

MODDING SUDDEN STRIKE

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Tools:

Sudden Strike takes use of files packed in a certain format called "sue". In order to make any changes and modifications you need to unpack certain packed directories ending with ".sue" make your changes there, repack again and move them to your appropriate Sudden Strike II Directories. Several other programmes have been released by Stirlitz or other people, however since i haven't used them i can't tell you bout them either

Directories:

Like i said, there are several Files and Directories in Sudden Strike you need to make changes on for modifications. Here are the important ones:

Desc_common.sue – This Directory holds the most vital game informations, Damage system, Units listing and stock of units used in the game.

Lang.sue – This Directory holds an copy of Units and Unitfiles adapted to regional language. By SUST Standards these files overwrite the one in Desc_Common.sue

Game_Common.sue – This Directory holds the Unitgraphics used in the game. If you want to introduce an new unit, normally this is the place where you copy your graphic files to.

Edit_Common.sue – This Directory holds the graphic informations for the Editor. How units will appear in the editor is defined there.

Misc – This File in the Desc_CommonMisc Directory defines the Damage System & Infantry Colors. It'll be your main target to modify at first.

There are some other files worth mentioning too, especially in use with the MMS, however i didn't get that far and you might ask an professional modder about them.

How to unpack:

I'll explain you now how to unpack .sue files by help with Sue.exe and Unsue.exe in DOS Window. First thing you have to do is to copy your Desc_Common.sue , Lang.sue etc. files to a new directory where you also have those two packing programmes. Then opend the Dos Window and type following:

unsue desc_common.sue descmod - This will create a new directory called "descmod" and unpack all the files from Desc_Common to this directory

unsue lang.sue langmod - This will create a new directory called "langmod" and unpack all the files from lang to this directory

A closer look on Units:

After you unpacked your files to your new directories, change to them and take a look at descmod and langmod. You'll notice in both, descmod and langmod an directory called "units". That's where the gameunits are listed and where you need to do your modifications on. You should be aware of following:

- I. There are single units (like Tanks, Infantry) and multiple connected ones (like Ship, Ship Turret)
- II. The Desc_Common directory is the main directory which will later on get overwritten by the Lang directory. However, in Desc_Common there are different Unit files as in Lang. These are the multifiles I talked about (Ship- or Trainparts), Whitehorse Jeep and the Units file which is a listing with all units in the game.

The Misc File:

Browsing the descmod directory, you'll also see a directory called Misc. Open that one, and among other things, you'll find an file also called misc. That's where Damage System and Infantry Colors are defined. Here's what you have to know:

The Damage system consists of 3 lines to every Damage class, looking like this:

```
Shot_Damage 5 1000
Shot_Armor 1 200
Shot_Delta 1000
```

Sudden Strike Damage systems are ordered in a simple multiplicator line. You set an minimum and a theoretical maximum, so the system can calculate Damage Ratings. As you can see in this system The Shot_Damage is an 5 multiplicator of the Armor, which means in order to penetrate 1 point of armor, you need to do 5 points of damage. In order to penetrate 10 points of armor, you need to do 50 points of damage, and so on. The Shot Delta finally is an multiplicator which defines how damage is deducted from units health. From what I've found out now I can say that 1000 means damage is deducted once, and 1 means damage is deducted twice.

The Infantry Colors consist of three numbers, specifying an RGB Volume multiplied by the factor 2,745098. For example :

SoldClr 240 288 180 in SUST2 stands for 87 105 66 in RGB

Modifying existing units:

You begin your modifications in the descmodunits Directory with the help of an editor programme

like Ultraedit or others. Open the files and change their Parameters as you like them to be, in regards also with your changed Misc file (for a correct Damage system). I'll explain on the Unit Parameters lateron. When you're done, save your changes and then copy your modified single unit (Do not copy multi-units or units not naturally in Lang) to langmodunits Directory. The programme will only work if values in Lang and Desc are one and the same.

Creating new units:

You can create new units easily by opening an existin unit, change some unit parameters and then save them as new unit with different name. For example, the german and british armies are missing an mortarist. So change the japanese or american mortarist with fitting parameters and save him as new unit as "dmortar" or "emortar". Copy your files to langmodunits as described above. Additonally you have to edit the "Units" file in descmodunits which is as I said an list to all units in the game. The game must be aware that there's a new infantry unit. So open the Units file and add to the section guner the dmortar or emortar.

That's about it, if you want to add new vehicles with different graphics it's more complicated, you need to add files to game_common.sue and since this didn't work out with me yet, i realy can't tell you to much about that matter of course. It's best to ask an professional modder.

How to repack:

After you made your changes, you want to test your modifications in the game. To do this, you have to repack your modified files in the .sue format. Open the dos window again and change to the directory where your packing programmes are. Then type folowing:

sue desc_common.sue descmod - This will repack your modified directory into it's proper designaiton for the Original Sudden Strike Game

sue lang.sue langmod - This will repack your modified directory into it's proper designation for the Original Sudden Strike Game

Now move your freshly made desc_common.sue and lang.sue to your SuddenStrike2Game directory. If you're asked if you want to overwrite click on "yes" (Note, do an backup of your original files). That's about the first steps on the modding way. For further info ask the people who're professionally into it.

Unit Parameters:

Internal comments for unit files (These don't appear in the game)

Syntax: -Mass

Usage: Comment for weight

Used for: All units

Example: -mass 3.4

Syntax: -Size

Usage: Comment for size
Used for: All units
Example: -size 3080 1620 1620

Syntax: -Armouring
Usage: Comment for armouring front/side/rear
Used for: All units
Example: -armouring 12 8 10

Syntax: -Primaryweapon
Usage: Comment for primary weapon
Used for: All armed units
Example: -primaryweapon F32 mod. 1940 76 31.5 6.3 612

Syntax: -Secondaryweapon
Usage: Comment for secondary weapon
Used for: All armed units
Example: - secondaryweapon 4xDT MG 7.62

Syntax: -Ammo
Usage: Comment for ammunition primary/secondary
Used for: All armed units
Example: -ammo 135 2772

Syntax: -Speed
Usage: Comment for units moving speed
Used for: All mobile units
Example: -speed 34

Syntax: -Crew
Usage: Comment for crewstrength
Used for: All vehicles
Example: -crew 5

Syntax: -Loadstock
Usage: Comment for how many soldiers can ride on the vehicle
Used for: Infantry carrying units
Example: -loadstock 6

Syntax: -Chassis
Usage: Comment for type of chassis
Used for: All units
Example: -chassis Track

Syntax: -Nation
Usage: Comment for nationality

Used for: All units
Example: -nation Russian

Syntax: -Year
Usage: Comment for year of production
Used for: All units
Example: -year 1940

Syntax: -Firearmtype
Usage: Comment for type of armament
Used for: All armed units
Example: -firearmtype TANK_P

Syntax: -Usedfor
Usage: Comment for objected usage
Used for: Aerial units
Example: -usedfor BOMBER

Syntax: -Information
Usage: Comment for internal information
Used for: All units
Example: -information Mag34/35

Syntax: -Url
Usage: Comment for informal website
Used for: All units
Example: -url <http://www.achtungpanzer.com>

Editor Informations for unit files (These will be used in the Editor only)

Syntax: *Name
Usage: Unit designation in the editor
Used for: All units
Example: *name KV-1

Syntax: *Picture
Usage: Picture used in the editor
Used for: All units
Example: *picture KV-1-.pck KV-1-.col

Syntax: *Nationtype [Nationality] [Unittype]
Usage: Nationality in the editor
Used for: All units
Example: *nationtype russian tank
[Nationality] = russian / japanese / german / american / none / british / italian / other / french
[Unittype] = tank / at / antiaircraft / mortar / apc / sold / none / plane / furg / stug / car / fortification

/ othertypes / crew / ship / rail / support

*Canbepara

Unit can be used in the editor for transport plane (0=NO, 1=YES)

*Guncrewunit

Definition in the Editor which Infantry type will be automatically added

Unit Informations used for the normal game

Name

Unit designation in the game

Shortname

Unit short designation

File

Reference to the unit file in SUST directory

Icon

Icon used when being in a transport truck

Art

Animation to be used for soldiers manning an gun

Newtypegaub

Enables direct firing for howitzers

Dieexplosion

Animation when being destroyed

Removeexplosion

Animation when being removed

Watertrace

Animation for movement over shallows

Permanentanimask

Used when an permanent animation is placed over the unit

Health

Unit Hitpoints

Healdelay

Amount of time required to recover hitpoints

Movedamagehp

Amount of healthpoints required to stop moving

Radius

Unit size as radius for damaging

Walkonground

Unit can move on ground (0=NO, 1=YES)

Walkonwater

Unit can move on water (0=NO, 1=YES)

Walkonshallows

Unit can move on shallows (0=NO, 1=YES)

Canbepara

Unit can be dropped from transport plane (0=NO, 1=YES)

Canbetowed

Defines the weightclass - important for towing

Havepricep

Defines wich which weightclass can be towed by this unit (WEIGHTLESS, LIGHT, MEDIUM)

Pricepspeed

Movement speed with trailed unit

Marchenabled

Unit has marchmode (0=NO, 1=YES)

Crewcanbehealed

Unit can heal it's crew (0=NO, 1=YES)

Canmovebackward

Unit can drive backward (0=NO, 1=YES)

Cannattackpoint

Weapon used to fire on blank space (1=PRIMARY, 2=SECONDARY)

Canbecrew

Infantryunit can drive wich vehicles (0=NONE, 1=VEHICLES, 2=PLANES, 3=VEHICLES & PLANES)

Canbecrushed

Infantryunit can be crushed by tanks (0=NO, 1=YES)

Officerradius

Radius in Pixels where officer raises experience (NO EXP, FULL EXP)

Binocular

Sight range and angle for binocular use

Crouch to fire

Infantry unit will crouch to fire (0=NO, 1=YES)

Pass can fire

Passengers in the vehicle can fire (0=NO, 1=YES)

Nation type

Home nation + unit type

Camouflage

Camouflage scheme used

Native

Defines sound files used for crew speaks

Double trace

Animation for 2 wheeled or 2 tracked vehicles (0=DEACTIVATED, 1=ACTIVATED)

Engine

Reference to the chassis used

Altitude

Flying altitude for planes

Bomb altitude

Bombing altitude for planes

Idle sound_move

Soundfile used for moving unit

Idle sound_idle

Soundfile used for idle unit

Mech

Defines if unit can be repaired by supply units (0=NO, 1=YES)

Scan delay

Duration of time needed to actualize field of vision (25=1sec)

Ground trace

Animation used for units traveling over land

Crew_unit

Type of crew used in unit

Crew_number

Number of maximum crew members

Attackcrew

Amount of crewmembers required to attack

Movecrew

Amount of crewmembers required to move

Crew_ver

Bail out chances for transported infantry (0.00= 0%, 1=100%)

Stock

Amount of passengers for cars

Moralemax

Amount of maximum Morale

Moralenoattack

Amount of Morale required to crew stops firing

Moralerage

Amount of Morale required to crew goes berserk

Moraleresist

Amount of Morale required to unit changes sides

Moralerndmove

Amount of Morale required to crew stops moving

Sight

Sightrange (NO EXP, FULL EXP)

Crouchsight

Sightrange while crouching (NO EXP, FULL EXP)

Marchsightbonus

Additional Sightrange while in marchmode (NO EXP, FULL EXP)

Turndelay

Turning speed (NO EXP, FULL EXP)

Anispeed DIE

Animation speed of Infantryunit dying (1=DEFAULT)

Anispeed FIRE

Animation speed of Infantryunit firing (1=DEFAULT)

Anispeed RUN

Animation speed of Infantryunit running (1=DEFAULT)

Anispeed STOP

Animation speed of Infantryunit stooping (1=DEFAULT)

Anispeed THROW

Animation speed of Infantryunit throwing (1=DEFAULT)

Alarmrange

Radius in which unit notices and reports enemy units

Expa_crush

Amount of experience gained from crushing infantry (NO EXP, FULL EXP)

Expa_loosehp

Amount of experience gained from losing hitpoints (NO EXP, FULL EXP)

Expa_heal

Amount of experience gained from being healed (NO EXP, FULL EXP)

Davirange

Radius in which tanks attack and crush enemy infantry units

Scanrange

Radius in which supply vehicles will resupply friendly units

Ammoregendelay

Amount of time needed to regenerate ammunition on supply vehicles

Getminetime

Time used to recover mines (NO EXP, FULL EXP)

Layminetime

Time used to lay mines (NO EXP, FULL EXP)

Marad

Regeneration speed for infantry ammunition (0=NEVER, 4096=DEFAULT, 32678=MAX)

Movesmoke

Animation of engine exhausts

Movespeed

Movement speed forward (NO EXP, FULL EXP)

Crouchmovespeed

Movement speed while crouching (NO EXP, FULL EXP)

Backmovespeed

Movement speed backward (NO EXP, FULL EXP)

Maxgund

Turning speed of an gun (0=MINIMUM, 30=MAXIMUM)

Soldtomove

Amount of Infantry units required to pull artillery

Paraani

Animation used for dropping parachutists

Paraexplosions

Animation used for parachuted items landing

Cancrouchexpa

Soldiers will automatically crouch when being attacked (0 = activated, never= deactivated.) !Please note for Infantry without fitting crouching animations an 0 causes the game to crash

Dirboomtype

Animation when receiving a direct hit

Radboomtype

Animation when receiving a indirect hit

Targettype

Unit type classification

Seltype

Defines to which group classification the unit is selected with a doubleclick

Bonus_sight

Bonus to sightrange for infantry riding (NO EXP, FULL EXP)

Bonus_shotdeadzone

Addition/Subtraction bonus to deadzone (NO EXP, FULL EXP)

Bonus_shotrange

Addition/Substraction bonus to shotrange (NO EXP, FULL EXP)

Shot1_id

Reference to the weapon type in SUST directory

Shot1_sound

Primary weapon startsound

Shot1_endburstsound

Unknown yet

Shot1_animation

Reference to the weapon animation in SUST directory

Shot1_animat

Reference to the gunsmoke animation in SUST directory

Syntax: Shot_delay

* [y]

Usage: Delay time for a projectile to leave the barrel (74=1Second) [x= 0 EXP] [y= FULL EXP]

Used for: Armed Ground units

Example: Shot_delay 74 0

Syntax: Shot_burstshots

* [y]

Usage: Number of shots fired in one salvo [x= 0 EXP] [y= FULL EXP]

Used for: All armed units

Example: Shot_burstshots 4 6

Syntax: Shot_burstreloadtime

* [y]

Usage: Timedelay between firing one salvo to the next one (74=1Second) [x= 0 EXP] [y= FULL EXP]

Used for: All armed units

Example: Shot_burstreloadtime 370 296 Syntax: Shot_reloadtime

* [y]

Usage: Timedelay till unit starts reloading ammo (74=1Second) [x= 0 EXP] [y= FULL EXP]

Used for: All armed units

Example: Shot_reloadtime 444 518

Shot1_damage

Weapon damage (NO EXP, FULL EXP)

Shot1_range

Weapon range in pixel (NO EXP, FULL EXP)

Shot1_accuracy

Weapon accuracy [can deviate from original target point with given amount of pixels] (NO EXP, FULL EXP)

Shot1_deadzone

Weapon blind range in pixel (NO EXP, FULL EXP)

Shot1_expa

Amount of experience gained from firing 1 shot (NO EXP, FULL EXP)

Shot1_speed

Weapon shotspeed (NO EXP, FULL EXP)

Shot1_useammo

Amount of ammo used for 1 shot (NO EXP, FULL EXP)

Ammo1

Weapon ammunition

Reload1

Amount of material and time used to reload weapon

Gunshotwait

Gun firing speed

Gunturndelay

Turret turning speed

Shot2_id

Reference to the weapon type in SUST directory

Shot2_sound

Secondary weapon startsound

Shot2_endburstsound

Unknown yet

Shot2_animation

Reference to the weapon animation in SUST directory

Shot2_animat

Reference to the gunsmoke animation in SUST directory

Shot2_delay

Weapon rate of fire - when projectile leaves the barrel after firing [25=1Second] (NO EXP, FULL EXP)

Shot2_damage

Weapon damage (NO EXP, FULL EXP)

Shot2_range

Weapon range in pixel (NO EXP, FULL EXP)

Shot2_accuracy

Weapon accuracy [can deviate from original target point with given amount of pixels] (NO EXP, FULL EXP)

Shot2_deadzone

Weapon blind range in pixel (NO EXP, FULL EXP)

Shot2_expa

Amount of experience gained from firing 1 shot (NO EXP, FULL EXP)

Shot2_speed

Weapon shotspeed (NO EXP, FULL EXP)

Shot2_useammo

Amount of ammo used for 1 shot (NO EXP, FULL EXP)

Shot2_reloadtime

Timedelay before firing the next shot [25=1Second] (NO EXP, FULL EXP)

Shot2_burstshots

Number of shots fired in one salvo before reloading (NO EXP, FULL EXP)

Shot2_burstreloadtime

Time needed to reload one salvo after one shot(NO EXP, FULL EXP)

Ammo2

Weapon ammunition

Reload2

Amount of material and time used to reload weapon

Armor AIR

Armoring against AIR damage (front,front,side,side,rear,rear)

Armor EXPLOSIVE

Armoring against EXPLOSIVE damage (front,front,side,side,rear,rear)

Armor FIRE

Armoring against FIRE damage (front,front,side,side,rear,rear)

Armor MACHINE

Armoring against MACHINE damage (front,front,side,side,rear,rear)

Armor MINE

Armoring against MINE damage (front,front,side,side,rear,rear)

Armor PIERCE

Armoring against PIERCE damage (front,front,side,side,rear,rear)

Armor TRANSPIERCE

Armoring against TRANSPIERCE damage (front,front,side,side,rear,rear)

Armor SNIPER

Armoring against SNIPER damage (front,front,side,side,rear,rear)

Protection AIR

Crew protection against AIR damage (front,front,side,side,rear,rear)

Protection EXPLOSIVE

Crew protection against EXPLOSIVE damage (front,front,side,side,rear,rear)

Protection FIRE

Crew protection against FIRE damage (front,front,side,side,rear,rear)

Protection MACHINE

Crew protection against MACHINE damage (front,front,side,side,rear,rear)

Protection MINE

Crew protection against MINE damage (front,front,side,side,rear,rear)

Protection PIERCE

Crew protection against PIERCE damage (front,front,side,side,rear,rear)

Protection TRANSPIERCE

Crew protection against TRANSPIERCE damage (front,front,side,side,rear,rear)

Protection SNIPER

Crew protection against SNIPER damage (front,front,side,side,rear,rear)

Attackpref APC

Attack priority for APC

Attackpref BOAT

Attack priority for BOAT

Attackpref BUILDING

Attack priority for BUILDING

Attackpref CAR

Attack priority for CAR

Attackpref CRUISER

Attack priority for CRUISER

Attackpref GUN

Attack priority for GUN

Attackpref HEAVYTANK

Attack priority for HEAVYTANK

Attackpref LIGHTTANK

Attack priority for LIGHTTANK

Attackpref MAN

Attack priority for MAN

Attackpref MEDTANK

Attack priority for MEDTANK

Attackpref SMALLGEAR

Attack priority for SMALLGEAR

Attackpref SOFT

Attack priority for SOFT

Attackpref TRAIN

Attack priority for TRAIN

Attackpref TURRET

Attack priority for TURRET

Scorevalue

Points achieved for destruction of this unit

Scoretype

Classification in score system

Selector

Unknown yet

Soundtype

Sound variety to be used for this unit

Soldonarmor

Unit types who can be transported on roof

Repair

Amount of material and time used to repair unit

My personal settings:

MY DAMAGE SETTINGS

PIERCE DAMAGE:

Shot_damage pierce 5 1250 5 Points damage = 1mm Penetration

Shot_armor pierce 1 250 1 Points armor = 1mm Armoring

Shot_delta 1 1 Delta effects = Damage x 2

EXPLOSIVE DAMAGE:

Shot_damage explosive 20 5000 20 Points damage = 1mm Penetration

Shot_armor explosive 1 250 1 Points armor = 1mm Armoring

Shot_delta 1000 1000 Delta effects = Damage x 1

MINE DAMAGE:

Shot_damage mine 20 5000 20 Points damage = 1mm Penetration

Shot_armor mine 1 250 1 Points armor = 1mm Armoring

Shot_delta 1000 1000 Delta effects = Damage x 1

TRANSPIERCE DAMAGE:

Shot_damage transpierce 5 1250 5 Points damage = 1mm Penetration

Shot_armor transpierce 1 250 1 Points armor = 1mm Armoring

Shot_delta 1 1 Delta effects = Damage x 2

MACHINE DAMAGE:

Shot_damage machine 10 2500 10 Points damage = 1mm Penetration

Shot_armor machine 1 250 1 Points armor = 1mm Armoring

Shot_delta 1000 1000 Delta effects = Damage x 1

SNIPER DAMAGE:

Shot_damage sniper 10 2500 10 Points damage = 1mm Penetration

Shot_armor sniper 1 250 1 Points armor = 1mm Armoring

Shot_delta 1000 1000 Delta effects = Damage x 1

FIRE DAMAGE:

Shot_damage fire 10 2500 10 Points damage = 1mm Penetration

Shot_armor fire 1 250 1 Points armor = 1mm Armoring

Shot_delta 1 1 Delta effects = Damage x 2

AIR DAMAGE:

Shot_damage air 1 10 Damage = AP Pen x4 for light Calibre

Shot_armor air 1 10 Damage = AP Pen x10 for medium Calibre

Shot_delta air 1 Damage = AP Pen x20 for heavy Calibre

ABJECTIVE DAMAGE:

shot_damage abjective 1 10

shot_armor abjective 1 10

shot_delta abjective 1

MY FIRING RANGE SETTINGS

Long Range Artillery: Range= (((Authentic Range km – 1km): 3) x 1280)+1280

Tank Guns & AT Guns: 500m=640pxl / 750m=960pxl / 1000m=1280pxl

Sniper, heavy Machineguns: 500m=640pxl

Rifle, MG, AT-Rifle: 453m=580pxl

Assault Rifle, Carbines: 390m=500pxl

Submachineguns, Bazookas: 351m=450pxl

Pistol, Handgrenades, Flamethrowers: 281m=360

MY SIGHTRANGE SETTINGS

1 Sightpoint = 32pxl

Officer/Sniper + Glasses: Sight = 30

Infantry/Scoutcars: Sight = 20

Open Guns: Sight = 16

Trucks / closed Guns: Sight = 12

Tanks: Sight = 8

PERSONAL COMMENTS

Delay Time: 50 points = 1 Game Second

Sightrange: 1 point = 32 Pixels

Shotrange: 1 point = 1 Pixel

Shotspeed: 1 point = 25 m/sec Adapted / 2: Shotspeed = Original / 12,5

Movespeed: 0,0111 = 1 km/h Adapted x 3: Movespeed = Original * 0,0333

Movespeed Base: 1 1,3

Movespeed Infantry: Pistol/SubMG = 24km/h, Rifle = 20km/h, MG/ATR/PzFst = 16 km/h ,

Mortar/Flamer = 12 km/h

Fire armor: Armored units everywhere 256 except exhaust sides with 6 points

Health: small Gears=150 HP, medium Gears=300 HP, large Gears=500 HP

Health: Tanks = Weight(t) x 22

AA-Ammo: heavy Guns=30 Shots,

Accuracy: Tank MG=44/39, Flamer=10/10, Grenade=25/23, Bazooka=18/16, PzFst=22/20

Tank

Source : <http://www.strateticgames.de/community/thread.php?postid=108>