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><><   TRICKS OF THE TRADE   ><><
><><><><><   TUTORIAL #2   ><><><><><
><><><><><   MIKE WHITE   ><><><><><
><><><><><><   COUNTY LINE #2   ><><><><><
><><><><><><   R.D.#1 BOX 373   ><><><><><
><><><><><><   WAKEMAN , OHIO   ><><><><><
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BEFORE RETURNING TO FOR NEXT LOOPS, I WANT TO EXPLAIN THIS MONTHS PROGRAM SOMEWHAT. HERE IS A REPRINT OF "FILE SEARCHER EB"

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ENTER>DE.;CLEAR
1 :INPUT
10 CLEAR ;DATA BC,7,165,91,0;DATA NT,0,-25,8,6;PRINT "STOP TAPE
20 NT=3;FOR G=0TO 50;MU=RND (26)+64;NEXT G;CLEAR ;FOR G=1TO
%(27808)c10-8;PRINT #3,G,;GOSUB 80
30 NEXT G;CC=5;PRINT "YOUR CHOICE?
40 G=KP+48;IF (G<1)+(G>%(27808)c10-8)GOTO 40
50 CLEAR ;DATA CX,-29,8,6;PRINT "START TAPE";NT=0
60 :INPUT W;CLEAR ;CY=12;IF Y=G CC=6;CX=-17;PRINT "LOADING";
GOSUB 80;RUN
70 CC=5;CX=-35;PRINT "SEARCHING FOR";GOSUB 80;FOR D=WTO X;NEXT D
;FOR D=WTO X;NEXT D;GOTO 60
80 IF G=1CX=-(# OF LETTERS+SPACES)b3+1;PRINT "PROG. TITLE
90 IF G=2 ETC.
(LAST LINE NO.) RETURN
ENTER>PRINT ";GOTO 10";:PRINT %(24676),1690

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THE SET UP IN LINE #1 IS BECAUSE UNLIKE AB, EB EXECUTES INSTRUCTIONS WHERE THEY LIE. WE NEED TO SET UP A STARTING POINT SO THE COMPUTER DOESN'T GET LOST. USING LINE #1 IN AB WILL WORK. IN FACT, YOU HAVE THE ADVANTAGE OF SETTING UP THE LINE INPUT BUFFER OF YOUR "SLAVE" PROGRAMS. TAPE THOSE AB PROGRAMS:

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ENTER>PRINT ";&(0)=170;&(1)=170;&(2)=7;&(3)=7;&(9)=20;RUN ";
:PRINT %(16384),1937

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(THIS EXAMPLE TAPES "GOLF" PG.46 VOL.3 ARCADIAN). IN EB YOUR SLAVE PROGRAMS WILL HAVE TO START WITH:

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1 ..
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TAPE THEM BY FIRST TIMING A :PRINT (OF THE ENTIRE DUMP) NEXT ENTER THIS LINE TEMPORARILY AND FIND VALUES FOR W+X THAT GIVE A DELAY A LITTLE LONGER THAN YOUR DUMP ROUTINE TOOK.

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30000 FOR Z=WTO X;NEXT Z;FOR Z=WTO X;NEXT Z
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THEN TAPE WITH:

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ENTER>:PRINT W,3;DA.W,(YOUR #'S);:PRINT (YOUR DUMP ROUTINE)
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THE PUZZLING PART OF THIS PROGRAM IS THE PART DON GLADDEN DID NOT PRINT IN THE ARCADIAN, %(20111). PUT AB IN THE SLOT AND RESET. ENTER>PRINT %(20111). NOW ENTER [WORDS] [GO]. WHAT LINE # ARE YOU AT? ENTER:

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10PRINT "YOUR NAME
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NOW >PRINT %(20111). WHAT DID YOU GET NOW? RESET AND ENTER>%(20111)=9990. NOW ENTER [WORDS] [GO]. WHAT LINE # ARE YOU AT NOW? ARE YOU NOW FAMILIAR WITH THE +10 ADVANCE REGISTER? IN OLD BB IT WAS AT %(20068), %(-32608) IN VIPER-SOFT, AND %(27808) IN BLUE RAM BASIC. THIS SETS THE LOOPS AUTOMATICALLY IF A CHANGE IS MADE TO THE MENU. (NEW ADDITION PERHAPS). JUST ENTER: (LAST LINE #) [PAUSE] [PAUSE], JUST BEFORE TAPING. DONT FORGET! IF ANY OF MY PROGRAMS PUZZLE YOU, DON'T HESITATE TO WRITE. A S.A.S.E. SPEEDS UP REPLY'S. NOW ON TO:

FOR NEXT LOOPS AND DJNZ

DID YOU FIGURE THAT LOOP OUT FROM LAST MONTH? ON PAGE 21 OF THE ASTRO BASIC INSTRUCTION MANUAL YOU WILL READ:

"THE WORD NEXT IN LINE 30 MEANS ADD 1 TO A AND LOOP BACK TO THE WORD FOR."

NOT "HE WILL GO BACK TO LINE #20, ADD ONE TO 'A', AND REPEAT THE PROCESS, (LOOP), UNTIL 'A' IS MORE THAN FIVE.", AS DON GLADDEN SAID ON PG.69 VOL.5 ARCADIAN. NOW I,M NOT SAYING THAT DON'S TUTORIALS IN VOL.5 WERE MISLEADING, IN FACT THIS IS THE ONLY TIME THAT A TECHNICAL MISTAKE WAS MADE! IF YOU HAVEN'T GOT VOL.5 GET IT! DON'S (AND OTHERS) WRITINGS ARE INVALUBLE! WHY DID THE LOOP OVERRUN A 13? YOU ASK? WHEN BASIC WAS WRITTEN THE "WIZZARDS" IN THE BUSINESS DECIDED TO GIVE US A LOOP INSTRUCTION THAT RESEMBLES DJNZ! WHAT'S DJNZ??? YOU ARE WONDERING. DJNZ IS THE ASSEMBLY LANGUAGE MNEMONIC FOR A MACHINE CODE INSTRUCTION USED FOR LOOPS. DJNZ STANDS FOR "DECREMENT AND JUMP IF NOT ZERO" THE B REGISTER INSIDE THE Z80 (NOT BASIC VARIABLE B), IS PRESET. THEN WHEN THE DJNZ IS ENCOUNTERED B IS DECREMENTED BY ONE THEN TESTED. IF B=0 THE NEXT INSTRUCTION IS EXECUTED. IF NOT, THE OFFSET VALUE (IMMEDIATELY FOLLOWING THE DJNZ) IS ADDED TO THE PROGRAM COUNTER, CAUSING A JUMP TO OCCUR, + A LOOP TO BE FORMED. NOTICE THAT THE "NEXT" IN BASIC DOES THE SAME. THE VARIABLE IS ADDED TO THE "STEP", THEN IT IS TESTED TO SEE IF IT HAS PAST THE END OF THE LOOP. IF YOU TRIED CHANGING THE "STEP" AROUND YOU WOULD HAVE FOUND THAT THE VARIABLE STOPED ONE "STEP" OVER THE END. NOW, I'LL GIVE YOU SOMETHING TO HOLD YOU TILL NEXT MONTH.

ON PG.103 VOL.4 ARCADIAN I READ (CONCERNING GOTO AND GOSUB), "THE COMPUTER GOES BACK TO THE BEGINNING AND SEARCHES FOR THE NEW LINE NUMBER.-SHOULD BE NEAR THE BEGINNING TO SAVE TIME." FOR NEXT LOOPS HAVE NO SUCH HANGUPS AND CONSEQUENTLY RUN FASTER. BUT ,CAN YOU WRITE A FOR NEXT LOOP THAT WON'T END? IT HAS BEEN DONE. SEE MONKEY JUMP OR QUADRA! ANSWERS NEXT MONTH. KEEP BUGGIN'!