

# ZEAP O/P

ZEAP OUTPUT TO PRINTER/'TELETYPE'

by R. Beal

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Mr. J. Addey has written to the INMC saying:-

"We bought ZEAP some time ago hoping to use it on our NASCOM 1 which is exclusively used in conjunction with an ASR 'teletype'. End of story. No-one from NASCOM can offer any advice as to how ZEAP may be used except by using the original keyboard + VDU O/P."

Here are the answers for both ZEAP 1 and ZEAP 2.

## ZEAP 1

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The address of the output routine is located at 0F22-0F23, so cold start ZEAP, then return to the monitor, then alter this address to your own routine and then warm start ZEAP. When you use ZEAP, only output from the U command (=list to UART) and assembler output with option 04 on (TTY option) will be output to the TTY. This is extremely useful as updates to text are carried out using the Nascom keyboard and VDU, command 04 is entered and then the A command, for hard copy listing.

If you are simply using a serial ASCII printer, there is no need to change the address at 0F22-0F23 because the default is to send the data to the UART in any case. Read pages 43 and 49 of the ZEAP 1 manual where it is explained very clearly. If you are using a parallel printer (or serial device) which require special print handling routines, then this pointer must be changed to direct data to the output handling routine.

## ZEAP 2

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The comments above for ZEAP 1 apply also to ZEAP 2, except that the address of the output routine is at 0F05-0F06. See appendix E, and appendix G, as well as the description of the U command, all clearly set out in the ZEAP 2 manual.

## INPUT

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You may wish to use an external keyboard for input. ZEAP does nothing special when it gets an input character, so you can activate a teletype keyboard as described in the Nas-Sys manual under the X command. (Enter X0.) This also works with the T4 monitor, and applies to ZEAP 1 and ZEAP 2. If you are still back in the dark ages with T2 then bad luck, you can't do it without writing a special program. Using the X command will not in this case affect output, as ZEAP itself takes control of where the output is to go to.

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