Start

Binary input

quit?

R0..R15

F

T

Decimal output

End

Detailed Top Level

George Eaton November 2020

Rev 1.0

Start

get a key

xx_getKey

key == 0 || 1
&& < =16 bits
entered?

T

output bit

ge_output_X

add to buffer
xx_addBuf

F

key ==
backspace ?

T

remove last
input

xx_delBuf

F

key ==
c ?

T

clear buffer

xx_clearBuf

F

key ==
q ?

T

clear buffer

xx_clearBuf

F

key ==
Enter && 16 bits
entered?

F

T

process buffer

xx_processBuf

get a key

xx_getKey

F

key == q ?

clear buffer

xx_clearBuf

T

key == c || q ||
Enter ?

F

T

End

xx_processBuf

Start

Convert buffer to 16 bit word

Convert 16 bit word to decimal digits

Output arrow

Output sign

Output decimal digits

End

George Eaton December 2020

Convert 16 bit
word to
decimal digits

Rev 1.1

Start

Special case
of -32768?

T → set sign and digits to
-32768

F

Determine 10000s
digit

Determine 1000s digit

Determine 100s digit

Determine 10s digit &
remainder = 1s

End