Useful notes

Condition codes

A number of effectors perform actions based on global configurations stored as a series of bits in an internal variable named **`ingamesettings`**. Current supported values are:

- 1 Game type is Capture the Flag (CTF).
- 2 Explosive ammunition boxes are enabled.
- 4 Game type is Team DukeMatch.
- 8 Game type is Enhanced Duke-Tag.
- 16 Mid-game team swaps are *not* allowed.
- 32 Game type is Flag-Tag.

Values can be combined with addition or bitwise-OR operations.

NOTE: The value 16 is a legacy feature that exists for backwards compatibility (prior to TeamDUKE 0.8), although it is still relevant under the "Use Config Rooms (FFA)" option.

Palette Lookup Indices

TeamDUKE introduces some new palette indices beyond the standard 25. Many of these have internal uses, but some are useful for mapping purposes:

- 26 Converts regular shades of red to blue. Used to replace Duke's red shirt with a blue one and to give the Team DukeMatch GAMESWITCH a blue colour, it is useful for transforming textures with predominant red hues into blue versions of themselves for use in blue bases. It is a counterpart to index 21, which converts blue shades to red.
- 34 Converts fullbright blue colours to red. Used internally by REDTEAMSCOREONE, REDTEAMSCORETEN and REDTEAMSCORE100 to display red digits, this is useful for replacing the blue glowing stripe with a red one on texture #258 for use in red bases.
- 35 Converts fullbright blue colours to yellow.

Actors and Effectors (Alphabetised)

AUTORESET (*#3962*)
BLUEBEACON (*#3844*)
BLUEBEACONDEST (*#3848*)
BLUEFLAG (*#3841*)
BLUEFLAGRESPAWN (*#3849*)
BLUESCOREZONE (*#3949*)
BLUETEAMSCORE100 (*#3876*)
BLUETEAMSCOREONE (*#3874*)
BLUETEAMSCORETEN (*#3875*)
CONDITIONAUDIO (*#3969*)
CONDITIONCEILING (*#3944*)
CONDITIONFLOOR (*#3956*)
CTFSPAWNTIMEOUT (*#3977*)
DEFAULTCONDITION (*#3945*)
DEFAULTWEAPONS (*#3979*)
DEFFLAGTAGSCORE (*#3946*)
DUKETAGBLUEDEST (*#3948*)
DUKETAGREDDEST (*#3958*)
EXPLOSIVE_AMMO (*#3927*)
FLAGTAGBEACON (*#3894*)
FLAGTAGDEST (*#3887*)
FLAGTAGRESPAWNTIMEOUT (*#3978*)
GAMESWITCH (*#3951*)
GOLDFLAG (*#3941*)
GOLDFLAGRESPAWN (*#3964*)
REDBEACON (*#3864*)
REDBEACONDEST (*#3868*)
REDFLAG (*#3871*)
REDFLAGRESPAWN (*#3869*)
REDSCOREZONE (*#3959*)
REDTEAMSCORE100 (*#3879*)
REDTEAMSCOREONE (*#3877*)
REDTEAMSCORETEN (*#3878*)
STIMPACK (*#3892*)
TDMATCHBLUEDEST (*#3947*)
TDMATCHREDDEST (*#3957*)
TEAMSWAP (*#3928*)

Actors and Effectors (Numeric)

BLUEFLAG (*#3841*)
BLUEBEACON (*#3844*)
BLUEBEACONDEST (*#3848*)
BLUEFLAGRESPAWN (*#3849*)
REDBEACON (*#3864*)
REDBEACONDEST (*#3868*)
REDFLAGRESPAWN (*#3869*)
REDFLAG (*#3871*)
BLUETEAMSCOREONE (*#3874*)
BLUETEAMSCORETEN (*#3875*)
BLUETEAMSCORE100 (*#3876*)
REDTEAMSCOREONE (*#3877*)
REDTEAMSCORETEN (*#3878*)
REDTEAMSCORE100 (*#3879*)
FLAGTAGDEST (*#3887*)
STIMPACK (*#3892*)
FLAGTAGBEACON (*#3894*)
EXPLOSIVE_AMMO (*#3927*)
TEAMSWAP (*#3928*)
GOLDFLAG (*#3941*)
CONDITIONCEILING (*#3944*)
DEFAULTCONDITION (*#3945*)
DEFFLAGTAGSCORE (*#3946*)
TDMATCHBLUEDEST (*#3947*)
DUKETAGBLUEDEST (*#3948*)
BLUESCOREZONE (*#3949*)
GAMESWITCH (*#3951*)
CONDITIONFLOOR (*#3956*)
TDMATCHREDDEST (*#3957*)
DUKETAGREDDEST (*#3958*)
REDSCOREZONE (*#3959*)
AUTORESET (*#3962*)
GOLDFLAGRESPAWN (*#3964*)
CONDITIONAUDIO (*#3969*)
CTFSPAWNTIMEOUT (*#3977*)
FLAGTAGRESPAWNTIMEOUT (*#3978*)
DEFAULTWEAPONS (*#3979*)

BLUEFLAG (#3841)

The blue flag in CTF games. Make sure its sector (hence known as its 'home sector') is large enough that a player can comfortably enter, otherwise they will not be able to pick it up or score.

If a red player picks up the blue flag but is killed within the home sector, the flag will be considered to be at home, not dropped, even if its position isn't the same as before.

To score, a blue player need only enter the home sector while carrying the red flag, not necessarily standing next to the blue flag (which must be at home to score).

Flag is invisible outside of CTF games.

WARNING: Having multiple BLUEFLAG actors in a map will lead to unpredictable results.

BLUEBEACON (#3844)

Used in the team selection room. Running into it will put a player on the blue team in team modes with the "Use Config Rooms (FFA)" option. Is converted into a FLAGTAGBEACON (#3894) in Flag-Tag mode. Otherwise, it will put a player on the team selected via NetDuke32.

BLUEBEACONDEST (#3848)

Spawn point for blue players. If a player joins the blue team, they will randomly teleport to one of these effectors on the map in CTF mode. Blue players that are killed in CTF will also randomly respawn at one of these points.

`Angle` Players will teleport/respawn facing the same direction as the effector.

`Hitag` (TeamDUKE 0.8 and later) A bitfield that specifies which weapons a player starts with (overrides DEFAULTWEAPONS). See DEFAULTWEAPONS for values.

WARNING: Having no BLUEBEACONDEST effectors in a CTF map will have unpredictable results.

BLUEFLAGRESPAWN (#3849)

Used internally to indicate where to respawn the blue flag if it is returned, reset or if the red team scores. Do not place in map, as one is generated automatically by the BLUEFLAG (#3841) actor upon map load.

REDBEACON (#3864)

Used in the team selection room. Running into it will put a player on the red team in team modes with the "Use Config Rooms (FFA)" option. Is converted into a FLAGTAGBEACON (#3894) in Flag-Tag mode. Otherwise, it will put a player on the team selected via NetDuke32.

REDBEACONDEST (#3868)

Spawn point for red players. If a player joins the red team, they will randomly teleport to one of these effectors on the map in CTF mode. Red players that are killed in CTF will also randomly respawn at one of these points.

`Angle` Players will teleport/respawn facing the same direction as the effector.

`Hitag` (TeamDUKE 0.8 and later) A bitfield that specifies which weapons a player starts with (overrides DEFAULTWEAPONS). See DEFAULTWEAPONS for values.

WARNING: Having no REDBEACONDEST effectors in a CTF map will have unpredictable results.

REDFLAGRESPAWN (#3869)

Used internally to indicate where to respawn the red flag if it is returned, reset or if the blue team scores. Do not place in map, as one is generated automatically by the REDFLAG (#3871) actor upon map load.

REDFLAG (#3871)

The red flag in CTF games. Make sure its sector (hence known as its 'home sector') is large enough that a player can comfortably enter, otherwise they will not be able to pick it up or score.

If a blue player picks up the red flag but is killed within the home sector, the flag will be considered to be at home, not dropped, even if its position isn't the same as before.

To score, a red player need only enter the home sector while carrying the blue flag, not necessarily standing next to the red flag (which must be at home to score).

Flag is invisible outside of CTF games.

WARNING: Having multiple REDFLAG actors in a map will lead to unpredictable results.

BLUETEAMSCOREONE (#3874)

In-game, is rendered as a large, blue, seven-segment number that displays the units digit of the blue team's current score (i.e. it displays `bluescore % 10`). Is invisible in Flag-Tag mode.

HINT: The effector's graphic is the same size as a digit, so use this for scaling in an editor.

BLUETEAMSCORETEN (#3875)

In-game, is rendered as a large, blue, seven-segment number that displays the tens digit of the blue team's current score (i.e. it displays `(bluescore / 10) % 10`). Renders a blank digit if the score is less than 10. Is invisible in Flag-Tag mode.

HINT: The effector's graphic is the same size as a digit, so use this for scaling in an editor.

BLUETEAMSCORE100 (#3876)

In-game, is rendered as a large, blue, seven-segment number that displays the hundreds digit of the blue team's current score (i.e. it displays `(bluescore / 100) % 10`). Renders a blank digit if the score is less than 100. Is invisible in Flag-Tag mode.

HINT: The effector's graphic is the same size as a digit, so use this for scaling in an editor.

REDTEAMSCOREONE (#3877)

In-game, is rendered as a large, red, seven-segment number that displays the units digit of the red team's current score (i.e. it displays `redscore % 10`). Is invisible in Flag-Tag mode.

HINT: The effector's graphic is the same size as a digit, so use this for scaling in an editor.

REDTEAMSCORETEN (#3878)

In-game, is rendered as a large, red, seven-segment number that displays the tens digit of the red team's current score (i.e. it displays `(redscore / 10) % 10`). Renders a blank digit if the score is less than 10. Is invisible in Flag-Tag mode.

HINT: The effector's graphic is the same size as a digit, so use this for scaling in an editor.

REDTEAMSCORE100 (#3879)

In-game, is rendered as a large, red, seven-segment number that displays the hundreds digit of the red team's current score (i.e. it displays `(redscore / 100) % 10`). Renders a blank digit if the score is less than 100. Is invisible in Flag-Tag mode.

HINT: The effector's graphic is the same size as a digit, so use this for scaling in an editor.

FLAGTAGDEST (#3887)

If a player joins a Flag-Tag session, they will randomly teleport to one of these effectors on the map. Players that are killed in Flag-Tag will also randomly respawn at one of these points.

`Angle`	Players will teleport/respawn facing the same direction as the effector.
`Hitag`	(TeamDUKE 0.8 and later) A bitfield that specifies which weapons a player starts with (overrides DEFAULTWEAPONS). See DEFAULTWEAPONS for values.

STIMPACK (#3892)

A black Portable Medkit. It gives 250% Portable Medkit, and Duke exclaims “Let's Rock” upon grabbing it, but takes a much longer time to respawn compared to other items (in TeamDUKE 0.65, this item also gave 100% Steroids, but this attribute was removed as of TeamDUKE 0.8).

FLAGTAGBEACON (#3894)

Used in the team selection room. Running into it will teleport players to a random FLAGTAGDEST (#3887) effector and give them a yellow shirt! Do not use directly in a map unless it only supports Flag-Tag; instead, use a REDBEACON (#3864) and BLUEBEACON (#3844) for team selection, as these are automatically converted into FLAGTAGBEACON actors when Flag-Tag mode is selected.

EXPLOSIVE_AMMO (#3927)

This decal has the words “Explosive Ammunition” over a yellow circle. It allows a player (normally player 1 in a special 'configuration' room) to toggle whether ammunition crates explode or not by pressing the Use key on the yellow circle. If enabled, the words appear green, otherwise they appear red.

HINT: It is often good practice to place sprite #3929 above it, which is the word “Allow”.

TEAMSWAP (#3928)

This decal has the words “Mid-Game Team Swap” over a yellow circle. It allows a player (normally player 1 in a special 'configuration' room) to toggle whether players can switch teams mid-game by pressing the Holster Weapon key (normally Scroll Lock). If enabled, the words appear green, otherwise they appear red.

HINT: It is often good practice to place sprite #3929 above it, which is the word “Allow”.

NOTE: This is a legacy feature that exists for backwards compatibility (prior to TeamDUKE 0.8), although it is still relevant under the “Use Config Rooms (FFA)” option.

GOLDFLAG (#3941)

The golden flag in Flag-Tag games. Flag is invisible outside of Flag-Tag games.

WARNING: Having multiple GOLDFLAG actors in a map will lead to unpredictable results.

CONDITIONCEILING (#3944)

This effector checks the internal variable `ingamesettings` and sets its sector's ceiling to its z-coordinate if a desired condition is met, and resets the sector's ceiling to its original position if it is not. This check is performed via a bitwise-AND operation with the sector's hitag (in TeamDUKE 0.8, the effector's hitag, if nonzero, is used instead) and seeing if all the masked bits are set (in C code, equivalent to `(ingamesettings & hitag) == hitag`).

`Angle` If the effector's angle is *not* due North (1536), then the sector's ceiling is adjusted to the effector's z-coordinate if the condition is *not* met, and reset if it is.

`Lotag` (TeamDUKE 0.8 and later) If set to 1, the condition is met if any bit in the bitmask is set, not necessarily all of them; i.e. checks `(ingamesettings & hitag) != 0`.

`Hitag` (TeamDUKE 0.8 and later) The bitmask to compare `ingamesettings` against. If zero, use sector hitag instead.

`Sector hitag` The bitmask to compare `ingamesettings` against.
(TeamDUKE 0.8 and later) Ignored if the effector's hitag is non-zero.

DEFAULTCONDITION (#3945)

This effector sets `ingamesettings` when the map is first loaded, setting it to equal its sector's hitag. Use this effector if a map doesn't support CTF or if you wish to showcase a different game mode by default.

`Hitag` (TeamDUKE 0.8 and later) The value to set `ingamesettings` to. If zero, use sector hitag instead.

`Sector hitag` The value to set `ingamesettings` to.
(TeamDUKE 0.8 and later) Ignored if the effector's hitag is non-zero.

WARNING: Specifying a value of 0 or a combination of multiple game modes will have unpredictable results.

DEFFLAGTAGSCORE (#3946)

This effector overrides the starting score for Flag-Tag games, by default set to 150.

`Hitag` (TeamDUKE 0.8 and later) The Flag-Tag starting score. If zero, use sector hitag instead.

`Sector hitag` The Flag-Tag starting score.
(TeamDUKE 0.8 and later) Ignored if the effector's hitag is non-zero.

WARNING: Specifying a value of 0 will have unpredictable results.

TDMATCHBLUEDEST (#3947)

Spawn point for blue players in Duke-Tag mode. If a player joins the blue team, they will randomly teleport to one of these effectors on the map in Team DukeMatch mode. Blue players that are killed in Team DukeMatch will also randomly respawn at one of these points.

`Angle` Players will teleport/respawn facing the same direction as the effector.

`Hitag` (TeamDUKE 0.8 and later) A bitfield that specifies which weapons a player starts with (overrides DEFAULTWEAPONS). See DEFAULTWEAPONS for values.

NOTE: If no TDMATCHBLUEDEST effectors are placed in the map, the BLUEBEACONDEST (#3848) effectors are used instead.

DUKETAGBLUEDEST (#3948)

Spawn point for blue players in Duke-Tag mode. If a player joins the blue team, they will randomly teleport to one of these effectors on the map in Duke-Tag mode. Blue players that are killed in Duke-Tag will also randomly respawn at one of these points.

`Angle` Players will teleport/respawn facing the same direction as the effector.

`Hitag` (TeamDUKE 0.8 and later) A bitfield that specifies which weapons a player starts with (overrides DEFAULTWEAPONS). See DEFAULTWEAPONS for values.

NOTE: If no DUKETAGBLUEDEST effectors are placed in the map, the BLUEBEACONDEST (#3848) effectors are used instead.

NOTE: Prior to TeamDUKE 0.9, this effector was known as GREENBEACONDEST.

BLUESCOREZONE (#3949)

In Duke-Tag, if a player runs into the same sector as one of these effectors, they will score a point for the blue team and get teleported back to a spawn point.

NOTE: Due to an oversight, ANY player can score for the blue team, not necessarily a blue player!

NOTE: Prior to TeamDUKE 0.9, this effector was known as GREENSCOREZONE.

GAMESWITCH (#3951)

This switch allows a player (normally player 1 in a special 'configuration' room) to select the game mode at the start of a match. Pressing the Use key will activate the switch and its corresponding game mode, and deactivate other GAMESWITCH actors that correspond to different game modes. The switch's sprite palette index dictates which mode the switch corresponds to.

`Palette` 0 (red button) – activates CTF mode.
9 (green button) – activates Duke-Tag mode.
26 (blue button) – activates Team DukeMatch mode.
46 (yellow button) – activates Flag-Tag mode.

NOTE: Despite its design being based on DIPSWITCH, shooting the switch will not activate it.

WARNING: Providing access to this switch outside of the initial mode selection may yield unpredictable results.

CONDITIONFLOOR (#3956)

This effector checks the internal variable `ingamesettings` and sets its sector's floor to its z-coordinate if a desired condition is met, and resets the sector's floor to its original position if it is not. This check is performed via a bitwise AND operation with the sector's hitag (in TeamDUKE 0.8, the effector's hitag, if nonzero, is used instead) and seeing if all the masked bits are set (in C code, equivalent to `(ingamesettings & hitag) == hitag`).

`Angle` If the effector's angle is *not* due North (1536), then the sector's floor is adjusted to the effector's z-coordinate if the condition is *not* met, and reset if it is.

`Lotag` (TeamDUKE 0.8 and later) If set to 1, the condition is met if any bit in the bitmask is set, not necessarily all of them; i.e. checks `(ingamesettings & hitag) != 0`.

`Hitag` (TeamDUKE 0.8 and later) The bitmask to compare `ingamesettings` against. If zero, use sector hitag instead.

`Sector hitag` The bitmask to compare `ingamesettings` against.
(TeamDUKE 0.8 and later) Ignored if the effector's hitag is non-zero.

TDMATCHREDDEST (#3957)

Spawn point for red players in Duke-Tag mode. If a player joins the red team, they will randomly teleport to one of these effectors on the map in Team DukeMatch mode. Red players that are killed in Team DukeMatch will also randomly respawn at one of these points.

`Angle` Players will teleport/respawn facing the same direction as the effector.

`Hitag` (TeamDUKE 0.8 and later) A bitfield that specifies which weapons a player starts with (overrides DEFAULTWEAPONS). See DEFAULTWEAPONS for values.

NOTE: If no TDMATCHREDDEST effectors are placed in the map, the REDBEACONDEST (#3868) effectors are used instead.

DUKETAGREDDEST (#3958)

Spawn point for red players in Duke-Tag mode. If a player joins the red team, they will randomly teleport to one of these effectors on the map in Duke-Tag mode. Red players that are killed in Duke-Tag will also randomly respawn at one of these points.

`Angle` Players will teleport/respawn facing the same direction as the effector.

`Hitag` (TeamDUKE 0.8 and later) A bitfield that specifies which weapons a player starts with (overrides DEFAULTWEAPONS). See DEFAULTWEAPONS for values.

NOTE: If no DUKETAGREDDEST effectors are placed in the map, the REDBEACONDEST (#3868) effectors are used instead.

NOTE: Prior to TeamDUKE 0.9, this effector was known as BROWNBEACONDEST.

REDSCOREZONE (#3959)

In Duke-Tag, if a player runs into the same sector as one of these effectors, they will score a point for the red team and get teleported back to a spawn point.

NOTE: Due to an oversight, ANY player can score for the red team, not necessarily a red player!

NOTE: Prior to TeamDUKE 0.9, this effector was known as BROWNSCOREZONE.

AUTORESET (#3962)

Introduced in TeamDUKE 0.8. If a flag is dropped in the same sector as this effector, it is immediately returned to its home base, regardless of the timeout period. Use this for lava pools and inescapable pits.

HINT: Outer space (parallaxed ceiling or floor with `BIGORBIT1` and `MOONSKY1` textures with a palette index of 0) will also auto-reset flags.

GOLDFLAGRESPAWN (#3964)

Used internally to indicate where to respawn the gold flag if it is reset (after timing out). Do not place in map, as one is generated automatically by the GOLDFLAG actor upon map load.

CONDITIONAUDIO (#3969)

If the sector's floor is ever different to this effector's z-coordinate, the sound `ALARM2` is constantly emitted. This is often useful to indicate the lava run being open on Duke-Tag-inspired maps.

`Angle` If the effector's angle is *not* due North (1536), then the sector's ceiling position is compared instead of the floor.

`Hitag` (TeamDUKE 0.8 and later) The sound to play. If zero, play `ALARM2`.

CTFSPAWNTIMEOUT (#3977)

This effector overrides the time that must elapse before a dropped flag resets in CTF, returning automatically to its home sector. The units are 1/15th of a second, and by default is set to 900 (equivalent to 60 seconds).

`Hitag` (TeamDUKE 0.8 and later) The timeout period. If zero, use sector hitag instead.

`Sector hitag` The timeout period.
(TeamDUKE 0.8 and later) Ignored if the effector's hitag is non-zero.

FLAGTAGRESPAWNTIMEOUT (#3978)

This effector overrides the time that must elapse before the gold flag in Flag-Tag returns to its spawn point if it was dropped and not claimed again. The units are 1/15th of a second, and by default is set to 1,800 (equivalent to 2 minutes).

`Hitag` (TeamDUKE 0.8 and later) The timeout period. If zero, use sector hitag instead.

`Sector hitag` The timeout period.
(TeamDUKE 0.8 and later) Ignored if the effector's hitag is non-zero.

DEFAULTWEAPONS (#3979)

Introduced in TeamDUKE 0.8.

Globally controls which weapons a player starts with, along with some ammunition for that weapon usually equal to that of an ammo pickup. A local version exists in the spawn point effectors; their hitags control what weapons the player gets if they spawn there.

`Hitag` A bitfield controlling which weapons a player starts with. Combine to allow a player to spawn with multiple weapons (a hitag of 0 will have no effect):

1 – Foot only (no weapons)

2 – Pistol with 48 bullets.

4 – Shotgun with 10 shells.

8 – Chaingun Cannon with 50 bullets.

16 – RPG with 5 rockets.

32 – 5 Pipebombs.

64 – Shrinker with 5 charges.

128 – Devastator with 15 cluster rockets.

256 – 3 Laser Tripbombs (just 1 would be a little unfair).

512 – Freezethrower with 25 crystals.

2048 – Expander with 10 blasts (Shrinker available, but no ammunition).

NOTE: 1024 represents the Pipebomb detonator and won't give the player anything if specified.