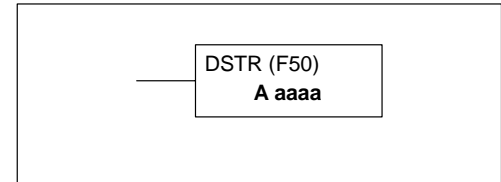


## Accumulator Load and Output Instructions

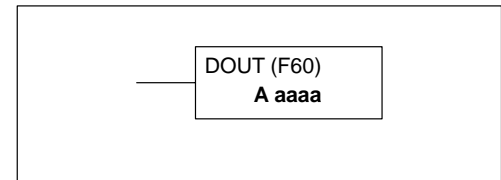
### Data Store DSTR (F50)

The Data Store (F50) is a 16-bit instruction that loads the value of a 16-bit register, two consecutive 8-bit registers (specify starting location), or a 4-digit BCD value into the accumulator.



### Data Out DOUT (F60)

The Data Out (F60) is a 16-bit instruction that copies the 16-bit value in the accumulator to a 16-bit reference or two consecutive 8-bit registers (specify starting location).

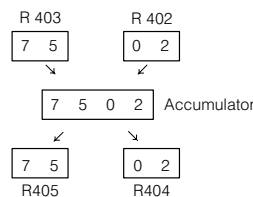
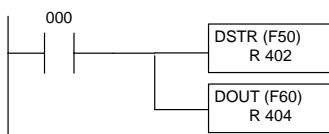


Data Type		D3-330 Range	D3-340 Range	D3-330P Range
A		aaaa	aaaa	aaaa
Inputs / Outputs	R	000-014 070-075	000-014 070-075	000-014 070-075
Control Relays	R	016-036	016-036 100-105	016, 020-027
Shift Registers	R	040-056	040-056	—
Stages	R	—	—	100-116
Timer /Counters (16 bit)	R	600-677	600-677	600-677
Data Registers	R	400-577	400-577 700-777	400-577
*Constant (4-digit BCD)	K	0000-9999	0000-9999	0000-9999

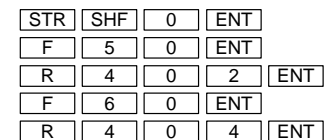
\* A constant is not a valid data type for the DOUT (F60) instruction.

In the following example, when input 000 is on the value (7502) in R402 and R403 is loaded into the accumulator using the Data Store (F50) instruction. The value in the accumulator is output to data registers R404 and R405 using the Data Out (F60) instruction.

DirectSOFT Display

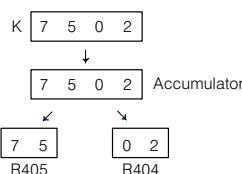
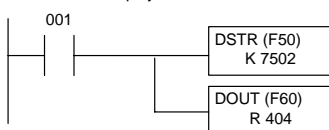


Handheld Programmer Keystrokes

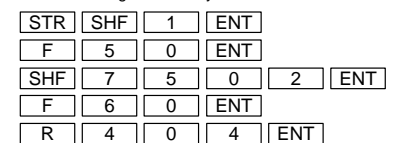


In the following example, when input 001 is on the BCD constant value K7502 is loaded into the accumulator using the Data Store (F50) instruction. The value in the accumulator is output to data registers R404 and R405 using the Data Out (F60) instruction.

DirectSOFT Display



Handheld Programmer Keystrokes

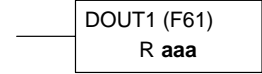


**Data Store 1  
DSTR (F51)**

The Data Store 1 (F51) is an 8-bit instruction that loads the value from a specified 8-bit register into the lower 8 bits of the accumulator. The upper 8 bits of the accumulator are set to zero.

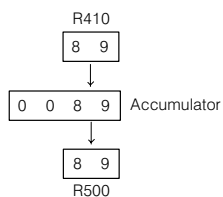
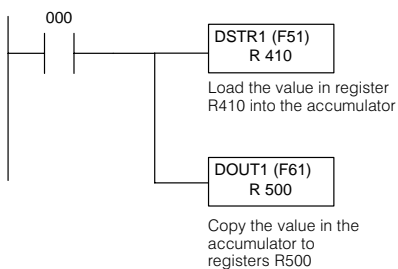

**Data Out 1  
DOUT (F61)**

The Data Out 1 (F61) is an 8-bit instruction that copies the value in the lower 8 bits of the accumulator to a specified 8-bit register.



Data Type		D3–330 Range	D3–340 Range	D3–330P Range
		aaaa	aaaa	aaaa
Inputs / Outputs	R	000–014 070–075	000–014 070–075	000–014 070–075
Control Relays	R	016–036	016–036 100–105	016, 020–027
Shift Registers	R	040–056	040–056	—
Stages	R	—	—	100–116
Data Registers	R	400–577	400–577 700–777	400–577

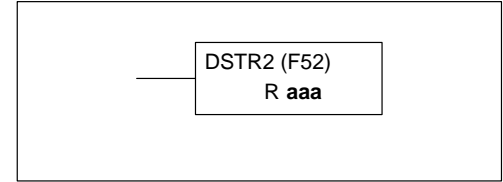
In the following example, when input 000 is on the value (89) in R410 is loaded into the lower 8 bits of the accumulator using the Data Store 1 (F51) instruction. The value in the least significant 8 bits of the accumulator is output to data register R500 using the Data Out 1 (F61) instruction.

**DirectSOFT Display****Handheld Programmer Keystrokes**

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

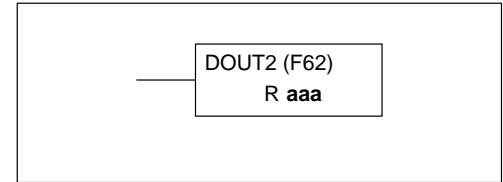
## Data Store 2 DSTR (F52)

The Data Store 2 (F52) is a 4-bit instruction that loads the value of the most significant 4 bits of a specified 8-bit register into the least significant 4 bits of the accumulator. The remaining 12 bits of the accumulator are set to zero.



## Data Out 2 DOUT (F62)

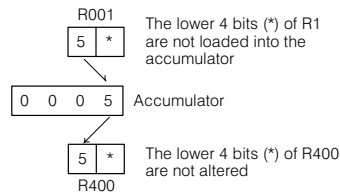
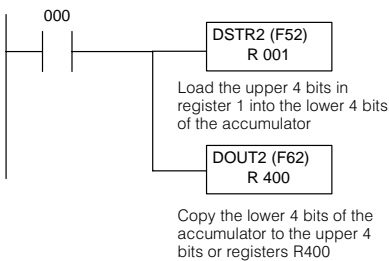
The Data Out 2 (F62) is a 4-bit instruction that copies the value in the least significant 4 bits of the accumulator into the most significant 4 bits of a specified 8-bit register. The lower 4 bits of the register are not altered.



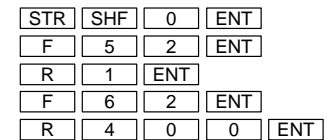
Data Type		D3-330 Range	D3-340 Range	D3-330P Range
		aaaa	aaaa	aaaa
Inputs / Outputs	R	000-014 070-075	000-014 070-075	000-014 070-075
Control Relays	R	016-036	016-036 100-105	016, 020-27
Shift Registers	R	040-056	040-56	—
Stages	R	—	—	100-116
Data Registers	R	400-577	400-577 700-777	400-577

In the following example, when input 000 is on the most significant 4 bits of R1 are loaded into the lower 4 bits of the accumulator using the Data Store 2 (F52) instruction. The value in the least significant 4 bits of the accumulator is output to most significant 4 bits of data register R400 using the Data Out 2 (F62) instruction.

### DirectSOFT Display

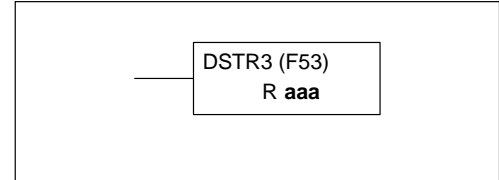


### Handheld Programmer Keystrokes



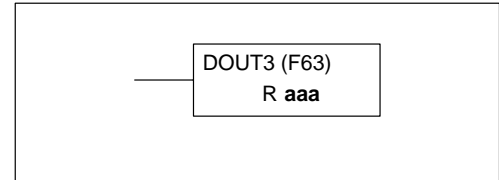
#### Data Store 3 DSTR (F53)

The Data Store 3 (F53) is a 4-bit instruction that loads the value of the least significant 4 bits of a specified 8-bit register into the least significant 4 bits of the accumulator. The upper 12 bits of the accumulator are set to zero.



#### Data Out 3 DOUT (F63)

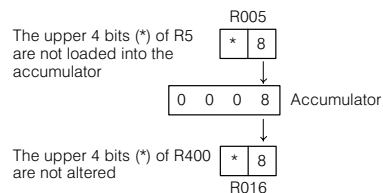
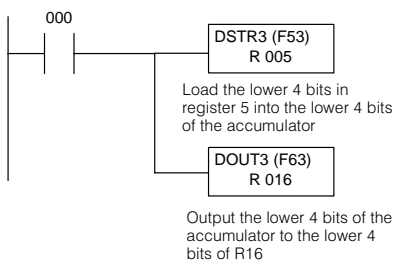
The Data Out 3 (F63) is a 4-bit instruction that copies the value in the least significant 4 bits of the accumulator to the least significant 4 bits of a specified 8 bit register. The upper 4 bits of the register are not altered.



Data Type		D3–330 Range	D3–340 Range	D3–330P Range
		aaaa	aaaa	aaaa
Inputs / Outputs	R	000–014 070–075	000–014 070–075	000–014 070–075
Control Relays	R	016–036	016–036 100–105	016, 020–027
Shift Registers	R	040–056	040–056	—
Stages	R	—	—	100–116
Data Registers	R	400–577	400–577 700–777	400–577

In the following example, when input 000 is on the least significant 4 bits of R005 are loaded into the accumulator using the Data Store 3 (F53) instruction. The data in the least significant 4 bits of the accumulator is output to the least significant 4 bits of R016 using the Data Out 3 (F63) instruction.

#### DirectSOFT Display

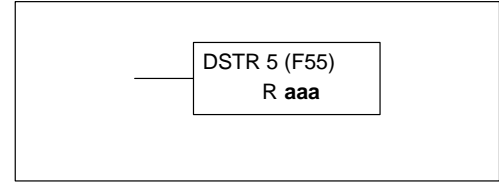


#### Handheld Programmer Keystrokes

STR	SHF	0	ENT
F	5	3	ENT
R	5	ENT	
F	6	3	ENT
R	1	6	ENT

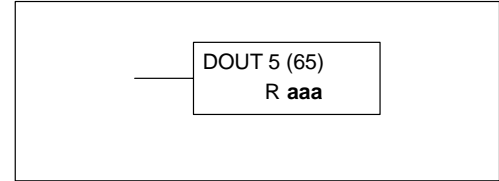
### Data Store 5 DSTR (F55)

The Data Store 5 (F55) is a 16-bit instruction that loads the value of 16 image register locations for a specified 16 point input module into the accumulator.



### Data Out 5 DOUT (F65)

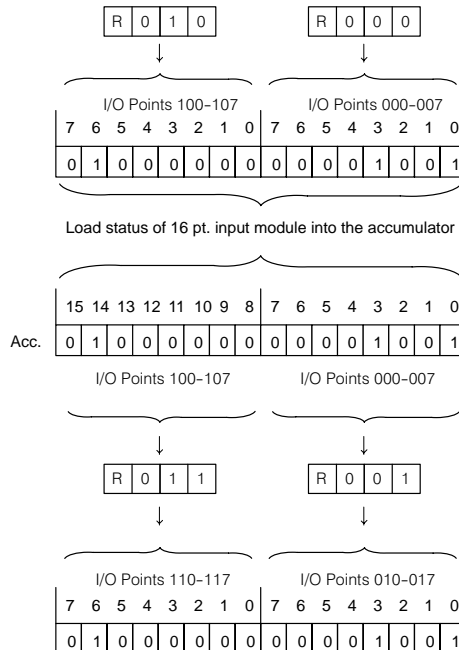
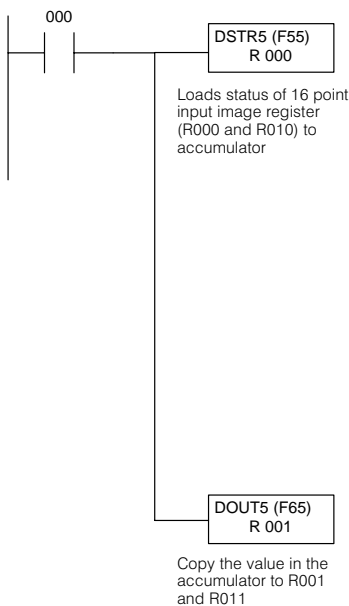
The Data Out 5 (F65) is a 16-bit instruction that outputs the 16 bit value in the accumulator to the image register of a specified 16 point output module.



Data Type		D3-330 Range	D3-340 Range	D3-330P Range
		aaaa	aaaa	aaaa
Inputs / Outputs	R	000-014 070-075	000-014 070-075	000-014 070-075

In the following example, when input 000 is on the binary status of a 16 point I/O module in slot 1 (R000 and R010) is loaded into the accumulator using the Data Store 5 (F55) instruction. The value in the accumulator is copied to I/O register locations in slot 2 (R001 and R011) using the Data Out 5 (F65) instruction.

DirectSOFT Display



Handheld Programmer Keystrokes

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