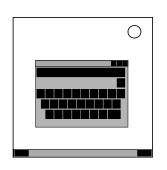# On the Subject of ⊒NA Cipher

*Nice weather! What conspiracies are we cooking on the menu today?*

The module consists of a taskbar with a start button (which will go into submission mode), 5 panels on a window which will display patterns of three. They are displayed in the following order:
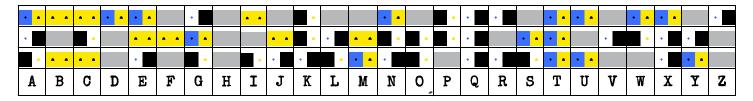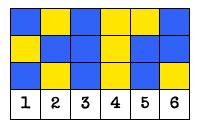
- The Encrypted Word
- Arithmetic Sequence Cipher Keyword
- Extinction Transposition Key
- Temptation Stairway Cipher Keyword
- Substitution Key

Follow the mechanics down below to decrypt your word:

## Decrypting Patterns

The patterns displayed on the module three times corresponds to a letter or number. Decrypt the patterns using the table below to get your encrypted word, keywords, substitution letters, and digit string.

| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|

## Step 1: Arithmetic Sequence Cipher

Take the encrypted word from display 1, and keyword decrypted from display 2. Remove any duplicate letters in the keyword while keeping the 1st occurrence. Take the entire alphabet and remove all the letters shown in the keyword.

If the serial number contains a letter in "ENA", put the alphabet at the end of the keyword. Otherwise, put the alphabet in front of the keyword. This will be the Arithmetic Sequence key.

Split the encrypted word into pairs. Note the movement from the first letter in the pair to the second letter in the pair in either direction.

Repeat the movement from the second letter to obtain two new letters. Then, reverse the pair to obtain the decrypted pair.

Repeat the process for the other two pairs to get your new encrypted word.

### Example

Encrypted Word: DUHXIU
Key: ABCDEGHJKMNOPQRUVWXZSTIFLY

D, U -> 12 -> Q, B
H, X -> 12 -> V, E
I, U -> 7 -> B, K

New Encrypted Word: QBVEBK

## Step 2: Extinction Transposition

Take the new encrypted word from step 1 and the digit string decrypted from the display 3.

Split the digit string into pairs. Swap the two letters correndsponding to the positions of each pair.

### Example

Encrypted Word: QBVEBK
Digit String: 144156

QBVEBK -> 14 -> EBVQBK
EBVQBK -> 41 -> QBVEBK
EBVQBK -> 56 -> QBVEKB

New Encrypted Word: QBVEKB

## Step 3: Temptation Stairway Cipher

Take the new encrypted word from step 2 and the keyword decrypted from the display 4, replacing any Js with Is, and remove any duplicate letters in the keyword while keeping the 1st occurrence. Take the entire alphabet, omitting J and remove all the letters shown in the keyword.

However, if encrypted word contains any Js, replace each J with the letter in the same position as the substitution string in display 5.

If the number of ports is odd and the number of port plates is even, put the alphabet at the end of the keyword. Otherwise, put the alphabet in front of the keyword.

Once you have the 25 length string, create a 5×5 matrix of letters.

Split the encrypted word into triplets.

For each triplet, use only the columns of your matrix containing a letter of your triplet, or any columns in between.

- If all letters are in the same column, do nothing.
- Mirror each letter horizontally across the middle of the column group.

### Example

Encrypted Word: QBVEKB
Key: BCDEGHIKLMNOPQRUVWXYZFAST

| B | C | D | E | G |
|---|---|---|---|---|
| H | I | K | L | M |
| N | O | P | Q | R |
| U | V | W | X | Y |
| Z | F | A | S | T |

QBV -> NEW
EKB -> BIE

Decrypted Word: NEWBIE

## Submission

Once you finally have your decrypted word, press the start button to go into submission mode to type out your word.

To clear it, click on the backspace key. It will not let you go over 6 letters on input.

If at any point you want to go back to the main window, click on the X on the top right corner of the window.

Once you are satisfied with your input, press the button labeled "SUB" to submit your answer. On a strike, the module will go back to the main window after the blue screen, but will not regenerate entirely.