On the Subject of Misordered Keys

*Another one? **Another one.***

This module consists of 6 coloured keys, each of which has a 1 – 6 digit label, consisting of numbers in the range 1 – 6.

The possible colours for both the keys and the numbers labelling them are: (R)ed, (G)reen, (B)lue, (C)yan, (M)agenta, and (Y)ellow.

One of the six keys will turn black when highlighted.
This key is referred to as "K" throughout the manual.

The information given by each key is used to locate a number of cells, each within a 6x6 grid, which will have values in the range 1 – 6.

Each key has two values attributed to it. The two sets of keys each contain exactly one of each number in the range 1 – 6.

Push the keys whose positions are given by the first set of values in ascending order of the second set of values.

Pushing the keys in the wrong order will result in a strike.
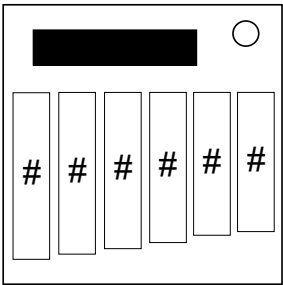
First key values

		Key Colour					
		R	G	B	C	M	Y
Label Colour	R	B	A	D	E	F	C
	G	E	B	C	F	A	D
	B	D	E	B	A	C	F
	C	A	F	E	C	D	B
	M	C	D	F	B	E	A
	Y	F	C	A	D	B	E

		First Digit of Label					
		1	2	3	4	5	6
Key Position (L – R)	1	Z	Y	W	X	U	V
	2	W	U	Y	V	Z	X
	3	V	W	Z	U	X	Y
	4	U	X	V	W	Y	Z
	5	Y	V	X	Z	W	U
	6	X	Z	U	Y	V	W

	A	B	C	D	E	F
U	1	5	6	2	3	4
V	3	4	1	5	6	2
W	6	2	3	1	4	5
X	2	3	5	4	1	6
Y	5	6	4	3	2	1
Z	4	1	2	6	5	3

Second key values

Apply the list of conditions on the labels of each key from left to right to obtain the second key values.

If a condition applies, but its second key value has been previously assigned, continue working down the list.

Ignore K: its second key value will be the one remaining value once the others have been assigned.

If the...	...,then the second key value is the...
label has only one digit	position of the key whose first key value is that digit.
label has three or more unique digits	first key value of K.
sum of digits is greater than 15	first key value of the key whose position is the last digit.
label has less than 3 distinct digits	position of the key whose first key value is the last digit.
label contains no odd numbers	position of the key whose first key value is the position of this key.
label contains both a 1 and a 6	position of the key whose first key value is the first digit of K.
label contains at least two distinct even numbers	position of the key whose first key value is the last digit of K.
label has only one digit	the value given by Grid A.
label has more than one digit	the value given by Grid B.
key has not been assigned a value	the lowest unassigned second key value.

Note: A digit is unique if it appears exactly once on the label.

Grid A

		Label Colour					
		R	G	B	C	M	Y
Label	1	2	1	5	3	4	6
	2	6	3	2	1	5	4
	3	5	4	3	6	2	1
	4	3	6	4	2	1	5
	5	1	5	6	3	4	2
	6	4	2	1	5	6	3

Grid B

		Label Colour					
		R	G	B	C	M	Y
Last Digit of Label	1	+	L	i	I	!	#
	2	i	#	L	!	+	I
	3	I	!	+	i	#	L
	4	#	+	!	L	I	i
	5	L	I	#	+	i	!
	6	!	i	I	#	L	+

i– The first digit of the label.

L– The last digit of the label.

#– The number of digits on the label.

+– One plus the sum of labelled digits modulo 6.

I– The position of the key.

!– The minimum modal digit.