## HANDY RELEASE 0.5.1 16 November 1988

### CONFIDENTIAL and PROPRIETARY

This document describes the V 0.5.1 bug fix release of Handy development environment. It includes these sections:

- Handebug V1.34
- Handycraft V1.29
- Revisions to 6502: Directory
- What You Must Do To Start Using This Release

#### Handebug V1.34

#### Bug fixes:

- Low memory isn't trashed
- Structure display updated correctly

#### Handycraft V1.29

#### Bug fixes:

Sprites might appear for you now. I dunno, maybe

## Revisions to 6502: Directory

Handy math macros are slightly modified. Now, you setup up all your registers, writing MATHA or MATHE last (which on real hardware will trigger the math operation) and then use the MULTIPLY or DIVIDE macro depending on which you want to do. On real hardware, these macros will do nothing as the act of writing to the math triger register starts the math for you. In the emulator, these macros do a JSR to the appropriate routine.

To use the math you must do this:

- Call RESETMATH to initialize the registers
- If you're doing a multiply
  - If you want to accumulate the results of multiplies, you can either preset the accumulator or use the CLEARACCUM macro to reset the accumulator
  - Set any of the registers, and set MATHA last
  - MULTIPLY
- If you're doing a divide
  - Set any of the registers, and set MATHE last
  - DIVIDE
- You might want to call WAITMATH to wait for the results, or you might want to go off and do other stuff while the math hardware churns

6502:examples/testmath.src reflects the above changes.

# What You Must Do To Start Using This Release

If you have started using the math macros, you'll need to make the above changes.