XCOM2: Terror from the Deep

The UN-official Strategy Guide

and

Answers to Frequently Asked Questions

Updated September 25, 1995

Edited / Maintained by Kuo-Sheng (Kasey) Chang

0.   READ ME FIRST

0.1   Introduction

Thanks for the tremendous response for XCOM:USG and XCOM2:USG! I've
received feedback all over the world and I thank you all. This is the
fourth revision of the XCOM2:USG. Undoubtably lots of things are
missing despite plenty of feedback since the first version, but with
your help details will be filled...

This latest revision has more information than ever! Updated
information such as new XCOM Webpages have been added, slightly
expanded section on movement, and various other small enhancements...
This is probably one of the longest FAQs out there! (With exception
of
the Official DOOM FAQ, of course...)

I am still taking your suggestions for XCOM3, though I felt obligated
to mention that MicroProse is ALWAYS taking your suggestions as well.
Send your suggestions to "support@microprose.com", with "XCOM3
Suggestions" as the topic. Any way, I still have indirect contact
with
Mr.Gollop and I can pass on your suggestions. I already have most of
the common ones like robot/cyborg units, construction kits for
weapons
and tanks, reorder troops, fix the 80-item limit, etc. etc. Think of
some UNIQUE ones and send them!

0.2   Purpose of this guide

USG was written to help fellow players survive and succeed in the
universe of XCOM/XCOM2. While it tries to do that, and it lists many
tactics, only YOU, the player, can implement those tactics. XCOM2 is
NOT an adventure or RPG game. There are no "keys" for you to "solve"
the game. One given tactic could work for several missions but fail
to
gain you a victory the next time. EVERY mission is a little
different,
and different things CAN and WILL happen each time you play it.

The tactics, strategies, and analyses in USG are compiled from a wide
variety of sources, and most have been tested by dozens of people (if
not hundreds and thousands). If they fail, it is probably because
the
tactic does not apply to your particular situation.

Do NOT assume that you can beat the game just by going through every
page of this guide. It is NOT that simple. All I can do with this

guide is offer you some suggestions. Implementation is up to you.

This guide assumes that you are already familiar with the interface
(which button to click to go upstairs on a lift, etc). If you are not
yet familiar with XCOM2, please read the manual first.

0.3 Credits where credits are due

Thanks to MicroProse and Mythos Games for bringing us such a nice
game... I can't wait to see XCOM3! (Will the graphics be as good as
that new game from Origin?)

Thanks to all the people who have contributed to the previous edition
of XCOM2:USG. Donny Chan, LT; Robert Bellflower, Xenologist;
"FractalLaw", Researcher, and many many others.

Thanks to all the people who have contributed to previous editions of
the XCOM:USG, whom include but are not limited to: William Kang,
CMDR;
Tim Chown, CMDR; Doug Osborne, SGT; Stuart Lamble, SGT; Seth Cohn,
SGT; Bill Soo, SGT; Jeff Shaffer, Economist; Rob Eiben, SGT; Jim
Muchow, SGT; Menachem Pasteich, architect; Paul Close, publicist and
simulation expert; JGrif36366, Researcher, and fellow XCOM players
all
over the world discussing the game on USENET, America On-line and
elsewhere.

Lots of thanks goes to Jeff James (CGW columnist), who shared his
knowledge of the game (and the chapter scheme!) with me and provided
a
lot of exclusive information (non-MicroProse), including the Julian
Gollop interview. We honor you as XCOM Admiral. :-)

0.4 Notes on the USG

XCOM: UFO Defense and XCOM: Terror From the Deep are trademarks of
MicroProse software.

This document's organization is mostly based on Jeff James's book,
Totally Unauthorized XCOM:Terror From the Deep, and is used with
permission.

This document is produced by "Print to File" from MSWord, based on a
Generic printer of 60 lines per page and 1 inch margin all around,
fixed pitch courier 10 font. If you loaded this into Windows or Mac,
try using Courier or other fixed-pitch font as the viewing font.

This document is available FREE of charge. You are under NO
obligation
to send me ANY compensation. However, I request a small donation of
US$5.00 if you believe this USG has helped your game. If you don't
think so, that's okay too. As I said, it's voluntary. Non-US readers
can send some nice local stamps instead.

All readers, PLEASE let me know if there's a confusing or missing
remark... If you find an question about the game that is not covered
in the USG, e-mail it to me. I'll try to answer it and include it in
the next update.

PLEASE do NOT send me disks or requests for utilities mentioned mail
to you. All I CAN do is point you in the right direction (WWW pages,
FTP sites, etc.), and they are listed IN section 1. I have a VERY

long
commute and I REALLY DO NOT HAVE TIME mailing disks (even when you
offer to compensate me for the disks...) Depending on availability
and
time available, I MIGHT e-mail files, so include your e-mail address!

Regretably, some of you found that that I do not reply to regular
mail
very well. I do respond to e-mail promptly though! So if you do
contact me via regular mail, include your e-mail address as well!

0.5 USG Distribution

The USG should be available at the Game Domain WWW

     WWW : http://wcl-rs.bham.ac.uk/GamesDomain

     FTP : ftp://wcl-l.bham.ac.uk/pub/~djh/faqs

Any quick updates for the USG can be found on my own homepage

     http://userwww.sfsu.edu/~kschang

Also check the various XCOM/TFTD web pages listed in Section 1.

If you are on America On-Line, look in the PC Games Forum (keyword:
PCGAMES). Go into the file library, and search under XCOM or XCOM2.

If there is ABSOLUTELY NO WAY you can get this file (how did you know
about this in the first place?) then send me e-mail (see below) and
I'll try to get back to you.

Please don't just mail me and ask "it's nice and do you have an
update
and if so please send it to me". If I have an update I can release I
would have released it already.

0.6 The Editor

I am just a gamer who didn't like the existing FAQ's and strategy
tactics collection available out there, and decided to write my own.
Lots of people like what I did, so I kept doing it.

I also wrote XCOM:USG and Wing Commander 3:USG, with Mechwarrior
2:USG
coming soon!

You can contact me at:

Internet1   kschang@sfsu.edu (preferred)

WWW Homepage   http://userwww.sfsu.edu/~kschang

Internet2   ksc1@aol.com (only if you must, see below)

America On-Line Ksc1 (that's a "one", not "ell")

US Mail   Kasey Chang, 2220 Turk Blvd. Apt. 6
                 San Francisco, CA 94118, USA

If you contact me via Internet e-mail I usually reply within two

working days. Please use the preferred e-mail address if possible, not
BOTH. I only sign onto America On-Line (second address) twice a week
so you won't get a prompt reply if you contact me there.

0.7 Revision history

April 15th, 1995 -- Initial release, quick patch together job from
XCOM USG, missing lots of stuff

June 1st, 1995 -- Major revision, new chapter scheme and all that...
LOTS of details filled

August 17, 1995 -- "Minor" revision, though substantial! Lots of
rewriting, more filling in the details, and other stuff.

September 5th, 1995 -- "Minor" revision, added section on formations
and sweep tactics, plus misc fix-ups.

Table of Contents

1.   WHAT IS XCOM AND OTHER GENERAL INFORMATION

1.1 So what is XCOM2: Terror From the Deep?

1.1.1   What is the "background" of XCOM2: TFTD?

XCOM had defeated the alien invasion which threatened Earth at year
2001. The conflict was then known as "The First Alien War". In a
final
do-or-die attack, XCOM soldiers destroyed the alien homebase at
Cydonia, Mars.

But not all of it...

Deep in the ruins of the Cydonia base, a tachyon beam came to life,
sending out a signal...

To Earth, straight into Gulf of Mexico.

Deep in the oceans, machinery buried for millenia came back to life,
unseen by human eyes...

[cut to]

It is the year 2040. New aliens in flying subs (unidentified swimming
objects, or USOs) have appeared all over the world, often attacking
ships and terrorizing coastal cities.

Thus started "The Second Alien War", and only one force stand in
their
way to conquest of Earth: the XCOM Underwater Experimental Facility.

You are in overall command of XCOM. You will launch and control
fighter subs to attack marauding alien flying subs, send aquanauts to
attack crashed or landed subs, raid alien colonies and other targets
on Earth (if you can find them), keep the sponsor alliances happy and
USOs out of their territories, buy the ammo and weapons you need in
the war, research and build better weapons as your aquanauts bring in
captured alien artifacts for analysis and eventually manufacture our
own copies, pay for everything by contributions from sponsor
alliances
and selling stuff, and eventually figure out the alien threat's
origin
and end the threat once and for all.

If you say "this sounds just like XCOM", you're absolutely right, but
this game is quite a bit harder.

1.1.2   How does XCOM2 play?

In three words, "just like XCOM". If you've never played XCOM, here's
a description:

The game is divided into two main segments: GeoScape and BattleScape.

GeoScape is a 3-D view of the globe, rotate-able and zoom-able. This
is where you control your various bases around the world (with
sonars), your fighter and transport subs (carrying your aquanauts),
your inventory at each base, the subs and alien bases/targets
currently in sight, and so on. Once ground contact is made (transport
landed next to subs, you attack alien base, aliens attack your base,
etc.), the game switches to Battlescape.

Battlescape is an isometric tile-based 3-D combat with viewpoint
similar to SimCity 2000 and Syndicate but lower resolution. The
combat
is turn-based with opportunity fire on the opponent's round (provided
you have enough TimeUnits [TUs] and reaction), with plenty of
different weapons and terrains. Every thing is mouse-driven so game

is
very easy to learn yet hard to master.

1.1.3   If I already have XCOM, should I buy this game?

Yes! If you think XCOM is easy, you'll get CREAMED in this game! (At
least early on). Graphics are somewhat better, though some people
complained of clashing colors. There's more use of shading and
lighting effects, sound is better too, with more soundcards
supported.
Even though the physics are goofy, it's still a great game. For
differences, see [What's the difference between XCOM1 and XCOM2?].

1.2 What do I need to run XCOM2:TFTD?

1.2.1   What type of PC do I need?

You need a 386 or better, minimum of 4 MB RAM, VGA, Mouse, MS/PC-DOS
5.0 or higher. A 286 won't work since XCOM uses a 386 DOS extender. A
386SX will work though.

If you have the bare minimum, 4 megs, do NOT use any SMARTDRV. In
fact, boot clean (If using DOS6+, press F5 during bootup) Low memory
is knwon to cause several bugs. Also, amount of lower memory IS
important, since there are TWO programs involved, one needs
conventional, the other uses DOS extender, so BOTH must be maximized.

Despite the box says SVGA, the game uses only VGA. This is a goof-up
on the part of MicroProse, and caused quite an uproar (charges of
"false advertising", etc. *sigh*)

It comes on four (4) 3.5" HD disks, and needs about 15MB of hard
drive
space to install, more if using disk compression software such as
Stacker or DoubleSpace.

There is a CD version takes up only about 4 megs of hard drive space,
and comes with extneded animation/sound "cut scenes".

1.2.2   What's the difference between disk and CD version?

CD version has a much longer animated beginning and ending. Instead
of
slideshows you get full animations.

You need a double-speed CD-ROM drive (minimum throughput of 280K/sec)
in order to see the animated beginning and ending, or you'll see the
slide-show instead. See TFTD's README.TXT file for details.

You CAN install the CD version onto the hard drive if you have enough
space. Run the INSTALL in the \HARDDISK directory on the CD.

1.2.3   What sound cards are supported?

All major soundcards including Gravis Ultrasound are supported.
Gravis
owners must have FULL set of patches available on HD. If you don't
you
WILL have sound problems.

Advice from MPS: be warned that some "Soundblaster compatible" soundcards may not be really 100% compatible.

1.2.4   Any incompatibility problems?

Windows: The game may run under Windows but I have no information on the PIF settings, sorry. Someone reported that default settings seem to work.

Windows 95: Here's the report I got from a fellow reader.

     From: oskar@surfchem.kth.se

     ...You mention that you don't have any further details whether
it
     runs under Windows 95 or not. It does run fine under Windows 95
     build 490c which is a release that's later than the final beta.
     Just make sure that the DOS-Window you start don't notice that
it
     is running under Windows. There is a check box under Properties
     for the Xcom2 shortcut. It seems that the game slows down
     occasionaly but that might be a problem on other computers as
     well, I don't know.

OS/2: There appears to be a problem with the intro running under OS/2.
The following is from another reader...

     From: Decio Trinca MC5908@MCLink.it

     Thanks for the answer but it seems I solved the problem ... I
     changed the IRQ number in the Sound Blaster Pro settings of the
     setup program and now it crashes only one every twenty-thirty
     times I run the program. To avoid crashing I soon skip the
     presentation with the esc key and the game never locks up: the
     settings I'm using are the default for a dos session I have
     increased only the dpmi memory and nothing more and the game has
     never crashed anymore during playing...

     I'm already Warped and TFTD runs very well crashing only rarely
     and to avoid this I quickly skip with the esc key the intro. I
     have a Sound Blaster Pro Sound Card. I've played the game for
     hours without crashing, in a full screen dos session with the
xms
     and ems limits set to 0 and the dpmi limit set to 20, further
     more I've changed only the dos back. exec. to off, the idle
     sensitivity to 100, and the int during io to on. Thank again.

Other DOS: No compatibility claims was made to any other versions of DOS such as DR DOS, Novell DOS 7.

Other EMM managers: Some have reported problems running with ANY EMM manager such as EMM386, QEMM, 386MAX, Netroom, etc. For more info, see
APPENDIX A: Some Troubleshooting. I personally have ran XCOM2 under QEMM 7.03/7.04 and 7.51/7.53 with no problems, but I have 16 megs of RAM. Your mileage may vary.

1.2.5   Where can I find a demo?

There is a playable demo available on most on-line services such as

America On-Line in the MicroProse forum/ SIG/ roundtable/ whatever. On
AOL, try Keyword: MicroProse

For Internet access, try ftp.microprose.com. The URL is:

     ftp://ftp.microprose.com/pub/mps-online/demos

1.2.6   What about any bugs? Any patches?

TFTDV2 patch has been released by MicroProse back in June.

     ftp://ftp.microprose.com/pub/mps-online/new-versions/tftd*

Some freeze-ups and occasional "blue text bug" has been reported,
though not as pervasive as XCOM1. Some situation can be caused by
"hacking" of data files, so keep a backup if you "hack" files!

If you PERIODICALLY experience blue text bug, disable EMS and
optimize
your memory again. Also try decreasing your SMARTDRV settings. You
are
short on either conventional or extended memory. See [APPENDIX A:
Some
Troubleshooting] for more help.

1.3 What's the difference between XCOM1 and XCOM2?

Quite a few... Here's a list:

        Most battles are underwater -- And it LOOKS underwater too!
        Shots trail bubbles. Aquanauts "leaks" air bubbles, etc.
        Unfortunately there are no fish, currents, etc.
        More terror sites -- you handle terror sites at ports, resort
        islands, cargo ships, and cruise ships.
        More two-stage missions -- Terror sites are now sometimes two
        stage missions. So are the alien colony attacks and artifact
        site attacks. Also, If you attack UFOs, you may discover an
        alien colony nearby. Also see [Gameplay bugs/gripes].
        Your weapons are punier -- Your guns and rifles carry smaller
        magazines, and are really puny at first. Better research some
        better weapons fast... Some weapons also ONLY work underwater.
        Hand-to-hand weapons -- Vibroblade, Thermic Lance, and Heavy
        Thermic Lance are CONTACT weapons, very useful, require
        completely new tactics
        Zrbite is more plentiful -- It's easier to find more Zrbite in
        TFTD than Elerium in XCOM.
        Terrain has more corners and cubbyholes -- Which also makes
        game harder since aliens have more places to hide
        Aliens are smarter and tougher! -- They use grenades and
        disruptor torpedoes (i.e. blaster bombs) more effectively now,
        not to mention harder to kill
        Research is different -- Research tree is really weird now...
        Research lots of dead bodies and live aliens for advances. You
        also need a certain artifact to continue your research
        sometimes...

1.4 Gameplay bugs/gripes

1.4.1   GRIPE: It doesn't FEEL underwater

Ever tried throwing ANYTHING underwater? Try tossing a grenade
underwater in XCOM2. You'll be AMAZED.

1.4.2   BUG: Two-stage missions item losses

In two-stage missions, all aliens stunned from the first part are
counted as DEAD. Any items not carried on the soldiers are NOT
available in the second part.

This is a bug since 1) it was not like this in XCOM1, at Cydonia's
pyramids. 2) the mission screen says that those items should be
available.

[Note: partial fix of this problem is in TFTDV2 patch]

1.4.3   BUG: Underwater Only weapons reaction fire on land

HydroJet Cannon can only be fired underwater, but when on land, a
soldier can reaction fire it...

1.4.4   BUG: Ocassional White/Blue text bug

This is similar to the "Green Text Bug" in XCOM1, usually related to
low-memory conditions.

1.4.5   BUG?: Losing scientists?

pjuang@hawking.nhgs.tec.va.us wrote:

I have an odd observation for you on xcom2 tftd. Whenever I "mass
classified add" hire scientists (i.e. 200 at a time) my lab space
goes
into the negatives (down to -266).   Oddly enough, nothing much
happens. But if I try to put more than 265 (out of 350) on a single
project, the number resets to 0 and I lose those 266 scientists.
Have
you ever heard of this bug? Maybe the scientists got a little
violent
in their competition? (Survival of the fittest at it's finest!)

1.5 Future of XCOM, and related things

1.5.1   Any plans on sequels? Mission disks?

XCOM3 is in the works... See CGW's exclusive interview with Julian
Gollop, head of Mythos games, designer of XCOM. (http://www.ziff.com,
look under Computer Gaming World, back issues, April '95) Project
release date is sometime Christmas 1995 or early 1996. It will
feature
SVGA graphics and a more detailed physical model.

No mission disk for XCOM 1 or 2 are currently planned.

1.5.2   Other computers?

There is current NO PLAN on porting XCOM2 to other computers. If you
want to see a native version, tell MicroProse. You can try

support@microprose.com.

If there is one, it'll probably be for the Amiga. There IS an XCOM (or
UFO, its European name) for Amiga. [Note: XCOM is the current name for
both Europe and US releases, there is NO UFO2. It's XCOM2.]

1.5.3   How about XCOM fiction? Can I write my own?

Here's the official word straight from MicroProse...

     If you are interested in writing fictional stories for X-COM,
     please write a letter which includes a clear outline and
proposal
     for our marketing and public relations staff. [see address
below]

     Understand that we have an in-house writer (John Possidente), so
     you may want to see what track our stories have taken by looking
     at our WWW page, at

     http://www.microprose.com

     Although we do our own stories, that is no reason you could not
     submit a story to us.

     Please include a rough outline of your story ideas, and your
     intent for distribution (free, on web page, for money, etc.)

     Tim Patterson, Spectrum HoloByte/MicroProse Software
     support@microprose.com

1.6 Where can I find XCOM related stuff?

The MicroProse Homepage is at

     http://www.microprose.com

This contains patches, updates, drivers, stories, and more. The
official ftp archive site is

     ftp.microprose.com

The new, improved, and moved UN-official XCOM Archive is at

     http://www.surfchem.kth.se/~aa/xcom/xcom.html

It is maintained by Alasdair Allan (aa@frodo.surfchem.kth.se)

For other cheats and editors, try wuarchive

     ftp://wuarchive.wustl.edu/pub/MSDOS_UPLOADS/xcom2

Also Happy Puppy's Games Onramp XCOM cheat section

     http://happypuppy.com/games/faqcht/xcom2cht.htm

And, the XCOM Sagas' homepage

     http://www.cs.cmu.edu/afs/andrew/usr/gd2d/www/xcom.html

Plus Hakan Tandogan's XCOM: UFO Defense / UFO: Enemy Unknown homepage

    http://www.franken.de/users/speedy/hakan/hobbies/games/xcom
      ==>/Welcome-e.html

And his XCOM2: Terror from the Deep homepage

    http://www.franken.de/users/speedy/hakan/hobbies/games/tftd
      ==>/Welcome-e.html

1.7 XCOM General Information FAQ

Q: With the CD version, how do I do a full install to hard drive?
A: Run the INSTALL.EXE in the \HARDDISK directory on the CD. Note
that
you will NO LONGER get the full animation intro and finale.

Q: Where is the TFTDV2 patch?
A: URL:ftp://ftp.microprose.com/pub/mps-online/new-versions/tftd*

2.   GEOSCAPE AND BASES

    "Dammit, Kaminski! Find me that alien colony!" Commander Gideon
vented his frustration, "That thing has been launching raids ALL OVER
Asia. It can't be that hard to find!"

    Kaminski stood his ground and pointed at the global plot in the
base commander center. "Sir, I've had Barracudas and Tritons went
over
North China Sea with a fine-tooth comb. It is NOT around Japan or
Hainan, or Taiwan. A Triton is patrolling India now, but if the
science boys can finish researching that toy that's supposed to
intercept alien transmissions I may have a better idea where to
look."

    WHOOOOP! WHOOOOP! Red lights started flashing in the command
center.

    "Report!" Gideon snapped.

    "S.O.S. signal sir! S.S.Bavaria, cargo vessel registered to
Panama, is reported under alien attack. Coordinates..."

    "Launch Team Gold immediately!" Gideon briskly walked out the
door, pausing in the doorway, "And wake Team Blue now for alert five
status."

    "And where are you going, sir?"

    "To join the fun, Kaminski."

    Gideon's footsteps echoed down the corridor.

2.1 How is scoring calculated?

Like XCOM, score is kept for both sides. You get positive score for

    conducting successful research
    capturing and/or killing aliens
    grounding and/or destroying USOs
    destroying alien bases

capturing alien equipment/artifact

You get negative score for losing XCOM aquanauts, crafts, SWS, and
civilians.

In terms of aliens, capture yields 200% of "killed" points. Of
course,
interrogating the captured aliens also gives points, but only if you
learned something new.

In terms of USOs, destruction yields 200% of "shot down" points. Of
course, if you mount an recovery mission you may get more than the
points you "lost" by not completely destroying the USO.

For exact amounts, you need to consult the OSG.

Aliens score points by

        fly and/or touch down on Earth
        complete a "resource raid" mission
        build alien colony and keep them
        opening up artifact (synomium) sites
        conducting terror raids (terror sites)
        sign pact with your sponsors

The BIGGEST scores by aliens are "artifact sites" and "terror sites".
You MUST respond to them. If you don't they score BIG and may put
you
into the negative range.

[TRICK] If you don't have soldiers to deal with an artifact site or
terror site, send ONE soldier in. Land, then immediately abort the
mission. You'll lose a couple hundred points, but it's LESS than what
you would have lost had you not sent ANYONE.

Your net score is (your_score - alien_score), which is the score you
see on the monthly performance report (and the graph). The funding
changes are affected by your total score.

2.2 How do I win? How do I lose?

You win by finding the sources of the alien threat and "deal with it"
once and for all... For some ideas on what the threat is, see H. P.
Lovecraft's works.

You can lose by several ways:

        1) You were in debt for over $1,000,000 for two months. Your
        sponsors had had enough of your mismanagement and terminated the
        XCOM project. Earth was conquered by aliens not long after.
        2) You had two consecutive "bad" rating months (big negative
        score), and your sponsors had had enough and terminated XCOM
        project. Just how negative is "bad" depends on your difficulty
        level. For details, you need to see the OSG.
        3) You lost all of your bases to the aliens.
        4) UNCONFIRMED: You lost a certain number of sponsor to alien
        infiltration. (not sure of exact number, maybe all? All but
one?)
        5) You failed to destroy T'Leth after sending out the
expedition.
        You only get one chance.

2.3 Bases

2.3.1   Where should I put my first base? Later?

Remember that your bases now MUST be underwater, which limits your
choices.

Second, your first base has only 1 standard sonar, and even if you
start adding to it right away, you are STILL stuck with that sonar
for
almost a whole month. You HAVE to pick a good start, or you won't
detect any USOs at all!

There are several things to consider while placing your first base.
Keep in mind that your first base will be your only base for a while,
so make sure you place it where you get maximum coverage of the
sponsors, who also pays the most. The problem is how to maximize the
country coverage WHILE maximizing the covered countries' total
payment. Therefore, any spot can cover multiple sponsors is good.

We know that the US pays the most (always), so a base near US is
usually a good idea. Eastern US seaboard, near Georgia, is good that
it can also cover parts of Eastern Canada.

Other good spots include:

     Eastern Africa (covers Egyptian Cartel, Arabian Bloc, and
     possibly Asian Coalition)
     Western India (covers Asian Coalition and maybe Arabian Bloc)
     Japan (covers Neo-Japan, Federation of Korea, and Free China)
     Mediterranean (covers Euro-Syndicate and Egyptian Cartel)

2.3.2   How should I name my bases?

I personally name bases based on the ocean they are in, plus the COM
suffix (stands for Command). Ex: PacCom (Pacific), AtlanCom
(Atlantic), IndCom (Indian), etc. If there are more than one, one
gets
Nor (North), Sou (South), etc. prefixes.

Naming bases is important because it means less confusion on the
Intercept screen on choosing which base to launch the fighters and
transports. Launching from the wrong one means the craft will not get
there in time, run out of fuel before getting there (never get there
since it will come back first), etc. This is important since XCOM2
crafts have shorter ranges than XCOM1.

2.3.3   What should I add to my base at first? Later?

Initial modifications you need for the main base are: alien
containment (prisoners), general stores (ammo and captured
artifacts),
and wide array sonar (detection), preferably in that order.

Keep in mind that the initial base is PRACTICALLY undefendable. If
you
have the money and the inclination to fix it, build a sub pen between
to two southern sub pens first, then dismantle the north one, then
dismantle the modules linking the sub pens to the base until only the
airlock is left, then build to the empty space to the north.

Alien containment is first since it takes longer to construct, and
you

already have some storage space for the captured artifacts. Besides, a
"general stores" module only takes 10 days.

Later, with more money, add labs, living quarters, workshops, and
defense, in approximately that order.

Defenses comes last usually since you can defend with aquanauts and
SWSs. Of course, don't clog up the items list.

Note: According to the TFTD:OSG, the 80-item limit has been expanded
to 110 items, also there's a predetermined list of items you will get
during base defense, so you should not see any more "50 flares and
clips but no guns" scenarios.

If you have lots of money and the necessary techs to build a craft,
try to keep an sub pen available,

2.3.4   What types of bases should I build?

I use about 5 types of bases. You can "grow" from one to another, but
usually finances will limit your growth.

Some players prefer to have 2-3 large multi-purpose bases rather than
6-7 specialized bases. Both strategies can work, and I don't
recommend
one or the other.

2.3.4.1   Sensor/Sonar Base
This is also known as a "listening post" to some players.

The sonar base just have sonars, and later, Transmission Resolvers.
Remember to put in a storage space (for SWSs and their ammo) and a
living quarter (for expansion and a few aquanauts as guards). Stock
it
with a SWS and a few aquanauts for defense, add one defense station
when you can afford it.

Transmission Resolver detects 100% of alien traffic in the effective
range, which is slightly farther than Wide Array Sonar. Once you have
Transmission Resolver, you don't need sonars at the same base any
more. This also allows you to put up more and cheaper sonar bases.

2.3.4.2   Intercept Base
Intercept Base is a Sonar Base with a hangar housing a fighter sub or
two such as Barracuda or Manta. Watch the storage space since fighter
subs need its own weapons and ammo. Add one if needed.

Consider adding defense now (or assign more guards and SWS) since
aliens may get mad seeing their USOs getting destroyed in your area.

2.3.4.3   Strike Base
Strike Base is an Intercept Base with a second hangar housing a
transport. Remember to add alien containment (prisoners) and storage
(weapons and ammo, plus loot) when needed. Remember to transfer the
artifacts to a research base after the mission!

Consider adding more defense, esp. when the aliens will get really
mad
as you attack more of their USOs and/or bases in the area.

2.3.4.4   Command Base
Your primary base, probably your also your first base, contains
EVERYTHING; workshop, laboratory, defenses, sonars, sub pens, etc. A
little too many eggs in one basket if you ask me... But usually
you're too busy to build the REALLY specialized bases. So if defended
successfully, this type of base is perfectly adequate of erasing
alien
presence from Earth.

2.3.4.5   Research/Manufacture Base
A base should specialize in either research or manufacture, not both
(doing so is putting too many eggs in one basket). Add living
quarters
and either workshop or laboratory as needed. Manufacture base needs
more storage space or an empty hangar (if building crafts) so make
sure you have enough or use TRANSFER a lot.

You shouldn't have to build a lot of defenses here, esp. if you build
the next variant.

2.3.4.6   Special Research/Manufacture Base
USOs will start looking for your base if their brethren keeps getting
attacked and destroyed in the area. If you build a base at North or
South pole, and wait until USOs enter a different zone before
attacking them, you can keep a base pretty safe. Many people have
employed this tactic and it seems to work quite well. This is also
great for MC labs location, for your aquanaut's MC training.

2.3.4.7   Sample Manufacturing base by Jim Vieira
Jim had designed a NICE manufacturing base that is easy to build. Of
course, he didn't put in any defenses... But you can drop a workshop
and/or a living quarters for defenses.

     From: jayden@earth.execpc.com (Jim Vieira)

     In my current game I decided to build a base strictly dedicated
     to manufacture. Both to make money from selling goods and to
     relieve the load on my other bases. I also wanted something of a
     'storehouse'.

     Here's how I have laid it out:
                         X- Airlock
     SWWWWW   S- General Stores
     SWWrRL   W- Workshops
     SLLLLL   L- Living quarters
     S.....   r- Sonar (to be replaced soon)
     SXHHHH   R- Wide Sonar (trans.resolver soon)
     S.HHHH   H- Sub pen
                         .- open space

     The layout was based on strategic designs from the XCOM USG.
[See
     next section] The sub pens have no craft. Their purpose is for
     building craft. The General stores take only 10 days, so they
     were the best choice for that long hallway. I wanted to get this
     base up and running very quickly.

     As you can see this layout gives me 350 workshops, 300 living
     quarters, and 300 stores. I wanted to go more but I have heard

you can only have 255 of any given worker type (soldier,
scientist, engineer). So with 300 living quarters, I can fit 250
engineers and a small 'strike' squad to defend the base. The 350
workshops gives me extra room for projects that require space.

2.3.5   How do I design a easy to defend base?

MPS appear to have gave aliens an extra turn to deploy before
allowing
your soldiers to move, when compared to XCOM. Therefore you will find
aliens in modules adjacent to airlocks and sub pens, but these base
building hints are still valid.

        XXXXXX   This base has only ONE access point: by the lift.
        X.XXXX   Any other way (such as through the hangar) actually
        X.XXXX   takes LONGER. And the long corridor spanning FOUR
        A.....   sections makes EXCELLENT choke points and impromptu
        HHHHHH   minefields with par.dis. grenades are great for
        HHHHHH   defense in this kind of situations. If you don't
                  need three hangars, you can trade the right one for
        XXXXXX   three more structures down the right side.
        X.XXXX
        X.XXXX   Basically, put the access lift off to one side of
        A....X   the map and try to isolate that and hangars from
the
        HHHH.X   rest of the base. This should ALWAYS be the primary
        HHHH.X   base design principle you use...

There is one catch: sometimes, there's a bug in the game that
eliminates some doors that leads you to the rest of the base. Without
grenades and heavy weapons to "dig", you can't kill the aliens in the
other section and thus cannot finish the battle at all.

[Note: If any of you has the TFTD:OSG, compare this section with the
OSG section on the same topic, pg 80-82. Notice any similarities?]

2.3.6   How should I defend a base?

Defending a base against alien raids is tough. Fortunately, unless
you
are doing terribly well, aliens usually don't bother your bases for a
while. But near the end, alien battleships and dreadnoughts will come
after your bases, then you have a problem...

To defend against that, you need a high defense rating. I don't know
how much is enough yet, but I would suspect about 3000, which is what
I recommended for XCOM1. That rating should be able to destroy over
90% of incoming dreadnaughts.

On the other hand, if you don't have fighter subs to fight off large
USOs, you may want to let it land and take it out in water (i.e. at
your base). Remember you will see A LOT of aliens on a base raid, I
hope you have a lot of USABLE equipment.

Small USOs usually scout ahead of the large USOs that will actually
raid your base. If you can destroy the scout before it detects your
base, you can prevent the base attack. MC Generator will also
decrease
chances of detection.

Inventory in transports now are available for base defense. This is
DIFFERENT from XCOM, in which your transports are yet a separate
place
of storage.

Particle Displacement Grenades are vital in base defenses. Dump a few
near entrances and doors, and get ready for the alien death screams.
Of course, aliens are now tougher...

Remember that it's now almost impossible to get rid of particle
displacement grenades once you've thrown them, see the grenades
section, [Various Grenades and Magna-Pack Explosive]

2.3.7   Base Management

Since it takes several weeks before additional modules to the base
can
be brought on-line, you need to build them ahead of time. See the
base
status often to see how full are your facilities getting. If they are
getting close, start building additional facilities so that they'll
be
ready by the time you need them.

Watch the STORES list to note which items takes up the most space.
Those numbers may come in handy when you run out of space and have to
conduct a sale of existing inventory.

Examine "Monthyly Costs" several times a month. One possible end to
the game is overextending yourself financially, and keeping track of
your expenses before the end of the month to make sure you have
enough
cash to cover them all is important.

Examine base information screen at least twice every month, check
living quarters, workshops and labs, etc., and determine your
expansion schedule. See above. Dismantle extra stuff before end of
month so you don't pay maintenance on them.

This screen also gives you "utilization ratio". You want to keep
everyone "in use" as not to pay "idle" salaries. If a lot of your
scientists or technicians are sitting idle, something is wrong, and
you better deal with it.

Hire engineers and scientists at the very end of the month so that
they get delivered early NEXT month, so you get maximum research from
them while not paying an extra penny in salary. If you fire then, do
it BEFORE end of the month.

2.3.8   Base modules

Name	Days	Cost	Mant	Remark
Airlock	1	300k	4k	Entrance to floating base
Alien Containment	18	400k	15k	Holds 10 aliens TYPES
Bombardment Shield	38	1200k	15k	Gives defense an extra shot
Gauss Defense	24	400k	10k	Def value 600, Accuracy 60%
General Stores	10	150k	5k	Holds 50 units of equip. (2)
Laboratory	26	750k	30k	Allows 50 research
Living Quarters	16	400k	10k	Sleeps 50
M. C. Generator	33	1300K	5K	Makes base harder to find
M. C. Lab	24	750k	16k	For troop MC training
P. W. T. Defense	34	800k	14k	Def value 1200, Accuracy 80%
Sonar Array	12	500k	10k	500 nm rng, 5% detect/10 mins
Sonic Defense	34	600k	12k	Def value 900, Accuracy 70%
Sub Pen	25	200k	25k	Maintains 1 craft

```
Torpedo Defense      16    200k   5k   Def value 500, Accuracy 50%
Trans. Resolver      26    1400k  30k  Evaluate USO missions
Wide Sonar Array     25    800k   15k  750 nm rng, 5% detect/10 mins
Workshop             32    800k   35k  Allows 50 manufacture (1)
```

(1) In a workshop, the object being manufactured takes up some space.
So you will not be able to cram all 50 technicians in there.

(2) For exact composition, see [base information]>>[stores]

NOTE 1: Defenses are noticeably cheaper to build in XCOM2

NOTE 2: You can dismantle a facility, even when it is under
construction. Simply click on the facility, and the program will ask
you do you wish to dismantle it, select OK

NOTE 3: To dismantle a base, you must remove all facilities
(transferring all people and equipment elsewhere if needed) then
finally remove the airlock itself.

NOTE 4: Transmission Resolver outranges Wide Array Sonar, and is 100%
effective in detection.

2.4 Finding Alien Colonies

Finding alien colonies is the first step to win the second Alien War,
so find those critters' home or else...

Of course, you do NOT have to take out that colony... You go after
the
supply subs instead, repeat as needed. Gain a few million bucks of
loot if you can pull off the raid successfully.

2.4.1   XCOM Agents

XCOM agents have a chance of finding an alien colony for you, but
chances are pretty slim. So do not rely on that. Usually the game
will
reveal an alien colony only if you did VERY VERY BAD that month.

2.4.2   Watch the graphs

Watch for high alien activity (check the graphs) yet no interception:
there's probably an alien colony in the area.

Note: alien colonies can be VERY CLOSE to each other, which should be
a bug, but is not.

2.4.3   Slow patrol

Send something slow like a Triton to patrol the area. An empty Triton
has pretty good range and therefore is good in spotting alien bases.

2.4.4   Follow Them Home

Watch USOs, esp. where they land. Trail it and follow it to their
base. After it lands, patrol nearby and you should see the alien
colony. If there are multiple subs landing of appearing at the same
locations, there is probably a base nearby.

2.4.5   Eavesdrop

Transmission Resolvers can find USOs on supply runs. Follow that will
usually lead you to a base. This is a refinement of Follow Them Home.

2.5 Target Selection

If several targets presents itself, which one should you attack?
Here
are some of my general guidelines:

2.5.1   USOs in flight

Attack the biggest subs you can handle. Ajax and DUP launchers can
handle small, MAYBE medium USOs. Sonic Oscillators and PWT Torpedoes
are needed for the very large and huge USOs.

Launch from the closest base FROM USO'S INTENDED TARGET if it is
known
or can be deduced from its path. Launching from the closest base at
the time of contact will result in a tail chase, resulting frequently
in lost tracking and waste of fuel and time.

If the landing site is on the dark side (i.e. night), you may want to
patrol nearby and wait for light. Of course, in the meanwhile the
landed USO may take off again.

Keep a fighter sub on top of a landed USO in case it takes off before
your transport sub can get to it.

2.5.2   Downed/Landed USOs

[Downed = shot down, Landed = landed by itself]

Attack the biggest USO you can handle. (How many times did I say
that?) Don't bother attacking battleships and dreadnoughts before
getting MC

Larger subs have more aliens and more artifacts to recover, so risk
and reward are proportional.

If you have a choice, attack a landed USO instead of a shot-down USO.
Landed subs are undamaged and therefore have more artifacts (plus
Zrbite). Of course, it also has more enemies.

Some veterans have reported that they can finish game faster by
attacking landed subs only. While score may not be as spectacular,
they also have less risk of retaliation and can get more research
done
and have more money (from the extra booty).

Try not to follow an USOs around with a loaded transport (with
soldiers and equipment) unless it's a Triton. The transport is
wasting
fuel and time and it may not have enough endurance to finish the race
and thus not able to respond to a different emergency (such as a
terror or artifact site suddenly popping up elsewhere)

2.5.3   Terror sites and Artifact sites

Attack one ASAP, no exceptions. Divert from other subs or base attacks
if necessary. The penalty for ignoring a terror site is simply too
large to ignore, and can cause loss of sponsors.

A site will NOT disappear if you have a ship en route to it. I've been
told by reliable source (Jeff, that is) that he was able to keep a
terror site on the map for three days until he got bored by keep
targeting it with Tritons. :-)

Some terror sites are now "long missions" (two-parter), so take along
LOTS of reloads... Or grab every alien ammo you can. (One more reason
to research fast and furious, so you can use alien weapons)

2.5.4   Alien colonies

Depending on your soldiers, you should attack an alien colony as soon
as you are able to (don't take rookies) or people have low MC ability
or bravery.

According to some reports, a "newly established" alien colony is NOT
as well defended as an "well established" one.

You may want to consider leaving an alien colony alone nearby so you
can keep attacking the supply subs that drops by. Just make sure you
can handle the subs AND possible alien retaliation.

On the other hand... Aliens build colonies like CRAZY in XCOM2. They
build MORE THAN ONE PER MONTH, almost geometric growth! You have to
take out a few or else...

(I have a saved game where there's OVER TWENTY alien colonies on the
map, and I kill at least two a month...)

Alien colonies are A LOT TOUGHER in XCOM2. It's a "two-parter",
meaning you have to fight your way INTO the base, then fight to
destroy the heart of the base. You'll see LOTS of enemies, including
the really deadly ones. Take no mercy... No stun weapons, at least in
first half.

See [Colony assaults] for more information.

2.6 GeoScape Tricks and Tips

Many people don't realize that click on the USO's icon will bring up
all known info about the USO, even crashed ones. If you detected it
via Transmission Resolver, you'll know A LOT about it.

USO crash sites usually disappear in a few days. If you have no
soldiers available, you can let it sit for a day or two.

Landed subs will take off in a few hours (less than a day).

Terror Sites disappear in less than a day (which mean you have to get
to one ASAP, even if it means skipping subs and landing at night!) On
the other hand, you can keep terror sites on the map if you can keep
it targeted by a craft, any craft. If you have several Tritons, you
can probably keep it targeted almost indefinitely, and it will not
disappear! Or use one of those "no-fuel" crafts. See [Unlimited fuel

craft cheat (built-in)].

UNCONFIRMED: There appears to be a bug that if you went into a non-terror battle while the terror site is on the map, when you come back from battle the terror site will have disappeared.

2.7 GeoScape FAQ

Q: Can I dismantle a base?
A: To dismantle a base, you must remove all facilities (transferring all people and equipment elsewhere if needed) then finally remove the airlock itself.

Q: Do I need sonar modules if I have Transmission Resolver?
A: No. Transmission Resolver outranges even Wide Array Sonar, and is 100% effective in detection. You need NO SONARS if you have a Transmission Resolver.

3.   INTERCEPTING USOS

     "Beta-One, your target is at bearing 335, 150 klicks, little low." AtlanCom's combat controller said, "Should be coming onto your scope any second now. Beta-Two is enroute, ETA 2 minutes."

     "Tally-ho, AtlanCom, going Judy," Barracuda's pilot replied. He has sighted the target and is taking over the intercept, "arming DUPpers." Circuits started to feed target information into the twin Depleted Uranium Pellet Torpedo launchers nested under the fuselage.

     "Target large sized, AtlanCom, continue closing to firing range. I see three levels on this baby, haven't seen this one before."

     "Proceed with caution, Beta-One."

     "Don't I always, AtlanCom?" Beta-One's pilot chuckled. "Entering firing range in five seconds. Four. Three. Two. One... Firing!"

     Two rocket-propelled torpedoes dropped free of the launcher, and their motors ignited two seconds later, charging toward their target. They connected five seconds later, and explosion was visible even at this distance. Alien modules fell out through the tear in the hull, and Beta-One swerved to avoid the debris.

     "Firing again... He's returning fire! Evading...<static>"

     "Atlancom to Beta-One. Beta-One, please reply..."

3.1 XCOM Crafts

XCOM crafts are divided into two classes: conventional, and advanced. Conventional crafts are based on "normal" Earth technology, while advanced crafts are based on captured alien technology and components.

There is no "ideal craft", though the Leviathan comes close. As in a navy, you probably need a "mixed fleet" of crafts in your war against the aliens.

3.1.1   XCOM Craft Summary Chart

```
              Speed Accel  Fuel     Wpn   Hull Cargo  SWS
----------------------------------------------------------
Triton          790   2     1400      0   160   14     3
Barracuda      2400   3      800      2   120    0     0
----Research required----
Manta          4600  10    30(Z) 6?   2   400    0     0
Hammerhead     4030   9    60(Z)12?   1   960   12     0
Leviathan      5400   9    50(Z)10?   2  1250   26     4

        (Z) Uses Zrbite for fuel

     Speed : maximum speed of craft, determines if it can keep up
             with subs during interception.
     Accel : maximum acceleration of craft, determines whether subs
             will stay in range
     Fuel  : amount of fuel carried, determines endurance
     Wpn   : number of weapon pod mounts available
     Hull  : amount of damage the craft can take
     Cargo : number of "spaces" craft can carry. Each soldier is one
             space and each SWS is four spaces
     SWSs  : maximum number of SWS this craft can carry.

     NOTE: in Fuel, 30(Z) 6?  means 30 units of fuel (from UFOpedia,
          Zrbite), and 6?  means estimated Zrbite units used.
```

3.1.2   Triton

Pro> always available
     use regular fuel
     transport
     very long range

Con> no weapons
     easily destroyed
     VERY slow
     requires monthly lease

Recommendation> This transport should be okay for most purposes,
since
10+1 is a normal assault configuration and enough for most purposes.
On BIG jobs you may want to send a Hammerhead or Leviathan, of
course.

Trick> Consider intercepting an USO with it. Without weapons, it
will
just follow the USO around until the USO lands, then the Triton lands
on top of it and starts assault immediately.

3.1.3   Barracuda

Pro> 2 weapon pods
     always available
     use regular fuel

Con> easily destroyed (esp. by large USOs)
     slow (cannot catch smaller USOs)
     requires monthly lease

Recommendation> Keep one around for the "easy" targets

3.1.4   Hammerhead

Pro> faster and takes more punishment than Barracuda
     transport
     no monthly lease since it was built by XCOM

Con> Only 1 weapon pod
     large initial expense due to construction

     needs Zrbite for fuel
     cannot carry SWS

Recommendation> You really need the Manta instead for intercept jobs.
As a transport, the lack of SWS can be crippling earlier in the game,
but later in the game, when soldiers are more powerful, Hammerhead
may
be useful.

3.1.5   Manta

Pro> Next fastest sub (to Leviathan)
     2 weapon pods
     it is rather cheap as an advanced sub
     no monthly lease since it was built by XCOM

Con> Large initial expense due to construction
     needs Zrbite for fuel
     horrible range
     cannot stand alone against the largest USOs

Recommmendation> Send a pair or more against the largest USOs, a
single against smaller targets. This should be your primary
interceptor at all times, with maybe a Barracuda or two as backup.
Make sure you launch from closest base...

3.1.6   Leviathan

Pro> fastest XCOM sub (keep up with anything!)
     huge damage capacity (can stand up to the largest USOs)
     2 weapon pods
     holds plenty of Aquanauts and SWSs
     can go to any depth
     the only vehicle that can take you to T'Leth

Con> VERY EXPENSIVE (including construction costs and materials)
     lots of eggs in one basket if aliens bag one of these
     needs lots of Zrbite for fuel

Recommendation> You only need one (maybe two) of these, and reserve
them for anti-battleship or -dreadnaught missions, and the final
assault. Send Tritons on other missions instead.

3.2 Target Selection for USOs in transit

Attack the biggest USO you can handle, and that depends on the
weapons
you have on the crafts.

Ajax and DUP launchers can handle small, MAYBE medium USOs (expect to
take some damage). Sonic Oscillators and PWT Torpedoes are needed for
the very large and huge USOs, and even then you need something that
can stand up to a few hits, and that means at least Mantas.

Launch from the closest base FROM USO'S INTENDED TARGET if it is
known
or can be deduced from its path. Launching from the closest base at
the time of contact will result in a tail chase, resulting frequently
in lost tracking and waste of fuel and time.

If the landing site is on the dark side (i.e. night), you may want to
patrol nearby and wait for light. Of course, in the meanwhile the
landed USO may take off again.

Keep a fighter sub on top of a landed USO in case it takes off before
your transport sub can get to it.

3.3 USO Attack methods

Once you got a fighter sub in range of the USO, it's time to attack.
Here's what different attacks mean, according to me:

      Cautious Attack: causes least damage per attack but remains at
      the longest range and therefore has the least chance of getting
      counter-attacked. Cautious attack is useful when you want a not
      too badly damaged USO (just enough to "sink" it) and your weapon
      outrange the USO's.

      Normal Attack: average damage per attack, close at steady rate,
      enough for most attacks if your weapon outranges the USOs.
Normal
      attack is useful as a general purpose attack. [Interestingly,
the
      OSG claims that Cautious Attack is virtually identical to Normal
      attack, only in that Cautious attack attempts to use the
longest-
      ranged weapon first, while normal attack just shoot in range]

      Aggressive Attack: close to point-blank and let them have it in
      the face! Causes the most damage per attack, but exposes craft
to
      counter-fire. Aggressive attack is good for brave/suicidal
      charges (toward an alien battleship or dreadnought, for
      instance). You want maximum amount of damage done in the short
      time the fighter sub may live under fire, so aggressive it is.

3.4 Multiple interceptors

You can send multiple fighter subs to intercept a single USO. In
fact,
you should do so when intercepting large or very large USOs before
you
develope the Leviathan (which can take the damage). It is the ONLY
way
to keep your fighter subs alive against superior enemy firepower.

You can launch up to FOUR fighter subs at a single target. Just pick
the same USO as the target. As each get within range, they will hang
back, and each will get its own intercept windows. When all four
shows
intercept, select attack on each one.

The USO is stupid in that it divides fire among the fighter subs you
send. So while you double/triple/quadruple the firepower you brought
to bear, each of your fighter subs will receive half/one third/one

fourth of the damage it would receive had it attacked alone.

3.5 Craft Weapons

These weapons ONLY work underwater. If your fighter subs managed to
intercept an USO in the air, weapons are useless. You'll have to wait
until the USO re-enters water.

	Damage	Range	Accuracy	Reload	Shots
Craft Gas Cannon	15	8	25%	3s	200
Ajax torpedo	60	32	70%	17s	6
D. U. P torpedo	110	50	80%	21s	3
----Research required----					
Craft Gauss Cannon	90	20	35%	4s	50?
Sonic Oscillator	150	55	50%	5s	99
P. W. T. Launcher	200	60	100%	28s	3

        Damage   damage done to target if hit
        Range   max range of weapon, Kilometers
        Accuracy hit probability when fired
        Reload   seconds needed to fire next shot
        Shots   number of shots available

Note: some of the descriptions below may differ from those that
appeared in the game and the OSG as well. Tell me if mine makes more
sense. :-)

Craft Gas Cannon: large version of the gas cannon carried by
Aquanauts, this one uses gas pressure to shoot armor piercing bolts.
It is fast loading, but it causes very little damage. You need
something with more PK (probability of kill) than this.

Ajax Torpedo: high-speed torpedo for underwater use, carries
explosive
warhead, uses water pressure for the hull cracking. Okay for early
use, but won't work against medium USOs.

D.U.P. Torpedo Launcher: new type of torpedo with a ultra-dense
depleted uranium pellet as an armor piercing nose cap backed by hi-
tech explosive BEHIND the cap that explodes AFTER the penetration,
causes 90% more damage than Ajax torpedo, but only three shots per
launcher instead of 6 of Ajax.

Craft Gauss Cannon: extension of the hand-held gauss weapons, this
one
uses super-conducting technology to create a heavy gauss field, which
is used to guide a particle stream onto the target. Unlike laser,
this
"gauss beam" is NOT attenuated heavily by water. Unfortunately, this
weapon is NOT very accurate at craft fighting range, and overall is
not that much more effective than the Ajax torpedo. On the other
hand, this is a DEFINITE money maker. See [What do I manufacture to
make more money?]

Sonic Oscillator: extension of the alien "sonic" technology, which
uses an energy field to guide a high-frequency resonance-inducing
sonic wave onto the target, causing molecular disruption, sonic
oscillator is probably the best craft weapon, and has a huge ammo
capacity of 100 shots.

Pulse Wave Torpedo Cannon: the ultimate synthesis of Terran and alien
technology, this one combines a radiation seeker, Zrbite based "pulse

wave displacement" propulsion for incredible underwater speed,
depleted uranium pellet for target armor piercing, and Zrbite-based
explosive for the biggest bang of any XCOM craft weapon. On the other
hand, you can only carry three torpedoes per launcher, and they cost
a
lot, both launcher and ammo.

3.6 Craft Weapon Notes

Match the weapon to the target. You want to force the alien to land
so
you can board it and recover artifacts and prisoners, not blow it
into
smithereens (though it might make you feel good)

Replace Ajax and Craft Gas Cannon with DUP launchers ASAP. They are
too weak and can only handle SMALL USOs, and they tend to disable
instead of destroy them instead.

Gauss cannons are okay but I would wait for Sonic Oscillators
(equivalent to Plasma Cannon in XCOM, though far less accurate)

I would not recommend PWT launchers, since, like Fusion Ball
Launchers
of XCOM, they don't cause enough "total" damage. Though if you feel
like it, arm a craft with 1 PWT and 1 Sonic Oscillator.

3.7 Special Craft Tactics

Here's some Tactics and tips from Master XCOM commanders to help you
get the most out of your crafts.

3.7.1   Go Home Early

When you send multiple crafts after one USO and the USO was shot
down,
the shooter will go home, but other crafts will continue onto the
crash site and THEN return. Instead, click on them and turn them back
early (Return to base). They will return earlier, thus be refueled
and
rearmed faster for the next mission.

3.7.2   Keep Landed USOs covered

Even if the USO landed, keep a fighter sub on top of it until your
landing craft arrives for the action. That way, if the USO takes off,
you still have a chance to shoot it down before it escapes.

3.7.3   Weapon vs. subs analysis

Before attacking, click on the VIEW subs button to take a look at
your
target before deciding whether to attack or not. Attacking with wrong
weapons means either the loss of your fighter sub or the USO totally
destroyed so that nothing can be recovered.

Corollary: If you WANT to go after the smaller USOs, keep a fighter
sub around with "wimpy" weapons.

3.7.4   Unlimited fuel craft cheat (built-in)

Transfer a Barracuda or Manta to another base. Send it out on patrol
IMMEDIATELY. Its fuel would be zero, but it will fly, and in fact, it
will fly FOREVER! If it returned to base, then it must wait to be
refueled, but then, just transfer it again.

Using this trick to keep terror site targeted continuously can keep
the terror site on the map until you can deal with it!

3.7.5   Don't run away!

If you use cautious attack with missiles, the alien USO will JUST
pull
out of range as your last salvo is launched. To get that last hit,
hit
aggressive attack BEFORE your last salvo is launched so you get
closer. This is especially important since the more powerful missiles
have limited reloads and you can't afford to waste a shot.

3.8 Interception FAQ

Q: How do I remove the weapons from a craft I plan to scrap?
A: You can't. (Arrrggh!) Put the cheapest weapon on it (craft gas
cannon) and then scrap it

4.   FINANCE

     "We are WHAT?" Commander Rogers gasped. He had just been
promoted
after the loss of Commander Gideon on that last terror raid, and not
even before his seat warmed to him did the first crisis hit.

     "I am telling you, commander. We are out of money," the
accountant stabbed emphatically at the datapad he wielded in front of
him as if to shield himself from Rogers.

     "Last I checked we had ten mil in the Bank!"

     "Aye, but it's end of the month. Salaries and maintainence to
pay
as always."

     Rogers sank back into his chair. "Great. So what do we do?"

     "Have a sale."

     "What?!?!"

     "You'll be surprised how many people will buy these alien
gadgets
and carcasses you've recovered. I heard they do WEIRD things with the
alien bodies we dispose of. Ever tried Xarquid sushi?"

     Rogers grimaced and shuddered at the thought.

     The accountant shrugged, "I heard it tastes very good, but any
way, you brought back a dozen bodies from that last raid, and the lab
boys only need the two new ones. Sell the rest, plus some of the

gadgets you found, and we can recover a few mil, especially if you
want to sell one of those Ion Beam Accelerators. I've heard that
quite
a few corporations are interested in a sample..."

4.1 What really eats up money at XCOM?

The answer is: maintenance and salary. If you have 100 scientists,
their monthly salary is $3 million (!). Add that to your bases, and
you will go broke pretty quick. Sponsors' money will barely make a
dent in your expenses, as they only pay you a few million, probably
not even enough for base maintenance once your base grows.

Remember that expenses are deducted all at the end of the month. So
if
you don't have enough money in the bank for monthly maintenance, you
will end the month with a NEGATIVE balance, and two months of >1 mil
of debt will result in your DISMISSAL as XCOM commander!

4.2 How do I earn more money?

Three (real) ways to make money in XCOM:

4.2.1   Make your sponsors happy

So they will increase their payments? Sure... The problem is: they
don't pay much to start with, and the increase is just enough to
sneeze at. Their payments may be enough to buy some ammo and stuff,
but don't expect much of an increase.

4.2.2   Manufacture arms for sale

See [What do I manufacture to make more money?] Craft Gauss Cannon
takes the top prize as the top TFTD moneymaker, and you are almost
guaranteed a profit by manufacturing it and selling it.

4.2.3   Sell captured/surplus equipment

Most of your money will be made this way. General guidelines:

Dump off all your obsolete equipment (harpoon rifles when you have
gauss weapons, etc.)

Dump off all your surplus equipment. (You will usually end with
plenty
of surplus sonic cannons, etc., and those fetch very good prices on
the market.)

[Trick] once the research has started on the item, you can sell the
item for more money.

Dump the Alien equipment too. "Alien Cryogenics", "Alien Cloning",
etc., are just research items, so dump them ASAP and research them
when you have time and extra money.

Alien corpses, yuck. All that green blood ice in the freezers. Sell
them all, as they keep accumulating after each mission. Just kinda
makes you wonder what do people DO with those bodies...

Alien sub components such as "magnetic navigation" and "ion beam
accelerator" fetch good prices. Since you usually have a surplus of
them not needed for your sub construction, sell them and use the
money
on something else. (Aqua Plastic and Zrbite should NOT be sold as
they
are used in almost everything, and Zrbite must be captured)

Doing all these also means you need less storage space (and less
maintenance). Keep only one item of each type for research, sell the
rest. You need the money and the space for more useful stuff.

Consider keeping an alien colony around so you can keep raiding its
supply USOs. It's a good training ground for rookies too.

4.2.4   As a last resort...

You can always cheat. See [The "Transfer Salary Savings"].

4.3 How do I cut expenses?

Many many ways. Just like governments find ways to cut meat from
their
budget, you will find where to cut your expenses.

4.3.1   Cut Maintenance

Dismantle any unused facility. Here are some things to look for:

    Transmission resolver detects 100% of USOs in range, so get rid
    of all sonars once you have one. (Also use the chance to
    rearrange the base into something defensible...)
    You don't EVER need more than one Alien Containment module. See
    [Special notes on Alien Containment Facility].
    Don't have too many "general stores" modules. ALWAYS sell the
    excess stuff so you don't need to build extras.
    Replace defenses ASAP. One of the latest defenses is often worth
    two or more of the older ones.

4.3.2   Build your own crafts

Tritons and Barracudas have a monthly rental fee, XCOM crafts do not.
Of course, this means you have to research subs construction and
things and spend money to build them, but their advanced capabilities
such as ability to take more damage is worth it.

On the other hand, Tritons and Barracudas don't use Zrbite... So you
may want to keep a few around, in case you run short on those.

4.3.3   Minimize salary

Legally: Minimizing the people XCOM employ.

Illegally: use the salary transfer cheat!

4.3.3.1 Aquanauts
Except for the base garrison, all aquanauts should be assigned to a
transport sub, and be ready to go at a moment's notice. Any
unassigned

aquanauts not needed for base garrison should be transfered to another
base and put to use, or be sacked.

Consider sacking the "wounded", unless their abilities made them worth
retaining despite the time they will not be available. Yes, it's cold-
hearted, but such is war.

4.3.3.2   Scientists
Every scientist at every base should be assigned to a project all the
time. You can check this easily by looking at the Base Information
Screen. If no projects are available, keep about 20-25 scientists and
sack the rest. Remember that you can rehire scientists with only a few
days' delay.

You should not have more scientists than lab capacity. If you do, sack
the excess.

4.3.3.3   Technicians
You usually don't ALWAYS build new items, so it is harder to determine
just how many technicians you should keep during the "down" period. On
the other hand, most players use the "profitability study" below and
keep the techs busy building something that will fetch a good price.

Remember the item being manufactured takes up space in the module, so
you do NOT need 50 techs per workshop on the base. I would keep about
45 per workshop.

4.3.4   Don't overextend

Building too many bases is a sure way to early bankruptcy. Pick GOOD
locations first, then SLOWLY grow them. Do NOT spread all over the
world immediately. Cocentrate on holding at least ONE part of Earth,
then spread out cautiously. Overextending yourself is a good way to
put you in debt.

4.4 What do I manufacture to make more money?

TOP SECRET -- XCOM2 Profitability study -- TOP SECRET

by Kasey Chang   original (XCOM1 version) by Jeff Shaffer

We assume that you, as XCOM supreme commander, are willing to support
technicians long-term in order to make a profit. I calculated results
for a hypothetical 2 workshop operation. You would get slightly better
results with larger facilities, due to the economy of scale.

Technician actually costs $25000 a month, and scientist $30000 a
month. Check your base information screen.

NOTE: Some numbers are rounded down to nearest 1000 (K) for space

```
                    Work  Eng  Raw             Sale Unit|Monthly|Net
Item                Space Hrs  Material Cost  Price  P R O F I T
-------------------------------------------------------------------
Par. Disp. Sensor  4    220    -         34K    45K   11K 3765K 1275K
Medikit            4    420    -         28K    46K   18K 3146K  656K
M.C. Disruptor     4    500   1Z        160K   194K   29K 4242K 1752K
Aq.plas. Armor     12   800    4A        22K    54K   6K  491K     -
Ion armor          16  1000   5Z+5A      42K    85K   -    -       -
Mag. Ion armor     16  1400  16Z+5A      58K   115K   -    -       -
Aqua Plastic       10   100    -          3K     6K   3K 2343K    3K
Gauss Pistol       2    300    -          8K    20K   12K 2916K  376K
Gauss pistol clip  2    20     -          1K   1050   -
Gauss Rifle        3    400    -         20K    36K   16K 3049K  534K
Gauss rifle clip   4    45     -          2K   1950   -
Heavy gauss        4    700    -         32K    61K   29K 2958K  468K
Heavy gauss clip   4    70     -          4K   3220   -
Sonic Pistol       3    600    1A        56K    84K   21K 2586K   71K
Sonic Pistol Clip  4    60    1Z         2K      4K   -    -       -
Sonic Blasta Rifle 4    820    1A        88K   126K   32K 2787K  297K
Blasta Power Clip  4    80    2Z         3K      6K   -    -       -
Sonic Cannon       4   1000    1A       122K   171K   43K 3078K  588K
Cannon Power Clip  4    80    3Z         6K      9K   -    -       -
Dis. Pulse L'cher  5   1200    1A        90K   144K   47K 2797K  332K
Dis. Pulse ammo    3    220   3Z         8K     17K   -    -       -
Thermo Shok l'cher 3    900    1A        78K   120K   35K 2846K  331K
Thermo Shok bomb   2    200   1Z         7K     15K   3K 1166K    -
Sonic pulser       2    200   2Z         6K     14K   -    -       -
M.C. Reader        4   1200   1Z        262K   304K   37K 2202K    -
Ion beam accel.    22  1400  16Z+5A     130K   250K   7K  310K     -
Mag Navigation     18  1600    3A       150K    80K   -    -       -
P.W.Torp l'cher    6    400    1A       242K   281K   36K 6294K 3874K
P.W.T ammo         6    600   4Z        28K     53K   5K  617K     -
Gauss Craft Cannon 6    300    -        182K   211K   29K 6904K 4434K
Gauss Cannon ammo  2     5     -        200    200    -    -       -
Sonic Oscillator   8    500  15Z       226K   267K   -    -       -
Coelacanth/Gauss   25  1200    -       500K   594K   94K 4371K 2406K
Displacer/sonic    30  1200  30Z+5A    850K   980K   -    -       -
Displacer/P.W.T.   0   1400  25Z+8A    900K  1043K   -    -       -
P.W.T. SWS ammo    25   400   5Z+8A    15K     31K   -    -       -
```

The "Unit Profit" column is sale price minus cost, minus the cost of
any Zrbite/Aqua plastic used in manufacture. A '-' means a net loss,
no further analysis. Of course, Zrbite is of alien manufacture and
can
be hard to find...

"Monthly Profit" column is based on an "XCOM Month" of 24*31 = 744
hours. The calculation is number of technicians that fit in two
workshops times 744 times unit profit, divided by the hours required
to make one item. For example, the monthly profit for Motion Scanners
is 96*744*11600/220 = 1275993 (1275K). Of course, that is not quite
accurate since TFTD does do months more correctly now (Feb has 28
days, etc.)

"Net Profit" column is the bottom line. Monthly expenses are the
salaries of as many engineers as fit in the workshops times $25K,
plus
the maintenance on 2 workshops and 2 living quarters (70000 monthly).
(Note I wrote 25K, not 50K as advertised)

As you can see, Gauss Craft Cannon is the winner, closely edging out
PWT Launcher. A profit can be made early in the game on particle

displacement sensors, however.

One final note: It costs roughly $7M to hire technicians and build the
facilities, so you'll need to "borrow" some money (preferably from
alien supply ships :) to get started.

[Editor's note: don't forget the "transfer salary cheat" below]

4.5 The "Transfer Salary Savings" cheat

Have two bases approximately equivalent to each other, like both
research (or manufacturing), about same living quarters, and
scientists (or engineers). Just before end of the month (last day,
last hour), leave only ONE scientist/engineer on the job, and
transfer
the rest to the other base, and do the same on the other base (i.e.
they swap their contingent). When the end of month comes along,
NEITHER side has their scientists (engineers) (they are in transit),
no salary is paid (except for the 2 left behind at each base). If you
have like 100 scientists moving each way, you save $30,000x100x2 = $6
million!

4.6 Aliens signed pact with XXX!

Nothing you can do. One of the Infiltration subs got through and now
the sponsor stopped paying you. Consensus on the net is you canNOT
get
them back (i.e. nullify the pact).

If enough sponsors left you, you will probably lose.

4.7 XCOM Finance FAQ

Q: Can I get back a sponsor who was infiltrated by aliens and stopped
funding me?
A: See [Aliens signed pact with XXX!] above.

Q: I don't understand the Profit Analysis. What do I need to build to
make money again?
A: (sigh) Look at the RIGHTMOST column for the potential profit. See
the largest number? It corresponds to "Craft Gauss Cannon".

Q: But I don't have "Craft Gauss Cannon" yet...
A: Further glance at the RIGHTMOST column shots that Medikit also
makes some profit, though quite a bit less than CGC.

5.   RESEARCH/INTERROGATION AND MANUFACTURING

     "Here we are, _Kommandate_." The Chief Scientist opened the
airlock with a thumbprint AND a voice ID, and stepped through first.
Commander Rogers followed, and the door closed. They waited for the
other side to cycle through.

     "You said you've made some progress?" Commander Rogers asked.

     "Wery important progress, _Kommandante_! It is so good, I vould
'ave to SHOW you."

"So please do."

The air lock cycled through and the scientist lead Rogers to a large glass enclosure, surrounded by computer consoles. Inside is a captured "Deep One", now dissected and hooked up to a lot of electrodes and wires.

"So? I've seen plenty of these."

"Ah, but wait, _Kommandante_. Do you recall that we had discovered the molecular control dewice within the brain? We have finally decoded its control protocol! It is absolutely ingenious how they did it, very efficient yet such a high bandvidth!"

"Get to the point."

"Ah, yes. Do me a favor. Can you sit down over here? Good. Can you put on this helmet for me?"

"Why me?"

"Your test scores, _Kommandante_. You have been certified compatible with this helmet. Great! Let me turn on the superconductors
inside... Aha!"

"And?"

"This helmet is a neuro-sensing helmet, _Kommandante_. It can sense your thoughts. It is connected to the MC transmitter. Just THINK
moving your right arm, and look ower there..."

Nothing happened.

"You must concentrate, harder, _Kommandante_... Your arm is heavy, and you must raise it higher... Higher..."

Behind the protective enclosure, the Deep One is actually slowly raising its right arm!

Rogers slowly moved his hands around, and the Deep One echoed his
motions.

"This is great! But it's a little too big..."

"Ah, not to worry, _Kommandante_. We are working on a hand portable version, with ten times the transmission power, enough to jam
any molecular circuits the aliens may have!"

5.1 What should I start researching first?

Interestingly, you must research something before it can be THROWN.

I recommend gauss weapons for the starting projects. Dart pistols and Jet Harpoons are pitiful against Sonic Blasta Rifles and Sonic Pulsers
(super grenade) :-P Get gauss pistols and gauss rifles first, ignore heavy gauss for now.

After that, research medikit and all dead bodies you've found so far.
Medikit allows you to survive any shots that haven't killed you yet
(since you don't have armor yet), and hopefully you've found a "Deep
One" corpse, which will allow you to have aqua plastic armor.

Now you need sonic weapons, and I hope you've captured some by now.

As for later, you need to capture aliens ASAP. Without captured
aliens
you would have nothing to research, which is VERY BAD.

Capture would be hard since you don't have enough firepower... Go for
kills until you nab a couple Thermal Shok Launchers and Thermal Shok
Bombs, and research them ASAP.

Ignore the "Alien components" till last. They are "dead-end" items.

5.2 Overall strategy

Keep roughly 100-150 scientists in your employment. You need that
much
research to discover things in reasonable time, though you can
probably get by with 50-75.

Due to the way research works, concentrate on one project at a time
so
you can start on later topics faster.

Research prisoners AND dead aliens ASAP. They lead to other techs.

WARNING: DO NOT RESEARCH TASOTH COMMANDER. According to "FractalLaw",
researching Tasoth Commander will result in NO Leviathan, which means
you will not be able to finish the game. (interestingly, they don't
exist in OSG's alien chart)

Hammerhead is a CRUCIAL point in the research tree.

5.3 Duplicate Research -- NOT!

Do NOT have two or more bases research the same thing. Research
efforts are NOT cumulative.

Sometimes a captured alien will appear on the list over and over, and
if you keep researching it, you may spend the time and effort without
finding anything. Consult the research tree below. Some aliens CAN be
researched multiple times and yield different results, but others are
just a waste of time and effort.

5.4 Research Tree [probably incomplete]

These research trees are to the best of my knowledge. If you believe
I
have made an error, please document YOUR sequence and submit them to
me for review...

The "requirements" are more stringent in XCOM2 for researching items.
Often you must have items already present to be able research it when
a breakthrough is made.

This research tree format was inspired by Roy Indrebo of Norway.

```
Tree Format:

[Research Topic] -> (Manufacturable item) ==>
  <item> -> [Topic 2]

[Research Topic], when researched, leads to (Manufacturable item).
Which, with presence of <item>, leads to Topic 2 being available.

 [Gauss Tech] ==>
  [Gauss Pistol] -> (Gauss Pistol)
  [Gauss Pistol Clip] -> (Gauss Pistol Clip) ==>
    [Gauss Rifle] -> (Gauss Rifle)
    [Gauss Rifle Clip] -> (Gauss Rifle Clip) ==>
      [Heavy Gauss] -> (Heavy Gauss)
      [Heavy Gauss Clip] -> (Heavy Gauss Clip) ==>
        [Craft Gauss Cannon] -> (Craft Gauss Cannon)
        [Craft Gauss Cannon Ammo] -> (Craft Gauss Cannon Ammo) ==>
        [Gauss Defense] -> (Gauss Defense)


[Hammerhead] + [Gauss Cannon] = [Coelacanth/Gauss] ->
   (Coelacanth/Gauss)

[live alien] -> [Alien Origins]
                      |
[Gillman or ]         V
[Lobsterman ] -> [The Ultimate Threat] + [Lobsterman Cmdr] ->
[T'Leth]
[Cmdr or Nav]

[Live Medic] -> [Alien Autopsy Info] (maybe)

[Live Squad Leader] -> [Alien Origins / Mission Info] (maybe)

[Live Technician] -> [Alien USO Info] (maybe)

[Sonic Pulser] -> (Sonic Pulser)

[Sonic Pistol] -> (Sonic Pistol) -------------\___
[Sonic Pistol Clip] -> (Sonic Pistol Clip)----/    \
                                                      \
[Sonic Blasta Rifle] -> (Sonic Blasta Rifle)--_____
[Sonic Rifle Clip] -> (Sonic Rifle Clip)------/      /  |
                                                   /    |
[Sonic Cannon] -> (Sonic Cannon)--------------\____/    |
[Sonic Cannon Clip] -> (Sonic Cannon Clip)----/         |
                                                        |
 +---------------------------------------------------+
 |
 +-> [Sonic Oscillator] -> (Sonic Oscillator)
 |
 +-> [Sonic Defense] -> (Sonic Defense)

[Hammerhead] + [Sonic Oscillator] -> (Displacer/Sonic)

[Thermal Shok Launcher] -> (Thermal Shok Launcher)
[Thermal Shok Bomb] -> (Thermal Shok Bomb)

[Live Terrorist] -> [M.C. Lab] ---->  (M.C. Lab)
                       |
                       V
[M.C. Reader] ---> [M.C. Reader] ->  (M.C. Reader)
                       |
                       V
```

```
[Live Tasoth] ----> [M.C. Disruptor]+-> (M.C. Disruptor)
                                     |
                                     V
                          [M.C. Generator] -> (M.C. Generator)

[Calcinite Corpse] -> [Vibroblade] -> (Vibroblade)
                          |
                          V
[Gillman Corpse]----> [Thermic Lance] -> (Thermic Lance)
                          |
                          V
                     [Heavy Thermic Lance] -> (Heavy Thermic Lance)

<Zrbite> -> [Zrbite] ==>
<Disruptor Pulse Launcher> -> [D.P.L] -------> (D.P.L)
<Disruptor Ammo> -----------> [D.P.L. Ammo] -> (D.P.L.Ammo)

[D.P.L.] + [D.P.L.Ammo] -> [P.W.T. Launcher] -> (PWT Torpedo)
                                  |
                                  +--> [PWT Defense] --> (PWT Defense)

[Hammerhead] + [P.W.T.Launcher] --> [Displacer PWT] -> (Displacer
PWT)

<Deep One corpse> -> [Deep One Corpse] ->

<aqua plastics> -> [aqua plastics] -> (Aqua plastics)

[Deep One Corpse] + [Aqua Plastics] -->
     [aqua plastic armor] -> (aqua plastic armor)

<Ion Beam Accelerators> -> [Ion Beam Accelerators] -> (I.B.A.)

<Live Deep One> -> [Live Deep One]

[I.B.A.] + [Aqua Plastic armor] + [Live Deep One] ->
     [Ion Armor] ==> (Ion Armor)

<Live Lobsterman Nav> -> [Live Lobsterman Nav]

<Magnetic Navigation> + [Live Lobsterman Nav] ->
     [Magnetic Navigation] -> (Mag Nav)
     [Transmission Resolver]  -> (Transmission Resolver)

[Mag Nav] + [I.B.A.] -> [Magnetic Ion Armor] -> (Magnetic Ion Armor)

<Alien Sub construction> + [Zrbite] + [Transmission Resolver] ==>
     [Alien sub construction]

[I.B.A.] + [Alien Sub Construction] ==>
  [Manta] --> (Manta)
    |
    V
  [Hammerhead] --> (Hammerhead)  * very important!

[Live Lobsterman Commander] + [Hammerhead] ==>
     [Leviathan] --> (Leviathan)

Tasoth Commander ->
  T'Leth, the Alien City  (NO Latest Flying Sub!!!!!)


5.5  Any hints on manufacturing?
```

Only manufacture thing that you REALLY need, like crafts, etc. almost
NEVER manufacture ammo since most require Zrbite, which is always in
short supply. Captured ammo is much cheaper and don't use your
precious Zrbite supply.

OTOH, Zrbite appears to be a bit more plentiful in XCOM2.. . So go
ahead and make 20 Thermal Shok Bombs for your raids...

NEVER let any engineers go idle. If you don't need anything built,
build something that makes money.

5.6 Research and Manufacturing FAQ

Q: How do I get...
A: Please look at the research tree first

Q: But I can't get...
A: Are you SURE you got the pre-requisites researched and necesary
items at the research base?

Q: What's the maximum scientists/technicians I can have?
A: 255 of each per base (you maybe able to hire more, but you may run
into a bug!)

5.7 Stuff that can be bought, hire, or leased

These are the stuff you can buy, usually not very interesting or
useful, but they're all you've got early on.

Item	Category	Cost	Note
Aquanaut	Personnel	40000	hiring bonus
Scientist	Personnel	60000	hiring bonus
Technician	Personnel	50000	hiring bonus
Triton	Craft	500000	hiring bonus
Barracuda	Craft	600000	hiring bonus
Ajax Torpedo lchr	Craft Weapon	16000	6 rounds
Ajax Torpedo	Craft Ammo	3000	
D.U.P. Torp lchr	Craft Weapon	17000	2 rounds
D.U.P. Torpedo	Craft Ammo	9000	
Craft Gas Cannon	Craft Weapon	30000	
Cannon Ammo (x50)	Craft Ammo	1240	
Coelacanth/GC	SWS	420000	30 rounds
Solid Harp.Bolt	SWS Ammo	200	
Coelacanth/AJT	SWS	480000	8 rounds
AquaJet Torp	SWS Ammo	3000	
Dart Pistol	Weapon	800	12 rd/clip
Pistol Clip	Ammo	70	
Jet Harpoon	Weapon	3000	10 rd/clip
Harpoon pod	Ammo	200	
Gas Cannon	Weapon	6400	6 rd/clip
GC-AP	Ammo	300	
GC-HE	Ammo	500	
GC-P	Ammo	400	
AquaJet Cannon	Weapon	13500	14 rd/clip
AC-AP	Ammo	500	
AC-HE	Ammo	700	
AC-P	Ammo	650	
Torpedo Launcher	Weapon	4000	
Small Torp	Ammo	600	
Large Torp	Ammo	900	
Phosphorus Torp	Ammo	1200	

```
Magna-Blast Grde.    Weapon            300
Smoke Grenade        Weapon            150
Par.Disp.Grenade     Weapon            500
Magna-Pck Explo.     Weapon           1500
Thermal Tazer        Weapon           1260
Chemical Flare       Equipment          60
```

Personnel have monthly salary of half of hiring bonus

Craft have month lease payment same as hiring bonus

5.8 Stuff that must be researched and manufactured

The "advanced technology" items are much more useful, but most of them
requires special resources such as Zrbite and Aqua plastics, which
must be captured (though you can manufacture aqua plastics later).

	Engr Hours	Workshop Cost	Space	Zrbite	Aqua Plas.	Sale Price
[Equipment]						
Par. Disp. Sensor	220	34k	4	–	–	45600
Medikit	420	28k	4	–	–	46500
M.C.Reader	1200	262k	4	1	1	304000
M. C. Disruptor	500	160k	4	1	–	194700
[Armor]						
Aqua plas.armor	800	22k	12	–	4	54000
Ion Armor	1000	42k	16	5	5	85000
Mag. Ion Armor	1400	58k	16	16	5	115000
[SWS]						
Coelacanth/Gauss	1200	500k	25	–	–	59400
Gauss ammo	?	200	?	–	–	?
Displacer/Sonic	1200	850k	30	30	5	980000
Displacer/PWT	1400	900k	30	25	8	1043000
SWS PWT	400	15k	25	5	8	31500
[weapons]						
Gauss pistol	300	8k	2	–	–	20000
Gauss pistol clip	20	1k	3	–	–	1050
Gauss rifle	400	20k	3	–	–	36900
Gauss rifle clip	45	2k	4	–	–	1950
Heavy gauss	700	32k	4	–	–	61000
Heavy gauss clip	70	4K	4	–	–	3220
Sonic pistol	600	56k	3	–	1	84000
Sonic pistol clip	60	2k	4	1	–	4440
Sonic blasta rifle	820	88k	4	–	1	126500
Blasta power clip	80	3k	4	2	–	6290
Sonic Cannon	1000	122k	4	–	1	171600
Cannon power clip	80	6k	4	3	–	9590
Dis. Pulse l'cher	1200	90k	5	–	1	144000
Dis. Pulse ammo	220	8k	3	3	–	17028
Thermo Shok l'cher	900	78k	3	–	1	120000
Thermo Shok bomb	200	7k	2	1	–	15200
Sonic Pulser	200	67k	2	2	–	14850
Vibroblade	150	7k	3	1	–	1500
Thermic Lance	220	12k	3	2		1800
Hvy Thermic Lance	300	20k	3	2		2000
[Crafts]						
Hammerhead	14000	400k	30	–	65	–*
Manta	18000	600k	34	–	85	–*
Leviathan	34000	900k	36	–	120	–**
[Craft Weapons]						

```
Gauss cannon           300    182k    6     -      -     211000
Gauss Ammo               5     200    2     -      -       1012
Sonic oscillator       500    226k    8    15      -     267300
P.W.T. launcher        400    242k    6     -      -     281100
P.W.T. ammo            600     28k    6     4      -      53300
[Misc]
Aqua plastic           100      3k   10     -      -       6500
Zrbite ***             ---      --                          5000
Ion Beam Accel.       1400    130k   22    16      5     250000
Mag. Navigation       1600    150k   18     -      3      80000
```

  * needs 1 Ion Beam Accel. + 1 Mag. Navigation
  **needs 2 Ion Beam Accel. + 1 Mag. Navigation
  *** Zrbite can ONLY be captured as parts of sub or base, which
  makes it extremely valuable, so NEVER sell or waste any of it

6. THE ALIENS

  "Let's try the basic gestures," the xenologist said.

  The alien contact speciliast looked at the captured alien
inside,
one of those "Gillmen", and shrugged.

  She pointed to herself and said, "I, human." Then she pointed
at
the alien, "You?"

  The alien just looked at her, and did nothing. In fact, the
alien
looks totally bored. X-rays showed that this alien is female, and
even the specialist thought she looked BORED.

  The specialist tried again. Nothing.

  The third time she tried it, the alien replied in English.

  "Shut up. You are boring me."

  The xenologist were shocked, then they busily
chattered/conferred
among themselves.

  The specialist was intrigued and asked, "You speak English?"
According to the files, this specimen was captured not too far from
Baja California at an alien colony.

  The Gill-women replied easily, "Yes, and the languages known to
you as French and Chinese." There was no trace of accent.

  "So, you are not... Alien?"

  "My race originated on this planet, just as yours did."

  "But how? We didn't find..." The specialist spared a glance
above
the alien, where the camera and the microphone are taping down every
movement and sound. It's time to play the "good cop"...

6.1 Average Alien Stats on veteran (normal) level

There's a modifier for the alien stats depending on the difficulty

level. Veteran level is 100%. Beginner/Experience gets a < 1.0
modifier, while Genius and Superhuman gets a > 1.0 modifier.

You can probably figure out the modifier if you play a few games on
the other levels and compare the numbers you get to this chart.

```
Name         Rank   TU   Hl  En   Re  St  FA  TA   F  L/R  B  U
------------------------------------------------------------------
Aquatoid     Soldr  54   30  90   63  30  52  58   4   3   2  2
             Ldr    54   35  90   63  30  52  58   4   3   2  2
MC           Tech   54   35  90   63  30  52  58   4   3   2  2
             Medic  54   35  90   63  35  52  58   4   3   2  2
MC           Nav    54   35 100   63  40  52  58   4   3   2  2
MC           Cmdr   54   35 100   63  40  52  58   4   3   2  2
------------------------------------------------------------------
GillMan      Soldr  40   45  80   45  47  45  50  15  12  14 12
             Ldr    45   50  80   45  47  49  54  15  12  14 12
             Tech   45   55  80   50  50  54  58  15  12  14 12
MC           Cmdr   50   60  80   53  52  58  65  15  12  14 12
------------------------------------------------------------------
Tasoth       Soldr  56  125 100   80  70  54  62  20  20  20 10
MC           Ldr    66  135 100   80  70  65  62  20  20  20 10
------------------------------------------------------------------
LobsterMan   Soldr  56   90  90   60  70  54  62  20  20  15 10
             Ldr    66  110  90   65  70  54  62  20  20  15 10
             Tech   70  115  95   70  70  54  62  20  20  18 10
             Nav    74  120  95   75  70  54  62  20  20  18 10
             Cmdr   76  125 100   80  70  54  62  22  22  20 12
------------------------------------------------------------------
Deep One     Ter    50   35  90   55  40  70  58   8   6   4 12?
Tricene      Ter    72  158  90   69 120  80  80 120 110 110  8
Xarquid      Ter F  40  114  80   50  70  65  50  50  50  50  5
Calcinite    Ter    68   55  96   75 110  74  80  35  35  35 10
Tentaculat   Ter F  99   96 140   90 100  50  50  35  35  35 10
Hallucinoid  Ter F  62  120  90   90  90  80  80  35  35  35 25
Biodrone     Ter F  80  140 120   40 120  90   0  25  15  10  5
Drone        N/A    40   84 110   40 120   0   0   4   4   4  4
```

F = Can fly   MC = can use MC attack

NOTE 1: you can get info on a particular alien by using a M.C.Reader
on them. Leaders and commanders are 10 to 20% higher than "regulars",
and there appears to be random modifiers, depending on rank and
position. Stats are also higher on higher difficulty levels.

NOTE 2: higher rank aliens also have higher "intelligence", which
means they will remember your location longer. Some alien species are
also more intelligent than others.

6.2 Alien attack/defense summary

```
Alien            Attack          Defend           Vulnerable
------------------------------------------------------------------
Aquatoid         weapon, MC*                       HTH,SO
Gillman          weapon, MC*                       SO,HTH
Lobsterman       weapon, HTH     AP,HE,IC,SO,GA    HTH,stun
Tasoth           weapon, MC*     IC,AP,GA,HTH      SO,stun
Calcinite        HTH (claw)      IC,GA,HTH         SO
Deep One         electric shock  AP,IC,HE,GA       SO,HTH
BioDrone         sonic beam      GA, IC            HTH**
Tentaculat       HTH             AP,GA             HE,SO,Stun,HTH
Triscene         HTH, SO         all except HTH    HTH
Xarquid          GA, Dye Grenade all exc. HTH,AP   HTH,AP
```

```
Hallucinoid       freeze ray, HTH AP,GA,SO,HTH     IC
Drone/Zombie      HTH (claw)      MC***            all

HTH = hand to hand  IC = incendiary/fire     AP = armor piercing
SO  = sonic         HE = high explosive      GA = gauss

Alien          alien name
Attack         attack method
Defend         resistance to type(s) of attack
Vulnerable     vulnerable to type(s) of attack

*     Only on SOME aliens, not all, see 6.1
**    BioDrone does NOT explode when killed with HTH attack
***   Zombie/Drone is virtually immune to XCOM MC attacks


6.3  Alien Missions

Alien Probe             survey area for resources
Alien Interdiction      attack areas to drive out human presence
Alien Resource Raid     grab for resources
Alien Infiltration      infiltrate sponsor nations
Colony expansion        build new colonies
Surface attack          terror raid
Floating base attack    attack XCOM base
Colony Resupply         resupply other colonies from main base

6.4  Battle Notes on individual aliens

Kill Tentaculats anywhere. Kill them fast, even if it means wiping
out
any civilians near it. Use all heavy weapons on it freely. You can't
afford to see any Drones. (At least Drones don't fly...)

If you are REALLY worried about Tentaculats (or don't want any one
die
without making a kill), have everyone carry a PRIMED grenade around.
If your soldier got turned into a zombie, or killed, all equipment
gets dropped, and the grenade should go BOOM at the end of the turn.

Tentaculats CAN attack "floating" soldiers (via mag. ion armor).

Lobsterman are more vulnerable to stun weapons than most.


6.5  USO speed, range, etc.

                  Size  Spd   Dam   Wpwr  Wrng ?km
Survey Ship       VS    2000   60    0     0     0
Escort            S     2800  300   30   104    13
Cruiser           S     2600  300   25   280    35
Heavy cruiser     M     3800  450   60   160    20
Hunter            M     4500  500   50   144    18
Battleship        L     4200 1400  140   400    50
Dreadnaught       VL    4500 3400  120   480    60
Flt Supply Cruiser L    3400 2000   70   304    38


*     Weapon Range should be divided by 8 for range in KM, see 7.5

?     Range in kilometers are estimated based on XCOM1 data, not
confirmed. Please let me know if this is not correct!
```

7.   SOLDIERS AND NON-COMBAT EQUIPMENT

     "All right, aquanauts! Attention!

     "Today is your aptitude test. So far, all of you have received
XCOM basic training. However, we all know that some of you are better
at some things than others. As we are about to introduce special
equipment training, it is time we know what you are REALLY good at.

     "The tests have been uploaded into your desk terminals. Have a
seat now. You have two hours. The physical test and weapons test is
scheduled for this afternoon. Tomorrow I will announce the results.

     "Any questions? Good! The test starts on my mark... Now!"

7.1 Recruiting Aquanauts

Sack weaklings ASAP. You want high strength, reaction, bravery, and
shooting accuracy, and when you get MC, MC ability. So recruit lots
of
rookies, use them for scouts (they are cheap when compared to SWSs).
If they survive, keep them, else, oh, well, they've done the world a
great service. :-)

Why those traits? High strength means they can carry more (and
heavier) stuff. High reaction means they can get opportunity fire
(reaction shots) while enemy is moving.

High bravery means they are less susceptible to panic, and shooting
accuracy is obvious. :-) Other characteristics are not as important.

7.2 How do I improve soldiers?

Growth: Try to always take a couple of rookies along to give them
experience to boost their stats. In XCOM, you learn by doing. Below
are activities that will improve traits:

Time Units   Survive, Kills
Strength   Carry heavy stuff
Energy   Survive, Kills
Throwing Accuracy   Throw more!
Firing Accuracy   Shoot more!
Bravery   fixed? get panicked more???
Health   Survive, Kills
Reactions   fixed? Make more reaction shots???
MC Ability   fixed
MC Skills   Use more MC attacks

Soldiers with kills gain more than those without kills. on the other
hand, grenade and missile kills do not count, only HTH and gun kills
count in improvements.

Try not to let SWS get a kill since you will lose a chance to let a
soldier improve, so leave the easy shots (against panicked aliens,
for
example) to the rookies.

MC skill also improves with use. (MC Abl does not increase though)

Promotion: Ensigns come from able seamen, and able seamen come from
Seamen who survived a mission and gotten at least one kill. You just

need to HIRE some more soldiers, then when some of them got
promotions, you sack the low-ranks. For exact numbers of soldiers to
get promotions, see the manual.

The advantage of having officers? They decrease morale lost when
someone is killed. Of course, when officers get killed, those of
lower
rank are even MORE devastated.

7.3 Soldier Specialties / Change soldier names

We recommend that instead of using the default names, you adopt a
naming system for your soldiers that will help you to know at a
glance
who to take on a mission.

To change the name, go to the soldiers screen (the one base display)
that displays their stats. Click on their name, and a cursor comes
up,
allowing you to change them.

System One reflects a specialty, such as scout (SC), heavy weapons
(HW), demolitions (DM), MC combat (MC), sharpshooter (SS), etc. For
example, "Steve Rogers HW/MC" has lots of strength and nice time
units
for carrying the heavy weapons (and shooting them). His MCStr and
MCSkl is also pretty high so he also carries a MCAmp for MC combat.

Here's some suggested specialties

Scout   (SC)   carry particle displacement sensor
Medic   (MD)   carry MediKit
Sharpshooter   (SS)   shooter, carry nice guns
Intelligence   (IT)   carry MC Reader
Heavy Weapons   (HW)   carry "heavy" stuff
Molecular Control   (MC)   carry MC Disruptor

You can also cross-train, of course. There's no limit in the number
of
spots each person can hold... And real-life SEAL teams are mostly
cross-trained any way.

System Two just places the numbers in the name. Use just the first
digit, round up (if rating is 42, use 4, 47 would be 5). Example is
"Steve Rogers 4345"

System Three, includes a letter for the area the soldier is good in,
like A)ccuracy, T)Us, etc.

Assuming 10 soldiers and 1 SWS (normal for a Triton):

    2 medics/pack mule (carry medikit + reloads + grenades)
    2 MC/grenadiers (pistol and lots of grenades) + MC stuff
    2 rifleman (rifles, maybe heavy, plus grenades)
    2 heavy weapons (heavy stuff, including disruptor pulse)
    2 scout (high TUs + react, carry grenade and pistols)

If you decide to go to 14 soldiers, add two more rifleman and 1 more
grenadier/MC weapons, and 1 more heavy weapons.

7.4 Missing in Action

If one of your troopers in under alien control at the end of a battle
s/he counts as MIA; therefore try to wait until s/he is no longer in
control before finishing off aliens.

If you abort a mission, any soldiers you leave behind (not in craft
or
exit zone) is MIA. On missions with a transport, any one not in the
transport are "left behind". On an alien base assault, any one not on
the exit zone are "left behind".

Yet another way to get people MIA is to try abort mission with only
an
unconscious soldier in the transport. You'll lose that person as MIA
as well as the transport (strangely, a SWS counts as a "soldier", and
you can't stun an SWS, so an SWS can "pilot" back the transport. :-)

Note: I've had reports of people using the patch, and had unconcsious
people considered MIA, so far unconfirmed

HINT: use MediKit to wake them up (stimulant) then march them in if
that happens to you.

7.5 Packing Advice

The item limit is always a problem, especially on an Hammerhead and
Leviathan, when you can carry LOTS of soldiers. Here's a couple more
hints to see you through the item crunch:

     If you are short on ammo clips, use sonic weapons, which use
less
     ammo (no auto-fire mode, both a blessing AND a curse). [CHEAT:
     use weapon editor and create a weapon that uses no ammo!]
     Carry only ONE clip for your sonic weapons. You should be able
to
     find plenty of reloads during battle, esp. for Sonic Cannon
     (which seems to be used by all aliens near the end of the game)
     Bring less misc. equipment such as MC Readers, medikits,
particle
     displacement sensors, M.C. Disruptors, and so on. You don't need
     everything on every person (except maybe Medikits)
     Bring SWSs if you can. SWS is one item yet has plenty of
     firepower. Too bad it takes FOUR soldier's space. Still, they
are
     quite useful in the early parts of the game
     Don't fight at night so that you need to take along all those
     chemical flares which you end up throwing all over the place.
     (exception: Attack Terror Sites ASAP) Of course, you can always
     pick up those flares and throw them again.

7.6 Basic Loadout for Transports

Triton : 1 SWS / 10 aquanauts or 14 aquanauts. The SWSs early on
carry
more firepower and has more TUs than soldiers, which makes them good
scouts, and more survivable. Switch to only soldiers later.

Hammerhead : as many soldiers as you can fit. Hammerhead doesn't take
SWSs. Bring enough equipment for all those soldiers you got!

Leviathan : 14 soldiers / 3 SWSs or 18 soldiers / 2 SWSs. If you
carry
more soldiers you don't have equipment for them. If you put in more
SWS you actually lose firepower.

As the end of game draws near, your best soldiers should be as fast as
SWSs and carries just as much (if not more) firepower. SWSs are there
to simply scout ahead, esp. the PWT and/or Sonic versions (one each).

7.7 Equipment list

```
                          TU    Usage
--------------------------------------------------------------
-
Chemical Flare          25%  Use at dark places for illumination
--Must research and
build-------------------------------------------
Medikit                 10%  heal fatal wounds, raise morale, revive
                             unconscious people, add energy
Particle Disp Sensor    25%  registers movement within 8 squares,
                             see UFOpedia for instructions
M.C.Reader              50%  allows you to see alien's status screen
                             (ID, TUs remain, health, + other stats)
M.C.Disruptor           50%  with M.C.training, allows panic or
                             control of aliens
```

Note: you can use medikits on ALIENS! (may be useful for captures...)

7.8 Other Actions/ TU cost cross-reference

```
from\to    hand      belt       shoulder  leg       backpack   ground
hand       0         8          10        8         14         2
belt       4         0          12        10        16         4+2=6
shoulder   3         10         0         3+8=11    3+14=17    3+2=5
leg        4         10         4+10=14   0         4+14=18    4+2=6
backpack   8         8+8=16     8+10=18   8+8=16    0          8+2=10
ground     8         8+8=16     8+10=18   8+8=16    8+14=22    0
```

```
Crouch          4        Un-crouch (stand)  6
Load Weapon    15        Throw item          25% of base
```


7.9 Equipment FAQ

Q: Why do I lose ammo that was fired only a few times?

A: After combat all clips that had been USED in the battle and left in
their weapons are lost, no matter only 1 round fired or totally empty.
UNUSED clips are NOT affected, nor are the clips separate from weapon.

HINT: You should unload any weapons that had fired and use valuable
ammo before the battle ends.

HINT: You can get MORE clips if you unload captured alien weapons that
you come across. If you have MC, have the alien throw you the weapon.

Q: Why should I need grenades when I have heavy weapons?

A: Heavy weapons such as torpedo launcher, hydrojet cannon, and gas
cannon weigh A LOT. For the same weight you can carry a lighter

weapon
plus a couple grenades, and move faster and further as a result.

Q: How do I wake up unconscious soldiers?

A: See UFOpedia on Medikit.

HINT: Heal any fatal wounds first before attempt to revive.

HINT: After applying shot of stimulant, exit medikit screen and check
your inventory. If "body" is still on ground, apply another shot of
stimulant until the "body" is no longer on ground. S/he should appear
in an adjacent square. You may need LOTS of stimulant shots to revive
a stunned soldier.

HINT: Stimulant also raises ENERGY. If you had soldiers running all
across battlescape, add some stimulant if they can't move.

HINT: Pain killer raises morale, so if solider is panicking a lot,
add
some pain killer may help.

Q: How do I use particle displacement sensor?

A: See UFOpedia

HINT: They are useful to detect that one last alien you can't find,
esp. at night when visibility is less, or city blocks (but there you
have civilians)

HINT: They are somewhat useful for looking behind closed doors that
you would like to enter.

Q: How do I use the Disruptor Pulse Launcher or Displacer/PWT?

A: When you select Launch, you can specify a series of up to 9
"waypoints" which can go around any thing, climb and dive, even fly
in
circles. The final waypoint is the explosion point, UNLESS it runs
into something solid first.

HINT: There MUST be something solid at the last waypoint or the
"torpedo" will NOT explode! I usually fly the pulse overhead, then
dive. If not, fly the pulse all around the impact zone to try to make
it run into SOMETHING.

HINT: You can UNset a waypoint by right-clicking

Q: How do I use Chemical Flare?

A: Chuck one inside the building through a window to see inside. You
may have to kneel to angle one in.

HINT: Carry one or two for each soldier for "night" underwater
fights.
Visibility underwater is horrible, especially during "night".

HINT: You can pick up an existing flare and throw it again.

Q: How do I use Particle Displacement Sensor?

A: Use this to look around corners and behind doors.

HINT: Aliens hardly ever stay still between rounds, but going through

doors is still not a great idea. Use this to hunt down aliens
instead.

Q: How do I use M.C. Reader?

A: Usually you would use this to ID a target for capture.

HINT: Here's a trick that you can use if you do NOT have one: try to
pick up the unconscious alien on the ground will also identify
alien's
rank and position.

HINT: Use MCR to check if the alien have enough TUs to attack you. If
not, they are prime candidates for HTH attacks.

8.   GROUND WEAPONS, ARMOR, AND SWS

     "All right, class! Listen up!" The Able Seaman slapped the stock
of his weapon twice. "What we have here, is the latest and greatest
toy to come out of the labs of wonder boys: the gauss rifle.
Perfection of room temperature superconductors plus study of the
plasma weapons captured and duplicated during the First Alien War
allowed us to use conventional plutonium to power this baby instead
of
that exotic E-115 stuff. Lin, question?"

     "I thought plasma weapons don't work underwater."

     "Correct. We tried a few samples we still have left along with
with remaining stock of Elerium we got. The alien metal dissolved in
salt water, and Elerium leaked out, killing the testing team.

     "However, the gauss rifle, a larger cousin of the gauss pistol,
uses superconductors to power a containment field for the radiation,
resulting in a nice concentrated beam that DOES work UNDERWATER.

     "So no more harpoon rifles, folks. Gauss is the way to go.

     "Now here's a sample of the alien grenade we've been able to
capture recently. The science boys call it 'sonic pulser'..."

8.1 Armor

```
                        Fr/ Sd/ Rr/ Bt
----------------------------------
None                     5/  3/  2/  2
--Must research and build----------
Aqua Plastic Armor     60/ 35/ 30/ 25
Ion Armor             132/ 70/100/ 55
Magnetic Ion Armor    142/ 80/110/ 65
```

NOTE : Mag. Ion Armor "flies", like "flying suit", but only
underwater. Can't do it on land.

Interestingly, XCOM armor also has has special protection and
vulnerabilities. For specifics, see the OSG. Suffice to say that the
ion armors are "fireproof".

8.1.1   Aqua Plastic Armor

This first armor available, this one is not very good, and it is NOT
fire-proof (phosphor round), but it is better than nothing. Try to
get
advanced armor quickly.

8.1.2   Ion Armor

Ion Armor is a substantial improvement over APA, with twice the armor
in all areas. Unfortunately, in the original version of TFTD, it is
rather hard to get, requiring a very specific sequence of research.
It
is somewhat easier to get in the V2 patch.

8.1.3   Magnetic Ion Armor

Magnetic Ion Armor is basically Ion armor with a magnetic levitation
unit, which allows "hover" underwater.

8.2 Firing mode selection

With smaller magazines in XCOM2 (10-15), ammo and reloads are
becoming
a problem, esp with Gauss weapons and dart/harpoon weapons, which may
have auto-fire mode. Therefore, watch your ammo load carefully, and
pick your shots carefully.

Sonic weapons are less of a problem since they do NOT have auto-mode
and you can find reloads easily. Gauss reloads must be manufactured.

If you can, take a aimed shot. "One shot, one kill" is not a bad
motto. On the other hand... If you have the ammo, use auto shot
whenever you can. Why? It ensures a kill. Let me explain:

Auto shot fires three rounds, but is the least accurate of the three
shots. On the other hand, when you use the laws of probability, you
usually come out ahead using an auto-shot, since each shot is
calculated independently. For example, let's say chance of hitting in
auto shot is 25%, and snap shot is 35%. The chance of getting at
least
one hit out of three is

     1-(chance of no hits)

So 25% hit probability (75% miss) AND no hit in three tries is

     0.75 * 0.75 * 0.75 = 0.42

Chance of getting at least one hit is then

     1 - 0.42 = 0.56, or 56%
Which is much better than 35% (but no higher than the aimed
percentage). When your accuracy improves, you increase your chances
of
hitting the target multiple times, which ensures a kill, and you use
less TUs than ONE aimed shot. The only thing wasted with auto-fire
mode is ammo, and gauss reloads are hard to come by...

It is not unknown to see three aliens line up in a row, you fired
auto, and each shot killed one alien.

8.3 Pistol vs Rifle debate

```
          Pro                Con
-----------------------------------------------
Rifles    more powerful      use more TUs
          more accurate      two-handed weapon
Pistols   uses less Tus      less powerful
          one handed weapon  less accurate
```

As you can see, they are exact complements of each other.

Very often, using a pistol is called for, since using a pistol would
mean you still have enough TUs to duck into cover.

Give pistols or HTH weapons to heavy weapons people for when they ran
out.

8.4 XCOM Ground Weapons

	Aimed	Snap	Auto	Dam	Type	Ammo (Capacity)
Dart Gun	80/40	40/20		16	AP	Dart Pod (12)
Jet Harpoon	90/70	60/35	40/40	32	AP	Harp. pod (20)
Gas Cannon	90/75	60/40		60	AP	GC-AP (6)
				65	HE	GC-HE (6)
				60	I	GC-P (6)
HydroJet Cannon*	80/80	50/35	40/40	40	AP	HC-AP (14)
				50	HE	HC-HE (14)
				40	I	HC-I (14)
Torpedo Launcher*	110/80	50/40		80	HE	Small Torp.
				90	HE	Large Torp.
				80	I	Phosporus Torp.
Magna-Blast Grenade				50	HE	
Dye Grenade				10	HE	Smoke
Particle Displacement Grenade				70	HE	
Magna-Pack Explosive				100	HE	
Thermal Tazer				80	Frez	
--MUST RESEARCH--						
Gauss Pistol	70/50	40/25	30/30	45	Gau	GP Clip (20?)
Gauss Rifle	100/60	65/30	50/40	60	Gau	GR Clip (15)
Heavy Gauss	90/80	50/40		75	Gau	HG Clip (10?)
Sonic Pistol	85/50	65/30		80	Snc	SP Clip (20)
Sonic Blasta Rifle	110/60	75/40		95	Snc	SBR Clip (15)
Sonic Cannon	115/70	80/50		130	Snc	SC Clip (10)
Dis. Pulse Lch'r	120/75			210	HE	Disruptor Ammo
Ther. Shok Lch'r	120/70	70/50		90	Frez	Ther. Shok Bomb
Sonic Pulser				120	HE	
Vibroblade				80	AP	HTH
Thermic Lance				110	AP	HTH
Hvy Thermic Lance				150	AP	HTH

```
AP      Armor piercing     HE       High Explosive
I       Incendiary         Gau      Gauss
Sonc    Sonic              Frez     Freeze
HTH     hand to hand
```

Note 1 : Accuracy for two-handed weapons is decreased 20% if
     other hand is not empty (i. e. holding something)
Note 2 : Accuracy is increased 15% if the soldier is kneeling,
     which takes only 4 TUs

8.5 Specific Weapon Notes

8.5.1   Dart Pistols and Jet Harpoons

Use them only when you have to, sniper style, use Aimed and/or Snap
shots only. At the beginning your accuracy is bad enough that auto-
mode is just a waste of ammo unless you are at point-blank range, and
with only 10/15 shots, you can't afford to miss or you'll run out of
ammo during missions. Dump them for gauss weapons as soon as
possible.

8.5.2   Gas Cannon and HydroJet Cannon

Gas Cannon is lighter and slightly more accurate than the HydroJet
Cannon and does a bit more damage per shot, but less effective with
only six shots and no auto-fire mode.

On the other hand, HydroJet Cannon does NOT work above water, so for
normal use, you would probably want the Gas Cannon. HydroJet Cannon
is
pretty good, but since it only works below water, that makes it
rather
ineffective. If you're sure you're going underwater, then take one.
Just remember that HydroJet cannon is VERY heavy.

8.5.3   Torpedo Launcher

Torpedo Launcher packs your biggest punch in the early game, BUT IT
ONLY WORKS UNDERWATER! :-P I would NOT carry one of these. Carry
more grenades instead unless you have room to spare, then carry one
with three reloads. (Even sonic pulsers do more damage!)

Try to have another team member carry reloads. When you got to a good
firing point, have that guy drop the reloads on the ground, then
stand on top of the reloads. (This also works for disruptor pulse
launchers, or any big one-shot weapon)

Don't give torpedo launcher (or any high-power weapons for that
matter) to rookies with low morale/bravery. If they go berserk or
gets
M.C.ed by aliens, you may lose a lot of people. (This may be a good
case to use the [use all TU] button)

8.5.4   Gauss Weapon Family

Forget the heavy gauss. The 25% more damage that it does is offset by
having no auto mode and decreased accuracy. As you can see from
analysis earlier, auto mode is VERY useful.

You can probably forget the gauss pistol also, but you need to
research it to get gauss rifle.

You also need to research heavy gauss to get gauss defense and craft
gauss cannon, the most profitable item in XCOM2, but you can come
back
to it later.

Gauss rifle is one of the top weapons in the game, with decent
damage,
auto mode (when necessary), and okay ammo capacity. Its primary
weakness is it goes through ammo very quickly, esp. with auto-fire,
and you must carry your reloads (whereas you can often find aliens

carrying sonic weapons and ammo)

8.5.5   Various Grenades and Magna-Pack Explosives

Use sonic pulsers when you can... They are MORE THAN TWICE as
powerful
as your regular grenades. Throw it REALLY FAR away. They also have
enough power to punch through some USO's outer hull.

One sonic pulser will NOT destroy another in explosions. If you need
plenty of damage to one place, throw in multiple sonic pulsers.

For suicidal attacks, carry a primed grenade around as you attack. If
you die, everyone close to you goes POOF. Or for THAT matter, carry
MORE primed grenades! (obviously, if you panic, your will kill
yourself and you drop the grenade at your feet and ran... But then
you
probably deserve to die for desertion)

Jeff James' variation, a.k.a. Rookie Kamikaze -- Have rookie arm X
sonic pulsers and place in his/her backpack. Then, when a group of
aliens were detected, have him separate from your group, then CHARGE
into the aliens. When s/he dies, the sonic pulsers drop out, then as
the turn ends, ALL X sonic pulser will go BOOM in sequence! That will
do TONS of damage to everything nearby.

Particle Displacement Grenades should be used to block off doors and
stuff so nothing can sneak up behind you. They appear to have a 1-
square sensing radius, so do NOT throw them next to the door!
Instead,
throw them one square away from the door so when the alien have to
come out before it blows up. For example:

(D=Door P=PD Grenade A=Alien)

Alien just behind door, does NOT trigger the grenade since not in
radius of 1.Then Alien steps through the door, and BOOM!

      | |
    AD P   DAP
     | |

Jim Muchow's "trap the door" variation -- Throw one in front of the
door, one off like above, then hide near the doors in the shadows so
you are not visible.

       | X = YOU   Just stand there, keep others out of
       | sight. After a few turns, alien
       | will come out and take a peek,
     \----\   wondering where did you go. And as
        | soon as it steps out the door, BOOM!
       D P = PD   Repeat as needed. They are dumb...
        | Grenade

I haven't found dye grenades to be that useful. I've tried it in
covering my deployment, but it doesn't seem to work that well, but it
was listed in the sourcebook...

No comment on magna-pack explosives yet. Supposedly it's good in
inner
port fighting, but I use sonic pulsers.

Sometimes kneeling down will allow you to throw where you cannot

before

Use grenades to open up single-width doors to help your SWS move.

8.5.6   Sonic Weapon Family

Sonic weapons are good weapons, and virtually all aliens carry them.
Later they all carry Sonic Cannons only... And you may wish to do the
same, since those are powerful weapons, but the most useful is
probably the sonic blasta rifle, with more magazine capacity and
faster shooting (less TUs used).

These are the weapons you should sell to raise cash. You should have
captured lots of them. Ammo may be a problem if you don't capture
that
many, but in that case, usually one reload is enough, sometimes none,
since you can usually FIND reloads. If not, use captured weapons.

8.5.7   Disruptor pulse launcher

Disruptor pulse launcher is probably one of the greatest weapons in
the game. It is VERY useful, but it ONLY works UNDERWATER. You can
blow up things in ANY direction, turn around corners, go up and down
stairs, flatten entire buildings, even punch a hole in sub's outer
hull! Each aquanaut can carry up to 6 reloads (2 on belt, 3 in
backpack, 1 in other hand).

One XCOM trick is to leave the soldier and the launcher inside the
craft kneeling on top of the ammo on the floor. That way there's more
than 6 rounds available. Or you can have other soldiers carry more
ammo, drop them on the ground, then have the launcher guy stand/kneel
on top of them. You can use this trick on torpedo launchers too, but
it's not as useful.

Use a disruptor pulse to enlarge a standard door so you can fit a
tank
through by targeting the wall next to the door. If you are short on
disruptor pulse ammo, use sonic pulsers instead.

8.5.8   Thermal Shok Launcher

Nice weapons, but you may need more than one bomb to stun the
suckers.

Lobsterman are vulnerable to stun weapons, esp. Thermal Shok Bombs,
than other projectile/missile weapons. The ONLY thing they are more
vulnerable to are the hand-to-hand weapons. So if you are short on
firepower, use stun weapons on Lobsterman.

NOTE: aliens ignore stunned soldiers/civilians. If your soldiers run
into enemy they can't handle and has no chance to escape, STUN HIM
with Thermal Shok bombs. The blast MAY stun the alien(s) nearby, and
if the soldier is stunned, aliens will ignore him/her. You can always
revive him/her later.

8.5.9   Hand-to-hand weapons

XCOM players asked for hand-to-hand weapons and they got them! These
weapons are NICE! Sneak up on a Lobsterman and Zzzzzzziiiiiiippp!
Fried lobster! Lobstermen are VERY vulnerable to HTH weapons of ANY

TYPE (including thermal tazer), and almost all aliens takes extra
damage to HTH weapons.

Thermic Lance is the best compromise between weight and potential
damage. Remember you need TUs to get close to the enemy, so try to
pick a target that has already spent most of its TUs.

WARNING: some players reported that you must be on the EXACT SAME
LEVEL as your target for HTH weapons to work. If your target is on an
incline/hill HTH may not work. Plan for that in your attack.

8.6 SWS Types

Submersible Weapon Systems are amphibious tanks, descendents of the
Heavy Weapons Platform of the First Alien War. They give you heavy
weapon support, while having more health to survive a few hits from
the aliens, saving your soldiers from a similar fate. Remember they
are there to SUPPORT you...

SWS should be used to act as scouts to go into areas too dangerous to
be explored by an Aquanaut.

8.6.1   SWS Summary

                           Dam TU Ammo   F/S/R/U   He
Coelacanth/Gas Cannon   50   90   30   90/ 75/ 60/ 60   90
Coelacanth/AquaJet Missile 90   90   8   90/ 75/ 60/ 60   90 *
--Must research and build--
Coelacanth/Gauss Cannon   120 100 50   90/ 75/ 60/ 60   90
Displacer/Sonic Cannon   130 100 100   130/130/130/100 90
Displacer/Pulse Wave Torp 140 100 8   130/130/130/100 90 *

Note 1 : The displacers "fly" both above and below water.
Note 2 : Coelacanth/ Aquajet Torpedo and Displacer/Pulse Wave Torpedo
     only works underwater, as indicated by "*"

8.6.2   Coelacanth/GC

One of the early SWS's, C/GC is mounted with a heavy version of the
same Gas Cannon carried by Aquanauts, with only AP harpoon bolt
available as ammo. Since the weapon is somewhat inaccurate, this SWS
is not very effective. However, 1) it CAN fight on land, and 2) it
has
3.75x more ammo than Coelacanth/AJM.

8.6.3   Coelacanth/AJM

C/AJM is C/GC's cousin, mounting a single AJM launcher (HE warhead).
The HE warhead makes this a proximity weapon; even a close-miss can
wound/kill, which CAN make this quite effective when compared to
C/GC,
even though it has only 8 shots. Remember C/AJM does NOT work on
land.

8.6.4   Coelacanth/Gauss Cannon

C/GaC is the first advanced SWS you can get, and this is a
SUBSTANTIAL
improvement. The weapon is still not quite as accurate, but you get
50

shots doing 120 damage each, and you never have to buy ammo. This is
THE SWS of choice until you get Displacer/Sonic.

8.6.5   Displacer/Sonic

D/S utilizes the alien ion propulsion methods and magnetic levitation
(also used in magnetic ion armor) to allow total 3D movement, but its
primary advantage is in its HUGE ammo capacity (100 shots!) and its
armor. This SWS is definitely worth its price.

8.6.6   Displacer/PWT

D/PWT is like a weak version of disruptor pulse launcher on a SWS.
While it does have the most powerful weapon available (140 HE), it
has
only 8 shots, and the ammo is EXPENSIVE to build. All of these, plus
the fact that PWT only operates underwater, makes this weapon not
very
effective overall. You should stay with Displacer/Sonic.

8.7 Molecular Control Combat

See research tree on how to gain Molecular Control.

General observation: aliens STILL do NOT pick up dropped weapons, so
panic attack and MC attack will disarm most aliens.

8.7.1   Offensive tips

Panicked aliens drop their weapons (just as panicked XCOM soldiers).
Of course, they will pull out anything else they got left on them as
well as use their natural abilities (HTH or MC attacks) if any.

Aliens under your M.C. control then stunned do NOT count as captured.
Computer counts M.C.ed aliens as "friendly", which they sort of are.

You can NO LONGER access inventory of an alien under your M.C.
control. It was possible under XCOM (as a "feature").

To get more ammo, M.C. an alien, and have it throw its weapon toward
you. You can then use the weapon, or unload and pocket the clip.

Panic has a better chance of success than MC Jam Control.

M.C.ability is more important than M.C.skill. M.C.ability determines
resistance to M.C.attacks as well as potential with training

8.7.2   MC Defensive tips

The only REAL way to protect yourself against MC attacks is to kill
the attackers quickly. While some soldiers at the beginning may be
more resistant to M.C. attacks (i.e. high M.C. Ability), without M.C.
labs to help you identify them it is purely by chance and experience.

If morale is low, try adding some painkiller to the solider.

Once you get M.C. Labs and identified your aquanauts with MC, sack
those with low M.C. Ability.

If a solider was M.C.ed more than once in a battle and s/he survives,
sack him/her immediately after. S/he probably has low bravery and/or
low M.C. Ability, bad combination.

Get rookies with high bravery ensures they are more resistant to
alien
panic attacks (though they may not be as resistant to mind control,
that has a inherent lower chance of success). I recommend sacking all
bravery below 30, maybe even 40.

8.7.3   Interesting MC Tricks

Mass xenocide: use MC, send all of your victims into a corner, then
send a disruptor pulse torpedo into the middle one. BLAM! Only a
Lobsterman will survive that one...

Target practice: use MC/Panic attack to make an alien freeze in
place,
then have your rookies shoot it for practice. Note that if aliens
under your control die, your morale drops. If you don't care, then
use
MC and take the morale drop.

Free Mercenary: Found a Tricene giving you trouble? MC it and use it
as YOUR tank. With almost 200 shots, that thing is almost
unstoppable.

8.7.4   Molecular Control FAQ

Q: What is MC ability and MC skill?
A: MC ability is a person's physical talent for MC and cannot be
improved. It is also a measure of resistance against enemy MC
attacks.

MC skill is a person's skill at USING the MC ability. It can be
improved with usage (so use it!) and training at a MC lab.

Q: Help! My soldiers kept getting MC blasted!

A: Fight harder, make more kills, don't get killed. Low morale
invites
more MC attacks.

HINT: add some pain killer to soldiers with low morale may help.

HINT: If you survive the fight, sack the ones who's not very good and
kept getting panicked or controlled.

HINT: Sack newbies with low bravery (i.e. below 40). Screen your
recruits carefully.

HINT: After you get M.C.Lab, sack everyone who has MC Ability of less
than, say, 60. Those have 80+ will be your MC specialists. Players
have reported of being practically MC-proof with MC Ability >70.

8.8 Weapons FAQ

Q: How do I UN-load a weapon?
A: Make sure one hand is free, the gun to unload in the other. Drag
gun onto the UNLOAD icon. You'll end up with unloaded weapon in one
hand and the ammo/clip in the other hand.

9.   BATTLESCAPE

Battlescape, where all tactical combat takes place, is probably the
best part of XCOM, and the most difficult. Each battle is different,
and you will never know whether you will succeed this time, or fail
miserably in a watery grave... And this section hopefully will help
you avoid that.

9.1 General Combat Notes

There is no penalty for destroying civilian property, so go ahead and
wreck the whole place like "The Dirty Pair" (anime).

If the only person inside the craft is unconscious and you abort
mission, s/he's MIA and the transport is lost as well. (Note: some
reported that unconscious soldiers are MIA even if you WIN the
mission
with the V2 patch, this is unconfirmed)

In the early game, you want gas cannon and/or Hydrojet cannon as your
heavy weapons, and plenty of grenades (mix of regular and proximity).

Later in the game, you want almost exclusively sonic blasta rifles
(except for the heavy weapons people carrying disruptor pulse
launchers, who would carry sonic pistols)

9.2 Locating Aliens

Remember, being able to see a part of land/seascape does NOT mean
there are no aliens in that area. You ONLY see aliens when they are
within the line of sight of one of your units.

If an alien falls into lines of sight during your movement, your unit
will stop automatically.

If your unit was shot at by an alien, and the unit survives the shot,
s/he/it will automatically stop. Turn to face the direction where the
shot came from will usually reveal the alien (unless the weapon is
long distance, like disruptor pulse or a sonic pulser)

If you want to use the particle disturbance sensor, use it at the
VERY
BEGINNING of the turn (which means the user needs to be up in front),
so that later XCOM movements will not clutter up the scope.

Once alien is spotted (a number appears in lower right) click on the
"1" to center the alien in the screen, then move the cursor around
the
middle of the screen. When you have the alien's square targetted the
cursor will flash yellow, even though the alien may not be quite
visible. As long as cursor turns yellow you can target it for
something (MC? Disruptor pulse?)

9.3 Capturing Aliens

Capturing aliens is VERY important to advance on your research tree.

9.3.1   How to I capture an alien?

You can capture aliens in three ways, so let's discuss advantages and
disadvantages.

Shoot an alien and hope it drops stunned instead of dead: Since smoke
inhalation produce stun damage, if alien had inhaled smoke for a
while, and you shot it later, it may drop stunned. This is too much
of
a guess work though, and is dangerous if alien is armed. On the other
hand, Lobsterman, having so much health, does this a lot.

Use thermal tazer on the alien: Dangerous since thermal tazer is a
hand-to-hand weapon (range 0), but it's all you have early on, and
all
aliens takes a little extra damage to HTH weapons. Remember to stand
RIGHT NEXT to the target, and DIRECTLY FACING the target, or you
cannot stun! Dangerous, of course, but Lobsterman are pretty dumb,
so
if you double-team, you can probably stun it before it realizes that
you're next to it.

Use thermal shok bombs and launcher: safest way to capture an alien,
shoot and scoot. Still double/triple team to be sure though...

[Has any one been able to stun an alien with dye grenades yet? I
can't
do it so far...]

9.3.2   So what's your recommendation?

Double/triple-team on capture: at least two soldiers should carry
thermal shok bombs/launcher and ready to fire in salvoes in case the
alien does not drop after one hit.

Combine MC combat with capture: panic it with MC to make it drop its
weapon (repeat if necessary), then stun it. Be careful since alien
WILL pull out any other weapon that it has on it, including GRENADES.
After it is out of weapons, and if it does not have HTH attack, you
can use thermal tazer on it safely.

WARNING: it is now IMPOSSIBLE to get to the alien's inventory screen,
so you canNOT make it drop all its weapons.

WARNING: release molecular control on the alien (wait one full turn),
THEN stun it, or otherwise it is NOT captured! Somehow computer
counts molecular-controlled alien as "friendly" and not "captured".

WARNING: all aliens on "first" stage of a two-stage mission stunned
is
considered DEAD. Only aliens stunned in second stage counts.

If a stun attempt fails, shoot the alien with a light weapon like a
pistol. The addition damage may cause the health to drop below stun
damage, which ALSO counts as "stunned". Just don't kill it (yet).

9.3.3   Do you HAVE an alien containment facility?

Does the home base of the transport have alien containment facility
available? If not, all aliens you captured will DIE upon end of
ground
battle.

Periodically check your base inventory. If you have too many alien
soldiers, transfer some out so you can research the high-ranked stuff
(UNCONFIRMED)

9.3.4   Special notes on Alien Containment Facility

by Robert Bellflower

Alien containment can hold ten (10) TYPES of prisoners, not a total
of
10 prisoners. For example, 4 Aquatoid soldiers, 2 aquatoid medics, 1
Aquatoid technician, 2 Aquatoid navigators, and 1 aquatoid squad
leader counts as 5 types of prisoner, but 11 TOTAL prisoners. New
prisoners will stop being put in alien containment ONLY when the
total
TYPES exceeds 10. Building a second alien containment facility at the
same base does NOT change this. There is no reason to ever build more
than one alien containment at the same base.

There are two ways to remove prisoners from alien containment. The
obvious is to transfer them to another base. This only spreads your
problem out. However, if you have the same TYPE of prisoner at more
than one base, transfer all of the same TYPE to the same base.

Whenever you capture a prisoner, open up the research screen and
start
the prisoner as a new project. You do not need to assign any
scientists to the research at this time. That prisoner TYPE, and all
of his identical brothers, will be removed from the alien
containment.
You can confirm this by opening up the transfer screen.

[Hey, where did the body(ies) go? :-)]

If you capture more of the same TYPE of alien before the research on
that type is completed, they will be place in the alien containment.
They can be removed by transfer, or, after the first is done, add the
new prisoner to the research list. You don't ever have to research
the
second prisoner, it just gets it out of the alien containment. And in
XCOM2, you may need to research the same alien TYPE again.

9.4 General Combat Tactics

9.4.1   SWS usage

SWSs should be used for "beating the bush" and flush aliens out for
soldiers to shoot. Since Aqua Jet Torpedoes only work underwater, the
early preference is Coelacanth/Gas Cannon. Later, use
Coelacanth/Gauss
and Displacer/Sonic.

9.4.2   Grenade usage

Grenades should be used for firepower supplement. If you suspect an
alien in the area, drop a grenade in the area. Since you can throw
beyond your visible area, this can REALLY raise your survival rates.

This is important if you see aliens toss grenades or take shots at

you
but you don't see them. Toss a grenade in the area, and see if you
hear screams. If not, send an SWS slowly into the area.

You CAN equip someone with ALL grenades, but with only 80 items in
inventory for more than 10 soldiers you won't get a very good
distribution.

Rookies can be effective grenadiers since grenades are area weapons
and grenades don't miss by very far. Of course, make sure their MC
Ability and/or bravery is high, or...

Magna-Pack Explosive is just a very heavy grenade, and you will have
problems tossing it. Toss it a short distance or drop it on ground,
then RUN away from the area. This would mean you need to set it for
multiple turns.

Particle Displacement grenades are great for traps. Use them to
prevent aliens coming up behind you, and/or pin aliens (toss one on
either side of it and it can't move without setting one off)Just
remember where you threw them (check the map) and don't walk near
them
yourself.

Par. Dis. Grenades canNOT be "destroyed" now. Many have tried to set
one off by dropping grenades on top of it, but the safest way is to
save the game, and reload it. All ParDis Grenades will be primed but
will NOT explode when you walk up to them. (This is better than
XCOM1,
when all Prox. Grenades disappear after saved game)

You can toss grenades to upper levels and through windows, though you
may have to kneel down to do it, and it requires a bit of extra
"height" available.

Sonic pulsers can punch holes in some USO halls, so save disruptor
pulses for other uses unless sonic pulsers don't work.

This of course, means that your transports can be hit by aliens, and
if a grenade explodes OUTSIDE, aquanauts INSIDE can be killed.

9.4.3   The grenade relay trick

Did you know that regular grenades (not prox) can be RE-THROWN safely
as long as the timer holds? Grenades set to 0 can be safely re-thrown
in the same turn.

The scout spotted an alien up ahead but don't have a grenade handy.
One Aquanaut throws the primed grenade at his scout buddy a few
meters
away. The grenade rolled to a stop. The scout picked it up and threw
it, BLAM! One less alien!

This essentially allows you to combine the TU's of the two aquanauts
for the process of the grenade throw, or bypass the problem of the
"second" unit can't throw to the target spotted by the first unit.

Warning: if timer is set to ZERO, the Grenade must be thrown ON THE
SAME TURN, since it explodes at the end of the turn, no matter what!
Don't try to pick up a primed grenade and hold it!

Warning: Don't try this with Prox grenades, once they hit the floor
ANY movement *including picking them up* will trigger them.

9.4.4   Disruptor pulse usage

Disruptor pulse is equivalent to blaster bomb in XCOM1, except this one ONLY works underwater (HEY! Where's my ROCKET LAUNCHER?) Like blaster bomb, it can shoot around corners, has wonderful damage (210 points!) and is very effective. Of course, it is also EXPENSIVE, and so is ammo. So, use them carefully (don't save them either).

Try to keep the first waypoint as FAR from the launcher as possible. That way, should the shot explodes at least you have a chance to survive...

Remember that disruptor pulse do NOT explode when they reach their last waypoint. They explode when they actually HIT something. If you just fly a DB into an empty spot, it will NOT explode. I typically make them fly overhead, then DIVE straight down at the target.

Disruptor pulse does NOT always make the turns you specify perfectly, so do NOT rely on it. Give it some room to manuever. I would try to set the intermediate waypoints in mid-air.

For completeness' sake, add a few waypoints all around the impact zone
just to make SURE it hit something.

Use sonic pulsers, not disruptor pulse, to try to open holes in USOs.

You can carry 7 shots on each disruptor pulse user. Backpack can fit three, plus 2 on belt, plus one in left hand, and you have one in the launcher itself.

9.4.5   Rookie Sonic Fodder

One possible if cruel tactic is to use rookies instead of SWS as scouts. A rookie is a smaller target, though have less armor and a lot
less TUs. On the other hand, they cost about 1/9th as much.

Just make sure you give them weapons that won't cause too much damage if it turns out they are susceptible to alien MC...

Jeff James has a different variation: the Rookie Kamikaze. Give the rookie lots of PRIMED sonic pulsers (12?) all in the backpack, then run him/her straight into a group of aliens. Aliens will kill him/her,
spilling all grenades on the floor. Turn ends, and ALL will explode one by one, doing 1440 pts of damage to anything nearby.

9.4.6   Leave opportunity for shots

To make opportunity shots in the enemy movement phase, you need TU's left unused, as well as a high reactions rating (over 50 preferred).

BUG: underwater-only weapons fire on land during op. fire.

9.4.7   Saving ammo

XCOM has a peculiar way of counting ammo usage: any clip that was fired (even just one round!) is consider "spent" at the end of the

scenario UNLESS unloaded from the weapon.

So, if you just fired one round, unload it when the end of battlescape
is near (you DID time the alien movement phase, didn't you?)

Interestingly, the same thing applies to the aliens as well! If you
panic the aliens and they drop their weapons, you should pick them up
and unload them, toss the ammo clip aside. That way you gain a clip
independent of the gun you got (plus clips the alien was carrying).

Do this with disruptor pulse launchers later. Lots of aliens carry
them later (almost ALL aliens on base attack missions carry disruptor
pulse launchers)

This is REALLY important now on two-stage missions since you only get
to keep what's actually ON your soldiers.

9.5 Movement

Moving around the battlescape is NOT as easy as click and watch.
Doing
that may put you into situations you may not wish to be in, and you
also need to know WHERE you want to go.

9.5.1   Encumbrance

Encumbrance is the amount of "stuff" that an aquanaut can carry
without "overloading". EVERYTHING in the game has a weight value, and
the more weight an aquanaut carries, more energy is used per turn. If
you REALLY overload, TU is reduced.

The heaviest items are the "dead bodies", then the cannons (except
sonic cannon, which weighs amazingly little, unless OSG has a typo).

The moral: do not overload.

9.5.2   Deployment from Transport into Battle

Always send an SWS out first... It will at least make aliens nearby
to
waste their weapons on it, not your aquanauts.

Prime a grenade for most soldiers and be ready to throw. There's
usually a few aliens nearby.

Move the initial soldiers at least 8 squares away before deploying
the
next two so you don't invite grenades or torpedoes.

If you have mag. ion armor, fly up and stand on top of the transport
to clear the "blind side"

9.5.3   Use the terrain!

You can use the terrain in other ways than just hiding behind
something.

Use secondary explosions to your advantage! If alien is standing next
to volatile object like fuel drums, blow THAT up!

Aliens do try to shoot through each other, so if you have NOWHERE to
hide, hide BEHIND an alien and pray.

Kneel whenever possible. It increases your accuracy and decreases the
enemy's (make you a smaller target)

WARNING: you may have to kneel down to look through windows. Be
careful as you "clear" buildings or your aquanauts will get shot in
the back.

Always hide behind something; it could mean the difference between a
wound vs. death! Of course, that also means that you have to have
enough TUs, which is related to snap shots vs aimed shots and pistols
vs. rifles.

If you have magnetic ion armor, fly one level up will protect you
from
grenades AND HTH attacks. This is VERY useful on base raids since
then
the Lobstermen can only shoot you, and once you MC them and made them
threw away their weapons, they're practically harmless. Of course,
you
are still not protected against flying creatures.

9.5.4   Spread out and cover each other (formation)

Bunch up invites enemy attack you with sonic pulsers, or worse,
disruptor pulses. Stay AT LEAST five squares apart. Sonic pulsers
(alien grenades) are now HE damage of 120, 33% more powerful than
alien grenades in XCOM1.. . Which means ONE grenade can kill LOTS
more
soldiers... Same goes for Disruptor pulse torpedoes... Here's a
simple
demonstration with a four person fire team:

A ----------> A

     C ----------> C

B ----------> B

     D ----------> D

They should be at least six squares away from each other.

9.5.5   More formations

The above is actually a modified skirmish line. You can also use
wedge
or diamond formations. I usually use a large wedge with a SWS as the
point element, with supporting staff behind and to the sides. Heavy
weapons hide 6 squares behind the SWS, along with a grenadier or two.
The rest, usually shooters, follow the SWS in the wedge.

9.5.6   Movement Tips

You CAN spin in place by putting the cursor on the square you wish to
face, then RIGHT click.

You can open doors without stepping through by going up to the door,

face the door (see above), then RIGHT click with cursor just behind the door.

Try not to walk into the green moss/seaweed. They use up A LOT of TU!

Therefore, you may want to guide your units AROUND potential obstacles, rather than let them stumble through a lot of stuff and use
up all their TUs.

Some have reported that if you stand on elevators you will not be attacked, while you can keep shooting. This does NOT work on stairs though.

9.5.7   Listen and watch

Watch carefully in alien movement phase. Sometimes you CAN spot them moving around. TRY to remember the surrounding terrain, then go to overhead map or scroll around and see if you can spot where that was.

Watch carefully where the shots came from. Aliens use TUs when they move, just like you do.

Sound can give you important clues to alien locations. If you hear door sounds, you know alien moved in/out of a door. Different door makes different sounds.

Aliens also have no manners. They leave doors open after they go through. Watch doors carefully.

The length of the alien movement phase is proportional to the number of hostile aliens left on the map. Just keep in mind that stunned aliens can wake up, though rather unlikely. Those that drop unconscious from taking a regular shot (not a stun shot) are more likely to wake up.

9.6 Movement FAQ

Q: Some of my soldiers have TU's used before I moved them. Why?

A: Each soldier has a physical weight limit to the amount of "stuff" he or she can carry, usually known as "encumbrance". If you carry less
than or equal to the encumbrance, no penalty is assessed. For each weight unit over the limit, you get a TU penalty. Carry too much and you can't move at all! I haven't found the weight table yet, but I expect to soon.

Q: How can I fire on aliens in their movement phase?

A: This is called "opportunity fire". Leave enough TU's after your move for at least a snap shot, then if your trooper saw an alien and has good enough reactions s/he will fire at the alien.

HINT: Use the 4 icons near the bottom left of screen to reserve the TUs. Reactions usually need to be above 50.

Q: How do I open doors?

A: Target your soldier to move up to the door. Turn to face the door (right click behind door), then right click one more time to open the door without going in.

HINT: Do not open doors without plenty of spare TU's or expect to
DIE.
Using a motion scanner will help to see if any aliens moved beyond
the
door.

HINT: When you are not sure, create another door! Either shoot a hole
in the wall or blow up the entire wall with sonic pulser, HE, Sonic
Cannon, or Disruptor Pulse.

9.7 Time Unit management

The reserve TU buttons are useful, but ONLY FOR PROJECTILE WEAPONS.
Missile weapons (Disruptor Pulse launcher, torpedo launcher, etc.) as
well as HTH weapons are NOT affected by reserve TU buttons! In other
words, if your aquanauts are armed with those weapons, they will act
as if they are under FREE MOVEMENT even if you have one of the
reserve
TU buttons selected!

There are two additional reserve TU buttons. One is the "reserve
kneel" button, which should be obvious. This button CAN be combined
with the other reserve TU buttons so you have enough TU to do both.

The other button is "zero TU", which uses up ALL of the aquanaut's
TU.
Since this is used very infrequently, this button must be RIGHT
CLICKED. Why would you need such a button? To prevent some rookie
with
a heavy weapon from frying your own people with opportunity fire
would
one, and to prevent possible MC victim from inflicting damage upon
his/her comrades.

9.8 Retreat (Tactical withdrawal)

Sometimes you can't win and it's time to cut your losses. To retreat
from a landing assault (sub recovery or assault, terror site), move
any many units as you can back into the transport, then hit the dust-
off button. Any units left behind are "missing in action".

If the only solider onboard the transport is unconscious and you
select dust-off, s/he's also missing in action, and you lose the
transport. Fortunately, if the remaining unit is an SWS, you WILL get
the transport back. (that's a bug, IMHO)

To retreat from a base defense mission, just hit dust-off. You will
lose the whole base to the aliens, of course, including the crafts
(no
home elsewhere for them)

9.9 Alien Movement

9.9.1   Alien Movement and visual range

>> Do the aliens have better night vision? <<

Yes, a few squares more

>> Why they can shoot at you but you don't see them? <<

They can see you... And the XCOM AI cheats slightly: it REMEMBERS
your
position(s).

Aliens capitalize on this by moving forward, spot you, then move back
out of range. Then for next X turns those aliens in range shoot at
you
out of your visual range.

```
        visible
         range
    A-----|->A
          |  |            YOU
    A<----|--+
```

This is why soldiers may get mind-blasted even if no aliens are in
sight. Aliens REMEMBER where you were...

WARNING: aliens are a lot sneakier now and shoots from different
levels (guns, grenades, and disruptors), and often hides behind
things
to stay invisible.

9.9.2   Alien movement habits?

Nowadays, aliens usually do not charge you unless they have HTH
capability, like Lobsterman, or they have HTH weapons like
vibroblade.
If they only carry a gun, they may just walk around.

I've seen a Gillman walked up to within three squares of one of my
soldiers, then turned around and ran.

10. SPECIFIC MISSION TACTICS

The OSG has a chart on how many enemies or what type to expect on
each
type of mission.

10.1 USO Recoveries and Assaults

Attack on subs shot down is "recovery"

Attack on landed USOs (not downed) is "assault"

10.1.1   Assault/Recovery preparations

USO missions are all underwater, so you can bring all types of
weapons
and SWSs along.

If you left equipment on the floor in a Triton (did not distribute
all
objects during equip screen), you can pick it up again, but you can't
do that in a Leviathan. Wierd, but true.

You better NOT right-click during Equip Squad screen or the Aquanaut

Data screen you access from it... That is the same as clicking OKAY.

You should save your game immediately after equiping your squad.

10.1.2   Assault/Recovery tactics and tips

SWSs CAN enter an USO with a single-width door if you help make the
door wider with a disruptor pulse launcher and/or a sonic pulser.
Just
target the panel beside the door with a sonic pulser or disruptor
pulse. On the other hand, most subs now have two-wide doors

Sonic pulsers and disruptor pulses can be used to punch a hole in the
outside wall of USOs, creating an alternate entrance. This will allow
you to surprise the aliens inside since usually they gather by the
doors waiting for you.

Corollary: if downed USO has holes on the side due to damage, try go
in through that instead, as aliens usually wait by the doors, and you
can surprise them that way.

Corollary: if you have mag. ion armor, on a multi-level USOs,
consider
attack from top down by blasting a hole in the roof or top level,
posting guards near the sub doors or use proximity grenades. You can
do this easily with the "Fleet Supply Cruiser" since FSC has top
entrance.

Post guards outside an USO when attacking inside. Any aliens already
outside will attempt to return, and getting shot from behind is not
fun. You can try sweeping the outside first, but then you have to
leave guards against the USO doors.

NEVER use up all of your TU as you go through a door. You WILL get
fried. Stop one/two squares from the door and end the turn. With
maximum TU available next turn, go through.

Alien subs have a lot of nooks and cranies, better be careful. Try
not
to shoot the alien tech stuff...

Go AROUND the obstacles, and save TU for more important things..

Don't use heavy weapons INSIDE the subs unless you are the "I'll take
one of those bastards with me" type of fighter.

Try NOT to use the door if possible. Unconventional entrances,
especially those caused by disruptor bolts on upper levels, tend to
REALLY surprise aliens. Of course, you need mag.ion armor to use
them...

Remember large USOs have PLENTY of aliens... Be careful!

10.2 Colony assaults

Alien colonies cost you points EVERY DAY they exist, so you should
get
rid of them ASAP.

10.2.1   Colony Assault Preparation

Bring mostly guns and rifles. You should be able to find disruptor
pulse launchers and ammo locally, as well as thermal shok bomb
launchers and ammo.

The HE-armed SWS and/or disruptor pulse launchers can be very useful,
so don't leave those at home.

You should be expecting a lot of MC attacks, so leave the MC-
weaklings
at home, and bring some MC disruptors for MC combat.

10.2.2   Colony Assault General Tactics and Tips

The trick in colony assaults is use a lot of grenades and disruptor
pulses. Use grenades to clear corners, part. disp. grenades to block
corridors and/or doors so no one can come up behind you (esp.
Tentaculats!), disruptors to open walls so you don't have to go extra
distance around things.

MC can be important here. Use MC to turn aliens on each other, then
disarm the ones close to you and then stun/grenade them.

Colony assualts are now "two-parters". You have to fight your way
into
the base, then into the heart of the base deep underground.

10.2.3   Colony Assault Part 1

The "into" part isn't that bad, except most aliens to be armed with
disruptor pulse launchers. Others use lots of grenades and carry HTH
weapons. Of course, there's always those biological nightmares like
Tentaculats and Hallucinoids.

The base is composed of a two-story main module, a two-story
secondary
module to the north, three "arms" as entraces to the east, west, and
south, and the M.C. Transmission towers to the east and west edge.

I would recommend you ignore the "arms" and attack the main module
directly. Blow a hole in the main module, then send some disruptors
inside, then up to second level. There's usually two Tentaculats and
two Tasoths squad leaders on the second level.

You can get into the second part of the base without killing all the
aliens by finding the "exit area" in the "secondary module", but it's
not that hard killing all the aliens if you're careful. Hallucinoids
are outside hiding by the towers. Lots of Tasoths and Aquatoids
inside, with two to four Tentaculats.

Alien snipers love to fire from windows on both upper story
buildings...

According to MicroProse, all aliens stunned on "top" (first part) are
counted as DEAD. Only aliens captured in the second level count.
Also,
you lose ALL equipment not ON a soldier in the first part. This
"problem" is sort of fixed by the TFTDV2 patch. See What about any
bugs? Any patches?]

10.2.4   Colony Assault Part 2

The second part is messy. There are so many rooms to cover, and the whole place is infested with mostly Lobsterman and a few Tentaculats. Fortunately, a few of the Lobsterman seem to be armed with Thermal Shok Bombs instead of the deadly Sonic Cannons and/or Disruptor launchers.

You start out on level 2 (bottom is 0) in double-height rooms. Your objective is the Synonium device on level 0. If you destroy that, you can retreat. The base is ruined.

The rooms are hard to defend, with too many doors. Back up against the
wall and face the doors, and NEVER stop in the middle of a room...

The Synonium device is in a small room USUALLY guarded by two Lobsterman Commanders and a Lobsterman Navigator (could be 3 commanders). It is VERY easy to recognize if you've seen it once. On Level 1 it is usually marked by a crosswalk very close to it.

If you are short on time, just torpedo the room. If not, blast a hole in side wall and drop in a grenade.

Synomium device is explosive, so don't get too close when it blows.

Consider guarding the entrance/exit area so you have a way out.

10.3 Artifact site assault

Alien activity has attracted the attention of XCOM to an alien artifact site with LARGE versions of the Synomium device used to construct a world-wide M.C. network. You must destroy it at all costs... Another two-level mission.

You can't just land and leave in this mission. If you got into stage 2
but did not destroy the device before withdrawing, you lose 750 points. (if you ignore the site you lose 2000 pts!)

10.3.1   Artifact site part 1 -- Pyramids

This is NOT quite as easy as alien colony. In fact, this battlefield reminds quite a few X-COM veterans of the Pyramids on Mars, and it is harder, in fact. There are just too many structures around to explore and clear one by one, so don't try. You should head STRAIGHT for the exit. Explore the buildings nearby and spot the exit quickly.

The building housing the exit is the same, even though the rest of the
battlefield is variable. Find it, move in, and hit [DUST OFF].

Watch for snipers! Don't hesitate to blow apart the top of pyramids with a disruptor pulse if you think there's a sniper in it.

If you think you've found the exit, send in a SWS first. There's probably a guard inside that you need to take care of.

10.3.2   Artifact site part 2 -- Into the darkness

You start in small rooms. Go down the elevators to level 0...

Once outside on level 0, explore carefully. Your main objective is

the
control center on level 3 ("ground" is level 0), and to get there,
you
need to find the "main elevator" that leads up. There are rooms
mainly
on level 0 and 1, and a lot of small elevators linking them.

Watch out for a Hallucinoid hiding in the main elevator in level 0,
and Tentaculats hiding in a hibernation chamber in main elevator's
level 1 to the east.

Tentaculats hides all over the place in the control room, especially
in upper levels. With so many TU, they are EXTREMEMLY dangerous.

The safest way is use a displacer. Send one up and in, let the
Tentaculats sting it to no effect. Then move inside that little
alcove, and shoot the synomium device.

If you don't have displacer, use particle displacement grenades to
trap the left/right sides of the doorways so when aliens come to you
they will trip them. If you have MC, take over visible aliens and use
them as both scout and bait

Once you wiped out the Synomium device on the top of the elevator on
level 3, the mission is over and you can leave by the way you came
in.

10.4 Anti-Terror Mission in general

Your top priority is self-preservation. Killing 9 out of your 10
soldiers to save a city or ship is NOT worth it. If given a choice to
save your soldier or to save a civilian, save the soldier.

Consider stunning the civilians. Stunning the civilians makes them
"unpalatable" to the alien terrorists, and they count as saved at the
end of the mission. (WARNING: when they wake up, they count as ENEMY
and you must kill them!)

Do NOT mind control any of the civilians. They count as ENEMY after
you release control and you must kill them! (They can't attack you,
of course, but you have to kill them to finish the mission.)

Kill Tentaculats ASAP. If necessary, kill the civilian near it so
that
the civilian will not be turned into a zombie/drone that will attack
you. Have two persons watch each other.

WARNING: Do NOT hit [dust off] in the second stage of a two-stage
mission. Doing so will result in death of ALL civilians, even those
you "saved" in the first stage.

If you can't handle a terror site, just land then dust off
immediately. You lose points for the dead civvies, but you did not
"ignore" it, and thus is not penalized as severely. Of course, on a
two-stage mission, the number of civilian casualties makes this
"technique" not quite as useful.

Never go straight into any room. Always open the door, take a peek,
THEN go in.

10.4.1   Port Terror missions

This one is relatively easy, being only a one-parter. On the other
hand, the aliens tend to shoot down at you from higher levels in the
various warehouses and buildings. They also tend to hide in
toolsheds.
So when in doubt, GRENADE IT!

Often the battle devolves to "hunt the last alien". Here's some
favorite alien hiding places: on top of tower, on top floor of that
three story building near north edge, in that "warehouse" in the
middle, in the little "tool sheds" all around.

Towers frequently have alien snipers, as will any catwalks in
buildings.

10.4.2   Island Terror missions

This one is STILL relatively easy, being on a one-parter. This one is
tough due to the little "bunkers" hiding in some of the hills,
especially the big bunker right below those statues. Biodrones tend
to
hide in there, and going in there digging them out is NOT a good
idea.

Don't destroy the stairs in the resort; go easy on the HE stuff. If
you destroy the stairs you can't get to the level above...

Favorite alien hiding places are: all those hill bunkers, top floor
of
the "resort" (are they getting a tan or what?), between the hills.

10.4.3   Cargo Ship Terror missions

The cargo ship terror mission is probably the TOUGHEST type of
mission
you'll ever run into, being a two-parter. There are SO MANY places to
hide in a cargo ship! The passages are narrower and more intricate.
The ceilings are low, making grenades almost useless, but you have no
heavy firepower to take its place! (Where's a rocket launcher when
you
need one?)

Obvious: don't stand too close to oil drums

First Stage: After clearing the immediate vicinity, split team in two
and clear the upper decks, then sweep the below decks one room at a
time. NEVER run out of TU and never stop in the middle of a room.

Alien love to hide in closets... If you don't see civilians around,
blow up the room with grenades.

Second Stage: Be VERY careful when the upper levels have a clear
field
of fire toward your aquanauts: plenty of favorite sniper spots.

Watch out for Gillman grenadiers. They throw sonic pulsers from Level
3, and you can't shoot back due to bad angle! (And disruptor pulse
launcher don't work on land, neither does mag.ion armor!) If you find
a stair going up, take it. The aliens are often above you.

10.4.4   Cruise Ship Terror missions

It's the stairs that makes this one hard... And it is a two-parter.
There are twice as many civilians as a one-part mission, which makes
the game that much more difficult.

WARNING: Don't stand too close to oil drums...

First stage: Watch for aliens hiding behind the cargo boxes next to
your sub. One grenade and there goes your whole team!

You'll probably get sniped by aliens from the upper balcony.

Hide behind tables and other things whenever possible.

Usually aliens don't hide in rooms; they tend to hang around the
corridors. Suggest you divide into several small teams, maybe two or
so and tackle both corridor's and/or outside decks simultaneously. As
the range is short, have HTH weapons available, and do NOT overload
so
you lose TU.

Second stage: Clean out the cargo hold first, then split the team and
clear both sides simultaneously (you may catch aliens in cross-fire),
then split again and clear upper/lower levels.

10.5 XCOM Base Defense

You DID plan your base as mentioned in [How do I design a easy to
defend base?], didn't you? If you did, you should have an easy time
rushing units to block the aliens.

MPS listened to players, and you get 110 items on base defense now,
and you won't get "50 flares and no guns" again, as the computer
actually goes through the inventory and distributes the item somewhat
evenly among the different types of weapons.

You must use Par Dis Grenades to isolate parts of the base so the
aliens cannot converge on you. Then clean out one module at a time.
Do
it fast since aliens hiding in second level is a REAL PAIN to find.

Aliens attack the base to DESTROY your base, and if failing that,
they
want to destroy as many modules as possible so the base will need to
be repaired. Becareful that if they destroy a module so the the OTHER
modules are no longer connected to the base, THAT SECTION is
considered DESTROYED.

Number of attacking aliens depend solely on the landing USO type.

Weapons stored around sub pens are highly explosive, keep that in
mind
when you shoot in a sub pen, as it is both a blessing and a curse.

Remember a stunned aquanaut can always be revived.

WARNING: If the airlock is destroyed, the entire base is gone, so be
careful with HE stuff around the airlock. Of course, you still need
to
clean out all four levels of it...

WARNING: If you hit DUST OFF during base defense, you lose the entire
base and everything/everyone in it. If that's your only/last base,
you

lose the whole game.

10.6 Mastering T'leth--The Final Assault

This is a THREE-parter... and you don't get to save in the last part!

Oh, how do you GET there? First, does your research show "T'leth,
the
alien city"? If not, grab a commander and interrogate it. Then, do
you
have a Leviathan? Good! Arm your Leviathan with your best soldiers
and
equipment, and hit INTERCEPT. Next to the CANCEL button should be
T'LETH. Push it, and you're on your way!

By the way, did I mention you only get ONE chance against T'leth (not
counting restoring saved games)?

10.6.1   Preparation

No mercy, folks. Sonic cannon and/or Disruptor pulse launchers with
lots of reloads. Bring some extra grenades as well. You don't get
reloads except by stripping alien dead bodies...

Don't forget HTH weapons, since you're no doubt going to see a lot of
Lobstermen. Thermic lance definitely.

Magnetic Ion Armor for all aquanauts, nothing else will do.

You need best of the best, highest MC ratings available.

You can bring along a few SWSs, preferably Displacer/Sonic, be aware
that its manueverability may be restricted, esp. in Stage two and
three if you don't help it along by widening the doors.

Bring a lot of disruptor pulse launchers. You can find PLENTY of ammo
around the enemy bases.

Definitely bring along some Medikits, if you have them. T'leth stages
are VERY long, and wounded won't survive without medikits.

10.6.2   T'Leth Stage 1 --Outer City

You start in staging areas. Your objective is to find the exit area
and dust off. Interior is similar to the second stage of the artifact
site mission.

You are welcome to try hunting down every last alien, but that is not
recommended.

Some rooms contain explosive stuff... Fight at your own peril.

Aliens hide in the elevators in several rooms. They wait for you to
come into the lower level, then they come down, shoot, and go back
up.
When entering such room, go into corners and look toward elevators.
If
possible, send something ELSE up first. On the other hand, the rooms
with SMALL elevators are not worth tackling.

WARNING: exit area is NOT as big as it looks. When in doubt, use the

overhead map, or you will be missing a lot of stuff when you start
the
next stage, such as a few of your soldiers.

Energy state is carried over to next stage. Therefore, if your
aquanauts ran around a lot and energy is low, allow them to rest on
this stage (safely) before taking them to next stage.

To find the exit area, look for a 2x2 elevator on Level 0. Send the
SWS up if you got one, let it take the heat, while you take the
glory.

10.6.3   T'Leth Stage 2 --Inner City

Only equipment you carried into the exit area is available...

DANG! Who designed this level? The staging area is big and bright,
but
the rest of the base is small, thin corridor and small dark rooms,
ZILLIONS of places for ambush. Suggest you use HE to open up some
manuevering room.

Lots of aliens with disruptor pulse lanchers in this stage.

You can blow through the walls and take a short cut. The exit area is
not as obvious on this stage. In fact, you MUST blow away some walls
to take the SWS along. The Exit Area is close to the 3x3 elevator.
Remember to send in a SWS first, if you have one.

WARNING: exit area is NOT as big as it looks, and is actually SMALLER
than Stage 1's exit area. When in doubt, use the overhead map, or you
will be missing a lot of stuff when you start the next stage. You
need
to get EVERY unit onto the EXIT area since those not on will be left
behind.

Energy state is carried over to next stage. Therefore, if your
aquanauts ran around a lot and energy is low, allow them to rest on
this stage for a few turns before taking them to next stage.

10.6.4   T'Leth Stage 3 -- Crypt of the Ultimate Alien

This map is BIG! You all start on upper left corner of the map, and
you go all around the outer edge of the base with no way to bypass
any
(i.e. cannot blow through walls).

WARNING: You can NOT save during this battlescape session.

This stage is brightly lit and open (relatively)

Watch out for aliens JUST outside the room you came in... Use MC
whenever possible for scouting, or send a grenade/bomb or two
immediately.

Watch out for "death from above" terrorists such as Tentaculats.

SWS needs help going through the level's single-width doors.

Map view does not work in this stage, but it's basically a clock-wise
spiral into the middle of the compound.

Your objective is to locate the stasis chamber of the Ultimate Alien,
and destroy the 8 power conduits nodes that are keeping him alive.
The
stasis chamber is in the middile of the map, and you're going clock-
wise spiraling in.

Walk slowly. There's a lot of room to cover. You don't want to run
out
of energy and become sitting (standing?) ducks.

You can't damage Ultimate Alien's Crypt. Just destroy the power nodes
and that'll kill him. The Nodes are NOT explosive.

11. MISC QUESTIONS AND THEIR ANSWERS

Q: How do I cheat?

A: If you REALLY want to cheat, here's how to add TONS to money into
your account. Yes, you are embezzling the world to support XCOM. You
are twisting arms, and it is for a GOOD cause. :-D

Use a sector editor (such as Norton DiskEdit) and edit LIGLOB. DAT in
your saved game's directory. Overwrite the first 8 bytes with

64 64 64 64 00 00 00 00...

You should get about 1.68 billion dollars. (In case you are
wondering,
64646464h is a hexadecimal number. In decimal it is 1,684,300,900)
You can also use

FF FF FF 7F 00 00 00 00...

Which will give you about 2.1 billion dollars. (7FFFFFFFh =
2,147,484,647)

If you need more help, try finding these at the XCOM Homepage, see
section 1.

12. APPENDIX A: SOME TROUBLESHOOTING

All information provided here are garnered from around the world. I
canNOT guarantee that ANY of the solutions will work nor is any of
the
information here "official".

     PROBLEM: I can't get the intro animation (CD only) to run.
     TRY THIS: Double-check your CD's I/O address (unless you use
SCSI
     CD). If you use MIDI, see if your CD's address conflict with the
     MIDI address. Some Gravis cards have problem with CD intro...

     PROBLEM: I get the "blue text bug" (program is running, then all
     of a sudden I get blue 40-column text crawling all over the
place
     and I get dumped to DOS or some other place) quite often.
     TRY THIS: XCOM/TFTD is actually two separate programs: GeoScape
     and Battlescape. Each has a different requirement. One wants
more
     extended memory, other wants more conventional memory. You must

maximize BOTH. To do so, create a boot disk. ONLY HIMEM and
        EMM386, NOEMS specified. DOS4GW don't need EMS. If you use
        MEMMAKER and similar programs, remember to specify "no expanded
        memory", and optimize the memory again. Also, do NOT use any
disk
        cache (SMARTDRV) or similar software that uses a lot of extended
        memory, especially on systems with only 4 megs of RAM.

        PROBLEM: I use Version 1 and have SB16 with Waveblaster, but I
        can't get SB16 digital sound to work together with general MIDI.
        TRY THIS: Apply the V2 patch. If you don't have the patch and
        can't get to it, use SB16 digital sound with Adlib FM, or use SB
        (8-bit) digital sound with general MIDI. You just can't use
both.
        See "What about any bugs? Any patches?"

13. APPENDIX C: TFTD BOOKS

Order of entries are only dependent upon order received. :-)

Title: Totally Unauthorized X-COM: Terror From the Deep
Price: $17.99
Author: Jeff James
Publisher: ////BradyGAMES Publishing
ISBN # 1-56686302-3
Order Number : 1-800-428-5331

Yes, the same Jeff James who interviewed Mr.Gollop for Computer
Gaming
World and the same one who helped me write THIS Un-official Strategy
Guide. I borrowed his chapter structure for this revision.

His book will include maps for all USOs, maps for all terror sites
(at
least one variation of it), map of colony sites (both levels), and
complete map to T'leth.

Title: XCOM:Terror From the Deep-- The Official Strategy Guide
Price: $19.95
Author: David Ellis
Publisher: Prima Publishing
ISBN # 0-76150074-X

Well, David Ellis' second book is quite a bit better than his first,
but still not quite there. Yes, it's got all the nice charts and
numbers, and maps to all the USOs, and it has more recommendations
now, but lots of places could be improved upon.

I have the OSG here, and several sections looks... Uh... FAMILIAR!
:-)