

BULLETIN 1203-GD1, GK1

BULLETIN 1336-GM1

Block Transfer with a 1747-SN Series B

APPLICATION NOTE

JULY 10, 1997

PURPOSE

The purpose of this document is to provide guidelines for wiring and control schemes for SCANport devices including Bulletin 1305 and 1336 PLUS AC Drives. This document is a suggestion only. Users must ensure that installations meet applicable codes and are suitable for the existing conditions.

WHAT THIS NOTE CONTAINS

This document contains information and a simple example of an SLC ladder program to use the 1747-SN series B scanner for Block Transfer operation with a 1203-Gx1. It also includes a slightly more complex example ladder program that performs Block Transfers with two 1203-Gx1 modules.

INTENDED AUDIENCE

This application note should be used by personnel familiar with the hardware components and programming procedures necessary to operate SCANport devices. It is also assumed that the user has some familiarity with the SLC-500, 1747-SN scanner and ladder programming.

WHERE IT IS USED

The diagrams, parameter settings and auxiliary hardware used in this application note are designed to address specific issues in many different applications. Some changes by the user may be necessary to apply the concepts of this document to a specific application.

TERMS AND DEFINITIONS

BTR Block Transfer Read

BTW Block Transfer Write

1203-Gx1 1203-GD1, 1203-GK1 or 1336-GM1 RIO to SCANport communications module

DESCRIPTION

These ladder programs use an SLC and a 1747-SN series B RIO scanner to set parameters in a SCANport device via block transfer. The programs will execute a BTW and then a BTR. The programs can be used to read or write parameters depending on the information contained in the BTW data file.

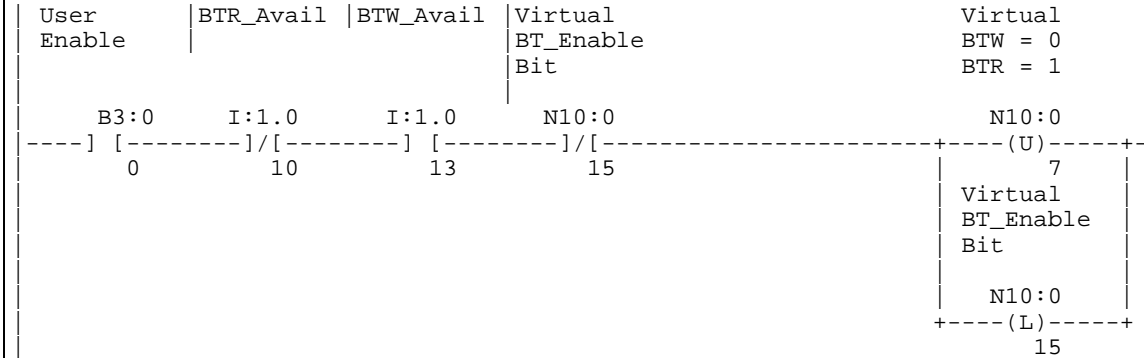
APPLICATION CONSIDERATIONS

These example ladder programs were written to be simple and clear examples of block transfer. They contain no error handling. Consult the SLC or 1747-SN scanner manual for more information.

Bulletin 1203-Gx1 modules use full slot addressing, and must use the first slot assigned to the 1203-Gx1 for block transfer control. See the 1747-SN user manual or the application note "Configuring a 1747-SN RIO Scanner for use with a 1203-Gx1" for instructions on configuring the 1747-SN.

Rung 2:2

This rung sets up the BT buffer for a BTW.



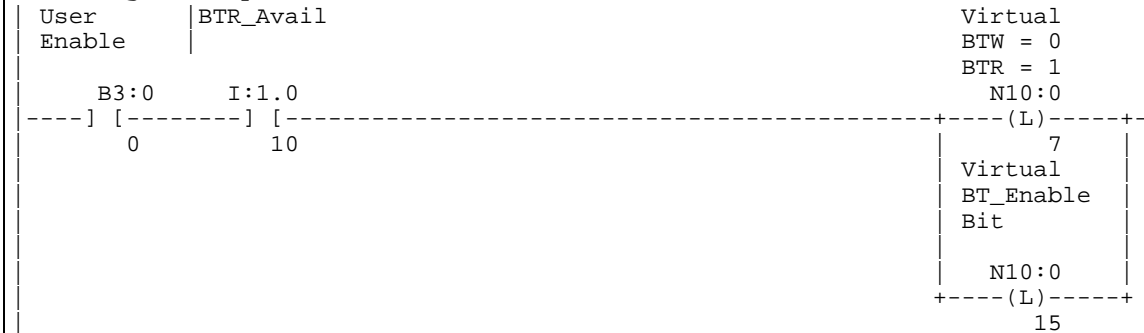
Rung 2:3

This rung turns off the Virtual BT_Enable when a BTW has completed.



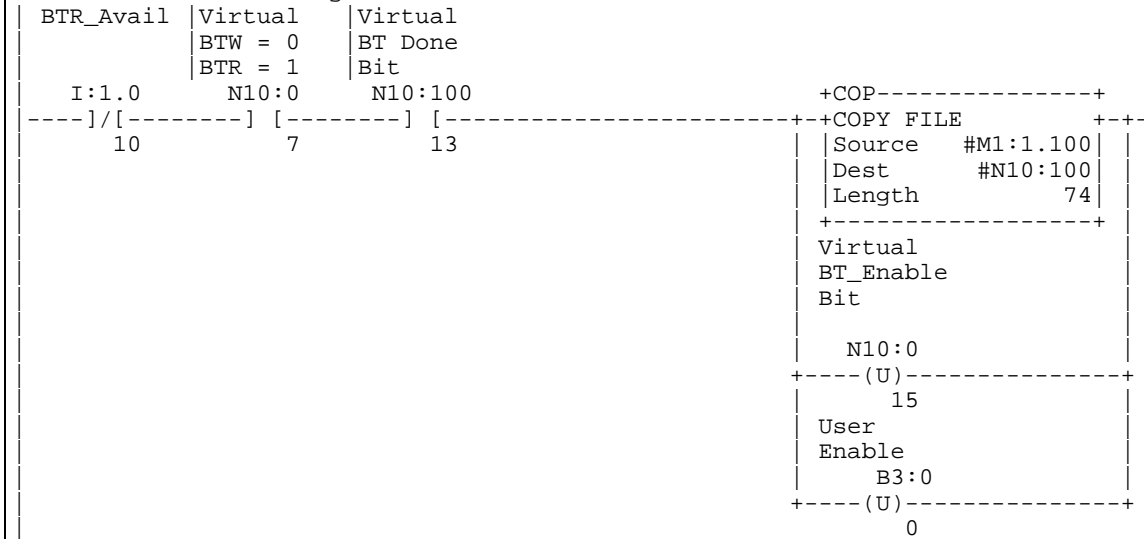
Rung 2:4

This rung sets up the BT buffer for a BTR and sets the Virtual BT_Enable.

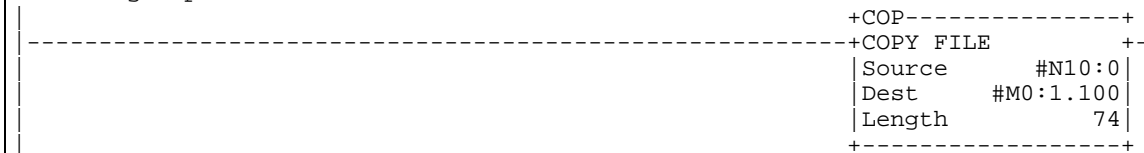


Rung 2:5

This rung copies the BTR data from the 1747-SN, clears the Virtual BT_Enable and clears the User Logic bit.


Rung 2:6

This rung copies the BT information to the 1747-SN for execution.



1747-SN ser B w/ 1203-Gx1 Block Transfer Example August 06, 1995 Page 3
Data Table Processor File: BT_JIM1.ACH Data Table File B3

Address	Data (Radix=BINARY)				Address	Data (Radix=BINARY)			
B3:0	0000	0000	0000	0000					
Address	Data (Radix=DECIMAL)								
N10:0	128	64	0	0	0	0	0	0	0
N10:10	3	768	78	0	0	0	0	0	0
N10:20	0	0	0	0	0	0	0	0	0
N10:30	0	0	0	0	0	0	0	0	0
N10:40	0	0	0	0	0	0	0	0	0
N10:50	0	0	0	0	0	0	0	0	0
N10:60	0	0	0	0	0	0	0	0	0
N10:70	0	0	0	0	0	0	0	0	0
N10:80	0	0	0	0	0	0	0	0	0
N10:90	0	0	0	0	0	0	0	0	0
N10:100	0	64	0	0	0	0	0	0	0
N10:110	24	768	78	7	354	1	1	1	24900
N10:120	24948	20256	29813	17440	8241	8224	8224	3850	125
N10:130	0	8224	8224	0	0	0	0	0	0
N10:140	0	0	0	0	0	0	0	0	0
N10:150	0	0	0	0	0	0	0	0	0
N10:160	0	0	0	0	0	0	0	0	0
N10:170	0	0	0	0	0	0	0	0	0
N10:180	0	0	0	0	0	0	0	0	0
N10:190	0	0	0	0	0	0	0	0	0
N10:200	0								

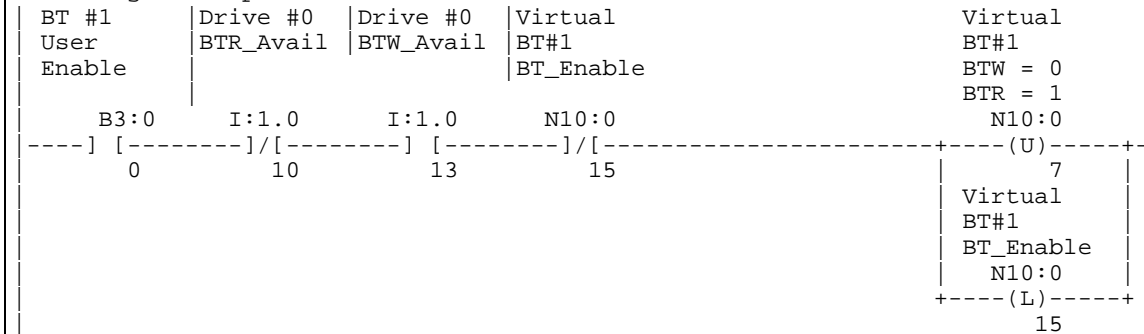
M0:1 File Length:3300
M0:2 File Length:0
M0:3 File Length:0
M0:4 File Length:0

M1:1 File Length:3300
M1:2 File Length:0
M1:3 File Length:0
M1:4 File Length:0

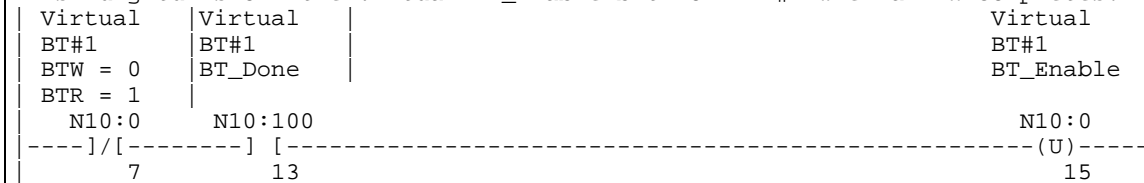
Address	Data (Radix=HEX)		
G1:0	2020	0001	000F

Rung 2:2

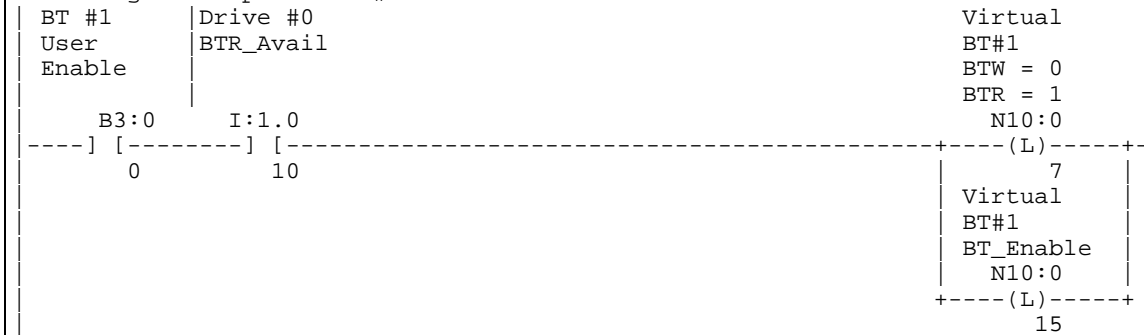
This rung sets up the BT #1 buffer for a BTW.


Rung 2:3

This rung turns off the Virtual BT_Enable bit for BT #1 when a BTW completes.


Rung 2:4

This rung sets up the BT #1 buffer for a BTR.



Rung 2:5

This rung copies the BTR data from the 1747-SN, clears the Virtual BT_Enable and clears the User Logic (all for BT #1).

Drive #0 BTR_Avail	Virtual BT#1 BTW = 0 BTR = 1	Virtual BT#1 BT_Done	
I:1.0	N10:0	N10:100	
-----]/[-----]	-----]/[-----]	-----]/[-----]	+COP-----+
10	7	13	+COPY FILE +
			Source #M1:1.100
			Dest #N10:100
			Length 74
			+-----+
			Virtual
			BT#1
			BT_Enable
			N10:0
			+-----(U)-----+
			15
			BT #1
			User
			Enable
			B3:0
			+-----(U)-----+
			0

Rung 2:6

This rung copies the BT #1 buffer to the 1747-SN's first BT area. The 1747-SN then executes the block transfer.

			+COP-----+
			+COPY FILE +
			Source #N10:0
			Dest #M0:1.100
			Length 74
			+-----+

Rung 2:7

This rung copies the BT Status bits from the 1747-SN's second BT area into the Virtual BT #2 Status buffer.

			+MOV-----+
			+MOVE +
			Source M1:1.200
			*
			Dest N11:100
			0
			+-----+

Rung 2:8

This rung sets up the BT #2 buffer for a BTW.

BT #2	Drive #1	Drive #1	Virtual	Virtual
User	BTR_Avail	BTW_Avail	BT#2	BT#2
Enable			BT_Enable	BTW = 0
				BTR = 1
B3:0	I:1.8	I:1.8	N11:0	N11:0
-----]	-----]/[-----]	-----]/[-----]	-----]/[-----]	+-----(U)-----+
1	10	13	15	7
				Virtual
				BT#2
				BT_Enable
				N11:0
				+-----(L)-----+
				15

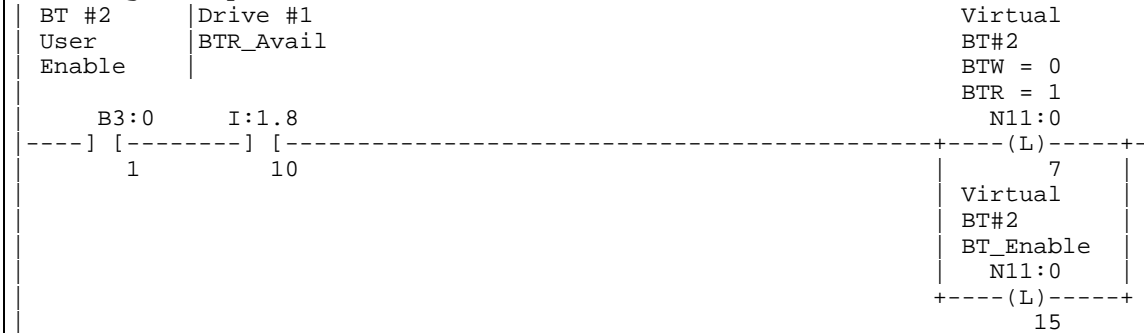
Rung 2:9

This rung turns off the Virtual BT #2 BT_Enable when the BTW completes.



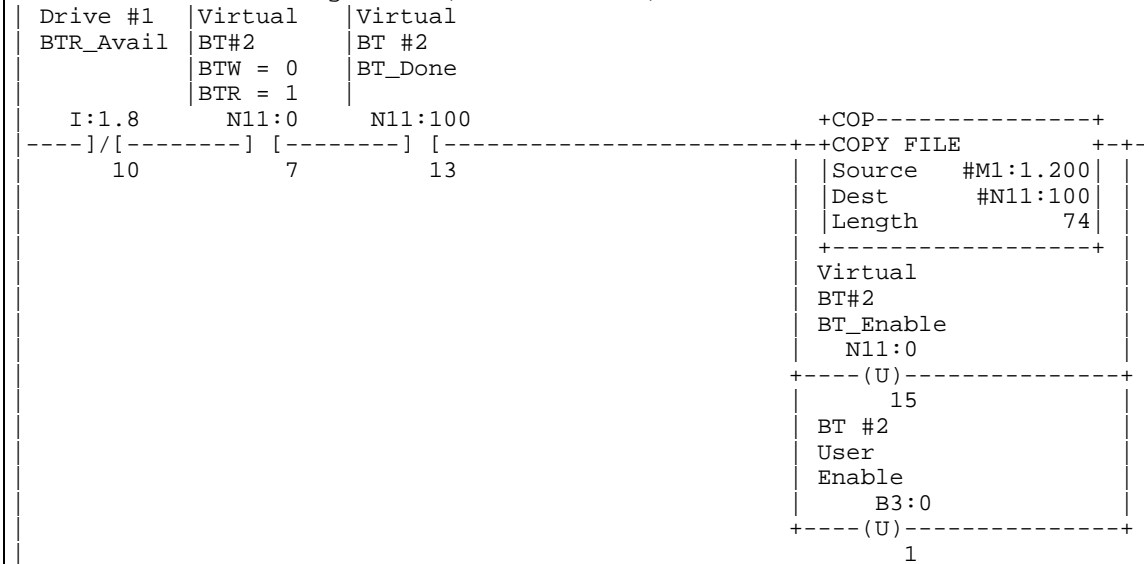
Rung 2:10

This rung set up the BT #2 buffer for a BTR.



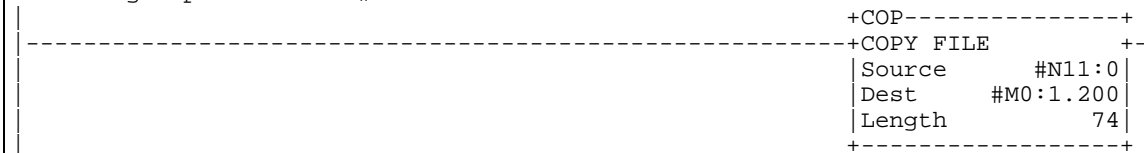
Rung 2:11

This rung copies the BTR data from the 1747-SN, clears the Virtual BT_Enable and clears the User Logic bit (all for BT #2).



Rung 2:12

This rung copies the BT #2 information to the 1747-SN for execution.



1747-SN ser B w/ 1203-Gx1 Block Transfer Example August 19, 1995
 Data Table Processor File: BT_JIM2.ACH Data Table Files

Address	Data (Radix=BINARY)			Address	Data (Radix=BINARY)						
B3:0	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
Address	Data (Radix=DECIMAL)			Address	Data (Radix=DECIMAL)						
N10:0	0	64	0	0	0	0	0	0	0	0	0
N10:10	3	768	78	0	0	0	0	0	0	0	0
N10:20	0	0	0	0	0	0	0	0	0	0	0
N10:30	0	0	0	0	0	0	0	0	0	0	0
N10:40	0	0	0	0	0	0	0	0	0	0	0
N10:50	0	0	0	0	0	0	0	0	0	0	0
N10:60	0	0	0	0	0	0	0	0	0	0	0
N10:70	0	0	0	0	0	0	0	0	0	0	0
N10:80	0	0	0	0	0	0	0	0	0	0	0
N10:90	0	0	0	0	0	0	0	0	0	0	0
N10:100	0	64	0	0	0	0	0	0	0	0	0
N10:110	24	768	78	7	354	1	1	1	0	24900	0
N10:120	24948	20256	29813	17440	8241	8224	8224	3850	0	125	0
N10:130	0	8224	8224	0	0	0	0	0	0	0	0
N10:140	0	0	0	0	0	0	0	0	0	0	0
N10:150	0	0	0	0	0	0	0	0	0	0	0
N10:160	0	0	0	0	0	0	0	0	0	0	0
N10:170	0	0	0	0	0	0	0	0	0	0	0

Address	Data (Radix=DECIMAL)			Address	Data (Radix=DECIMAL)						
N11:0	0	64	100	0	0	0	0	0	0	0	0
N11:10	3	768	78	0	0	0	0	0	0	0	0
N11:20	0	0	0	0	0	0	0	0	0	0	0
N11:30	0	0	0	0	0	0	0	0	0	0	0
N11:40	0	0	0	0	0	0	0	0	0	0	0
N11:50	0	0	0	0	0	0	0	0	0	0	0
N11:60	0	0	0	0	0	0	0	0	0	0	0
N11:70	0	0	0	0	0	0	0	0	0	0	0
N11:80	0	0	0	0	0	0	0	0	0	0	0
N11:90	0	0	0	0	0	0	0	0	0	0	0
N11:100	0	64	100	0	0	0	0	0	0	0	0
N11:110	24	768	78	7	354	1	1	1	0	24900	0
N11:120	24948	20256	29813	17440	8241	8224	8224	3850	0	125	0
N11:130	0	8224	8224	0	0	0	0	0	0	0	0
N11:140	0	0	0	0	0	0	0	0	0	0	0
N11:150	0	0	0	0	0	0	0	0	0	0	0
N11:160	0	0	0	0	0	0	0	0	0	0	0
N11:170	0	0	0	0	0	0	0	0	0	0	0

M0:1 File Length:3300
 M0:2 File Length:0
 M0:3 File Length:0
 M0:4 File Length:0

M1:1 File Length:3300
 M1:2 File Length:0
 M1:3 File Length:0
 M1:4 File Length:0

Address	Data (Radix=HEX)		
G1:0	2020	0011	00FF