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0001 *****
0002 *           M O D 3
0003 *****
0004           IDT 'MOD3'
0005 0000      RDRG
0006          0320 DRCRU EQU >320 DECREMENTER CRU BASE ADDRESS
0007          0360 FLGCRU EQU >360 FLAG REGISTER CRU BASE ADDRESS
0008          03C0 P0DATA EQU >3C0 P0 - P15 CRU BASE ADDRESS
0009          03E0 P16DTA EQU >3E0 P16 - P31 CRU BASE ADDRESS
0010 *
0011 *
0012 *           WORKSPACE / REGISTER ASSIGNMENTS
0013          0001 GENR1 EQU 1 GENERAL REGISTER 1
0014          0002 GENR2 EQU 2 GENERAL REGISTER 2
0015          0003 GENR3 EQU 3 GENERAL REGISTER 3
0016          0004 GENR4 EQU 4 GENERAL REGISTER 4
0017          0005 STROBE EQU 5 STROBE COUNTER
0018          0006 MILISC EQU 6 MILLISECOND COUNTER
0019          0008 CT5060 EQU 8 50/60 HERTZ COUNTER
0020          0009 FLSHCT EQU 9 FLASH TIME COUNTER
0021          000A MS3 EQU 10 3 MILLISECOND COUNTER
0022          000C CRUBAD EQU 12 CRU BASE ADDRESS STORE
0023 *
0024 *
0025 *           WORKSPACE 2 REGISTER ASSIGNMENTS
0026 *R0      USED FOR 60 SEC DELAY ON TYPEIN
0027          0001 GENRB1 EQU 1 GENERAL REGISTER 1
0028          0002 GENRB2 EQU 2 GENERAL REGISTER 2
0029          0003 GENRB3 EQU 3 GENERAL REGISTER 3
0030          0004 GENRB4 EQU 4 GENERAL REGISTER 4
0031          0005 MS500 EQU 5 500 MILLISECOND COUNTER
0032          0006 DELAY EQU 6 DELAY COUNTER
0033          0007 PRGPT EQU 7 PLAY AT SEQUENCE POINTER
0034          0008 GOTOPT EQU 8 GOTO SEQUENCE POINTER
0035          0009 FTNPT EQU 9 FUNCTION SEQUENCE POINTER
0036          000A MEMIPT EQU 10 MEMORY INPUT SEQUENCE POINTER
0037          000D TMPIPT EQU 13 TEMPORARY INPUT STORE
0038 *
0039 *
0040 *
0041 *           FLAG ASSIGNMENTS IN FLAG REGISTER
0042 *
0043          0000 ARWFLG EQU 0 AUTO REWIND FLAG
0044          0001 RRLFLG EQU 1 RECORD RELEASE FLAG
0045          0002 RPSFLG EQU 2 RECORD PAUSE FLAG
0046          0003 RECFLG EQU 3 RECORD FLAG
0047          0004 MIPFLG EQU 4 MEMORY INPUT FLAG
0048          0005 TCLFLG EQU 5 TAPE CALIBRATED FLAG
0049          0006 EDTFLG EQU 6 END OF TAPE FLAG
0050          0007 DLYFLG EQU 7 DELAY FLAG
0051          0008 PRGFLG EQU 8 PLAY AT PROGRAM FLAG
0052          0009 FUNFLG EQU 9 FUNCTION RUNNING FLAG
0053          000A FFWFLG EQU 10 FAST FORWARD FLAG
0054          000B DSPTIM EQU 11 DISPLAY TIME FLAG
0055          000C DSPUD EQU 12 DISPLAY UPDATE FLAG
    
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|      |           |        |   |          |                                |
|------|-----------|--------|---|----------|--------------------------------|
| 0056 | 000D      | FLSFLG | EQU   | 13       | FLASH DISPLAY FLAG             |
| 0057 | 000E      | DSPDN  | EQU   | 14       | DISPLAY ON FLAG                |
| 0058 | 000F      | GOTDFG | EQU   | 15       | GOTO FLAG                      |
| 0059 | 0000      | CKCAL  | EQU   | 0        | CLOCK CALIBRATED FLAG          |
| 0060 | 0001      | LOCFLG | EQU   | 1        | LOCAL KEYBOARD INPUT FLAG      |
| 0061 | 0002      | REMFLG | EQU   | 2        | REMOTE KEYBOARD INPUT FLAG     |
| 0062 | 0003      | CKSTAT | EQU   | 3        | CLOCK INPUT STATUS             |
| 0063 | 0004      | CKSTFG | EQU   | 4        | CLOCK SET FLAG                 |
| 0064 | 0005      | TPSTAT | EQU   | 5        | TAPE COUNT INPUT STATUS        |
| 0065 |           | *      |   |          |                                |
| 0066 |           | *      |   |          |                                |
| 0067 |           | *      |   |          |                                |
| 0068 |           | *      |   |          |                                |
| 0069 | 0027      | CON23  | EQU   | 39       | DECIMAL POINT - DISC INDICATOR |
| 0070 |           | *      |   |          |                                |
| 0071 |           | *      |   |          |                                |
| 0072 |           | *      |   |          | INPUT-OUTPUT LINE ASSIGNMENTS  |
| 0073 |           | *      |   |          |                                |
| 0074 |           | *      |   |          |                                |
| 0075 |           | *      |   |          |                                |
| 0076 | 0030      | CLKIP  | EQU   | 48       | REAL TIME CLOCK INPUT          |
| 0077 | 0031      | REMIP  | EQU   | 49       | REMOTE SIGNAL INPUT            |
| 0078 | 003F      | TAPIP  | EQU   | 63       | TAPE COUNTER SIGNAL INPUT      |
| 0079 | 0040      | RECAWD | EQU   | 64       | RECORD ALLOWED INPUT           |
| 0080 | 0041      | TAPIND | EQU   | 65       | TAPE CASSETTE INDICATOR        |
| 0081 | 0042      | TAPDWR | EQU   | 66       | TAPE POWER SWITCH              |
| 0082 | 0043      | FFWD   | EQU   | 67       | FAST FORWARD CONTROL SWITCH    |
| 0083 | 0044      | REWD   | EQU   | 68       | REWIND CONTROL SWITCH          |
| 0084 | 0045      | RECDSP | EQU   | 69       | RECORDING DISPLAY LED          |
| 0085 | 0046      | GRAMSP | EQU   | 70       | GRAMPHONE STOP CONTROL         |
| 0086 | 0047      | DSCPT  | EQU   | 71       | DEC POINT- DISC INDICATOR      |
| 0087 | 004F      | MUTE   | EQU   | 79       | MUTING CONTROL                 |
| 0088 |           | *      |   |          |                                |
| 0089 |           | *      |   |          |                                |
| 0090 | 0E00      | WKSP2  | EQU   | >E00     | WORKSPACE 2 ADDRESS            |
| 0091 | 0E20      | WKSP1  | EQU   | >E20     | WORKSPACE 1 ADDRESS            |
| 0092 | 0E80      | DCAPC  | EQU   | >E80     | DECIMAL ADD CORRECT ADDRESS    |
| 0093 | 0EA4      | DCSPC  | EQU   | >EA4     | DECIMAL SUBTRACT ADDRESS       |
| 0094 |           | DEF    | LABT6                                       |          |                                |
| 0095 |           | DEF    | REWKEY,FFKEY,STBY,TAPREL,VOLUP,VOLDN,GOTOKY |          |                                |
| 0096 |           | REF    | TEMDSP,PRGFTN,PRGTIM,DIGT5,ERROR,VOLUD      |          |                                |
| 0097 |           | REF    | LABB8,TAPCNT,GOTDST,LABB2                   |          |                                |
| 0098 |           | REF    | REMC,RECST,PRGREC,DLYUD2,LOC3,LABD5,FLAG33  |          |                                |
| 0099 |           | REF    | SELDP,VOLSEL,RTCNST                         |          |                                |
| 0100 |           | REF    | DLYUD,LABDL                                 |          |                                |
| 0101 |           | *      |   |          |                                |
| 0102 |           | *      |   |          |                                |
| 0103 |           | *      |   |          |                                |
| 0104 |           | *      |   |          |                                |
| 0105 |           | *      |   |          | DECODE SECTION FOR REWIND KEY  |
| 0106 |           | *      |   |          |                                |
| 0107 | 0000 0460 | ERRDRH | B   | 0ERRDR   |                                |
|      | 0002 0000 |        |   |          |                                |
| 0108 | 0004 0201 | REWKEY | LI  | GENRB1,7 | LOAD FUNCTION NUMBER           |
|      | 0006 0007 |        |   |          |                                |

|      |      |            |        |     |                |                               |
|------|------|------------|--------|-----|----------------|-------------------------------|
| 0109 | 0008 | 1F04       |        | TB  | MIPFLG         | TEST FOR MEMORY INPUT         |
| 0110 | 000A | 16--       |        | JNE | LABT1          |                               |
| 0111 | 000C | 045A       |        | B   | *MEMIPT        | GO TO MEMORY INPUT SEQUENCE   |
| 0112 | 000E | 1F03       | LABT1  | TB  | RECFLG         | TEST FOR RECORDING            |
|      |      | 000A**1601 |        |     |                |                               |
| 0113 | 0010 | 13F7       |        | JEQ | ERRORH         |                               |
| 0114 | 0012 | 0205       |        | LI  | MS500,1200     | DELAY FOR AUTOSTOP            |
|      |      | 0014       |        |     | 04B0           |                               |
| 0115 | 0016 | 1F00       |        | TB  | ARWFLG         | TEST FOR AUTO REWIND          |
| 0116 | 0018 | 16--       |        | JNE | LABT2          |                               |
| 0117 | 001A | 1F02       |        | TB  | RPSFLG         | TEST FOR RECORD PAUSE         |
| 0118 | 001C | 13--       |        | JEQ | LABD18         |                               |
| 0119 | 001E | 1F44       | LABT2  | TB  | REWD           | IS REWIND ACTIVE              |
|      |      | 0018**1602 |        |     |                |                               |
| 0120 | 0020 | 13--       |        | JEQ | LABT3          |                               |
| 0121 | 0022 | 1F43       |        | TB  | FFWD           | IS FAST FORWARD ACTIVE        |
| 0122 | 0024 | 13--       |        | JEQ | LABD19         |                               |
| 0123 | 0026 | 1F41       | LABT3  | TB  | TAPIND         | TEST FOR PRESENCE OF CASSETTE |
|      |      | 0020**1302 |        |     |                |                               |
| 0124 | 0028 | 16EB       |        | JNE | ERRORH         |                               |
| 0125 | 002A | 1D4F       |        | SBO | MUTE           |                               |
| 0126 | 002C | 1D43       |        | SBO | FFWD           | STOP >>                       |
| 0127 | 002E | 1D44       |        | SBO | REWD           | STOP <<                       |
| 0128 | 0030 | 1E42       |        | SBZ | TAPDWR         | TURN ON TAPE POWER            |
| 0129 | 0032 | 1E47       |        | SBZ | DSCPT          | TURN OFF OUTPUT POINT         |
| 0130 | 0034 | 1E02       |        | SBZ | RPSFLG         | RESET RECORD PAUSE            |
| 0131 | 0036 | 1E06       |        | SBZ | EDTFLG         | RESET END OF TAPE FLAG        |
| 0132 | 0038 | 1E0B       |        | SBZ | DSPTIM         | DISPLAY TAPE COUNTER          |
| 0133 | 003A | 1D0C       |        | SBO | DSPUD          |                               |
| 0134 | 003C | 1E0D       |        | SBZ | FLSFLG         |                               |
| 0135 | 003E | 1D45       |        | SBO | RECDSP         |                               |
| 0136 | 0040 | 0209       |        | LI  | FTNPT,LABD21   | SET UP RETURN ADDRESS         |
|      |      | 0042       |        |     | ----           |                               |
| 0137 | 0044 | 1E0F       |        | SBZ | GOTDFG         | RESET GOTD FLAG               |
| 0138 | 0046 | 0202       |        | LI  | GENRB2,700     | DELAY FOR 700 MS              |
| 82A  |      | 0048       |        |     | 02BC           |                               |
| 0139 | 004A | 0460       |        | B   | @DLYUD         |                               |
|      |      | 004C       |        |     | 0000           |                               |
| 0140 |      |            |        |     | *              |                               |
| 0141 | 004E | 1E44       | LABD21 | SBZ | REWD           | START REWIND                  |
|      |      | 0042**004E |        |     |                |                               |
| 0142 | 0050 | 1E0A       |        | SBZ | FFWFLG         | DECREMENT TAPE COUNTER        |
| 0143 | 0052 | 0460       |        | B   | @LABD5         | GO AND FIND KEY SPACE         |
|      |      | 0054       |        |     | 0000           |                               |
| 0144 |      |            |        |     | *              |                               |
| 0145 | 0056 | 1E44       | LABD18 | SBZ | REWD           | START REWIND                  |
|      |      | 001C**131C |        |     |                |                               |
| 0146 | 0058 | 1D45       |        | SBO | RECDSP         | RESET RECORD DISPLAY          |
| 0147 | 005A | 1E02       |        | SBZ | RPSFLG         | RESET RECORD PAUSE FLAG       |
| 0148 | 005C | 1E06       |        | SBZ | EDTFLG         | RESET END OF TAPE FLAG        |
| 0149 | 005E | 1E0A       |        | SBZ | FFWFLG         | SET TAPE COUNTER DECREMENTING |
| 0150 | 0060 | C820       |        | MOV | @RECST,@GOTOST | SET UP START OF REC           |
|      |      | 0062       |        |     | 0000           |                               |
|      |      | 0064       |        |     | 0000           |                               |
| 0151 | 0066 | 0208       |        | LI  | GOTOPT,LABG10  | SET UP RETURN POINT           |

|      |      |      |        |                            |                        |                                |
|------|------|------|--------|----------------------------|------------------------|--------------------------------|
|      | 0068 | ---- |        |                            |                        |                                |
| 0152 | 006A | 1D0F | SBD    | GOTDFG                     | SET GOTO FLAG          |                                |
| 0153 | 006C | 0460 | B      | @LABD5                     | GO FIND KEY SPACE      |                                |
|      | 006E | 0054 |        |                            |                        |                                |
| 0154 | 0070 | 1D44 | LABD19 | SBD                        | REWD                   | STOP REWIND                    |
|      | 0024 | 1325 |        |                            |                        |                                |
| 0155 | 0072 | 1E00 | SBZ    | ARWFLG                     | RESET AUTO REWIND FLAG |                                |
| 0156 | 0074 | 1E0F | SBZ    | GOTDFG                     | RESET GOTO FLAG        |                                |
| 0157 | 0076 | 0460 | B      | @LABD5                     | GO FIND KEY SPACE      |                                |
|      | 0078 | 006E |        |                            |                        |                                |
| 0158 |      |      | *      | END OF FUNCTION            |                        |                                |
| 0159 |      |      | *      |                            |                        |                                |
| 0160 |      |      | *      |                            |                        |                                |
| 0161 |      |      | *      |                            |                        |                                |
| 0162 |      |      | *      | DECODE OF FAST FORWARD KEY |                        |                                |
| 0163 |      |      | *      |                            |                        |                                |
| 0164 | 007A | 0201 | FFKEY  | LI                         | GENRB1,8               | LOAD FUNCTION NUMBER           |
|      | 007C | 0008 |        |                            |                        |                                |
| 0165 | 007E | 1F04 |        | TB                         | MIPFLG                 | TEST FOR MEMORY INPUT          |
| 0166 | 0080 | 16-- |        | JNE                        | LABT4                  |                                |
| 0167 | 0082 | 045A |        | B                          | *MEMIPT                | CONTINUE MEMORY INPUT SEQUENCE |
| 0168 | 0084 | 1F03 | LABT4  | TB                         | RECFLG                 | TEST FOR RECORDING             |
|      | 0080 | 1601 |        |                            |                        |                                |
| 0169 | 0086 | 13BC |        | JEQ                        | ERRORH                 |                                |
| 0170 | 0088 | 0205 |        | LI                         | MS500,1200             | DELAY FOR AUTOSTOP             |
|      | 008A | 04B0 |        |                            |                        |                                |
| 0171 | 008C | 1F43 |        | TB                         | FFWD                   | TEST FOR FAST FORWARD          |
| 0172 | 008E | 16-- |        | JNE                        | LABT5                  |                                |
| 0173 | 0090 | 1F41 | NOFFWD | TB                         | TAPIND                 | TEST FOR CASSETTE              |
| 0174 | 0092 | 16B6 |        | JNE                        | ERRORH                 |                                |
| 0175 | 0094 | 1F06 |        | TB                         | EOTFLG                 | TEST FOR END OF TAPE           |
| 0176 | 0096 | 13B4 |        | JEQ                        | ERRORH                 |                                |
| 0177 | 0098 | 1D43 |        | SBD                        | FFWD                   | STOP >>                        |
| 0178 | 009A | 1D44 |        | SBD                        | REWD                   | STOP <<                        |
| 0179 | 009C | 1E0F |        | SBZ                        | GOTDFG                 | RESET GOTO FLAG                |
| 0180 | 009E | 1D45 |        | SBD                        | RECDSP                 | SET RECORD DISPLAY             |
| 0181 | 00A0 | 1E47 |        | SBZ                        | DSCPT                  | RESET OUTPUT POINT             |
| 0182 | 00A2 | 1E02 |        | SBZ                        | RPSFLG                 | RESET RECORD PAUSE FLAG        |
| 0183 | 00A4 | 1E00 |        | SBZ                        | ARWFLG                 | RESET AUTO REWIND FLAG         |
| 0184 | 00A6 | 1E0B |        | SBZ                        | DSPTIM                 | DISPLAY TAPE COUNTER           |
| 0185 | 00A8 | 1D0C |        | SBD                        | DSPUD                  |                                |
| 0186 | 00AA | 1E0D |        | SBZ                        | FLSFLG                 |                                |
| 0187 | 00AC | 1E42 |        | SBZ                        | TAPOWR                 | TAPE POWER ON                  |
| 0188 | 00AE | 0209 |        | LI                         | FTNPT,LABD23           | SET UP RETURN ADDRESS          |
|      | 00B0 | ---- |        |                            |                        |                                |
| 0189 | 00B2 | 0202 |        | LI                         | GENRB2,700             | DELAY FOR 700 MS               |
| 896  | 00B4 | 02BC |        |                            |                        |                                |
| 0190 | 00B6 | 0460 |        | B                          | @DLYUD                 | GO AND DELAY                   |
|      | 00B8 | 004C |        |                            |                        |                                |
| 0191 |      |      | *      |                            |                        |                                |
| 0192 | 00BA | 1E43 | LABD23 | SBZ                        | FFWD                   | STRT >>                        |
|      | 00B0 | 00BA |        |                            |                        |                                |
| 0193 | 00BC | 1D0A |        | SBD                        | FFWFLG                 | INCREMENT TAPE COUNTER FLAG    |
| 0194 | 00BE | 0460 |        | B                          | @LABD5                 |                                |
|      | 00C0 | 0078 |        |                            |                        |                                |

|      |      |      |       |      |                                |                                |
|------|------|------|-------|------|--------------------------------|--------------------------------|
| 0195 | 00C2 | 1F44 | LABT5 | TB   | REWD                           | TEST FOR REWIND                |
|      | 008E | 1619 |       |      |                                |                                |
| 0196 | 00C4 | 16E5 |       | JNE  | NOFFWD                         |                                |
| 0197 | 00C6 | 1E0F |       | SBZ  | GOTDFG                         | RESET GOTO FLAG                |
| 0198 | 00C8 | 1D43 |       | SBD  | FFWD                           | STOP >>                        |
| 0199 | 00CA | 1D45 |       | SBD  | RECDSP                         | RESET RECORD DISPLAY           |
| 0200 | 00CC | 0460 |       | B    | @LABD5                         |                                |
|      | 00CE | 00C0 |       |      |                                |                                |
| 0201 |      |      |       | ♦    | END OF FUNCTION                |                                |
| 0202 |      |      |       | ♦    |                                |                                |
| 0203 |      |      |       | ♦    |                                |                                |
| 0204 |      |      |       | ♦    |                                |                                |
| 0205 |      |      |       | ♦    | DECODE SECTION FOR STANDBY KEY |                                |
| 0206 |      |      |       | ♦    |                                |                                |
| 0207 | 00D0 | 0201 | STBY  | LI   | GENRB1,10                      | LOAD FUNCTION NUMBER           |
|      | 00D2 | 000A |       |      |                                |                                |
| 0208 | 00D4 | 1F04 |       | TB   | MIPFLG                         | TEST FOR MEMORY INPUT          |
| 0209 | 00D6 | 16-- |       | JNE  | LABT6                          |                                |
| 0210 | 00D8 | 045A |       | B    | ♦MEMIPT                        | CONTINUE MEMORY INPUT SEQUENCE |
| 0211 | 00DA | 1D45 | LABT6 | SBD  | RECDSP                         | SET RECORD DISPLAY FLAG        |
|      | 00D6 | 1601 |       |      |                                |                                |
| 0212 | 00DC | 1D47 |       | SBD  | DSCPT                          | DECIMAL POINT ON               |
| 0213 | 00DE | 1E4F |       | SBZ  | MUTE                           | ACTIVATE MUTING                |
| 0214 | 00E0 | 1E02 |       | SBZ  | RPSFLG                         | RESET RECORD PAUSE             |
| 0215 | 00E2 | 1E03 |       | SBZ  | RECFLG                         | RESET RECORD FLAG              |
| 0216 | 00E4 | 1E00 |       | SBZ  | ARWFLG                         | RESET AUTO REWIND FLAG         |
| 0217 | 00E6 | 1E0F |       | SBZ  | GOTDFG                         | RESET GOTO FLAG                |
| 0218 | 00E8 | 1E0D |       | SBZ  | FLSFLG                         | RESET FLASH FLAG               |
| 0219 | 00EA | 1D0B |       | SBD  | DSPTIM                         | DISPLAY TIME                   |
| 0220 | 00EC | 1E0C |       | SBZ  | DSPUD                          | NO DISPLAY UPDATE              |
| 0221 | 00EE | 1E07 |       | SBZ  | DLYFLG                         | RESET DELAY FLAG               |
| 0222 | 00F0 | 1E04 |       | SBZ  | MIPFLG                         | RESET MEMORY INPUT FLAG        |
| 0223 | 00F2 | 0201 |       | LI   | GENRB1,15                      | BLANK 5TH DIGIT                |
|      | 00F4 | 000F |       |      |                                |                                |
| 0224 | 00F6 | 06A0 |       | BL   | @DIGT5                         |                                |
|      | 00F8 | 0000 |       |      |                                |                                |
| 0225 | 00FA | 0720 |       | SETD | @TEMDSP                        | BLANK DISPLAY                  |
|      | 00FC | 0000 |       |      |                                |                                |
| 0226 | 00FE | 0209 |       | LI   | FTNPT,LABU2                    | SET RETURN POINT               |
|      | 0100 | ---- |       |      |                                |                                |
| 0227 | 0102 | 0460 |       | B    | @DLYUD2                        | GO DELAY FOR 200 MS            |
|      | 0104 | 0000 |       |      |                                |                                |
| 0228 |      |      |       | ♦    |                                |                                |
| 0229 | 0106 | 1D42 | LABU2 | SBD  | TAPOWR                         | TAPE POWER OFF                 |
|      | 0100 | 0106 |       |      |                                |                                |
| 0230 | 0108 | 1D43 |       | SBD  | FFWD                           | FAST FORWARD OFF               |
| 0231 | 010A | 1D44 |       | SBD  | REWD                           | REWIND OFF                     |
| 0232 | 010C | 0201 |       | LI   | GENRB1,7                       | SET OUTPUT SELECTOR TO 7       |
|      | 010E | 0007 |       |      |                                |                                |
| 0233 | 0110 | 06A0 |       | BL   | @SELOP                         |                                |
|      | 0112 | 0000 |       |      |                                |                                |
| 0234 | 0114 | 1D46 |       | SBD  | GRAMSP                         |                                |
| 0235 | 0116 | 0202 |       | LI   | GENRB2,8                       |                                |
|      | 0118 | 0008 |       |      |                                |                                |
| 0236 | 011A | 06A0 |       | BL   | @VOLUD                         | OUTPUT VOL SELECTOR            |

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011C 0000
0237 011E 0209      LI   FTNPT,LABU5
      0120 ----
0238 0122 0202      LI   GENRB2,2500
      0124 09C4
0239 0126 0460      B    @DLYUD
      0128 00B8'
0240                LABU5
      0120**012A'
0241 012A 1F08      TB   PRGFLG      TEST FOR PROGRAMMED FUNCTION
0242 012C 16--      JNE  GLABDL
0243                *   THERE IS A PROGRAMMED FUNCTION SO DISPLAY
0244                *   THE PROGRAMMED TIME AND FUNCTION
0245                LABUP
0246 012E C820      MOV  @PRGTIM,@TEMDSP      DISPLAY PROGRAMMED
      0130 0000
      0132 00FC'
0247 0134 C0A0      MOV  @PRGFTN,GENRB2
      0136 0000
0248 0138 16--      JNE  LABT9
0249 013A 0201      LI   GENRB1,0      PROGRAMMED FOR GRAMOPHONE
      013C 0000
0250 013E 06A0      BL   @SELOP      OUTPUT SELECTOR
      0140 0112'
0251 0142 0201      LI   GENRB1,4      DISPLAY 4 IN DIGIT 5
      0144 0004
0252 0146 06A0 LABT7 BL   @DIGT5
      0148 00F8'
0253 014A C0A0 LABT8 MOV  @PRGREC,GENRB2      PICK UP PROGRAM RECD
      014C 0000
0254 014E 0282      CI   GENRB2,>FFFF      TEST FOR RECORDING
      0150 FFFF
0255 0152 16--      JNE  LABU3      NOT RECORDING
0256 0154 1E45      SBZ  RECDSP      SET RECORD DISPLAY ON
0257 0156 0202 LABU3 LI   GENRB2,2500      DELAY FOR 2500 MS
      0158 09C4
      0152**1601
0258 015A 0209      LI   FTNPT,LABU4      SET UP RETURN POINT
      015C ----
0259 015E 0460      B    @DLYUD      GO DELAY
      0160 0128'
0260 0162 0282 LABT9 CI   GENRB2,6      TEST FOR PROGRAMMED FUNCTION
      0164 0006
      0138**1614
0261                *
0262 0166 15--      JGT  LABT10      IS P1 TO P6
0263 0168 C060      MOV  @PRGFTN,GENRB1      LOAD FUNCTION TO DIS
      016A 0136'
0264 016C 10EC      JMP  LABT7
0265 016E 0282 LABT10 CI   GENRB2,11      IS TAPE PLAY PROGRAMMED
      0170 000B
      0166**1503
0266 0172 16EB      JNE  LABT8
0267 0174 1E42      SBZ  TAPOWR      SWITCH TAPE POWER ON
0268 0176 10E9      JMP  LABT8

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0269
0270 0178 C0A0 LABU4 MOV @REMC,GENRB2 DISPLAY FOR AS LONG AS
      017A 0000
      015C**0178'
0271 017C 16FD JNE LABU4 THE STANDBY KEY IS HELD
0272 017E C0A0 MOV @LDC3,GENRB2 DOWN
      0180 0000
0273 0182 16FA JNE LABU4
0274 0184 0201 LI GENRB1,7
      0186 0007
0275 0188 06A0 BL @SELOP OUTPUT SELECTOR GOES TO 7
      018A 0140'
0276 018C 0720 SETO @TEMDSP BLANK DISPLAY
      018E 0132'
0277 0190 1D45 SBO RECDSP TURN RECORD DISPLAY OFF
0278 0192 1D42 SBO TAPDWR SWITCH TAPE POWER OFF
0279 0194 0201 LI GENRB1,15
      0196 000F
0280 0198 06A0 BL @DIGT5 BLANK 5 TH DIGIT
      019A 0148'
0281 019C 0460 GLABDL B @LABDL
      019E 0000
      012C**1637
0282 * END OF FUNCTION
0283 *
0284 *
0285 *
0286 * DECODE FOR RECORD RELEASE KEY
0287 01A0 0460 ERRORB B @ERROR
      01A2 0002'
0288 *
0289 01A4 1F40 TAPREL TB RECAWD IS RECORDING ALLOWED ON CASSE
0290 01A6 16FC JNE ERRORB
0291 01A8 1D01 SBO RRLFLG SET RECORD RELEASE FLAG
0292 01AA 0460 B @LABD5 GO FIND KEY SPACE
      01AC 00CE'
0293 * END OF FUNCTION
0294 *
0295 *
0296 *
0297 *
0298 * DECODE OF VOLUME UP KEY
0299 *
0300 01AE 06A0 VOLUP BL @SUB3
      01B0 ----
0301 01B2 0282 CI GENRB2,>F TEST FOR TOP OF RANGE
      01B4 000F
0302 01B6 13-- JEQ GLABD5 AT TOP, STOP
0303 01B8 0582 INC GENRB2 NOT AT TOP SO INCREMENT
0304 01BA 06A0 LABT11 BL @VOLUD OUTPUT NEW VOLUME DATA
      01BC 011C'
0305 01BE 0209 LI FTNPT,LABE2 SET UP RETURN POINT
      01C0 ----
0306 01C2 0460 B @DLYUD2 GO AND DELAY 200 MS
      01C4 0104'

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0307      *
0308      *      KEEP INCREMENTING THE VOLUME AT 200 MILLISECOND
0309      *      INTERVALS UNTIL THE VOLUME UP KEY IS RELEASED
0310      *
0311      *      END OF FUNCTION
0312      *
0313      *
0314      *
0315      *
0316      *      DECODE SECTION FOR VOLUME DOWN KEY
0317
0318      01C6      06A0      VOLDM      BL      @SUB3
           01C8      ----
0319      01CA      13--      JEQ      GLABD5      AT BOTTOM, STOP
0320      01CC      0602      DEC      GENRB2      NOT ZERO SO DECREMENT BY 1
0321      01CE      10F5      JMP      LABT11      OUTPUT NEW VOLUME DATA
0322      *
0323      01D0      C060      LABE2      MOV      @REMC,GENRB1
           01D2      017A
           01C0**01D0
0324      01D4      16--      JNE      LABT14      KEEP DECREMENTING
0325      01D6      C060      MOV      @LOC3,GENRB1      VOLUME UNTIL KEY
           01D8      0180
0326      01DA      16--      JNE      LABT14      IS RELEASED
0327      *      GLABD5
           01B6**1312
           01CA**1308
0328      01DC      0460      B      @LABD5
           01DE      01AC
0329      01E0      0454      LABT14      B      *GENRB4      GENRB4 STORES ADDRESS OF VUP
           01D4**1605
           01DA**1602
0330      *
0331      *
0332      *      SUBROUTINE 3
0333      *
0334      *      SUB3
           01B0**01E2
           01C8**01E2
0335      01E2      C0A0      MOV      @VOLSEL,GENRB2      PICK UP CURRENT VOLU
           01E4      0000
0336      01E6      08B2      SRA      GENRB2,11      LINE UP VOLUME DATA FOR TESTIN
0337      01E8      0242      ANDI     GENRB2,>000F      MASK OFF VOLUME DATA
           01EA      000F
0338      01EC      045B      B      *11      RETURN
0339      *
0340      *      END OF FUNCTION
0341      *
0342      *
0343      *
0344      *
0345      *      GOTO KEY DECODE SECTION
0346      *
0347      01EE      1F41      GOTOKY      TB      TAPIND      TEST FOR CASSETTE
0348      01F0      16D7      JNE      ERRORB

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|      |      |      |        |      |                |                          |
|------|------|------|--------|------|----------------|--------------------------|
| 0349 | 01F2 | 1F03 |        | TB   | RECFLG         | TEST IF RECORDING        |
| 0350 | 01F4 | 13D5 |        | JEQ  | ERRORB         |                          |
| 0351 | 01F6 | 1E00 | LABT15 | SBZ  | ARMFLG         | RESET AUTO REMIND FLAG   |
| 0352 | 01F8 | 0720 |        | SETD | @TEMDSP        | BLANK DISPLAY            |
|      | 01FA | 018E |        |      |                |                          |
| 0353 | 01FC | 1E0D |        | SBZ  | FLSFLG         |                          |
| 0354 | 01FE | 1E02 |        | SBZ  | RPSFLG         |                          |
| 0355 | 0200 | 1D45 |        | SBD  | RECDSP         |                          |
| 0356 | 0202 | 1E0C |        | SBZ  | DISPUD         | RESET DISPLAY UPDATE     |
| 0357 | 0204 | 1E0B |        | SBZ  | DISPTIM        | RESET DISPLAY TIME       |
| 0358 | 0206 | 1E47 |        | SBZ  | DSCPT          | SWITCH DECIMAL POINT OFF |
| 0359 | 0208 | 1D43 |        | SBD  | FFWD           | FAST FORWARD OFF         |
| 0360 | 020A | 1D44 |        | SBD  | REWD           | REWIND OFF               |
| 0361 | 020C | 1E42 |        | SBZ  | TAPOWR         | TAPE POWER ON            |
| 0362 | 020E | 1D4F |        | SBD  | MUTE           | SWITCH MUTE OFF          |
| 0363 | 0210 | 04E0 |        | CLR  | @GOTO ST       | ZERO GOTO STORE          |
|      | 0212 | 0064 |        |      |                |                          |
| 0364 | 0214 | 020A |        | LI   | MEMIPT,LABG1   | SET UP RETURN POINT      |
|      | 0216 | ---- |        |      |                |                          |
| 0365 | 0218 | 1D04 |        | SBD  | MIPFLG         | SET MEMORY INPUT FLAG    |
| 0366 | 021A | 0460 |        | B    | @LABD5         | GO FIND KEY SPACE        |
|      | 021C | 01DE |        |      |                |                          |
| 0367 |      |      | *      |      |                |                          |
| 0368 |      |      | LABG1  |      |                |                          |
|      | 0216 | 021E |        |      |                |                          |
| 0369 | 021E | C000 |        | MOV  | R0,R0          | CHECK TIMEOUT            |
| 0370 | 0220 | 16-- |        | JNE  | LABT16         | NOT YET                  |
| 0371 |      |      | LABGUP |      |                |                          |
| 0372 | 0222 | 1E04 |        | SBZ  | MIPFLG         | RESET MEMORY INPUT FLAG  |
| 0373 | 0224 | 0460 |        | B    | @LABG11        | GO FINISH RESETTING      |
|      | 0226 | ---- |        |      |                |                          |
| 0374 |      |      | *      |      |                |                          |
| 0375 |      |      | LABT16 |      |                |                          |
|      | 0220 | 1603 |        |      |                |                          |
| 0376 | 0228 | C0A0 |        | MOV  | @TEMDSP,GENRB2 | TYPEIN                   |
|      | 022A | 01FA |        |      |                |                          |
| 0377 | 022C | 0282 |        | CI   | GENRB2,>F000   | CHECK NO OF DIGITS       |
|      | 022E | F000 |        |      |                |                          |
| 0378 | 0230 | 1A-- |        | JL   | TSB            | NOT 4 YET                |
| 0379 | 0232 | 0281 |        | CI   | GENRB1,10      | NUMBER < 10              |
|      | 0234 | 000A |        |      |                |                          |
| 0380 | 0236 | 11-- |        | JLT  | LABT17         |                          |
| 0381 | 0238 | 0282 |        | CI   | GENRB2,>FFFF   | MUST BE AT LEAST ONE     |
|      | 023A | FFFF |        |      |                |                          |
| 0382 | 023C | 13F2 |        | JEQ  | LABGUP         | NOT, IGNORE              |
| 0383 |      |      | TSB    |      |                |                          |
|      | 0230 | 1A06 |        |      |                |                          |
| 0384 | 023E | 0281 |        | CI   | GENRB1,11      | IS IT OK KEY             |
|      | 0240 | 000B |        |      |                |                          |
| 0385 | 0242 | 13-- |        | JEQ  | LABG2          | OK KEY                   |
| 0386 | 0244 | 0281 | LABT18 | CI   | GENRB1,10      | TEST FOR STAND BY        |
|      | 0246 | 000A |        |      |                |                          |
| 0387 | 0248 | 13-- |        | JEQ  | STBYA          |                          |
| 0388 | 024A | 10AA |        | JMP  | ERRORB         |                          |
| 0389 |      |      | LABT17 |      |                |                          |

|      |                 |       |                 |                               |  |
|------|-----------------|-------|-----------------|-------------------------------|--|
|      | 0236**110A      |       |                 |                               |  |
| 0390 | 024C 0A42       | SLA   | GENRB2,4        | SHIFT ROUND FOR NEXT DIGIT    |  |
| 0391 | 024E A081       | A     | GENRB1,GENRB2   | ADD ON NEXT DIGIT             |  |
| 0392 | 0250 C802       | MOV   | GENRB2,@TEMDSF  | DISPLAY CURRENT INP           |  |
|      | 0252 022A'      |       |                 |                               |  |
| 0393 | 0254 C0A0       | MOV   | @GOTDST,GENRB2  | LAST VALUE BINARY             |  |
|      | 0256 0212'      |       |                 |                               |  |
| 0394 | 0258 0A32       | SLA   | GENRB2,3        | MULT BY 8                     |  |
| 0395 | 025A A081       | A     | GENRB1,GENRB2   | ADD NEW ENTRY                 |  |
| 0396 | 025C A820       | A     | @GOTDST,@GOTDST | DOUBLE PREVIOUS               |  |
|      | 025E 0256'      |       |                 |                               |  |
|      | 0260 025E'      |       |                 |                               |  |
| 0397 | 0262 A802       | A     | GENRB2,@GOTDST  | MULT BY 10                    |  |
|      | 0264 0260'      |       |                 |                               |  |
| 0398 | 0266 0460       | B     | @LABD5          | GO FIND KEY SPACE             |  |
|      | 0268 021C'      |       |                 |                               |  |
| 0399 |                 | STBYA |                 |                               |  |
|      | 0248**1310      |       |                 |                               |  |
| 0400 | 026A 0460       | B     | @LABT6          |                               |  |
|      | 026C 00DA'      |       |                 |                               |  |
| 0401 |                 | *     |                 |                               |  |
| 0402 |                 | LABG2 |                 |                               |  |
|      | 0242**1315      |       |                 |                               |  |
| 0403 | 026E C120       | MOV   | @GOTDST,GENRB4  | INPUT NUMBER                  |  |
|      | 0270 0264'      |       |                 |                               |  |
| 0404 | 0272 0284       | CI    | GENRB4,>1FFF    | VALUE TOO LARGE               |  |
|      | 0274 1FFF       |       |                 |                               |  |
| 0405 | 0276 1594       | JGT   | ERRORB          |                               |  |
| 0406 | 0278 1D0C       | SBO   | DISPUD          |                               |  |
| 0407 | 027A 1E04       | SBZ   | MIPFLG          | RESET MEMORY INPUT FLAG       |  |
| 0408 | 027C 1D09       | SBO   | FUNFLG          | SET FUNCTION FLAG             |  |
| 0409 | 027E 0A24       | SLA   | GENRB4,2        | MULT BY 4                     |  |
| 0410 | 0280 C804       | MOV   | GENRB4,@RTCNST  | STORE REQUIRED POSI           |  |
|      | 0282 0000       |       |                 |                               |  |
| 0411 | 0284 13--       | JEQ   | LABT19          |                               |  |
| 0412 | 0286 1D0F       | SBO   | GOTDFG          | SET GOTO FLAG                 |  |
| 0413 | 0288 1F05       | TB    | TCLFLG          | TEST FOR TAPE CALIBRATED COND |  |
| 0414 | 028A 16--       | JNE   | LABT19          | TAPE NOT CALIBRATED           |  |
| 0415 | 028C 0224 LABG8 | AI    | GENRB4,>FFEC    | SUBTRACT 20 FROM DESIRED POSI |  |
|      | 028E FFEC       |       |                 |                               |  |
| 0416 | 0290 0205       | LI    | MS500,500       | AUTOSTOP LOAD                 |  |
|      | 0292 01F4       |       |                 |                               |  |
| 0417 | 0294 8120       | C     | @TAPCNT,GENRB4  | COMPARE WITH CURREN           |  |
|      | 0296 0000       |       |                 |                               |  |
| 0418 | 0298 11--       | JLT   | LABT20          | LESS THAN CURRENT             |  |
| 0419 | 029A 8820       | C     | @TAPCNT,@RTCNST |                               |  |
|      | 029C 0296'      |       |                 |                               |  |
|      | 029E 0282'      |       |                 |                               |  |
| 0420 | 02A0 11--       | JLT   | LABGLT          |                               |  |
| 0421 | 02A2 13--       | JEQ   | LABG11          |                               |  |
| 0422 | 02A4 C820       | MOV   | @RTCNST,@GOTDST | LOAD UP GOTO STORE            |  |
|      | 02A6 029E'      |       |                 |                               |  |
|      | 02A8 0270'      |       |                 |                               |  |
| 0423 | 02AA 1E06       | SBZ   | EDTFLG          | RESET END OF TAPE FLAG        |  |
| 0424 | 02AC 1E0A       | SBZ   | FFWFLG          | DECREMENTER FOR TAPE COUNTER  |  |

|      |      |        |        |     |                |                                |
|------|------|--------|--------|-----|----------------|--------------------------------|
| 0425 | 02AE | 1E44   |        | SBZ | REWD           | ACTIVATE REWIND                |
| 0426 | 02B0 | 0208   | LABT21 | LI  | GOTOPT,LABG4   | SET UP RETURN POINT            |
|      | 02B2 | ----   |        |     |                |                                |
| 0427 | 02B4 | 0460   |        | B   | @LABD5         | GO FIND KEY SPACE              |
|      | 02B6 | 0268   |        |     |                |                                |
| 0428 |      |        | *      |     |                |                                |
| 0429 | 02B8 | C804   | LABT20 | MOV | GENRB4,@GOTDST | STORE TAPE COUNTER             |
|      | 02BA | 02A8   |        |     |                |                                |
|      | 0298 | **110F |        |     |                |                                |
| 0430 | 02BC | 1D0A   |        | SBD | FFWFLG         | SET TAPE COUNTER INCREMENTING  |
| 0431 | 02BE | 1E43   |        | SBZ | FFWD           | ACTIVATE FAST FORWARD          |
| 0432 | 02C0 | 10F7   |        | JMP | LABT21         |                                |
| 0433 |      |        | *      |     |                |                                |
| 0434 |      |        | LABT19 |     |                |                                |
|      | 0284 | **131E |        |     |                |                                |
|      | 028A | **161B |        |     |                |                                |
| 0435 | 02C2 | 0205   |        | LI  | MS500,500      | AUTOSTOP LOAD                  |
|      | 02C4 | 01F4   |        |     |                |                                |
| 0436 | 02C6 | 0208   |        | LI  | GOTOPT,LABG5   | SET UP RETURN POINT            |
|      | 02C8 | ----   |        |     |                |                                |
| 0437 | 02CA | 1E44   |        | SBZ | REWD           | ACTIVATE REWIND                |
| 0438 | 02CC | 1E0A   |        | SBZ | FFWFLG         | SET TAPE COUNTER INCREMENTING  |
| 0439 | 02CE | 0460   |        | B   | @LABD5         | GO FIND KEY SPACE              |
|      | 02D0 | 02B6   |        |     |                |                                |
| 0440 |      |        | *      |     |                |                                |
| 0441 | 02D2 | 1F05   | LABG5  | TB  | TCLFLG         | IS TAPE CALIBRATED YET         |
|      | 02C8 | **02D2 |        |     |                |                                |
| 0442 | 02D4 | 16--   |        | JNE | LABB2F         | NOT YET                        |
| 0443 | 02D6 | 1F09   |        | TB  | FUNFLG         | TAPE CALIBRATED SO TEST FOR FL |
| 0444 | 02D8 | 13--   |        | JEQ | LABB2F         |                                |
| 0445 |      |        | *      |     |                |                                |
| 0446 | 02DA | 1D09   | LABG6  | SBD | FUNFLG         | SET FUNCTION FLAG              |
| 0447 | 02DC | 0202   |        | LI  | GENRB2,700     | SET UP 700 MS DELAY            |
|      | 02DE | 02BC   |        |     |                |                                |
| 0448 | 02E0 | 0208   |        | LI  | GOTOPT,LABB2   | SET UP RETURN ADDRESS AFTER GO |
|      | 02E2 | 0000   |        |     |                |                                |
| 0449 | 02E4 | 0209   |        | LI  | FTNPT,LABG7    | SET UP RETURN ADDRESS AFTER DE |
|      | 02E6 | ----   |        |     |                |                                |
| 0450 | 02E8 | 0460   |        | B   | @DLYUD         | GO AND DELAY                   |
|      | 02EA | 0160   |        |     |                |                                |
| 0451 |      |        | *      |     |                |                                |
| 0452 | 02EC | C120   | LABG7  | MOV | @RTCNST,GENRB4 | LOAD UP REQUIRED COU           |
|      | 02EE | 02A6   |        |     |                |                                |
|      | 02E6 | **02EC |        |     |                |                                |
| 0453 | 02F0 | 10CD   |        | JMP | LABG8          |                                |
| 0454 |      |        | *      |     |                |                                |
| 0455 | 02F2 | 1F09   | LABG4  | TB  | FUNFLG         | TEST FOR CURRENT FUNCTION      |
|      | 02B2 | **02F2 |        |     |                |                                |
| 0456 | 02F4 | 13--   |        | JEQ | LABB2F         |                                |
| 0457 | 02F6 | 1F43   |        | TB  | FFWD           | TEST IF >> STOPPED             |
| 0458 | 02F8 | 16--   |        | JNE | LABB2F         |                                |
| 0459 | 02FA | 1F44   |        | TB  | REWD           | TEST IF << STOPPED             |
| 0460 | 02FC | 16--   |        | JNE | LABB2F         |                                |
| 0461 |      |        | LABGLT |     |                |                                |
|      | 02A0 | **112E |        |     |                |                                |

|      |      |      |        |     |                 |                                |
|------|------|------|--------|-----|-----------------|--------------------------------|
| 0462 | 02FE | 1D09 |        | SBO | FUNFLG          | SET FUNCTION FLAG              |
| 0463 | 0300 | 0208 |        | LI  | GOTOPT,LABB2    | SET UP RETURN POINT AFTER GOTO |
|      | 0302 | 02E2 |        |     |                 |                                |
| 0464 | 0304 | 0209 |        | LI  | FTNPT,LABG9     | SET UP RETURN POINT AFTER DELA |
|      | 0306 | ---- |        |     |                 |                                |
| 0465 | 0308 | 0202 |        | LI  | GENRB2,700      | DELAY FOR 700 MS               |
|      | 030A | 02BC |        |     |                 |                                |
| 0466 | 030C | 0460 |        | B   | @DLYUD          |                                |
|      | 030E | 02EA |        |     |                 |                                |
| 0467 |      |      | *      |     |                 |                                |
| 0468 | 0310 | 1D0A | LABG9  | SBO | FFWFLG          | SET TAPE COUNTER INCREMENTING  |
|      | 0306 | 0310 |        |     |                 |                                |
| 0469 | 0312 | C820 |        | MOV | @RTCNST,@GOTOBT | SET UP REQUIRED COUN           |
|      | 0314 | 02EE |        |     |                 |                                |
|      | 0316 | 02BA |        |     |                 |                                |
| 0470 | 0318 | 0208 |        | LI  | GOTOPT,LABG10   | SET UP RETURN POINT            |
|      | 031A | ---- |        |     |                 |                                |
| 0471 | 031C | 0205 |        | LI  | MSS00,500       |                                |
|      | 031E | 01F4 |        |     |                 |                                |
| 0472 | 0320 | C0A0 |        | MOV | @VOLSEL,GENRB2  | GET OUTPUT SELECTOR            |
|      | 0322 | 01E4 |        |     |                 |                                |
| 0473 | 0324 | 0201 |        | LI  | GENRB1,>0700    | BITS FOR TAPE SELECT           |
|      | 0326 | 0700 |        |     |                 |                                |
| 0474 | 0328 | 2081 |        | CDC | GENRB1,GENRB2   | CHECK FOR TAPE                 |
| 0475 | 032A | 16-- |        | JNE | LABT23          |                                |
| 0476 | 032C | 1E4F |        | SBZ | MUTE ACTIVATE   | MUTING                         |
| 0477 | 032E | 1E43 | LABT23 | SBZ | FFWD            | START FAST FORWARD             |
|      | 032A | 1601 |        |     |                 |                                |
| 0478 | 0330 | 1E44 |        | SBZ | REWD            | START REWIND                   |
| 0479 | 0332 | 0460 |        | B   | @LABB8          |                                |
|      | 0334 | 0000 |        |     |                 |                                |
| 0480 | 0336 | 0460 | ERRRRC | B   | @ERROR          |                                |
|      | 0338 | 01A2 |        |     |                 |                                |
| 0481 |      |      | *      |     |                 |                                |
| 0482 |      |      | *      |     |                 |                                |
| 0483 | 033A | 1F43 | LABG10 | TB  | FFWD            | CHECK AND SEE IF FAST FORWARD  |
|      | 0068 | 033A |        |     |                 |                                |
|      | 031A | 033A |        |     |                 |                                |
| 0484 | 033C | 16-- |        | JNE | LABB2F          |                                |
| 0485 | 033E | 1F44 |        | TB  | REWD            | MEANS THE TAPE HAS REACHED THE |
| 0486 | 0340 | 16-- |        | JNE | LABB2F          |                                |
| 0487 | 0342 | 1E0F | LABG11 | SBZ | GOTDFG          | RESET GOTO FLAG                |
|      | 0226 | 0342 |        |     |                 |                                |
|      | 02A2 | 134F |        |     |                 |                                |
| 0488 | 0344 | 1D4F |        | SBO | MUTE            | SWITCH MUTE OFF                |
| 0489 | 0346 | 1D0C |        | SBO | DSPUD           | SET DISPLAY UPDATE             |
| 0490 | 0348 | 0460 | LABT25 | B   | @LABD5          | GO FIND A KEY SPACE            |
|      | 034A | 02D0 |        |     |                 |                                |
| 0491 |      |      | *      |     |                 |                                |
| 0492 |      |      | *      |     |                 |                                |
| 0493 | 034C | 0460 | LABB2F | B   | @LABB2          |                                |
|      | 034E | 0302 |        |     |                 |                                |
|      | 02D4 | 163B |        |     |                 |                                |
|      | 02D8 | 1339 |        |     |                 |                                |
|      | 02F4 | 132B |        |     |                 |                                |

|      |      |      |        |     |        |                                |
|------|------|------|--------|-----|--------|--------------------------------|
| 0477 | 032E | 1E43 | LABT23 | SBZ | FFWD   | START FAST FORWARD             |
|      | 032A | 1601 |        |     |        |                                |
| 0478 | 0330 | 1E44 |        | SBZ | REWD   | START REWIND                   |
| 0479 | 0332 | 0460 |        | B   | @LABB8 |                                |
|      | 0334 | 0000 |        |     |        |                                |
| 0480 | 0336 | 0460 | ERRRRC | B   | @ERROR |                                |
|      | 0338 | 01A2 |        |     |        |                                |
| 0481 |      |      |        |     |        |                                |
| 0482 |      |      |        |     |        |                                |
| 0483 | 033A | 1F43 | LABG10 | TB  | FFWD   | CHECK AND SEE IF FAST FORWARD  |
|      | 0068 | 033A |        |     |        |                                |
|      | 031A | 033A |        |     |        |                                |
| 0484 | 033C | 16-- |        | JNE | LABB2F |                                |
| 0485 | 033E | 1F44 |        | TB  | REWD   | MEANS THE TAPE HAS REACHED THE |
| 0486 | 0340 | 16-- |        | JNE | LABB2F |                                |
| 0487 | 0342 | 1E0F | LABG11 | SBZ | GOTOFG | RESET GOTO FLAG                |
|      | 0226 | 0342 |        |     |        |                                |
|      | 02A2 | 134F |        |     |        |                                |
| 0488 | 0344 | 1D4F |        | SBO | MUTE   | SWITCH MUTE OFF                |
| 0489 | 0346 | 1D0C |        | SBO | DSPUD  | SET DISPLAY UPDATE             |
| 0490 | 0348 | 0460 | LABT25 | B   | @LABD5 | GO FIND A KEY SPACE            |
|      | 034A | 02D0 |        |     |        |                                |
| 0491 |      |      |        |     |        |                                |
| 0492 |      |      |        |     |        |                                |
| 0493 | 034C | 0460 | LABB2F | B   | @LABB2 |                                |
|      | 034E | 0302 |        |     |        |                                |
|      | 02D4 | 163B |        |     |        |                                |
|      | 02D8 | 1339 |        |     |        |                                |
|      | 02F4 | 132B |        |     |        |                                |

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|      |      |      |       |                 |       |
|------|------|------|-------|-----------------|-------|
|      | 02F8 | 1629 |       |                 |       |
|      | 02FC | 1627 |       |                 |       |
|      | 033C | 1607 |       |                 |       |
|      | 0340 | 1605 |       |                 |       |
| 0494 | 0350 | 0001 | C0001 | DATA            | >0001 |
| 0495 |      |      |       |                 |       |
| 0496 |      |      |       | END OF FUNCTION |       |
| 0497 |      |      |       | END             |       |

0000 ERRORS

ASM/TERM?