

Bit Operation Instructions

Shift Left SHFL (F81)

The Shift Left (F81) is a 16-bit instruction that shifts the value in the accumulator a specified number of bits (15 maximum) to the left. Discrete bit flags are used to indicate if a "1" was shifted out of the accumulator or if the accumulator equals "0" after the shift.

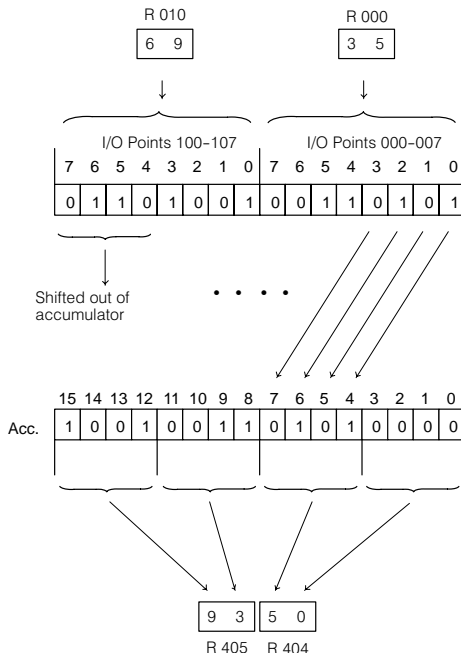
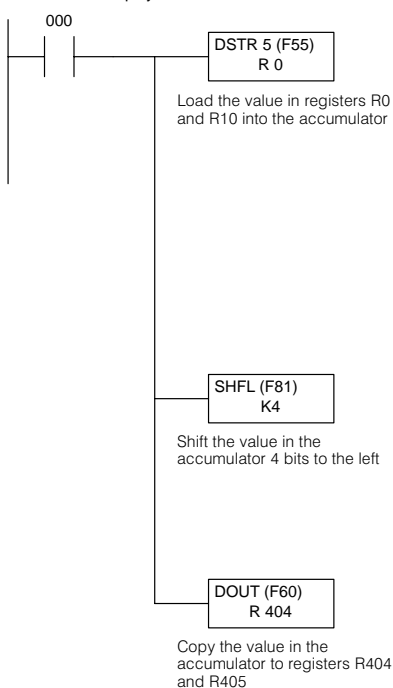
SHFL (F81)
Kaaaa

Data Type		D3-330 Range	D3-340 Range	D3-330P Range
		aaaa	aaaa	aaaa
Constant (4-digit BCD)	K	1-16	1-16	1-16

Discrete Bit Flags	Description
775	Will be on if a "1" was shifted out of the accumulator.
776	Will be on if the accumulator equals zero after the shift instruction is executed.

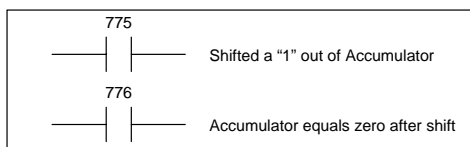
In the following example, when input 000 is on the value in R000 and R010 is loaded into the accumulator using the Data Store 5 (F55) instruction. The bit pattern in the accumulator is shifted to the left 4 bit positions using the Shift Left (F81) instruction with the result resides in the accumulator. The value in the accumulator is copied to data registers R404 and R405 using the Data Out (F60) instruction.

DirectSOFT Display



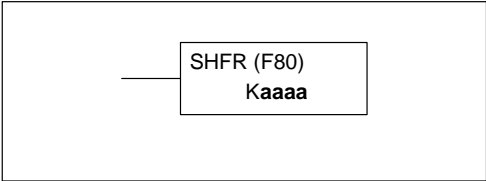
Handheld Programmer Keystrokes

STR	SHF	0	ENT
F	5	5	ENT
R	0		ENT
F	8	1	ENT
SHF	4		ENT
F	6	0	ENT
R	4	0	4 ENT



Shift Right
SHFR (F80)

The Shift Right (F80) is a 16-bit instruction that shifts the value in the accumulator a specified number of bits (15 maximum) to the right. Discrete bit flags are used to indicate if a “1” was shifted out of the accumulator or if the accumulator equals “0” after the shift.

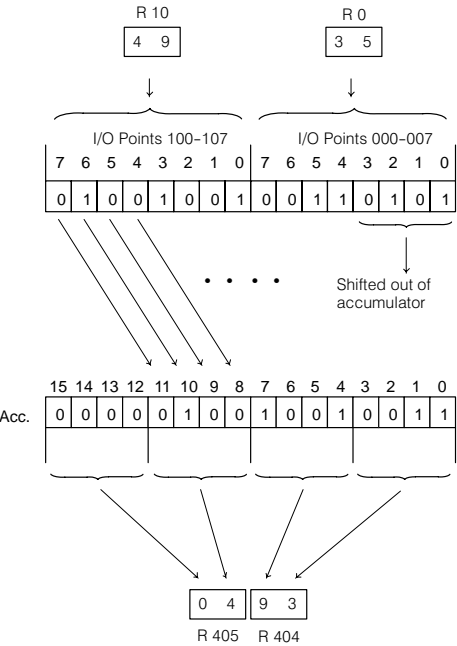
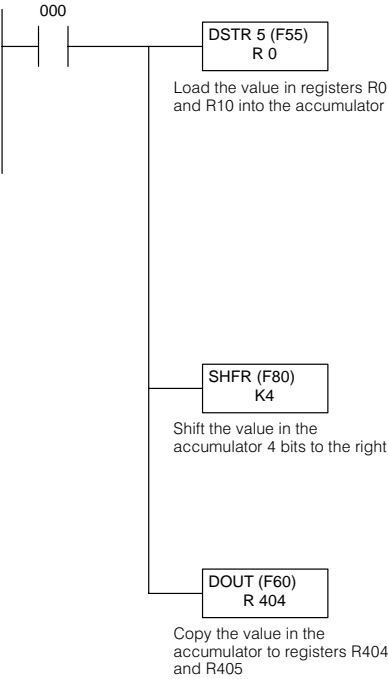


Data Type		D3-330 Range	D3-340 Range	D3-330P Range
		aaaa	aaaa	aaaa
Constant (4-digit BCD)	K	1-16	1-16	1-16

Discrete Bit Flags	Description
775	Will be on if a “1” was shifted out of the accumulator.
776	Will be on if the accumulator equals zero after the shift instruction is executed.

In the following example, when input 000 is on the value in R000 and R010 is loaded into the accumulator using the Data Store 5 (F55) instruction. The bit pattern in the accumulator is shifted 4 bit positions using the Shift Right (F80) instruction and the result resides in the accumulator. The value in the accumulator is copied to data registers R404 and R405 using the Data Out (F60) instruction.

DirectSOFT Display



Handheld Programmer Keystrokes

