

## IOT and Miscellaneous Instructions

### SBS16

dsc IOT 50 disable channel nnnn  
asc IOT 51 enable channel nnnn  
isb IOT 52 initiate break on nnnn  
cac IOT 53 disable all channels  
esb IOT 54 enable SBS  
lsb IOT 55 disable SBS  
cbs IOT 56 clear all pending breaks

### Type 23 Parallel Drum

dia IOT 61 drum initial address  
dba IOT 2061 same but break on addr reached  
    IO 0123456-17  
        rffffffaaaaaaaaaaaa read enab, track, drum addr  
dwc IOT 62 drum word count numwords 0 = 4096  
    IO 0123456-17  
        wffffffnnnnnnnnnnnn write enab, track, numwords  
dra IOT 2062 drum read address  
    On return:  
    IO 0123456-17  
        epixxxaaaaaaaaaaaa current drum address, epi not used  
dcl IOT 63 drum core location  
    IO 0123456-17  
        xxbbbbaaaaaaaaaaaa memory bank, memory address  
dss IOT 2063 drum set sbs, nonstandard, dynamic IOT only  
    IO 12, 13, 14-17  
        xxxxxxxxxxescccc enable sbs16, set channel, channel

### BBN Timesharing Clock

clk IOT 32 read 1ms clock  
    On return, IO contains current 1ms counter, 0-59999  
cls IOT 2032 set clock parameters  
    AC 0123456789 10-13 14-17  
        xxxxxxeIIMMMmmmm enable clock, enable 1 min interrupt,  
            enable 32 ms interrupt, 1 min channel, 32ms channel

### Misc PDP-1D extensions

lai skip group bit 12, 620040 load AC from IO  
lia skip group bit 13, 620020 load IO from AC  
lsw skip group bit 5, 630000 swap AC and IO

## DCS2

See UsingDCS2.md for detailed information

```
rch IOT 22 read character from current channel
    IOT 2022 clear IO then rch
    6 low bits if flexo, else 8 low bits
rcr IOT 1022 rch then rsc
    IOT 3022 clear IO then rch, rsc
tcb IOT 4022 send a character to current send channel
tcc IOT 5022 tcb then release current send channel
    6 low bits if flexo, else 8 low bits
rrc IOT 0122 get current receive channel
    On return, IO has current receive channel or
    Bit 0 set, 12-17 010 octal, no current channel
rsc IOT 1122 release current receive channel
ssb IOT 4122 set send channel
    IO bits 12-17 have channel number
```

### Extended DCS2 commands

\* means on call, IO bits 12-17 are the channel number to use

```
scb 4222 set/clear/rebind channel
```

See the documentation for the details.

```
rle 4322 get last error
```

IO returns the last error seen

```
rpc 4422 receive pending count*
```

IO returns the count of characters waiting to be read

```
rci 4522 clear interrupt status*
```

```
ric 4622 get interrupting channel
```

IO returns channel number that interrupted or 0100 for none

```
rsc 4722 get channel status*
```

IO returns the status bits for the channel

```
rwe i 735122 wait for event
```

Blocks until any event such as connect, char ready, etc.

```
roc 5222 override current channel*
```

The channel becomes the current channel which is locked

```
res 5322 enable/disable sbs16
```

IO register bit 17 set to 1 enables sbs16, else disables

Note - the various command mnemonics and status codes are defined in include files in the MacroIncludes directory.