

## TWOWRITE

Define a task that implements the two-write protocol.

**TWOWRITE** (<Src>, <PortVec>, <Dest>)

### Parameters

<Src>

Source of the data to be written.

**WORD PIPE**

<PortVec>

Vector containing the output ports to be written to.

**WORD VECTOR**

<Dest>

Destination for the two-write encoded data.

**WORD PIPE**

### Description

**TWOWRITE** encodes a merged stream of raw data into the two-write protocol format. Each single data word becomes two sequential data words containing the output port, raw data, and sequence information. This data is sent to the DAP's digital output and is interpreted by an appropriate MSXB expansion board that is addressed to one of the port addresses in <PortVec>.

### Example

```
TWOWRITE(P0, (7,23,0), OP0)
```

The first value in P0 is encoded with port address 7 and sent to the synchronous output pipe OP0. The second value is encoded with port address 23 and the third with port address 0. The sequence repeats until processing is stopped.

### DAPL

```
RESET
PIPE PMERGE
PIPE PA,PB,PC
PDEF A
  SQUAREWAVE(10000, 100, PA)
  SINEWAVE(15000, 121, PB)
  SAWTOOTH(20000, 144, PC)
  MERGE(PA,PB,PC,PMERGE)
  TWOWRITE(PMERGE, (7,23,0), OP0)
END
ODEF B 1
  SET OP0 B0
  TIME 1000
END
```

### Notes

The output data rate will be half the non-encoded rate. In the example above, a new value will be available to each port every 6000 usec (three ports \* two writes per port).

**TWOWRITE** is a custom DAPL command module which must be downloaded using the Data Acquisition Processor program in the Control Panel.