

A TO D TEST

IDENTIFICATION

PRODUCT CODE: MAINDEC 12-D6CB-D (D)
PRODUCT NAME: A TO D TEST
DATE CREATED: OCTOBER 24, 1969
MAINTAINER: DIAGNOSTIC GROUP
AUTHOR: HAROLD LONG

(OUTDATED)

1. ABSTRACT:

This program may be used to test the knobs for continuity, the basic A-D for monotonicity, and to test and calibrate the preamps for gain and offset. A provision for testing sixteen additional A-D channels is included for the AM12-AG12 multiplex extension.

Three methods are provided for testing the knobs and adjusting the preamps. (NOTE: Adjustment of the latching differential amplifier or the sample and hold is not normally required. For adjustment of these modules see the appropriate maintenance manual.)

2. REQUIREMENTS:

2.1 Equipment

- a) A PDP-12 with A-D and VR12 Display.
- b) An ASR-33 or equivalent.

2.2 Preliminary Programs:

- a) Insure that the binary loader is operating properly.
- b) All basic processor tests must have been run successfully before attempting to execute ADTST.

3. LOADING PROCEDURES

3.1 Method

This program may be loaded with the binary loader. If you are unfamiliar with the proper binary loading procedures refer to "Appendix A" of this program, otherwise proceed with the following:

- a) Set the teletype reader switch to FREE.
- b) Open the teletype reader and insert the program tape so that the arrows on the tape are visible to and pointing toward the operator.
- c) Close the reader and set the reader switch to START.
- d) Set the teletype front panel switch to ON LINE.
- e) Set the LEFT switches to 7777.
- f) Set the RIGHT switches to 4000.
- g) Set the MODE switch to 8 mode.
- h) Depress I/O preset.
- i) Depress START LS.
- j) When the program tape has been read the ACCUMULATOR must be 0000 if it is not, a read-in error has occurred and one might try reloading the binary loader.
- k) Remove the program tape from the reader.

4. STARTING PROCEDURES.

- a) Turn the VR12 on, and allow to warm up for at least one minute.
- b) Set the brightness POT on the VR12 to 3/4 maximum.
(NOTE: if a bright dot appears on the VR12, shut down the intensity immediately to prevent burning the phosphor)
- c) Set the MODE switch on the console to L mode.
- d) Depress I/O preset.
- e) Set all switches to \emptyset 's.
(This will set up the program for the first display)
- f) Depress start 20.
- g) The program is now running. Adjust the intensity on the VR12 to give a comfortable viewing level. If any difficulty is encountered, it is a hardware problem and must be corrected before proceeding.
- h) This program does NOT use fast sample mode.

5. OPERATING PROCEDURES

5.1 Switch Settings

- a) SSW = $\emptyset\emptyset$; CHANNELS $\emptyset\emptyset$ -17₍₈₎ are sampled and displayed.
- b) SSW = $4\emptyset$; CHANNELS 2 \emptyset -37₍₈₎ are sampled and displayed.
These channels are optional on the PDP-12; if not installed, the value displayed for each channel will be -777₍₈₎.
- c) SSW = $2\emptyset$; The channel selected by bits \emptyset 7-11 of the left switches will be displayed as a full oscilloscope type display. The routine used for display will trigger (SYNC) to the input if it is an AC signal with at least 2 bits (.4 MV) of change within 15 MS.
- d) SSW = $1\emptyset$; CHANNELS \emptyset -7 are sampled and displayed as a segmented oscilloscope display. Each channel has triggering capability as in (C) above.
- e) SSW = $\emptyset 4$; CHANNELS 1 \emptyset -17 are sampled and displayed as a segmented oscilloscope display. Each channel has triggering capability as in (C) above.
- f) SSW = $\emptyset 2$; CHANNELS 2 \emptyset -27 are sampled and displayed as a segmented oscilloscope display. Each channel has triggering capability as in (C) above.
- g) SSW = $\emptyset 1$; CHANNELS 3 \emptyset 3-37 are sampled and displayed as a segmented oscilloscope display. Each channel has triggering capability as in (C) above.

5.2 Adjustment Procedures

For adjustment of the AD12/AM12/AG12 A to D converter, refer to the checks and adjustments section of the PDP-12 maintenance manual.

5.3 Error Routine

This test has no error routines; if difficulty is encountered with the SAM instruction, check the A to D control. If difficulty is encountered with the potentiometers, it will most likely be either the multiplexer or the pots themselves. If difficulty is encountered with the external analog channels, check the preamplifiers.

*2
00001 *PDP-12 A TO D TEST, MAINDEC 12-D6C
00002 //COPYRIGHT 1969, DIGITAL EQUIPMENT RP., MAYNARD, MASS.
00003 //THIS TEST IS DESIGNED TO DISPLAY ALL AVAILABLE
00004 //ANALOG INPUT CHANNELS ON THE VR12 DISPLAY
00005 //
00006 //SENSE SWITCH Ø DETERMINES WHAT CHANNELS TO DISPLAY
00007 //
00010 //SENSE SWITCH 1 GIVES AN OSCILLOSCOPE DISPLAY
00011 //FOR THE CHANNEL ENTERED IN THE LEFT SW
00012 //
00013 //SENSE SWITCHES 2 THRU 5 GIVE AN OVERALL
00014 //OSCILLOSCOPE OF CHANNELS Ø-7, 1Ø-17, 2Ø-27,
00015 //AND 3Ø-37, RESPECTIVELY.
00016 //
00017 //I/O PRESET, START 2Ø LINC MODE.
00020 //TYPING CTL-"D" RETURNS USER TO DIAL
00021 //
00022 //
00023 //MAJOR START 4Ø2Ø
00024 //
00025 //TAGS AND CONSTANTS
00026 //
00027 *0001 H1, 0000
00030 0001 0000 *0016
00031 0016 0701 DIAL, RCC
00032 0032 7300 7300
00033 0033 EJECT
00034 0034

/TO HERE IF FIRST TIME THROUGH

0036
0037
0040
0041
0042
0043
0044
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0055
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0060
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0063
0064
0065

0020 0461 87, SNS 1 1
0021 6275 JMP D5
0022 0462 SNS 1 2
0023 6356 JMP J6
0024 0463 SNS 1 3
0025 6360 JMP J6+2
0026 0464 SNS 1 4
0027 6363 JMP J6+5
0030 0465 SNS 1 5
0031 6366 JMP J6+1 Ø

0032 0024 /BASIC CHANNEL SAMPLE AND DISPLAY
0033 1620 /LIFT SSW Ø FOR CHANNELS 2Ø-37
0034 0200 /GET SPECIAL FUNCTIONS REGISTER
0035 0004 /SET FOR FULL SIZE CHARACTERS
0036 1020 /ENABLE SPECIAL FUNCTIONS
0037 1020 /SET FLOW TAG FOR 2Ø CHANNEL DISPLAY
0040 1040 /END OF SINGLE DISPLAY
0041 0067 EJECT -
0042 0068

0043 0069
0044 0070
0045 0071
0046 0072
0047 0073
0048 0074
0049 0075
0050 0076
0051 0077
0052 0078
0053 0079
0054 0080
0055 0081
0056 0082
0057 0083
0058 0084
0059 0085
0060 0086
0061 0087
0062 0088
0063 0089
0064 0090
0065 0091

/CHECK FOR OPTIONS
/TRIGGERED SCOPE DISPLAY
/CHANNELS Ø-7
/CHANNELS 1Ø-17
/CHANNELS 2Ø-27
/CHANNELS 3Ø-37

```

    / DISPLAY CHANNEL NO.
    / E1,      LDA      A1
    0066 1000 0042 0043 0244
    0067 0071 0072 0073 0044 1040
    0068 0074 0075 0045 0245
    0069 0076 0046 0241 0047 1540
    0070 0077 0050 0247 0051 2246
    0071 0100 0052 4011 0051
    0072 0101 0053 2245 ADD G1
    0073 0102 0054 0302 ADD T1
    0074 0103 0055 1540 ROR 2
    0075 0104 0056 0247 BCL
    0076 0105 0057 2246 M1
    0077 0106 0058 ADD G1
    0078 0107 0060 4010 STC 10
    0079 0110 0061 2250 ADD V1
    0080 0111 0062 1750 DSC 10
    0081 0112 0063 1770 DSC I
    0082 0113 0064 6216 JMP X1
    0083 0114 0065 1751 DSC 11
    0084 0115 0066 1771 DSC I
    0085 0116 0067 1020 LDA I
    0086 0117 0070 7737 +40
    0087 0120 0071 1140 ADM H1
    0088 0121 0072 0001
    0089 0122 EJECT

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```

    / GET CHANNEL NUMBER
    / SAVE IT
    0066 0071 0072 0073 0044 1040
    0067 0074 0075 0045 0245
    0068 0076 0046 0241 0047 1540
    0069 0077 0050 0247 0051 2246
    0070 0100 0052 4011 0051
    0071 0101 0053 2245 ADD G1
    0072 0102 0054 0302 ADD T1
    0073 0103 0055 1540 ROR 2
    0074 0104 0056 0247 BCL
    0075 0105 0057 2246 M1
    0076 0106 0058 ADD G1
    0077 0107 0060 4010 STC 10
    0078 0110 0061 2250 ADD V1
    0079 0111 0062 1750 DSC 10
    0080 0112 0063 1770 DSC I
    0081 0113 0064 6216 JMP X1
    0082 0114 0065 1751 DSC 11
    0083 0115 0066 1771 DSC I
    0084 0116 0067 1020 LDA I
    0085 0117 0070 7737 +40
    0086 0120 0071 1140 ADM H1
    0087 0121 0072 0001
    0088 0122 EJECT

```

/ADD POINTER
 /SAVE FIRST ADDRESS AND CLEAR AC
 /ADD BASIC CHANNEL NUMBER
 /SAVE BITS 8,9,10

/ADD POINTER
/SAVE SECOND ADDRESS AND CLEAR AC

/PICK UP VERTICAL COORDINATE

/DISPLAY HALF CHARACTER

/DISPLAY SECOND HALF CHARACTER

/GO INSERT SPACE BETWEEN CHARACTERS

/DISPLAY HALF CHARACTER

/DISPLAY SECOND HALF CHARACTER

/DECREMENT HORIZONTAL COORDINATE

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0123
0124
0125
0126
0127
0128
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0164
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0170
0171
0172
0173
0174

    /SAMPLE CHANNEL JUST LABELED

    CLR      ADD     A1          /GET CHANNEL NUMBER
    0073    0011    2244        /SET FOR SAM X
    0074    0074    1620        /STORE FOR EXECUTION
    0075    0075    100         /EXECUTE SAM X

    /CONVERT SAMPLE

    APO      JMP     *+4        /POSITIVE?
    0451    0101    6106        /NO, SET POINTER FOR NEGATIVE PREFIX
    0102    0070    0070        /YES, SET POINTER FOR POSITIVE PREFIX
    0103    0103    0271        SET I   10
    0104    0104    0271        T2+20
    0105    0105    6111        JMP     *+4
    0106    0106    0070        SET I   10
    0107    0107    0273        T2+22
    0108    0017    0017        COM
    0109    0110    1040        STA
    0110    0111    1040        T1
    0111    0112    0245        ROL   1
    0112    0113    0241        BCL
    0113    0114    1540        M1
    0114    0115    0247        ADD   G1
    0115    0116    2246        STC   13
    0116    0117    4013        ADD   T1
    0117    0120    2245        ROR   2
    0118    0121    0302        STA
    0119    0122    1040        T1
    0120    0123    0245        BCL
    0121    0124    1540        M1
    0122    0125    0247        ADD   G1
    0123    0126    2246        STC   12
    0124    0127    4012        ADD   T1
    0125    0130    2245        ROR   3
    0126    0131    0303        BCL
    0127    0132    1540        M1
    0128    0133    0247        ADD   G1
    0129    0134    2246        STC   11
    0130    0135    4011        EJECT
    0131    0136    -           /FIRST DIGIT

```

3175
 0176
 0200 0136 1120 ADA I
 0201 0137 7737 -40 ADD V1
 0202 0140 2250 DSC I 10
 0203 0141 1750 DSC I 10
 0204 0142 1770 DSC I 10
 0205 0143 6216 JMP X1
 0206 0144 1751 DSC I 11
 0207 0145 1771 DSC I 11
 0210 0146 6216 JMP X1
 0211 0147 1752 DSC I 12
 0212 0150 1772 DSC I 12
 0213 0151 6216 JMP X1
 0214 0152 1753 DSC I 13
 0215 0153 1773 DSC I 13
 / DISPLAY DIGITS
 0216 / IS ROW ENDED?
 0220 /
 0221 LDA 1000
 0222 0155 0244 A1
 0223 0156 BCL I
 0224 0157 7774 7774
 0225 0160 1460 SAE I
 0226 0161 0003 0003
 0227 0162 6224 JMP P1
 0230 / NOT END OF ROW, INCREMENT HORIZONTAL AND CHANNEL
 0231 / IS DISPLAY ENDED?
 0232 /
 0233 LDA 1000
 0234 0164 0244 A1
 0235 0165 1560 BCL I
 0236 0166 7760 7760
 0237 0167 1460 SAE I
 0240 0170 0017 0017
 0241 0171 6235 JMP U1
 0242 EJECT
 / DISPLAY DIGITS
 0136 /INCREMENT VERTICAL TO DISPLAY BELOW CHANNEL
 0137 /ADD BASIC VERTICAL COORDINATE
 0140 /DISPLAY PREFIX (+ OR -)
 0141 /INCREMENT HORIZONTAL
 0142 /DISPLAY DIGITS
 0143 /INCREMENT HORIZONTAL
 0144 /DISPLAY DIGITS
 0145 /INCREMENT HORIZONTAL
 0146 /DISPLAY DIGITS
 0147 /INCREMENT HORIZONTAL
 0148 /DISPLAY DIGITS
 0149 /INCREMENT HORIZONTAL
 0150 /DISPLAY DIGITS
 0151 /INCREMENT HORIZONTAL
 0152 /DISPLAY DIGITS
 0153 /INCREMENT HORIZONTAL
 0154 /NOT END OF ROW, INCREMENT HORIZONTAL AND CHANNEL
 0155 /FIND CHANNEL NUMBER
 0156 /SAVE LOW-ORDER 2 BITS
 0157 /DISPLAY 4 CHANNELS PER LINE
 0158 /NOT END OF ROW, INCREMENT HORIZONTAL AND CHANNEL
 0159 /FIND CHANNEL NUMBER
 0160 /SAVE LOW-ORDER 4 BITS
 0161 /DISPLAY 17 OCTAL CHANNELS PER FRAME
 0162 /NOT END OF DISPLAY, DECREMENT VERTICAL, INCREMENT CHANNEL

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0243 /END OF DISPLAY
0244
0245
0246
0247 0172 1020 LDA I
0248 0173 0300 0300 STC V1
0249 0174 4250 STC H1
0250 0175 4001 SNS 0
0251 0176 0440
0252 0177 6203 .+4
0253 0200 1020 LDA I
0254 0201 0020 0020 JMP .+4
0255 0202 6204 /CHANNELS 20-37
0256 0203 0011 CLR
0257 0204 4244 STC A1
0258 0205 0415 KST
0259 0206 6020 JMP B7
0260 0207 0500 IOB
0261 0208 6036 /CHANNELS 0-17
0262 0209 6036 /RESET CHANNEL NUMBER
0263 0210 6036 /KEYBOARD?
0264 0211 1460 /BACK TO START
0265 0212 0204 /READ KEYBOARD
0266 0213 6020
0267 0214 0643
0268 0215 6016
0269 0216 0221 X1,
0270 0217 0221
0271 0218 0221
0272 0219 0221
0273 0220 0221
0274 0221 0221
0275 0222 0221 XSK I
0276 0223 0016 NOP H1
0277 0300 6000 EJECT
0278 0224 0016 JMP 0

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0301      /NOT END OF ROW
0302      /
0303      0224    1020    P1,      LDA I
0304      0225    0077    0077
0305      0226    1140    ADM
0306      0227    0001    H1
0307      /
0308      0230    1020    Q1,      LDA I
0309      0231    0001    0001
0310      0232    1140    ADM
0311      0233    0244    A1
0312      0234    6042    JMP   E1
0313      /
0314      0235    1000    U1,      LDA V1
0315      0236    0250    V1
0316      0237    1120    ADA I
0317      0238    0240    0240
0318      0239    7577    -200
0319      0240    4250    STC V1
0320      0241    4001    STC H1
0321      0242    6230    JMP G1
0322      /
0323      0243    1000    U1,      LDA V1
0324      0244    0000    A1,      0000
0325      0245    0000    T1,      0000
0326      0246    0251    G1,      T2
0327      0247    7761    M1,      7761
0328      0248    0000    V1,      @
0329      /
0330      0249    0000    EJECT
0331      /
0332      /
0333      /
0334      /
0335      0244    0000    A1,      0000
0336      0245    0000    T1,      0000
0337      0246    0251    G1,      T2
0338      0247    7761    M1,      7761
0339      0248    0000    V1,      @
0340      /
0341      /
0342      /

```

-

0343
0344
0345
0346
0347
0348
0349
0350
0351
0352
0353
0354
0355
0356
0357
0358
0359
0360
0361
0362
0363
0364
0365
0366
0367
0368
0369
0370
0371
0372

/DISPLAY MATRICES
/
/ZERO
/ONE
/TWO
/THREE
/FOUR
/FIVE
/SIX
/SEVEN
/PLUS
/MINUS
-
EJECT

	T2,	4136
0251	0252	3641
0253	2101	2101
0254	0177	0177
0255	4523	4523
0256	2151	2151
0257	4122	4122
0260	2651	2651
0261	2414	2414
0262	0477	0477
0263	5172	5172
0264	0651	0651
0265	1506	1506
0266	4225	4225
0267	4443	4443
0270	6050	6050
0271	0404	0404
0272	0437	0437
0273	0404	0404
0274	0404	0404


```

0442          /DISPLAY A TRACE TO HERE IF TRIGGERED, OR NOT TRIGGERED AND
0446          /SET I 4          /START DISPLAY AT LEFT SIDE
0447          /0000          E6          /SAMPLE CHANNEL
0450          0064          1000          C5,          DIS 4          /DISPLAY CHANNEL
0451          0341          1000          6462          CLR          /DISPLAY @V REFERENCE
0452          0342          6462          C5,          DIS 4          /DISPLAY +5V REFERENCE
0453          0343          2144          0211          CLR          /DISPLAY -.5V REFERENCE
0454          0344          0211          0144          DIS 4          /INCREMENT HORIZONTAL
0455          0345          0144          1020          LDA 1          /CONTINUE TRACE
0456          0346          1020          0377          DIS 4          /GO CHECK KEYBOARD
0457          0347          0377          0144          COM          /DISPLAY -.5V REFERENCE
0460          0350          0144          0217          DIS 4          /DISPLAY -.5V REFERENCE
0461          0351          0217          0144          XSK 1          /INCREMENT HORIZONTAL
0462          0352          0144          0224          JMP  C5          /CONTINUE TRACE
0463          0353          0224          6342          JMP  X1-10          /GO CHECK KEYBOARD
0464          0354          6342          5206          /TRIGGERED PREAMP DISPLAY
0465          0355          5206          J6,          CLR          /TO HERE IF SSW2=1
0466          0467          /TRIGGERED PREAMP DISPLAY
0470          0356          2011          6370          JMP  K6          /TO HERE IF SSW3=1
0471          0357          6370          0360          LDA 1          /TO HERE IF SSW4=1
0472          0358          0360          1020          10          K6          /TO HERE IF SSW5=1
0473          0360          1020          0010          LDA 1          /STORE CHANNEL NUMBER
0474          0361          0010          0362          10          K6          /WE NOW HAVE CHANNEL
0475          0362          0362          6370          JMP  LDA 1          /SET FLOW TAG
0476          0363          0363          1020          20          K6          /INITIALIZE DISPLAY
0477          0364          0020          0365          JMP  LDA 1          /SET VERTICAL COORDINATE FOR CHANNEL NUMBER DISPLAY
0478          0365          0020          6370          30          K6          /SET HORIZONTAL COORDINATE FOR LEFT SIDE
0479          0366          0366          0200          30          STA          /RESET HORIZONTAL FOR SAMPLE DISPLAY
0480          0367          0367          0030          A1          B6          /GO DISPLAY CHANNEL NUMBER
0481          0368          0030          0370          STC          LDA 1          EJECT
0482          0369          0370          1040          30          LDA 1          E1
0483          0370          1040          0371          STC          LDA 1          E1+25
0484          0371          0371          0244          A6          STC          LDA 1          E1
0485          0372          0372          4464          B6          STC          LDA 1          E1
0486          0373          0373          1020          14          STC          LDA 1          E1
0487          0374          0374          6407          -177          STC          LDA 1          E1
0488          0375          0375          4067          V1          STC          LDA 1          E1
0489          0376          0376          1020          14          STC          LDA 1          E1
0490          0377          0377          7600          14          STC          LDA 1          E1
0491          0400          0400          4250          14          STC          LDA 1          E1
0492          0401          0401          1020          14          STC          LDA 1          E1
0493          0402          0402          0014          14          STC          LDA 1          E1
0494          0403          0403          4001          14          SET  H1          E1
0495          0404          0404          0064          4          SET  I          E1
0496          0405          0405          1000          1000          JMP  E1          EJECT
0497          0406          0406          6042          1000          /SET HORIZONTAL COORDINATE FOR LEFT SIDE
0498          0407          0407          0000          1000          /RESET HORIZONTAL FOR SAMPLE DISPLAY
0499          0408          0408          0000          1000          /GO DISPLAY CHANNEL NUMBER

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```

    /DISPLAY CHANNEL NUMBERS
    /
    /INCREMENT CHANNEL NUMBER
    0523 0407 1020 A6, LDA I
    0524 0410 0001 1
    0525 0411 1140 ADM
    0526 0412 0244 A1
    0527 0413 1560 BCL I
    0528 0414 7770 7770
    0529 0415 0470 AZE I
    0530 0416 6424 JMP D6
    0531 0417 1020 LDA I
    0532 0420 0034 34
    0533 0421 1140 ADM
    0534 0422 0001 H1
    0535 0423 6042 JMP E1
    0536 0424 1020 LDA I
    0537 0425 6436 JMP F6
    0538 0426 4340 STC C5-2
    0539 0427 2464 ADD B6
    0540 0430 1620 BSE I
    0541 0431 0100 100
    0542 0432 4462 STC E6
    0543 0433 0075 SET I
    0544 0434 7677 15
    0545 0435 6322 -100
    0546 0436 6462 JMP A5
    0547 0437 0144 JMP E6
    0548 0438 1020 DIS 4
    0549 0439 0377 LDA I
    0550 0440 1020 377
    0551 0441 0377 DIS 4
    0552 0442 0144 COM 4
    0553 0443 0017 DIS 4
    0554 0444 0144 CLR 4
    0555 0445 0011 DIS 4
    0556 0446 0144 XSK I
    0557 0447 0235 15
    0558 0448 0235 JMP G6
    0559 0449 6450 H6,
    0560 0450 1020 LDA I
    0561 0451 0001 1
    0562 0452 1140 ADM
    0563 0453 0464 B6
    0564 0454 0464 XSK I
    0565 0455 0224 4
    0566 0456 6430 JMP G6
    0567 0457 0224 XSK I
    0568 0458 6436 JMP F6
    0569 0459 1020 X1-10
    0570 0460 6206 JMP
    0571 0461 0000 E6,
    0572 0462 0000 JMP
    0573 0463 6000 B6,
    0574 0464 0000 B6,
    0575 0465 6430 JMP
    0576 0466 0224 H6,
    0577 0467 6436 JMP
    0578 0468 1020 X1-10
    0579 0469 6206 JMP
    0580 0470 0000 E6,
    0581 0471 6000 B6,
    0582 0472 0000 B6,
    0583 0473 6000 B6,
    0584 0474 0000 B6,
    0585 0475 6000 B6,
    0586 0476 0000 B6,
    0587 0477 6000 B6,
    0588 0478 0000 B6,
    0589 0479 6000 B6,
    0590 0480 0000 B6,
    0591 0481 6000 B6,
    0592 0482 0000 B6,
    0593 0483 6000 B6,
    0594 0484 0000 B6,
    0595 0485 6000 B6,
    0596 0486 0000 B6,
    0597 0487 6000 B6,
    0598 0488 0000 B6,
    0599 0489 6000 B6,
    0600 0490 0000 B6,
    0601 0491 6000 B6,
    0602 0492 0000 B6,
    0603 0493 6000 B6,
    0604 0494 0000 B6,
    0605 0495 6000 B6,
    0606 0496 0000 B6,
    0607 0497 6000 B6,
    0608 0498 0000 B6,
    0609 0499 6000 B6,
    0610 0500 0000 B6,
    0611 0501 6000 B6,
    0612 0502 0000 B6,
    0613 0503 6000 B6,
    0614 0504 0000 B6,
    0615 0505 6000 B6,
    0616 0506 0000 B6,
    0617 0507 6000 B6,
    0618 0508 0000 B6,
    0619 0509 6000 B6,
    0620 0510 0000 B6,
    0621 0511 6000 B6,
    0622 0512 0000 B6,
    0623 0513 6000 B6,
    0624 0514 0000 B6,
    0625 0515 6000 B6,
    0626 0516 0000 B6,
    0627 0517 6000 B6,
    0628 0518 0000 B6,
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