
002	Pre-Columbian / Barbarian / Nomadic / Seafaring
003	Civilized / Pre-Columbian / Barbarian / Nomadic / Seafaring
004	Civilized / Barbarian / Nomadic / Seafaring
005 – 007	Civilized / Seafaring
008 – 011	The Renaissance
012 – 015	Industrial Stage One
016 – 019	Industrial Stage Two
020 – 022	Industrial Stage Three

2.3 ECONOMIC INFORMATION

2.3.1 International Trade Value

As in the Basic System, the ITV is calculated by totaling the City Trade Values of all of the cities in your nation. Each CTV is calculated according to the following formula:

City Trade Value (CTV) =
(City GPv / 3) ×
City Type Modifier ×
City Status Modifier ×
Regional Terrain Modifier ×
Cultural Modifier

Note that Renaissance and Industrial nations have a different Cultural Modifier, as noted in the following table:

Table 2-2. National Culture Modifiers

Cultural Type	Modifier
Industrial Four	1.4
Industrial Three	1.3
Industrial Two	1.2
Industrial One	1.1
Renaissance	1.0
Seafaring	0.9
Civilized	0.8
Barbarian	0.7
Nomadic	0.6
Pre-Columbian	0.5

Example: The Frankish Commonwealth has a port city, Marseilles, which is worth 8 GPv. It is in an allied province, which is cultivated. The Commonwealth is Renaissance. The CTV of Marseilles, then, would be (8/3) = 2.6 × 1.5 × 1.0 × 1.0 × 1.0 = 3.9, rounded up to 4.

2.3.2 Regional Income

As in the Basic System, the formula for figuring out the regional income is as follows:

Regional Value =
Region's GPv × Status Multiple ×
Terrain Multiple

Regional Income (in GP) =
The Sum of Regional Values +
1 (for each Silk Road region controlled) +
2 (for each Fur Line region controlled)

Table 2-3. Terrain Type Tax Multiples

Terrain	*Culture*						
	I1	*R*	*C*	*B*	*N*	*S*	*P*
c2	1.0	1.0	1.0	1.5	2.0	1.0	1.0
C	1.0	1.0	1.0	1.0	1.5	1.0	1.0
W	0.5	0.5	0.5	1.0	0.3	0.5	1.0
M	0.5	0.3	0.3	0.5	0.2	0.2	0.5
S	0.5	0.3	0.3	0.2	1.0	0.0	0.2
D	0.2	0.2	0.2	0.2	0.5	0.0	0.2
T	0.2	0.2	0.2	0.3	0.0	0.0	0.2
I	0.5	1.0	1.0	1.0	1.0	1.5	1.0
j	0.2	0.3	0.3	0.5	0.2	1.0	1.0
o	0.0	0.0	0.0	0.0	0.0	0.0	0.0

2.3.3 Monetary Troop Support

This expenditure covers the minimum expenses required for the maintenance of the armed forces of the nation. If less is paid, then those units that are not supported disappear. The Troop Support cost is an easy calculation. Each unit type has a troop support cost defined for it. This much gold must be paid per unit that you have in your armies and garrisons at the *beginning* of the turn, *before* builds. This cost is further modified by the terrain of the region that the units ended the previous turn in, and whether they fought in a battle in the previous turn.

Units that were 'On Campaign' in the previous turn cost double to support. The effects of terrain upon troop support depends on the Society Type of the owning nation and the terrain type that the units ended the turn in.

Troop support is one-tenth the GPv purchase cost per turn.

$$\text{Troop Support} = \text{TSC} \times \text{TSM} \times \text{ASM}$$

TSC is the Troop Support Cost (from the Unit Build Chart, see Table 8-3 on page 40).

ASM is the Army Status modifier, from the following table.

Table 2-4. Army Status Troop Support Modifiers

Status	*Description*	*Modifier*
A	Administering	1.0
B	Being Besieged	2.0
C	On Campaign	2.0
E	Sneaking Around...	0.0
G	In Garrison	1.5
M	Mutinious!	0.0
N	Normal	1.0
P	Prisoner	0.0
R	Ruling	1.0
S	Besieging A City	2.0

Notes

- A Leader (and his army) have a Status of *On Campaign* if they have fought in ***any*** battle during the previous turn.
- A Leader (and his army) have a status of *In Garrison* if they are the sole units in a Pacified region, and are thus serving as its garrison.
- Leaders on Evade or in Prison cannot command troops. A Mutinous Leader is not counted for Troop Support.

TSM is the Terrain Support modifier, from the following table:

Table 2-5. Terrain Troop Support Modifiers

Terr.	*I1*	*R*	*C*	*B*	*N*	*S*	*P*
M	1.5	1.75	2.0	1.0	2.0	2.0	1.5
S	2.0	1.5	2.0	1.5	0.0	2.0	1.5
T	2.0	2.0	2.0	1.5	2.0	2.0	1.0
D	2.0	1.75	1.5	1.5	1.0	1.5	1.5
J	1.5	1.5	1.5	1.0	1.5	1.0	1.0
W	1.25	1.0	1.5	1.0	1.5	1.5	1.0
C	1.0	1.0	1.0	1.0	0.1	1.0	1.0
C2	1.0	1.0	1.0	0.5	0.1	1.0	1.0
I	1.0	1.0	1.0	1.0	1.0	0.5	1.0
O	2.0	2.0	2.0	2.0	1.0	2.0	1.5

2.4 REGIONS AND CITIES

2.4.1 Regional Garrisons

As in the Basic System, the size of a regional garrison must equal or exceed the Modified Resistance Value of the region. The Modified Resistance Value can be calculated using the following equation:

Modified Resistance Value =
Regional Resistance ×
Terrain Multiple ×
Religion Modifier

Note that new Renaissance and Industrial nation terrain multiples have been added to the following table:

Table 2-6. Garrison Terrain Modifiers

Culture	c	c2	w	s	j	i	d	m	t	o
PreColumbian	1	1	1	2[c]	1	1	2[c]	1	2	1
Seafaring	1	1	2	2[c]	2	1	2[c]	2	2	1
Civilized	1	1	2	2[c]	2	1	2[c]	2	2	1
Barbarian	2	2	1	2[c]	1	1	2[c]	1	2	2
Nomadic	1	2	2	1[c]	2	1	1[c]	2	2	1
Rena./Indust1	1	1	2	2[c]	1	1	1.5[c]	1	2	1

Notes

- All regions requiring a cavalry garrison (those marked with a [c]) can be garrisoned with infantry or field forts in twice the cavalry amount. An exception to this applies in the case of regions where there is no Cavalry in use (pre-Cav Count America, or South Africa).
- All listed numbers are factors that are multiplied by the Region Resistance Value.

2.4.2 Maximum Status For A Region

The maximum control status a nation can achieve in a region will be the lower of the two statuses as determined from the following tables:

Table 2-7. Maximum Region Status by Religion

National RS	Regional Religion.		
	Same	Tolerant	Hostile
1	F	F	A
2-3	F	F	EA
4-5	F	A	EA
6-7	F	EA	T
8-9	F	EA	NT
10	F	T	P/PT

Table 2-8. Maximum Region Status by Terrain

Regional Terrain	Controlling Culture.					
	R / I1	C	B	N	S	P
C2 (Intns Cult.)	Hm	Hm	Hm	Hm	F	Hm
C (Cultivated)	Hm	Hm	Hm	Hm	F	Hm
W (Wilderness)	F	F	Hm	EA	FA	Hm
M (Mountain)	EA	FA	F	T	EA	FA
S (Steppe)	EA	FA	T	F	NT	FA
D (Desert)	EA	FA	T	F	NT	EA
T (Tundra)	F	F	F	NT	T	F
I (Island)	Hm	F	F	T	Hm	F
J (Jungle)	F	F	EA	NT	EA	F
O (Oasis)	EA	T	NT	A	NT	NT

Note: Seafaring, Renaissance, and Industrial nations may have a Port City as their Homeland.

2.4.3 Building Facilities and PWB

Regular nations, Merchant Houses, Religious Primacies, Religious Orders and Secret Empires may build Public Works or Projects in regions and cities where they maintain a control status which yields some amount of tax revenue.

In addition, Public Works can be built in an uncontrolled region if the GP / NFP required to build the PWB are moved to the region by a Leader. Presumably this will be done as part of a diplomatic overture.

2.5 NEW MILITARY RATINGS

A new Military Quality Rating is added with the advent of gunpowder and the Renaissance: the **Artillery** QR. This represents the efficacy and tactical skill of field artillery units attached to your armies in the form of Artillery units.

The actual effect of Artillery units is two-fold: first, they fight as units with a combat strength and second, they give your army a bonus. As your Artillery QR improves, it takes fewer Artillery units to give you a given level of bonus.

Note that the Artillery QR only affects your Artillery units in field battles. In sieges the Siege QR represents their effectiveness.

With the advent of the first Industrial Age, other QR's such as Airship or Submarine may be added, as your GM decides.

2.6 YEAR LENGTH CHANGE

As a campaign progresses, the number of years per turn is reduced to reflect the increasing tempo of events. As the turn length decreases, so too does the Base Tax Rate as well as the costs for support. For example, If your nation is paying 100gp for its various support costs (Government, Troop and so on), then when the turn becomes four years long, you would only pay (100 × 0.80 = 80gp) in support.

The costs to purchase discrete units (infantry points, Public Works, and so on) remain constant, however.

Table 2-9. Years per Turn

Year Range	Years per Turn	Base Tax Rate
1000-1399	5	100%
1400-1499	4	80%
1500-1599	3	60%
1600-1800	2	40%
1801-1850	1	20%
1851-1900	6 months	10%
1901-1950	3 months	6%
1951+	1 month	2%

2.7 MERCHANT SHIPPING LIMITS BY PORT SIZE

Each Port City has a limit on the amount of merchant shipping that can be based in it by one or more Nations. This limit is:

20 × GPv of City × Tax Status = Maximum MSP based at port

For example, if the Port City is shared by two nations (being Tributary to each of them) then the basing capacity is also split, with each nation getting 50% of the total capacity.

Only Port Cities controlled at Tributary status or better can be used for basing Merchant Shipping Points.

2.8 SEA RATINGS AND TRADE

All three of these Ratings (**Navigation**, **Trade Range** and **Conduit Limit**) are concerned with the effective utilization and exploitation of the oceans of the world. Navigation aids your fleets with faster movement and the ability to explore and map sea zones or ocean arrows that were previously unknown. Trade Range lets your Merchant Shipping reach farther from your home ports, and Conduit Limit lets you establish a far-flung network of trade outposts that will carry the riches of China, the Americas and Europe home to swell your coffers.

All three of these ratings can be invested in, and improve as do your military QR, Intel or Religious ratings. Your current Tech Level limits each rating's maximum value.

Table 2-10. Sea Ratings Maximum Values

Rating	Maximum Value
Navigation	Tech Level / 2
Trade Range	Tech Level – 2
Conduit Limit	Tech Level / 2

2.8.1 Navigation Rating

As nations put forth feelers into the great ocean, they begin to acquire the ability to transverse hostile seas and move farther than before possible. Each nation, then, is assigned a *Navigation Rating*. The higher a nation's rating, the less likely that the nation's ships will be swallowed up by Hostile Sea Zones or Open Ocean Arrows. The Navigation Rating also improves the movement capability of ship units (warships, transports).

With the acquisition of a Navigation Rating, nations can also begin mapping Hostile Sea Zones and Open Ocean Current Arrows. Renaissance nations do not receive any enhanced Navigation Rating benefit when mapping the *Straits of Magellan*; Industrial nations do, however.

2.8.1.1 Ship Movement Effects

The Transport and Warship units of Renaissance and Industrial nations base their number of actions per **year** on the national Navigation Rating, with the number of actions being equal to:

Culture	Actions per Year
Renaissance	7 + Nav. Rating + other AP modifiers
Industrial One	8 + Nav. Rating + other AP modifiers

This applies to both wind- and steam-powered ships, though steamships have a -1 AP modifier to the base number of Actions per Year.

Note that a new Action Point Impulse Chart is in use once nations begin achieving Modern Era tech levels. The new chart is included in the Charts and Tables section on page 37.

2.8.1.2 Effect on Mapping Unknown Sea Zones

Mapping an unknown Sea Zone or Arrow is accomplished by a fleet of ships (at least 5-7 units and a Leader are recommended) being sent into an unknown sea zone with orders to conduct an **Explore** action. See Section [5.2.2].

The *rutters* (navigational books) produced by Mapping can, of course, be stolen, sold, swapped or lost. Fleets that are engaged in Mapping suffer attrition if they fail their mapping rolls. This is a dangerous mission and ships, leaders and men may be killed by hostile natives, great white whales and what-not…

2.8.2 Initial Trade Range(s)

Upon achieving Renaissance status, each nation has its trade range modified, based upon the previous Culture.

Table 2-11. New Trade Ranges

Original Culture Type	*New Trade Range*
Civilized	4
Seafaring	5

2.8.2.1 Tracing Trade Ranges

Normally, a nation may trace a Trade Route through a number of known Sea Zones, Open Ocean or Inter-Island Arrows equal to or less than its Trade Range. However, tracing into a Sea Zone against a Sea Zone Border Arrow costs two (2) points of Trade Range for each such Sea Zone. Renaissance and Industrial nations may establish Trade Conduits allowing those nations to increase their Trade ranges dramatically (see 2.8.3). Neither normal Trade Routes nor Conduits may be traced through unknown Sea Zones Inter-Island or Open Ocean Arrows, blockaded Sea Zones, or into Cities under Siege or Blockade.

Example

The sea zones off the western coast of Africa were historically some of the worst in the world in terms of ships swallowed by dangerous seas. The *Gambian Sea* therefore, is a Hostile Sea Zone. Until your pilots have mapped it, you cannot trace trade through it. Similarly the *Cape of Good Hope* is prey to ferocious Antarctic storms that litter the beaches of Cape province with smashed ships.

Worse, the borders of *Grand Bassam* / *Bight of Benin*, *Bight of Benin* / *Kongo Sea*, and *Cape Fria* / *Nambian Sea* have directional arrows, pointing north. When trade is being traced across these sea zone borders, each one counts as 2 SZ for trade range purposes.

2.8.2.2 Effect on Effective Merchant Shipping

In the Middle Ages, the base Trade Range was assumed to be three (3) for most nations. Now, however, it will be four for previously Civilized nations and five for previously Seafaring nations. As a result the formula for calculating the number of effective Merchant Shipping points on a given Sea Trade route changes to take the varying Trade Range into account. This formula replaces the one shown in **Basic Rulebook** 5.6 [12.1] Step 2a.

$$eMSP = m\left(\frac{r}{l}\right)$$

eMSP is the resulting, effective, **MSP** on the Route.
M is the initial, unmodified, MSP assigned to the Route.
R is the Trade Range of the Nation.
L is the Length (in Sea Zones) of the Route.

2.8.3 Sea Trade Routes & Trade Conduits

An important aspect of the Modern Era is the ability of nations to conquer the seas and send their merchants and colonists to the far corners of the world. To reflect this, the concept of the Sea Trade Route formed of Trade Conduits is introduced.

A Trade Conduit consists of two controlled Port Cities, connected by a number of known Sea Zones, Inter-Island or Open Ocean Arrows no greater than the Trade Range of the Nation. The two port cities are called Conduit Anchors, as they form the "ends" of the Conduit.

Example:
The English control the port city of London and a port city at Gibraltar. They have a Trade Range of 4, allowing them to form a Conduit between **London**, via *English Channel*, *Bay of Biscay*, *Sea of Portugal*, *Gates of Hercules* (4 Sea Zones) to **Gibraltar**. This is one (1) Conduit.

A Sea Trade Route is comprised of one or more Trade Conduits. More than one Sea Trade Route may use a single Trade Conduit. Each Sea Trade Route can be composed of a number of Conduits equal to the nation's **Conduit Limit**. A nation can have any number of Conduits, as long as no single Sea Trade Route is formed of more Trade Conduits than allowed by the Conduit Limit.

In general, this allows the nation to extend its trade by multiples (up to the conduit limit) — but only so long as it controls Port Cities at the Conduit 'anchors'. This also means that sea-borne trade will increase dramatically in importance to aspiring world powers, as will the sea power required to establish and protect these trade routes.

2.8.3.1 Requirements for Establishing a Conduit

A Trade Conduit consists of:

1) An origination port, which is a controlled Port City in the home nation, of **at least** the minimum status (as indicated by the following table) connected to the Capital or Homeland by contiguous controlled land regions.
2) A certain number of contiguous sea zones from that controlled port to another controlled Port City of at least **minimum** status.

A Capital that is also a Port City may, of course, act as the first conduit anchor. Port Fortresses and Port Areas cannot act as trade conduit anchors.

Trade Conduits can branch out from one another to form myriad Sea Trade Routes as well. It is not necessary to construct completely separate sequences of Trade Conduits for each Trade Route.

Table 2-12. Conduit City Minimum Status

Nation Type	Minimum Status for Conduit City
Open Nation	Tributary
Religious Primacy	Holy City or Tributary
Merchant Combine	Branch Office or Tributary
Religious Order	Order Fortress or Tributary

Example
The Swedish player has a Renaissance nation with a Capital (Stockholm) in Uppsala. Sweden's Trade Range is 5 and its Conduit Limit is 3. Assume that Sweden possesses the region of Norway and has a port city (Oslo) therein. Since Oslo is connected to Uppsala by Swedish controlled regions, it can be used for Inter-Nation Trade. Oslo, therefore, is the first 'anchor' in the Conduit chain. Sweden can trace a Trade Conduit through the sea zones of *Skaggerak*, *Viking Bank*, *North Sea*, *English Channel*, and *Bay of Biscay* to Gascony where it controls the port city of Bordeaux. (as a Tributary).

Bordeaux is the second 'anchor' and allows the Swedes to establish a Trade Conduit between Oslo and Bordeaux. The second Trade Conduit can be traced a further five sea zones (through the *Bay of Biscay, Sea of Portugal, Gates of Hercules, Sea of Dogs*, and *Ifriqan Coast*) to Gambia. Here, the Swedes control a friendly port city (Sunderholm) to serve as an 'anchor', this is the second Trade Conduit of their maximum of 3 in this particular direction.

Unlike Bordeaux, Sunderholm straddles both Sea Zones. So the third, and final, Trade Conduit can be traced through the sea zones of *Gambian Sea, Grand Bassam,* and into the *Bight of Benin*.

Note that the Arrow Sea Zone Border between *Bight of Benin* and *Grand Bassam* costs TWO Trade Range points to traverse.

Assuming that the Swedes have a Port City in a coastal region adjoining the *Bight of Benin*, say in Teke, the 'anchor' of the third Trade Conduit is established. Then, from this final Conduit 'anchor', the Swedes can trade normally with any nation within 2 sea zones (their Trade Range from a region on *Bight of Benin* considering that there are Arrow Sea Zone borders on both exits from the Zone), which is this case could be as far south as the region of Ovambo on the coast of the Nambian Sea.

Effectively then, the Swedes have a Trade Range of 15 Sea Zones, from Oslo to Ovambo.

If the 'anchor city' of a Trade Conduit borders on only one Sea Zone, that Sea Zone must be counted as the last Sea Zone of the first Trade Conduit *and* as the first Sea Zone of the second Trade Conduit.

Example
Ming China's first trade conduit can reach to *Mallaca Strait*, where they control Kadaram (in Perak) as the 'anchor' city. Kadaram borders only one Sea Zone. When counting the second trade conduit, *Mallaca Strait* is counted as that conduit's first Sea Zone.

Which is one reason why cities straddling Sea Zones are so valuable.

2.8.3.2 Sharing Trade Conduit Cities

The control of strategically placed port cities becomes critical with the Trade Conduit rules in effect. It quickly becomes apparent that there are a number of crucial seaways or straits scattered around the world. Further, since there is a limit of one city per province, the acquisition or seizure of controlled cities is vital.

Note, however, that for a city to qualify as an 'anchor' it must be at least **Tributary** status. Since a city can be Tributary to two nations at a time (with each nation getting one-half of the tax revenues) this means that a port city can serve as an 'anchor' for two different nations at a time if it is Tributary to each of them.

If a port city is shared then each Nation also receives half of the port capacity for basing Merchant Shipping as well.

Example

The Rajputate of Mandalam is trying to acquire an entré into the lucrative Mediterranean trade. Unfortunately, there are no regions on the Red Sea (the limit of their access) that are 'available' to have Mandalemi trade cities built in them. The Mandalam approach the Sultantate of Syria, then, and arrange to 'share' the port city of Akaba in the region of Petra. Akaba is a 3 Gpv city and under the terms of the arrangement, the Mandalam get half of the city as a Tributary. This gives them a basing capacity of (1.5 × 20 = 30) MSP in Akaba.

2.8.3.3 Opening a Sea Trade Route via Conduits

To open a Sea Trade Route through a series of Trade Conduits at least one Merchant Shipping Point must be allocated to the Trade Route. This MSP must be able to 'move' through a series of connected Trade Conduits controlled by the nation opening the Trade Route from the origination port in the home nation to a viable port in the target nation. If this can be accomplished, then trade can be opened.

To allocate shipping to a Sea Trade Route, your Nation **must** be able to open that Route through its **own** set of Trade Conduits.

Note, therefore, that you **cannot** use another nation's Trade Conduits to open a Sea Trade Route or to allocate your nation's Merchant Shipping to an existing route. This means that if another nation with a superior trade range or conduit configuration opens a Route to your nation where you cannot match the connection, then your nation cannot allocate merchant shipping to the route. This will place your Nation at a significant economic disadvantage on that Trade Route.

Example

The Nisei have acquired 'anchor' cities in the Great Lakes area and on Newfoundland, Greenland and the Shetland Islands. These cities form a set of Trade Conduits reaching from the Nisei heartland in the American North-West and Great Plains to Europe. From their final 'anchor' city of Ukiuo-ye on the Shetlands, the Nisei merchants can reach England, the Netherlands, Sweden, Russia and many more nations. Due to the progression of events, however, none of the European nations have Trade Conduits in place to return the favor. Since none of the Europeans could theoretically open a Sea Trade Route to the Nisei realm, none of them are allowed to allocate Merchant Shipping to the Sea Trade Routes opened by the Nisei.

Effectively, the Nisei control all of the trade between themselves and the Europeans and will make the lion's share of profits from the routes. The Nisei are happy. The Europeans are sad.

2.8.3.4 Closing Trade Conduits

A Trade Conduit is closed down if one or both of the 'anchor' cities that the Nation controlled to form it are lost to hostile action, blockade or rebellion. If a Conduit closes down then all Sea Trade Routes being traced through it are also shut down if there is no other way for them to be traced from the originating nation to the target nation.

Note that a Sea Trade Route *may* remain open even if one Nation loses a crucial 'anchor' city if the other Nation in the trade route can replace the Conduit chain with one of its own.

However, if this occurs, then the Nation that can no longer trace the route cannot allocate any MSP to the route.

2.8.3.5 Handling Trade Route Distance via Disparate Paths

As mercantile nations establish global trading networks, situations will arise where (due to the varying locations of Conduit Cities), nation A will be able to establish a Trade Route of distance X, while nation B will be able to establish a trade route of distance Y.

When this situation develops the Distance of the Route is the *average* of the two route lengths, rounded up.

2.8.4 Railroad Trade

Two nations whose *Capital* Cities are connected by a railroad may conduct Rail Trade (at a level of efficiency slightly superior to sea trade). Railroad Trade supercedes (or replaces) any existing trade route between the two nations.

2.8.5 Aerial Trade

Merchant Houses who possess Airship Transports (requiring, therefore, the completion of the appropriate R&D Project and construction of at least one ZT unit) may open *Aerial Trade* routes. An Aerial trade route is traced from the Home Office of the Merchant House to the Capital of the nation to trade with. Aerial Trade is considered to be in small, valuable cargoes, passengers, mail and other items where speed of delivery surcharges make up the difference in volume profits.

Merchant Shipping Points for Aerial Trade routes can only be acquired by converting Airship Transport (ZT) units to Aerial MSP (aMSP). Airship Transports are converted to aMSP at the usual MSP conversion rate of 1 MSP per Cargo point.

The Range of Aerial Trade is equal to Tech Level / 2 (rounded down, to a minimum of one). Merchant Houses with an Industrial culture type gain an additional +1 to their Aerial Trade Range.

Conduits may be established for Aerial trade with the first anchor city being the city containing the Merchant House's Home Office. Successive anchor cities are may be established at intervals of the Aerial Trade Range provided that the Merchant House has at least a Branch Office or better at each anchor city. The Conduit Limit for aerial trade is equal to one-half the Merchant House's Conduit Limit, rounded down, with a minimum of one.

Aerial Trade may be established between the Merchant house and its Trade Partners in **addition** to regular Sea Trade. A Merchant House trading by a common land border may not establish Aerial Trade in addition to their land trade. Finally, Aerial Trade Routes may **not** be used for Cartel Trade (see [7.1.3]).

2.9 HANDS-OFF TRADE (OPTIONAL RULE)

Some campaigns use a new "Hands-Off Trade" approach to make life for the GM and the players easier. Fundamentally, the HOT system attempts to automate the process of adding and removing MSP routes by following market demand.

Merchant Houses, however, still use the standard trade system (including having to build transport units to convert into MSP, and adding MSP to new routes).

Open Nations, Religious Primacies, Religious Orders and Secret Empires do **not** have to build transports to convert into MSP. Instead, when they open a new trade route, the system calculates a starting set of MSP for the route, based on the nation's NMV, the size (Total Trade Value) of the route, and the free capacity at the port basing the route.

The trade partners on a given route are also now noted as to whether they can provide MSP for the route (a "Yes" or a "No" in the proper column of the trade route display). You can provide MSP for a route if you are able to **Open** the route with your current trade range and conduit setup.

Open trade routes for which you can assign MSP, which are based at a port with free MSP basing capacity, which are under-capacity for the whole route (a non-negative "FreeCap" number) will automatically accrue new MSP to "fill up" the route at the rate of: NMV × FreeCap.

MSP are automatically added and removed by the program, depending on whether the route is under- or over-capacity and whether the base port is under- or over-capacity.

However an Open Nation, Primacy or Order can elect to shift MSP from route to route **if** the King/Pope/Grand-Master spends 6 AP to "Intervene in Mercantile Affaires." This represents the government taking a direct hand in the internal affairs of the dozens of merchant brokerages, financiers and investment companies. During this intervention any number of MSP can be shifted around from/to any number of routes.

You **may** change the Base Port of the route, or Close the route, or open new routes. Note that changing the base port of a route may mean the route can accumulate more MSP and gain you more money. You are also free to attack the shipping of your trade partner (secretly, of course) to reduce their MSP allocation, thus allowing yours to grow and make you more money.

MSP **may** be removed from a HOT route, at the usual rate of 4GP per 4 MSP, which produces 1 HT unit.

3. THE ORDER FORM

3.1 EXPENSES: INVESTMENTS

The new Artillery QR is limited like the other Military Quality Ratings by the Tech Level of your Nation. The previous caps placed on QR advancement are also raised by the acquisition of new Tech Levels.

Table 3-1. Max. QRs per Culture and Tech Level

Civilized

Tech	Cavalry	Infantry	Warship	Siege	Artillery
3	5	5	4	5	0
4	7	6	5	7	0
5	8	7	6	8	0
6	9	8	7	10	0
7	10	10	10	12	4

If a Civilized Tech 7 Nation purchases one or more Artillery units from a Renaissance nation they can then begin building Artillery units and investing in their own QR, which starts at one (1).

Seafaring

Tech Level	Cavalry	Infantry	Warship	Siege
1	0	3	4	2
2	1	4	6	4
3	3	5	6	5
4	5	6	7	7
5	6	7	8	8
6	7	8	9	10
7	8	10	12	12

Barbarian

Tech Level	Cavalry	Infantry	Warship	Siege
2	3	4	4	4
3	5	5	4	5
4	7	6	5	7

Nomadic

Tech Level	Cavalry	Infantry	Warship	Siege
2	5	3	2	2
3	7	4	3	3
4	9	5	4	5

Pre-Columbian

Tech Level	Cavalry	Infantry	Warship	Siege
1	0 (1)	3	2	2
2	0 (2)	4	4	4
3	0 (3)	5	4	5

Note: Cavalry is available to Pre-Columbian cultures only after the expiration of the Cavalry Count in that geographic area.

Renaissance

Tech	Cavalry	Infantry	Warship	Siege	Artillery
8	11	12	12	15	6
9	11	14	15	17	9
10	12	15	17	20	11
11	13	16	20	23	13

Industrial One

Tech	Cavalry	Infantry	Warship	Siege	Artillery
12	14	18	27	26	20
13	14	20	30	29	22
14	14	22	34	32	24
15	15	24	37	35	26

Industrial Two

Tech	Cavalry	Infantry	Warship	Siege	Artillery
16	15	26	40	38	30
17	15	28	42	41	32
18	15	30	46	44	35
19	15	32	48	47	40

Industrial Three

Tech	Cavalry	Infantry	Warship	Siege	Artillery
20	15	34	50	50	42
21	15	40	54	53	45
22	15	50	57	57	50

3.2 CONSTRUCTION: BUILDING ARMIES

3.2.1 New Unit Types

With widespread gunpowder use and the evolving science of gunnery, a new unit type is introduced. **Artillery** becomes available for purchase and deployment with the armies of your Nation. In field battles, Artillery units are governed by the Artillery QR. In sieges, by the Siege QR.

With the Industrial Era and the advent of steam and internal combustion power, **Steamships, Airships**, and **Submarines**, and **Aircraft** become available.

3.2.1.1 Artillery

The base *Artillery* (**a**) unit represents from five to ten field pieces and their crews and support personnel, numbering about 200 men.

Artillery units have a new Artillery QR that ranges from one (1) to fifty (50). In normal combat Artillery units provide a bonus to the effective QR of the army, depending upon their QR and the number of them present.

Expenditure to raise the Artillery QR is handled just like the other Military QRs.

Note, however, that artillery cannot win battles by itself. There must be Infantry or Cavalry to carry the brunt of the fighting. Proportions of Field Artillery in excess of a third of an army will not be useful.

Artillery comes in Heavy (H), Medium and Light (X) equipment classes, as well as Regular and Elite training classes. There is no inexperienced artillery.

3.2.2 Steamships

Once a nation has reached Tech Level 12 and completed an **R&D: Steamships** project (with or without the help of another nation already possessing steamships), they may build Steamship Yards. Once at least one Steamship Yard point has been completed, they may begin building actual steamship units (see sections [3.6] and [4.2]).

Completion of the basic R&D: Steamships project gains the ability to build the *Steam Transport* unit. All other steamship unit types must be designed and developed by

additional research. All steamship units, however, are built using the same Steamship Yard capacity points.

3.2.2.1.1 Types of Steamships

Five kinds of steamship units can be developed: the *Steam Transport* (st), *Steam Cruiser* (sca), *Steam Battleship* (sbb), *Steam Dreadnaught* (sdn) and *Steam Airship Carrier* (scv). The construction costs of these units are given in the Charts and Tables, Industrial Build Chart. There are no inexperienced or elite steamship units.

Each Steam Transport and Cruiser unit represents two ships, while Battleships, Dreadnaughts and Carriers represent one ship. Feel free to name, number and keep track of your capital ships.

3.2.2.1.2 Steamship Range

Though capable of operating against the wind, or even in the absence thereof, steamships are restricted by requiring enormous amounts of fuel (wood or coal) to operate. They are also very fickle and require regular, skilled maintenance. Such supplies are acquired only through a fueling (or coaling) station provided by a controlled port (at Tributary or above).

Steamships operating without the support of a coaling station will suffer severe attrition (on the order of 25% per AP) as ships go down for lack of fuel or maintenance.

The operating range (as expressed in Action Points) of a steamship unit is equal to:

Operating Range = Tech Level - 10

This number is rounded down, with a minimum of 1 AP. The maximum operation range of a Steamship is 3 AP.

Example

The Danish Imperial Navy is operating a steamship squadron off the coast of India against Mussulman pirates. Denmark's Tech Level is 12, giving them an operating range of (12-10 = 2 AP). Their nearest controlled port (for fueling and repairs) is at Mansura in Egypt. From Krak-de-Chevaliers in Mansura (Which is on the **Nile**), they can operate normally in seas as far away as the **Red Sea** (from Krak, 1 AP into the Nile, 1 AP into Red Sea). Beyond the Red Sea, they will suffer attrition. The acquisition of a port on the Bab-al-Mandab, then, would be of great strategic use.

3.2.2.1.3 Trade Ranges with Steamships

Nations having acquired the capacity to build Steam Transports may use them on their trade routes (as any transport may be converted into MSP), as long as the distance between each **Anchor City** on the trade route is equal to, or less than, **twice** the Steamship Operating Range of the nation.

Steam-powered merchant traffic may use the hexgrid ocean map overlay for tracing distances for trade routes and conduits.

3.2.3 Diesel-powered Ships

Once a nation has reached Tech Level 14 and completed an **R&D: Diesel Engines** project (with or without the help of another nation already possessing diesel-engine ships), they may build Diesel-type version of previously known Ship types.

3.2.3.1 Types of Diesel-Powered Ships

Five kinds of diesel-powered units can be developed: the *Transport* (dt), *Cruiser* (ca), *Battleship* (bb), *Dreadnaught* (dn) and *Aircraft Carrier* (cv). The construction costs of these units are given in the Charts and Tables, Industrial Build Chart starting on page 40. There are no inexperienced or elite diesel-engine ship units.

Each Diesel Transport and Cruiser unit represents two ships, while Battleships, Dreadnaughts and Carriers represent one ship. Feel free to name, number and keep track of your capital ships.

3.2.3.2 Diesel Ship Operating Range

While, on a per-kilo-of-fuel basis, a Diesel-powered ship gets more kilometers of action range to the liter, they still require an extensive and technically-proficient support structure and vast quantities of fuel.

Diesel-powered ships operating without the support of a fueling station will suffer severe attrition (on the order of 25% per AP) as ships go down for lack of fuel or maintenance.

The operating range (as expressed in Action Points) of a steamship unit is equal to:

Operating Range = Tech Level / 3

This number is rounded **up**, with a minimum of 1 AP. The maximum operating range is 7 AP.

Example

The Imperial Aztec Navy is operating a diesel-powered cruiser squadron off the coast of Australia against Javan pirates. The Aztec Tech Level is 14, giving them an operating range of (14/3 = 5 AP). Their nearest controlled port (for fueling and repairs) is at Majuro on the Marshall Islands. From the Marshalls they can operate normally in waters as far away as the **Coral Sea** (from the Marshalls, 1 AP into hex 45K, 1 AP into hex 44K, 1 AP into hex 43L, 1 AP into *Solomon Sea*, and 1 AP into *Coral Sea*). Beyond the Coral Sea, they will suffer attrition. The acquisition of a port in Arukun or Papua, then, would be of great strategic use.

3.2.3.3 Trade Ranges with Steamships

Nations having acquired the capacity to build Diesel-powered Transports may use them on their trade routes (as any transport may be converted into MSP), as long as the distance between each **Anchor City** on the trade route is equal to, or less than, **twice** the Diesel-ship Operating Range of the nation.

Diesel-powered merchant traffic may use the hexgrid ocean map overlay for tracing distances for trade routes and conduits.

3.2.4 Flying Machines

Flying Machines are rigid-airframe, winged aircraft with one or more fixed wings and gasoline-burning engines to drive propellers. Aeroplanes!

A variety of Aircraft units can be developed through Research & Development: *Fighters* (af), *Bombers* (ab), *Heavy Bombers* (ahb), *Cargo Transports* (ac), *Carrier Fighters* (cvf), and *Carrier Bombers* (cvb)

Completion of the R&D: Flying Machines research project gains the ability to construct *Fighters.*

Subsequent R&D projects may develop the other three kinds of aircraft. All types of airships use Airship Factory

capacity points for construction. There are no inexperienced or elite Airship units. See sections [3.6] and [4.2].

Following the completion of the R&D: Flying Machines project your Nation can build Aircraft Factories, which will in turn allow you to build the various kinds of Aircraft units.

Aircraft engaged in combat with Airships gain a substantial bonus to their combat rolls.

3.2.4.1 Aircraft Operations

Unlike Airships, which can travel about as they please and operate from almost anywhere, Aircraft have to operate from a *base* and can engage in combat operations (in support of Leader actions) within their *Range* of the base.

Aircraft can be based at a City or Fortress controlled at Tributary or better, or from an Aircraft Carrier.

Aircraft at a base but *not* under the command of a Leader can defend the base itself (the city or fortress or aircraft carrier) if it is attacked.

Aircraft under the command of a Leader may conduct offensive operations (in support of an Attack or Siege or React), in either the region where they are based, or in regions up to their operations Range away.

Table 3-2. Operational Ranges for Aircraft

Aircraft Type	Operations Range
Carrier Fighter	1
Fighter / Carrier Bomber	2
Bomber / Cargo Plane	4
Heavy Bomber	6

Sea Zones and Hexes count as 2 Range Points per zone or hex. This means that Carrier Fighters can only conduct operations in their current Sea Hex or Zone.

An exception to this is Sea Hex/Zone combinations which in area make up approximately one Hex. Examples of this are: Hex 23C and *Freya Bank*, Hex 41H and *Inland Sea* and so on. In this case the Zone is 1 Range and the Hex is 1 Range.

3.2.4.2 Aircraft Rebasing

Aircraft units can **rebase** – move from one controlled City or Fortress to another controlled City or Fortress – with a range of twice their Operational Range. During the **Year** in which they rebase, they cannot undertake any other operations.

Yes, this is simplification. You'll live.

3.2.4.3 Aircraft Combat Doctrine

In battle, you may direct your aircraft units to *specifically* engage opposing aircraft, in which case a separate combat will be fought (before any ground, naval or siege engagements) to determine air superiority. If you do not so direct your air units, they will fight in conjunction with your ground and/or naval forces.

Fighter and *Carrier Fighter*-type Aircraft can only engage in combat with other Aircraft and Airships.

Bombers and *Carrier Bombers* can engage in land combat, sieges, and naval actions.

Heavy Bombers can engage in siege, land combat and aerial bombardmen, but are not particularly useful against in naval actions.

3.2.4.4 Aerial Bombardment

Aircraft with a **Siege** rating of one (1) or more may be directed to attack existing facilities (Airship Yards, Submarine Yards, Mercantile Industry, Steamship Yards) or projects (Railroad lines, Bridges, Pyramids, etc.). Damage is done in terms of GP/NFP/Time required to repair the damage, if the facility is not destroyed outright.

Specific locations may be defended against aerial bombardment by XEA (AA guns), HEA (rocket artillery) or patrolling aircraft and airships.

3.2.5 Airships (Optional Rule)

Airships (zeppelins) are large rigid-airframe flying machines, using hydrogen (or helium for those lucky enough to have helium gas deposits within their domain) for lift and kerosene-burning engines to drive propellers. Though of considerable size, they cannot carry as much as a sea-going ship, and demand considerable and specialized resources to build.

Four different kinds of Airship unit can be developed: *Scout Airships* (zs), "standard" *Airships* (z), *Heavy Airships* (zh) and *Transport Airships* (zt). Completion of the R&D: Airships research project gains the ability to construct *Scout Airships*.

Subsequent R&D projects may develop the other three kinds of airship. All types of airships use Airship Factory capacity points for construction. There are no inexperienced or elite Airship units. See sections [3.6] and [4.2].

Following the completion of the R&D: Airships project, you get one "free" Scout Airship unit. However, this unit is the prototype and was essentially hand-built by the engineers working on the project. Before you can build more Airship units, you have to build at least one Airship Yard.

Note to GMs: the prevalence of airships as a major unit in most nations of Lords One is due to the peculiarities (some would say perversities) of that Campaign. If you feel that airships are too far-fetched an idea for Industrial One nations to possess, feel free to push their development back to later tech levels.

It is your campaign after all!

3.2.5.1 Aerial Combat Doctrine

In battle, you may direct your airship units to *specifically* engage opposing airships or aircraft, in which case a separate combat will be fought (before any ground, naval or siege engagements) to determine air superiority. If you do not so direct your air units, they will fight in conjunction with your ground and/or naval forces.

3.2.5.2 Aerial Bombardment

Airships with a **Siege** rating of one (1) or more may be directed to attack existing facilities (Airship Yards, Submarine Yards, Mercantile Industry, Steamship Yards) or projects (Railroad lines, Bridges, Pyramids, etc.). Damage is done in terms of GP/NFP/Time required to repair the damage, if the facility is not destroyed outright.

Specific locations may be defended against aerial bombardment by XEA (AA guns), HEA (rocket artillery) or patrolling airships or aircraft.

3.2.6 Submarines

Small, cramped, filled with bad air, choking fumes and cursed with absurdly short range, submarines are more of a novelty than a strategic weapon. However, they can be constructed at lower levels of technical sophistication.

Completion of the **R&D: Submersible** project gains the ability to build one kind of unit, the *Submersible* (sm). This is a primitive vessel, powered by a row of sailors turning a giant hand crank to provide propulsion.

Once a nation has completed both the R&D: Submersibles project and the R&D: Internal Combustion Engine project, they may attempt to develop the more advanced, *Holland*-like *Submarine* (ss) unit via the **R&D: Submarines** project. These are the classic diesel-electric boats that were so effective during the Two World Wars. Those wanting nuclear powered behemoths are going to have to wait for higher tech levels.

Submarines are built using specialized Submarine Yards, which cannot be used for other kinds of units.

In combat, a Submersible unit gets one 'torpedo' attack on an enemy unit, which results in the possible destruction of the target (regardless of size or combat strength) and the loss of the submersible (and the hapless crewmen, *gurgle, gurgle*). The player deploying submersibles in combat is advised to indicate the kind of target they are to seek out. Submarines, by contrast, are true naval units, with combat units that can be used in the line of battle or unleashed upon enemy shipping.

3.2.7 Reserve Units (Optional)

Renaissance and Industrial nations gain the ability to build or place units in 'reserve' status, where they are not actively supported each turn by the nation. These units may, as the need arises, be called up and converted into active units of infantry, cavalry or whatever type they are. Only mobile national units may be placed in, or built in, reserve status. While these units are in reserve, no troop support is paid for them and they do not affect the national ISI.

3.2.7.1 Building Units as Reserves

Only Regular and Inexperienced units can be built as Reserve status units. Like normal national mobile units, they must be built at a Friendly city within the Homeland Build Zone. Since these units are built specifically as reserves, no troop support is paid on them the turn that they are built.

Building units as reserves *does* require the appropriate Yard Capacity.

Table 3-3. Costs to Build as Reserves

Unit	*GP (R / I1)*	*NFP*
Cavalry	2.5 / 4.0	1
Inexperienced Cavalry	1.25 / NA	1
Light Cavalry	2.0 / 3.5	1
Light Inexperienced Cav.	0.75 / NA	1
Heavy Cavalry	3.0 / 4.5	1
Infantry	1.5	1
Inexperienced Infantry	0.75	1
Light Infantry	1.0	1
Light Inexperienced Inf.	0.25	1
Heavy Infantry	2.0	1
Artillery	2.5	1
Light Artillery	2.0	1
Heavy Artillery	3.0	1
Siege Engineer	2.0	1
Warships	2.0	1
Light Warship	1.5	1
Heavy Warship	2.5	1
Transport	1.5	1
Light Transport	1.0	1
Heavy Transport	2.0	1
Steam Transport	NA / 5.0	1
Steam Cruiser	NA / 7.5	2
Steam Battleship	NA / 12.5	5
Steam Dreadnought	NA / 25.0	10
Steam Aircraft Carrier	NA / 15.0	8
Scout Airship	NA / 4.0	1
Regular Airship	NA / 7.5	2
Heavy Airship	NA / 10.0	3
Transport Airship	NA / 5.0	2
Submarine	NA / 5.0	1
Advanced Submarine	NA / 12.5	3
One value under GP column applies to both Renaissance and Industrial nations NA: Not allowed for that nation.		

3.2.7.2 Placing Existing Units into Reserve

Existing Regular and Inexperienced units that *begin the turn* at a controlled city anywhere in the Nation may be placed into 'Reserve' status at the whim of the player. Simply note on your orders that you desire to place some number of units from a given army into Reserve.

Units may not be placed into Reserve and activated from Reserve in the same turn.

3.2.7.3 Activating Reserves

Reserves can be called up, at the beginning of the turn, in any controlled unbesieged Friendly City or Fortress that is within the Homeland Build Zone of the country that placed them into Reserve. The Nation must pay an activation fee, as noted below, for each unit that is being called up.

Table 3-4. Activate from Reserve

Unit	GP (R / I1)	NFP
Cavalry	3.5 / 5.0	0
Inexperienced Cavalry	2.25 / NA	0
Light Cavalry	3.0 / 4.5	0
Light Inexperienced Cav.	1.75 / NA	0
Heavy Cavalry	4.0 / 5.5	0
Infantry	2.5	0
Inexperienced Infantry	1.75	0
Light Infantry	2.0	0
Light Inexperienced Inf.	1.25	0
Heavy Infantry	3.0	0
Artillery	3.5	0
Light Artillery	3.0	0
Heavy Artillery	4.0	0
Siege Engineer	3.0	0
Warships	3.0	0
Light Warship	2.5	0
Heavy Warship	3.5	0
Transport	2.5	0
Light Transport	2.0	0
Heavy Transport	3.0	0
Steam Transport	NA / 6.0	0
Steam Cruiser	NA / 8.5	0
Steam Battleship	NA / 13.5	0
Steam Dreadnought	NA / 26.0	0
Steam Aircraft Carrier	NA / 16.0	0

Unit	GP (R / I1)	NFP
Scout Airship	NA / 5.0	0
Regular Airship	NA / 8.5	0
Heavy Airship	NA / 11.0	0
Transport Airship	NA / 6.0	0
Submarine	NA / 6.0	0
Advanced Submarine	NA / 13.5	0
One value under GP column applies to both Renaissance and Industrial nations NA: Not allowed for that nation.		

3.2.7.4 Division of Reserves in the event of Civil War

On occasion a Nation may break into one or more successor states due to Dynastic Failure or Civil War. In this case, should the Nation have some troops in Reserve, the reserves are divided proportionally between the successor nations on the basis of how many originally friendly cities each successor state possesses. Fractions are rounded down, however, even if this results in the loss of units.

Example:

The Maori Imperium controlled a wide swathe of the Pacific and Australasia before it dissolved into civil war and three successor states; Austral, Java and the Maori Seahold. Before the civil war, the Maori controlled fifteen friendly cities and they had 56 regular infantry, 20 regular artillery and 115 regular warships in reserve. Now, Austral has eight of those cities, Java three and the Seahold four. This gives the Austral a (8 ÷ 15 = 53%) share of the reserves, the Javanese a (3 ÷ 15 = 20%) share, and the Seahold a (4 ÷ 15 = 27%) share.

In terms of units the Austral get (56 × 0.53 = 29) regular infantry, (20 × 0.53 = 10) regular artillery and (115 × 0.53 = 60) regular warships in reserve. In the same manner the Javanese get 11 regular infantry, 4 regular artillery and 23 regular warships. The Maori Seahold gets 15 regular infantry, 5 regular artillery and 31 regular warships in reserve.

3.3 CONSTRUCTION: COLONIES & CITIES

In the Post Medieval Period the venue for establishing colonies is expanded to include, in addition to the traditional unsettled or depopulated areas, those regions occupied by peoples of substantially inferior technological development. Renaissance and Industrial nations can colonize, or settle, regions inhabited by Pre-Columbian, Nomadic or Barbarian peoples as if those regions were unsettled.

In addition, Industrial nations can improve the gold point value of cultivated regions and benefit from both higher maximum city size and increased Public Works limits.

3.3.1 Colonizing Inhabited Regions

Regions occupied by Pre-Columbian, Nomadic or Barbarian cultures can be settled by Renaissance and Industrial nations just as if those regions were colonizable (unsettled) regions.

This includes all *uncontrolled* Wilderness, Jungle, Desert and Steppe regions.

The Colonization of these inhabited regions can be accomplished by the expenditure of 15 GP and 15 NFP for each one (1) GPv of the region. Each allotment of 15 GP and 15 NFP converts one intrinsic GPv to the new culture. The GP and NFP may be expended over a period of time with each GPv conversion occuring when the requisite GP and NFP have been expended.

Each region can be settled in this manner up to the original value of the region. As each new GPv of settlers is completed, the equivalent GPv of 'old' population is destroyed or assimilated. Note that each time a GPv is settled, the region may rise up in revolt against the settlers and if not suppressed by friendly armies the settlement(s) may be wiped out.

If the Inhabited Region to be colonized is adjacent to a controlled land region, then the player may expend the requisite GP and NFP directly. If, however, the Inhabited Region is **not** adjacent to a controlled land region, then the GP and NFP must be moved to the Inhabited Region by a Leader (and fleet, if necessary) and deposited. This requires the use of the *Colonize Inhabited Region* Action (5.2.4).

3.3.2 Improving Conquered Pre-Columbian Regions

Renaissance and Industrial nations may increase the GPv of former Pre-Columbian cultivated regions through the introduction of more efficient farming and ranching techniques. To this end, former Pre-Columbian *cultivated* regions with a GPv of one (1) or two (2) may be increased by 1 GPv (to 2 and 3, respectively) by the expenditure of 15gp/15nfp per region.

Pre-Columbian Cultivated regions with a GPv of 3 or 4 may not be increased. **Exception:** Jungle regions that have become cultivated may **not** be improved.

3.3.3 Improving Cultivated Regions

Industrial nations of at least Tech Level 12 may enhance Cultivated (terrain type **C**) regions which are worth 1 GP (on the **base map**[1]) by spending 15gp/15nfp to increase them to 2 GP in value. 2 GP (base map) provinces may be increased to 3 GP provinces by the expenditure of 20gp/20nfp. 3 and 4 GP provinces may not be improved. All other kinds of provinces (C2, W, etc.) may not be improved.

3.3.4 Urban Populations

Cities in Tech Level 12 (or greater) nations may be improved beyond the size limitations of the Middle Ages and the Renaissance, as per the following table:

Table 3-5. Maximum City Size by Terrain

Region Terrain	*Maximum GPv*
C2	20
C / I	15
W	10
M / J	8
S / D	6
T	5

Agricultural improvements in the kinds of plows, seed, sewers, medicine, threshing machinery, etc. also improve the amount of Public Works that can be built in a province or city:

Table 3-6. Maximum Public Works for TL 12

Region Terrain	Maximum PWB
C2	GPv × 30

[1] See http://members.cox.net/cruenti/lote/lote.html for a copy of the Base Maps. Thanks, Tyler!

C	GPv × 20
Other Terrains	No Change
Cities	GPv × 15

3.3.5 City Co-Builds

A Religious Order, Primacy, or Merchant House can add a *complete* GPv to a city (with the permission of the cities 'regular' owner). This gains the co-builder an appropriate improved status in the city. This new status depends on the size of the city the GPv is being added to, and any pre-existing status the co-builder may have in the city:

Table 3-7. City Build/Status Increase

Starting GPv	*Status Increase*
1	+4
2	+3
3	+2
4 or more	+1

Table 3-8. Pre-Existing Status Levels

Status Level	*MH*	*PRA*	*RO*
0	None	None	None
1	MA	CH	OH
2	MF	AB	OO
3	BO	MN	OP
4	CI	CA	OE

So, to get the final status the co-builder has in the city, check the starting size of the City to find the amount of increase, then the Pre-Existing chart to see where you're beginning.

Example

Adding a GPv to a 1 GPv city with no pre-existing status results in a 2 GPv city with CI/CA/OE status. Adding 1 GPv to a 9 GPv city containing a Church results in a 10 GPv city with a (1+1 = Level 2, or Abbey) status.

The co-builder must pay the **full GP and NFP cost** of the newly added GPv. The construction of this city GPv may be implemented as a Project (and undertaken over multiple turns), though the new GPv is not added (and the new status gained) until the entire cost is paid.

The city retains the owning Nations' previous status. That is, if a Merchant House adds a GPv to a city held as Pacified by an Open Nation, the city remains Pacified to the Open Nation.

More caveats:

1. The co-builder must have permission from the owning nation to attempt the build.
2. The city must be of the co-builder's religion.
3. The co-builder must deliver the NFP/GP to the location to effect the build. Usually this requires a Leader (and perhaps ships) to move from the co-builder's Home Office/Holy City/Order Fortress. However, if the co-builder **already** has a status in the city and the city is within the co-builder's Control Web, the city expansion can be implemented without having to move the NFP/GP to the city directly.
4. The co-builder's construction attempt does not collide with the host nation's own build attempt. Native city construction always, takes priority over any co-builds.
5. The city in question is within the co-builder's Action Range of an existing Cathedral/Order Estate/CartelCity or the Holy City/Order Fortress/Home Office.
6. This city addition cannot occur in the same turn as the regular nation adding a city level (as there is a limit of +1 GPv per turn per city). Nor may maximum city (as modified by terrain, and tech level) be exceeded.

3.4 CONSTRUCTION: RAILROAD PROJECTS

3.4.1 Building Railroads

Industrial Nations at Tech Level 12 or higher can build a new type of National Project: the Railroad (RR). Like a Royal Road, a Railroad is built between the center of a province (though usually anchored to a city) and the center of an adjacent province. Like Royal Roads each RR segment (or level of capacity) is a Level One Project with a base cost of 50gp and 25nfp. Unlike other Projects, each RR segment also costs 10 City (generic) yard capacity points.).

A Railroad segment can only be built in a province containing a Friendly city that is within the HBZ, or from a province already containing a Railroad segment that is, in turn, connected to a Friendly city within the HBZ. A Railroad segment can have more than one **level** of capacity.

Railroads built in Desert or Steppe provinces cost an additional 50% over any other modifiers to the Megalithic Construction cost, due to the necessity to import lumber.

A contiguous controlled series of Railroad segments are called a "rail line".

If a Railroad segment must cross a River, a (new) Bridge must be built specifically to carry the railroad. For purposes of keeping the GM from going insane, only one Bridge is required per river crossing, regardless of the number of Railroad levels between the two regions. See Base Rulebook section [5.8.10] for details. A railroad cannot cross a Ferry Point.

3.4.2 Moving Units by Rail

Each level of Railroad can carry 10 cargo points of units per turn in a **single** direction. This is the Rail Capacity of a rail line. Multiple levels of rail between provinces either allow more Cargo moved in one direction, or half as much in each direction.

Example

The RSA has built a rail line from their capital at Great Zimbabwe up to Iesuwayo in Mbundu. Each segment has 2 capacity levels (two tracks, essentially). This means the RSA could move (2 × 10 = 20 cargo) points of units *from* Great Zimbabwe *to* Iesuwayo in 1 AP, **or** 10 cargo in both directions at the same time.

An army (a Leader and one or more units) moving by rail may move the full length of the rail-line in 1 AP if the Cargo-size of the army is less than or equal to the rail line capacity. Larger cargo-requirement armies must be 'shuttled', which each additional block of capacity costing 1 AP per set.

If a rail line 'contracts' due to a segment being below the capacity of the others, extra AP will be spent to unload everyone, shuttle them forward on the lower capacity track, then load them up again. Very messy.

Example

The RSA Second Army needs to move up to Iesuwayo in preparation for loading onto an invasion fleet. The total cargo cost of the army is 160 points. With the aforementioned double-track rail line (with a one-way capacity of 20 cargo per AP), this would take (160 / 20 = 8 AP) to effect.

3.4.3 Rail Communications

Like a Royal Road, a railway enables swift and efficient communications between the capital of a nation and it's attendant provinces and outlying regions. The Homeland Build Zone (and the King's Command and Control Radius) is extended from the capital by a railroad.

The AP cost for HBZ or CCR to enter a region is quartered (multiplied by 0.25) when following a Railroad. Terrain effects (due to mountains, bad terrain, etc.) are still accounted in the cost of tracing the HBZ or CCR, but are quartered as well.

Example

A Danish railroad passes through the city of Venice in northern Italy, the Imperial capital. As a result, the Danish HBZ (with a range of 4) may extend along the rail-line up to (4 × 4 = 16 AP) to the north or east.

3.4.4 Third-Party Railroad Projects

Merchant Houses of the proper Tech Level (12 and above), may embark upon Railroad construction projects for another 'host' nation. In this case the project appears on the Merchant Houses' stat sheet during construction, then moves to the 'host' Nation's upon completion.

The railroad may be constructed with national NFP (provided by the 'host' nation), Project Recruitment NFP (provided by the Merchant House), or a combination. National NFP provided in this way are **not** halved.

The GP to finance the project must be spent by the Merchant House directly (though of course they may be reimbursed by the 'host' Nation). The Merchant House must provide all of the Yard Capacity used to build the Railway.

A Railroad construction Project must begin in a region containing a city capable of producing the Merchant Houses' "generic" Yard Capacity used to fuel the project.

Example

The Norsktrad merchant house secures a contract to build a railway in Persia, from Tehran to Ormuz in Bandar province. A mighty undertaking indeed! To begin, the Norsktrad will have to acquire Cartel City status in either Tehran or Ormuz, than build at least one Merchant Factory to begin providing "generic" Yard Capacity. Once they have an operating Factory, they may begin railway construction.

3.5 CONSTRUCTION: UNIVERSAL WEIGHTS AND MEASURES

Industrial Nations may invest in the Universal Weights and Measures project (UW&M) to establish a standardized system of weights and measures throughout the nation. A nation that completes the UW&M Project will have compatible rail-lines, shipping containers, yogurt flavors, wheel and gear sizes, ammunition calibers, gun barrels, measures of distance, time, weight, mass and volume. In game terms this will be represented by a base Tax Rate increase of 10%.

The base cost of a UW&M Project is 100gp, 10nfp and 2 years. The base cost is multiplied by the Imperial Size of your Nation to get the final, Total Cost.

Example: *Ming China is Imperial Size 13. Implementing a Universal Weights and Measures Project would cost them (13 x 100gp, 13 x 10nfp and 13 x 2 years) 1,300gp, 130nfp and will take at least 26 years.*

3.6 CONSTRUCTION: FACTORIES & YARDS

The construction of all Heavy-prefix, Artillery, Air, Steam and Submarine units requires the use of (in addition to GP and NFP expenditures) **Yard Capacity** of the appropriate kind. Each unit type has a **YrdC** (yard capacity) cost listed on the Build Chart for your Nation. This is the Yard Capacity cost when constructing the unit. In addition, some Projects have a Yard Cost as well.

For most types of nations Factory and Yard Capacity can only be used at a Friendly City within your Homeland Build Zone. Merchant Houses, however, can build **Mercantile Industry Sites** at any location they control at Cartel City (CI) status or better. These Sites provide the House with "generic" Yard Capacity that can be used for building Heavy-prefix units and supporting National Projects.[2]

Each point of Yard size (Air, Ship, Submarine, Aircraft) provides one Yard Capacity point per **turn**.

Yard Capacity may not be saved from turn to turn. Units with a high Yard cost (like a *Steam Dreadnought*, for example) may, however, be built over the course of more multiple turns.

Note the imposition of Yard Costs upon **all** Nations, regardless of Tech Level. This means lower Tech nations (nomads, barbarians, civilized, renaissance, etc.) are also bound by Yard capacities for the construction of Heavy units. Luckily for them, cities and trade centers have an intrinsic Yard capacity for the production of heavy units.

3.6.1 Intrinsic Yard Capacities

Cities, Trade Centers and Port Cities have "generic" Yard Capacities, as noted in the following table.

Table 3-9. Intrinsic Yard Capacity

Source	*Capacity*	*Notes*
Trade Center	5	Usable only by Nomads or Barbarians for the construction of Heavy units (including ships, if in a coastal region).
City	GPv × 5	Usable for the construction of Heavy land units and projects.
Port City	GPv × 5	Usable for the construction of Heavy ships, units and projects.

Note: Port City capacity is **not** separated for ground unit and ship unit construction. There is only one Capacity, reflecting the specialization of port cities for ship construction.

3.6.2 Finding Yard Capacities on the Stat Sheet

The city-based Intrinsic Yard capacity is **not** listed on your stat sheet. You'll need to calculate it, as given in the previous section.

Your Airship/Steamship/Submarine/Aircraft Yard capacities are listed in two locations on your stat sheet. First, in the Controlled Region and City listing, beneath each City or Region where a Yard has been constructed, you will see an entry like this:

Airship Factory (City) (5.0), Finished: Project No. 00138

The number in parentheses indicates **5 points** of Airship Yard capacity in this location. This same information is also shown in your Projects section (at the end of your stat sheet), like so:

00138 NAT Airship Factory (City) 5.0 Tenochtitlán Finished

3.6.3 Building Factories & Yards

There are five kinds of factories and yards that can be built:

- Airship Factories
- Steamship Yards
- Submarine Yards
- Aircraft Factories
- Mercantile Industry Sites

The first four may only be used to construct units of the specified type (airship, submarine, etc). As mentioned above, Mercantile Industry Sites may be used only by Merchant House nations to construct Heavy-prefix units and national projects (either for themselves of for sale to other nations). All Factories and Yards except Mercantile Industry Sites may be built at either a city or within a region, though the costs and maximum number(s) of Yard Capacity points vary by location. Mercantile Industry sites may only be constructed in Cities of Cartel City (CI) status or better.

Airship Factories cannot be built until an **R&D: Airships** project has been completed.

Shipyards cannot be built until an **R&D: Steamships** project has been completed.

Submarine Yards cannot be built until an **R&D: Submarines** project has been completed.

Aircraft Factories cannot be built until an **R&D: Flying Machines** project has been completed.

The maximum number of Factory/Yard Capacity points which can be built in a region or city are as follows:

Table 3-10. Maximum Factory Construction

Location	*Max YC*	*Notes*
City	GPv × 2	This total includes **all** Factories and Yards located at the city.
C/C2 region	GPv	This total includes all Factories and Yards located in the province. Steamship and Submarine Yards may only be built in coastal provinces.
W/I/J region	GPv / 2	This total includes all Factories and Yards located in the province. Steamship and Submarine Yards may only be built in a coastal province.
Other terrains	None	

Note: Wilderness, Island or Jungle capacity is rounded down (so will be 0 for anything less than a 2 GP province).

Example

Sussex is a 3 GPv C province and contains London, a 10 GPv city. The rural areas could contain as many as 3 Airship Factories (or Steamship/Submarine Yards), while the city could contain up to (10 × 2 = 20) Factories and Yards.

[2] Merchant House construction using Merchant Factory capacity is **not** limited to the Merchant Houses' Homeland Build Zone. But it is restricted to Cartel City status cities.

The cost of building a Factory or Yard varies by type and location, as per the following table:

Table 3-5. Factory/Yard Construction Costs

Type	Location	GPc	NFPc	Time
Airship Factory	City	25.0	5	2
	Region	50.0	8	4
Shipyard	Port City	50.0	5	2
	Coastal Region	100.0	10	4
Submarine Yard	Port City	30.0	5	2
	Coastal Region	50.0	8	4
Mercantile Industry	City	5	1	2
Aircraft Factory	City	50	5	2
	Region	75	8	4
Hidden or Underground	Appropriate Region (only)	×2	×2	×2

Note Homeland Build Zone restrictions continue to apply, even to units built at a Factory. See Base Rulebook section [5.4.1] for more details.

Note Mercantile Industry sites can be staffed (built) using Project Recruitment NFP.

Factories and Yards appear on your stat sheet in the Projects section (and as the Project listing below the appropriate City or Region, where the listed **Level** is the capacity of the Factory or Yard).

3.6.4 Moving Factories

An Airship or Aircraft Factory or Mercantile Industry Site may be broken down, crated up and moved to a new location. While in transit the Factory does not produce any Capacity. Moving a Factory point costs 10 GP (or 2 NFP).

The Factory must be moved to a controlled **City** (even if it was originally built in a region).

A Factory may move up to (HBZ Range) Action Points by regular land movement per turn, without requiring a Leader to move the facility. Note that using a Railroad to move your factory may allow you to move it a considerable distance.

Each Factory point requires 10 Cargo points to transport by rail or sea.

A Factory point may be moved by sea on a fleet, commanded by a Leader (mercenary or National). A Leader moving a Factory by sea may use his entire AP allowance (and is not limited by the HBZ AP limitation of land relocation).

Note! For a moved Factory to be useable, it must *still be within the Homeland Build Zone* after relocation.

3.6.5 Capturing a Factory or Yard

If you capture an enemy location (region or city) containing a Factory or Yard, one-half (rounded down) of the Factory or Yard points in the location are destroyed unless you capture the location by surprise[3].

If a captured factory, site or yard is then within the HBZ of the capturing nation *and* the region or city becomes friendly to the capturing Nation, then those Capacity points may be used by the captor. Captured Airship Factories or Mercantile Industry Sites may be moved as per [3.6.4] above.

Exception: Nations with a Slave-based economy may use captured, non-Friendly, Factory and Yard capacity in locations within their HBZ, whether the region or city is friendly or not.

3.6.6 Attacking a Factory or Yard

A Factory or Yard in a location may also be attacked by airships or artillery barrage (from either heavy artillery or ships offshore). In this case, units attack with their Siege strength (and Siege QR), and the factories/yards have a passive Siege strength as per the following table:

Table 3-12. Factory/Yard Defense Strengths

Factory or Yard Type	Siege Strength
Airship and Aircraft Factories, Mercantile Industry	10
Steamship or Submarine Yard	20
City "generic" Yard	15

3.6.7 Hidden and Underground Factories and Yards

Merchant Industry, Airship and Submarine Yards may be constructed as "hidden" or "underground" facilities for twice the cost of the equivalent Regional Yard. This makes them very expensive, but how else are you going to pay for those side-of-the-mountain clam-shell doors which swing open ponderously to let your newly-built airship majestically appear?

Steamship yards cannot be built as "hidden" or "underground", but you should feel free to build them in some out-of-the way location where no one will notice them.[4]

3.6.8 Upgrading Airship Factories

Existing Airship Factories may be upgraded to Aircraft Factories the turn after the R&D: Flying Machines project is completed by the Nation in two ways:

Two (2) Airship Factories can be directly converted into **one** (1) Aircraft Factory.

One (1) Airship Factory can be converted (retooled) to one (1) Aircraft Factory at the cost of 25 GP and 1 NFP. This NFP cost may be provided by Project Recruitment.

[3] And it's up to the GM to say whether a location is captured by surprise or not. In general, however, if a Combat roll is involved, then it's not a surprise capture.

[4] Except some meddling kids and that damned orange dog!

4. RESEARCH AND DEVELOPMENT

The acquisition of a variety of technologies and unit types is controlled by Research and Development (R&D) projects. These are like National Projects, save their completion is not just a matter of men, gold and time.

Each R&D project is assigned a certain number of **Advances** which must be attained before the project is complete. Like increasing an AQR; gold, money and time are invested and each turn a die roll is made by the GM to assess progress.

Depending on the amounts invested, the difficulty of the project, the die roll and a host of modifying factors (your Nations' government type, economy, religious strength, imperial size and university level) you may gain one or two advances, make no progress, or even back up a step as the project encounters some dead-end or obstacle.

When a project is complete, you gain the ability to use the devised technology or unit type, and in some cases you gain one unit (the prototype) of the appropriate type.

When starting an R&D Project you must also provide a project location (either a region or city under your control within the HBZ of your nation).

4.1 R&D PROJECT COST *and* EXECUTION

When starting an R&D project, you **must** invest at least 1 GP and 1 NFP. Thereafter, as each project gains an Advance, your GP investment is zeroed (as for a QR), but your NFP and Time investment remain. On a rough basis, your chances of gaining an Advance on a given turn are equal to:

$$\% = (GP + (NFP \times 5)) + (\text{Number of Years Invested} \times 5) / (\text{Total Advances} + 1)$$

Over the entire life of the project, you **must** invest at least as many NFP as the number of **Advances** required by the project. If your NFP investment is not sufficient to match the next Advance level, then you will not progress until you have provided sufficient manpower.

When a project is completed, all invested NFP are zeroed. Once invested in a project, invested GP and NFP may **not** be withdrawn.

Example

The Pacific Mercenary and Trust Company is attempting to develop an improved *Ithaqua-Sanrio* kerosene engine (via the Internal Combustion Engine project). This project is a level 6 project. PM&T invests 300gp and 4 NFP into the project. The current turn length is 2 years per turn.

The first turn (assuming all supplementary modifiers cancel out), their chances of gaining an advance are (300 + (4 × 5) + (2 × 0)= 320 / 7 = 45%. If they are successful in gaining an Advance, the next turn they will start with 0 GP, 4 NFP and 2 years invested.

While only 4 NFP remain invested in the project, they cannot gain more than 4 Advances, so at some point they will have to commit another 2 NFP to the endeavor.

Note the project, with an Advance requirement of 6 will take (at optimum speed) at least three 2-year turns to complete and more likely six 2-year turns (or more, if the team runs into some obstacle delaying their progress.)

4.2 INDUSTRIAL RESEARCH PROJECTS

The following list of research projects is not inclusive. Other projects may be proposed by the players and accepted by the GM (as the GM sees fit).

4.2.1 Building Factories and Yards

Tech Level Requirement	11+
R&D Requirement	See [3.6.3] above

Enables the Nation to construct the facilities that are required for building advanced units (Steamships, Airships, etc.).

4.2.2 Submersibles

Tech Level Requirement	11
R&D Requirement	None
Advances Required	2

Completion of this project provides the Nation with the ability to build Submarine Yard points, *Submersible* (sm) units and a single SM unit (the prototype). Once the project is complete, work may begin the following turn on any project with Submersibles as a pre-requisite.

A Submersible unit represents two actual Submersibles.

4.2.3 Steamships (Steam Transport)

Tech Level Requirement	11
R&D Requirement	None
Advances Required	5

Completion of this project provides the Nation with the ability to build Steamship Yard points, *Steam Transport* (st) units and a single ST unit (the prototypes). Once the project is complete, work may begin the following turn on any project with Steamships as a pre-requisite.

A Steam Transport unit represents two actual steamships.

4.2.4 Steam Cruiser

Tech Level Requirement	11
R&D Requirement	Steamships, a Steamship Yard
Advances Required	2

Completion of the Steam Cruiser project provides the Nation with the ability to build *Steam Cruiser* (sca) units, as well as a single SCA unit (the prototypes). Once the project is complete, work may begin the following turn on any project with Steam Cruiser as a pre-requisite.

A Steam Cruiser unit represents one steam-powered warship.

4.2.5 Steam Battleship

Tech Level Requirement	12
R&D Requirement	Steam Cruiser, Three Steamship Yards
Advances Required	3

Completion of the Steam Battleship project provides the Nation with the ability to build *Steam Battleship* (sbb) units, as well as a single SBB unit (the prototype). Once the project is complete, work may begin the following turn on any project with Steam Battleship as a pre-requisite.

A Steam Battleship unit represents one steam-powered warship.

4.2.6 Steam Dreadnought

Tech Level Requirement	12
R&D Requirement	Steam Battleship, Six Steamship Yards
Advances Required	4

Completion of the Steam Dreadnought project provides the Nation with the ability to build *Steam Dreadnought* (sdn) units, as well as a single DN unit (the prototype). Once the project is complete, work may begin the following turn on any project with Steam Dreadnought as a pre-requisite.

A Steam Dreadnaught represents one steam-powered warship.

4.2.7 Steam Airship Carrier

Tech Level Requirement	12
R&D Requirement	Steam Battleship, Airships, Six Steamship Yards
Advances Required	3

Steam Airship Carriers are only available if the Airship optional rule is in use.

Completion of the Steam Airship Carrier project provides the Nation with the ability to build *Steam Airship Carriers* (scv) units, as well as a single SCV unit (the prototype). Once the project is complete, work may begin the following turn on any project with Steam Airship Carrier as a pre-requisite.

A Steam Airship Carrier represents one steam-powered warship.

A Steam Airship Carrier can carry and launch two Scout Airships or one Standard Airship.

4.2.8 Super-Heavy Artillery

Tech Level Requirement	12
R&D Requirement	None
Advances Required	4

Completion of the Super-Heavy Artillery (sha) project allows the Nation to build SHA units. See the Industrial Build Chart starting on page 40 for costs. Super-Heavy Artillery can only be moved from region to region (or city to city) by sea (via cargo ship) or by Rail.

SHA units can be used in Siege situations (either on the attack or on the defense) and in protecting Port Cities from attack by hostile Fleets. They are not useful in open field battles.

A Super-Heavy Artillery unit represents one enormous cannon.

4.2.9 Internal Combustion Engine

Tech Level Requirement	13
R&D Requirement	None
Advances Required	6

Developing a reasonable Internal Combusion Engine does not allow the Nation to immediately build any specific unit types, but it is the prerequisite for a whole series of new Projects, as detailed below:

4.2.10 Submarines

Tech Level Requirement	13
R&D Requirement	Submersibles, Internal Combustion, 4 Submarine Yards
Advances Required	4

Completion of this project provides the Nation with the ability to build *Submarine* (ss) units and a single SS unit (the prototype). Once this project is complete, work may begin the following turn on any project with Submarines as a pre-requisite.

A Submarine unit represents two submarines.

4.2.11 Motorized Transport

Tech Level Requirement	13
R&D Requirement	Internal Combustion
Advances Required	3

Completion of the Motorized Transport project allows the Nation to build trucks to move their troops around. See the Industrial Build Chart (starting on page 40) for costs of Motorized units.

Motorized Units have half-again the AP per Year of non-Motorized units. Otherwise they operate as standard Infantry or Artillery.

Nations completing this project gain a **Mechanized** QR. All motorized, mechanized and AFV units fight using the Mechanized QR.

Note! All Motorized units are also *elite* units.

4.2.12 Armored Fighting Vehicle: Landships

Tech Level Requirement	13
R&D Requirement	Motorized Transport
Advances Required	5

Completion of the AFV project allows the Nation to build *Landship* (lsh) units, which are very early, very primitive tanks. The turn after the AFV project has been completed, the Nation may begin research into more advanced (and more useful) varieties of tanks.

Landship units cannot move between provinces, save by Sea (carried in cargo ships) or by Rail. When deployed in battle or siege in a province, the AFV units are automatically destroyed, though the army deploying them gains a bonus to their combat modifier that **turn** in that location.

A Landship unit represents ten armored fighting vehicles.

4.2.13 Airships (Scout Airships)

Tech Level Requirement	13
R&D Requirement	Internal Combustion
Advances Required	2

Completion of this project provides the Nation with the ability to build Airship Factory points, *Scout Airship* (zs) units and a single ZS unit (the prototype). Once the project is complete, work may begin the following turn on any project with Airships as a pre-requisite.

A Scout Airship unit represents two zeppelins.

4.2.14 Standard Airships

Tech Level Requirement	13
R&D Requirement	Airships, Two Airship Yards
Advances Required	2

Completion of this project provides the Nation with the ability to build *Standard Airship* (z) units and a single Z unit (the prototype). Once the project is complete, work may begin the following turn on any project with Standard Airships as a pre-requisite.

An Airship unit represents two zeppelins.

4.2.15 Heavy Airships

Tech Level Requirement	13
R&D Requirement	Standard Airships, Four Airship Yards
Advances Required	3

Completion of this project provides the Nation with the ability to build *Heavy Airship* (zh) units and a single ZH unit (the prototype). Once the project is complete, work may begin the following turn on any project with Heavy Airships as a pre-requisite.

A Heavy Airship unit represents two big-ass zeppelins.

4.2.16 Transport Airships

Tech Level Requirement	13
R&D Requirement	Standard Airships, Two Airship Yards
Advances Required	1

Completion of this project provides the Nation with the ability to build *Transport Airship* (zt) units and a single ZT unit (the prototype). Once the project is complete, work may begin the following turn on any project with Transport Airships as a pre-requisite.

A Transport Airship unit represents two zeppelins.

4.2.17 Diesel Ship Engines

Tech Level Requirement	13
R&D Requirement	Internal Combustion, Steam Transports, 5 Steamship Yards
Advances Required	6

Completion of the Diesel Ship Engines project allows the nation to build diesel (or standard) versions of Steam-type ship projects already completed by that Nation. These would be *Diesel Transport*, *Cruiser*, *Battleship*, *Dreadnaught* and *Aircraft/Airship Carrier*.

Existing Steam-prefix units cannot be refitted for Diesel engines. Existing Shipyards, however, can now be used to build Diesel-type units.

Diesel-type units have improved operating range as well as combat capability over their Steam counterparts.

4.2.18 Armored Fighting Vehicle: Light Tank

Tech Level Requirement	14
R&D Requirement	AFV: Landship
Advances Required	4

Completion of this project allows the Nation to build *Light Tank* (afx) units the following turn. Unlike Landships, the Light Tank moves and fights as a regular combat unit.

A Light Tank unit represents five tracked vehicles (which may be either tanks or armored cars, actually) and their crews.

4.2.19 Flying Machines: Fighter

Tech Level Requirement	14
R&D Requirement	Internal Combustion, Airships (if used), 2 Airship Yards (if used)
Advances Required	3

Completion of this project provides the Nation with the ability to build heavier-than-air *Fighter Aircraft* (af) units (i.e. biplanes). No prototype is provided as a result. Once this project is complete, work may begin the following turn on projects requiring Flying Machines as their pre-requisites.

Nations completing this project must now construct *Aircraft Factories* to build, in turn, the various kinds of Flying Machines as they are developed. These nations also gain an **Aircraft** Quality Rating which starts at one-half of their Airship QR. All units derived from the **Flying**

Machine project and its descendants fight with the Aircraft QR.

A Fighter unit represents ten aircraft, pilots and ground-crews.

4.2.20 Flying Machines: Bomber

Tech Level Requirement	14
R&D Requirement	Fighter, 5 Aircraft Factories
Advances Required	4

Completing the FM: Bomber project allows the Nation to begin using their Aircraft Factories to build *Bomber* (ab) type aircraft units the following turn. The turn after completing the Bomber project, work may begin on projects having FM: Bomber as a pre-requisite.

A Bomber unit represents five aircraft, pilots, and ground-crews.

4.2.21 Flying Machines: Cargo Plane

Tech Level Requirement	14
R&D Requirement	Bomber, 5 Aircraft Factories
Advances Required	1

Completing the GM: Cargo Plane project allows the Nation to begin using their Aircraft factories to build *Cargo Plane* (act) units the following turn.

A Cargo Plane unit represents ten aircraft, pilots and ground-crews.

4.2.22 Parachute Infantry

Tech Level Requirement	14
R&D Requirement	Cargo Plane, 10 Aircraft Factories
Advances Required	2

Completing the Parachute Infantry project allows the Nation to begin building *Paratroop* (pi) units, which fight as Elite Light Infantry, but have the training, equipment and capability to be delivered by Cargo Planes to a target by air.

4.2.23 Aircraft Carrier

Tech Level Requirement	15
R&D Requirement	Battleship, Carrier Fighter(*), Six Shipyards
Advances Required	5

The Aircraft Carrier project can be attempted concurrently with the development of Carrier Fighters. Until both projects are successful, however, neither is finished.

If the Nation already developed Steam Airship Carriers as a ship type, then completion of the Diesel Ship Engines project provides for the construction of Aircraft Carriers. However, the Nation can't actually use them until the Carrier Fighter project is completed.

Completion of the Aircraft Carrier project provides the Nation with the ability to build *Aircraft Carriers* (cv) units, as well as a single CV unit (the prototype).

An Aircraft Carrier unit represents one warship.

An Aircraft Carrier can base four Carrier Fighter and/or Carrier Bomber units.

4.2.24 Flying Machines: Carrier Fighter

Tech Level Requirement	15
R&D Requirement	Fighter, Aircraft Carrier(*), 10 Aircraft Factories
Advances Required	4

The Carrier Fighter project can be attempted concurrently with the development of Aircraft Carriers. Until both projects are successful, however, neither is finished.

Completing the Carrier Fighter project allows the Nation to begin building *Carrier Fighter* (cvf) units the following turn.

4.2.25 Flying Machines: Carrier Bomber

Tech Level Requirement	15
R&D Requirement	Carrier Fighter, Aircraft Carrier, 10 Aircraft Factories
Advances Required	4

Completing the Carrier Bomber project allows the Nation to begin building *Carrier Bomber* (cvb) units the following turn.

Note that Aircraft Carriers and Carrier Fighters must already be completed before this project can begin.

4.2.26 Mechanized Infantry

Tech Level Requirement	15
R&D Requirement	AFV: Light Tank
Advances Required	3

Completion of this project allows the Nation to build Mechanized versions of Infantry and Artillery (see the Industrial Build Chart starting on page 40).

Mechanized Infantry and Artillery have twice the AP of their base unit types, and include integrated armor (tank, armored car, self-propelled artillery) elements. This substantially increases their combat capability.

4.2.27 Armored Fighting Vehicle: Medium Tank

Tech Level Requirement	15
R&D Requirement	AFV: Light Tank
Advances Required	4

Completion of this project allows the Nation to build *Medium Tank* (afv) units the following turn. Like the Light

Tank unit, Medium Tanks move and fight as regular combat units.

A Medium Tank unit represents five tanks, their crews and supporting fuel trucks, etc.

4.2.28 Flying Machines: Heavy Bomber

Tech Level Requirement	15
R&D Requirement	Flying Machines:Bomber, 10 Aircraft Factories
Advances Required	6

Completing the GM: Heavy Bomber project allows the Nation to begin using their Aircraft factories to build *Heavy Bomber* (ahb) units the following turn.

A Heavy Bomber unit represents two aircraft, crews and ground-support personnel.

4.2.29 Armored Fighting Vehicle: Heavy Tank

Tech Level Requirement	15
R&D Requirement	AFV: Medium Tank
Advances Required	3

Completing the AFV: Heavy Tank project allows the Nation to begin building *Heavy Tank* (fvh) units the following turn. Then there will be some smacky action!

Each Heavy Tank unit represents five tanks, crews and support personnel.

4.3 PROJECT RECRUITMENT

"Specialized" NFP may be acquired by the various kinds of Nations for National Projects (roads, railroads, research and development, mercantile colonies, etc.) through recruitment. The NFP acquired by this process may **not** be used for the construction of cities, troops, fortresses (including field forts) or fleets.

Recruitment is handled by spending blocks of 25 GP and designating a specific project for the recruited NFP. Each 25 GP gains the project 0-5 (1d6-1) NFP.

Only Merchant Houses can use Project Recruitment for regional colonization (via the Merchant Colony project).

Project Recruitment cannot be attempted in the same turn as over-spending NFP. If an Open Nation controls (at Friendly or Homeland status) the 'home' site of an Merchant House, Religious Order or Religious Primacy - and the Open Nation over-spends NFP, then any Project Recruitment attempts undertaken by the House, Order or Primacy in that same turn will fail.

4.4 TECHNICAL ASSISTANCE

A Nation which already possesses the ability to build a unit type (having already completed their own R&D project) may provide help to another nation attempting to gain the capability by providing *Technical Assistance*.

One (1) NFP may be contributed by the assisting Nation to the recipient Nation's project. In addition to satisfying part (or perhaps all) of the NFP requirements for the project, the assistance so rendered reduces the number of Advances required for the project by one (1).

The NFP representing the technicians must be moved by the lending Nation to the project site and then invested in the project.

Conversely, *capturing* one or more Factory points already capable of building a specific kind of unit produces Technical Assistance NFP equal to (# Factories or Yards divided by two, rounded down), which may then be used to jump-start one's own R&D Projects.

4.5 OVERREACHING

A Nation that is only one Tech Level short of a Project's requirements (a TL 11 nation, for example, who wishes to embark on a TL 12 project), may do so if they acquire one or more examples of the item to be duplicated (or Technical Assistance NFP).

The number of Advances required for an Overreach R&D Project is increased by two (2) (which may then be reduced by one (1) by the investment of Technical Assistance NFP).

4.6 ENGINEERS

Industrial Nations (TL 12 and better) may use Siege Engineer units (henceforth referred to as Engineers) to assist with **Construction** Projects (Railroads, Megalithic Construction, Yard Construction, etc.).

Each Engineer unit assigned to a project for an *entire turn* (which means no moving about, no fighting, no sieges, etc.) will add (0-2) NFP and (1-10) GP to the investment tracked for the project. The Siege QR of the Nation provides a modifier to the rolls made to generate the NFP and GP added.

Engineers which provide the *entire* GP/NFP cost of a project must remain at the project site for the full duration of the project.

Engineer units are not useful for Research and Development projects.

5. LEADERS AND ARMY ACTIONS

5.1 REVISED ACTION CAPACITIES

Just like nations during the Middle Ages period, the various kinds of Nations in the Post Medieval period have base Action capacities, based on their culture type. An exception to this are Warship and Transport units, which now calculate their Base Actions per Year from the Navigation Rating of their Nation.

Note that the previous (12-impulse) Action Chart has been replaced by a new 24-impulse Action Chart, Table 8-4, which can be found on page 43.

Table 5-1. Months Per Year Available For Actions

Culture	# of Months
Civilized	6
Seafaring	7
Barbarian	8
Nomadic	8
Pre-Columbian	5
Renaissance Land Units	8
Renaissance Ships	7 + Nav
Industrial One non-Steam Ships	8 + Nav
Industrial One Steamships	See build chart
Industrial One Land Units	9

Table 5-2. Unit Type Modifiers

Unit Type	*Modifier*
Leader	+2
Cavalry	+1
Infantry	+0
Siege	+0
Artillery	-1
Tribe Points	-1

Table 5-3. Equipment Type Modifiers

Equipment	*Modifier*
Heavy	-1
Medium	+0
Light	+1

Table 5-4. Unit Training Modifiers

Training	*Modifier*
Elite	+1
Regular	+0
Inexperienced	-1

Table 5-5. Leader Combat Rating Modifiers

Combat Leadership	*Modifier*
1 – 4	-1
5 – 8	+0
9 – 11	+1

The Unit Training Modifier does not apply to Leaders moving by themselves. If, however, they are moving with a unit type that has a greater Action capacity than they do they acquire the Action capacity of the unit *only while* they act in tandem with it.

The modifiers for Equipment and Training apply to ship units, as well as land units.

The Leader's Combat rating does not affect *his own* Action capability, but that of land units he is commanding instead. If he is commanding ships then his Combat Rating may boost the Action Capacity of the ships and thence his own capabilities. Kind of makes the head spin, don't it?

Example

Lord Captain Jehanli Drake, commanding the Marôcain pirate fleet in the Caribbean, is a L97A leader and he commands a fleet of twelve elite heavy warships. The Marôcain Navigation rating is currently two (2). Drake's fleet gets 7 actions base (Renaissance culture), plus two for the Navigation rating, plus one for Drake being a swell guy, plus one for being elite crews, minus one for the heavy class ships = 10 actions per year. Quite enough to raise the very devil on the coast of Azteca and fill the Marôcain coffers with heavy red gold and their decks with coffles of slaves...

Table 5-6. Regional Terrain Action Modifiers

	Regional Terrain Type					
Culture Type	*c/c2/i*	*w*	*m*	*d/s*	*t*	*j*
Civilized	+0	+1	+2	+1	+2	+2
Seafaring	+0	+1	+2	+2	+2	+2
Barbarian	+0	+0	+1	+1	+1	+1
Nomadic	+0	+1	+2	+0	+2	+2
pre-Columbian	+0	+0	+1	+1	+1	+0
Renaissance	+0	+0	+1	+1	+2	+1
Industrial	+0	+0	+1	+1	+2	+1

5.2 NEW ACTION CODES

The following actions are available only to Renaissance culture Nations.

5.2.1 Retraining Units

Code **RU**
BAC 8 AP
Stat Combat
Results Extant units of one Training Class (Regular, Inexperienced) can be converted to units of the next higher Training Class at a rate of two-to-one. This action can be performed by National or Allied leaders. Mercenary Leaders may not perform this action. The action must be performed at an un-besieged controlled city within the Homeland Build Zone in the case of National leaders and troops. Or within the Allied region, in the case of Allied leaders and troops. Units that are attacked while in the process of an RU action fight at their previous training class (and number). The action is also aborted and must be attempted again.

Example

Ten inexperienced Nisei infantry (10ii) can be converted into five regular infantry (5i) if they expend 8 Leader Actions at a city within the Nisei homeland. If the units were attacked while

retraining then they would fight as 10ii and the action would be aborted.

5.2.2 Explore

Code **EX**
BAC 3+ AP
Stat Charisma
Results The *Explore* action is used by a Leader and (*optionally*) some ship units to attempt to chart the currents, reefs, shoals and waterways of a given:

- Sea Zone
- Inter-Island Arrow
- Open Ocean Arrow
- River Section

Dependent on the quality of the leader (as represented by his Charisma rating) and the current Navigation Rating of the nation in question, the fleet may accrue Mapping points. Each Sea Zone, Inter-Island Arrow, Open Ocean Arrow and River Section has a Mapping requirement that varies between one (1) and fifteen (15). Each successful Explore action attempt gains 1 Mapping point. When the requirement has been satisfied, the Sea Zone is considered 'known' to that nation. Other nations must still map it, if they are to gain 'known' status. Once charted, ships in the possession of these charts (historically called 'rutters') can navigate across explored Sea Zones, Rivers and Arrows without undue risk. However, Hostile Sea Zones still cost the same number of Action Points to cross (there's just less chance of the units being lost in doing so). Open Ocean Arrows are relatively easy to explore, while Hostile Sea Zones will still be difficult to map successfully. Regardless of whether the action succeeds or fails, some of the ships may be lost due to storms, wrecks and / or mutinies. When assessing losses, a Leader counts as **one** ship unit. If there is more than one ship unit present then the Leader will be taken **last** in assessing losses.

5.2.3 Nationalize Monopoly

Code **NM**
BAC 6 King AP
Stat Diplomacy
Results The *Nationalize Monopoly* action is used by a Nation when it has had quite enough of the leeching effects of a Mercantile Combine monopoly on its Trade Revenue. It requires the King to spend about a year of time kicking all of the toadying minions of the Combine out of the country and attempting to restore normal economic relations within his nation. Unfortunately the usual result of such an action is to depress the economy and ruin whatever industry or resource the Combine was exploiting — reducing the Tax Rate…

5.2.4 Colonize Inhabited Region

Code **CIR**
BAC 8 AP
Stat Charisma
Results This is a specialized action used when a player desires to create a Colony in a given Inhabited region that is **not** adjacent to a region controlled by that nation. To this end, the NFP (Colonists) and Gold (Equipment) are moved to the designated area and emplaced though use of the Action. Can only be executed by a National Leader (King, Heir, Prince or Lieutenant). A Leader is required to supervise the emplacement of the colony.
Be aware that inhabited regions that are not already Friendly or actually Unsettled will be intrinsically hostile to colonies. An army should accompany any such effort to deal with the natives, should they become restless.

5.2.5 Destroy Combine Location

Code **DCL**
BAC 2 AP
Stat Combat
Results Allows a national or mercenary leader, accompanied by at least one point of troops (infantry or cavalry) to destroy a designated Combine Location such as a Merchant Factor, or a Branch Office and so on. This is, of course, assuming that the location is not defended by Combine troops or fortifications.

6. EMPIRE BUILDING

6.1 RULING WIDE DOMAINS

The location of the King governs what territory can be effectively controlled. High Bureaucratic Level and whether or not a King is performing a *Rule* action help determine the efficacy of the Command Control Radius (**CCR**) on outlying regions. The CCR is roughly equal to your Bureaucratic Level, plus the King's Administration stat (which is usually unknown to you). If the Nation has regions and / or cities that are outside the Command Control Radius at the **end** of the turn, then they may revolt.

6.1.1 Tracing the Command Control Radius

This happy activity is undertaken by the Game Master at the end of each turn for each country, just to see if your realm has grown too fat to be supported by the efforts of your King and his dutiful bureaucrats. To determine this the Game Master traces lines of communication from your Capital (if you have one) or from your King (if you do not have a Capital) to your outlying regions, counting each CCR point as if it were an Action Point for a "messenger" traveling from the King (or Capital) to each outlying region.

For these purposes, each *complete* Trade Conduit counts as **one** Sea Zone for CCR 'movement'. A complete Trade Conduit is one that is 'anchored' at each end by a controlled Port City of at least Tributary status. If a controlled region exists at the very end of a Sea Trade route and is not anchored by a controlled Port City, then the Sea Zones in the last portion of the Sea Trade Route are counted individually for CCR purposes.

If it is impossible to move from the Capital to the outlying region with (CCR) Action Points, then the region is 'out of control' and may revolt.

The usual movement point costs are used for tracing, with some supplemental items, as detailed here:

Table 6-1. CCR Costs Supplement

Border / Region Type	*CCR Cost*
Controlled land border along a Royal or Postal Road segment	× ½
Unsettled (empty, Barbarian / Pre-Columbian / Nomadic) regions	+1
Any kind of region within the tsetse Fly zone	+1
'Anchored' Trade Conduit	1

Example

The Nisei realm has established control of various colonies in Scandinavia. To support control of these regions, the Shogunate possesses controlled port cities in the intervening area. At the end of the given turn, a Nisei general has completed the conquest of the province of Norway. The Game Master, checking the CCR, observes that the Nisei capital is in the province of Gosiute on the Great Inland Sea in the New World. The Nisei BL is 8, and their current Shogun has an Administration of 4 and is, in fact, ruling this turn.

This set of circumstances gives the Nisei a CCR of (8 + 4 = 12ap). From Gosiute an Imperial Highway runs through the provinces of Bohogue, Lemhi, Shoshone, Crow, Teton, Okoboji, Minnewaska, Yankotnai and into Chippewa. The CCR cost for this section is seven due to the Road. The base would be fourteen (9 for nine controlled regions, plus 5 for two Type-2 and one Type-1 mountain range in the way), divided by two for the Royal Road passing through all of the involved provinces.

From Chippewa the Nisei have a set of Trade Conduits anchored on the cities of Joetsu in Chippewa, Achi in Sokoki, Nuri in Naskapi, and Ukio-ye in the Shetlands. This adds three more to the cost of the CCR (1 CCR for the Trade Conduit between Joetsu and Achi, 1 CCR for the Trade Conduit between Achi and Nuri, and 1 CCR for the Trade Conduit between Nuri and Ukio-ye) bringing it to 10 of its 12 points. Since the city of Bergen in Hordaland is still under siege by Nisei and Dakotan troops, it cannot serve as an 'anchor' city. The last section must be traced sea zone by sea zone then, which adds another 3 to the total CCR cost (1 CCR for *Viking Bank* , 1 CCR for the *Skaggerak* and 1 CCR for the region of Norway) bringing it to 13.

Well, this is one more than the Nisei can support with their CCR of 12, so the army in Norway will be checked for revolt at the end of the turn. Should they pass the check and move out of the province, then the province will be checked for revolt each turn following while it remains out of the CCR.

6.2 INTER-NATIONAL BANKING

There exist, in all nations blessed with Renaissance (Tech Level 8 or better) culture; banks, moneylenders, brokers and merchants who are willing to loan varying sums to their own rulers, and perchance, to the rulers of neighboring realms with which their own princes are of good accord. Obviously, such merchants must make a little something for their troubles and risks. Thus the borrower must pay a hefty interest surcharge as well as the amount initially borrowed.

Depending on the decision of the player for each civilized nation, other nations may also borrow from his banks, paying a greater fee.

Of course, if a borrower defaults on a loan and is unable or unwilling to pay it back, the bank suffers. When a bank is forced into collapse by defaulting borrowers the economy of the nation suffers. This is reflected as a reduction in the Tax Rate of the country whose bank has suffered collapse, for one or more turns.

More than one loan may be taken out against the national bank simultaneously as long as the total value of all currently outstanding loans does not exceed the amount of funds on hand for the bank to lend.

The profits from these loans are re-invested in the bank, improving its value and ability to lend.

6.2.1 The Loan Payment Schedule

The principal and the interest of a loan are due at the **beginning** of the **third** turn following the initial borrowing, regardless of the number of years per turn. The loan may, of course, be paid back before this time, but the full amount (principal + interest) must be paid.

6.2.2 Catholic National Banks

For campaigns that began at 1000AD (or earlier) the proscription against usury stands until the Roman Pope rescinds it. Though unlikely, this state of affairs may still pertain during the Renaissance Period.

While this edict is in effect, only the Papacy can make external (nation to nation) loans. A very small amount of internal loan capacity is available to each Catholic nation. Once the Papacy rescinds the proscription, then each Catholic nation may make external loans to one another.

Note that Catholic nations may freely acquire external loans from non-Catholic national banks during this time.

6.2.3 Banking System Status

Each national banking system has one of three statuses; **Open**, **Closed** or **Defaulted**. An Open bank can make loans to its own national government and other nations with which its nation is currently trading. A Closed bank can only make loans to its own national government. A Defaulted bank cannot make any loans to any nation until it recovers from the default.

Each player may decide whether his nation's bank will be Open or Closed at the beginning of each turn, as it pleases him. Additionally, a player may declare that his bank is closed to specific other nations, even ones that he is trading with. Finally, Nations that are not trading with his nation at the beginning of the turn cannot take out loans from his bank.

6.2.4 Loan Capacity

Each national bank has a basic loan capacity, which is roughly (though not exactly) equal to that nation's Base Revenue. In addition to this base capacity, nations may invest in their bank by spending Gold Points. Each 10 GP spent increases the Loan Capacity of the bank by one (1) GP. These investment increases are permanent until such time as the bank suffers a collapse due to a defaulted loan (or loans), whereupon the investment increase is reduced by the amount of the defaulted loan. If the defaulted loan is greater than the amount invested, then the base capacity is reduced by the remainder.

The Loan Capacity of a nation may also grow or shrink as its base assets grow and shrink. When loans are paid back, the profits are invested in the bank, raising its capacity.

6.2.5 Interest Rates

Each national bank has two interest rates, one for internal loans (to the national government) and one for external loans (to other governments). The internal rate is generally 30%, the external 40%. Bank systems that have defaulted and then recover are required to boost their interest rates by 10%, to 40% and 50%, respectively.

The player can increase or decrease the **external** loan rate as he pleases, bearing in mind that the minimum is the current **internal** loan rate and the maximum is the highest rate that the international market can bear.

The internal loan rate can also be adjusted, with a minimum of interest rate of 20%.

The calculation to determine the amount that must be repaid is:

$$\text{Amount Owed} = \text{Principal} + (\text{Principal} \times \text{Interest})$$

There is no compounding for each year or turn. If you borrow 100gp at 30%, you pay back 130gp. Very simple. This amount is due whether your nation takes one turn or three to pay back the outstanding loan.

Example

Florence has a Loan Capacity of 450gp. Charles the Bold of Burgundy wants to borrow 200gp to finance a war against the Swiss cantons. The Florentine internal rate is at 25% (due to internal stock manipulations and excessive government intervention in the Florentine banking houses) and the external is 43%. Charles will have to pay back (200 × 1.43 = 286gp) to the Florentines. When (and if) he does so, the Florentine bank will get 36gp in cold hard cash, which will be invested, raising the base value of the Bank by (36 / 10 = 3.6) GP.

6.2.6 Loan Defaults

When a nation that has taken out a loan is unwilling or unable to repay the loan principal and interest on the beginning of the third turn, that nation is considered to have defaulted on the loan. The bank that made the loan, and the nation that the bank resides in, suffer a number of deleterious effects.

- First, the defaulting nation (regardless of the type of Nation — Normal, Religious, Merchant House, it matters not!) loses all external borrowing privileges to **all** banking systems, including the nation's own until such time as the Penalty Payment is made.
- Second, the bank defaulted against loses loan capacity equal to the amount of the forfeited loan (starting with any Investment and proceeding to the Base Capacity thereafter). If the bank capacity is reduced to zero or less then the Bank has Collapsed.
- Third, the tax rate of the nation with a bank in collapse is reduced by the same proportion of the banking capacity that was lost for the following turn. The turn thereafter the Tax Rate is reduced by half of that proportion, and the third turn by one quarter of the proportion. On the fourth turn the nation regains its full tax rate.

Any current Government Investment is reduced (wiped out) by defaulted loans. If the base capacity is reduced, it recovers during the turns that the Tax Rate is reduced. During this period loans may still be taken out by allowed parties (that is, NOT those who defaulted) to the maximum of the reduced Capacity. If the bank Collapses, however, **no loans** may be taken out until the bank regains its full capacity (that is, four turns later).

Example

Charles the Bold of Burgundy, having previously borrowed 200gp from the Florentine banks, launches his campaign against the Swiss and the southern German cities and is utterly trounced at the battle of Nancy. So crushing is his defeat that he is forced to default on a large number of loans, including the one to the Florentine banks.

So. The initial Florentine capacity was 450gp, and Charles borrowed 200gp. He, then, has defaulted on 44% of the Florentine capacity. This means that the next turn, the Florentine Tax Rate (normally, say, 100%) will be reduced by 44%, to 56%. Needless to say, this will not please the Florentine government (and in fact will lead to the collapse of the Florentine merchant republic and lead to the foundation of the first of a series of tyrannies and eventually the establishment of a Dukedom and autocratic rule). The second turn following, the base Tax Rate (again, say its 100%) will be reduced by half of the forfeited percentage, or 22% to 78%. The third and final turn of the process the Florentine Tax Rate will be 89%, as the reduction will be 11%.

6.2.7 Penalty Payments

Nations that have defaulted on loans from foreign banks must make Penalty Payments in order to resume taking out foreign loans. The Penalty Payment is twice the total amount of any defaulted loans. Once this large pile of cash is paid, then the defaulting nation's foreign borrowing rights are restored.

6.2.8 Rebuilding a Collapsed Bank

Once a bank has collapsed, you have to rebuild it by paying out bags of cash. In short, you have to pay 4gp per GP of the bank before it collapsed. Yes, it is quite expensive, but those are the breaks.

These payments may be spread out over several turns, but the bank is not restored until all of the money has been paid. At that point it will reset its value to that of your base economy.

7. THE MERCHANT HOUSE

The **Merchant House** is a new Nation type, like an Open Empire, Secret Empire or Religious Primate. It represents the great mercantile cartels and companies of the late Renaissance and the age of Imperialism. The primary emphasis of a Merchant House is to develop a world-spanning web of trade contacts, monopolies and eventually political power that enable it to shake the foundations of the great Nations and direct their policies to its own ends.

It's about money, really. A Merchant House is not geared towards fighting a land war in Asia. It exists in a symbiotic relationship with the Open Empires, providing them with services and receiving various trade concessions in turn. Since the Merchant does not have access to a large source of manpower (and what manpower it does receive will doubtless go into ships to protect and expand its trade routes) it is vulnerable to the greater military power of the Open Empires. However, a Merchant House can generate more money from trade and the local economies than can an Open Empire.

Playing a Merchant House also requires much more skill at diplomacy and cunning than a raw Empire throwing armies around the world. Various trade arrangements and pacts will need to be established if the Merchant House is to flourish and expand.

7.1 POWERS OF THE MERCHANT HOUSE

Like Secret Empires or Religious Primacies, Merchant Houses have a number of special capabilities that set them apart from the more mundane world of the Open Empire. These capabilities are:

- Monopolies
- Colonies
- Cartel Trade
- Mercenary Brokerage
- Trading Via Road Networks
- Divisional Offices

7.1.1 Controlling Monopolies

A Merchant House can establish one or more Monopolies in Nations (Open Empires) that it associates with. Each monopoly represents the control of a specific portion of the National economy, like the trade in salt, or slaves or amber or grain. A Monopoly, once established, effectively transfers a Trade Value point from the Nation to the Merchant.

Controlling one or more Monopolies also improves the competitive ability of the Merchant House: each Nation granting the House at least one Monopoly increases the National Market Value of the House by 0.01.

Note! This means that if you're looking to improve your NMV, you want monopolies from multiple nations.

Each nation is worth a certain number of Monopolies, in total, equal to the square-root of its total Trade Value, rounded up. Therefore if a nation has a Trade Value of, say, eight, then the number of Monopolies that could be established within its economy is three (2.8 rounded up). Each successfully established Monopoly reduces the Trade Value of the Nation by one and increases the Trade Value of the Merchant by one.

$$m = \sqrt{tv}$$

M is the number of possible monopolies (rounded up).
TV is the Trade Value of the nation granting the monopolies.

Establishing a Monopoly can be achieved in one of two ways:

- The Nation in question can grant the Merchant House a monopoly within its borders in return for services rendered, or cold hard cash, or a cut in the action as a result. This arrangement is purely between the players of the Nation and the Merchant. The granting Nation can revoke a 'granted' Monopoly at any time. A variant of this kind of Monopoly acquisition is where a Nation is forced to grant a Monopoly as part of a peace settlement between the Merchant (or its allies) and the Nation.
- The second kind of Monopoly is one acquired via the *Acquire Monopoly* action, where the Merchant seizes control of a Monopoly through purely economic means. This kind of Monopoly is much harder to achieve than the first, but cannot be 'expelled' by the Nation at its whim. An acquired Monopoly can only be removed by the Nation executing a successful *Nationalize Monopoly* action. In this event the Trade Value represented by the Monopoly is destroyed and the Monopoly is removed.

Example

The Khemer East Africa company has its eye on the trade in slaves and gold coming out of the Ethiopian highlands, an area that is controlled by the Lion Kingdom of Judah. The Khemer, however, are a Renaissance nation and the Judah are only Civilized. Why, they barely have gunpowder — foolish savages!

So the Khemer approach the Judah king and offer him several shiploads of cannons and powder in exchange for monopolies on gold and slaves. The Judah nation has a Trade Value of 16, so there are (16 ^½ = 4) possible monopolies to be acquired. The Judah, desiring the guns, agree and fork over 2 monopolies (and two of their own trade value points) to the KEAC. The KEAC trade value is increased by two as a result, and the Judah trade value is reduced to 14. For the moment, anyway, both sides are satisfied.

7.1.2 Establishing Colonies

In addition to the normal methods of establishing Colonies a Merchant House may also attempt to establish colonies through the *Establish Colony* action (See Section [7.4.5] below). By this means a Combine attempts to establish a new Colony in any qualifying region within (Trade Range) Action Points of an 'anchor' city that it controls. Unlike the colonies established by Open Nations, however, Mercantile Colonies do not necessarily require the expenditure of NFP to settle them.

Settling a region (either inhabited or uninhabited) costs 15 GP and 15 NFP per GPv.

A Merchant House may acquire the NFP for a Colony via Project Recruitment (see section [4.3] on page 23).

In addition, a Combine may expend its own NFP in establishing a colony.

Example
The Khemer East Africa Company decides that it wants to expand into new, raw material rich, areas in South Africa. The present culture in that area is Pre-Columbian, so even though there are populated regions along the coast the KEAC can settle the regions directly. A leader, Lord Prahvarata, is sent with a small fleet down into the region of Transkei off of the Cape Francis sea zone. He lands and attempts an Establish Colony action. By good luck, this succeeds. He has brought 15 NFP and 15 GP with him on his fleet, so this converts one of the two GPv of the province.

7.1.3 Cartel Trade

Since a Merchant House is more efficient than an Open Nation at conducting trade (well, in the majority of cases...) it may make financial and political sense for a Merchant to handle the Sea Trade being conducted between a **pair** of Open Nations. In this case the Merchant House provides all of the Merchant Shipping for **one** of the nations involved and receives the proceeds of that trade (for their Cartel partner).

The Merchant's NMV, MSP, Trade Range and Conduits are used in place of the Nation that it is replacing the shipping for in this case. The nation whose trade is being handled is called the Cartel Nation hereafter. The *other* trade partner is called the Target nation.

The Merchant House opening (or accepting) a cartel trade route must have a **Branch Office** status or better in the base port cities of *both* the Cartel and the Target nation.

Example:
The AEIC wants to establish cartel trade between Arnor (from Schwarzkastel) to Ethiopia (to Gozer). The AEIC *must* have a Branch Office or better in both Schwarzkastel and in Gozer. Note the MSP for this route may be based at any AEIC port with capacity.

There are a number of advantages to cartel trade:

- The Merchant House NMV is higher than regular nation NMV allowing more gold to be squeezed from the route!
- Merchant House Trade Ranges are generally higher than regular nations, allowing fewer MSP to carry more trade, which also increases revenues.
- Due to the Merchant Houses' trade network cartel trade may be the only way for two regular nations to trade with one another, also increasing revenue.

The disadvantages are in the realm of coordination between the Merchant and the cartel Nation, of figuring out what the Merchant House cut is, and redistributing the gold produced by this trade. These responsibilities fall upon the Merchant House player to handle.

Additional Restrictions include:

- Trade between a Cartel nation and a Merchant House cannot be carried by a *second* Merchant House.
- Land trade between adjacent nations cannot be carried by a Merchant House.
- A Merchant House may only handle one Nation's trade on a given trade route, **not** both!
- If the Cartel nation revokes Cartel Trade rights to a route, that route reverts to the Cartel nation. Cartel Trade rights can be assigned to a different Merchant House on the following turn (or thereafter).
- When a Merchant House takes over another Nations' trade route(s) for the purposes of Cartel Trade, the MSP for the route **must** be based at a port city where the Merchant House has sufficient free capacity.

The gold generated by Cartel Trade goes to the **Merchant House** at the end of the turn. The Merchant must then figure out how much to give to the Cartel Nation, who gets it the **next turn**. This one-turn delay may be a disadvantage.

7.1.4 Mercenary Brokerage

A Merchant House may also become the broker for mercenaries operating in their area. When this occurs, players wishing to hire mercenaries must negotiate with the House instead of bidding directly on the mercenaries themselves. The Merchant house shoulders the responsibility of feeding and equipping the mercenaries, however, if there is no business.

To acquire this business, a Merchant leader must succeed in an *Establish Mercenary Brokerage* action (see section [7.4.11]) in a specific geographic area (which corresponds to the Merc Pool). Thereafter, the Merchant House must pay the mercs **at least** the minimum of 0.5 GP per unit per turn, or more if they are hired out.

Should the Merchant ever fail to pay this minimal support, they will lose their Broker's rights and will have a substantial number of angry mercenaries to deal with! This will also happen whenever a Merchant House player fails to turn in orders for a turn.

Of course, another Merchant House can always attempt to steal this lucrative trade from whoever is the current broker. Ah, the price of business!

7.1.4.1 Adjusting Mercenary Pool Composition

A Merchant House that acts as broker for a mercenary pool may adjust the composition of the pool by rebuilding the units therein at their own cost. For example, a pool with 20i may be converted into 10c and 10i if the broker house pays the cost to build 10c.

7.1.4.2 Hiring Mercenaries from a Broker

Certain areas have a *Hiring Contact* for the mercenaries. If there is a Hiring Contact, those wishing to hire mercs must contact that player to make a bid for the mercenaries, otherwise, the bid will be ignored. Note also that mercenaries must be hired at a **City** within the Geographical Zone covered by the Mercenary Pool. If a group of mercenaries move out of their Regional area into another, they may be hired at the location they ended the previous turn.

7.1.4.3 Breaking a Brokerage Agreement

An unfriendly Merchant House may attempt to disrupt an existing Brokerage agreement by attempting an Establish Mercenary Brokerage action (EMB) of its own.

If successful, the existing agreement is broken, removing the other Merchant Houses' control of the Pool. On a

following turn, the 'attacking' Merchant House must succeed at a *second* EMB action to acquire a new agreement with the Mercenary Pool.

Note that this requires at least two turns of activity and two separate, successful, EMB actions.

Defending against a hostile EMB is effected by attempting an EMB on a Pool you control. Note however, that a particularly bad failure at protecting your own Pool will cause the Mercenaries (who are by nature fickle creatures) to revert to non-agreement status.

7.1.5 Trading Via Royal Road & Railroad Networks

While Open Nations are restricted to only trading with adjacent land neighbors, Merchant Houses may take advantage of Royal Road and/or Railroad networks to trade *through* one or more Nations to another, which may be land-locked and otherwise barred from trade.

To open an Overland Trade Route, the following conditions must be met:

1. A contiguous Royal Road or Railroad must link the **capital** of the landlocked power to a **port city**, from which a sea trade route must exist that reaches the Home Office of the Merchant House (unless, of course, the port city is itself the Home Office). **Or** the Royal Road / RR may connect the Home Office directly to the land-locked capital. A contiguous Royal Road or Railroad may be comprised of any combination of individual Royal Road or Railroad links.
2. The Merchant House must have at least a **Branch Office** in the Capital of the land-locked trading partner and at least a **Merchant Factor** (or better) in each city through which the Royal Road / RR passes to reach the capital of the land-locked power.
3. The Nation(s) controlling the intervening area (cities and regions through which the Royal Road or Railroad passes) must give their explicit permission to the Merchant House to carry this trade through their demesne. Of course, such a Nation may choose to levy a tax on this trade…
4. The length of the land-bound (Royal Road / RR) portion of the trade route cannot be longer (in AP) than the Trade Range of the Merchant House, divided by two (2).

When the Trade Route is established it will appear as a Sea Trade route with a Distance equal to the AP necessary to reach from the port city to the land-bound capital, plus any Sea Zones necessary to reach from the port city to the Home Office.

Only the Merchant House may allocate MSP (in this case, not only ships, crews and warehouses, but pack animals, drovers, caravan masters, etc.) to the overland trade route.

7.1.6 Division Headquarters

A Merchant House having:

- Two or more BL
- Two or more Infra
- One or more cities controlled at Cartel City or Friendly status

May designate *one* appropriate qualifying city within CCR Action Points of the Home Office (by land or sea), as a **division headquarters**.

Once the Division Headquarters is designated, pairs of BL and Infra may be transferred from the Home Office to the Division Headquarters by paying the "Moving Your Capital" cost for each pair of points, as noted in Base Rulebook section [10.1.3].

BL and Infra must be transferred in pairs.

Upon the loss of a Lieutenant due to leader death, a new Lieutenant is generated at either the Home Office or the Division Headquarters, whichever is *closer* to the location where the Lieutenant died.

Only Lieutenants are replaced in this way. All other Leaders (King, Heir, Prince) appear at the Home Office.

The Division Headquarters may also be used as an endpoint for trade routes. The Trade Route distance of such a 'subordinate' route is equal to the distance from the trade partner to the division headquarters and then to the Home Office.

Should the Home Office be lost due to enemy action or the destruction of the host city, the Division Headquarters *automatically* becomes the new Home Office.

In the event of the Merchant House suffering a Dynastic Faliure/Civil War of some kind, it is very likely the Division Headquarters will revolt, founding a new Merchant House.

7.2 HOUSE CONTROL LEVELS

Merchant Houses are not restricted in the kinds of control that they may exert over cities and regions controlled by them. They may have all of the usual control types (Allied, Tributary, Friendly and so on) but you should be aware, as a player, that the Imperial Size modifier for a Merchant House is quite high. As a result, it is not likely to be cost effective for a House to control large territories — unless the House has grown very rich and can afford the Infrastructure.

There are, however, some special control status's that apply only to Mercantile Houses:

Table 7-1. Merchant House Control Statuses

Control Status	Code	Taxes	Agro	NFP?	Trade ?	Base?
Merchant Agent	ma	0.10	0.00	No	Yes	Yes
Merchant Factory	mf	0.20	0.10	No	Yes	Yes
Branch Office	bo	0.30	0.20	No	Yes	Yes
Cartel City	ci	0.40	0.30	Yes	Yes	Yes
Home Office	ho	0.50	0.40	Yes	Yes	Yes
Merchant Colony	mcl	1.00	0.00	Yes	Yes	Yes

Taxes This is the taxation percentage that the Merchant House receives of the Regional or City GPv and Public Works.

Agro This is the rate at which a given status produces and consumes Agro.

NFP? Indicates whether the Merchant House receives any NFP from the location / control status. Cartel Cities do not provide as much NFP as does a Home Office.

Trade? Indicates whether the location under this control status adds to the International Trade Value of the Merchant House.

Base? Indicates whether a Port City containing one of these statuses can provide harborage for House merchant shipping points. Only a Branch Office status (or better) can serve as a Conduit Anchor.

Note that Merchant Houses are creatures of cities, and efforts to create Control Statuses in regions suffer a negative modifier. In addition, only Agents, Factories and Colonies may be created in the provinces (regions). Branch Offices, Cartel Cities and the Home Office **must** be in a city.

As with Secret Empires and Religious Primacies, a Merchant House control status can only increase one level per turn. So, you cannot establish a Cartel City directly — you must have first acquired an Agent, then created a Factory, then expanded that operation to a Branch Office before attempting to create a Cartel City.

7.2.1 Mercantile Agent

The Agent (**ma**) is the first level of control status that a Merchant House can exert on a given city or province. It represents a local office and a minimal network of contacts, arrangements and interest. Some revenue is generated by the Agent's local dealings. No NFP are produced, however, and a location containing an Agent does not add to the Trade Value of the Combine. An Agent, however, can serve as a base for Intel activities.

An Agent may be acquired in either a region or a city.

An Agent does not interfere with any Open Nation control statuses that may exist in the city, and can coexist with up to ten Agents of other Mercantile Houses.

7.2.2 Merchant Factory

The Factory (or Factor) (**mf**) is the second level of control status that a Merchant House can exert on a given city or province. It represents a local office, warehouses and a growing network of contacts, arrangements and interest. Some revenue is generated by the Factory's local dealings. No NFP are produced, however, and a location containing a Factory does not add to the Trade Value of the House. A Factory, however, can serve as a base for Intel activities.

A Factory can be established in either a region or a city.

A Factory does not interfere with any Open Nation control status's that may exist in the city, and can coexist with up to three Factories of other Merchant Houses.

7.2.3 Branch Office

A Branch Office (**bo**) represents a more substantial interest in the local economy. The revenues from local operations are increased and the possibility of acquiring a Monopoly in the national economy is opened up. Like a Factor, a Branch Office can serve as a base for Intel operations and as a location for hiring Mercenaries.

A Branch Office may be established in a region or city.

A Branch Office does not interfere with the control statuses that an Open Nation may have in respect to the location. A Branch Office may coexist with either two Factors of other Merchant Houses or one other Branch Office. A Branch Office in a Port City allows the House to base Merchant Shipping Points in the city.

7.2.4 Cartel City

A Cartel City (**ci**) is restricted, as the name implies, to cities only. With this level the Merchant House has assumed essentially direct **civilian** control over the city government. The city counts for the Combine's Trade Value and the majority of the revenues and a portion of the NFP produced by the city are collected by the House. Military and Political administration of the city may still be retained by an Open Nation, however, and a portion of the NFP produced by the city is available to the House.

A Cartel City status can only be established in a **City**.

A Cartel City can also serve as a base for Intel operations, Merchant Shipping Points and hiring Mercenaries. Like the Branch Office or Factory, a Cartel City status does not interfere with any Open Nation control status' in the city. It cannot, however, coexist with any other Merchant House status, even the Agents of another House.

7.2.5 Colony

A Colony (**cl**) is a special case of region, being directly controlled by the House in all respects. The revenue, if any, that it produces is entirely gathered by the House. So too are any NFP that are produced by the Colony. A Colony may only share a control status in the region with a Pre-Columbian, Nomadic or Barbarian culture while there are unconverted GPv left. No other Mercantile Combine or Renaissance or Civilized statuses can exist in the region.

A Colony can be established in either a region or a city.

When a Colony is complete — that is all of the GPv in an Inhabited Region are converted, or the maximum possible GPv has been achieved in an Unsettled Area — the control status changes to Friendly.

7.2.6 Home Office

The Home Office (**ho**) is the cornerstone of the Merchant House. It serves as the focus for the entire operation, as well as the origin of the Homeland Build Zone for the House. It is the seat of the House government — that is the Bureaucratic Level, Infrastructure, Intel Ratings and University. Each Combine can only have one Home Office at a time, though the Home Office can be moved like a Capital from it's original location to another location of at least Cartel City status at any time (as explained in **Base Rulebook** section [9.1.3]).

The Home Office produces full gold and NFP revenue from its location, and cannot coexist with any other kind of Merchant House status. It can, however, coexist with any Open Nation status. A Home Office allows the Merchant House to base Intel Operations and Merchant Shipping Points from its location and to hire Mercenaries.

7.3 MERCHANT HOUSE RESTRICTIONS

Merchants operate under a number of restrictions, as delineated in the following sections.

7.3.1 Societal Bases

Due to its nature, a Combine can only be of the *Clan*, *Caste* or *Open* societal types.

7.3.2 Economic Bases

Only the *Guild* and *Free* Economic bases are available to a Combine.

7.3.3 Government Types

Only the *Oligarchy* and *Dictatorship* government types are available to a Combine.

7.3.4 Limited Manpower

This is the primary restriction on the Merchant House. They just do not get very much in the way of NFP. You will find, if you are playing a Merchant House, that you must adjust your playing style to avoid land wars (unless fought by mercenaries) or any kind of protracted conflict that may reduce your fleet assets.

7.3.5 Agricultural Requirements

Unlike Open Nations, Merchants do not produce Agricultural Points or consume them from regions and/ or cities that the Merchant House controls under the special Merchant House control statuses listed in the next section, with the following exceptions:

Any regions or cities that the Merchant House controls with a 'regular' control status (Allied, Friendly, etc.) produce Agro for the House and consume it as well. Colonies established by the House produce and require Agro (if they are a City) to support.

Also note that troops (infantry, warships, siege) consume food too! So if the Merchant House has men under arms, they will need agro points to feed them.

7.3.6 Troop Support

Should a Merchant House have regular troops (infantry, artillery, warships, etc.) then they pay the usual rate of troop support for these units. Soldiers have to be paid, right?

However, unlike Open Nations or Primacies, Merchant Houses must also pay support on the **Merchant Shipping Points** that they maintain on trade routes. Those boats and crews are the lifeblood of the merchant house, they need pay, equipment, repairs, etc. This support will appear as "Troop Support" on the Merchant House stat-sheet.

Each MSP requires 0.1 GP per turn in support, adjusted for turn length, of course.

7.3.7 Controlling the Domains of a Merchant House

The House traces a chain of administrative control through its control statuses (which are also called "sites"). If any site is isolated from the others, it will degrade one level per turn, eventually being eliminated. Action Range is the critical stat in maintaining control over a far-flung Merchant House.

- Each *Cartel City* or *Colony* must be within (Action Range) Action Points of the Home Office, a Cartel City, a Colony, or a region or city controlled by the House at Tributary or better.
- Each *Branch Office* must be within (Action Range) Action Points of the Home Office, a Cartel City, a Colony, or a region or city controlled by the House at Tributary or better.
- Each *Factory* must be within (Action Range) Action Points of a Branch Office, a Cartel City, a Colony, the Home Office, or a region or city controlled by the House at Tributary or better.
- Each *Agent* must be within (Action Range) Action Points of a Factory, Branch Office, a Cartel City, a Colony, the Home Office, or a region or city controlled by the House at Tributary or better.

When tracing the Action Range, you count regions as if you were moving a merchant leader through them in regular movement. Mountains and hostile terrain hinder, therefore, and roads and seas benefit.

A Merchant Leader, however, may move out of the Control Range of the Merchant House (on any number of missions) and will not revolt, unless provoked by a hostile power. Once that leader creates a Control Status, however, it must be within the Control Range (as noted above) of the Merchant House, or the leader will be checked for revolt.

A Merchant Leader that revolts will then establish his own merchant house in the location.

7.3.8 Movement of Merchant Leaders

Merchant Houses leaders do not pay the additional AP for entering an uncontrolled region or city if a) the leader's House has a control status of MA or better in the region / city, or b) the region / city have the same *language* as the leader's Merchant House.

This applies, **unless** your Merchant House has been Discredited (see [7.4.8] on page 34) in the controlling nation, in which case they count as Uncontrolled, in which case you have to spend an extra 1ap to move through each area.

7.4 MERCHANT ACTIONS

In addition to the regular Actions available to Open Nations, there are a number of new Actions that are specific to the Merchant House. All of these actions chances of success can be improved by spending Gold in support of them. In addition, some actions' chances of success can be improved by the *Support Diplomacy* (SD) or *Battle Assistance* (BA) Intel actions.

Table 7-2. Merchant House Actions Table

Action (Code)	*Applicable Intel*	*Costs*
Acquire Agent (aa)	Support Diplomacy	2 AP and 3 GP
Establish Factory (emf)	Support Diplomacy	3 AP and 5 GP
Open Branch Office (obo)	Support Diplomacy	6 AP and 10 GP
Acquire Monopoly (amn)	Support Diplomacy	8 AP and 25 GP
Found Cartel City (fct)	Support Diplomacy	8 AP and 25 GP
Establish Mercantile Colony (ecl)	Battle Assistance	8 AP and 25GP / year

Gain Preferential Treatment (gpt)	Support Diplomacy	3 AP and 25 GP
Discredit Competitor (dcm)	Support Diplomacy	6 AP and 25 GP
Seize Location (zl)	Battle Assistance	5 AP and 10 GP
Establish Mercenary Brokerage (emb)	Support Diplomacy	12 AP and 25 GP
Destroy Location (dl)	Battle Assistance	3 AP and 5 GP

7.4.1 Acquire Agent

Code **AA**
BAC 3+ AP and 3 GP
Stat Diplomacy
Results Can be attempted in any Region or City within (Action Range) AP of, or adjacent to, a location controlled by the Combine. If successful, it creates an Agent control status in the location. Chances of success are increased by spending gold to support the action and by Support Diplomacy actions. Hostile religion, different language and distance from other controlled locations are detriments to this effort.

7.4.2 Establish Factory

Code **EMF**
BAC 3+ AP and 5 GP
Stat Diplomacy
Results Can be attempted in any Region or City already containing an Agent. Chances of success are increased by spending gold to support the action and by Support Diplomacy actions. Hostile religion, different language and distance from other controlled locations are detriments to this effort.

7.4.3 Open Branch Office

Code **OBO**
BAC 6+ AP and 10 GP
Stat Diplomacy
Results Can be attempted in any location that already contains a Factory status. If successful, it upgrades the Factory to a Branch Office status. Suffers from the same detriments to success that an *Establish Factor* action does. Can also benefit from gold and Support Diplomacy actions.

7.4.4 Found Cartel City

Code **FCT**
BAC 8+ AP and 25 GP
Stat Diplomacy
Results A Branch Office in a city can be expanded to a Cartel City status through the FCT action if there are no other existing Merchant House statuses in the city. If another House has a Factor or Branch Office in the city already, it would need to be withdrawn or destroyed before a Cartel City could be founded. Again, gold and Support Diplomacy actions can increase the chances of success.

7.4.5 Establish Mercantile Colony

Code **ECL**
BAC 8 AP plus the Colony GP/NFP cost
Stat Combat
Results The ECL action is attempted by a Merchant leader in the target province. This action is used if the target province is not adjacent to a location controlled by the Combine at least Branch Office (or Tributary) status. Battle Assistance actions can also be used to increase the chances of success. See section [7.1.2] for more details.

7.4.6 Acquire Monopoly

Code **AMN**
BAC 8+ AP and 25 GP
Stat Diplomacy
Results Attempting to acquire a Monopoly requires at least a Branch Office in the Capital of the nation that the Monopoly will be acquired from. If no Capital exists, than a city in the target nation's homeland region will suffice. If no such city exists, than the Merchant House *may not* establish a monopoly.
This action, which produces a Monopoly despite any agreement from the Nation in question, is difficult to achieve. However, if the majority of locations (cities particularly) in the Nation already have some kind of Merchant House control status in them, then the chances of success are improved. Lots of cash in bribes helps.
Maintaining a Monopoly requires that the Merchant House maintain a control level in the Capital/Homeland city of Branch Office or higher. If the Branch Office (or better) status is destroyed for any reason the Monopoly is lost and the 'borrowed' Trade Value point reverts to the Nation.
This action can also be used to convert an existing 'granted' monopoly to an 'acquired' monopoly to help secure it from the whims of local governments.

7.4.7 Gain Preferential Treatment

Code **GPT**
BAC 3+ AP and 25 GP
Stat Diplomacy
Results The GPT action can be undertaken in a Nation where the Merchant House has at least a Branch Office. Its effect is to adjust the Trade Route Duration for a trade route between the Merchant House and the Nation upwards. This has the effect of increasing the revenues gained from the trade route as taxes or levies are relaxed and the House gains better access to the National markets. If there are numerous Merchant locations (Factors, Branch Offices and so on) in the Nation, the chances of success are greater.
A GPT can also be used to reverse the effects of a Discredit Competitor action taken by a rival.

7.4.8 Discredit Competitor

Code DCM
BAC 6+ AP and 25 GP
Stat Diplomacy
Results Once you realize that other Merchant Houses are edging in on your action in some Nation, you begin to think about ways to kick them back to whatever

misbegotten land they came from in the first place. The DCM action is one of the tools that you have available to deal with other Merchants. A specific DCM action must be directed against one of the following kinds of targets:

- A competitor's Monopoly (a difficult target).
- A competitor's Preferential Treatment (an moderate target).
- A competitor's movement in the Nation (an easy target)

You must have either at least a Branch Office in the same Nation that is providing the Monopoly or the Preferential Treatment to attempt the action. If your effort is successful, then your competitor may loose the Monopoly, or have the Trade Duration of his Sea Trade Route to this Nation reduced. For DCM effects on Merchant House leader movement, see section [7.3.8].

This action and it counterpart, *Gain Preferential Treatment* (GPT) can be undertaken on the same target nation by two or more competing Merchant Houses. In this situation, each GPT action cancels out one DCM action and vice versa. Any remaining result is implemented.

7.4.9 Seize Location

Code ZL
BAC 5+ AP and 10 GP
Stat Combat
Results A Leader (hopefully backed by some combat units – warships and infantry) attempts to directly attack and take over another Combine's control status.

7.4.10 Destroy Location

Code DL
BAC 3+ AP and 5 GP
Stat Combat
Results A Leader (hopefully backed by some combat units – warships and infantry) attempts to directly attack and destroy another Combine's control status in a specific city or region.

7.4.11 Establish / Break Mercenary Brokerage

Code EMB
BAC 12+ AP and 25 GP
Stat Diplomacy
Results This effort is directed against a geographic areas Mercenary Pool in an attempt to become the controlling broker for those mercenary *condotierri*. See section [7.1.4] for more details.

7.4.12 Other Actions Undertaken by Combines

There are many activities that a Combine may undertake in support and pursuit of its mercantile policies. They are not limited to the actions shown above. Here are some activities that you may be interested in undertaking to expand your own sphere of business and limiting the influence of others:

- Piracy against other Combine's merchant fleets. Particularly in areas that you are expanding into.
- Supporting Open Nations that are fighting against other Open Nations that support your competitors.
- Fighting limited, mercenary-led, wars against weak nations to force them to grant you Monopolies and Trade Concessions.
- Piracy against the merchant fleets of Nations that you are trading with so that your Merchant Shipping expands into the deficit of hulls that this leaves. Piracy will also get you more shipping if you are lucky.
- Convincing Open Nations to destroy the locations and control statuses of your competitors.

7.5 Munitions and Heavy Machinery Export

All Nations with the proper Yard Capacity may build the following kinds of units for export to other, less-technologically endowed, nations:

- Heavy Infantry or Cavalry (as Gun points)
- Clipper-ships, Warships and Transports
- Artillery
- Steamships
- Airships
- Submarines

The construction of units for Export requires the usual number of GP and Yard Capacity (of the proper type) expended by the constructing nation. Export units require the expenditure of **no** NFP to build. Export units are noted on the stat sheet by their code's enclosure in parentheses.

Example
The Pacific Mercenary and Trust company builds 10 Heavy Artillery units for export to Prester John. These units would be listed on the PM&T stat sheet like so: 10(ha).

The Cargo requirement of an Export unit is one-half the cost of the regular unit. Once built and moved (or sailed by a 'ferry crew', in the case of ships) to the purchasing nation, the Export unit is expended to upgrade an existing national unit to a new type, as per the following table.

You may, of course, upgrade your own National units (if they are far from home) with Export units.

Upgrading a unit (or group of units) takes 6 AP, and in the case of ship units, must be undertaken at a Port City or Port Area (which includes a coastal region containing a port city).

Table 7-3. Export Unit Conversion(s)

Export Unit	Turns…	…Into
(hi)	**i** or **ei**	**hi** or **hei**
(hc)	**c** or **ec**	**hc** or **hec**
(hw)	**w**	**hw**
(ht)	**t**	**ht**
(xa)	**xi**, **xei** or **xc**, **xec**	**xa** or **xea**
(a)	**i**, **c** or **ei**, **ec**	**a** or **ea**
(ha)	**i**, **c** or **ei**, **ec**	**ha** or **hea**
(st)	**t**	**st**

(ca), (bb), (dn)	**w** (nfp equivalent)	**ca**, **bb**, **dn**
(zs), (z), (zh), (zt)	**c** (or **d**)	**zs**, **z**, **zh**, **zt**
(ss), (sn)	**w**	**ss, sn**
(m)	**w**	**m**
(af), (ab)	**ei**	**af, ab**
(ti), (mi)	**i**	**ti, mi**
(ta), (ma)	**a**	**ta, ma**
(lsh), (afx), (afv), (afh)	**c**	**lsh, afx, afv, afh**

Note National units upgraded by the delivery of export arms continue to fight with the Quality Rating of the nation employing them.

Note When crewing an export Steamship (of any of the varying kinds), you must convert an NFP equivalent number of warship units to the NFP build cost of the steamship.

7.6 MERCANTILE CONSTRUCTION

With the introduction of Factories and Yards (of all kinds), the Merchant House gains the capability to build different kinds of units in cities outside their immediate Homeland Build Zone.

Note: This is an exception to the usual Yard and Factory rules and **only** applies to Merchant House construction.

A Merchant House may build any kind of unit for which they have the technology, gold, NFP and yard capacity at their Home Office. In addition, they may build any kind of unit (assuming they have the yard capacity) at any *friendly* city within their Homeland Build Zone.

Cartel Cities (both within and without the HBZ) containing a Mercantile Industry site (or other factory or yard) may be used to build:

- Units of the type constructed by the specific Yard or Factory (Airships, Steamships, Submarines).
- Export Munitions (guns, artillery, ships) using the "generic" Yard Capacity of any Mercantile Industry points present in the Cartel City.
- Railroads using the "generic" Yard Capacity of any Mercantile Industry points present in the Cartel City.

Regular units (including ships for use by the Merchant House itself), must be constructed with the Homeland Build Zone (and most likely at the Home Office).

8. CHARTS AND TABLES

8.1 THE STAT SHEET

Table 2-1. Technology Levels

TechLevel	Culture Types
001	Pre-Columbian / Seafaring
002	Pre-Columbian / Barbarian / Nomadic / Seafaring
003	Civilized / Pre-Columbian / Barbarian / Nomadic / Seafaring
004	Civilized / Barbarian / Nomadic / Seafaring
005 – 007	Civilized / Seafaring
008 – 011	The Renaissance
012 – 015	Industrial Stage One
016 – 019	Industrial Stage Two
020 – 022	Industrial Stage Three

Table 2-2. National Culture Modifiers

Cultural Type	Modifier
Industrial Four	1.4
Industrial Three	1.3
Industrial Two	1.2
Industrial One	1.1
Renaissance	1.0
Seafaring	0.9
Civilized	0.8
Barbarian	0.7
Nomadic	0.6
Pre-Columbian	0.5

Table 2-3. Terrain Type Tax Multiples

Terrain	Culture						
	I1	*R*	*C*	*B*	*N*	*S*	*P*
c2	1.0	1.0	1.0	1.5	2.0	1.0	1.0
C	1.0	1.0	1.0	1.0	1.5	1.0	1.0
W	0.5	0.5	0.5	1.0	0.3	0.5	1.0
M	0.5	0.3	0.3	0.5	0.2	0.2	0.5
S	0.5	0.3	0.3	0.2	1.0	0.0	0.2
D	0.2	0.2	0.2	0.2	0.5	0.0	0.2
T	0.2	0.2	0.2	0.3	0.0	0.0	0.2
I	0.5	1.0	1.0	1.0	1.0	1.5	1.0
j	0.2	0.3	0.3	0.5	0.2	1.0	1.0
o	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 2-4. Army Status Troop Support Modifiers

Status	*Description*	*Modifier*
A	Administering	1.0
B	Being Besieged	2.0
C	On Campaign	2.0
E	Sneaking Around...	0.0
G	In Garrison	1.5
M	Mutinious!	0.0
N	Normal	1.0
P	Prisoner	0.0
R	Ruling	1.0
S	Besieging A City	2.0

Table 2-5. Terrain Troop Support Modifiers

Terr.	*I1*	*R*	*C*	*B*	*N*	*S*	*P*
M	1.5	1.75	2.0	1.0	2.0	2.0	1.5
S	2.0	1.5	2.0	1.5	0.0	2.0	1.5
T	2.0	2.0	2.0	1.5	2.0	2.0	1.0
D	2.0	1.75	1.5	1.5	1.0	1.5	1.5
J	1.5	1.5	1.5	1.0	1.5	1.0	1.0
W	1.25	1.0	1.5	1.0	1.5	1.5	1.0
C	1.0	1.0	1.0	1.0	0.1	1.0	1.0
C2	1.0	1.0	1.0	0.5	0.1	1.0	1.0
I	1.0	1.0	1.0	1.0	1.0	0.5	1.0
O	2.0	2.0	2.0	2.0	1.0	2.0	1.5

Table 2-6. Garrison Terrain Modifiers

Culture	*c*	*c2*	*w*	*s*	*j*	*i*	*d*	*m*	*t*	*o*
PreColumbian	1	1	1	2[c]	1	1	2[c]	1	2	1
Seafaring	1	1	2	2[c]	2	1	2[c]	2	2	1
Civilized	1	1	2	2[c]	2	1	2[c]	2	2	1
Barbarian	2	2	1	2[c]	1	1	2[c]	1	2	2
Nomadic	1	2	2	1[c]	2	1	1[c]	2	2	1
Rena./Indust1	1	1	2	2[c]	1	1	1.5[c]	1	2	1

Notes

- All regions requiring a cavalry garrison (those marked with a [c]) can be garrisoned with infantry or field forts in twice the cavalry amount. An exception to this applies in the case of regions where there is no Cavalry in use (pre-Cav Count America, or South Africa).
- All listed numbers are factors that are multiplied by the Region Resistance Value.

Table 2-7. Maximum Region Status by Religion

National RS	*Regional Religion.*		
	Same	*Tolerant*	*Hostile*
1	F	F	A
2-3	F	F	EA
4-5	F	A	EA
6-7	F	EA	T
8-9	F	EA	NT
10	F	T	P/PT

Table 2-8. Maximum Region Status by Terrain

Regional Terrain	*Controlling Culture.*					
	R / I1	*C*	*B*	*N*	*S*	*P*
C2 (Intns Cult.)	Hm	Hm	Hm	Hm	F	Hm
C (Cultivated)	Hm	Hm	Hm	Hm	F	Hm
W (Wilderness)	F	F	Hm	EA	FA	Hm
M (Mountain)	EA	FA	F	T	EA	FA
S (Steppe)	EA	FA	T	F	NT	FA
D (Desert)	EA	FA	T	F	NT	EA
T (Tundra)	F	F	F	NT	T	F
I (Island)	Hm	F	F	T	Hm	F
J (Jungle)	F	F	EA	NT	EA	F
O (Oasis)	EA	T	NT	A	NT	NT

Table 2-9. Years per Turn

Year Range	Years per Turn	Base Tax Rate
1000-1399	5	100%
1400-1499	4	80%
1500-1599	3	60%
1600-1800	2	40%
1801-1850	1	20%
1851-1900	6 months	10%
1901-1950	3 months	6%
1951+	1 month	2%

Table 2-10. Sea Ratings Maximum Values

Rating	Maximum Value
Navigation	Tech Level / 2
Trade Range	Tech Level – 2
Conduit Limit	Tech Level / 2

Table 2-11. New Trade Ranges

Original Culture Type	*New Trade Range*
Civilized	4
Seafaring	5

Table 2-12. Conduit City Minimum Status

Nation Type	Minimum Status for Conduit City
Open Nation	Tributary
Religious Primacy	Holy City or Tributary
Merchant Combine	Branch Office or Tributary
Religious Order	Order Fortress or Tributary

8.2 THE ORDER FORM

Table 3-1. Max. QRs per Culture and Tech Level

Civilized

Tech	*Cavalry*	*Infantry*	*Warship*	*Siege*	*Artillery*
3	5	5	4	5	0
4	7	6	5	7	0
5	8	7	6	8	0
6	9	8	7	10	0
7	10	10	10	12	4

If a Civilized Tech 7 Nation purchases one or more Artillery units from a Renaissance nation they can then begin building Artillery units and investing in their own QR, which starts at one (1).

Seafaring

Tech Level	*Cavalry*	*Infantry*	*Warship*	*Siege*
1	0	3	4	2
2	1	4	6	4
3	3	5	6	5
4	5	6	7	7
5	6	7	8	8
6	7	8	9	10
7	8	10	12	12

Barbarian

Tech Level	*Cavalry*	*Infantry*	*Warship*	*Siege*
2	3	4	4	4
3	5	5	4	5
4	7	6	5	7

Nomadic

Tech Level	*Cavalry*	*Infantry*	*Warship*	*Siege*
2	5	3	2	2
3	7	4	3	3
4	9	5	4	5

Pre-Columbian

Tech Level	*Cavalry*	*Infantry*	*Warship*	*Siege*
1	0 (1)	3	2	2
2	0 (2)	4	4	4
3	0 (3)	5	4	5

Note: Cavalry is available to Pre-Columbian cultures only after the expiration of the Cavalry Count in that geographic area.

Renaissance

Tech	*Cavalry*	*Infantry*	*Warship*	*Siege*	*Artillery*
8	11	12	12	15	6
9	11	14	15	17	9
10	12	15	17	20	11
11	13	16	20	23	13

Industrial One

Tech	*Cavalry*	*Infantry*	*Warship*	*Siege*	*Artillery*
12	14	18	27	26	20
13	14	20	30	29	22
14	14	22	34	32	24
15	15	24	37	35	26

Industrial Two

Tech	*Cavalry*	*Infantry*	*Warship*	*Siege*	*Artillery*
16	15	26	40	38	30
17	15	28	42	41	32
18	15	30	46	44	35
19	15	32	48	47	40

Industrial Three

Tech	*Cavalry*	*Infantry*	*Warship*	*Siege*	*Artillery*
20	15	34	50	50	42
21	15	40	54	53	45
22	15	50	57	57	50

8.3 LEADERS AND ARMY ACTIONS

Table 5-1. Months Per Year Available For Actions

Culture	# of Months
Civilized	6
Seafaring	7
Barbarian	8
Nomadic	8
Pre-Columbian	5
Renaissance Land Units	8
Renaissance Ships	7 + Nav
Industrial One non-Steam Ships	8 + Nav
Industrial One Steamships	See build chart
Industrial One Land Units	9

Table 5-2. Unit Type Modifiers

Unit Type	*Modifier*
Leader	+2
Cavalry	+1
Infantry	+0
Siege	+0
Artillery	-1
Tribe Points	-1

Table 5-3. Equipment Type Modifiers

Equipment	*Modifier*
Heavy	-1
Medium	+0
Light	+1

Table 5-4. Unit Training Modifiers

Training	*Modifier*
Elite	+1
Regular	+0
Inexperienced	-1

Table 5-5. Leader Combat Rating Modifiers

Combat Leadership	*Modifier*
1 – 4	-1
5 – 8	+0
9 – 11	+1

8.4 EMPIRE BUILDING

Table 6-1. CCR Costs Supplement

Border / Region Type	*CCR Cost*
Controlled land border along a Royal or Postal Road segment	× ½
Unsettled (empty, Barbarian / Pre-Columbian / Nomadic) regions	+1
Any kind of region within the tsetse Fly zone	+1
'Anchored' Trade Conduit	1

8.5 MERCHANT HOUSE INFORMATION

Table 7-1. Merchant House Control Statuses

Control Status	*Code*	*Taxes*	*Agro*	*NFP?*	*Trade ?*	*Base?*
Merchant Agent	ma	0.10	0.00	No	Yes	Yes
Merchant Factory	mf	0.20	0.10	No	Yes	Yes
Branch Office	bo	0.30	0.20	No	Yes	Yes
Cartel City	ci	0.40	0.30	Yes	Yes	Yes
Home Office	ho	0.50	0.40	Yes	Yes	Yes
Merchant Colony	mcl	1.00	0.00	Yes	Yes	Yes

Taxes This is the taxation percentage that the Merchant House receives of the Regional or City GPv and Public Works.

Agro This is the rate at which a given status produces and consumes Agro.

NFP? Indicates whether the Merchant House receives any NFP from the location / control status. Cartel Cities do not provide as much NFP as does a Home Office.

Trade? Indicates whether the location under this control status adds to the International Trade Value of the Merchant House.

Base? Indicates whether a Port City containing one of these statuses can provide harborage for House merchant shipping points. Only a Branch Office status (or better) can serve as a Conduit Anchor.

Table 7-2. Merchant House Actions Table

Action (Code)	*Applicable Intel*	*Costs*
Acquire Agent (aa)	Support Diplomacy	2 AP and 3 GP
Establish Factory (emf)	Support Diplomacy	3 AP and 5 GP
Open Branch Office (obo)	Support Diplomacy	6 AP and 10 GP
Acquire Monopoly (amn)	Support Diplomacy	8 AP and 25 GP
Found Cartel City (fct)	Support Diplomacy	8 AP and 25 GP
Establish Mercantile Colony (ecl)	Battle Assistance	8 AP and 25GP / year
Gain Preferential Treatment (gpt)	Support Diplomacy	3 AP and 25 GP
Discredit Competitor (dcm)	Support Diplomacy	6 AP and 25 GP
Seize Location (zl)	Battle Assistance	5 AP and 10 GP
Establish Mercenary Brokerage (emb)	Support Diplomacy	12 AP and 25 GP
Destroy Location (dl)	Battle Assistance	3 AP and 5 GP

Table 7-3. Export Unit Conversion(s)

Export Unit	Turns…	…Into
(hi)	**i** or **ei**	**hi** or **hei**
(hc)	**c** or **ec**	**hc** or **hec**
(hw)	**w**	**hw**
(ht)	**t**	**ht**
(xa)	**xi**, **xei** or **xc**, **xec**	**xa** or **xea**
(a)	**i**, **c** or **ei**, **ec**	**a** or **ea**
(ha)	**i**, **c** or **ei**, **ec**	**ha** or **hea**
(st)	**t**	**st**
(ca), (bb), (dn)	**w** (nfp equivalent)	**ca**, **bb**, **dn**
(zs), (z), (zh), (zt)	**c** (or **d**)	**zs**, **z**, **zh**, **zt**
(ss), (sn)	**w**	**ss, sn**
(m)	**w**	**m**
(af), (ab)	**ei**	**af, ab**
(ti), (mi)	**i**	**ti, mi**
(ta), (ma)	**a**	**ta, ma**
(lsh), (afx), (afv), (afh)	**c**	**lsh, afx, afv, afh**

Note National units upgraded by the delivery of export arms continue to fight with the Quality Rating of the nation employing them.

Note When crewing an export Steamship (of any of the varying kinds), you must convert an NFP equivalent number of warship units to the NFP build cost of the steamship.

8.6 UNIT BUILD CHARTS

Table 8-1. Research & Development Project Summary

Name	TL	Pre-requisites	Advances	Results
Submersible	11	None	2	One Submersible (ss) unit. Can build SS units. Can build Submarine Yards.
Steamships (Steam Transports)	11	None	5	One Steam Transport (st) unit. Can build ST units. Can build Steamship Yards
Steam Cruiser	11	Steamships, a Steamship Yard	2	1 Steam Cruiser (sca). Can build SCA units
Steam Battleship	12	Steam Cruiser, 3 Steamship Yards	3	1 Steam Battleship (sbb). Can build SBB units
Steam Dreadnaught	12	Steam Battleship, 6 Steamship Yards	4	1 Steam Dreadnaught (sdn). Can build SDN units
Super-Heavy Artillery	12	None	4	Can build Super-Heavy Artillery (sha) units.
Internal Combustion Engine	13	None	6	Allows many subsequent projects.
Submarine	13	Submersible, Internal Combustion Engine, 4 Submarine Yards	3	1 Submarine (sn). Can build SN units.
Motorized Transport	13	Internal Combustion Engine	3	Can build Motorized Infantry and Artillery.
Armored Fighting Vehicle: Landships	13	Internal Combustion Engine, Motorized Transport	5	Can build Landship units.
Airships (Scout Airships)	13	Internal Combustion Engine	2	1 Scout Airship (zs). Can build Airship Yards.
Standard Airships	13	Airships, 2 Airship Yards	2	1 standard Airship (z). Can build Z units.
Heavy Airships	13	Standard Airships, 4 Airship Yards	3	1 Heavy Airship (zh). Can build ZH units.
Transport Airships	13	Standard Airships, 2 Airship Yards	1	1 Transport Airship (zt). Can build ZT units.
Steam Airship Carrier	13	Steam Battleship, Airships, 6 Steamship Yards	3	1 Steam Airship Carrier (cv). Can build CV units
Diesel Ship Engines	14	Internal Combustion, Steamships, 5 Steamship Yards	6	Can build diesel (standard) versions of Transport, Cruiser, Battleship, Dreadnaught and Airship Carrier (if already developed).
Armored Fighting Vehicle: Light Tank	14	Internal Combustion, Landship	4	Can build Light Tank (afx) units.
Flying Machines: Fighter	14	Internal Combustion, Airships (if used), 2 Airship Yards (if used)	3	Can build Fighter Aircraft (af) units. Can build Aircraft Factories.
Flying Machines: Bomber	14	Fighter, 5 Aircraft Factories	4	Can build Bomber (ab) units.
Flying Machines: Cargo Plane	14	Bomber, 5 Aircraft Factories	1	Can build Cargo Plane (act) units.
Parachute Infantry	14	Cargo Plane, 10 Aircraft Factories	2	Can build Parachute Infantry (pi) units.
Aircraft Carrier	15	Battleship, Carrier Fighter (*), 6 Shipyards	5	Can build Aircraft Carrier (cv) units.
Flying Machines: Carrier Fighter	15	Flying Machines: Fighter, Aircraft Carrier (*), 10 Aircraft Factories	4	Can build Carrier Fighter (cvf) units.
Flying Machines: Carrier Bomber	15	Carrier Fighter, Aircraft Carrier, 10 Aircraft Factories	4	Can build Carrier Bomber (cvb) units.
Mechanized Infantry	15	Light Tank	3	Can build Mechanized versions of Infantry and Artillery
Armored Fighting Vehicle: Medium Tank	15	Light Tank	4	Can build Medium Tank (afm) units.
Flying Machines: Heavy Bomber	15	Bomber, 10 Aircraft Factories	6	Can build Heavy Bomber (ahb) units.
Armored Fighting Vehicle: Heavy Tank	15	Medium Tank	3	Can build Heavy Tank (afh) units.

Table 8-2. Renaissance Unit Construction Chart

Unit Name	*Code*	*GPc*	*NFPc*	*AP*	*Cargo*	*Combat*	*Siege*	*Support*	*Build At…*
Cavalry	C	5.0	1	9	3	1.5	0.5	0.5	Hm,Fc
Elite Cavalry	EC	10.0	2	10	3	2.3	0.8	1.0	Fc
Heavy Cavalry	HC	6.0	1	8	4	2.3	0.8	0.6	Fc
Heavy Elite Cavalry	HEC	11.0	2	9.	4	3.4	1.1	1.1	Fc
Inexperienced Cavalry	IC	2.5	1	8	3	0.8	0.3	0.25	Hm,Fc
Light Cavalry	LC	4.0	1	10	2	0.8	0.3	0.4	Hm,Fc,Csr
Light Elite Cavalry	LEC	9.0	2	11	2	1.1	0.4	0.9	Fc
Light Inexperienced Cavalry	LIC	1.5	1	9	2	0.4	0.1	0.15	Hm,Fc,Csr
Artillery	A	5.0	1	7	2	2.0	2.0	0.5	Fc
Elite Artillery	EA	10.0	2	8	2	3.0	3.0	1.0	Fc
Heavy Artillery	HA	6.0	1	6	3	3.0	3.0	0.6	Fc
Heavy Elite Artillery	HEA	11.0	2	7	3	4.5	4.5	1.1	Fc
Light Artillery	LA	4.0	1	8	1	1.0	1.0	0.4	Fc
Light Elite Artillery	LEA	9.0	2	9	1	1.5	1.5	0.9	Fc
Elite Infantry	EI	6.0	2	9	2	1.5	2.3	0.6	Fc
Heavy Elite Infantry	HEI	7.0	2	8	3	2.3	3.4	0.7	Fc
Heavy Infantry	HI	4.0	1	7	3	1.5	2.3	0.4	Fc
Infantry	I	3.0	1	8	2	1.0	1.5	0.3	Hm,Fc
Inexperienced Infantry	II	1.5	1	7	2	0.5	0.8	0.15	Hm,Fc
Light Elite Infantry	LEI	5.0	2	10	1	0.8	1.1	0.5	Fc
Light Infantry	LI	2.0	1	9	1	0.5	0.8	0.2	Hm,Fc,Crh
Light Inexperienced Infantry	LII	0.5	1	8	1	0.3	0.4	0.05	Hm,Fc,Crh
Field Fort	F	3.0	1	--	--	5.0	--	0.3	Cr
Siege Engineers	S	4.0	1	8	2	0.5	4.0	0.4	Fc
Wall Point	WP	5.0	1	--	--	--	10.0	0.5	Cc
Elite Warship	EW	8.0	2	9+Nav	(1)	1.5	1.5	0.8	Pc
Heavy Elite Warship	HEW	9.0	2	8+Nav	(2)	2.3	2.3	0.9	Pc
Heavy Transport	HT	4.0	1	7+Nav	(4)	0.8	--	0.4	Pc
Heavy Warship	HW	5.0	1	7+Nav	(2)	1.5	1.5	0.5	Pc
Light Elite Warship	LEW	7.0	2	10+Nav	(0)	0.8	0.8	0.7	Pc
Light Transport	LT	2.0	1	9+Nav	(2)	0.3	--	0.2	Pa
Light Warship	LW	3.0	1	9+Nav	(0)	0.5	0.5	0.3	Pc
Transport	T	3.0	1	8+Nav	(3)	0.5	--	0.3	Pa
Warship	W	4.0	1	8+Nav	(1)	1.0	1.0	0.4	Pc

Table 8-3. Industrial Build Chart

Unit Name	Code	GPc	NFPc	YardC	AP	Cargo	Support	Combat	Siege	Build At...
Airship	Z	15.0	2	2	5	0	3.0	3.0	6.0	Airship Yard
Heavy Airship	ZH	20.0	3	4	5	0	5.0	6.0	9.0	Airship Yard
Scout Airship	ZS	8.0	1	1	7	0	2.0	1.0	1.0	Airship Yard
Transport Airship	ZT	10.0	2	2	7	(1)	2.0	1.0	-	Airship Yard
Cavalry	C	8.0	1	-	10	3	0.5	1.5	0.5	Hm,Fc
Elite Cavalry	EC	16.0	2	-	11	3	1.0	2.3	0.8	Fc
Heavy Cavalry	HC	9.0	1	1	9	4	0.6	2.3	0.8	Fc
Heavy Elite Cavalry	HEC	17.0	2	1	10	4	1.1	3.4	1.1	Fc
Light Cavalry	XC	7.0	1	-	11	2	0.4	0.8	0.3	Hm,Fc,Csr
Light Elite Cavalry	XEC	15.0	2	-	12	2	0.9	1.1	0.4	Fc
Artillery	A	5.0	1	1	8	2	0.5	2.0	2.0	Fc
Elite Artillery	EA	10.0	2	1	9	2	1.0	3.0	3.0	Fc
Heavy Artillery	HA	6.0	1	2	7	3	0.6	3.0	3.0	Fc
Heavy Elite Artillery	HEA	11.0	2	2	8	3	1.1	4.5	4.5	Fc
Light Artillery	XA	4.0	1	1	9	1	0.4	1.0	1.0	Fc
Light Elite Artillery	XEA	9.0	2	1	10	1	0.9	1.5	1.5	Fc
Super-Heavy Artillery	SHA	25.0	2	5	--	10	2.5	(10.0)	10.0	Fc
Motorized Artillery	TA	15.0	2	4	14	5	2.0	4.0	3.0	Fc
Mechanized Artilery	MA	20.0	2	5	18	6	4.0	5.0	4.0	Fc
Elite Infantry	EI	6.0	2	-	10	2	0.6	1.5	2.3	Fc
Heavy Elite Infantry	HEI	7.0	2	1	9	3	0.7	2.3	3.4	Fc
Heavy Infantry	HI	4.0	1	1	8	3	0.4	1.5	2.3	Fc
Infantry	I	3.0	1	-	9	2	0.3	1.0	1.5	Hm,Fc
Inexperienced Infantry	II	1.5	1	-	8	2	0.15	0.5	0.8	Hm,Fc
Motorized Infantry	TI	9.0	2	3	15	4	1.2	2.0	2.3	Fc
Mechanized Infantry	MI	12.0	2	4	20	5	2.4	4.0	2.5	Fc
Force Point (Colonists)	NFP	N/A	N/A	-	8	2	1.0	6.0	-	Fr

Unit Name	Code	GPc	NFPc	YardC	AP	Cargo	Support	Combat	Siege	Build At…
Refugees (Tribal) Point	TBL	N/A	N/A	-	9	10	9.0	5.0	-	Cannot be built.
Light Elite Infantry	XEI	5.0	2	-	11	1	0.5	0.8	1.1	Fc
Light Infantry	XI	2.0	1	-	10	1	0.2	0.5	0.8	Hm,Fc,Crh
Light Inexp. Infantry	XII	0.5	1	-	9	1	0.05	0.3	0.4	Hm,Fc,Crh
Field Fort	F	3.0	1	-	-	-	0.3	5.0	5.0	Cr
Siege Engineers	S	4.0	1	-	9	2	0.4	0.5	4.0	Fc
Wall Point	WP	5.0	1	-	-	-	0.5	-	10.0	Cc
Landship	LSH	5.0	1	2	--	3	1.0	S/A	S/A	Fc
Light Tank	AFX	8.0	1	3	9	3	1.6	2.0	0.5	Fc
Medium Tank	AFV	12.0	1	4	9	4	2.4	4.0	1.0	Fc
Heavy Tank	AFH	15.0	1	5	9	5	3.0	8.0	1.5	Fc
Steam Battleship	SBB	25.0	5	3	6+Nav	(2)	2.5	10.0	4.0	Shipyard
Steam Cruiser	SCA	15.0	2	1	6+Nav	(1)	1.5	6.0	2.0	Shipyard
Steam Airship Carrier	SCV	40.0	8	6	6+Nav	[2] or (6)	3.0	3.0	-	Shipyard
Steam Dreadnought	SDN	50.0	10	6	6+Nav	(3)	5.0	15.0	8.0	Shipyard
Elite Warship	EW	8.0	2	1	11+Nav	(1)	0.8	1.5	1.5	Shipyard
Heavy Elite Warship	HEW	9.0	2	2	10+Nav	(2)	0.9	2.3	2.3	Shipyard
Heavy Transport	HT	4.0	1	2	9+Nav	(4)	0.4	0.8	-	Shipyard
Heavy Warship	HW	5.0	1	2	9+Nav	(2)	0.5	1.5	1.5	Shipyard
Clipper-ship	M	8.0	1	3	11+Nav	(4)	0.6	0.5	0.5	Shipyard
Submersible	SM	10.0	1	2	3	-	2.0	1.0 (*)	-	Submarine Yard
Steam Transport	ST	10.0	1	1	7+Nav	(5)	2.0	2.0	-	Steamship Yard
Transport	T	3.0	1	1	10+Nav	(3)	0.3	0.5	-	Shipyard
Warship	W	4.0	1	1	10+Nav	(1)	0.4	1.0	1.0	Shipyard
Light Elite Warship	XEW	7.0	2	1	12+Nav	-	0.7	0.8	0.8	Shipyard
Light Transport	XT	2.0	1	1	11+Nav	(2)	0.2	0.3	-	Shipyard
Light Warship	XW	3.0	1	1	11+Nav	-	0.3	0.5	0.5	Shipyard
Submarine	SS	25.0	3	4	6+Nav	-	2.5	5.0(*)	-	Submarine Yard
Battleship	BB	25.0	5	3	9+Nav	(2)	2.5	10.0	4.0	Shipyard
Cruiser	CA	15.0	2	1	9+Nav	(1)	1.5	6.0	2.0	Shipyard
Aircraft Carrier	CV	40.0	8	6	9+Nav	[4] or (6)	3.0	3.0	-	Shipyard
Dreadnought	DN	50.0	10	6	9+Nav	(3)	5.0	15.0	8.0	Shipyard
Fighter	AF	5.0	1	1	[2]	2	1.0	1.5	1.0	Aircraft Factory
Carrier Fighter	CVF	6.0	1	1	[1]	2	1.2	1.0	1.0	Aircraft Factory
Bomber	AB	8.0	1	2	[4]	4	1.6	(2.0)	5.0	Aircraft Factory
Carrier Bomber	CVB	9.0	1	2	[2]	4	1.8	(1.5)	3.0	Aircraft Factory
Heavy Bomber	AHB	12.0	2	3	[6]	6	2.4	(3.0)	8.0	Aircraft Factory
Cargo Plane	ACT	6.0	1	2	[4]	2 or (1)	1.2	(1.0)	--	Aircraft Factory

Notes

- **HM** : Unit can be built in the Homeland of the Nation, regardless of wether there is a city there or not.
- **FC :** Unit can be built at a Friendly city within the Homeland Build Zone of the nation.
- **CSR :** Unit type can be built at a controlled Steppe region within the nation. This region does not have to be within the Homeland Build Zone of the nation.
- **« None »** : Unit cannot be built by normal means, but appear as a result of Holy Wars and Crusades.
- **CRH** : Unit can be built in a controlled region within the Homeland Build Zone of the nation.
- **PA** : Unit type can be built in a Port Area within the Homeland Build Zone of the nation.
- **PC** : Unit type can be built at a Port City within the Homeland Build Zone of the nation.
- **FA** : Unit type can be built at a controlled Ferry Arrow.

Yard Cost Type	Source of Capacity
Airship	Airship Factories
Steamship or Diesel Ship	Shipyard
Submarine or Submersible	Submarine Yard
Ship	Port City generic Yard
Heavy Unit	Friendly City generic Yard
Railroad Train	Friendly City generic Yard
Artillery	Friendly City generic Yard
Mechanized, Motorized and AFV	Friendly City generic Yard
Aircraft	Aircraft Factories

Note: Ship unit actual movements rates (for **non**-Steamship or Submarine) units are calculated by adding the Navigation Rating of your nation to the shown AP rate.

Table 8-4. Renaissance Action Chart

AP	J		F		M		A		M		J		J		A		S		O		N		D	
1													X											
2											X		X											
3									X		X		X											
4									X		X		X		X									
5							X		X		X		X		X									
6							X		X		X		X		X		X							
7					X		X		X		X		X		X		X							
8					X		X		X		X		X		X		X		X					
9					X		X		X		X		X		X		X		X		X			
10			X		X		X		X		X		X		X		X		X		X			
11			X		X		X		X		X		X		X		X		X		X		X	
12	X		X		X		X		X		X		X		X		X		X		X		X	
13	X		X		X		X		X		X	X	X		X		X		X		X		X	
14	X		X		X		X		X	X	X	X	X		X		X		X		X		X	
15	X		X		X		X		X	X	X	X	X	X	X		X		X		X		X	
16	X		X		X		X	X	X	X	X	X	X	X	X		X		X		X		X	
17	X		X		X		X	X	X	X	X	X	X	X	X	X	X		X		X		X	
18	X		X		X	X	X	X	X	X	X	X	X	X	X	X	X		X		X		X	
19	X		X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X	
20	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X	
21	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	
22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	
23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

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