**THE SGOI STATEMENT**

**General Form:**

\[
\text{SGIO (comment) \{ [SGIO (comment)] \} \{ \text{microcommand sequence} \} \{ \text{error/status region} \} \{ \text{data buffer} \} }
\]

**Example:**

```
100 SGIO WRITE (02B, 0101, 604, 02B, 0101, 0101, 0101, 0101)
```

- **Mnemonic and Operation**
  - **CPS**
    - CPU sets Ready/Busy signal level to Ready.
  - **ECH01/CBS**
    - CPU sends echo of received character with CBS strobe to CO device.
  - **ECH02/CBS**
    - CPU sends echo of received character with CBS strobe to output channel of input device.
  - **ECH02/OBS**
    - CPU sends echo of received character with OBS strobe to output channel of input device.
  - **IBS**
    - CPU sends echo of received character with CBS strobe.
  - **MASK**
  - **REPEAT**
  - **SAVE DATA**
    - Save received character in data buffer.
  - **WR**
    - CPU sends Ready signal to enabled device.

**LEGEND**

- A separator denotes the end of an input line, the next received character is stored as the first character in the next element of the SGOI buffer. (If a separator is received for the last element, the microcommand is terminated.)
- **Data separator**
- **Data terminator**
- **Don't store in data buffer**
- **Echo to output channel with address**
- **Current input address**
- **Echo to console output device**

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**REGISTRY USAGE**

**Code**

```
8 01 02 04 06 08 10 20 40 80 10 11...
```

**Bit Position**

- **1** = Buffer overflow.
- **2** = Element overflow.
- **4** = Not used.
- **6** = Not used.
- **8** = Not used.
- **10** = Timeout.
- **20** = ENDI level termination.
- **40** = Terminator character termination.
- **80** = Separator received for last element.

**Use**

- Automatic storage of the count of elements used for incoming data. Storage of special character list (as in characters, asin, character, etc.). The list must end with HEX (2020).

**Action Atom Definition**

- **High order hex digit**
- **Low order hex digit**

**Notes:**

- A separator denotes the end of an input line, the next received character is stored as the first character in the next element of the SGOI buffer. (If a separator is received for the last element, the microcommand is terminated.)
- A terminator denotes the end of a data stream, the microcommand is terminated.