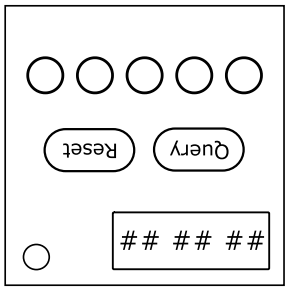
The Subject of Mastermind Restricted Cruel



He also sent this, which took a lot more refining than what he was normally used to.

This module may look familiar to Mastermind Cruel (Mastermind%20Cruel.html) however there are some changes the implementer performed on this module.

- The entire module is rotated 180°.
- The "Submit" button has been replaced with a "Reset" button.
- The "Query" and "Reset" buttons are aligned at the center of the module rather than on the edge. Likewise, the LEDs are aligned near the edge of the module rather than the center.
- There are 5 LEDs to cycle between 8 different colors rather than 5 LEDs to cycle between 6 different colors.
- The display has the gray borders on the top and bottom of the screen rather than on the left and right of the screen.
- When pressing the "Query" button, 3 colored numbers will be shown on the upside-down display. These numbers are referred to by the condition on the next set of pages.
- The defuser has 15 distinct queries to submit the correct sequence of colors to disarm the module. Using all 15 distinct queries without a correct sequence of colors will result in a strike and reset the module from the beginning. The reset button can be used to achieve the same effect without a strike. Correctly querying the correct sequence will cause the module to freak out but the module will solve in this state.

When the module resets, a new correct sequence will be generated alongside resetting the number of distinct queries left to 15. All queries relating to the previous correct sequence will also be cleared. The module will always reset when it is loaded in.

A distinct query is defined as a set of colors that is not yet been checked by the module after the reset. In fact, the defuser may use the same sequence of colors from previous queries to recheck the result.

The module will reveal the correct answer if all 15 distinct queries have been used up or if the defuser manages to get 5 correct colors in their correct positions.

Interpreting The Display: The Base Result

When reading the display right-side up, the color of the left number is used to determine the base result of the query before the modifications for each number left to right.

From the table provided:

- J refers to the number of correct colors in their correct positions.
- O refers to the number of correct colors not in their correct positions.
- L refers to the number of colors not in the correct sequence.

Left #'s Color	Base Values Display
Red	J, O, L
Yellow	O, L, J
Cyan	L, J, O
White	J, L, O
Magenta	L, O, J
Green	O, J, L

Interpreting The Display: The Modifier

When reading the display right-side up, the color of the middle number is used to determine the how the query result is modified for each number. The modifier obtained after shifting is then added to these numbers in their respective positions to get the result you see on the display. Do bare in mind some words have been removed to fit to the table on this page, I.E serial number is shortened to S.N; port plates are referred to as plates; the word "of" bring trimmed but still refer to edgework; etc. "*" refers to when you query for the given sequence, which denotes the values may change upon a requery. In the case any value is greater than 99, the module will only display the result after mod 100.

Center #'s Color	Offset Modifier (L, M, R)
Cyan	(# lit indicators, # unlit indicators, # indicators)
Green	(# solved mods.*, # unsolved mods*, # needies)
Yellow	(# AA bat., # D bat., # bat. holders)
Magenta	(# strikes*, # [solvables + needies], # minutes starting % 60)
White	(# unique port types, # dupe port types, # plates)
Red	(# digits in S.N, sum of digits in S.N, # letters in S.N)

Interpreting The Display: The Shifted Replacement

When reading the display right-side up, the right color is used to denote what numbers get replaced or how much the modifier is shifted by. Keep in mind the special modifier is applied before the offset modifiers are applied to each of the three numbers!

For clarification, shifting the offset modifiers indicate that the modifier is applied in a different position. For example, if the offset modifier is shifted to the right by 1, the 2nd modifier in the offset modifier is modifying the 3rd number instead of the 2nd number. Likewise, if the offset modifier is shifted to the left by 1, the 2nd offset modifier is modifying the 1st number. In a case where the offset modifier is shifted to the edge of the grid, the modifier will wrap around to affect the other number as a result; I.E the 3rd modifier if shifted to the right by 1 will offset the 1st number instead, the 1st modifier will offset the 3rd number if shifted to the left by 1.

Right #'s Color	Special Modifier
Cyan	Shift offset modifiers 1 left
Green	Replace left # with queries left
Yellow	Replace middle # with queries left
Magenta	Replace right # with queries left
White	Keep the offset modifiers as is
Red	Shift offset modifiers 1 right