KB doesn't respond when holding Multiple Keys

User is experiencing the no response called "Keyboard GHOSTING" when pressing keys in combination. In the case of Steel Series KB equipped in MSI gaming series, engineers designed the KB matrix to support more keys combination especially in the trapezoidal area shown below (mostly used in gaming). Though this does not indicate that 16 keys are all anti-ghost key, but wider combination has been implemented in this area to avoid ghosting.



According to MSI test engineer, the steel series keyboard anti-ghost combinations are presented in the table shown below:

You can combine any keys from group1 + group2 + group3 + group 4 + group 5 without experiencing Ghost key. The 2 tables should be treated seperately and cannot be combined.

For examples:

- 1. W+A+Left Shift+V = No Ghosting (left table)
- 2. W+D+Space+Q = No Ghosting (left table)
- 3. A+S+D+arrow key up+arrow key right (right table)
- 4. Z+C+arrow key up+arrow key left (right table)

Note:

The table doesn't limit the anti-ghost combinations of the KB, but only serves as reference of wider combinations with the use of the keys from the trapezoidal area mentioned above.

| group 1 | group 2 | group 3 | group 4 | group 1 | group 2 | group 3 | group 4 | group 5 |
|---------|---------|------------|---------|---------|---------|---------|------------------------|-----------------------|
| W | A | left Shift | V | A | S | D | arrow key up | arrow key right |
| S | D | left CTRL | Q | Z | × | C | arrow key up | arrow key left |
| | Q | Space | E | A | Z | | (includes numeric pad) | (includes numeric pad |
| | E | C | F | S | X | | | |
| | | | R | D | C | | | |
| | | | C | | | | | |
| | | | В | | | | | |
| | | | N | | | | | |
| | | | G | | | | | |
| | | | Z | | | | | |
| | | | X | | | | | |
| | | | 1 | | | | | |
| | | | 2 | | | | | |
| | | | 3 | | | | | |
| | | | 4 | | | | | |
| | | | 5 | | | | | |
| | | | 6 | | | 1 2 | | |
| | | | Tab | | | | | |

To learn more about KB ghosting, you may refer to Microsoft website for more detailed explanation. http://www.microsoft.com/appliedsciences/KeyboardGhostingDemo.mspx