

Rockwell Software Incorporated
9323 Series Software
APS Release 6.04
Documentation Utility
Program Listing

Processor File: AB500.ACH
October 29, 2008 - 13:25

Rung 2:0
This program is totally useless...

as far as controlling any process. Now on the other hand if you would like to see how different instructions are converted read on.

```
| INPUT          |                               OUTPUT |
| I:1/00        |                               O:2/00 |
|   I:1         |                               O:2    |
|-----] [-----] [-----] [-----] ( )-----|
|           0                               0    |
```

Rung 2:1
This program was converted using the 1756 option. I/O modules were converted to a local 1756 module in the ControlLogix chassis.
I/O addresses will convert to: Local:SS:I.Data.TT

```
| INPUT          |INPUT          |INPUT          |INPUT          |                               OUTPUT |
| I:1/01        |I:1/02         |I:1/03         |I:1/07         |                               O:2/01  |
|   I:1         |   I:1         |   I:1         |   I:1         |                               O:2    |
|+-----] [-----] [-----] [-----] [-----] [-----] (L)-----|
| | 1           | 2           | 3           | 7           | 1           | | |
| | INPUT      |INPUT      |INPUT      | |           | |           |
| | I:1/04     |I:1/05     |I:1/06     | |           | |           |
| |   I:1     |   I:1     |   I:1     | |           | |           |
| +-----]/[-----]/[-----]/[-----] |
|           4           5           6           |
```

Rung 2:2
where:
SS = slot
I = Input (or O for Output)
TT = Terminal

```
| INPUT          |INPUT          |INPUT          |INPUT          |INPUT          |                               OUTPUT |
| I:1/08        |I:1/09         |I:1/10         |I:1/11         |I:1/12         |                               O:2/08  |
|   I:1         |   I:1         |   I:1         |   I:1         |   I:1         |                               O:2    |
|-----] [-----] [-----] [-----] [-----] [-----] (U)-----|
|           8           9           10          11          12           8    |
```

Rung 2:3
I/O outside of this range (or using the NONE option) or modules that don't convert will point to the INT array (Ixxx or Oxxx).

where: xxx = slot

This section of rungs show how BITS are converted.

```
| INPUT          |INPUT          |INPUT          |                               OUTPUT |
| I:1/13        |I:1/14         |I:1/15         |                               O:2/15  |
|   I:1         |   I:1         |   I:1         |                               O:2    |
|-----] [-----] [-----] [-----] [-----] [-----] ( )-----|
|           13          14          15           15    |
```

Program Listing

Processor File: AB500.ACH

Rung 2:4

```
Rung 2:4
| ONE SHOT |                                ONE SHOT |
|           |                                OUTPUT   |
|     B3    |                                B3        |
|---[OSR]---|----- ( ) -----|
|     0     |                                2          |
```

Rung 2:5

```
|
|-----+END+-----|
|
```

Rung 3:0

TIMER INSTRUCTIONS

TON	TON	TON	TON
1.0 TIMER	1.0 TIMER	1.0 TIMER	1.0 TIMER
ENABLE	TIMING	DONE	
T4:0	T4:0	T4:0	
[-----]	[-----]	[-----]	[-----]
EN	TT	DN	
			+TON-----+
			+TIMER ON DELAY +- (EN) -
			Timer T4:0+- (DN)
			Time Base 1.0
			Preset 3600
			Accum 0
			+-----+

Rung 3:1

TOF	TOF	TOF	TOF
0.01 TIMER	0.01 TIMER	0.01 TIMER	0.01 TIMER
ENABLE	TIMING	DONE	
T4:1	T4:1	T4:1	
[-----]	[-----]	[-----]	[-----]
EN	TT	DN	
			+TOF-----+
			+TIMER OFF DELAY +- (EN) -
			Timer T4:1+- (DN)
			Time Base 0.01
			Preset 32767
			Accum 0
			+-----+

Rung 3:2

RTO	RTO	RTO	RTO
0.01 TIMER	0.01 TIMER	0.01 TIMER	0.01 TIMER
ENABLE	TIMING	DONE	
T4:2	T4:2	T4:2	
[-----]	[-----]	[-----]	[-----]
EN	TT	DN	
			+RTO-----+
			+RETENTIVE TIMER ON+- (EN) -
			Timer T4:2+- (DN)
			Time Base 0.01
			Preset 1
			Accum 0
			+-----+

Rung 3:3

RTO		RTO
0.01 TIMER		0.01 TIMER
DONE		
T4:2		T4:2
[-----]		[-----]
DN		(RES) -

Rung 3:4

	-----+END+-----	

Rung 4:0

COUNTER INSTRUCTIONS

CTU	CTU	CTU		CTU	
ENABLE	OVER FLOW	DONE		COUNTER	
C5:0	C5:0	C5:0		+CTU-----+	
-----]	[-----]	[-----]	[-----]	+COUNT UP	+-(CU)-
CU	OV	DN		Counter	C5:0+- (DN)
				Preset	500
				Accum	0
				+-----+	

Rung 4:1

CTD	CTD	CTD		CTD	
ENABLE	UNDER FLOW	DONE		COUNTER	
C5:1	C5:1	C5:1		+CTD-----+	
-----]	[-----]	[-----]	[-----]	+COUNT DOWN	+-(CD)-
CD	UN	DN		Counter	C5:1+- (DN)
				Preset	32767
				Accum	0
				+-----+	

Rung 4:2

CTD				CTD	
DONE				COUNTER	
C5:1				C5:1	
-----]	[-----]			(RES)	----
DN					

Rung 4:3

-----]	[-----]			+END+	----

Rung 5:0
I/O INSTRUCTIONS

INPUT WORD	
+IIM-----+	
+IMMEDIATE INPUT w MASK +-	
Slot	I:1.0
Mask	FFFF
Length	1
+-----+	

Rung 5:1

OUTPUT WORD	
+IOM-----+	
+IMMEDIATE OUT w MASK +-	
Slot	O:2.0
Mask	FFFF
Length	1
+-----+	

Rung 5:2

MSG CONTROL BLOCK	
+MSG-----+	
+READ/WRITE MESSAGE +- (EN) -	
Type	PEER-TO-PEER+- (DN)
Read/Write	READ+- (ER)
Target Device	500CPU
Local/Remote	LOCAL
Control Block	N10:0
Control Block Length	14
+-----+	

Rung 5:3

+-----+	
+END+-----	
+-----+	

Rung 6:0
COMPARE AND COMPUTE INSTRUCTIONS

		COMPUTE	
		+CPT-----+	
-----		+COMPUTE	+--
		Dest	N7:1
			0
		Expression	
		N7:2 + N7:3	
		+-----+	

Rung 6:1

LIMIT TEST		ADD	
+LIM-----+		+ADD-----+	
--LIMIT TEST		+ADD	
Low Lim	0	Source A	N7:5
			0
Test	N7:4	Source B	N7:6
	0		0
High Lim	100	Dest	N7:7
			0
+-----+		+-----+	

Rung 6:2

MASKED EQUAL COMPARE		SUBTRACT	
+MEQ-----+		+SUB-----+	
--MASKED EQUAL		+SUBTRACT	
Source	N7:8	Source A	N7:10
	0		0
Mask	00FF	Source B	N7:11
			0
Compare	N7:9	Dest	N7:12
	0		0
+-----+		+-----+	

Rung 6:3

EQUAL		MULTIPLY	
+EQU-----+		+MUL-----+	
--EQUAL		+MULTIPLY	
Source A	N7:13	Source A	N7:14
	0		0
Source B	55	Source B	100
+-----+		Dest	N7:15
			0
		+-----+	

```

Rung 6:4
|      NOT EQUAL                      DIVIDE                      |
| +NEQ-----+                      +DIV-----+ |
| -+NOT EQUAL +-----+DIVIDE +-----+ |
| |Source A      N7:16| |Source A      N7:18| | | | |
| |              0| |              0| |
| |Source B      N7:17| |Source B      4095.000| |
| |              0| |              | |
| +-----+ | |Dest          F8:0| |
| | | | | | |0.000000| |
| | | | | | +-----+ |

```

```

Rung 6:5
|      LESS THAN                      SQUARE                      |
| +LES-----+                      +SQR-----+ |
| -+LESS THAN +-----+SQUARE ROOT +-----+ |
| |Source A      N7:20| |Source          N7:22| | |
| |              0| |              0| |
| |Source B      N7:21| |Dest          N7:23| |
| |              0| |              0| |
| +-----+ | | | | | +-----+ |

```

```

Rung 6:6
|      GREATER THAN                      NEGATE                      |
| +GRT-----+                      +NEG-----+ |
| -+GREATER THAN +-----+NEGATE +-----+ |
| |Source A      N7:24| |Source          N7:26| | |
| |              0| |              0| |
| |Source B      N7:25| |Dest          N7:27| |
| |              0| |              0| |
| +-----+ | | | | | +-----+ |

```

```

Rung 6:7
|      LESS THAN OR EQUAL                      TO BCD                      |
| +LEQ-----+                      +TOD-----+ |
| -+LESS THAN OR EQUAL+-----+TO BCD +-----+ |
| |Source A      N7:28| |Source          N7:30| | |
| |              0| |              0| |
| |Source B      N7:29| |Dest          0:2.0| |
| |              0| |              0000| |
| +-----+ | | | | | +-----+ |

```

```

Rung 6:8
|      GREATER THAN OR EQUAL                      FROM BCD                      |
| +GEQ-----+                      +FRD-----+ |
| -+GRTR THAN OR EQUAL+-----+FROM BCD +-----+ |
| |Source A      N7:31| |Source          I:1.0| | |
| |              0| |              0000| |
| |Source B      N7:32| |Dest          N7:33| |
| |              0| |              0| |
| +-----+ | | | | | +-----+ |

```


Program Listing

Processor File: AB500.ACH

Rung 6:9

Rung 6:9

```
|-----+END+-----|  
|
```

Rung 7:0
WORD MOVE AND LOGICAL INSTRUCTIONS

```

|                                     MOVE                               |
|                                     WORD                               |
|-----+MOV-----+-----+-----+
|-----+MOVE-----+-----+-----+
| Source          N11:0 |
|                 0 |
| Dest            N11:1 |
|                 0 |
|-----+-----+-----+

```

Rung 7:1

```

|                                     MASKED                          |
|                                     MOVE                              |
|                                     WORD                              |
|-----+MVM-----+-----+-----+
|-----+MASKED MOVE-----+-----+-----+
| Source          N11:2 |
|                 0 |
| Mask            FF00 |
|                 |
| Dest            N11:3 |
|                 0 |
|-----+-----+-----+

```

Rung 7:2

```

|                                     BITWISE                          |
|                                     AND                              |
|-----+AND-----+-----+-----+
|-----+BITWISE AND-----+-----+-----+
| Source A        N11:4 |
|                 0 |
| Source B        N11:5 |
|                 0 |
| Dest            N11:6 |
|                 0 |
|-----+-----+-----+

```

Rung 7:3

```

|                                     BITWISE                          |
|                                     OR                               |
|-----+OR-----+-----+-----+
|-----+BITWISE INCLUS OR-----+-----+-----+
| Source A        N11:7 |
|                 0 |
| Source B        255 |
|                 |
| Dest            N11:8 |
|                 0 |
|-----+-----+-----+

```

Rung 7:4

```
|
|                                     BITWISE
|                                     EXCULSIVE
|                                     OR
|                                     +XOR-----+
|-----+BITWISE EXCLUS OR +-----|
|Source A      N11:9|
|              0|
|Source B      B3:1|
| 0000000000000000|
|Dest          N11:10|
|              0|
|-----+-----|
```

Rung 7:5

```
|
|                                     NOT
|                                     WORD
|                                     +NOT-----+
|-----+NOT +-----|
|Source      N11:11|
|           0|
|Dest        N11:12|
|           0|
|-----+-----|
```

Rung 7:6

```
|
|                                     CLEAR
|                                     WORD
|                                     +CLR-----+
|-----+CLEAR +-----|
|Dest      N11:13|
|           0|
|-----+-----|
```

Rung 7:7

```
|
|-----+END+-----|
|
```

Rung 8:0
FILE INSTRUCTIONS AND PID

```

|                                     COPY                                     |
|                                     FILE                                     |
|-----+-----+-----+-----+-----+-----+-----+-----+-----+
|                                     +COP-----+                         |
|-----+-----+-----+-----+-----+-----+-----+-----+-----+
|                                     +COPY FILE                         +-
|                                     |Source      #N12:0|                 |
|                                     |Dest        #N12:10|                |
|                                     |Length      10|                     |
|-----+-----+-----+-----+-----+-----+-----+-----+-----+

```

Rung 8:1

```

|                                     FILL                                     |
|                                     FILE                                     |
|-----+-----+-----+-----+-----+-----+-----+-----+-----+
|                                     +FLL-----+                         |
|-----+-----+-----+-----+-----+-----+-----+-----+-----+
|                                     +FILL FILE                         +-
|                                     |Source      0|                       |
|                                     |Dest        #N12:20|                 |
|                                     |Length      10|                     |
|-----+-----+-----+-----+-----+-----+-----+-----+-----+

```

Rung 8:2

```

|                                     DOUBLE                                 |
|                                     DIVIDE                                 |
|-----+-----+-----+-----+-----+-----+-----+-----+-----+
|                                     +DDV-----+                         |
|-----+-----+-----+-----+-----+-----+-----+-----+-----+
|                                     +DOUBLE DIVIDE                     +-
|                                     |Source      N12:30|                 |
|                                     |              0|                       |
|                                     |Dest        N12:31|                 |
|                                     |              0|                       |
|-----+-----+-----+-----+-----+-----+-----+-----+-----+

```

Rung 8:3

```

|                                     SCALE                                 |
|-----+-----+-----+-----+-----+-----+-----+-----+-----+
|                                     +SCL-----+                         |
|-----+-----+-----+-----+-----+-----+-----+-----+-----+
|                                     +SCALE                             +-
|                                     |Source      N12:32|                 |
|                                     |              0|                       |
|                                     |Rate [ /10000] 1250|                 |
|                                     |Offset      32|                     |
|                                     |Dest        N12:33|                 |
|                                     |              0|                       |
|-----+-----+-----+-----+-----+-----+-----+-----+-----+

```

Rung 8:4

```

| PID                                     PID                               |
| ENABLE                                 CONTROL                           |
| BIT                                   BLOCK                               |
|   N13:0                               +PID-----+                         |
|-----] / [-----+-----+-----+-----+-----+-----+-----+-----+-----+
|   15                                  +PID                             +-
|                                     |Control Block  N13:0|                 |
|                                     |Process Variable N12:34|                |
|                                     |Control Variable N12:35|                |
|                                     |Control Block Length 23|                |
|-----+-----+-----+-----+-----+-----+-----+-----+-----+

```

Rung 8:5

```
|-----+END+-----|  
|
```

Rung 9:0

SHIFT AND SEQUENCE INSTRUCTIONS

BSL	BSL	BSL	BSL	BIT
ENABLE	DONE	ERROR	UNLOAD	SHIFT
				LEFT
R6:0	R6:0	R6:0	R6:0	+BSL-----+
EN	DN	ER	UL	+BIT SHIFT LEFT +- (EN) -
				File #B14:0+- (DN)
				Control R6:0
				Bit Address B3/1
				Length 45
				+-----+

Rung 9:1

BSR	BSR	BSR	BSR	BIT
ENABLE	DONE	ERROR	UNLOAD	SHIFT
				RIGHT
R6:1	R6:1	R6:1	R6:1	+BSR-----+
EN	DN	ER	UL	+BIT SHIFT RIGHT +- (EN) -
				File #B14:3+- (DN)
				Control R6:1
				Bit Address B3/3
				Length 45
				+-----+

Rung 9:2

SQC	SQC	SQC	SQC	SEQUENCER
ENABLE	DONE	ERROR	FOUND	COMPARE
R6:2	R6:2	R6:2	R6:2	+SQC-----+
EN	DN	ER	FD	+SEQUENCER COMPARE +- (EN) -
				File #B14:6+- (DN)
				Mask 0FFF+- (FD)
				Source I:1.0
				Control R6:2
				Length 20
				Position 0
				+-----+

Rung 9:3

SQL	SQL	SQL		SEQUENCER
ENABLE	DONE	ERROR		LOAD
R6:3	R6:3	R6:3		+SQL-----+
EN	DN	ER		+SEQUENCER LOAD +- (EN) -
				File #B14:6+- (DN)
				Source I:1.0
				Control R6:3
				Length 20
				Position 0
				+-----+

```

Rung 9:4
| SQO          |SQO          |SQO          |          SEQUENCER          |
| ENABLE       |DONE         |ERROR        |          OUTPUT            |
|   R6:4       |R6:4        |R6:4        | +SQO-----+             |
|----]/[-----]/[-----]/[-----]-----+SEQUENCER OUTPUT +- (EN) -|
|   EN         |DN          |ER          | |File      #B14:6+- (DN)  | |
|               |            |            | |Mask      00FF|          |
|               |            |            | |Dest      O:2.0|          |
|               |            |            | |Control   R6:4|          |
|               |            |            | |Length    20|          |
|               |            |            | |Position  0|          |
|               |            |            | +-----+             |

```

Rung 9:5

```

Rung 9:5
| FFL          |FFL          |FFL          |          FIFO              |
| ENABLE       |DONE         |EMPTY        |          LOAD              |
|   R6:5       |R6:5        |R6:5        | +FFL-----+             |
|----]/[-----]/[-----]/[-----]-----+FIFO LOAD +- (EN) -|
|   EN         |DN          |EM          | |Source    B14:27+- (DN)  | |
|               |            |            | |FIFO      #B14:28+- (EM)  |
|               |            |            | |Control   R6:5|          |
|               |            |            | |Length    20|          |
|               |            |            | |Position  0|          |
|               |            |            | +-----+             |

```

Rung 9:6

```

Rung 9:6
| FFU          |FFU          |FFU          |          FIFO              |
| ENABLE       |DONE         |EMPTY        |          UNLOAD            |
|   R6:6       |R6:6        |R6:6        | +FFU-----+             |
|----]/[-----]/[-----]/[-----]-----+FIFO UNLOAD +- (EU) -|
|   EU         |DN          |EM          | |FIFO      #B14:28+- (DN)  | |
|               |            |            | |Dest      B14:48+- (EM)  |
|               |            |            | |Control   R6:6|          |
|               |            |            | |Length    20|          |
|               |            |            | |Position  0|          |
|               |            |            | +-----+             |

```

Rung 9:7

```

Rung 9:7
| LFL          |LFL          |LFL          |          LIFO              |
| ENABLE       |DONE         |EMPTY        |          LOAD              |
|   R6:7       |R6:7        |R6:7        | +LFL-----+             |
|----]/[-----]/[-----]/[-----]-----+LIFO LOAD +- (EN) -|
|   EN         |DN          |EM          | |Source    B14:49+- (DN)  | |
|               |            |            | |LIFO      #B14:50+- (EM)  |
|               |            |            | |Control   R6:7|          |
|               |            |            | |Length    20|          |
|               |            |            | |Position  0|          |
|               |            |            | +-----+             |

```

Rung 9:8

```

| LFU          | LFU          | LFU          | LIFO          |
| ENABLE       | DONE         | EMPTY        | UNLOAD        |
|   R6:8       |   R6:8       |   R6:8       | +LFU-----+
|----]/[-----]/[-----]/[-----+LIFO UNLOAD +- (EU) -|
|   EU         |   DN         |   EM         | |LIFO #B14:50+- (DN)|
|               |               |               | |Dest  B14:70+- (EM)|
|               |               |               | |Control R6:8|
|               |               |               | |Length  20|
|               |               |               | |Position 0|
|               |               |               | +-----+

```

Rung 9:9

```

|-----+END+-----|

```


Rung 10:0

PROGRAM CONTROL INSTRUCTIONS

```

|                                     PROGRAM          |
|                                     SUBROUTINE       |
| +SBR-----+                               +JSR-----+ |
| -+SUBROUTINE      +-----+JUMP TO SUBROUTINE+-- |
| +-----+                               |SBR file number 10| |
|                                     +-----+ |

```

Rung 10:1

```

|                                     LABEL 1        |
|                                     1              |
| ----- (JMP) ----- |
|

```

Rung 10:2

```

| ----- (TND) ----- |
|

```

Rung 10:3

```

| LABEL 1 |
| 1 |
| --- [LBL] ----- (MCR) --- |
|

```

Rung 10:4

```

| ----- (MCR) ----- |
|

```

Rung 10:5

```

|                                     +RET-----+ |
| -----+RETURN      +-- |
|                                     +-----+ |

```

Rung 10:6

```

| -----+END+----- |
|

```

Rung 11:0
ADVANCED MATH INSTRUCTIONS

```
|
|                                     SINE
|                                     +SIN-----+
|-----+SINE                        +-
|Source      F15:0|
|           0.000000|
|Dest        F15:1|
|           0.000000|
|-----+-----+
|
```

Rung 11:1

```
|
|                                     COSINE
|                                     +COS-----+
|-----+COSINE                       +-
|Source      F15:2|
|           0.000000|
|Dest        F15:3|
|           0.000000|
|-----+-----+
|
```

Rung 11:2

```
|
|                                     TANGENT
|                                     +TAN-----+
|-----+TANGENT                       +-
|Source      F15:4|
|           0.000000|
|Dest        F15:5|
|           0.000000|
|-----+-----+
|
```

Rung 11:3

```
|
|                                     ARCSINE
|                                     +ASN-----+
|-----+ARCSINE                       +-
|Source      F15:6|
|           0.000000|
|Dest        F15:7|
|           0.000000|
|-----+-----+
|
```

Rung 11:4

```
|
|                                     ARCCOSINE
|                                     +ACS-----+
|-----+ARCCOSINE                     +-
|Source      F15:8|
|           0.000000|
|Dest        F15:9|
|           0.000000|
|-----+-----+
|
```

Rung 11:5

ARCTANGENT	
+ATN-----+	
+ARCTANGENT +-	
Source	F15:10
	0.000000
Dest	F15:11
	0.000000
+-----+	

Rung 11:6

NATURAL LOG	
+LN-----+	
+NATURAL LOG +-	
Source	F15:12
	0.000000
Dest	F15:13
	0.000000
+-----+	

Rung 11:7

LOG BASE 10	
+LOG-----+	
+LOG BASE 10 +-	
Source	F15:14
	0.000000
Dest	F15:15
	0.000000
+-----+	

Rung 11:8

RADIANS TO DEGREES	
+DEG-----+	
+RADIANS TO DEGREES+-	
Source	F15:16
	0.000000
Dest	F15:17
	0.000000
+-----+	

Rung 11:9

DEGREES TO RADIANS	
+RAD-----+	
+DEGREES TO RADIANS+-	
Source	F15:18
	0.000000
Dest	F15:19
	0.000000
+-----+	

Rung 11:10

```
|
|                                     X TO Y
|                                     +XPY-----+
|-----+X TO POWER OF Y +-----+
|      |Source A   F15:20|
|      |           0.000000|
|      |Source B   2.000000|
|      |           |
|      |Dest       F15:21|
|      |           0.000000|
|      +-----+
|
```

Rung 11:11

```
|
|                                     ABSOLUTE
|                                     VALUE
|                                     +ABS-----+
|-----+ABSOLUTE VALUE +-----+
|      |Source     F15:22|
|      |           0.000000|
|      |Dest       F15:23|
|      |           0.000000|
|      +-----+
|
```

Rung 11:12

```
|
|                                     SCALE
|                                     WITH
|                                     PARAMETERS
|                                     +SCP-----+
|-----+SCALE W/PARAMETERS +-----+
|      |Input      N16:0|
|      |           0|
|      |Input Min.  0|
|      |           |
|      |Input Max.  16384|
|      |           |
|      |Scaled Min.  0|
|      |           |
|      |Scaled Max.  4096|
|      |           |
|      |Scaled Output N16:1|
|      |           0|
|      +-----+
|
```

Rung 11:13

```
|
|                                     SWAP
|                                     BYTES
|                                     +SWP-----+
|-----+SWAP +-----+
|      |Source     #N16:2|
|      |Length     1|
|      +-----+
|
```


Rung 12:0
INDIRECT ADDRESSING

These rungs show how indirect addresses will be converted. Indirect addresses can not be documented in the ControlLogix.

```

|                                     POINTER |
|                                     ADDRESS |
|                                     +MOV-----+ |
|-----+MOVE                        +- |
| Source                               1 | |
|                                     | |
| Dest                                N17:0 | |
|                                     0 | |
|-----+ |

```

Rung 12:1

```

| BIT                                WORD |
| INDIRECT                           INDIRECT |
| ADDRESS                             ADDRESS |
| N7:19                               +MOV-----+ |
|-----] [-----+MOVE                +- |
| [N17:0]                             | Source      2 | |
|                                     | |
| Dest                                N7:[N17:0] | |
|                                     0 | |
|-----+ |

```

Rung 12:2

```

|-----+END+----- |
|

```

REPORT OPTIONS SUMMARY

Insure Valid X-Ref Info:	NO
Graphics Mode:	NO
Page Width:	80
Page Length:	66
Starting File:	2
Ending File:	12
Power Rail:	YES
Address Comments:	YES
Address Display:	SYMBOL
Rung Comments:	YES
Ladder Cross Reference:	NONE
Output Cross Reference:	NO