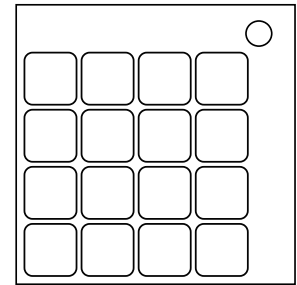# On the Subject of Memory Poker

"If a group you belonged to needed a scapegoat, who would you choose? If it was me, I would choose neither friend nor foe, but the person whose sacrifice would make no one angry or sad."

The module will initially display a 4×4 grid of cards. Some of the cards will be face down, while others will be face up. The cards are arranged within the grid so that:

- Every card will be a Jack, Queen, King, or Ace.
- Every card will be a Club, Heart, Spade, or Diamond.
- No two cards will be exactly the same.
- Every row, column, and main diagonal will have exactly one card of each suit and rank.

Determine the suit and rank of all 16 cards. This is the module's **starting configuration.** When you are ready to begin playing, select any card. Upon doing so, all face up cards will flip face down, and three cards will flip face up.

Each of the face up cards will represent a "table card". For each face up card, use its current position, combined with the location of the matching card in the starting configuration (its "initial position") to get a rank and a suit using the conditions on page 2.

Using these table cards, and the 16 cards from the starting configuration, determine the best possible 5-card poker hand using two different cards from the starting configuration.

If there is a tie, any valid answer will be accepted. Submit your answer by selecting the positions of those two cards in the module's starting configuration. If the two cards selected do not form the optimal poker hand, the module will reset back to its initial state. Submit 3 correct answers to solve the module.

Note that all ranks are abbreviated by their first letter (including ten).

Also note that you cannot choose cards which have already been flipped over.

If the bomb has exactly 3 batteries in 2 holders:

- Use the rank table for the current card position, and the suit table for the initial card position.

Otherwise, if the bomb's serial number has an "S" or "G":

- Use the suit table for the current card position, and the rank table for the initial card position.

Otherwise, if there is an empty port plate:

- Rotate both tables 90° clockwise.
- If there are no ports on the bomb, use the suit table for the current card position, and the rank table for the initial card position.
- Otherwise, use the rank table for the current card position, and the suit table for the initial card position.

Otherwise, if there are at least two indicators:

- Take the first two indicators in alphabetical order. Assign the first indicator to the rank table, and the second one to the suit table.
- For both of these indicators, if the indicator is lit, flip its respective table across the x-axis. Otherwise, rotate it 180° clockwise.
- If any indicators on the bomb share a letter, use the suit table for the current card position, and the rank table for the initial card position.
- Otherwise, use the rank table for the current card position, and the suit table for the initial card position.

Otherwise:

- Convert each character in the serial number from base-36 (A=10, B=11, C=12…) to base-10, then take the sum of these base-10 numbers.
- Rotate both grids 90° counterclockwise a number of times equal to this sum, modulo 3, plus one.
- If the last two digits of this sum (including a leading zero if it is one digit long) are both even or both odd, use the suit table for the current card position, and the rank table for the initial card position.
- Otherwise, use the rank table for the current card position, and the suit table for the initial card position.

<div align="center">

Rank Table

Q	T	J	J
K	A	T	K
Q	A	Q	T
T	J	K	A

Suit Table

♦	♥	♦	♣
♥	♥	♠	♣
♥	♦	♠	♣
♣	♠	♠	♦

</div>

Poker Hand Reference

Higher ranking hands towards the top of the table.

Name	Description
Royal Flush	An ace, a ten, a jack, a queen, and a king, all of the same suit.
5 of a Kind	Exactly 5 cards with the same rank.
4 of a Kind	Exactly 4 cards with the same rank.
Full House	3 cards of one rank, and 2 of another rank.
Flush	5 cards of any rank and the same suit.
Straight	An ace, a ten, a jack, a queen, and a king, with any suits.
3 of a Kind	Exactly 3 cards with the same rank.
Two Pair	2 cards with the same rank, 2 cards with a different rank, and 1 card with a unique rank.
Pair	Exactly 2 cards with the same rank.