**Player Attributes:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Attribute(s) | High Nibble | | Low Nibble | Notes |
| 1 | [Jersey Number] | 11 Jersey # | | | Full Byte |
| 2 | [**\*\***Weight] , [\*Agility] | 9 Weight | 4 Agility | | **\*\*** See Weight Note Below |
| 3 | [\*Speed] , [\*Off Aware] | 4 Speed | 4 Off Aware | |  |
| 4 | [\*Def Aware] , [\*Shot Power] | 4 Def Aware | 4 Shot Power | |  |
| 5 | [\*Checking] , [**\*\*\***Handed] | 4 Checking | 4 Handed | | **\*\*\*** See Handed Note Below |
| 6 | [\*Stick Hanl] , [\*Shot Accur] | 4 Stick Hanl | 4 Shot Accur | |  |
| 7 | [\*Endurance] , [\*Roughing] | 4 Endurance | 1 Roughing | | Roughing hidden stat |
| 8 | [\*Pass Accur] , [\*Aggression] | 4 Pass Accur | 3 Aggression | |  |

**Hex Sample of KIRK MULLER from ROM:**

A screenshot of a computer

Description automatically generated

**Notes:  
\*** 0-6 (0 = 25, 1 = 35, 2 = 45, 3 = 55, 4 = 65, 5 = 85, 6 = 100)

**\*\*** **Weight:**  0-F   
(0 = 140, 1 = 148, 2 = 156, 3 = 164, 4 = 172, 5 = 180, 6 = 188, 7 = 196, 8 = 204, 9 = 212, A = 220, B = 228, C = 236, D = 244, E = 252, F = 260)

**\*\*\* Handed:** 0-9Even Number = Lefty | Odd Number = Righty

**Hex Info:**

* The first 8 bytes after the players name, contain all the players attributes used in gameplay and edit lines.

**Goalie Attributes:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Attribute(s) | High Nibble | | Low Nibble | Notes |
| 1 | [Jersey Number] | 33 Jersey # | | | Full Byte |
| 2 | [**\*\***Weight] , [\*Agility] | 6 Weight | 6 Agility | | **\*\*** See Weight Note Below |
| 3 | [\*Speed] , [**\***Off Aware] | 4 Speed | 4 Off Aware | | **\*\*\*\*** See Off Aware Note Below |
| 4 | [\*Def Aware] , [\*Puck Cont] | 4 Def Aware | 6 Puck Cont | |  |
| 5 | [**\***Checking] , [**\*\*\***Glove Hand] | 4 Checking | 4 Handed | | **\*\*\*** , **\*\*\*\*\*** See Notes Below |
| 6 | [\*Stick Hanl] , [\*Shot Accur] | 4 Stick Hanl | 4 Shot Accur | | **\*\*\*\*\*** See Notes Below |
| 7 | [\*Stick Right] , [\*Stick Left] | 5 Stick Right | 5 Stick Left | |  |
| 8 | [\*Glove Right] , [\*Glove Left] | 6 Glove Right | 6 Glove Left | |  |

**Hex Sample of PATRICK ROY from ROM:**

A number on a white background

Description automatically generated

**Notes:  
\*** 0-6 (0 = 25, 1 = 35, 2 = 45, 3 = 55, 4 = 65, 5 = 85, 6 = 100)

**\*\*** **Weight:**  0-F   
(0 = 140, 1 = 148, 2 = 156, 3 = 164, 4 = 172, 5 = 180, 6 = 188, 7 = 196, 8 = 204, 9 = 212, A = 220, B = 228, C = 236, D = 244, E = 252, F = 260)

**\*\*\* Glove Hand:** 0-9Even Number = Lefty | Odd Number = Righty

**\*\*\*\* Off Aware:** 0-9  
Missing from Team Roster Attributes, not sure if used in game for goalies yet.

**\*\*\*\*\* Checking , Stick Hanl, Shot Accur**These are set to zero and I don’t believe they are used (To Be Confirmed)

**Hex Info:**

* The first 8 bytes after the players name, contain all the players attributes used in gameplay and edit lines / team roster.

**Player Attribute Details:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Attribute | Rom | Rescaled | Bonuses / Disadvantages | Hot / Cold | Additional Calc |
| Weight | 0-15 |  | None | No |  |
| Agility | 0-6 | 0-15 | None | Yes |  |
| Speed | 0-6 | 0-15 | None | Yes |  |
| Off Aware | 0-6 | 0-15 | PP + | PK - | Home/Away +-| Rubber Band + | Yes | Flip bits; Add 15 / 2 |
| Def Aware | 0-6 | 0-15 | Home/Away +- | Yes | Flip bits; Add 7; **If Goalie Then:** Flip bits; Add 15 / 2; |
| Shot Power | 0-6 | 0-15 | No | Yes |  |
| Checking | 0-6 | 0-15 | Rubber Band + | Yes |  |
| Stick Handling | 0-6 | 0-15 | PP + | PK - | Home/Away +- | Yes |  |
| Shot Accuracy | 0-6 | 0-15 | PP + | PK - | Home/Away +- | Yes |  |
| Endurance | 0-6 | 0-15 | None | Yes |  |
| Roughing | 0-6 | 0-15 | Rubber Band + (x2) | Yes |  |
| Pass Accuracy | 0-6 | 0-15 | PP + | Home/Away +- | Yes |  |
| Aggression | 0-6 | 0-15 | None | Yes |  |

Ex: Attribute = 4 of 6; Rescaled to 10 of 15 + (Bonuses/Disadvantages) + (Hot/Cold) + (Additional Calc)

**Bonuses / Disadvantages:**

* **PP + :** Positive (0 to +3) Applied to the team on the PP
* **PK - :**  Negative (-3 to 0) Applied to the team on the PK
* **Home/Away +/-:** Negative or Positive (-3 to +3) based on your teams Home/Road
* **Rubber Band +:** Positive +2 applied when losing early in the third and tied for OT

**Goalies:** Do not get Bonuses / Disadvantages applied to their attributes, only Hot/Cold.

**Hot/Cold function:**1) Takes a random number (-11 to +10) divides by 2 then divides by 2 again.  
2) Adds this number back to the rescaled value.  
3) Constraints the attribute to stay within the 0 to 15 range.  
 **Hot/Cold Bug:** A division error on the (-11 to +10) causes HUGE fluctuations in SNES, often resulting in large positive jumps.

**Example of the Bug**:

**1.Starting Values:**

- Benoit Brunet's agility was originally 2 out of 6.   
 - This value was rescaled to 5 out of 15. No bonuses were applied.

**2.Random Number Impact:**

- A random number of $F5 (-11 in decimal) was generated to adjust agility due to "Hot/Cold" status.  
 - This number should be halved (divided by 2) twice in the calculation.

**3. First Division by 2:**

- Instead of correctly calculating -11 ÷ 2 = -5, the instruction treats the number as if it’s positive (unsigned), which gives a wrong result of 245 ÷ 2 = 122.

**4.Second Division by 2:**

- The incorrect value 122 is halved again to get 61.  
 - This should have instead halved -5 to get -2.

**5.Adding the Original Agility Value:**

- The program adds the original rescaled value of 5 to the incorrect 61, resulting in 66.  
 - The correct calculation should have been 5 + (-2) = 3.

**6.Capping the Result:**

- Since 66 is greater than the maximum allowed agility of 15, the value is capped at 15.  
 - In the correct calculation, the value would have been 3, which is already under the cap.

**\*\*Summary:\*\***

Due to the bug, Benoit Brunet's agility incorrectly increases to the maximum value instead of decreasing as it should, because the negative number was mistakenly treated as a positive number during the calculations.

**Genesis / SNES Comparison:**

|  |  |  |  |
| --- | --- | --- | --- |
|  | GENS | SNES | Note |
| Attribute Scale | 0-30 | 0-15 |  |
| Bonuses / Disadvantages | Yes | Yes |  |
| PK/PP Team Data reversed | Yes | Yes | Same in both versions |
| Hot/Cold Bug | **Yes** | **Yes** | SNES Bug: Unsigned Byte Bug, **Huge** + fluctuations  GENS Bug: RNG same for each Attribute per player |
| PP/PK +/- Faceoff Bug | Yes | **No** | Gens Bug: Not applied until second faceoff |
| Comeback Bonus Bug | Yes | Yes | Applied at start of 3rd/OT instead of 2:30 remaining |

**Weight:**0-15 (0-F); Adds 0 to lower nibble then divides by 2  
Mullers weight in the rom is (9) Hex. Converts to byte 90 then divides by 2 = (48) Hex

**Agility:**0-6; Rescaled to 0-15; No Bonuses or Disadvantages; Hot Cold applied.  
Mullers Agility is 4 of 6; Rescaled to 10 of 15; No Bonuses or Disadvantages; Hot Cold applied to 10

**Speed:**0-6; Rescaled to 0-15; No Bonuses or Disadvantages; Hot Cold applied.  
Mullers Speed is 4 of 6; Rescaled to 10 of 15; No Bonuses or Disadvantages; Hot Cold applied to 10

**Off Aware:**0-6; Rescaled to 0-15; Bonuses + Disadvantages applied; Hot Cold applied. Flip lower 4 bits, Add 15 / 2  
Mullers Off Aware is 4 of 6; Rescaled to 10 of 15; Bonuses + Disadvantages applied; Hot Cold applied; Flips the lower 4 bits; Add 15 / 2.

**Def Aware:**0-6; Rescaled to 0-15; Home/Away +/- applied; Hot Cold applied. Flip lower 4 bits, Add 7  
Mullers Def Aware is 4 of 6; Rescaled to 10 of 15; Home/Away +/- applied; Hot Cold applied; Flips the lower 4 bits; Add 7.

**Shot Power:**0-6; Rescaled to 0-15; No Bonuses or Disadvantages; Hot Cold applied.  
Mullers Shot Power is 4 of 6; Rescaled to 10 of 15; No Bonuses or Disadvantages; Hot Cold applied.

**Checking:**0-6; Rescaled to 0-15; Rubber Band Bonus; Hot Cold applied.  
Mullers Checking is 4 of 6; Rescaled to 10 of 15; Rubber Band Bonus; Hot Cold applied.

**Stick Handling:**0-6; Rescaled to 0-15; PP + | PK - | Home/Away +-; Hot Cold applied.  
Mullers Stick Handling is 4 of 6; Rescaled to 10 of 15; PP + | PK - | Home/Away +-; Hot Cold applied.

**Shot Accuracy:**0-6; Rescaled to 0-15; PP + | PK - | Home/Away +-; Hot Cold applied.  
Mullers Shot Accuracy is 4 of 6; Rescaled to 10 of 15; PP + | PK - | Home/Away +-; Hot Cold applied.

**Endurance:**0-6; Rescaled to 0-15; No Bonuses or Disadvantages; Hot Cold applied.  
Mullers Endurance is 4 of 6; Rescaled to 10 of 15; No Bonuses or Disadvantages; Hot Cold applied.

**Roughing:**0-6; Rescaled to 0-15; Rubber Band Bonus; Hot Cold applied.  
Mullers Roughing is 1 of 6; Rescaled to 2 of 15; Rubber Band Bonus x2; Hot Cold applied.

**Pass Accuracy:**0-6; Rescaled to 0-15; PP + | Home/Away +-; Hot Cold applied.  
Mullers Pass Accuracy is 4 of 6; Rescaled to 10 of 15; PP + | Home/Away +-; Hot Cold applied.

**Aggression:**0-6; Rescaled to 0-15; No Bonuses or Disadvantages; Hot Cold applied.  
Mullers Aggression is 3 of 6; Rescaled to 7 of 15; No Bonuses or Disadvantages; Hot Cold applied.