



## Debugging Your Program

Even the most experienced programmer finds “bugs” in his programs. These bugs range from mistakes in his flowchart to mistakes in keying in the program. Wherever they occur, they need to be corrected and the HP-65 is designed to make this error-checking process as easy as possible.

**SST Execution.** In RUN mode, the **SST** key executes your program one step at a time. This allows you to observe the effect of your program in slow motion. If only a portion of your program seems to have bugs, move the program pointer to the nearest label

and use **SST** from there.

**SST** executes your program step by step. However, if the program step is a program control key (**A thru E**), pressing **SST** will activate the second pointer and calculate that subroutine in its entirety, finally returning to the step following the subroutine call and stopping there.

**SST** does not terminate data entries. Therefore, an **ENTER+** should be used to separate digits immediately following a **R/S** from the **R/S** itself. Otherwise the data entry from the keyboard will run together with the digits following the **SST** if followed by **SST** (which may well happen in debugging a program).

**Cued Stops for Debugging.** You have already read about cued stops on page 95. Where space permits, it is helpful to include additional cued stops to help you determine the position of the program pointer. This may be particularly useful to force a stop within a subroutine which otherwise would be executed in its entirety with one touch of **SST**. When the program is finally checked out, the unwanted stops can easily be deleted.

## Common Mistakes

The most common mistakes you are likely to make with your HP-65 are listed here for your convenience.

### Programming Errors

1. Having unwanted duplicate labels for program control keys because **f** **PRGM** was not pressed in W/PRGM mode before keying in a program.
2. Inadvertently erasing a program in memory by inserting a magnetic card when the W/PRGM-RUN switch was set to RUN.
3. Inadvertently erasing a program on a magnetic card by inserting an unprotected magnetic card when the W/PRGM-RUN switch was set to W/PRGM.
4. Keying unwanted operations into program memory because the W/PRGM-RUN switch was set to W/PRGM when the keys were pressed.