

Micro-Instruction Control Vector

END

W

R

MEM

I/O

DEC

STP AC

STP DR

INC PC

CLI

STI

CLL

CPL

IF3

IF2

IF1

IF0

WU2

WU1

WU0

RU3

RU2

RU1

RU0

Memory Bank Unit

AEXT7 ROM

AEXT6

AEXT5

AEXT4

AEXT3

AEXT2

AEXT1

AEXT0

Program Counter

15

14

13

12

11

10

9

8

7

6

5

4

3

2

1

0

Interrupt Requests

7

6

5

4

3

2

1

0

Enabled Interrupts

7

6

5

4

3

2

1

0

Flags

MBEN

N

Z

V

I

L

Accumulator

15

14

13

12

11

10

9

8

7

6

5

4

3

2

1

0

State

RUN

STOP

WS

FETCH

EXEC

INT

Output Register/Data Register/Micro-address vector

RST

INT

V

L

OP3

OP2

OP1

OP0

I

SKIP

AIDX

μPC3

μPC2

μPC1

μPC0

7

6

5

4

3

2

1

0

7

6

5

4

3

2

1

0

Microcode Bank Ext

μCB3

μCB2

μCB1

μCB0

Instruction Register

OP3

OP2

OP1

OP0

I

R

9

8

7

6

5

4

3

2

1

0

RESET

RUN

μSTEP

FAST

LTS ON

OR

SLOW

DR

Switch Register

START

STOP

STEP

CREEP

OFF

μADDR VEC

POWER

PANEL LOCK

15  
8000  
100000  
LIA/JMPII

14  
4000  
40000  
ISZ

13  
2000  
20000  
OP2/POP

12  
1000  
10000  
OP1

11  
800  
4000  
XOR

10  
400  
2000  
OR

9  
200  
1000  
AND

8  
100  
400  
ADD

7  
80  
200  
JSR

6  
40  
100  
JMP

5  
20  
40  
OUT

4  
10  
20  
IN

3  
8  
10  
STORE

2  
4  
4  
LOAD

1  
2  
2  
IOT

0  
1  
1  
TRAP

SR→IR

MEM W

MEM R

I/O W

I/O R

RAM BNK

IFR1

SR→PC

SR→AC

W NEXT

R NEXT

W NEXT

R NEXT

ROM BNK

IFR6



16 BIT SOLID STATE MINI COMPUTER