

## On the Subject of Rubik's Cube

*Remember this impossible thing? Now it's on a bomb. Have fun.*

The bomb presents an unsolved Rubik's cube. To disarm the module, solve the Rubik's cube. The following steps can be used to determine the sequence of moves necessary to solve it. If you get lost, press the Reset button to return the cube to its original state.

This module has a Rubik's Cube on it.

Table 1

U	L	F	Moves	
0	1	2	L'	F'
3	4	5	D'	U'
6	7	8	U	B'
9	A	B	F	B
C	D	E	L	D
F	G	H	R'	U
I	J	K	U'	F
L	M	N	B'	L'
O	P	Q	B	R
R	S	T	D	L
U	V	W	R	D'
X	Y	Z	F'	R'

- Start with Table 1 on the right. Observe the color of the U, L and F faces on the cube. Cycle each corresponding column down a number of rows as specified in Table 2.
- Take the serial number, but eliminate the character at the position corresponding to the color of the D face (again, using Table 2).
- Look up each remaining character of the serial number in the modified Table 1 to obtain two moves per character, or a total of 10 moves.
- If the R face is red, green or blue, take both moves in order for each serial number character. Otherwise, take the first move for each serial number character, then the second move for each character.
- If the R face is red or yellow, change the first five moves to their opposites.
- If the R face is green or white, reverse the order of all the moves.
- Finally, perform the resulting sequence of moves on the cube.

### Clarifications:

- F is the face with the Reset button. The faces visible from a direct view at the module are U, L and F.
- The "color" of a face is the color of the sticker in the middle of that face.
- A move is performed by rotating the corresponding face clockwise. A prime (') indicates the opposite move (i.e. counter-clockwise).

Table 2

Color	Number
Yellow	1
Blue	2
Red	3
Green	4
Orange	5
White	6

Faces: U = up, D = down, L = left, R = right, F = front, B = back