

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

Flags

MBEN

N

Z

V

I

L

Accumulator

15

14

13

12

11

10

9

8

7

6

5

4

3

2

1

0

Enabled Interrupts

7

6

5

4

3

2

1

0

State

RESET

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

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

SLOW

FAST

LTS ON

OR

DR

Switch Register

START

STOP

STEP

CREEP

OFF

μADDR VEC

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