

SERVOSTAR[®] S600

Profibus Communication with Allen-Bradley SLC-500

The SERVOSTAR[®] S600 servo amplifier is capable of Profibus communication with the addition of an optional Profibus expansion card (OPT-PB). Configured this way, the SERVOSTAR S600 operates as a Profibus DP slave with communication rates of up to 12 Mbits per second. One or more slaves may be controlled on a network by a Profibus DP master such as the SST-PFB-SLC Profibus scanner from SST[™]. Residing in an Allen-Bradley SLC-500 PLC backplane, the Profibus scanner module enables communication between the processor (SLC-500 or greater) and a network of Profibus DP slave devices.

Overview

An understanding of SERVOSTAR S600 operation and, in particular, its motion capability is a necessary prerequisite to understanding the operation and motion over Profibus.

High-level information transfer with the SERVOSTAR S600 is possible over one of three communication interfaces: RS-232, CAN-Bus, or Profibus (with optional board installed). The communication interface provides access to the commands and variables that control the behavior of the SERVOSTAR S600. The RS-232 (connector X6) interface is quite useful during development and startup of a Profibus system. RS-232 communication is ASCII text-based and easily established with a terminal (typically a PC running a program such as HyperTerminal) or, preferably, a PC running Danaher Motion's User Software Interface software designed specifically for the SERVOSTAR S600. The User Software Interface provides a user-friendly graphical interface and terminal for the setup, monitoring, and troubleshooting of the SERVOSTAR S600. It also provides a Profibus screen to view telegram data received by and sent from the drive.

Motion is commanded by executing motion tasks. A motion task is a group of related motion data (acceleration, position, etc.) identified by number (1, 2, 3, etc.) that is stored either in VRAM (Volatile Random Access Memory) or flash NVROM (Non-volatile Random Read-Only Memory). Once created, motion tasks are executed in a variety of ways: ASCII command, hardware input, another motion task, or Profibus.

To create a motion task with a number, first load the desired move parameters into a particular motion task either directly or indirectly. A task's nine parameters are entered directly using the ORDER command. All nine parameters must be included, even if only one has changed.

Alternatively, the motion task parameters are first entered into a special buffer area, motion task 0, where parameters can be individually edited with the O_XXXXXX commands. Then, motion task 0 is copied into the desired motion task number. An existing motion task may be edited by copying it into motion task 0, making the desired changes, and copying it back. Task numbering works like this: motion tasks 1 through 180 are stored in flash NVRAM and tasks numbered 192 through 255 are stored in VRAM. When control power is turned off, all VRAM motion task contents are lost. At power up, NVRAM tasks 1 through 64 are automatically copied into VRAM tasks 192 through 255.

Below are a few examples of motion task commands:

- OLIST x y (lists y number of motion tasks starting from x)
- ORDER # (displays or changes a task)
- OCOPY x y (copies motion tasks between various memory sites)
- O_P (view or change position in MT 0)

Before motion can be commanded, the drive must first be referenced or "homed". If it is in linear mode, POSCFG selects either linear or rotary mode. NREF identifies which one of the variety of homing types to use. For example, NREF=5 specifies homing to the resolver null. (Refer to the ASCII Reference document for additional information.)

Homing speed is determined by VREF when the home command is issued via the ASCII channel, but it is given in the PZD (Process Data Channel) when homing is via Profibus. The direction is determined by DREF. Homing acceleration and deceleration are controlled by ACCR and DECR. These variables are accessed through both the ASCII and Profibus parameter channels.

System Setup and Configuration

Setup of the SERVOSTAR S600 is mostly application-dependent and unrelated to the operation of Profibus. Of importance to Profibus operation is the setting of the drive's address using ADDR. Each drive must be correctly addressed via the keypad or RS-232 port prior to operation over the Profibus network (slave addresses are assigned during master configuration). It is recommended to set AENA=0. This causes the drive to power up with the power stage in a disabled state. In addition, set the external watchdog time variable EXTWD=1000 to prevent n04 (node guarding) warnings. This variable defaults to 100 for non-fieldbus use. A modified variable must be saved to the EEPROM (non-volatile memory) in order to retain its new value.

SST Profibus Scanner

The SST-PFB-SLC master must be configured before it will communicate with the DP slave network. Software supplied by the manufacturer is used to generate a configuration file that is then downloaded to the module. A "GSD" file supplied information about each manufacturer's slave device needed to generate the configuration file. Kollmorgen supplies this file (koll045.gsd) with the Profibus option card. This file is also available on the Product Support Package CD-ROM or can be downloaded from the website (www.danahermotion.com). The Profibus scanner's LEDs provide a quick, overall status of the system. An operational system is indicated by green "COMM" and "SYS" LEDs.

SYS LED*	
COLOR	INDICATION
Red	One or more slaves is reporting a fault condition.
Amber	The module is in program or test mode.
Green	The module is scanning in Run mode.

**At system startup, the SYS LED flashes green for two seconds.*

COMM LED	
COLOR	INDICATION
Red	A network error has occurred.
Green	No network errors exist.

Allen-Bradley SLC-500

Controller I/O configuration for the Profibus scanner is covered in the manufacturer's documentation. Once this has been completed, the scanner automatically maps the Profibus network data into the processor's data table. Master-to-slave data is written to the output data table and slave-to-master data is read from the input data table. The M0 and M1 files contain status and other information detailed in the scanner's documentation. Since the Profibus telegrams are mapped into the data table, the drive can be operated from the programming software by reading and writing the input and output data files while on-line.

Profibus Telegram

This discussion only applies to the **SERVOSTAR S600**, which is a Profibus DP slave using PPO-type 2. Profibus data is sent in telegrams. The master constantly sends and receives telegrams from each node (device) on the network. In general, the size of the telegram can vary from none to node, but with the **SERVOSTAR S600**, the telegram is always 20 bytes (10 words) long. The telegram consists of two parts: a four word PKW and a six word PZD. The PKW is the parameter or service channel. It has no realtime capability, but does provide confirmed communication to the host. The PZD is the process data channel and transmits data in realtime. PKW sends and receives information in response to parameter numbers, called PNUs. The standard PNUs are in the range from 904 to 1551. Parameter object channel PNUs are in the range of 1600 to 2000. Through the use of the parameter sub index (IND), a large amount of information is available from the parameter object channel. Access to all commands and variable information (minimum, maximum, and default values along with data format) is possible.

The PZD transfers process data in realtime. The functionality of the PZD is OPMODE-dependent and determined by PNU 930. Profibus OPMODE is different from the OPMODE accessed through the ASCII channel. The first of the six process data channel words, PZD1, is a control word (master-to-slave) or status word (slave-to-master). The remaining words contain data specific to the OPMODE and state of the control word.

The SST-PFB-SLC Profibus master maps telegrams (slave data) into the PLC's data table. The PLC program reads and writes to each slave's telegram. The module handles all communication details. Consider a system with a Profibus scanner in slot three and a single SERVOSTAR S600 slave. The telegram maps into the PLC like this:

Word	1	2	3	4	5	6	7	8	9	10
Bytes	1,2	3,4	5,6	7,8	9,10	11,12	13,14	15,16	17,18	19,20
Section	PKW	PKW	PKW	PKW	PZD	PZD	PZD	PZD	PZD	PZD
Function	PKE	IND	PWE	PWE	PZD1	PZD2	PZD3	PZD4	PZD5	PZD6
SLC inputs	I:3.1	I:3.1	I:3.2	I:3.3	I:3.4	I:3.5	I:3.6	I:3.7	I:3.8	I:3.9
SLC outputs	O:3.0	O:3.1	O:3.2	O:3.3	O:3.4	O:3.5	O:3.6	O:3.7	O:3.8	O:3.9

The byte ordering for the 32-bit PKW is:

Word	3		4	
Bytes	5	6	7	8
Weighing	MSB, MSW	LSB, MSW	MSB,LSW	LSB, LSW

MSB = Most Significant Byte, MSW = Most Significant Word

The PKW contains three parts: PWE, IND, and PKE (consisting of AK, a four-bit task and an 11-bit PNU).

AK	Master-to-Slave Function
0	No task
1	Request a parameter value
3	Set parameter to a new value

AK	Slave-to-Master Function
0	No task
2	Parameter value transmitted
7	Task not possible with error #



If an error occurs (AK=7), PWE reports an error code identifying the nature of the error.

The sub-index determines the functionality of the parameter object channel (PNU ≥ 1600). The sub-index is byte 3 of the telegram (MSW of word 2). For example, to read the default value of a parameter, set IDN=400 HEX (1024 decimal).

Sub-Index	Description
0	Number of subindices
1	Read/write a parameter
2	Read the low limit of a parameter
3	Read the high limit of a parameter
4	Read the default value of a parameter
5	Read the data format of a parameter
6	Read the control data of a parameter
7	Reserved
8	Reserved

Motion Task Examples

Below is a sample program listing containing multiple simulated motion tasks. The main ladder program calls one of ten subroutines, depending on the states of switches 1, 2, 3, and 4. Switches 5, 6, 7, and 8 take on different functions in each of the subroutines. Also included are graphic representations for each subroutine containing parameter object channel information. The motion tasks performed in this section were constructed using the following system configuration:

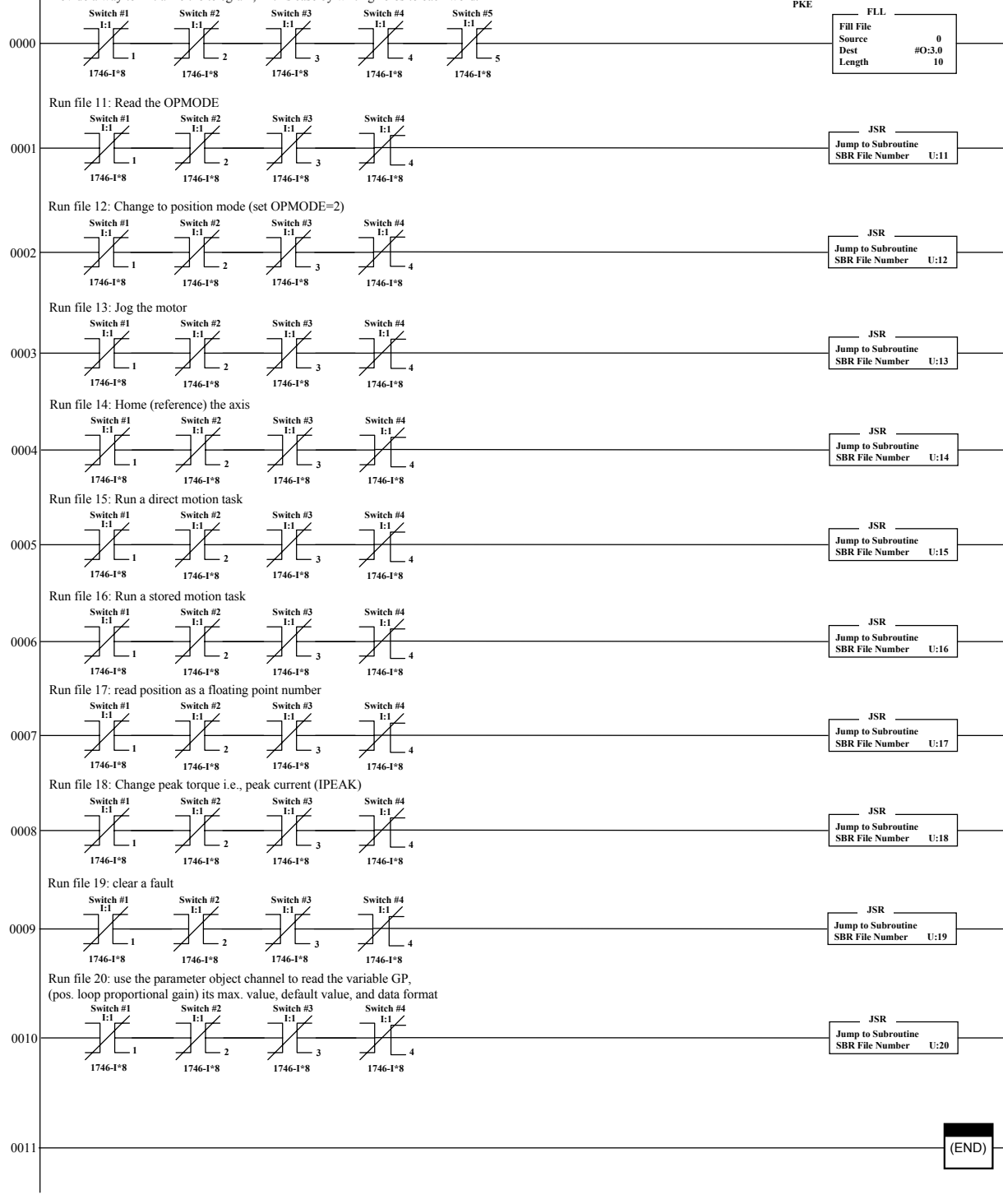
- SERVOSTAR S600 with OPT-PB Profibus option card
- PC with RSLogix 500 programming software
- Allen-Bradley SLC-500 rack and power supply with:
 - Slot 0: SLC5/03 processor
 - Slot 1: DC input module (8 inputs) wired to toggle switches
 - Slot 2: DC output module (8 outputs)
 - Slot 3: SST-PFB-SLC Profibus scanner configured as a master for a single SERVOSTAR S600 DP slave

Main Program

Profibus Application Note Demo Program

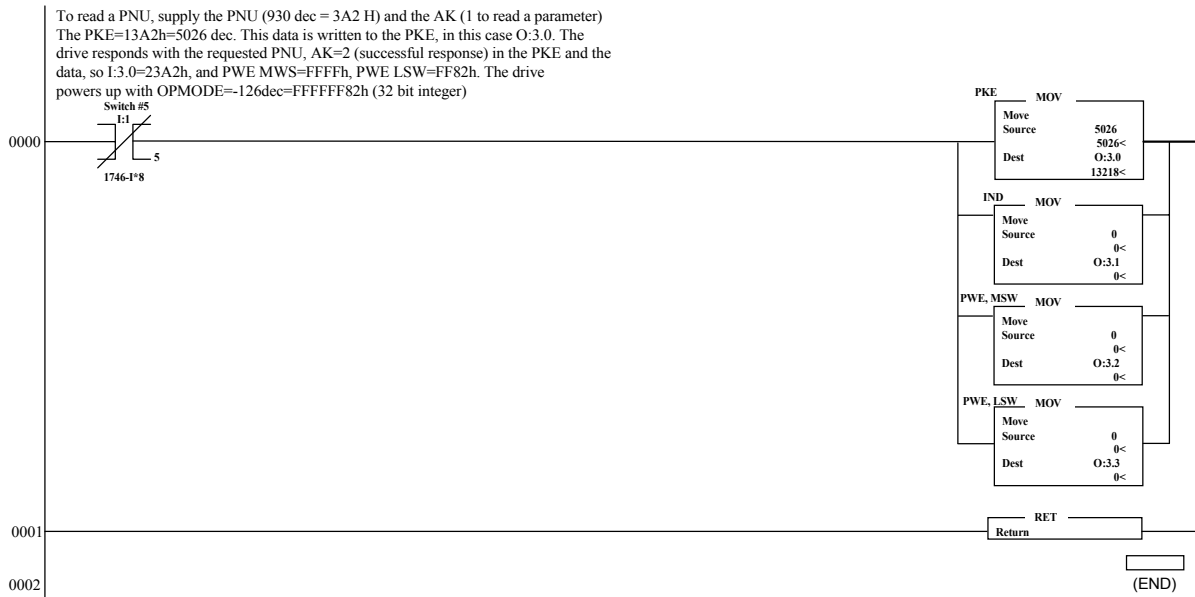
This is the Main routine which simply calls one of the 10 subroutines, based on the state of switches 1, 2, 3, and 4. Switches 5, 6, 7, 8 take on different functions in each of the subroutines.

Provide a way to initialize the telegram, in this case by writing zeros to each word.

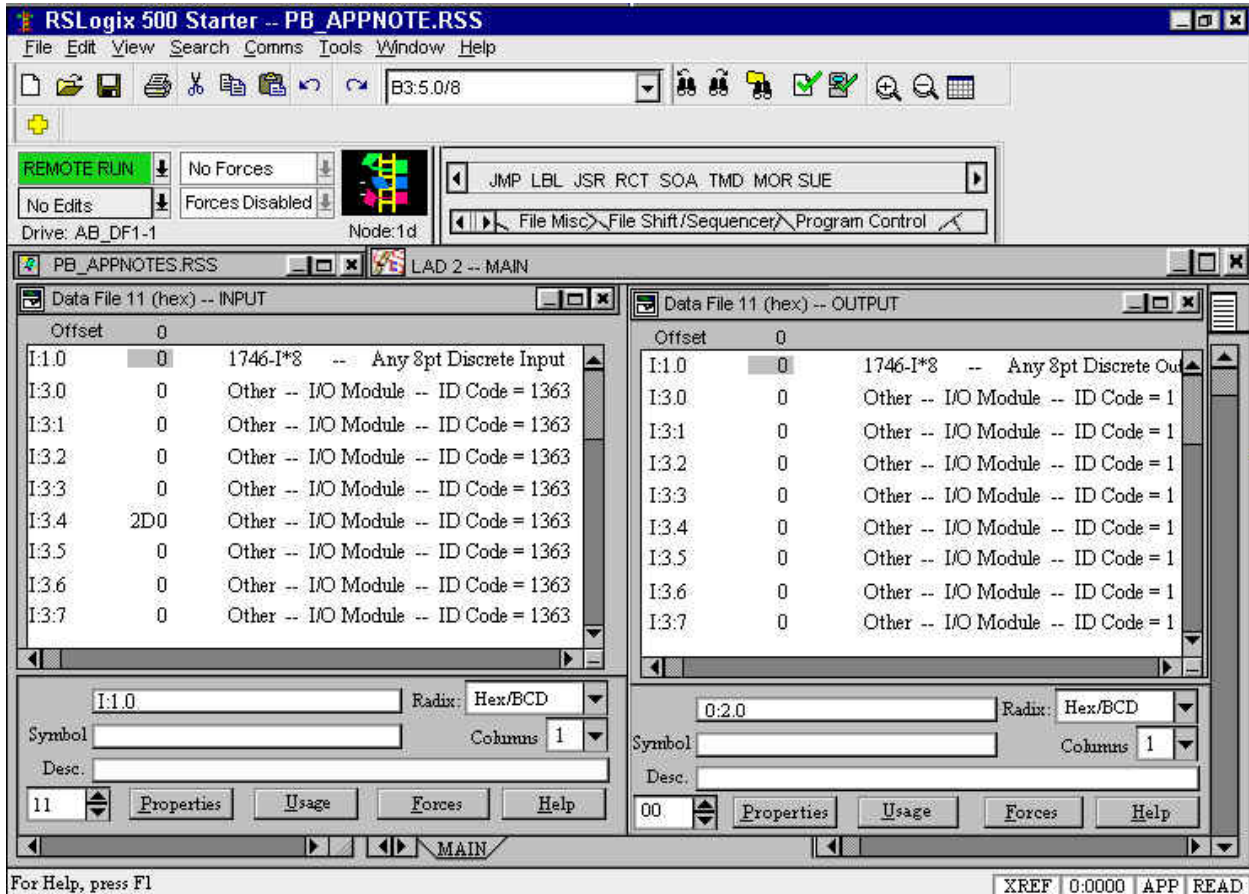


Read Profibus OPMODE

File 11: read parameter 930 - profibus OPMODE



Read Profibus OPMODE Screen 1



Read Profibus OPMODE Screen 2

The screenshot displays the RSLogix 500 Starter software interface. The title bar reads "RSLogix 500 Starter -- PB_APPNOTE.RSS". The menu bar includes File, Edit, View, Search, Comms, Tools, Window, and Help. The toolbar contains various icons for file operations and execution. The main workspace is divided into several panes:

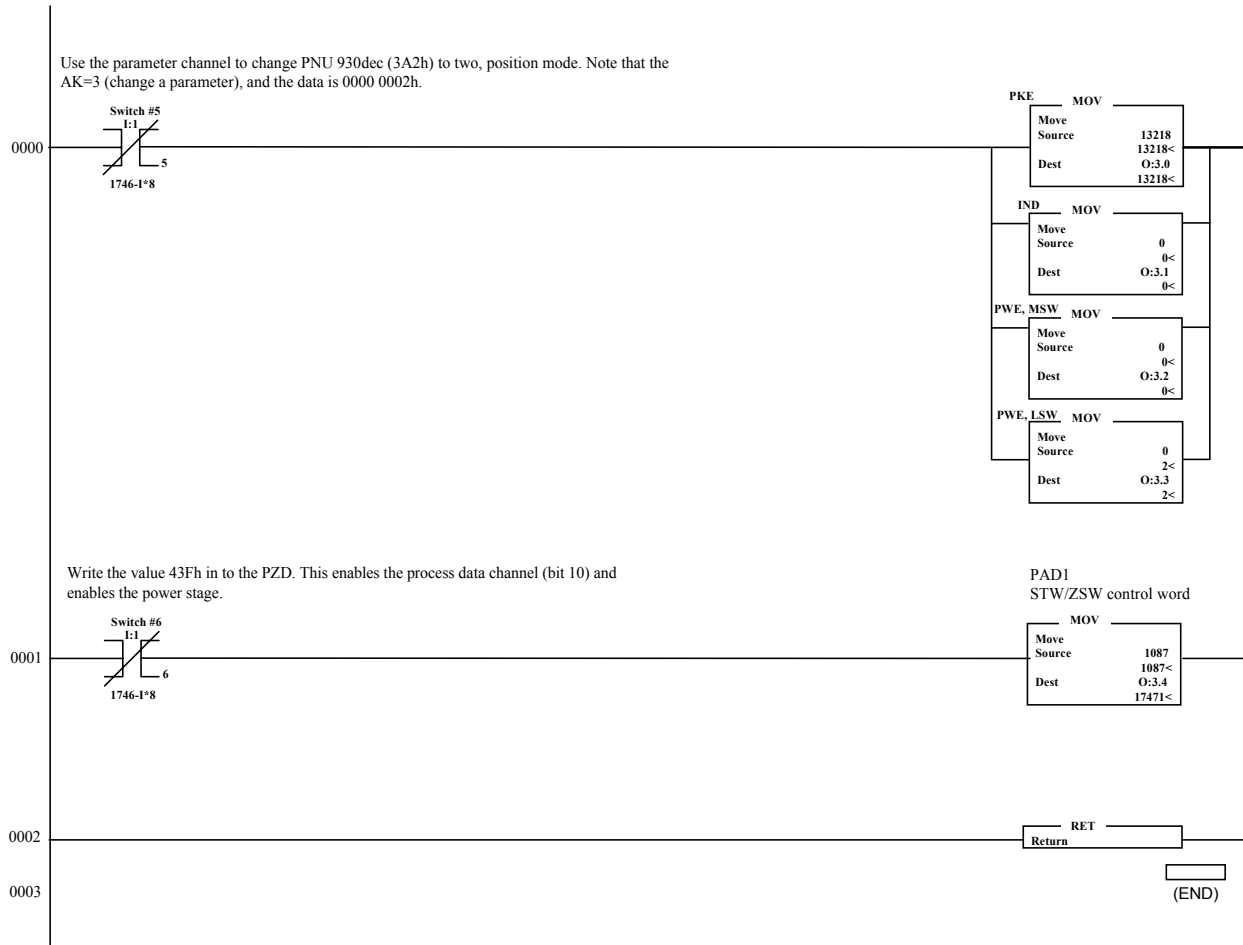
- Top Left:** Execution controls including "REMOTE RUN" (highlighted in green), "No Forces", "Forces Disabled", and a ladder logic diagram icon. Below these are "No Edits" and "Node:1d".
- Top Right:** A command list: JMP LBL JSR RCT SOA TMD MOR SUE.
- Bottom Left:** A pane titled "Data File 11 (hex) -- INPUT" containing a table of input data.
- Bottom Right:** A pane titled "Data File 11 (hex) -- OUTPUT" containing a table of output data.
- Bottom Center:** Property editors for the selected input (I:1.0) and output (O:2.0), including fields for Symbol, Desc., and buttons for Properties, Usage, Forces, and Help.
- Bottom Status Bar:** Displays "For Help, press F1" on the left and "XREF 0:0000 APP READ" on the right.

Offset	Value	Description
I:1.0	22	1746-I*8 -- Any 8pt Discrete Input
I:3.0	23A2	Other -- I/O Module -- ID Code = 1363
I:3.1	0	Other -- I/O Module -- ID Code = 1363
I:3.2	FFFF	Other -- I/O Module -- ID Code = 1363
I:3.3	FF02	Other -- I/O Module -- ID Code = 1363
I:3.4	2D0	Other -- I/O Module -- ID Code = 1363
I:3.5	0	Other -- I/O Module -- ID Code = 1363
I:3.6	0	Other -- I/O Module -- ID Code = 1363
I:3.7	0	Other -- I/O Module -- ID Code = 1363

Offset	Value	Description
O:2.0	0	1746-I*8 -- Any 8pt Discrete Out
I:3.0	13A2	Other -- I/O Module -- ID Code = 1
I:3.1	0	Other -- I/O Module -- ID Code = 1
I:3.2	0	Other -- I/O Module -- ID Code = 1
I:3.3	0	Other -- I/O Module -- ID Code = 1
I:3.4	0	Other -- I/O Module -- ID Code = 1
I:3.5	0	Other -- I/O Module -- ID Code = 1
I:3.6	0	Other -- I/O Module -- ID Code = 1
I:3.7	0	Other -- I/O Module -- ID Code = 1

Change to Position Mode (OPMODE=2)

File 12: set position mode (OPMODE=2) and enable PZD



Change Position Mode Screen 1

RSLogix 500 Starter -- PB_APPNOTE.RSS

File Edit View Search Comms Tools Window Help

B3:5.0/8

REMOTE RUN: No Forces

No Edits Forces Disabled

Drive: AB_DF1-1 Node:1d

JMP LBL JSR RCT SOA TMD MOR SUE

File Misc \ File Shift/Sequencer \ Program Control

PB_APPNOTES.RSS LAD 2 -- MAIN

Offset	Value	Description
I:1.0	24	1746-I*8 -- Any 8pt Discrete Input
I:3.0	23A2	Other -- I/O Module -- ID Code = 1363
I:3.1	0	Other -- I/O Module -- ID Code = 1363
I:3.2	0	Other -- I/O Module -- ID Code = 1363
I:3.3	2	Other -- I/O Module -- ID Code = 1363
I:3.4	2D0	Other -- I/O Module -- ID Code = 1363
I:3.5	0	Other -- I/O Module -- ID Code = 1363
I:3.6	0	Other -- I/O Module -- ID Code = 1363
I:3.7	0	Other -- I/O Module -- ID Code = 1363

Offset	Value	Description
I:1.0	0	1746-I*8 -- Any 8pt Discrete Out
I:3.0	33A2	Other -- I/O Module -- ID Code = 1
I:3.1	0	Other -- I/O Module -- ID Code = 1
I:3.2	0	Other -- I/O Module -- ID Code = 1
I:3.3	2	Other -- I/O Module -- ID Code = 1
I:3.4	0	Other -- I/O Module -- ID Code = 1
I:3.5	0	Other -- I/O Module -- ID Code = 1
I:3.6	0	Other -- I/O Module -- ID Code = 1
I:3.7	0	Other -- I/O Module -- ID Code = 1

I:1.0 Radix: Hex/BCD

Symbol Column: 1

Desc.

11 Properties Usage Forces Help

O:2.0 Radix: Hex/BCD

Symbol Column: 1

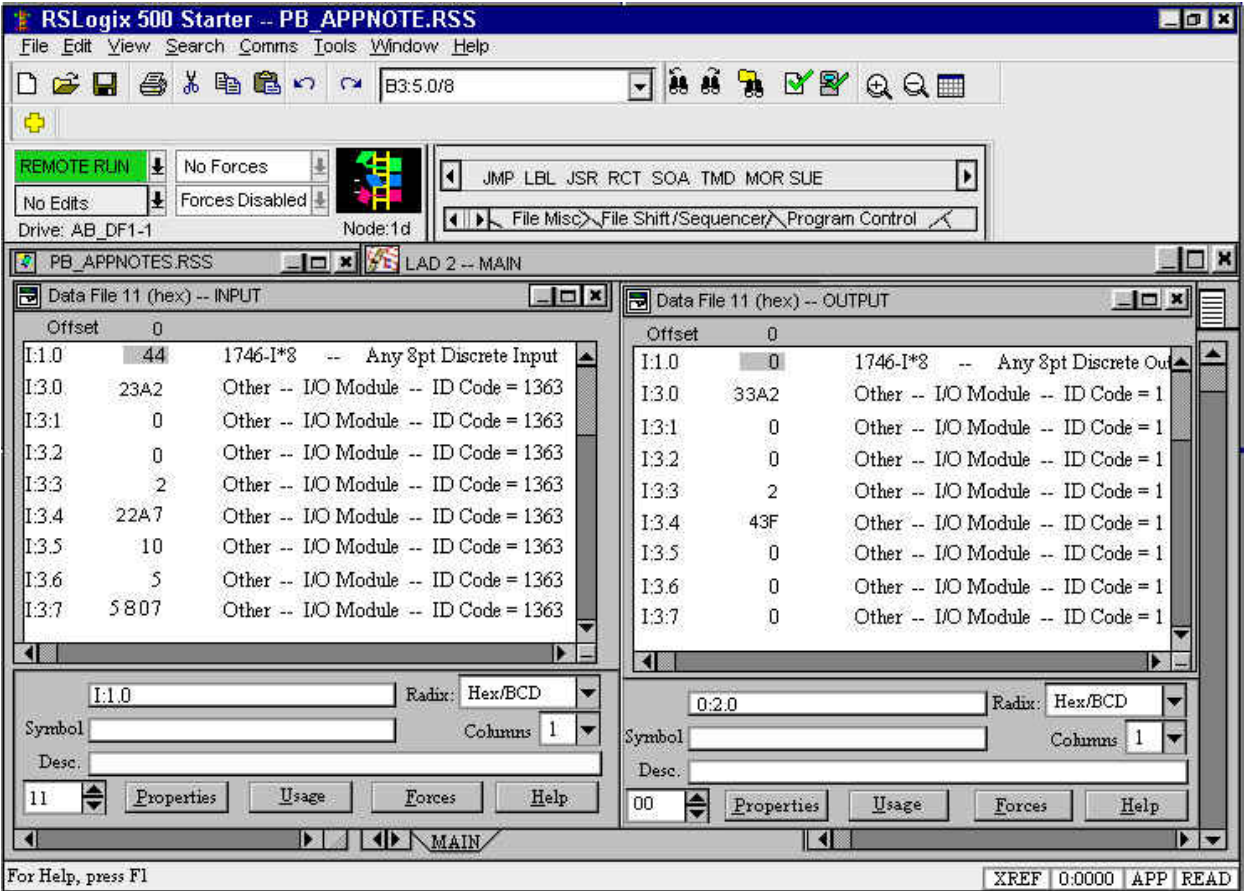
Desc.

00 Properties Usage Forces Help

MAIN

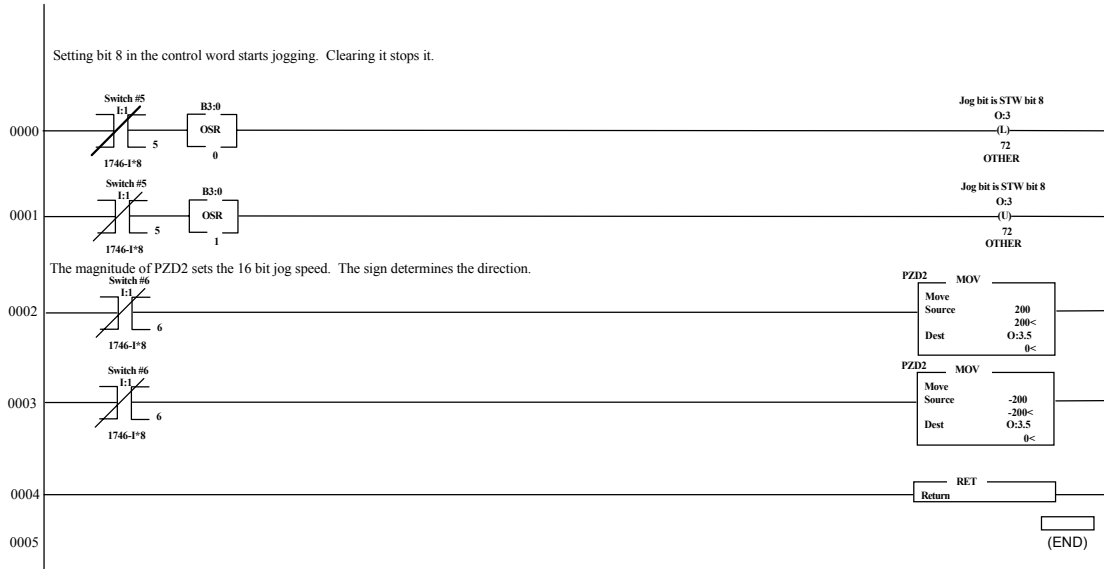
For Help, press F1 XREF 0:0000 APP READ

Change Position Mode Screen 2



Jog the Motor

File 13: Jog the motor



Jog Motor Screen 1

The screenshot shows the RSLogix 500 Starter software interface. The main window displays the Ladder Logic (LAD) editor for the program 'PB_APPNOTE.RSS'. The interface includes a menu bar (File, Edit, View, Search, Comms, Tools, Window, Help), a toolbar, and a status bar. The LAD editor shows a single rung with a normally open contact labeled 'I:1.0' and a coil labeled '11'. The data files are displayed as follows:

Data File 11 (hex) -- INPUT				Data File 11 (hex) -- OUTPUT			
Offset	Hex	Symbol	Description	Offset	Hex	Symbol	Description
I:1.0	66	1746-I*8	Any 8pt Discrete Input	I:1.0	0	1746-I*8	Any 8pt Discrete Out
I:3.0	23A2	Other	I/O Module -- ID Code = 1363	I:3.0	33A2	Other	I/O Module -- ID Code = 1
I:3.1	0	Other	I/O Module -- ID Code = 1363	I:3.1	0	Other	I/O Module -- ID Code = 1
I:3.2	0	Other	I/O Module -- ID Code = 1363	I:3.2	0	Other	I/O Module -- ID Code = 1
I:3.3	2	Other	I/O Module -- ID Code = 1363	I:3.3	2	Other	I/O Module -- ID Code = 1
I:3.4	2A7	Other	I/O Module -- ID Code = 1363	I:3.4	53F	Other	I/O Module -- ID Code = 1
I:3.5	F860	Other	I/O Module -- ID Code = 1363	I:3.5	FF38	Other	I/O Module -- ID Code = 1
I:3.6	354	Other	I/O Module -- ID Code = 1363	I:3.6	0	Other	I/O Module -- ID Code = 1
I:3.7	7119	Other	I/O Module -- ID Code = 1363	I:3.7	0	Other	I/O Module -- ID Code = 1

The interface also shows a 'REMOTE RUN' button, 'No Edits' status, and various control buttons like 'Properties', 'Usage', 'Forces', and 'Help'.

Jog Motor Screen 2

The screenshot displays the RSLogix 500 Starter software interface. The title bar reads "RSLogix 500 Starter -- PB_APPNOTE.RSS". The menu bar includes File, Edit, View, Search, Comms, Tools, Window, and Help. The toolbar contains various icons for file operations and execution. The main workspace is divided into several sections:

- Execution Controls:** Includes a "REMOTE RUN" button, "No Forces" and "Forces Disabled" dropdowns, a "Node: 1d" indicator, and a command list: JMP LBL JSR RCT SOA TMD MOR SUE.
- Data File 11 (hex) -- INPUT:** A table listing input modules with their offsets and descriptions.
- Data File 11 (hex) -- OUTPUT:** A table listing output modules with their offsets and descriptions.
- Property Editors:** Two editors at the bottom for "I:1.0" and "O:2.0", each with fields for Symbol, Desc., and buttons for Properties, Usage, Forces, and Help.

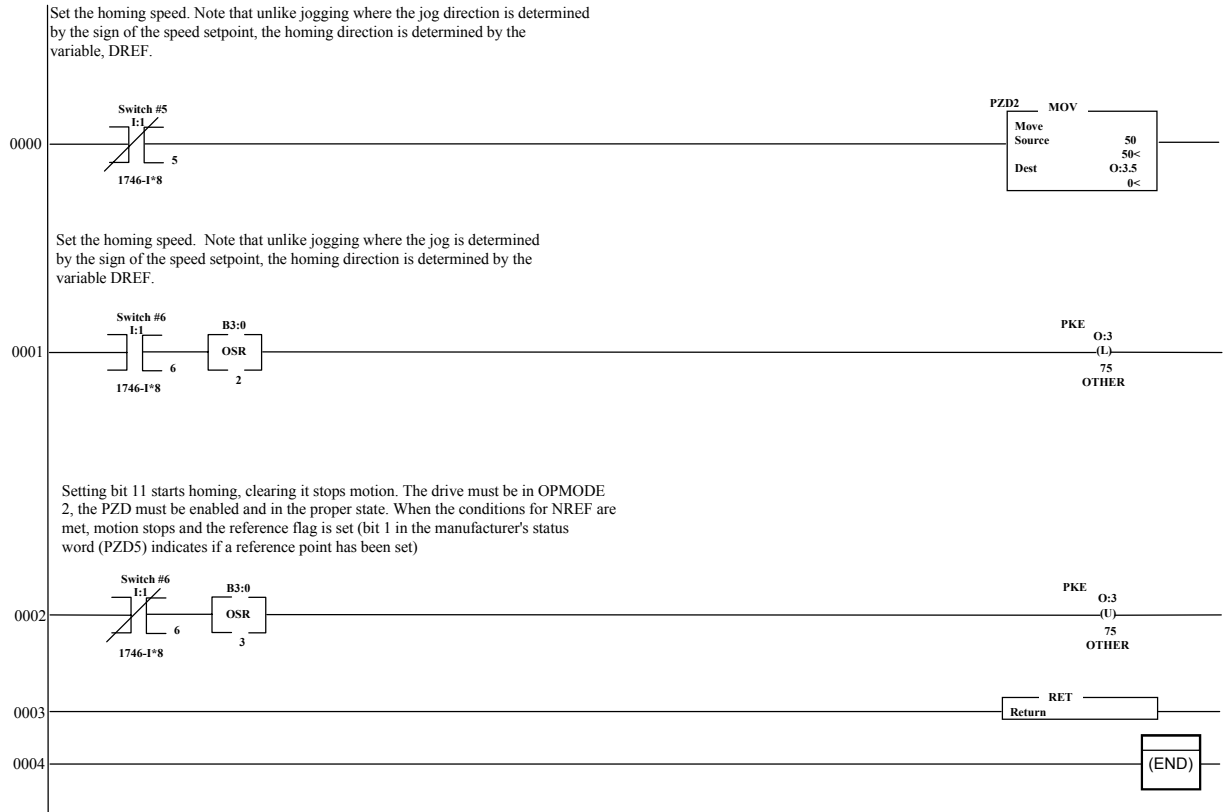
At the bottom of the window, the status bar shows "For Help, press F1" on the left and "XREF 0:0000 APP READ" on the right.

Offset	Value	Description
I:1.0	26	1746-I*8 -- Any 8pt Discrete Input
I:3.0	23A2	Other -- I/O Module -- ID Code = 1363
I:3.1	0	Other -- I/O Module -- ID Code = 1363
I:3.2	0	Other -- I/O Module -- ID Code = 1363
I:3.3	2	Other -- I/O Module -- ID Code = 1363
I:3.4	2A7	Other -- I/O Module -- ID Code = 1363
I:3.5	710	Other -- I/O Module -- ID Code = 1363
I:3.6	17D	Other -- I/O Module -- ID Code = 1363
I:3.7	93AA	Other -- I/O Module -- ID Code = 1363

Offset	Value	Description
I:1.0	0	1746-I*8 -- Any 8pt Discrete Out
I:3.0	33A2	Other -- I/O Module -- ID Code = 1
I:3.1	0	Other -- I/O Module -- ID Code = 1
I:3.2	0	Other -- I/O Module -- ID Code = 1
I:3.3	2	Other -- I/O Module -- ID Code = 1
I:3.4	53F	Other -- I/O Module -- ID Code = 1
I:3.5	C8	Other -- I/O Module -- ID Code = 1
I:3.6	0	Other -- I/O Module -- ID Code = 1
I:3.7	0	Other -- I/O Module -- ID Code = 1

Home Axis

File 14: home the axis



Home Axis Screen 1

The screenshot displays the RSLogix 500 Starter software interface for the project PB_APPNOTE.RSS. The main window is titled "PB_APPNOTES.RSS" and shows the "LAD 2 -- MAIN" ladder logic diagram. Below the diagram, there are two data tables for I/O module configuration.

Data File 11 (hex) -- INPUT

Offset	Value	Description
I:1.0	28	1746-I*8 -- Any 8pt Discrete Input
I:3.0	23A2	Other -- I/O Module -- ID Code = 1363
I:3.1	0	Other -- I/O Module -- ID Code = 1363
I:3.2	0	Other -- I/O Module -- ID Code = 1363
I:3.3	2	Other -- I/O Module -- ID Code = 1363
I:3.4	22A7	Other -- I/O Module -- ID Code = 1363
I:3.5	FFF0	Other -- I/O Module -- ID Code = 1363
I:3.6	FFFD	Other -- I/O Module -- ID Code = 1363
I:3.7	107D	Other -- I/O Module -- ID Code = 1363
I:3.8	5040	Other -- I/O Module -- ID Code = 1363

Data File 11 (hex) -- OUTPUT

Offset	Value	Description
I:1.0	0	1746-I*8 -- Any 8pt Discrete Out
I:3.0	33A2	Other -- I/O Module -- ID Code = 1
I:3.1	0	Other -- I/O Module -- ID Code = 1
I:3.2	0	Other -- I/O Module -- ID Code = 1
I:3.3	2	Other -- I/O Module -- ID Code = 1
I:3.4	C3F	Other -- I/O Module -- ID Code = 1
I:3.5	C8	Other -- I/O Module -- ID Code = 1
I:3.6	0	Other -- I/O Module -- ID Code = 1
I:3.7	0	Other -- I/O Module -- ID Code = 1
I:3.8	0	Other -- I/O Module -- ID Code = 1

The interface also includes a toolbar with various icons, a menu bar (File, Edit, View, Search, Comms, Tools, Window, Help), and a status bar at the bottom with the text "For Help, press F1" and "XREF 0:0000 APP READ".

Home Axis Screen 2

The screenshot displays the RSLogix 500 Starter software interface for a project named PB_APPNOTE.RSS. The main window shows the configuration for I/O modules. The interface is divided into two main sections: INPUT and OUTPUT.

INPUT Configuration (Data File 11 (hex) -- INPUT):

Offset	Value	Description
I:1.0	28	1746-I*8 -- Any 8pt Discrete Input
I:3.0	23A2	Other -- I/O Module -- ID Code = 1363
I:3.1	0	Other -- I/O Module -- ID Code = 1363
I:3.2	0	Other -- I/O Module -- ID Code = 1363
I:3.3	2	Other -- I/O Module -- ID Code = 1363
I:3.4	2A7	Other -- I/O Module -- ID Code = 1363
I:3.5	F890	Other -- I/O Module -- ID Code = 1363
I:3.6	F6	Other -- I/O Module -- ID Code = 1363
I:3.7	88DA	Other -- I/O Module -- ID Code = 1363
I:3.8	5041	Other -- I/O Module -- ID Code = 1363

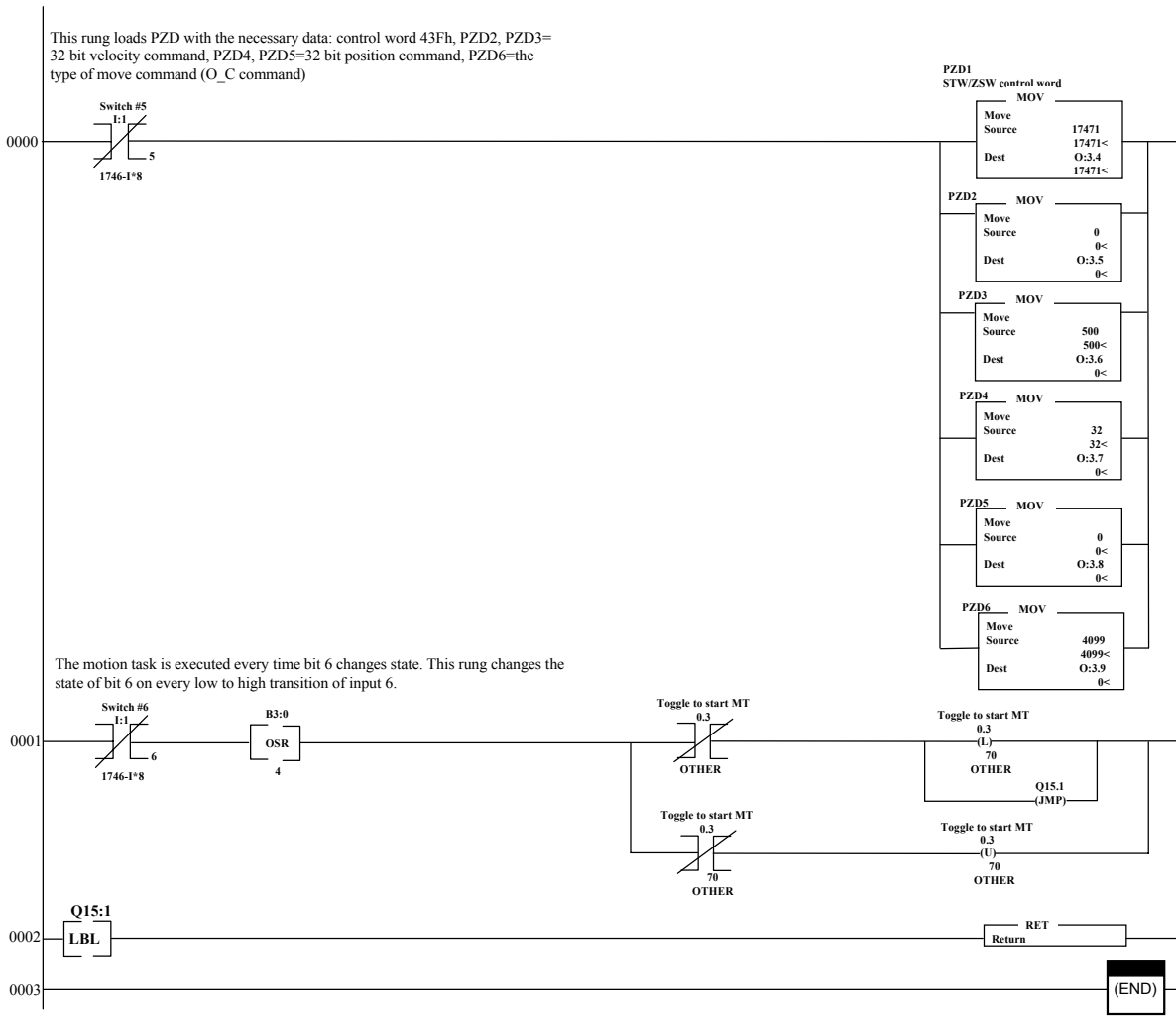
OUTPUT Configuration (Data File 11 (hex) -- OUTPUT):

Offset	Value	Description
I:1.0	0	1746-I*8 -- Any 8pt Discrete Out
I:3.0	33A2	Other -- I/O Module -- ID Code = 1
I:3.1	0	Other -- I/O Module -- ID Code = 1
I:3.2	0	Other -- I/O Module -- ID Code = 1
I:3.3	2	Other -- I/O Module -- ID Code = 1
I:3.4	C3F	Other -- I/O Module -- ID Code = 1
I:3.5	C8	Other -- I/O Module -- ID Code = 1
I:3.6	0	Other -- I/O Module -- ID Code = 1
I:3.7	0	Other -- I/O Module -- ID Code = 1
I:3.8	0	Other -- I/O Module -- ID Code = 1

The interface also includes a toolbar with various icons, a status bar at the bottom showing 'XREF 0:0000 APP READ', and a footer with document information.

Run Direct Motion Task

File 15: run direct motion task



Run Direct Motion Task Screen

The screenshot shows the RSLogix 500 Starter software interface. The title bar reads "RSLogix 500 Starter -- PB_APPNOTE.RSS". The menu bar includes File, Edit, View, Search, Comms, Tools, Window, and Help. The toolbar contains various icons for file operations and execution. The main window displays the "PB_APPNOTES.RSS" project in "LAD 2 -- MAIN" mode. The "REMOTE RUN" button is highlighted in green. Below it, there are controls for "No Forces" and "Forces Disabled". The drive is set to "AB_DF1-1" and the node is "1d". The program control area shows "JMP LBL JSR RCT SOA TMD MOR SUE".

Two data tables are visible: "Data File 11 (hex) -- INPUT" and "Data File 11 (hex) -- OUTPUT".

Offset	Value	Description
I:3.0	23AE	Other -- I/O Module -- ID Code = 1363
I:3.1	0	Other -- I/O Module -- ID Code = 1363
I:3.2	0	Other -- I/O Module -- ID Code = 1363
I:3.3	2	Other -- I/O Module -- ID Code = 1363
I:3.4	1AA7	Other -- I/O Module -- ID Code = 1363
I:3.5	3D0	Other -- I/O Module -- ID Code = 1363
I:3.6	92	Other -- I/O Module -- ID Code = 1363
I:3.7	B3B2	Other -- I/O Module -- ID Code = 1363
I:3.8	5043	Other -- I/O Module -- ID Code = 1363
I:3.9	0	Other -- I/O Module -- ID Code = 1363

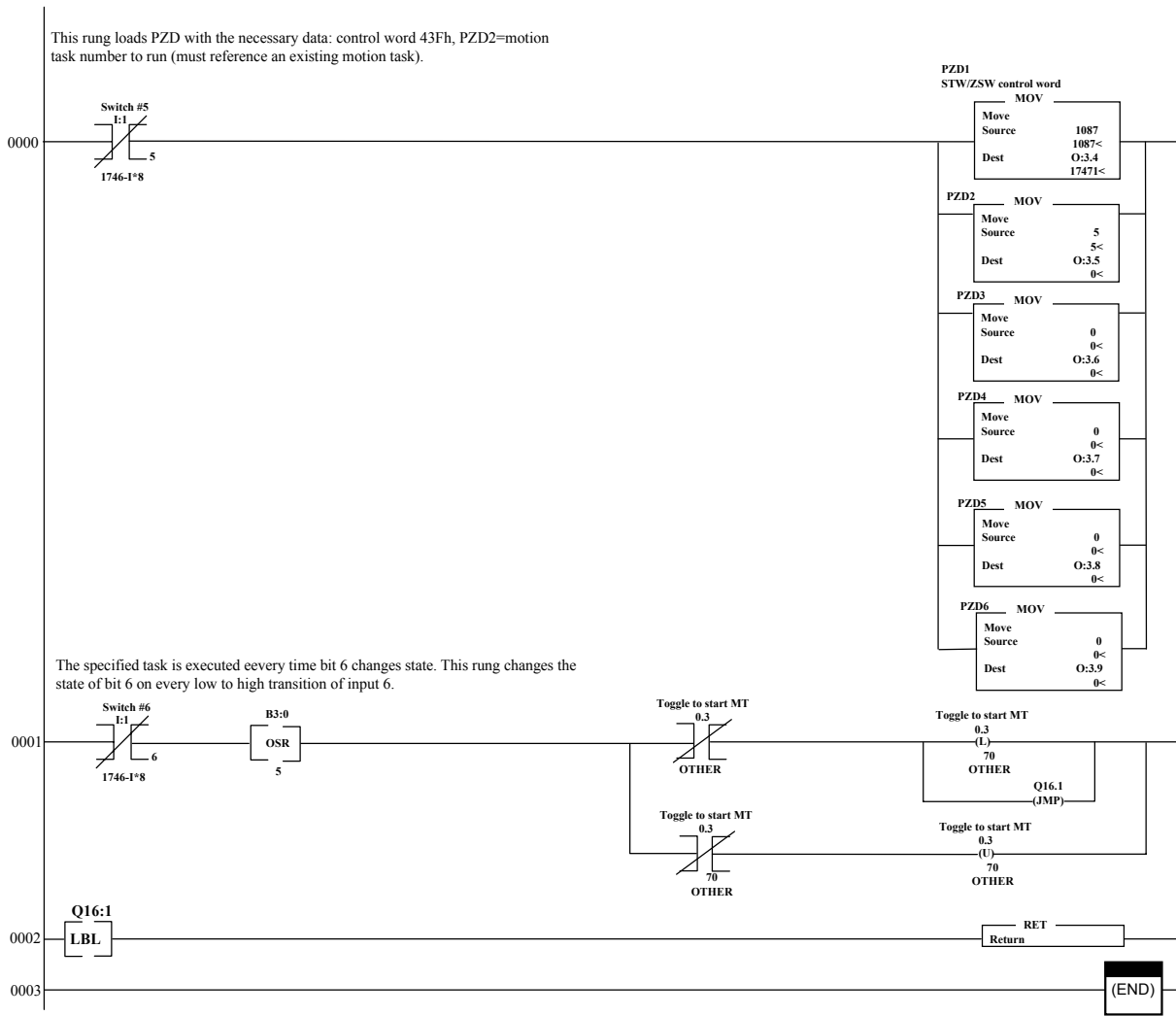
Offset	Value	Description
I:3.0	33A2	Other -- I/O Module -- ID Code = 1
I:3.1	0	Other -- I/O Module -- ID Code = 1
I:3.2	0	Other -- I/O Module -- ID Code = 1
I:3.3	2	Other -- I/O Module -- ID Code = 1
I:3.4	447F	Other -- I/O Module -- ID Code = 1
I:3.5	0	Other -- I/O Module -- ID Code = 1
I:3.6	1F4	Other -- I/O Module -- ID Code = 1
I:3.7	20	Other -- I/O Module -- ID Code = 1
I:3.8	0	Other -- I/O Module -- ID Code = 1
I:3.9	1003	Other -- I/O Module -- ID Code = 1

Below the tables are input and output symbol editors. The input editor shows "I:1.0" with a radix of "Hex/BCD" and a column of "1". The output editor shows "O:2.0" with a radix of "Hex/BCD" and a column of "1". Both editors have buttons for Properties, Usage, Forces, and Help.

The status bar at the bottom indicates "For Help, press F1" and "XREF | 0:0000 | APP | READ".

Run Stored Motion Task

File 16: run a stored motion task



Run Stored Motion Task Screen

The screenshot shows the RSLogix 500 Starter software interface. The title bar reads "RSLogix 500 Starter -- PB_APPNOTE.RSS". The menu bar includes File, Edit, View, Search, Comms, Tools, Window, and Help. The toolbar contains various icons for file operations and execution. Below the toolbar, there are controls for "REMOTE RUN" (set to "No Forces") and "No Edits" (set to "Forces Disabled"). A drive selection dropdown shows "Drive: AB_DF1-1" and a node selection dropdown shows "Node: 1d". A command list includes "JMP LBL JSR RCT SOA TMD MOR SUE".

The main workspace is divided into two panes: "Data File 11 (hex) -- INPUT" and "Data File 11 (hex) -- OUTPUT".

Offset	Value	Description
I:1.0	0	1746-I*8 -- Any 8pt Discrete Input
I:3.0	23A2	Other -- I/O Module -- ID Code = 1363
I:3.1	0	Other -- I/O Module -- ID Code = 1363
I:3.2	0	Other -- I/O Module -- ID Code = 1363
I:3.3	2	Other -- I/O Module -- ID Code = 1363
I:3.4	1EA7	Other -- I/O Module -- ID Code = 1363
I:3.5	0	Other -- I/O Module -- ID Code = 1363
I:3.6	E190	Other -- I/O Module -- ID Code = 1363
I:3.7	F4A	Other -- I/O Module -- ID Code = 1363
I:3.8	504A	Other -- I/O Module -- ID Code = 1363
I:3.9	0	Other -- I/O Module -- ID Code = 1363

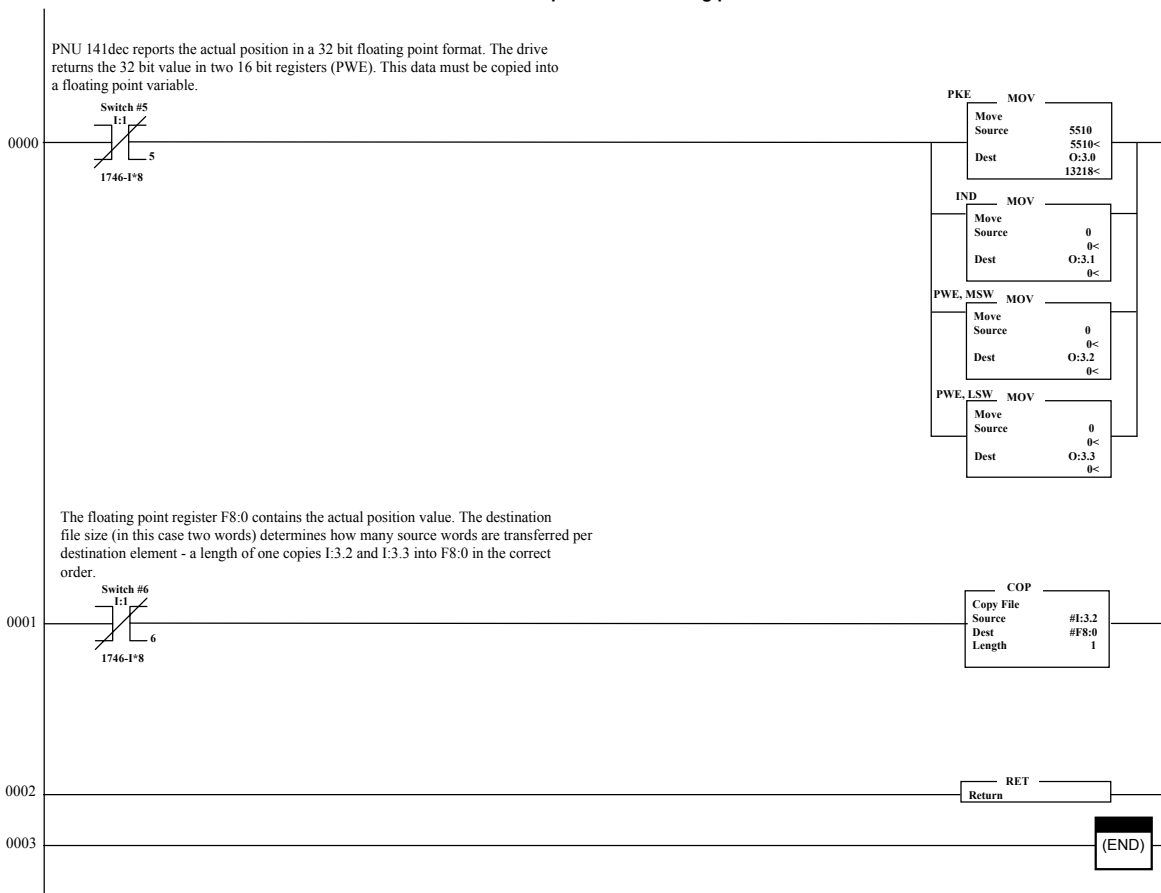
Offset	Value	Description
I:1.0	0	1746-I*8 -- Any 8pt Discrete Out
I:3.0	33A2	Other -- I/O Module -- ID Code = 1
I:3.1	0	Other -- I/O Module -- ID Code = 1
I:3.2	0	Other -- I/O Module -- ID Code = 1
I:3.3	2	Other -- I/O Module -- ID Code = 1
I:3.4	43F	Other -- I/O Module -- ID Code = 1
I:3.5	5	Other -- I/O Module -- ID Code = 1
I:3.6	0	Other -- I/O Module -- ID Code = 1
I:3.7	0	Other -- I/O Module -- ID Code = 1
I:3.8	0	Other -- I/O Module -- ID Code = 1
I:3.9	0	Other -- I/O Module -- ID Code = 1

Below the tables are input fields for "Symbol" and "Desc." with "Radix" set to "Hex/BCD" and "Columns" set to "1". Buttons for "Properties", "Usage", "Forces", and "Help" are available for each entry.

The status bar at the bottom shows "For Help, press F1" on the left and "XREF 0:0000 APP READ" on the right.

Read Position as Floating-Point Value

File 17: read actual position as floating point value



Read Position as Floating-Point Value Screen 1

RSLogix 500 Starter -- PB_APPNOTE.RSS

File Edit View Search Comms Tools Window Help

B3:5.0/8

REMOTE RUN No Forces

No Edits Forces Disabled

Drive: AB_DF1-1 Node: 1d

JMP LBL JSR RCT SOA TMD MOR SUE

File Misc \ File Shift \ Sequencer \ Program Control

PB_APPNOTES.RSS LAD 2 -- MAIN

Data File 11 (hex) -- INPUT			Data File 11 (hex) -- OUTPUT		
Offset	Value	Description	Offset	Value	Description
I:3.0	2586	Other -- I/O Module -- ID Code = 1363	I:3.0	1586	Other -- I/O Module -- ID Code = 1
I:3.1	0	Other -- I/O Module -- ID Code = 1363	I:3.1	0	Other -- I/O Module -- ID Code = 1
I:3.2	C6E3	Other -- I/O Module -- ID Code = 1363	I:3.2	0	Other -- I/O Module -- ID Code = 1
I:3.3	E600	Other -- I/O Module -- ID Code = 1363	I:3.3	0	Other -- I/O Module -- ID Code = 1
I:3.4	2EA7	Other -- I/O Module -- ID Code = 1363	I:3.4	43F	Other -- I/O Module -- ID Code = 1
I:3.5	FFE0	Other -- I/O Module -- ID Code = 1363	I:3.5	5	Other -- I/O Module -- ID Code = 1
I:3.6	E19D	Other -- I/O Module -- ID Code = 1363	I:3.6	0	Other -- I/O Module -- ID Code = 1
I:3.7	F21	Other -- I/O Module -- ID Code = 1363	I:3.7	0	Other -- I/O Module -- ID Code = 1
I:3.8	504A	Other -- I/O Module -- ID Code = 1363	I:3.8	0	Other -- I/O Module -- ID Code = 1
I:3.9	0	Other -- I/O Module -- ID Code = 1363	I:3.9	0	Other -- I/O Module -- ID Code = 1

I:1.0 Radix: Hex/BCD

Symbol: _____ Columns: 1

Desc: _____

11 Properties Usage Forces Help

O:2.0 Radix: Hex/BCD

Symbol: _____ Columns: 1

Desc: _____

00 Properties Usage Forces Help

MAIN

For Help, press F1 XREF | 0:0000 | APP | READ

Read Position as Floating-Point Value Screen 2

The screenshot displays the RSLogix 500 Starter software interface. The main window is titled "RSLogix 500 Starter -- PB_APPNOTE.RSS". The menu bar includes File, Edit, View, Search, Comms, Tools, Window, and Help. The toolbar contains various icons for file operations and execution. The main workspace shows a ladder logic diagram with a "JMP LBL JSR RCT SOA TMD MOR SUE" instruction. The status bar at the bottom indicates "XREF 0:0000 APP READ".

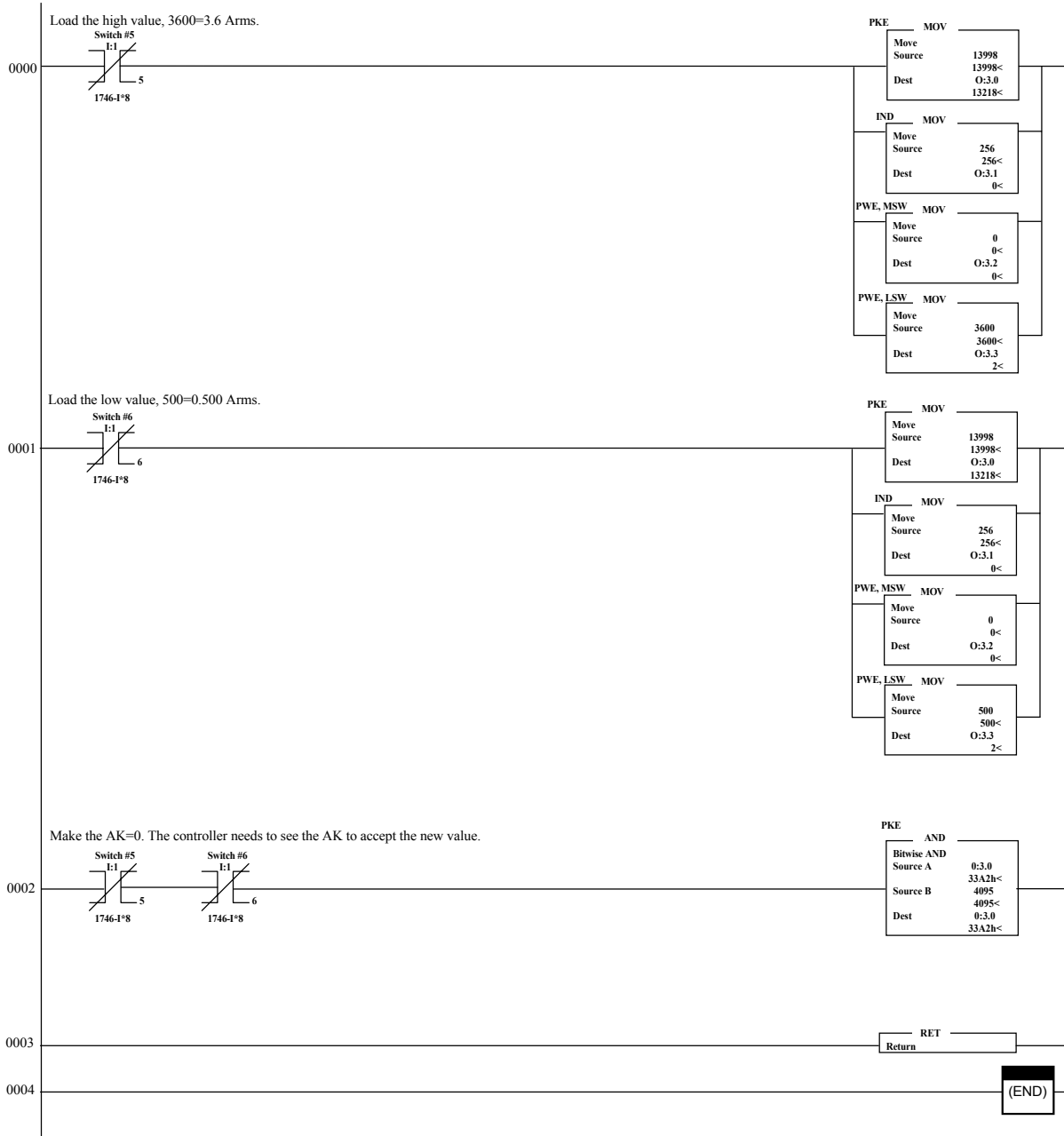
Three data windows are open:

- Data File F8 -- FLOAT:** Shows a table with columns for Offset, Symbol, and Desc. The table contains one row: Offset 0, Symbol F8:0, Desc -29171.
- Data File 11 (hex) -- OUTPUT:** Shows a table with columns for Offset, Symbol, and Desc. The table contains 10 rows, each representing an I/O module with an ID Code of 1.
- Data File 11 (hex) -- INPUT:** Shows a table with columns for Offset, Symbol, and Desc. The table contains 7 rows, each representing an I/O module with an ID Code of 1363.

The status bar at the bottom displays "XREF 0:0000 APP READ".

Change Index Parameter (IPEAK)

File 18: change between two values of peak current (IPEAK) peak torque



Change IPEAK Screen 1

The screenshot shows the RSLogix 500 Starter software interface. The main window is titled "PB_APPNOTE.RSS" and contains a menu bar (File, Edit, View, Search, Comms, Tools, Window, Help) and a toolbar. Below the toolbar, there are controls for "REMOTE RUN" (set to "No Forces"), "No Edits" (set to "Forces Disabled"), and a ladder logic diagram showing a program with instructions: JMP, LBL, JSR, RCT, SOA, TMD, MOR, SUE. The drive is identified as "AB_DF1-1" and the node as "Node:1d".

Two data files are open for configuration:

- Data File 11 (hex) -- INPUT:**

Offset	Value	Description
I:3.0	26AE	Other -- I/O Module -- ID Code = 1363
I:3.1	100	Other -- I/O Module -- ID Code = 1363
I:3.2	0	Other -- I/O Module -- ID Code = 1363
I:3.3	E10	Other -- I/O Module -- ID Code = 1363
I:3.4	2EA7	Other -- I/O Module -- ID Code = 1363
I:3.5	FFD0	Other -- I/O Module -- ID Code = 1363
I:3.6	E190	Other -- I/O Module -- ID Code = 1363
I:3.7	F4E	Other -- I/O Module -- ID Code = 1363
I:3.8	504A	Other -- I/O Module -- ID Code = 1363
I:3.9	0	Other -- I/O Module -- ID Code = 1363

Configuration for I:1.0: Radix: Hex/BCD, Symbol: I:1.0, Column: 1. Buttons: Properties, Usage, Forces, Help.
- Data File 11 (hex) -- OUTPUT:**

Offset	Value	Description
I:3.0	36AE	Other -- I/O Module -- ID Code = 1
I:3.1	100	Other -- I/O Module -- ID Code = 1
I:3.2	0	Other -- I/O Module -- ID Code = 1
I:3.3	E10	Other -- I/O Module -- ID Code = 1
I:3.4	43F	Other -- I/O Module -- ID Code = 1
I:3.5	C8	Other -- I/O Module -- ID Code = 1
I:3.6	0	Other -- I/O Module -- ID Code = 1
I:3.7	0	Other -- I/O Module -- ID Code = 1
I:3.8	0	Other -- I/O Module -- ID Code = 1
I:3.9	0	Other -- I/O Module -- ID Code = 1

Configuration for O:2.0: Radix: Hex/BCD, Symbol: O:2.0, Column: 1. Buttons: Properties, Usage, Forces, Help.

The status bar at the bottom shows "For Help, press F1" and "XREF | 0:0000 | APP | READ".

Change IPEAK Screen 2

RSLogix 500 Starter -- PB_APPNOTE.RSS

File Edit View Search Comms Tools Window Help

B3:5.0/8

REMOTE RUN No Forces

No Edits Forces Disabled

Drive: AB_DF1-1 Node:1d

JMP LBL JSR RCT SOA TMD MOR SUE

File Misc\>File Shift/Sequencer\>Program Control

PB_APPNOTES.RSS LAD 2 -- MAIN

Data File 11 (hex) -- INPUT		
Offset	Value	Description
I:3.0	6AE	Other -- I/O Module -- ID Code = 1363
I:3.1	100	Other -- I/O Module -- ID Code = 1363
I:3.2	0	Other -- I/O Module -- ID Code = 1363
I:3.3	E10	Other -- I/O Module -- ID Code = 1363
I:3.4	2EA7	Other -- I/O Module -- ID Code = 1363
I:3.5	0	Other -- I/O Module -- ID Code = 1363
I:3.6	E190	Other -- I/O Module -- ID Code = 1363
I:3.7	F1B	Other -- I/O Module -- ID Code = 1363
I:3.8	504A	Other -- I/O Module -- ID Code = 1363
I:3.9	0	Other -- I/O Module -- ID Code = 1363

Data File 11 (hex) -- OUTPUT		
Offset	Value	Description
O:2.0	6AE	Other -- I/O Module -- ID Code = 1
O:2.1	100	Other -- I/O Module -- ID Code = 1
O:2.2	0	Other -- I/O Module -- ID Code = 1
O:2.3	E10	Other -- I/O Module -- ID Code = 1
O:2.4	43F	Other -- I/O Module -- ID Code = 1
O:2.5	C8	Other -- I/O Module -- ID Code = 1
O:2.6	0	Other -- I/O Module -- ID Code = 1
O:2.7	0	Other -- I/O Module -- ID Code = 1
O:2.8	0	Other -- I/O Module -- ID Code = 1
O:2.9	0	Other -- I/O Module -- ID Code = 1

I:1.0 Radix: Hex/BCD Symbol: Columns: 1 Desc. 11 Properties Usage Forces Help

O:2.0 Radix: Hex/BCD Symbol: Columns: 1 Desc. 00 Properties Usage Forces Help

MAIN

For Help, press F1 XREF 0:0000 APP READ

Change IPEAK Screen 3

The screenshot shows the RSLogix 500 Starter interface. The main window displays the configuration for Data File 11 (hex) -- INPUT and Data File 11 (hex) -- OUTPUT. The interface includes a menu bar (File, Edit, View, Search, Comms, Tools, Window, Help), a toolbar, and a status bar at the bottom.

Data File 11 (hex) -- INPUT

Offset	Value	Description
I:3.0	26AE	Other -- I/O Module -- ID Code = 1363
I:3.1	100	Other -- I/O Module -- ID Code = 1363
I:3.2	0	Other -- I/O Module -- ID Code = 1363
I:3.3	1F4	Other -- I/O Module -- ID Code = 1363
I:3.4	2AA7	Other -- I/O Module -- ID Code = 1363
I:3.5	FFE0	Other -- I/O Module -- ID Code = 1363
I:3.6	FFF8	Other -- I/O Module -- ID Code = 1363
I:3.7	FDC9	Other -- I/O Module -- ID Code = 1363
I:3.8	5D42	Other -- I/O Module -- ID Code = 1363
I:3.9	0	Other -- I/O Module -- ID Code = 1363

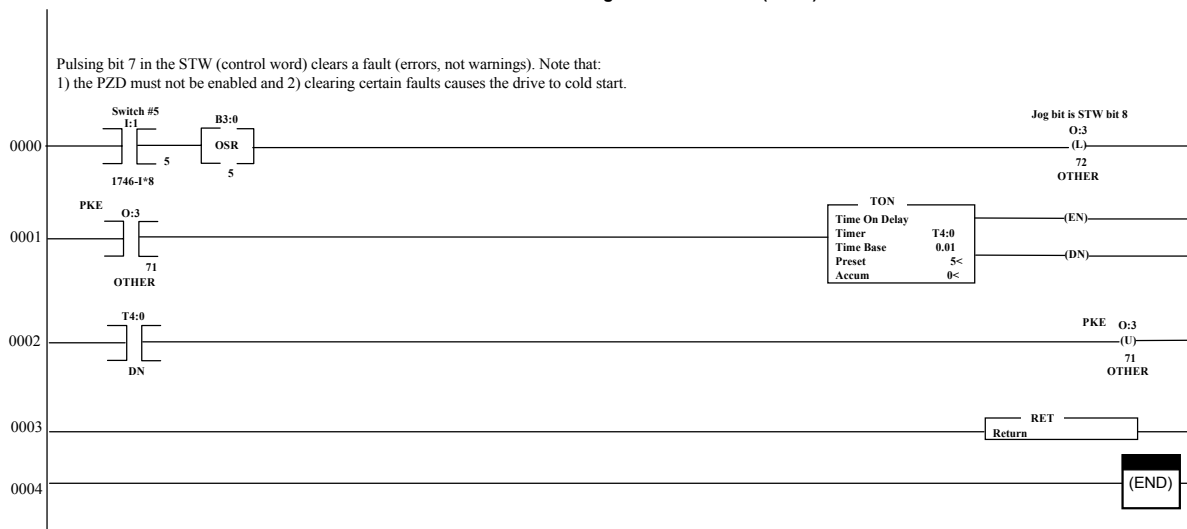
Data File 11 (hex) -- OUTPUT

Offset	Value	Description
I:3.0	36AE	Other -- I/O Module -- ID Code = 1
I:3.1	100	Other -- I/O Module -- ID Code = 1
I:3.2	0	Other -- I/O Module -- ID Code = 1
I:3.3	1F4	Other -- I/O Module -- ID Code = 1
I:3.4	43F	Other -- I/O Module -- ID Code = 1
I:3.5	C8	Other -- I/O Module -- ID Code = 1
I:3.6	200	Other -- I/O Module -- ID Code = 1
I:3.7	0	Other -- I/O Module -- ID Code = 1
I:3.8	0	Other -- I/O Module -- ID Code = 1
I:3.9	0	Other -- I/O Module -- ID Code = 1

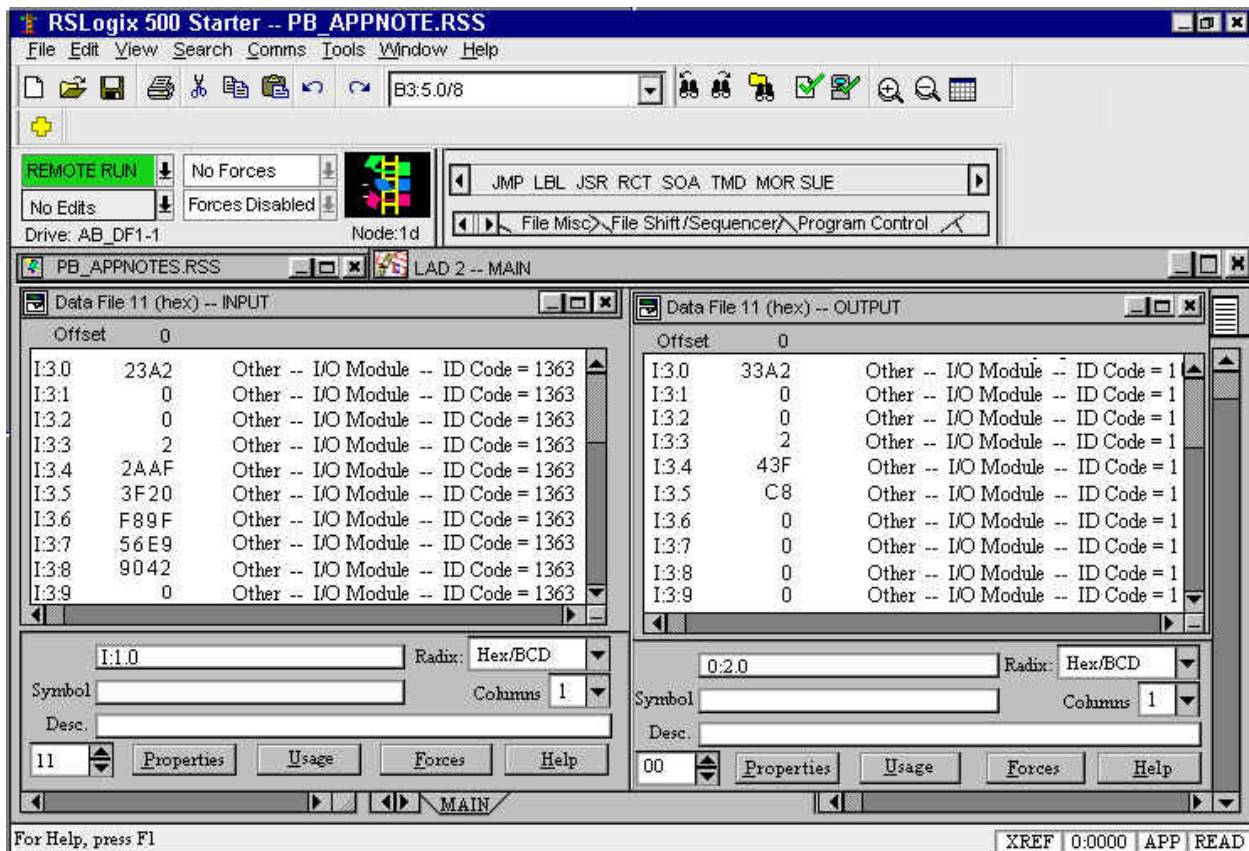
The status bar at the bottom displays: For Help, press F1 | XREF | 0.0000 | APP | READ

Clear a Fault

File 19: clear a fault using the control word (PZD1)



Clear a Fault Screen 1



Clear a Fault Screen 2

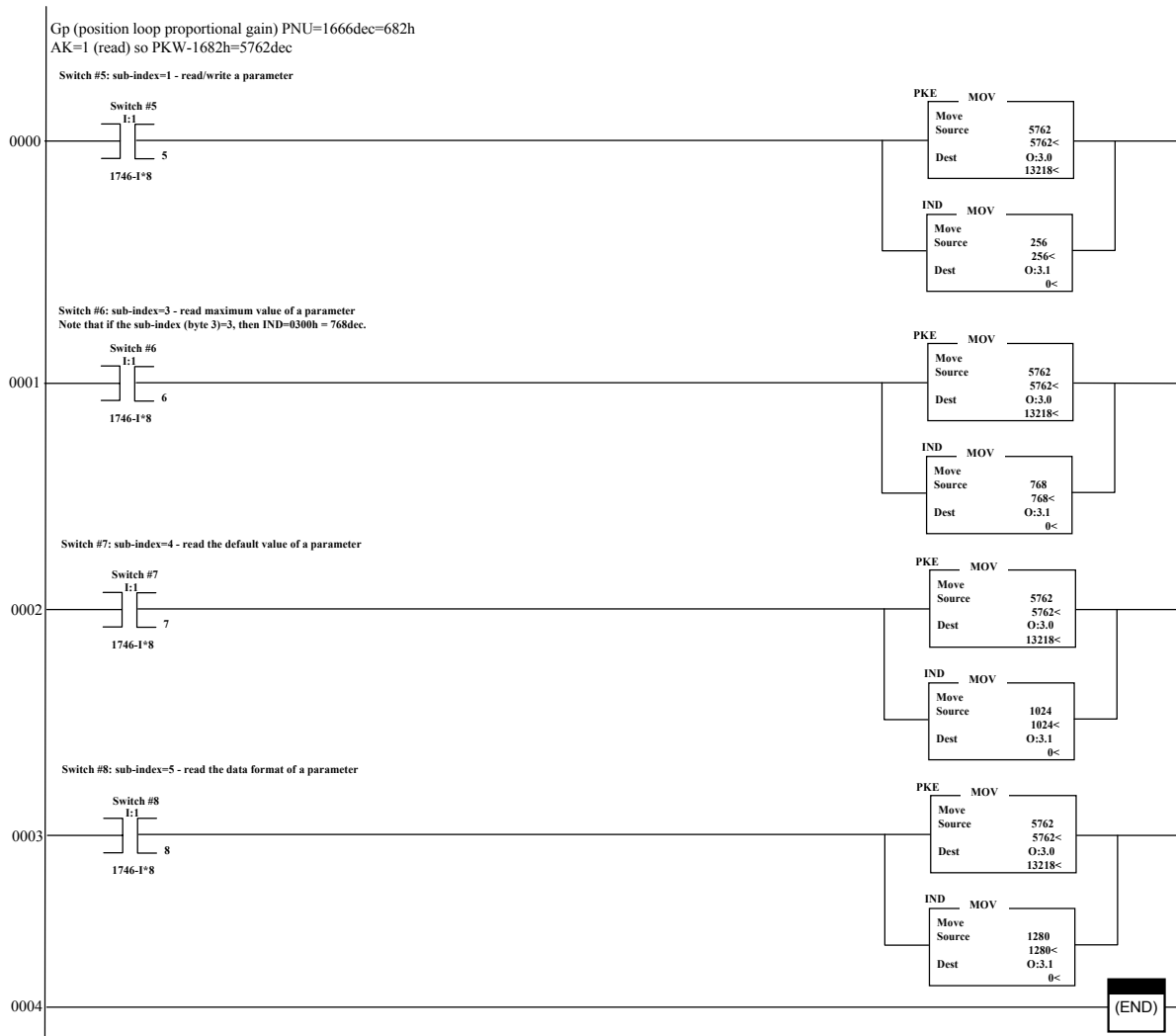
The screenshot displays the RSLogix 500 Starter interface. The main window shows the 'Data File 11 (hex) -- INPUT' and 'Data File 11 (hex) -- OUTPUT' windows. The INPUT window contains a table of I/O modules, and the OUTPUT window contains a table of I/O modules. The status bar at the bottom indicates 'XREF 0:0000 APP READ'.

Offset	Value	Description
I:3.0	0	Other -- I/O Module -- ID Code = 1363
I:3.1	0	Other -- I/O Module -- ID Code = 1363
I:3.2	0	Other -- I/O Module -- ID Code = 1363
I:3.3	0	Other -- I/O Module -- ID Code = 1363
I:3.4	0	Other -- I/O Module -- ID Code = 1363
I:3.5	0	Other -- I/O Module -- ID Code = 1363
I:3.6	0	Other -- I/O Module -- ID Code = 1363
I:3.7	0	Other -- I/O Module -- ID Code = 1363
I:3.8	0	Other -- I/O Module -- ID Code = 1363
I:3.9	0	Other -- I/O Module -- ID Code = 1363

Offset	Value	Description
I:3.0	3A2	Other -- I/O Module -- ID Code = 1
I:3.1	0	Other -- I/O Module -- ID Code = 1
I:3.2	0	Other -- I/O Module -- ID Code = 1
I:3.3	2	Other -- I/O Module -- ID Code = 1
I:3.4	43F	Other -- I/O Module -- ID Code = 1
I:3.5	C8	Other -- I/O Module -- ID Code = 1
I:3.6	0	Other -- I/O Module -- ID Code = 1
I:3.7	0	Other -- I/O Module -- ID Code = 1
I:3.8	0	Other -- I/O Module -- ID Code = 1
I:3.9	0	Other -- I/O Module -- ID Code = 1

Read Data Via Parameter Object Channel

File 20: Read Gp via Parameter Object Channel Using Sub-Index



Read Data via Parameter Object Channel Screen 1

RSLogix 500 Starter -- PB_APPNOTE.RSS

File Edit View Search Comms Tools Window Help

B3:5.0/8

REMOTE RUN No Forces

No Edits Forces Disabled

Drive: AB_DF1-1 Node: 1d

JMP LBL JSR RCT SOA TMD MOR SUE

File Misc \ File Shift \ Sequencer \ Program Control

PB_APPNOTES.RSS LAD 2 -- MAIN

Data File 11 (hex) -- INPUT

Offset	Value	Description
I:3.0	2682	Other -- I/O Module -- ID Code = 1363
I:3.1	100	Other -- I/O Module -- ID Code = 1363
I:3.2	0	Other -- I/O Module -- ID Code = 1363
I:3.3	A0	Other -- I/O Module -- ID Code = 1363
I:3.4	2D0	Other -- I/O Module -- ID Code = 1363
I:3.5	0	Other -- I/O Module -- ID Code = 1363
I:3.6	0	Other -- I/O Module -- ID Code = 1363
I:3.7	0	Other -- I/O Module -- ID Code = 1363
I:3.8	0	Other -- I/O Module -- ID Code = 1363
I:3.9	0	Other -- I/O Module -- ID Code = 1363

I:1.0 Radix: Hex/BCD

Symbol Column: 1

Desc.

11 Properties Usage Forces Help

Data File 11 (hex) -- OUTPUT

Offset	Value	Description
I:3.0	1682	Other -- I/O Module -- ID Code = 1
I:3.1	100	Other -- I/O Module -- ID Code = 1
I:3.2	0	Other -- I/O Module -- ID Code = 1
I:3.3	2	Other -- I/O Module -- ID Code = 1
I:3.4	0	Other -- I/O Module -- ID Code = 1
I:3.5	0	Other -- I/O Module -- ID Code = 1
I:3.6	0	Other -- I/O Module -- ID Code = 1
I:3.7	0	Other -- I/O Module -- ID Code = 1
I:3.8	0	Other -- I/O Module -- ID Code = 1
I:3.9	0	Other -- I/O Module -- ID Code = 1

0:2.0 Radix: Hex/BCD

Symbol Column: 1

Desc.

00 Properties Usage Forces Help

MAIN

For Help, press F1 XREF 0.0000 APP READ

Read Data via Parameter Object Channel Screen 2

The screenshot displays the RSLogix 500 Starter interface for the project PB_APPNOTE.RSS. The main window is titled "PB_APPNOTES.RSS" and shows a ladder logic diagram in LAD 2 -- MAIN. Below the diagram, two data files are open: "Data File 11 (hex) -- INPUT" and "Data File 11 (hex) -- OUTPUT".

Data File 11 (hex) -- INPUT

Offset	Value	Description
I:3.0	9858	Other -- I/O Module -- ID Code = 1363
I:3.1	256	Other -- I/O Module -- ID Code = 1363
I:3.2	0	Other -- I/O Module -- ID Code = 1363
I:3.3	160	Other -- I/O Module -- ID Code = 1363
I:3.4	720	Other -- I/O Module -- ID Code = 1363
I:3.5	0	Other -- I/O Module -- ID Code = 1363
I:3.6	0	Other -- I/O Module -- ID Code = 1363
I:3.7	0	Other -- I/O Module -- ID Code = 1363
I:3.8	0	Other -- I/O Module -- ID Code = 1363
I:3.9	0	Other -- I/O Module -- ID Code = 1363

Data File 11 (hex) -- OUTPUT

Offset	Value	Description
I:3.0	1682	Other -- I/O Module -- ID Code = 1
I:3.1	100	Other -- I/O Module -- ID Code = 1
I:3.2	0	Other -- I/O Module -- ID Code = 1
I:3.3	2	Other -- I/O Module -- ID Code = 1
I:3.4	0	Other -- I/O Module -- ID Code = 1
I:3.5	0	Other -- I/O Module -- ID Code = 1
I:3.6	0	Other -- I/O Module -- ID Code = 1
I:3.7	0	Other -- I/O Module -- ID Code = 1
I:3.8	0	Other -- I/O Module -- ID Code = 1
I:3.9	0	Other -- I/O Module -- ID Code = 1

Below each data file, there are input fields for "Symbol" and "Desc.", and buttons for "Properties", "Usage", "Forces", and "Help". The "Properties" button is highlighted for the selected channel.

At the bottom of the window, the status bar shows "For Help, press F1" and "XREF | 0:0000 | APP | READ".

Read Data via Parameter Object Channel Screen 3

RSLogix 500 Starter -- PB_APPNOTE.RSS

File Edit View Search Comms Tools Window Help

B3:5.0/8

REMOTE RUN No Forces

No Edits Forces Disabled

Drive: AB_DF1-1 Node:1d

JMP LBL JSR RCT SOA TMD MOR SUE

File Misc\>File Shift/Sequencer\>Program Control

PB_APPNOTES.RSS LAD 2 -- MAIN

Data File 11 (hex) -- INPUT

Offset	Address	Module	ID Code
I:3.0	9858	Other -- I/O Module	1363
I:3.1	768	Other -- I/O Module	1363
I:3.2	0	Other -- I/O Module	1363
I:3.3	25000	Other -- I/O Module	1363
I:3.4	720	Other -- I/O Module	1363
I:3.5	0	Other -- I/O Module	1363
I:3.6	0	Other -- I/O Module	1363
I:3.7	0	Other -- I/O Module	1363
I:3.8	0	Other -- I/O Module	1363
I:3.9	0	Other -- I/O Module	1363

I:1.0 Radix: Hex/BCD

Symbol Columns 1

Desc.

11 Properties Usage Forces Help

Data File 11 (hex) -- OUTPUT

Offset	Address	Module	ID Code
I:3.0	1682	Other -- I/O Module	1
I:3.1	300	Other -- I/O Module	1
I:3.2	0	Other -- I/O Module	1
I:3.3	2	Other -- I/O Module	1
I:3.4	0	Other -- I/O Module	1
I:3.5	0	Other -- I/O Module	1
I:3.6	0	Other -- I/O Module	1
I:3.7	0	Other -- I/O Module	1
I:3.8	0	Other -- I/O Module	1
I:3.9	0	Other -- I/O Module	1

O:2.0 Radix: Hex/BCD

Symbol Columns 1

Desc.

00 Properties Usage Forces Help

MAIN

For Help, press F1

XREF 0:0000 APP READ

Read Data via Parameter Object Channel Screen 4

The screenshot displays the RSLogix 500 Starter software interface. The title bar reads "RSLogix 500 Starter -- PB_APPNOTE.RSS". The menu bar includes File, Edit, View, Search, Comms, Tools, Window, and Help. The toolbar contains various icons for file operations and execution. The main workspace is divided into several panes:

- REMOTE RUN:** Includes a "REMOTE RUN" button, "No Forces" and "Forces Disabled" options, and a ladder logic diagram.
- Drive:** Shows "AB_DF1-1" and "Node: 1d".
- File Misc:** Shows the path "File Misc\>File Shift/Sequencer\>Program Control".
- Data File 11 (hex) -- INPUT:** A table with columns for Address, Offset, and Description.

Address	Offset	Description
I:3.0	9858	Other -- I/O Module -- ID Code = 1363
I:3.1	1024	Other -- I/O Module -- ID Code = 1363
I:3.2	0	Other -- I/O Module -- ID Code = 1363
I:3.3	150	Other -- I/O Module -- ID Code = 1363
I:3.4	720	Other -- I/O Module -- ID Code = 1363
I:3.5	0	Other -- I/O Module -- ID Code = 1363
I:3.6	0	Other -- I/O Module -- ID Code = 1363
I:3.7	0	Other -- I/O Module -- ID Code = 1363
I:3.8	0	Other -- I/O Module -- ID Code = 1363
I:3.9	0	Other -- I/O Module -- ID Code = 1363
- Data File 11 (hex) -- OUTPUT:** A table with columns for Address, Offset, and Description.

Address	Offset	Description
I:3.0	1682	Other -- I/O Module -- ID Code = 1
I:3.1	400	Other -- I/O Module -- ID Code = 1
I:3.2	0	Other -- I/O Module -- ID Code = 1
I:3.3	2	Other -- I/O Module -- ID Code = 1
I:3.4	0	Other -- I/O Module -- ID Code = 1
I:3.5	0	Other -- I/O Module -- ID Code = 1
I:3.6	0	Other -- I/O Module -- ID Code = 1
I:3.7	0	Other -- I/O Module -- ID Code = 1
I:3.8	0	Other -- I/O Module -- ID Code = 1
I:3.9	0	Other -- I/O Module -- ID Code = 1

Below the tables are input fields for address (e.g., "I:1.0"), radix ("Hex/BCD"), symbol, and column ("1"). Buttons for "Properties", "Usage", "Forces", and "Help" are provided for each table. The status bar at the bottom shows "For Help, press F1" and "XREF 0:0000 APP READ".

Read Data via Parameter Object Channel Screen 5

The screenshot displays the RSLogix 500 Starter software interface. The title bar reads "RSLogix 500 Starter -- PB_APPNOTE.RSS". The menu bar includes "File", "Edit", "View", "Search", "Comms", "Tools", "Window", and "Help". The toolbar contains various icons for file operations and execution. The main workspace is divided into two panes: "Data File 11 (hex) -- INPUT" and "Data File 11 (hex) -- OUTPUT".

The INPUT pane shows a table with the following data:

Offset	Value	Description
I:3.0	9858	Other -- I/O Module -- ID Code = 1363
I:3.1	1280	Other -- I/O Module -- ID Code = 1363
I:3.2	0	Other -- I/O Module -- ID Code = 1363
I:3.3	9	Other -- I/O Module -- ID Code = 1363
I:3.4	720	Other -- I/O Module -- ID Code = 1363
I:3.5	0	Other -- I/O Module -- ID Code = 1363
I:3.6	0	Other -- I/O Module -- ID Code = 1363
I:3.7	0	Other -- I/O Module -- ID Code = 1363
I:3.8	0	Other -- I/O Module -- ID Code = 1363
I:3.9	0	Other -- I/O Module -- ID Code = 1363

The OUTPUT pane shows a table with the following data:

Offset	Value	Description
I:3.0	1682	Other -- I/O Module -- ID Code = 1
I:3.1	500	Other -- I/O Module -- ID Code = 1
I:3.2	0	Other -- I/O Module -- ID Code = 1
I:3.3	2	Other -- I/O Module -- ID Code = 1
I:3.4	0	Other -- I/O Module -- ID Code = 1
I:3.5	0	Other -- I/O Module -- ID Code = 1
I:3.6	0	Other -- I/O Module -- ID Code = 1
I:3.7	0	Other -- I/O Module -- ID Code = 1
I:3.8	0	Other -- I/O Module -- ID Code = 1
I:3.9	0	Other -- I/O Module -- ID Code = 1

Below each table is a control area with a "Symbol" field (containing "I:1.0" for INPUT and "O:2.0" for OUTPUT), a "Radix" dropdown set to "Hex/BCD", and a "Column" dropdown set to "1". There are also "Properties", "Usage", "Forces", and "Help" buttons for each table.

The status bar at the bottom left says "For Help, press F1". The status bar at the bottom right shows "XREF 0:0000 APP READ".