
Subject: Impossible to exit a \$MAIN\$ program
Posted by [JDS](#) on Mon, 01 Feb 2010 04:49:52 GMT
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In performing a bit of IDLWAVE cleanup, I noticed something I hadn't seen before (but which explains an annoyance I'd always had when working with \$MAIN\$ routines): there is no apparent way to return from a \$MAIN\$ program.

As an example, compile the following simple \$MAIN\$ program

```
; foo.pro
;=====
a=1
stop
do_not_set_or_you_will_explode=2
END
;=====
```

```
IDL> help,/trace
% At $MAIN$
IDL> .run foo
% Compiled module: $MAIN$.
% Stop encountered: $MAIN$          2 /Users/jdsmith/code/idl/test/
foo.pro
IDL> retail
IDL> help,/trace
% At $MAIN$          2 /Users/jdsmith/code/idl/test/foo.pro
```

The calling stack is "stuck" inside the main level program. The *only* way out I can see is to .RETURN or .OUT (twice, for some unknown reason):

```
IDL> help,/trace
% At $MAIN$          2 /Users/jdsmith/idl/test/foo.pro
IDL> .out
IDL> help,/trace
% At $MAIN$          1 /Users/jdsmith/idl/test/foo.pro
IDL> .out
% Starting at: $MAIN$
IDL> help,/trace
% At $MAIN$
IDL> print,do_not_set_or_you_will_explode
      2
;; explodes
```

You see that it has the unwanted side effect of running through the rest of the \$MAIN\$ program. I can find no way equivalent to RETALL

for named programs, which exits all the way to the top of the program stack. Am I missing something, or is this a design (mis-)feature left over from olden times. I would expect RETALL to return to the clean, vanilla \$MAIN\$ level, not inside of any compiled \$MAIN\$ routines. If you knew how much there was to skip you could .SKIP your way out, but that's hardly automate-able.

Another oddity: once you are *out* of a \$MAIN\$, continued calls to .OUT or .RETURN seem to drop you back *into* it at the same place you stopped! I realize this won't make a difference to most people, but IDLWAVE uses the output of help,/trace quite a bit, and it's disconcerting when in a long-lived IDL session, the state of some old throwaway \$MAIN\$ program you ran days or weeks ago keeps popping up.

JD
