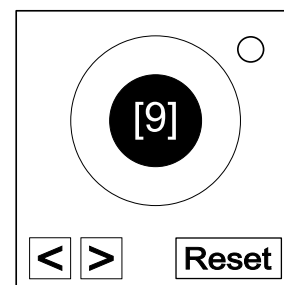# On the Subject of Combination Locks

This looks like a combination lock. I thought I was disarming this bomb, not unlocking it.

See Appendix B for battery identification reference.
See Appendix Two Factor for two factor identification reference.

Like a typical combination lock, this requires 3 numbers to unlock. Turn the dial to the right to the first number. Then turn it to the left for the second number. Finally, turn it to the right for the last number. That will unlock it! If sequential numbers in the code are the same, perform a full revolution back to the same number.

How to decode the combination:

Each number ranges from 0-19. Refer to the table to determine each number. Be careful if there are two factor codes present because they change periodically!

First number:

1. Add the least significant digit of each two factor code together. If there are no two factor codes, use the last digit of the serial number plus the number of solved modules.
2. Add the number of batteries.
3. If the result is over 19, keep subtracting 20 until the result is between 0-19.

Second number:

1. Add the most significant digit of each two factor code together. If there are no two factor codes, use the number of modules on the bomb (including needy modules).
2. Add the number of solved modules.
3. If the result is over 19, keep subtracting 20 until the result is between 0-19.

Third number:

1. Add the first two numbers together.
2. If the result is over 19, keep subtracting 20 until the result is between 0-19.