4. Magic

This chapter will explain the details of all spells in the game. It will, of course, include information about those "spells" monsters use, as well as information about traps, which are often of a magical nature. It will not, however, cover magical effects from shrines. Generally, such magical effects from shrines are dependent on the dlvl they are found on. For an explanation of skills, see chapter 2.4. For a detailed information about how spells attack and also some explanation in general about spells, see chapter 5.6.5.

4.1 Spells available to players

All spells in Diablo and Hellfire are equally learnable for all character classes. To learn them to a high slvl one needs a high magic attribute, and not all character classes have the ability to reach the needed 255 magic attribute that is needed for the highest spell levels.

4.1.1 List of spells and spell effects

Below is a summary of all spells you will find in Diablo and Hellfire. They are arranged in the same way they appear in your spell book. Page 5, Jester, Magi and Mana only exist in Hellfire.

Page One	Page Two	Page Three	Page Four	Page Five[5]	Not in Book
Skill	Resurrect[1,2]	Phasing	Nova[2]	Lightning Wall	Identify[3]
Firebolt	Fire Wall	Mana Shield	Golem	Immolation	Infravision[3]
Charged Bolt	Telekinesis	Elemental	Teleport	Warp	Jester[4,5]
Holy Bolt	Lightning	Fireball	Apocalypse[2]	Reflect	Magi[4,5]
Healing	Town Portal	Flame Wave	Bone Spirit	Berserk	Mana[4,5]
Heal Other[1]	Flash	Chain Lightning	Blood Star	Ring of Fire	
Inferno	Stone Curse	Guardian	-	Search	

1   Only appear in multi player games.
2   Only appear on scrolls or staves. In Hellfire you can learn Nova and Apocalypse normally though.
3   Only appear on scrolls.
4   Only appear on staves.
5   Found in Hellfire only.

4.1.2 Details about spells

Now follows some details about each spell. Not all types of data are applicable for each spell. Below is an explanation of what is told about most spells. If no information type is given for a specific spell, it is either due to it not applying (for example the speed of a stationary effect), or due to it not being known to me. For more details about how spells attack, see chapter 5.6.5 and more specifically chapter 6.1.8.

In previous versions there existed information for spells if they had any distance factor included in their To Hit calculation. From what I have found, no spell has a distance factor; or rather, it is always 0. Only arrows (including fire and lightning arrows and arrows from traps and monsters) have a distance factor. As a consequence, I have removed any reference to a distance in the detailed list of spells.

Type: Magic, fire or lightning. Some spells are not of one of the three main types and are listed as n/a.

Damage: Stated damage in spell book (see below for more details), can be split up into min. and max. damage where appropriate.

Quick Damage: A quicker way to calculate damage but not as accurate. Can be split up into min. and max. damage where appropriate.

Real Damage: The real damage as used by the game. This is not necessarily the same as the stated damage, especially for non missile spells, as they instead can often attack several times. If no real damage is stated, it is identical to the damage stated. Also, if the real damage distribution is linear within the range given, it is not

shown either. All this is done to reduce the amount of data presented, as it is already extensive.

Duration: This is how long each spell lasts. The time given is always in seconds unless otherwise stated. Moving spells will generally be terminated if they hit any dungeon feature, such as a wall.

Speed: This is the speed at which the spell effect travels. It is a relative number used for comparison between different spells and normal arrows, and is not to be confused with walk speed for players and monsters. The higher the value, the faster it is. For information about the speed of arrows, see chapter 2.2.3.

Blockable: This will tell if a spell is blockable or not. In Diablo, you will only block if you have 0% resistance. In Hellfire, you will block anything blockable regardless of your resistance.

Damage

Some spells use a recursive formula to calculate damage. The notation for these spells was introduced by Sourceror and I have used it here too. Here follows an explanation on how it works. To make it easier to write damage formulas for spells using multiple random numbers, I have also added a notation for that.

[ ]	round down
Rnd[x]	is a random number in the range 0 to x-1
Rec(slvl, slvl0)	recursive function, defined as follows:
	Rec(0, slvl0): [slvl0]
	and for slvl>0; Rec(slvl, slvl0): [Rec(slvl-1, slvl0) · 9/8]
Itt(nbr, value)	iterative function, defined as follows:
	Itt(0, value): value
	and for nbr>0; Itt(nbr, value): Itt(nbr-1, value) + value

The easiest way to understand how the recursive function works is to make an example. A Fireball's maximum damage for a level 30 character is:

1.   Rec(slvl, 40 + 2·clvl); clvl=30
2.   First calculate damage for spell level 0: $40 + 2·clvl = 100$
3.   Damage for spell level 1 can then be calculated as: $[100 · 9/8] = 112$
4.   Damage for spell level 2 can then be calculated as: $[112 · 9/8] = 126$
5.   and so on…

Note that it is very important to round down. For those spells using this recursive formula I have also given a quick formula. For a Fireball's maximum damage it is:

$$(40 + 2·clvl) · (9/8)^{slvl}$$

Note that this formula does not round down and you will therefore get a damage a bit too high, but it will still be more or less accurate. For a level 20 fireball from a level 50 character the correct maximum damage is 1442, while this quick method gives 1476. In the table below, I have listed values for use with the quick formula.

Summary for quick damage							
$(9/8)^1$	1.125	$(9/8)^6$	2.027	$(9/8)^{11}$	3.653	$(9/8)^{16}$	6.583
$(9/8)^2$	1.266	$(9/8)^7$	2.281	$(9/8)^{12}$	4.110	$(9/8)^{17}$	7.406
$(9/8)^3$	1.424	$(9/8)^8$	2.566	$(9/8)^{13}$	4.624	$(9/8)^{18}$	8.332
$(9/8)^4$	1.602	$(9/8)^9$	2.887	$(9/8)^{14}$	5.202	$(9/8)^{19}$	9.373
$(9/8)^5$	1.802	$(9/8)^{10}$	3.247	$(9/8)^{15}$	5.852	$(9/8)^{20}$	10.545

Lets make an example for the iterative function as well. Take the damage of the flash spell (case 1). It uses a recursive formulas where the slvl0 (see above) is actually first calculated using an iterative formula. Lets calculate slvl0 for a level 30 character:

slvl0 = Itt(clvl, Rnd[20] + 1); clvl=30

This means we should, 30 times, calculate Rnd[20] + 1 and add all those 30 values together. For each value, a new random number should be created, for if the same random number would be used, it would have been written as clvl·(Rnd[20] + 1) instead. This sum of 30 values, ranging from 1 to 20 in the example, is the slvl0 which is then used in the recursive formula. It is worth noticing that if there is any random number used in the iterative formula, the result would typically be a distribution of the values as in a bell curve.

Splash damage

Some spells do additional splash damage. Splash damage is always considered a separate attack and thus does its own to hit check and can hit or miss independently from the initial attack. Of course, there need to be some hit before the splash damage is applied. Such a hit can be either a normal target or such a thing as a wall. As an example a fireball will cause splash damage to all adjacent locations when it hits a wall.

4.1.3 Spells available in Diablo

The spells below are listed in alphabetical order and are available in both Diablo and Hellfire. For skills, see chapter 2.4. In those cases a spell can be used by a monster, see chapter 0.

Apocalypse	Blood Star
Type: n/a Min. Damage: clvl Max. Damage: 6·clvl Real damage: Itt(clvl, Rnd[6] + 1) Blockable: Yes	Type: magic Damage: 3·slvl + [Mag/2] - [Mag/8] Speed: 16 Blockable: Yes
Note: * Works against all monsters, even triple immune ones. * In Hellfire, this spell only works on monsters you have a line of sight to.	Note: * Costs 5 life to cast or 5 extra mana if you use Mana Shield. This cost is applied even if the spell is cast from a staff.

Bone Spirit	Chain Lightning
Type: magic Damage against monster: 1/3 of targets HP Damage against player: 1/6 of targets life Speed: 16 Blockable: Yes * Note that the damage value given above is still subject to reduction due to resistance.	Type: lightning Min. Damage: 4 Max. Damage: 4 + 2·clvl Real Damage: Rnd[clvl] + Rnd[2] + 2 Bolts: 1 + numbers of monsters in range Range: 2 + slvl (max 18) Speed: 32 Duration: ([slvl/2] + 6)/20 seconds Blockable: No
Note: * Costs 6 life to cast or 6 extra mana if you use Mana Shield. This cost is applied even if the spell is cast from a staff.	Note: * You get one bolt in the direction where you aim with your mouse and one additional bolt for each monster in range. * This spell is well known for causing gaps at high levels and/or when there are many monsters within range. * The lightning is actually a stationary effect, but the initiation will be delayed the further away it appears, thus giving an appearance of moving. This delay "travels" with a speed of 32. * The bolt will try to hit once each 0.05 seconds for a total of [slvl/2] + 6 times.

Charged Bolt	Elemental
Type: lightning Min. Damage: 1 Max. Damage: 1 + [Mag/4] Number of bolts: 4 + [slvl/2] Speed: 8 Blockable: Yes	Type: fire Min. Damage: Rec(slvl, 4 + 2·clvl) Max. Damage: Rec(slvl, 40 + 2·clvl) Quick Min. Damage: $(4 + 2·clvl) · (9/8)^{slvl}$ Quick Max. Damage: $(40 + 2·clvl) · (9/8)^{slvl}$ Real Damage: Rec(slvl, 2·(Rnd[10]+Rnd[10]+clvl) + 4)/2 Speed: 16 Blockable: Yes
	Note: * This is basically a fireball that has some homing abilities. * It does half the damage of a fireball, but can hit two targets. * Splash damage is 1/64th of the damage and is applied for 0.7 seconds and will try to hit every 0.05 second (for a total of 14 times) and is not blockable.

Fireball	Firebolt
Type: fire Min. Damage: Rec(slvl, 4 + 2·clvl) Max. Damage: Rec(slvl, 40 + 2·clvl) Quick Min. Damage: $(4 + 2·clvl) · (9/8)^{slvl}$ Quick Max. Damage: $(40 + 2·clvl) · (9/8)^{slvl}$ Real Damage: Rec(slvl, 2·(Rnd[10]+Rnd[10]+clvl) + 4) Speed: 16 + 2·slvl (max 50) Blockable: Yes	Type: fire Min. Damage: 1 + slvl + [Mag/8] Max. Damage: 10 + slvl + [Mag/8] Real Damage: Rnd[10] + slvl + [Mag/8] + 1 Speed: 16 + 2·slvl Blockable: Yes
Note: * A fireball cause splash damage in adjacent hexes as well as in the target hex. Splash damage is equal to the damage of the fireball itself. * If the fireball has traveled over some obstacle on its way to its target, the splash damage normally does not occur. * You can block either the fireball or the splash, but not both.	

Fire Wall	Flame Wave
Type: fire Min. Damage: 4 + 2·clvl Max. Damage: 40 + 2·clvl Real Damage: (Rnd[10] + Rnd[10] + clvl + 2)/8 Duration: 8 + 8·slvl seconds (12 + 8·slvl in Hellfire) Number of flames: 11 Blockable: No	Type: fire Min. Damage: 6 + 6·clvl Max. Damage: 60 + 6·clvl Real Damage: Rnd[10] + clvl + 1 Speed: 16 Number of flames: 5 + [slvl/2] Blockable: Yes
Note: * The central fire wall flame actually consists of two flames on top of each other, with the result of a damage for that "flame" being double. * The Fire Wall will disappear immediately if you gain any level in the spell. * Fire Walls are treated as traps against players, including the caster. * The flame will try to hit once every 0.05 seconds for a total of 160 + 160·slvl times (240 + 160·slvl times in Hellfire).	* Flame Waves are treated as traps against players, including the caster.

Flash	Golem

Type: magic (but uses same animation as lightning)
Min. Damage: [3·Rec(slvl, clvl)/2]
Max. Damage: 2·[3·Rec(slvl, clvl)/2]
Quick Min. Damage: 3·clvl/2 · (9/8)^slvl
Quick Max. Damage: 3·clvl · (9/8)^slvl
Real Damage 1: [3·Rec(slvl, Itt(clvl, Rnd[20] + 1))/2]/64
Real Damage 2: [3·Rec(slvl, Itt(clvl, Rnd[2] + 1))/2]/64
Duration: 0.95 seconds
Blockable: No
	Type: n/a (but uses same animation as fire)
	Stated damage: 11-17 (quite meaningless number)
	The golem has the following stats:
	   HP: 2·maxmana/3 + 10·slvl
	   AC: 25
	   To Hit: 40 + 2·clvl + 5·slvl
	   Min. Damage: 8 + 2·slvl
	   Max. Damage: 16 + 2·slvl
	   mlvl: 12 (modified for difficulty)
	HP regeneration: 1.9, 4.1 and 6.6 each second on
	   normal, nightmare and hell difficulty (same as for
	   normal monster)
	Resistances: None
	Immunities: Apocalypse, Stone Curse and Telekinesis

Note: * The Flash spell is actually composed of two different effects, the two different Real Damages given are for the two different effects. The first hit in front of you and to the sides, the other behind you. * You seem to be able to do two flashes in a row, then you have to wait for them to finish. Don't know how this affects damage though. * While casting Flash, you are temporarily invulnerable and can't access the normal GUI. * The flash will try to hit once every 0.05 seconds for a total of 19 times.	Note: * Each player can have only one golem alive at a time. If you cast the spell again, the first golem will be destroyed. * If more than one player casts golem, they will seek each other out and fight until one of them is destroyed. * You will get normal experience for any monster that your golem kills. * If no monster is close enough to the golem, he will walk in the same direction the owning player is facing.

Guardian	Healing

Type: fire
Min. Damage: Rec(slvl, 1 + [clvl/2])
Max. Damage: Rec(slvl, 10 + [clvl/2])
Quick Min. Damage: (1 + clvl/2) · (9/8)^slvl
Quick Max. Damage: (10 + clvl/2) · (9/8)^slvl
Duration: 4·slvl/5 + 2·clvl/5 seconds (maximum 24 seconds, minimum 0.8 seconds)
Fire frequency: every 0.8 second
Blockable: Yes
	Type: n/a
	Mana Cost: 8 + 2·clvl - 3·slvl
	Min. Healing: bonus·(1 + clvl + slvl)
	Max. Healing: bonus·(10 + 4·clvl + 6·slvl)
	Real Healing: bonus·(Rnd[10] + Itt(clvl, Rnd[4]+1) + Itt(slvl, Rnd[6]+1) + 1)
	Bonus:
	   Warrior, Monk and Barbarian: 2.0
	   Rogue and Bard: 1.5
	   Sorcerer: 1.0

Note: * The fire bolts shot by a Guardian are determined by the slvl of your Firebolt spell, so the shown damage is actually bogus. * You will get normal experience for any monster that your guardians kill.	Note: * The actual distribution of the healing is bell curve shaped.

Heal Other	Holy Bolt

Type: n/a
Mana Cost: 8 + 2·clvl - 3·slvl
Min. Healing: bonus·(1 + clvl + slvl)
Max. Healing: bonus·(10 + 4·clvl + 6·slvl)
Real Healing: bonus·(Rnd[10] + Itt(clvl, Rnd[4]+1) +
   Itt(slvl, Rnd[6]+1) + 1)
Bonus:
  Monk: 3.0
  Warrior and Barbarian: 2.0
  Rogue and Bard: 1.5
  Sorcerer: 1.0
	Type: n/a
	Min. Damage: 9 + clvl
	Max. Damage: 18 + clvl
	Speed: 16 + 2·slvl

Note: * The actual distribution of the healing is bell curve shaped.	Note: * This spell only works on undead monsters and Diablo. See chapter 5.2 for information about which monsters are undead. It does not work against players. * In Hellfire, Diablo and Bone Demons are resistant to Holy Bolt.

Identify	Inferno
Type: n/a	Type: fire Min. Damage: 3 Max. Damage: 6 + 3·clvl/2 Real Damage: (3·(Rnd[clvl]+Rnd[2]) + 6)/16 Range: 3 Duration: 1, 1.25 and 1.50 seconds Blockable: No
Note: * Identifies magical and unique items.	Note: * This spell always affect the same area and has the same duration, regardless of spell level. * The three values for duration are for the three target locations starting with the one closest to the caster. * The flame will try to hit once each 0.05 second for a total of 20, 25 and 30 times.

Infravision	Lightning

Type: n/a
Duration: Rec(slvl, 79.2) seconds
Murky pools:
  Church: slvl = 2
  Catacombs: slvl = 4
  Caves: slvl = 6
  Hell: slvl = 8
	Type: lightning
	Min. Damage: 4
	Max. Damage: 4 + 2·clvl
	Real Damage: Rnd[clvl]+ Rnd[2] + 2
	Speed: 32
	Duration: ([slvl/2]+6)/20 seconds
	Blockable: No

Note: * Lets you see a "heat" image of monsters and players outside of your normal view and through walls. * As far as I know, you will never find Murky Pools in the Hive or in the Crypt.	* The lightning is actually a stationary effect, but the initiation will be delayed the further away it appears, thus giving an appearance of moving. This delay "travels" with a speed of 32. * The bolt will try to hit once every 0.05 seconds for a total of [slvl/2]+6 times.

Mana Shield	Nova
Type: n/a Damage reduction in Diablo: 33% Damage reduction in Hellfire: see below Duration: until mana reaches 0 or you leave the current dlvl	Type: lightning Min. Damage: 5·Rec(slvl, 2 + [clvl/2]) Max. Damage: 5·Rec(slvl, 15 + [clvl/2]) Quick Min. Damage: $5 \cdot (2 + clvl/2) \cdot (9/8)^{slvl}$ Quick Max. Damage: $5 \cdot (15 + clvl/2) \cdot (9/8)^{slvl}$ Real Damage: Rec(slvl, (Itt(5, Rnd[6]) + clvl + 5)/2) Number of bolts: 92 Speed: 16 Blockable: No
Note for Hellfire only: * A Mana shield decreases the damage taken, but due to a bug the reduction actually decreases as slvl goes up. The damage is reduced by the following amount: 100/(3· slvl)% * If slvl is higher than 7, set slvl to 7. Note for both Diablo and Hellfire: * For slvl 0 there is never any reduction of the damage. * Due to a bug you will neither be stunned nor pushed back by *the bear* or Diablo if you receive damage (before modification by the Mana Shield) greater than your current life.	

Phasing	Resurrect
Type: n/a	Type: n/a
Note: * Due to being a non targeting spell, it is slightly faster than Teleport and it may thus be easier to escape with this spell than with Teleport.	Note: * Brings another player back to life. The player will have 10 life (or his max life if it is less than 10) and 0 mana.

Stone Curse	Telekinesis
Type: n/a Duration: 4.8 + 0.8·slvl seconds (max 12 seconds)	Type: n/a
Note: * Stone Curse works on all monsters except Diablo and Na-Krul. * Stone Curse does not work on other players. * Any monster already stoned, charging, phasing in or phasing out is temporary immune to Stone Curse.	Note: * Can be used to open doors, chests, bookcases, shrines etc. from a distance. * Can also be used to pick up items from a distance. * Can be used to "knock" monsters back. This "attack", although it does not inflict any damage, is sufficient for receiving full experience points when the monster later dies. The following Unique or Special monsters are immune to Telekinesis: Snotspill, Gharbad the Weak, Zhar the Mad, Warlord of Blood, Lachdanan, Arch-Bishop Lazarus, Blackjade and Red Vex. * A monster will immediately lose any Stone Curse status if it is targeted with Telekinesis.

Teleport	Town Portal
Type: n/a	Type: n/a
Note: * You can teleport to anywhere within the screen. I have noticed that if you quickly move your cursor before teleporting you often end up teleporting to where your cursor was just before you moved it.	Note: * Makes a portal to town and disappears when the caster uses it to go down to the dungeon.

4.1.4 New spells in Hellfire

The spells in the table below are new spells in Hellfire. Apocalypse and Nova, although new as learnable spells in Hellfire, exist in Diablo and no changes have been done to them. See chapter 4.1.3 for information about Apocalypse and Nova.

Berserk	Immolation
Type: magic	Type: fire Min. Damage: 5·Rec(slvl, 2 + clvl/2) Max. Damage: 5·Rec(slvl, 15 + clvl/2) Quick Min. Damage: $5 \cdot (2 + clvl/2) \cdot (9/8)^{slvl}$ Quick Max. Damage: $5 \cdot (15 + clvl/2) \cdot (9/8)^{slvl}$ Real Damage: Rec(slvl, (Itt(5, Rnd[6]) + clvl + 5)/2) Number of bolts: 92 Speed: 16 + slvl
Note: * All unique and special monsters are immune to Berserk. * Any monster charging, phasing in or phasing out is temporary immune to Berserk. * When cast on a monster, it will consider other monsters as possible targets too. * It will increase the damage done by the monster by between 20 and 30%, plus the level of the spell (possible problem with overflow if value gets higher than 255). * You will not receive any experience for monsters killed by a berserk monster. * Monsters resistant to Magic, will have a 50% chance of escaping the spell. Monsters immune to Magic are of course immune to this spell.	Note: * Does the same damage as Nova. * Immolation will use bolts that are basically fireballs (including splash damage), they just has a different damage and speed compared to normal fireballs.

Jester	Lightning Wall

Type: random
The following spells are cast by a staff of jester:
    Firebolt   20%
    Apocalypse   10%
    Chain lightning   10%
    Fireball   10%
    Fire Wall   10%
    Guardian   10%
    Teleport   10%
    Town Portal   10%
    Stone Curse   10%
	Type: lightning
	Min. Damage: 4 + 2·clvl
	Max. Damage: 40 + 2·clvl
	Real Damage: (Rnd[10] + Rnd[10] + clvl + 2)/4
	Duration: 12.75 + 12.75·slvl seconds
	Number of bolts: 11
	Blockable: No

Note: * This spell can only occur on staves and casts a random spell.	Note: * The central lightning wall bolt actually consists of two bolts on top of each other, with the result of a damage for that "bolt" being double. * Does twice the damage of a Fire Wall and lasts longer. * The flame will try to hit once every 0.05 seconds for a total of 255 + 255·slvl times.

Magi	Mana

Type: n/a	Type: n/a
	Min. Mana: bonus·(1 + clvl + slvl)
	Max. Mana: bonus·(10 + 4·clvl + 6·slvl)
	Real Mana restore: bonus·(Itt(clvl, Rnd[4]+1) + Itt(slvl, Rnd[6] + 1) + Rnd[10] + 1)
	Bonus:
	  Sorcerer: 2.0
	  Rogue and Bard: 1.5
	  Warrior, Monk and Barbarian: 1.0

Note: * Completely restores mana.	Note: * The actual distribution of healing is bell curve shaped. * This spell works like Healing but affects your mana instead of your life.

Reflect	Ring of Fire
Type: n/a Duration: slvl·clvl hits	Type: fire Min. Damage: 4 + clvl·2 Max. Damage: 40 + clvl·2 Duration: 12 + 8·slvl seconds Real Damage: (Rnd[10] + Rnd[10] + clvl + 2)/8 Duration: 8 + 8·slvl seconds (12 + 8·slvl in Hellfire) Number of flames: 22 Blockable: No
Note: * Reduces melee damage by 20-29% and reflects it back to the attacking monster. Spell level determines number of hits it lasts. * Even if you block an attack, 20-29% of the damage is reflected back to the attacking monster. * An attack counts as a hit even if you block it as it will reflect some damage. * The Reflect will be terminated if you die or leave the current dlvl.	Note: * Does the same damage as a Fire Wall and lasts the same amount of time. * The Ring of Fire will disappear immediately if you gain any level in the spell. * Fire Walls are treated as traps against players, including the caster. * The flame will try to hit once every 0.05 seconds for a total of 160 + 160·slvl times.

Search	Warp
Type: n/a Duration: 12.25 + 10·slvl + clvl seconds	Type: n/a
Note: * Makes items on the ground shine. * Makes items show up on the map.	Note: * Teleports you to the nearest stair.

4.1.5 Mana cost and magic requirements for spells

Casting spells costs mana and each spell has an initial mana cost at slvl 1. For each slvl the mana cost then decreases by a certain amount specific for each spell until it reaches its minimum mana cost. The table below shows the mana cost for each spell as well as the slvl you reach the minimum mana cost (unless stated otherwise, use the 100% value in the table unless stated otherwise for a character class). Note that Rogues, Monks and Bards only pay 75% of the mana cost (use the 75% value in the table). In Hellfire (after patch 1.01) the Sorcerer only pays 50% of the mana cost (use the 50% value in the table for Hellfire and the 100% value for Diablo). However, no character class ever pays less than the minimum mana cost. Casting spells from scrolls and staves do not cost any mana, but you have to have the required magic to do so.

For staves, the required magic to cast a spell from it is the same as it is to learn the same spell to the first slvl. For scrolls, the mana required to cast a spell is normally a bit less. The table below also shows those required magic levels. For information about prices and slvl of books, scrolls, and staves with spells, see chapter 3.2.3.

Name of Spell	Mana cost				Magic requirement	
	Initial[1]	Decrease per slvl	Minimum	slvl you reaches minimum (100%/75%/50%)	Staff[2] and slvl 1	Scroll
Apocalypse[3]	150	6	90	11 / 6 / 1	149	117
Blood Star	25	2	14	7 / 5 / 1	70	-
Bone Spirit	24	1	12	13 / 9 / 1	34	-
Chain Lightning	30	1	18	13 / 7 / 1	54	35
Charged Bolt	6	0	6	1 / 1 / 1	25	-
Elemental	35	2	20	9 / 6 / 1	68	-
Fireball	16	1	10	7 / 4 / 1	48	31
Firebolt	6	0.5	3	7 / 5 / 1	15	-
Fire Wall	28	2	16	7 / 5 / 1	27	17
Flame Wave	35	3	20	6 / 4 / 1	54	29
Flash	30	2	16	8 / 6 / 1	33	21
Golem	100	6	60	8 / 5 / 1	81	51
Guardian	50	2	30	11 / 6 / 1	61	47
Healing	special[4]				17	0
Heal Other	special[4]				17	-
Holy Bolt	7	1	3	5 / 4 / 2	20	-
Identify	-	-	-	- / - / -	-	0
Inferno	11	1	6	6 / 4 / 1	20	19
Infravision	-	-	-	- / - / -	-	23

1   This is also the amount of mana you receive when you read a book of the spell.
2   There is no requirement to cast a spell from a unique staff.
3   You can only learn this spell in Hellfire.
4   Heal and Heal Other cost 8 + 2·clvl - 3·slvl mana to cast.

Name of Spell	Mana cost				Magic requirement	
	Initial[1]	Decrease per slvl	Minimum	slvl you reaches minimum (100%/75%/50%)	Staff[2] and slvl 1	Scroll
Lightning	10	1	6	5 / 3 / 1	20	0
Mana Shield	33	0	33	1 / 1 / 1	25	0
Nova[3]	60	3	35	10 / 6 / 1	87	57
Phasing	12	2	4	5 / 5 / 3	39	25
Resurrect	-	-	-	- / - / -	30	0
Stone Curse	60	3	40	8 / 4 / 1	51	33
Telekinesis	15	2	8	5 / 4 / 1	33	-
Teleport	35	3	15	8 / 6 / 3	105	81
Town Portal	35	3	18	7 / 5 / 1	20	0
Berserk	35	3	15	8 / 6 / 3	35	
Immolation	60	3	35	10 / 5 / 1	87	-
Jester	-	-	-	- / - / -	30	-
Lightning Wall	28	2	16	7 / 5 / 1	27	-
Magi	-	-	-	- / - / -	45	-
Mana	-	-	-	- / - / -	17	-
Reflect	35	3	15	8 / 6 / 3	25	-
Ring of Fire	28	2	16	7 / 5 / 1	27	-
Search	15	1	1	15 / 15 / 14	25	0
Warp	35	3	18	7 / 5 / 1	25	0

1   This is also the amount of mana you receive when you read a book of the spell.
2   There is no requirement to cast a spell from a unique staff.
3   You can only learn this spell in Hellfire.

The table above has the magic requirement to learn a spell to level 1. For each additional spell level the magic requirement is 20% higher to learn. To make it easier for you, the table below lists the magic requirement for each spell and spell level. Note that if the magic requirement is 213 or higher, it is always adjusted to 255.

Name of Spell	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Blood Star	70	84	100	120	144	172	206	255	255	255	255	255	255	255	255
Bone Spirit	34	40	48	57	68	81	97	116	139	166	199	255	255	255	255
Chain Lightning	54	64	76	91	109	130	156	187	255	255	255	255	255	255	255
Charged Bolt	25	30	36	43	51	61	73	87	104	124	148	177	212	255	255
Elemental	68	81	97	116	139	166	199	255	255	255	255	255	255	255	255
Fireball	48	57	68	81	97	116	139	166	199	255	255	255	255	255	255
Firebolt	15	18	21	25	30	36	43	51	61	73	87	104	124	148	177
Fire Wall	27	32	38	45	54	64	76	91	109	130	156	187	255	255	255
Flame Wave	54	64	76	91	109	130	156	187	255	255	255	255	255	255	255
Flash	33	39	46	55	66	79	94	112	134	160	192	255	255	255	255
Golem	81	97	116	139	166	199	255	255	255	255	255	255	255	255	255
Guardian	61	73	87	104	124	148	177	212	255	255	255	255	255	255	255
Healing	17	20	24	28	33	39	46	55	66	79	94	112	134	160	192
Heal Other	17	20	24	28	33	39	46	55	66	79	94	112	134	160	192
Holy Bolt	20	24	28	33	39	46	55	66	79	94	112	134	160	192	255
Inferno	20	24	28	33	39	46	55	66	79	94	112	134	160	192	255
Lightning	20	24	28	33	39	46	55	66	79	94	112	134	160	192	255
Mana Shield	25	30	36	43	51	61	73	87	104	124	148	177	212	255	255
Phasing	39	46	55	66	79	94	112	134	160	192	255	255	255	255	255
Stone Curse	51	61	73	87	104	124	148	177	212	255	255	255	255	255	255
Telekinesis	33	39	46	55	66	79	94	112	134	160	192	255	255	255	255
Teleport	105	126	151	181	255	255	255	255	255	255	255	255	255	255	255
Town Portal	20	24	28	33	39	46	55	66	79	94	112	134	160	192	255
Apocalypse	149	178	255	255	255	255	255	255	255	255	255	255	255	255	255
Berserk	35	42	50	60	72	86	103	123	147	176	211	255	255	255	255
Immolation	87	104	124	148	177	212	255	255	255	255	255	255	255	255	255
Lightning Wall	27	32	38	45	54	64	76	91	109	130	156	187	255	255	255
Nova	87	104	124	148	177	212	255	255	255	255	255	255	255	255	255
Reflect	30	36	43	51	61	73	87	104	124	148	177	212	255	255	255
Ring of Fire	27	32	38	45	54	64	76	91	109	130	156	187	255	255	255
Search	25	30	36	43	51	61	73	87	104	124	148	177	212	255	255
Warp	25	30	36	43	51	61	73	87	104	124	148	177	212	255	255

4.1.6 Spell level of cast spells

When you cast a spell, it will always be cast at the slvl you know the spell plus any additional levels you get from items. As your slvl can go down (by hitting an Enchanted shrine, for example), it is possible to get a known spell to slvl 0. When this happens, you can no longer use the spell, unless some items you are wearing raise the slvl above 0. The slvl can never be negative. Maximum base slvl is 15. With the correct items equipped, the modified slvl can be brought to a maximum of 20.

When casting a spell from a scroll or staff, it will have the same slvl as the slvl you know the spell (including any modifications from items). If you don't know the spell it will be cast at slvl 1 (plus any modifications from items). There is a bug, however. If you cast a spell from a scroll and currently have another spell hot keyed, it will use the slvl of the hot keyed spell instead of the spell you are casting. This is true even if you don't know the spell.

4.1.7 Targeting of spells

The casting of spells in Diablo and Hellfire is normally easy to do. Just click on the mouse. Some spells need to be targeted, some change the cursor, and others just cast no matter where you are targeting it. The table below is a summary of how different spells behave.

It is worth noticing that there can be a small delay between the time you click on the mouse and the actual cast of the spell. If you change the cursor position during the time in between, or change the spell, you will normally cast the new spell and the target will be the new position of the cursor. Another side effect of this is that the actual mana reduction is done when the spell is cast which may at times lead to mana reaching negative values (the check for enough mana to cast the spell is done when you click the mouse, while the actual reduction is done when it is cast; due to this effect , one can, if one clicks fast enough, end up with negative mana, or be able to cast a spell twice from a scroll, or squeeze out an extra spell from a staff).

Area
The spell does not target in any way and normally affects a larger area. It does not matter where on the screen you position the cursor when you cast this spell. Nova is such a spell.

Cursor
The spell will, when cast, change the cursor. You will then have to click on the desired target to be affected by the spell. It does not matter where on the screen you position the cursor when you cast the spell initially. A good example of a spell that affects the cursor is Telekinesis.

Direction
The spell is only controllable in that you can affect in what direction from your character the spell will go. Flame Wave is such a spell.

Target
The effect of the spell will target the location (or monster) on the screen where the cursor is positioned at the time you cast the spell. Lightning is such a spell.

Auto
This spell targets a monster but you do not have to actually point the cursor on the monster, since it will automatically target a specific monster (normally the one closest to the cursor). Some spells are both targeted and automatically seek up a target. This is true for spells like Elemental and Bone Spirit, they are cast at the position you cursor is at but will then automatically seek out a target as well.

Self
The spell affects your character directly. Infravision is such a spell.

Spell	Behavior	Spell	Behavior	Spell	Behavior
Apocalypse	Area	Healing	Self	Teleport	Target
Blood Star	Target	Heal Other	Cursor	Town Portal	Target
Bone Spirit	Target/Auto	Holy Bolt	Target	Berserk[2]	Target/Auto
Chain Lightning	Target/Auto[1]	Identify	Cursor	Immolation	Area
Charged Bolt	Direction	Inferno	Direction	Jester[3]	n/a
Elemental	Target/Auto	Infravision	Self	Lightning Wall	Target[4]
Fireball	Target	Lightning	Target	Magi	Self
Firebolt	Target	Mana Shield	Self	Mana	Self
Fire Wall	Target[4]	Nova	Area	Reflect	Self
Flame Wave	Direction	Phasing	Self/Auto	Ring of Fire	Area
Flash	Area	Resurrect	Cursor	Search	Self
Golem	Target/Auto	Stone Curse[2]	Target/Auto	Warp	Self/Auto
Guardian	Target/Auto	Telekinesis	Cursor		

1   Chain Lightning will produce one lightning bolt that is targeted just as normal lightning. The other bolts are automatically targeted.
2   If there is no monster targeted, Stone Curse and Berserk will affect the monster closest to the cursor.
3   This spell casts another random spell. See each individual spell for the behavior.
4   The direction of the wall is always perpendicular to the caster.

4.2 Spell casting monsters

Some monsters have the ability to do magical attacks. Monsters in Diablo can only use spells that are available to the player (although they work a bit differently in regard to damage, for example), except for Spitting Terrors. In Hellfire, there are many new monsters that also have the ability to do magical attacks. Often those are new ones that are not available to the player in any way. The tables below summarize all monsters with magical attacks as well as what type of magic it is (not always obvious).

Type	Monster	Spell/Attack
Magic	Succubi	Blood Star
	Blightfire (Unique Goat Man)	Blood Star
	All Mages	Flash
	Spitting Terrors	Spit[1]
	Psychorb	Magic Attack[1]
	Necromorb	Magic Attack[1]
	Spider Lord	Spit[1]
	Bone Demon	Magic Attack[1]
	Lich	Magic Attack[1]
	Arch Lich	Magic Attack[1]

1   These monsters cast spells that are not available to characters.

Type	Monster	Spell/Attack
Fire	Counselor	Firebolt
	Advocate	Fireball
	Balrog	Inferno
	Torchant	Fireball
	Fire Bat	Firebolt
	Hell Bat	Fireball

Type	Monster	Spell/Attack
Lightning	Familiars	Single stationary Charged Bolt
	Magistrate	Charged Bolt
	Lightning Demons	Lightning
	Cabalist	Lightning

Type	Monster	Spell/Attack
Other	Diablo	Apocalypse
	Skeleton Archer	Arrow[1]
	Goat Archer	Arrow[1]

1   Arrows is of course not a spell, but is in many ways technically handled as a spell (with some special cases) by the game. For ease of use together with other parts of this Guide, it is thus useful to list arrow attacks here.

4.2.1 Details about monster spells in Diablo

Below are listed all those spells that monsters are able to use. In most cases they are identical to the ones used by players. although some differences can exist. If the damage is stated as *min - max*, the damage is identical to the one listed for melee damage in chapter 5. Note that the charge attacks some monsters can do are, in fact, treated by the game as a type of "spell," where the monster itself is the "spell" projectile. Upon hitting it will do normal melee damage. See chapter 6.1.7 for more information.

Apocalypse	Arrow
Type: n/a Damage: 40 Blockable: Yes	Type: n/a Damage: min - max Speed: 32 Blockable: Yes
Note: * Only Diablo can cast apocalypse.	Note: * See chapter 5.2.1 for information about min and max damage for monsters. * Arrow is of course not a spell, but is in many ways technically handled as a spell (with some special cases) by the game. For ease of use together with other parts of this Guide, it is thus useful to list arrow attacks here.

Blood Star	Charged Bolt
Type: magic Damage: min - max Speed: 16 Blockable: Yes	Type: lightning Damage Magistrate: 15 Damage Familiars: 1 - 10 Number of bolts: Speed: 8 Blockable: Yes
Note: * See chapter 5.2.1 for information about min and max damage for monsters.	

Fireball	Firebolt
Type: fire Damage: min - max Speed: 16 Blockable: Yes	Type: fire Damage: min - max Speed: 16 Blockable: Yes
Note: * See chapters 5.2.1 and 5.2.3 for information about min and max damage for monsters.	Note: * See chapters 5.2.1 and 5.2.3 for information about min and max damage for monsters.

Flash	Inferno
Type: magic Damage 1: mlvl/32 Damage 2: 4/64 Duration: 0.95 seconds Blockable: No	Type: fire Damage: min/64 - max/64 Range: 3 Duration: 1, 1.25 and 1.50 seconds Blockable: No
* The Flash spell is actually composed of two different effects, the two different Damages given are for the two different effects. The first hit in front of the monster and to the sides, the other behind the monster. * The flash will try to hit once every 0.05 seconds for a total of 19 times.	Note: * See chapter 5.2.1 for information about min and max damage for monsters. * The three values for duration are for the three target locations, starting with the one closest to the caster. * The flame will try to hit once every 0.05 seconds for a total of 20, 25 and 30 times.

Lightning	Magma Ball
Type: lightning Damage: min/32 - max/32 Speed: 32 Duration: 0.5 seconds Blockable: No	Type: fire Damage: min - max Speed: 16 Blockable: Yes
* The lightning is actually a stationary effect, but the initiation will be delayed the further away it appears, thus giving an appearance of moving. This delay "travels" with a speed of 32. * The bolt will try to hit once every 0.05 seconds for a total of 10 times.	Note: * See chapters 5.2.1 and 5.2.3 for information about min and max damage for monsters.

Spit Attack	Spit Puddle
Type: magic Damage: min - max Speed: 16 Duration: 20 + Intf·5 Blockable: Yes	Type: magic Damage (spit attack): 1/32 Damage (dead Acid Beasts): (Intf + 1)/64 Duration: 2·(Intf + 1) + Rnd[15]/20 seconds Blockable: No
Note: * See chapters 5.2.1 and 5.2.3 for information about min and max damage for monsters. * See chapter 5.3.3 for information about intelligence factors (Intf) for monsters. * The duration is actually what determines the distance a monster can spit.	Note: * See chapter 5.3.3 for information about intelligence factors (Intf) for monsters. * The puddle will try to hit once each 0.05 second for a total of (Intf + 1)·2 + Rnd[15] times.

4.2.2 Details about new monster spells in Hellfire

Most new monsters in Hellfire that can use spells have new special spells not available to players, although some use "old" spells. Below are listed all new spells monsters in Hellfire can use. If the damage given is stated as *min - max*, the damage is identical to the one listed for melee damage in chapter 5.

Arch Lich attack	Bone Demon attack
Type: magic Damage: min - max Speed: 16 Blockable: Yes	Type: magic Damage: min - max Speed: 16 Blockable: Yes
Note: * See chapters 5.2.1 and 5.2.3 for information about min and max damage for monsters.	Note: * See chapters 5.2.1 and 5.2.3 for information about min and max damage for monsters.

Lich attack	Necromorb attack
Type: magic Damage: min - max Speed: 16 Blockable: Yes	Type: magic Damage: min - max Speed: 16 Blockable: Yes
Note: * See chapters 5.2.1 and 5.2.3 for information about min and max damage for monsters.	Note: * See chapters 5.2.1 and 5.2.3 for information about min and max damage for monsters.

Psychorb attack	
Type: magic Damage: min - max Speed: 16 Blockable: Yes	
Note: * See chapters 5.2.1 and 5.2.3 for information about min and max damage for monsters.	

4.3 Traps

Most traps are of magical nature, and thus it is appropriate to explain how they work here. Traps can be set off when you open chests, sarcophagi, barrels, or doors. There are 7 different types of traps (including skeletons) in the original Diablo. Three new ones were added in Hellfire. The probability of a trap is shown in the table below. Traps originating from shrines are not covered by this guide.

	Probability of traps[5]			
Origin	**Church**	**Catacombs**	**Caves and Hive**	**Hell and Crypt**
Chest in Diablo	trap: 0 %	arrow: 5 % fire arrow: 5 %	arrow: 3.3 % fire arrow: 3.3 % nova: 3.3 %	arrow: 3.3 % fire arrow: 3.3 % nova: 3.3 %
Chest in Hellfire	trap: 0 %	arrow: 5 % fire arrow: 5 %	arrow: 1.7 % fire arrow: 1.7 % nova: 1.7 % ring of fire: 1.7 % mana drain: 1.7 % disenchant: 1.7 %	arrow: 1.7 % fire arrow: 1.7 % nova: 1.7 % ring of fire: 1.7 % mana drain: 1.7 % disenchant: 1.7 %
Sarcophagus	skeleton: 20 %	n/a	n/a	n/a
Barrel, Pods and Urns outside rooms	explosion: 20 % [2] skeleton: 16 % [3]	explosion: 20 % [2] skeleton: 16 % [3]	explosion: 20 % [2] skeleton: 0 %	explosion: 20 % [2] skeleton: 0 %
Barrels, Pods and Urns inside rooms[6]	explosion: 50 % skeleton: 0 %	explosion: 83 % skeleton: 0 %	explosion: 75 % skeleton: 0 %	explosion: 88 % skeleton: 0 %
Origin	**dlvl 1-2**	**dlvl 3-5**	**dlvl 6-8**	**dlvl 9-16[4]**
Doors[5]	arrow: 100 %	arrow: 50 % firebolt: 50 %	arrow: 33.3 % firebolt: 33.3 % lightning: 33.3 %	n/a

1   Sarcophagi only exist in the Crypt, never in Hell.
2   In each cluster of barrels, pods and urns, the first barrel placed has a 25% chance having an explosion trap. All subsequent barrels have a 20% chance. As the number of barrels in a cluster is very hard to calculate accurately, I have used the value of 20% for all barrels. This will also affect the value for skeletons slightly, as it is 20% for a *non* exploding barrel.
3   Skeleton traps are, of course, only available if there are skeletons on the same level.
4   Hell and Crypt can't have traps form doors.
5   The probabilities for doors apply to doors that *do* have traps. It seems that the probability to have traps is linked to the actual dungeon layout for doors in that it needs a wall opposite to it.
6   Rooms also includes the fenced locations in caves. A room does not necessarily need to have a door, in cats and especially in hell, many rooms just have an opening.

For damage and other information about the traps, see below. For damage, when two values or formulas are given, the top one is minimum damage and the bottom one is maximum damage. With fire arrows, the maximum damage might at times be less than the minimum damage (possible on dlvl 1-8). In that case, the actual damage done is always identical to the minimum damage. The table also list some dungeon features that while not being traps, still deal damage to players.

Trap	Damage	Speed/Duration	Other
Arrow	Min: dlvl Max: 2·dlvl	32	Will fire an arrow, originating from the nearest wall.[1]
Burning cross	Church: 6/64 Catacombs: 8/64 Caves: 10/64 Hell: 12/64	n/a	The flame will hit once every 0.05 seconds for as long as you are standing in it.
Fire Arrow	Min: dlvl + Rnd[10] + 1 Max: 2·dlvl + Rnd[10] + 1	32	Will fire an arrow, originating from the nearest wall.[1]
Firebolt	dlvl + Rnd[2·dlvl]	26	Will cast the spell Firebolt, originating from the nearest wall.[1]
Lightning	(dlvl + Rnd[dlvl])/32	32 / 0.4 seconds[2]	Will cast the spell Lightning, originating from the nearest wall.[1]
Nova	Itt(3, Rnd[3]) + dlvl/2	32	Will cast the spell Nova, originating from the chest.
Exploding barrel	Min: 8 Max: 16	n/a	An exploding barrel does fire damage and is treated like a Firebolt hitting.
Skeleton	n/a	n/a	Will create a random skeleton of those present on the same dlvl.
Ring of Fire	(Rnd[10] + Rnd[10] + dlvl + 2)/8	Unknown	Will cast the spell Ring of Fire, originating from the chest.
Mana Drain	n/a	n/a	Will drain you of all current mana. This trap has the ability to affect other players on the same dlvl.
Disenchant potions	Full Healing: Healing Full Mana: Mana Full Rejuvenation: Rejuvenation - 33% Full Healing - 33% Full Mana - 33% Healing: destroyed Mana: destroyed Rejuvenation: Healing - 50% Mana - 50%		For each potion in your belt, there is a 50% chance that it will be replaced with another potion according to the left. If several possibilities exist, the chance is equal for all possibilities and shown after the potion. This trap has the ability to affect other players on the same dlvl.

1   In caves, hell, the Hive, and the Crypt it will originate form the chest, pod or urn.
2   The bolt will try to hit once every 0.05 seconds.

To Hit
To Hit for traps is calculated according to the formulas below.

    To Hit for an arrow trap: 100 - AC/2
    To Hit for a magic trap: 40

As with attacks from monsters, there is also an automatic chance of hitting for traps, and it is listed below. Of course, the auto To Hit for magic traps is 40%, even on dungeon levels 14 to 16.

    arrow trap: 10%
    magic trap: 40%

    on dungeon level 14:   20%
    on dungeon level 15:   25%
    on dungeon level 16:   30%

- magic traps includes Fire Wall, Flame Wave and Ring of Fire attacks from other players.