On the Subject of Sonic & Knuckles

Sonic the Hedgehog was a popular 16-bit video game from... Wait a minute; this isn't Sonic the Hedgehog. Are SEGA on commission or something?

- The module will show the SEGA logo. Click it to start a game of Sonic & Knuckles.
- To disarm the module, defeat Dr. Robotnik.
- There are two stages to the module.
- At the first stage, one of six zones will be displayed (see the below table).
- Additionally, three objects will be interactable: a hero, a badnik and a monitor. Each of these objects will play a sound.
- To progress to the second stage, you must press the sound which is not featured on the chosen zone's sounds when the difference between the number of rings and the seconds timer on the module is a multiple of 20.
- Pressing an incorrect object at this time will cause a strike and reset the module.
- Pressing any object at any other time will play the sound and vanish the pressed object. The previously pressed object will return.
- · At the second stage, you must hit Dr. Robotnik a specific number of times.
- To calculate the correct number of hits, use the following steps:
 - o Take the base code (see the below table) of the object you pressed.
 - Multiply it by the score.
 - Find the digital root.
 - · Add the base codes of the objects you didn't press.
 - Modulo 10 and add 1.
- · Perform all but the final hit on an even-numbered second.
- · Perform the final hit on an odd-numbered second.
- If the hero was Knuckles and/or the badnik was a ghost and/or the monitor was running boots, inverse the hits (odd to even; even to odd).
- Hitting Dr. Robotnik at the wrong time will cause a strike and reset the module to the first stage.
- Once you have successfully defeated Dr. Robotnik, the module will disarm.
- Due to the 16-bit era, you only have 9.59 to complete the module. Failing to complete the module within this time will cause a strike and reset the module. This will also cause a "Time Over" and reset the timer.
- Every time you incur a strike on this module, you will lose a life. Losing three lives will cause a "Game Over", which will lock out the module for 30 seconds before resetting to the SEGA logo.
- Losing a life other than through a "Time Over" will revert the timer to a lower count than it was previously. The latest the timer will start after losing a life is 3.30.



Zone/Image	Featured Sounds	Description			
Mushroom Hill	Blue Sphere	0.25s: Two wobbly sounding notes, the first one higher than the second.			
	Invincibility Theme	2.6s: Fast snare hits followed by catchy melody.			
	Jump	0.5s: A short, upward-sliding note.			
	Lightning Shield	0.7s: Two short and spiky, electric sounding notes.			
Flying Battery	Boss Theme	3.3s: Nine short notes followed by two long ones. Intense and dramatic.			
	Flag Bump	2.4s: Like twinkling stars gradually decreasing in pitch and volume.			
	Not Enough Rings	0.9s: Two abrupt buzzing notes, the second one longer. Like a "wrong answer" buzzer.			
	Special Stage	1.5s: A rapidly tremolo-ing, shimmery sound. Dissipates immediately.			
Sandopolis	Antigrav Funnel	3.2s: Fourteen identical pulses. Like a wave monitor.			
	Flying Battery	3.2s: Like a large steamer coming into port.			
	Mushroom Bounce	0.9s: Like bouncing off a giant jelly. Rises in pitch.			
	Teleport	1.1s: A piercing, high pitched sound. Shimmers and echoes.			
Lava Reef	Badnik Kill	0.4s: Like a tiny explosion.			
	Breathe	0.4s: Two short high-pitched squawking sounds.			
	Lamppost	0.5s: Two distinct tones; like a futuristic doorbell.			
	Spikes	0.8s: A tinny, high-pitched sound that slides even higher.			

Zone/Image	Featured Sounds	Description			
	Alarm	2.4s: It's an alarm.			
	Bridge Up	0.8s: Like a slightly mechanical chain, rising slightly in pitch.			
Sky Sanctuary	Flying Battery 4.4s: A long start note followed by a funky ri and a super cool bassline.				
	Regular Shield	0.7s: A single twanging sound.			
Death Egg	Bumper	0.6s: A single metallic ringing sound; like a dull bell.			
	Drown Warning	0.8s: Two ringing bell-like notes, identical in pitch. The first is shorter.			
	Ring Cash-in	1.7s: The sound of an old-style shop till.			
	Spin	1.2s: Like a dentist's drill attacking a filling.			

Heroes			Badniks			Monitors		
Name	Image	Base Code	Name	Image	Base Code	Name	Image	Base Code
Sonic the Hedgehog	\$	17	Butter- droid	22	6	Running Boots		7
Miles "Tails" Prower	***	4	Cluckoid	*	14	Fire Shield		13
Knuckles the Echidna	A	12	Ghost		16	Invin- cibility	*	2
			Spike Bonker	₩	8	Knuckles Extra Life		9
			Techno- squeak	362	3	Lightning Shield	E	11