

## PUP Documentation

Copyright 1978 by Jamie Shrider and MicroWorks, Inc.

PUP stands for Phimon Upgrade Program, and that's exactly what it does: it takes a PHIMON 1.0 tape and converts it to a PHIMON 2.0 tape. To use it, the suggested procedure is:

1. Power up with a PHIMON 1.0 tape
2. Type RE
3. Read in the Suding-format copy of PUP
4. Type ST 5000
5. Follow the instructions given by PUP.

Once a PHIMON 2.0 tape has been created, more PHIMON 2.0 tapes may be created using the BU command (rather than going through the above procedure again).

Note: Running PUP will NOT destroy the directory of the PHIMON 1.0 tape.

### PHIMON 2.0 features:

- \*HX command -- Set I/O mode to hexadecimal (Except on the DI command)
- \*OC command -- Set I/O mode to octal
- \*RW command -- Format: RW#n  
will rewind drive #n. If n is not specified, a default to drive zero occurs.
- \*DT command -- DT has been replaced by STEPPER 1.0
- \*BU command -- Format: BU#n '(any valid PHIMON command)  
Standard BU command except that if the apostrophe followed by a command is included, the system will execute that command upon power up.
- \*LO command -- Same as old LO, except that an @nnnn clause may be specified, where nnnn is a full octal or hex address (page & byte). Will perform an offset load into memory starting with the specified (nnnn) byte.
- \*DI command -- Output format has been modified and a bug has been fixed (DI .EX did not work -- see the PHIMON manual for more information about this function).
- \*ZE command -- Now asks for tape length in order to fully utilize tapes. Valid lengths are 30, 45, 60, 90, and 120.
- \*True 64 character output has been implemented throughout PHIMON 2.0 and the upgraded version of PIP.
- \*Several known tape-handling errors have been corrected. (such as drive change timeout and overrun rewind)