

USING SR530 PROGRAMS WITH THE SR830

The SR830 responds to most SR530 programming commands. This allows the SR830 to drop into an existing SR530 application with a minimum of program changes. Of course, some changes will be required and some features are unique to one instrument or the other. For example, SR530 commands can not put the SR830 into a configuration which is not allowed by the SR830. **All program routines which query the SR530 status MUST be rewritten to query the equivalent SR830 status using the SR830 status commands.**

The SR530 emulation mode is intended to facilitate the transition to the SR830. New applications programs should use the SR830 commands in order to take advantage of all of the SR830 features.

The SR575 program will NOT run reliably with the SR830. This is because the SR575 is optimized for speed and the SR830 command execution time for some commands is longer than in the SR530.

The SR530 commands are documented in the SR530 manual. SR530 command parameters follow the SR530 conventions. Exceptions are noted below.

OUTX i	The SR830 OUTX i command sets the output interface to RS232 (i=0) or GPIB (i=1). The OUTX i command MUST be at the start of ANY SR830 program to direct responses to the interface in use.
FMOD i	The SR530 is always in external reference mode. Use the FMOD 0 command to set the SR830 to external reference. To use the SR830 internal oscillator, use the FMOD 1 command.
AX AY AR	The AX, AY and AR commands auto offset the X, Y and R outputs. Unlike the SR530, the X and Y offsets have no effect on R.
AP	The AP command performs the Auto Phase function. AP has no effect if the phase is unstable.
B {n}	The SR830 has no bandpass filter. This command is emulated but no changes are made to the SR830 configuration.
C {n}	Changes the Reference display.
D {n}	Change the dynamic reserve. Unlike the SR530, all reserves are allowed at all sensitivities.
E m {,n}	Change the Channel m expand. n=2 selects expand by 100. Note that expands in the SR830 affect the X and Y BNC outputs as well as the Display outputs.
F {x}	The F command Reads the frequency. The F x command sets the internal oscillator frequency to x Hz.
G {n}	Change the sensitivity from 10 nV (n=1) to 500 mV (n=24). Settings below 100 nV are always allowed. The 1V sensitivity can be set using G25. Querying this sensitivity returns a value of 24.