UGE Modules for Command & Conquer 95   by: AGENT 64

First of all I would like to thank Andrew Griffin for making CCedit, without this
program it would have been impossible for me to do the modules.

Installation:Unzip into your Universal Game Editor directory.
You can get it here:http://www.avault.com/cheat/cs-uge.asp
You'll need the Universal Game editor in order to use the modules, add them to the
game list and choose what module:

cc95air.mdl :: aircraft module
cc95bui.mdl :: buildings module
cc95inf.mdl :: infantry module
cc95veh.mdl :: vehicles module (1 of 2)
cc95veh2.mdl:: vehicles module (2 of 2)

when the program asks to locate the Saved Game File, you have to point it to
the c&c95.exe file which is the file containing all the units' data. So make
sure to make a back-up. To undo the changes simply overwrite the modified file.

Here are the value meanings for some of the variables:

                      value || meaning
===
• owner   249   GDI only
                   250   NOD only
                   251   Common (both GDI and NOD)
                   255   None
• construction
  type   0   None
                   2   Infantry
                   4   Vehicles
                   6   Helicopters
                   8   Structures

The following have
the same meaning
• buildable
• fires twice
• invulnerable
• invisible   0   Off, no
• selectable   1   On, yes
• attackable
• cannot land
• transport
  ability
• stealth

Now here is the weapon list:

value|weapon
==============================
255: none
0:    sniper's rifle
1:    high velocity machine gun
2:    pistol
3:    5.56mm chaingun

```
4:      rockets
5:      infantry flamethrower
6:      tank flamethrower
7:      chemical spray
8:      grenade
9:      70mm cannon
10:     120mm cannon
11:     120mm cannon(apr)
12:     turret cannon
13:     missile pack
14:     227mm rockets
15:     ballistic charges
16:     machine gun
17:     gunboat missile
18:     rocket launcher
19:     napalm bomb
20:     laser
21:     SAM missile
22:     Honest John missile
23:     dinosaur bite 1
24:     dinosaur bite 2
```

The following is a description for all the characteristics for the units.
I got it from the CCedit package. It explains all the allowable Maximum
and Minimum values. One more thing, if you play a multiplayer game the game
will hang if you modified it using the modules. I know the UGE is not
necessarily a proper way for a units editor, but I'm hoping that one of
you progarmmers out there will come up with an editor based on the modules
because I don't know how to program at all.

CHAPTER [5]: Unit and Building Characterisitcs

   There are certain characteristics which will only take effect at the
   beginning of a level, or when a new unit of that type is produced. The
   way around this is just to restart the level. From memory, this includes
   stealth ability, hit points, and ownership (there are probably others).

   There are some maximum values that I am not 100% sure about (such as
   maximum power required), but in these cases I decided to be safe rather
   than sorry (likewise the maximum of 32K for hit points).
[5-1]: Speed
============
   Units all have a maximum speed of 127 (this is very fast - the recon bike
   has speed 40 normally). However, there are a few problems with setting
   the speed high that you should know about.

   Infantry units behave very wierdly when given speed values above about
   30. Their movement becomes increasingly jerky, and eventually it will
   appear that there are 3 units where there should only be one, and at this
   stage that unit becomes very difficult to move around. It is recommended
   that you keep infantry speed below 30.

   Air units (mainly orca and apache) also behave strangely when given
   extremely high speed values. Sometimes they will simply refuse to land
   on a helipad, even thuogh there are no other helicopters trying to land
   there. This can get extremely frustrating. I don't know of an exact value
```

at which this begins to occur.

   Decreasing the speed of the A-10 means that it drops its bombs in a much
   smaller area, but also makes it much easier to kill with defensive
   missiles. Increasing the speed of the A-10 increases the area over which
   it will drop its bombs.

[5-2]: Armour Thickness ***ARMOUR
========================
   There are 5 levels of armour available to be placed on your vehicles or
   buildings. These increase in strength ranging from 1 (the weakest) to 5
   (virtually indestructible). No unit in the game has a natural armour value
   greater than type 3, so I'm not 100% sure whether types 4 and 5 are
   completely legal. Nevertheless, they work and don't cause Command and
   Conquer to crash.

[5-3]: Secondary Weapon
========================
   Only one unit (the mammoth tank) comes with a secondary weapon by default,
   but this allows you to give secondary weapons to all vehicles. However,
   they operate in a manner which is different to the primary weapons.

   For those vehicles which have turrets, the secondary weapon is fired when
   the turret turns around to fire at a new opponent. For vehicles which
   do not have turrets, the story is a little different, and more complex.

   When vehicles do not have a turret and are given secondary weapons, they
   will fire their primary weapons when in a direct line (horizontally or
   vertically) to their opponent. When not in a straight line, they will fire
   their secondary weapon to attack ther opponent.

   When giving a unit a secondary weapons which has a longer range than its
   primary weapon, that unit will begin to attack enemy units with its
   secondary weapon whenever an enemy unit comes within range of that weapon.

[5-4]: Primary Weapon
=====================
   This is the weapon that the unit/building attacks with, and there are only
   a few things that you should be aware of.

   If you give a unit/building (except for the Obelisk) the laser, then
   whenever that unit/building fires its weapon, there will be no graphic
   associated with the weapon discharge. The sound effect is still there
   however. I haven't found out why this is happening.

   Putting the napalm bomb on anything other than the A-10 is a pretty
   pointless excercise, as the bomb falls straight down on the square from
   which it was launched. While this does not damage the unit firing the
   bomb, it also doesn't do much (if any) damage to surrounding units.
   However, giving infantry napalm bombs is definitely interesting when they
   are in large groups.

[5-5]: Owner
============
   The ownership variable is set to determine which side (GDI, NOD, both, or
   neither) can build that particular unit/building. Remember that some
   units/buildings do have pre-requisites (check out Westwood's FAQ) before
   they can be built, so those pre-requisites must also be set (eg. grenadiers
   require a barracks - they cannot be built with just a hand of nod).

Please note that there is no known way of producing the dinosaurs,
viceroids, hovercraft, A-10, gunboat and transport plane so changing the
ownership on these items is a pointless exercise.

Also note that in single player mode, that the computer will continue to
rebuild its buildings even if they are marked as 'Cannot be built'. This
only affects the human player in single player mode.

## [5-6]: Power Required ***POWER REQ.
=====================
This is the amount of power that a building drains from the available
power supply. Only the Temple of Nod, Advanced Communication Centre and
Obelisk of Light can have a required power value of greater than 127.
These three structures can have a maximum power requirement of 32,766.

The minimum power requirement is 0.

## [5-7]: Power Produced ***POWER CAP.
=====================
This is the amount of power that this type of building contributes to
the power pool. Only the Advanced Power Plant can produce more than
255 units of power. The Advanced Power Plant can produce 32,766 units
of power.

The minimum power produced is 0.

## [5-8]: Cost
===========
Most units/buildings have a maximum cost of 32,766, but there are a
few exceptions that you should know about.

The minigunner has a maximum cost of 255. The walls and fences have a
maximum cost of 255. The dinosaurs also have a maximum cost of 255,
although it is probably better to leave their cost unchanged.

The minimum cost (except for the dinosaurs) is 1.

## [5-9]: Visual Radius ***SIGHT
====================
This determines how many black squares of the map are cleared when a
unit moves into range, or when a structure is built. Remember, it is
a radius, so this amount is cleared on all sides.

There is a maximum value of 10 for the radius.

If you give a unit a large radius (such as 10), what occasionally
happens when that unit unloads from a transport helicopter or
hovercraft is that some part of the map near the unit that should have
been uncovered will remain black. Simply move that unit (or another)
to uncover the dark area. It seems as though the black is removed from
the edge of the visual radius rather than from all squares covered by
that unit's vision.

## [5-10]: Hit Points
==================
There are three classes of hit points: light unit, heavy unit and
building.

Light units all have a maximum hit point value of 127. These units are:
all forms of infantry, the stealth tank, mobile HQ, SSM, artillery,
rocket launcher, and all aircraft.

The heavy units all have a maximum hit point value of 32,766. These units
are the remaining vehicles.

Buildings are different again. They have a maximum hit point value of
16,382. If they have a value greater than this, then they fail to build
correctly.

Please note that the walls have a maximum hit point value of 255, but
editing their hit points does not make them stronger.

If you have increased the maximum hit point value of a unit and load
up a savegame in which these units already exist, then these units
will appear to be damaged as the hit points they currently have is less
than the new maximum. They still have the same amount of hit points as
before, but will appear to be injured.

[5-11]: Weapon Payload
======================
   This changes the amount of ammunition that the aircraft carry. Increasing
   it means that the aircraft can stay out longer without needing to rearm
   itself. Changing the payload of the A-10 will increase the length of its
   bombing path (it does not turn back for another pass over the target until
   it has dropped all of its bombs). The A-10 will drop a number of bombs
   (or other weapon) equal to three times this number.

   Please note that the rearming rate of the helipad is constant, so
   completely rearming a helicopter which carried 127 missiles will take a
   very long time.

   The maximum allowable payload is 127.

[5-12]: Invulnerability ***INVULNERABLE
=======================
   When turned on, this unit/building type cannot be hurt in any way.

   However, buildings can still be captured by engineers, but cannot be
   blown up by commandos.

[5-13]: Construction Type
=========================
   This determines what a certain structure type allows you to build. There
   are a few things that you shuold know about this, however.

   In all cases, having multiple structures that have the same construction
   type (ie multiple barracks) decreases the time needed to build that
   unit/building.

   While setting a building other than the barracks or hand of nod to have
   the ability to build infantry will decrease the time needed to produce
   infantry units, they cannot be built FROM structures other than barracks
   or hand of nods. What i mean by this is that although, say, a power plant
   can give you the ability to build infantry units, if you just have a
   power plant and no barracks/hand of nod, then any infantry which you
   build will not appear. They will not emerge from buildings other than
   the barrack or hand of nod.

Likewise for the building of vehicles. Vehicles will only emerge/be
    delivered from weapons factories and Runway Delivery Systems. They will
    not emerge from other buildings.

    Fortunately, any type of building with the ability to build structures
    will be able to place down newly built structures.

[5-14]: Double Fire Ability *** *FIRES TWICE*
============================
    When on, this ability causes the unit/building to fire its weapon twice
    instead of once. This also affects the seondary weapon, it the unit has
    one.

    Note that if the unit/building kills its opponent with the first of its
    shots (and there was a delay before the second fired), the next time it
    attacks, it will use the shot that remains from this interrupted firing
    pair. So, there will be a single shot, the reloading delay, and then it
    will resume is double firing pattern.

    I think that when the obelisk has its double firing ability set, that
    when it attacks an opponent, it fires both lasers at the same time,
    rather than having a delay between attacks. At least, that is what I
    make of it.

[5-15]: Rotor Blades *** *NOT IN UGE MODULES*
====================
    I added this purely for fun, it just alters the graphics of the aircraft
    a little and has no othe impact on the game. You can give a set of rotor
    blades to any of the aircraft, or take them away from those aircraft
    (the apache and chinook) that already have a set.

[5-16]: Transport Ability
==========================
    This ability allows an aircraft to carry infantry (or, in the case
    of the transport plane, to deliver the newly created vehicles to the
    Runway Delivery System).

    When set for the orca and apache, the display showing how many infantry
    units it is carrying replaces the display showing how much ammunition
    it still has.

    An important note when giving the apache the transport ability is that
    when an infantry unit gets on and gets off, the graphics stuff up in
    a really big way. Don't worry about this, it doesn't seem to affect the
    game at all. The graphics will return to normal once the apache takes
    off again.

    It is important to note that if the transport plane does not have the
    transport ability turned On, then it will be unable to deliver units
    to the Runway Delivery System. This means that Nod will be unable to
    build new vehicles. Any money spent on undelivered vehicles is just
    wasted.

[5-17]: Draw Graphics *** *INVISIBLE*
====================
    Added so that you can see the dinosaur units (you need to play a mission
    that has some dinosaur units in it to see them).

Please note that this is not the same as the stealth ability. These units
are treated as though they are completely visible by opposition units,
and will be attacked when they come in range. It is mainly a disadvantage
for human palyers.

When a unit doesn't have its graphics being drawn, the status bar showing
how much health it has left is also not drawn. The only way to tell if
you have selected an undrawn unit is through sound.

When a unit dies however, you do see their death graphic.

[5-18]: Tech Levels
===================
    This only affects multiplayer games, it has no effect on what you can
    build in single player games. Remember that some units/buildings have
    pre-requisites, so use your head when changing the tech levels. eg. making
    orcas and apaches tech level 3 is useless if helipads are still tech level
    6.

    When it says that the tech level is Not Applicable, it just means that the
    default value of the tech level is outside the normal 1-7 range.

[5-19]: Turning Speed ***T. SPEED
=====================
    This determines how fast a unit (vehicle or aircraft) will be able to
    change direction. The higher this number, the faster it will be able to
    change directions.

    You may experience some control problems if you give a vehicle both a
    high Speed and high Turning Speed (it will occasionally go running off in
    another direction, especially if it has a secondary weapon).

[5-20]: Tiberium Capacity
=========================
    This reflects how much tiberium a buildings can store. Only the refinery
    and silo can store more than 127 units of tiberium. These two structures
    can store up to 32K of tiberium.

    While it may seem that the refinery/silo is full (all the boxes have turned
    green), they will continue to store tiberium until their new limit has been
    reached. It seems that a box represents a set amount of tiberium stored.
    Just wait until you get the 'Silos needed' message.

[5-21]: First Build Level ***BUILD AT LEVEL
=========================
    This is a very useful variable. It determines in which level of the game
    this unit/building can first be built by the human player. It is a level
    common to both the GDI and NOD mission levels (eg. setting Repair Bays
    as a level 14 building means that GDI will be able to first build them
    in the 14 mission, but NOD will never be able to build them [as there are
    only 13 missions in the NOD sequence]).

    Remember that some buildings have pre-requisites (eg. the Advanced
    Communications Centre needs the Communications Centre to be built first),
    so you will need to make sure that these pre-requisites are of the same or
    lower level.

    It is doubtful that building the Temple of Nod early will give you access
    to the nuclear missile, as you still have to collect the three steel crates

before gaining access to this missile.

However, if you build the Advanced Communications Centre early, you do get access to the Ion Cannon.

A problem that you should know about: Nod does not seem able to build helipads (and hence apaches) by setting the first build level lower. They need to capture (or start with) a helipad to be able to build them. This is probably coded into Command and Conquer (they only should need the Hand of Nod to build).

There is a similar problem for the rocket launcher unit.

## [5-22]: Unit Can Be Selected ***SELECTABLE
============================
When set to On, this aircraft can be selected. When Off, you are not able to select the unit, and hence are not able to move it around. See section [6-3] for details about how to use this in a useful way.

## [5-23]: Enemies Will Attack Unit ***ATTACKABLE
================================
This is the variable that allows the Nod transport plane to fly in new vehicles without being attacked by any missile troops. If you want the current aircraft to get attacked by missile troops (and by ground forces when it lands), set this to Off. If you do not want these troops to attack this aircraft, set it to On.

One thing to note is that while SAM sites will not attack a unit (I used an orca) that is attacking it and has this variable set to On, a bazooka infantry unit will attack any aircraft that attacks it, even if it has this variable set to On. It is likely (but untested by me) that vehicles will attack units that attack them (if possible), regardless of this variable, but structures will not.

## [5-24]: Aircraft Cannot Land ***CANNOT LAND
============================
If this is set to On, then this aircraft will not be able to land on the ground. It will seem to 'float', and you will not be able to move it, even if you are able to select it.

It Off, then the aircraft will be able to land, just like the normal helicopters.

Please note that if you set this to Off for the Transport Plane in a single player game and the computer is NOD, then it will be able to drop its newly bought vehicles anywhere on the map, not just where its runway it. This lets it bring new vehicles directly to the front line of the battle. See section [6-3] for details on how to use this in a useful way.

Also, if you set this to On for the A10, then it will have problems using its napalm bombs in the correct way. Instead of flying over the target, it will attempt to attack the target like a helcopter, and so will drop its bombs well away from the intended target.

## [5-25]: Can Be Built ***BUILDABLE
===================
This flag determines whether that particular unit/structure can be built. It does affect what the computer can build, not just the human player. When On, this unit/structure can be built. When Off, it cannot be built.

Using this flag, it becomes possilble to build the dinosaurs, viceroid,
   A10, transport plane, hovercraft and gunboat.


   ------------------------------------------------------------
   CHAPTER [6]: Supplementary Notes on Some Units and Buildings
   ------------------------------------------------------------
   [6-1]: Dinosaur Units
   =====================
   There are 4 dinosaur units in Command and Conquer (why? ask Westwood, not
   me). Normally, these units cannot be built, but there it is now possible
   to be able to produce these units.

   Firstly, set the Draw Graphics to On, so you can see these units once
   you build them.

   Now, set the Ownership to GDI, NOD or common.

   Lastly, set the Can Be Built variable to On.

   Now all you have to do is to set the level at which they will first
   appear (using the First Build Level variable). When you build the weapons
   factory or runway, you will be able to build and control them.

   However, their graphics are quite jerky, and are not very smooth when
   being moved around. Their death animations are nice, however. Also, they
   regenerate when eating infantry (not sure if this happens when eating
   vehicles).

   There is no little icon on the sidebar showing the dinosaur (you just get
   a blank square), suggesting that Westwood never intended you to be able
   to build them. You still get a name and price where there picture should
   be (when you move the mouse over the non-icon).

   [6-2]: Viceroids and Mobile HQ
   ==============================
   You'll see a viceroid occasionally in multiplayer games, but, like the
   dinosaurs, they are not normally able to be built. Just follow the same
   method as to get the dinosaurs buildable:

   Set the Ownership correctly, make them buildable, and then set the level
   at which they are first available to be built.

   Viceroids regerate when on tiberium.

   The mobile HQ only appears in multipalyer games where you are playing
   Capture the Flag with bases off. You should be able to build them by
   setting the first build level to an acceptable number.

   Be warned about the Mobile HQ: it one is destroyed, all of your vehicles
   and structures are blown up and you lose that mission. It is probably
   best not to built one :)

   [6-3]: A-10, Hovercraft, Gunboat, and Transport Plane
   =====================================================
   Being able to build the hovercraft and gunboat is not very useful as
   you can't really control them. The hovercraft just travels down the screen
   and disappears off the edge while the gunboat travels across the screen
   going left to right, and back again. It will attack any enemies it sees,

and ignores the different terrain types, but as you need a weapons factory
or runway to build one, it is likely that you will end up with gunboats
strolling through your base.

All you have to do is set the Can Be Built variable to On, and set the
appropriate build level.

You are also able to build the A10s and transport planes, but the method
for building them is a little different (if you want to be able to control
them as well).

Firstly, you need to set the Can Be Built variable to On, and set the
appropriate build level. Now, to control the A10 or transport plane, you
must set the Unit Can Be Selected variable to On, and the Cannot Land
cariable to On. You will now be able to build, select and move around these
two units.

However, it is important to note that these units will not behave and move
in the same way as helicopters. The A10 will no longer be able to use its
napaml bombs in the same way (even when called in by an airstrike).

The transport plane has the ability to carry 5 infantry units (like the
chinook), but when infantry units load into the transport plane, the
graphics of the plane stuff up in a big way (like they do for the apache
helicopter).

Interestingly, the A10 and transport plane both have the appropriate icon
on the sidebar, so  assume that you would have been able to buy these units
in an early (unreleased) version of Command and Conquer.

[6-4]: Walls and Fences
=======================
    Unfortunately, almost none of the values available for editing actually
    does anything. This is a real shame, and leads me to suspect that they
    are not treated as proper structures by Command and Conquer.

    The values that I know will do something are: cost, tech level, and
    probably ownership. Changing the first build level will also work.

    None of the others seem to do anything, but you are welcome to try your
    hardest.

[6-5]: Multiplayer-Only Units
=============================
    There are four units that you can only build in multplayer only games:
    the transport helicopter, the commando, the chemical warriors, and the SSM
    (surface to surface missile launcher). However, using First Build Level,
    you can make it so that you will be able to build these units in the single
    player game.

    Remember that these units do have pre-requisites before they can be built,
    so they will need to be built first (you may have to alter their first
    build level as well).


    Special Thanks to all the people involved in the CCedit team.
    Thank you,

    AGENT 64