OPERATOR INTERFACE PRODUCTS APPLICATION NOTE

Subject: SoftScreen Pseudo Key Conditional Event AN# 1057
Date: June 5, 1997
Name: Shui Moy

Description: "Condition Becomes True" Event in Pseudo Key

This Application Note will address a potential problem with the "Condition Becomes True" event in the pseudo key. It will also offer one possible solution.

Problems have been experienced when trying to use a pseudo key with the "Condition Becomes True" event to set a limit on a register or address. It is important to note that the pseudo key **only scans once per second**. Because of the one second scan time for pseudo keys, it is possible to miss the false transition needed to reset the pseudo key after it has triggered the first time.

For example, a pseudo key is configured for the "Condition Becomes True" event and "#50>5" condition. Its function is configured to "Write Data To Address", writing to "#50, a value of "0". Set up a function key to increment #50. With this setup we would expect a value of 0-5 in #50 and a pseudo key that prevents a value larger than 5. But if the function key is pressed rapidly a problem can occur. The first time #50 is greater than 5, the pseudo key triggers, the Current Pseudo Key Flag (CPKF) is set to true and a 0 is written to #50. However, if the function key is pressed 6 or more times before the next second elapses, the value in #50 is again greater than 5. The pseudo key triggers, finds a value greater than 5, and checks the status of the CPKF. Upon finding the CPKF = True, the pseudo key immediately goes to done. Since the pseudo key never saw a false transition, the CPKF never goes false, so the pseudo key will never perform its function again.

The way to avoid this scenario is to use a larger range of values in the #50. If 6 different values are needed in #50 (to change object states, text states etc.), do not use sequential values. Instead, insert a few unused numbers between the needed values. Then change the pseudo key condition accordingly. By increasing the range of values in #50, the pseudo key retriggers and finds the condition false. The CPKF is set to false. At this point, the pseudo key is ready to trigger when the condition becomes true and perform its assigned function.