## Mario AI Benchmark $^1$ . Setup options.

Option key	Description	Value range	Example	$(\mathrm{Get/Set})\mathrm{er}$
-echo	Output all command line options to	<on off>. Default: off</on off>	ult: off Main -echo on	isEcho/setEcho
	console after initialization			
-ag	AgentName should extend Register-	AgentName or Agents im-	Main -ag ForwardAgent	getAgent/setAgent
	ableAgent in order for the native agent	plementations. Default:		
	to be available from command line	HumanKeyboardAgent		
-ze	Observation Detalization for Enemies.	<0 1 2>. Default: 0	Main -ze 0	getZLevelScene/setZLevelScene
	0 - The most detailed			
-vis	Enable Visualization	<on off>. Default: off</on off>	Main -vis on	isVisualization/setVisualization
-vaot	Set main View to be on top of other	<on off>. Default: off</on off>	Main -vaot on	$\verb isViewerAlwaysOnTop  $
	windows			setViewerAlwaysOnTo
-tl	Time limit. Option value: [1MAX-	<int>. Default: 200</int>	Main -tl 42	getTimeLimit/setTimeLimit
	INT], units: marioseconds (1 MrSEC			
	== 16 interactions with Environment).			
	To give to the Agent the opportunity of			
	infinitie time per level use Option value			
	=-1			
-pw	Pause of the World. Freezes animation	<on off>. Default: off</on off>	Main -pw on	isPauseWorld/setPauseWorld
	all the sprites and disables Mario inter-			
	action with creatures. Mario still can			
	run and get level observation			,
-pr	Enable Power restoration. Enable	<on off>. Default: off</on off>	Main -pr on	isPowerRestoration/
	Power restoration by pressing speed			setPowerRestoration
	button (A on a keyboard)			
-ewf	Exit program when simulation is over	<on off>. Default: on</on off>	Main -ewf off	isExitProgramWhenFinished/
				setExitProgramWhenFinished
-gv	Enable Game Viewer	<on off>. Default: off</on off>	Main -gv on	isGameViewer/setGameViewer
-gvc	Enable Continuous Updates in	<on off>. Default: off</on off>	Main -gvc on	isGameViewerContinuousUpdates/
	GameViewer			setGameViewerContinuousUpdates
-rfw	Set receptive field width	Any odd number	Main -rfw 5	${\tt getReceptiveFieldWidth}/$
		$\in$ $(0,-ll)$ . Default:		setReceptiveFieldWidth
~		19.		
-rfh	Set receptive field height	Any odd number	Main -rfh 7	getReceptiveFieldHeight/
		$\in$ $(0,-lh)$ . Default:		setReceptiveFieldHeight
		19.		
				Continued on next page

<sup>&</sup>lt;sup>1</sup>v-0.1.9 compliant

Option key	Description	Value range	Example	(Get/Set)er
-srf	Set receptive field (grid) visible	<on off> Default: off</on off>	Main -srf on	isReceptiveFieldVisualized/
		·		setReceptiveFieldVisualized
-mm	Mario Mode. 0 – small,1 - large, 2 -	<0 1 2>. Default: 2	Main -mm 1	getMarioMode/seMarioMode
	large, fire ability is available			,
-mgr	Mario gravity. Than greater number,	Any number $\in (0,2)$ . De-	Main -mgr 0.8	getMarioGravity/setMarioGravity
	than greater gravity	fault: 1		
-cgr	Creatures gravity. Than greater num-	Any number $\in (0,2)$ . De-	Main -cgr 1.5	getCreaturesGravity/None
	ber, than greater gravity	fault: 1		
-fps	Change FPS. 100 enables max FPS	<integers [1100]="" in="">.</integers>	Main -fps 50	getFPS/setFPS
_		Default: 24		
-lt	Level type. 0 - Overground, 1 - Under-	<0 1 2>. Default: 0	Main -lt 1	getLevelType/setLevelType
	ground, 2 - Castle			
-ls	Level (Randomization) Seed	<integers [1maxint]="" in="" td=""  <=""><td>Main -ls 42</td><td><math>{\tt getLevelRandSeed}/</math></td></integers>	Main -ls 42	${\tt getLevelRandSeed}/$
		Path to the .lvl file>.		setLevelRandSeed
		Default: 0		
-11	Level length	<integers [14096]="" in="">.</integers>	Main -ll 550	getLevelLength/setLevelLength
		Default: 320		
-lh	Level height	<integers [14096]="" in="">.</integers>	Main -lh 18	getLevelHeight/setLevelHeight
		Default: 15		
-ld	Level Difficulty	<integers [0maxint]="" in="">.</integers>	Main -ld 5	getLevelDifficulty/
		Default: 0		setLevelDifficulty
-lde	Enable/disable dead ends on the level	<on off>. Default: off</on off>	Main -lde on	${\tt getDeadEndsCount}/$
				setDeadEndsCound
-lca	Enable/disable cannons on the level	<on off>. Default: on</on off>	Main -lca off	getCannonsCount/setCannonsCount
-lhs	Enable/Disable hills on the level	<on off>. Default: on</on off>	Main -lhs off	${\tt getHillStraightCount}/$
				setHillStraightCount
-ltb	Enable/Disable tubes on the level	<on off>. Default: on</on off>	Main -ltb off	getTubesCount/setTubesCount
-lg	Enable/Disable gaps on the level	<on off>. Default: on</on off>	Main -lg off	getGapsCount/setGapsCount
-lhb	Enable/Disable hidden blocks on the	<on off>. Default: off</on off>	Main -lhb off	${ t getHiddenBlocksCount}/$
	$level^2$			setHiddenBlocksCount

<sup>&</sup>lt;sup>2</sup>If level is build with dead ends and without hidden blocks, then you will go out from dead end over visible blocks, e.g. hidden blocks are replaced with visible blocks.

Option key	Description		Value range	Example	$(\mathrm{Get}/\mathrm{Set})\mathrm{er}$
-le	Customize creatures on the level. Crea-		List of creatures sepa-	Main -le off	getEnemies/setEnemies
	tures, that will be on the level are de-		rated by comma. De-		
	fined with first letter of the creature		fault: " " (empty string)		
	kind:				
	Creature	Short name			
	Goomba	g			
	Goomba Winged	gw			
	Green Koopa	gk			
	Green Koopa Winged	gkw			
	Red Koopa	rk			
	Red Koopa Winged	rkw			
	Spiky	S			
	Spiky Winged	sw			
	For more details and examples see marioai-lvlgen-options-usage.pdf				
-lb	Enable/Disable visible	blocks on the	<on off>. Default: on</on off>	Main -lb off	getBlocksCoutn/setBlocksCount
	level				
-lco	Enable/Disable coins on the level		<on off>. Default: on</on off>	Main -lco off	getCounsCount/setCounsCount
-lf	Create flat level		<on off>. Default: off</on off>	Main -lf on	isFlatLevel/setFlatLevel
-punj	Enable/Disable bytecode counting		<on off>. Default: on</on off>	Main -punj off	isPunj/setPunj
-stop	Run benchmark and stop a game-		<on off>. Default: off</on off>	Main -stop on	isStopGameplay/setStopGamePlay
	play. To continue a gameplay press a				
	SPACEBAR key.				
-Z	Enable Scale2X on startup		<on off>. Default: off</on off>	Main -z on	isScale2X/setScale2X