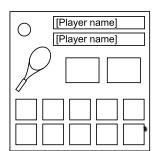# On the Subject of Tennis

Game, set, and match.

- The module displays the names of two players and the score table of a tennis match in progress. The names imply whether it's a women's or men's game.
- Observe the surface of the tennis court to determine which tournament is in progress:
  - <u>Hard court</u> (blue): **US Open at Flushing Meadows**
  - <u>Lawn</u> (green): **The Championships at Wimbledon**
  - <u>Clay</u> (orange): **French Open Roland-Garros**
- Convert each character of the bomb's serial number into a 5-digit binary number by using the following table.

Char	Binary	Char	Binary	Char	Binary	Char	Binary
0	00000	9	01001	I	01110	R	10111
1	00001	A	00110	J	01111	S	11000
2	00010	B	00111	K	10000	T	11001
3	00011	C	01000	L	10001	U	11010
4	00100	D	01001	M	10010	V	11011
5	00101	E	01010	N	10011	W	11100
6	00110	F	01011	O	10100	X	11101
7	00111	G	01100	P	10101	Y	11110
8	01000	H	01101	Q	10110	Z	11111

- Concatenate these into a 30-digit string of binary digits. In this string, a 1 represents a point scored by the serving player, a 0 a point for the opponent.
- If either player wins the match at any point, click that player's name and ignore any extraneous binary digits.
- Otherwise, enter the new score after this sequence of 30 rallies (exchanges).
- Click any digit box to increment or cycle the score in that box.
- Click on the first blank set scorebox to add a set.
- Click the tennis racket to switch between three different modes (0/15/30/40 scoring; deuce/advantage; and tie break).
- Long-press the number boxes in the center to reset those scores to 0-0.
- Long-press a score in a set to remove that set and all subsequent sets.
- Long-press the tennis racket to reset the module to its original scores.

Scoring rules

- To win a <u>match</u>, a player must win 2 (women's play) or 3 (men's play) <u>sets</u>.
    - The scores of each <u>set</u> are displayed at the bottom of the module.
- To win a <u>set</u>, a player must win at least 6 <u>games</u> with a difference in <u>games</u> of at least 2 from the other player.
- <u>Games</u> within a <u>set</u> are counted in increments of 1.
- Individual points within a <u>game</u> are notated as follows: 15, 30, 40.
    - These scores are shown in the middle of the module.
- If both players reach 40, the score is notated as a <u>deuce</u>.
    - In the French Open, the first 40-40 in a <u>game</u> is notated as 40-40.
- If a player scores a point while on 40 and the score is not <u>deuce</u> (or 40-40), that player wins the <u>game</u>.
- If a player scores in a <u>deuce</u> (or 40-40), the score is notated as <u>advantage</u> (<u>avantage</u> in the French Open) followed by the name of that player.
- If a player scores while they have <u>advantage</u>, that player wins the <u>game</u>.
- If a player scores while the opponent has <u>advantage</u>, the score returns to <u>deuce</u> (<u>égalité</u> in the French Open).
- If the score within a <u>set</u> reaches 6-6, a <u>tie break</u> occurs.
    - In Wimbledon and the French Open, <u>tie breaks</u> are not played in the final deciding <u>set</u> (5th <u>set</u> in men's play, 3rd <u>set</u> in women's play); instead, play continues until either player wins the <u>match</u> by achieving a difference in <u>games</u> of 2 from the other player.
- In a <u>tie break</u>, points for each rally are counted in increments of 1.
- To win a <u>tie break</u> (and hence, the <u>set</u>), a player must reach 7 points or more with a point difference of at least 2 from their opponent.

Service rules

- The first <u>game</u> in a <u>match</u> is served by the player listed first on the module.
- All rallies within a <u>game</u> are served by the same player (except in <u>tie breaks</u>, see below).
- The serve alternates with every <u>game</u>, even across <u>sets</u>.
- The first rally in a <u>tie break</u> is served by the player who didn't serve the previous <u>game</u>. Then the serve switches for the second rally. Beginning with the second rally, the serve switches after every two rallies.
- After a <u>tie break</u>, the first <u>game</u> of the next <u>set</u> is served by the player who didn't serve the first rally in the <u>tie break</u>.