

SOLUTIONS CUBED

Electronics Prototyping, Custom Design, Product Development

Commands for the systems I/O devices can be defined in banks 1 - 7, and pointers are defined as constants. Pointers to the commands in bank 0 must be saved to the IISX scratchpad RAM using the GET and PUT commands. Once entering bank 1, the program decides where to go by BRANCHing on the ROUTINENUM variable, defined in the main RAM of the IISX.

ROUTINENUM is defined as the nibble 1 of ROUTINE, which is defined as a byte. Thus, nibble 0 is the bank number. In order to call a function in bank 1, and return to the next section of code in bank 0, the user must place the pointer of the next TEST_PROGRAM (bank 0) into scratchpad RAM (into RAM location STACK con 62) by using the PUT command.

Next, assign the Pointer of the desired Motor Mind B command to ROUTINE, and execute the RUN command on it.

Here is the code:

In bank 0:

```
PUT STACK, POINTER_OF_NEXT_ROUTINE_IN_BANK_0
ROUTINE = POINTER_OF_ROUTINE_IN_BANK_1
RUN ROUTINE
```

Now in bank 1. To return to bank 0, we want to:

```
GET STACK, ROUTINE
RUN ROUTINE
```

ROUTINE will be the POINTER_OF_NEXT_ROUTINE_IN_BANK_0. Pretty simple, huh? Using this scheme for bank switching, make sure that your routines in each bank are placed in the sequence that you defined their pointers as. Otherwise, you will branch to the wrong routine.