```
File: RAMS_COMMON3.OZ06::RMS:4:252:39

* Setup file for N43RF   * Ozone 2006
*
* 30 Aug 06  TL Updated Cal constants
* 19 Aug 06  TL Created Ozone '06 ver from hu05 version
*  3 Jun 05  TL Updated Cal Constants
* 29 Mar 05  TL Created HU05 version from HU04
* 18 Aug 04  TL Updated TT#3 cal constants
* 23 Jul 04  TL Added RA1-RA2 into T3
* 03 Jul 04  TL New Cal Constants
* 14 May 04  TL Updated constants for new Hygro's
* 12 May 04  TL Changed DAC setup for New TDL scheme
* 11 May 04  TL Created HU04 from HU03
*  1 Mar 04  TL Changed year from '03 to '04
*  8 Dec 03 ASG Added 2nd SFMR calc to Name array
*  2 Sep 03  TL Installed CO2 Radiometer
* 18 Aug 03  TL Corrections in T3 array destinations ofr new T5 layout
* 15 Aug 03  TL Swapped Dew #2 (EdgeTech 137 for Buck)
* 14 Aug 03 ASG Moved CBPS&DGPS to chan 16&17, bump old 16-23 up +2
* 13 Aug 03  TL Moved AOC SFMR from IAU channel 32 to 2
*  7 Aug 03  TL Updated Cal Constants
* 10 Jun 03  TL Updated cal constants
* 23 May 03  TL Created Hu03 from OW03
*  5 Mar 03  TL Added PQ2 calculation in DACTBL
* 12 Aug 02  TL Setup DACTBL for BAT probe
* 26 Sep 00  TL Changed DACTBL for TAS on Channel 2 for PMS/SEA DAS
* 29 Aug 00 ASG Updated for Hurr 2000, copied from IPEX config.  Also
*                 added DGPS, Fast4 update, Quadrant SFMR, TCG1 ASCII
* 16 Nov 99 ASG Support for disk recording
* 17 june 99 jhr added lmaph to adc to T5 transfer section
*  5 Aug 98  TL Moved items in T1 Array to match Cal Lab's
* 15 Jul 98 STM Set up for HU98 made major changes to IAU array
* 11 Jun 97  TL Changed Input from AVAPS to 19.2 kb
* 21 Feb 97 jhr Set up for HU97 from HU96, Include VAPS input/output upgrade
* 21 Jun 96 asg Set up for HU96 from FOCI, also mod to use new ema rams sfwr
* 02 May 94 ASG Collins GPS, new calibrations
* 21 Sep 93 ASG new PQ & PS dynamic cal method - major CNS change
* 19 Aug 93  TL Added FORMVAR stuff in IAU setup
* 13 Oct 92 Jhr changed all adc gust probe rates to 40 samples/sec
* 14 Apr 92 ASG Hurr Ops '92 - GPS versions of all pgms, buffered fast data
* 15 Oct 91 ASG Major changes for ASDL-VI
* 24 Aug 90 DuG New ACIA card configs
*  3 Jul 90  TL Made IAU config right, cleaned up from new SETUP scheme
* 15 May 89 ASG Changed PQ/PS Dyn Cal Method, Wingtip Rsmt, update all const
* 15 May 87 TML Updated with configuration for 32 bit IAU SRIN cards
*
*
* This file is used by the setup program to fill in some of the
*  constants and flags store in system common and used by programs
*  of the RAMS '84 data collection and display system.  The file
*  starts with one comment line that is displayed by setup as an
*  operator message.  All comments are denoted by an asterisk.  If
*  the entire line is a comment, the '*' must be in the first column.
*  If it is in another column, the setup program may try to use the
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*  preceding characters (even blanks if there is no actual data) as
*  data.  A comment can be appended to a line of data, again using
*  a '*' after the last data character.
*
* The file is divided into several parts, each used to fill a
*  different array in the common area.  Each section is started with
*  an ampersand (&) in column 1, followed by a letter which denotes
*  the section of common that the following data is to be used for.
*
* The sections are as follows:
*   &A  -  T1 array cons; addr, slope and offset for ADC to T5 xfers
*   &B  -  T2 array cons; addr and poly constants for ADC to T5 xfers
*   &C  -  DACTBL cons; addr, offset, and scale for T5 to DAC output
*   &D  -  IT1 initial settings; default setup of global controls
*   &E  -  CNS array cons; misc constants for met. processes
*   &F  -  NAME files; file names of all pgms to be RP'd and put in NAME
*   &G  -  IAUCH array data; set up IAU channel to device equivalences
*   &H  -  IAU setup; channel assignments and config. data
*   &I  -  ADC setup; fast data rate config.
*   &J  -  ADC setup; sampling sequence config.
*   &K  -  T3 array cons; source 1 addr, source 2 addr, operation, dest
*             addr, slope1, offset1, slope2, offset2.
*
* The first two data entries of this file must be the aircraft number
*  and year (4 digits, e.g. 1985).  The sections can be in any order
*  after these two parameters, however if there are any sections that
*  have not been included, the setup program will generate an error
*  message.  If this file does not contain enough entries in a section,
*  the unfilled locations will be initialized with a value of zero.  If
*  a section has too many data entries, the excess will be ignored.
*
43           * aircraft N43RF
2006         * year
*
*
&A
*
* T1 array constants - format is source address (in ADC array), dest
*  address (in T5 array), multiplier, offset.  The source and dest
*  addresses must be integers, and the multiplier and offset are real
*  numbers. The source address can run from 0 to 79, the dest is in the
*  range 1-150.
*
* 30 Aug 06  TL New Cal Constants
*  3 Jun 05  TL New Constants & new S/N for Dew#3 (TDL) & CoPilot PS2/PQ2
* 18 Aug 04  TL New TT3 constants
* 03 Jul 04  TL New Constants
* 30 Jun 04  TL New Constants
* 14 May 04  TL Updated constants for Hygros
* 20 Aug 03 ASG New Edgetech 137X sn18267 w/1684
* 15 Aug 03  TL Swap Dew #2 - EdgeTech 137 for Buck
*  7 Aug 03  TL Updated Cal Constants
* 08 Apr 95  TL Added King LW to Array with W.A.G. for constants
* 15 Oct 91 ASG Changed all dest. for new T5 @ ASDL-VI
*
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```
5,DAPM,17.2537,-.1021      * Dynamic Attack (DAP) - Rsmt 1221F2AF Sn: 842
7,DBPM,17.1471,0.1028      * Dynamic Slip (DBP) - Rsmt 1221F2AF  Sn: 861
4,AP1,6.8881,0.0641        * Attack Press (AP1) - Rsmt 1221F2VL Sn: 877
6,BP1,6.8910,-0.0437       * Slip Press (BP1) - Rsmt 1221F2VL  Sn: 878
34,PQ3M,17.2312,0.8782     * PQ3 (PQF2) Copilot - Rsmt 1221F2AF  Sn: 2443
33,PQ2M,16.5540,-.3379     * PQ2 (PQF1) Copilot - Rsmt 1281B2BEP3  Sn: 161
32,PS2M,79.9650,249.2979   * PS2 (PSF)  Copilot - Rsmt 1281B2BEP3  Sn: 161
9,PQ1M,16.7337,-10.2298    * PQ1 Wingtip - Rsmt 1281B2BEP3  Sn: 163
8,PS1M,79.9704,249.4970    * PS1 Wingtip - Rsmt 1281B2BEP3  Sn: 163
*47,CBPS,120.0,500.0        * Cabin Pres (CBPS) Vaisala PTB 220 Sn: W3120001
*47,CBPS,96.3854,568.7978   * Cabin Pres (CBPS)   Rsmt 1201FA1A1ASC  Sn: 190
16,AP2,6.8765,-0.3298      * Radome Attack (AP2) - Rsmt 1221F2VL  Sn: 2317
17,BP2,6.8833,-0.0814      * Radome Sideslip (BP2) - Rsmt 1221F1VL  Sn: 879
18,PQ4M,34.5926,-0.7240    * Radome Dynamic (PQ4) - Rsmt 1221F1AF Sn: 286
19,QC,206.8766,-2.5857     * Radome Total Pres (QC) - Rsmt 1201F2A1  Sn: 260
1,TT1,12.0289,-0.1002      * Total Temp #1 - Rsmt 102CH2AF SN:58171/Amp#16
2,TT2,6.9934,0.0565        * Total Temp #2 - Rsmt 102CL2AF SN:A7775/Amp#152
20,TT3,4.9920,  0.0410     * Total Temp #3 - Rsmt 102CL2AZ SN:3275 Amp:123
3,TW1,11.1886,-16.8561     * Dew #1 Gen. Eastern 1011B SN:52724/52722
*??,TW2,12.500,-75.000      * Dew #2 - Buck 1011C   313-P w/92768
*24,TW2,30.0300,-100.0901   * Dewpointer #2 - Edge Tech 137X #484 w/1705
24,TW2,20,-60              * Dew #2 - EdgeTech Vigilant #29833 w/Sen 1744
*120,SFWS,0.1,0.0           * USFMR Wind Speed from ISEC(120)
*121,SFRR,0.1,0.0           * USFMR Rain Rate from ISEC(121)
*122,SFDV,1.0,0.0           * USFMR Status Error from ISEC(122)
27,TW3,7.500,-25.000       * Dewpointer #3 - MAYCOMM TDL S/N 1
30,10,800,0               * WVSS-II in T5(10) slot
15,AAV,4.9031,0.           * Vert. accel #1
14,BAV,4.9031,0.           * Vert. accel #2
0,ALW,1.2,0                * J&W Liquid Water
31,KLW,1,-1.5              * King Liquid Water (WAG at Offset TL)
48,BT1,10.,0.              * AXBT #1
49,BT2,10.,0.              * AXBT #2
50,BT3,10.,0.              * AXBT #3
26,LMAPH,1.,0.             * LMAPH not inverted
*
* Put Epply radiometer entries here
*
-1                         * terminator for metp process
*
*
&B
*
*
* T2 array constants - format is source addr (in ADC), dest addr (in
*  T5), A,B,C,D.  A-D are parameters used in the cubic equation:
*     dest = Ax**3 + Bx**2 + Cx + D  where x is the source data.
*
*  1 Mar 03  TL Installed 42's SST
*  2 Sep 03  TL Installed CO2 rad
* 20 Aug 03 ASG Updated for Hurr '03
* 15 Oct 91 ASG Changed all dest. for new T5 @ ASDL-VI
* 15 Nov 88 TML Moved PSR & PQR2M to T1 for new Rsmnts
*
12,RS,0.0224,-0.4182,11.1037,-0.0084            * RS - PRT-5 CO2 SN:642
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63,RU,0.0199,-0.4441,9.9670,2.8117               * RU - PRT-5 Up SN:648
10,RD,0.0906,-0.3626,8.1467,5.4626               * RD - PRT-5 SST SN:588
*
*
&C
*
* DACTBL array constants
* Four entries for each channel - the first entry is the source location
*  in the T5 array.  The second entry is the DAC channel that the data
*  is to be output on (0-15).  The third entry is a floating point offset
*  which is added to the raw number to set the zero voltage point.  It
*  is added before scaling, so express the offset in met. units. The
*  fourth parameter is the scale value.  The data is divided by the scale
*  to normalize the raw data (full scale set equal to +/- 1.0). Then
*  all of the normalized values are scaled to counts and fixed for
*  output to the ADC.
*
*
* 12 May 04  TL Removed PQ2 and added TA & PS for TDL Hygro
* 05 Mar 03  TL Added PQ2 on Ch 15 for TDL Hygrometer
* 12 AUG 02 JAS Updated for Hurr '02
* 26 Sep 00  TL Changed TAS output for SEA/PMS to use channel 2
* 27 Jan 00 JHR updated tas output to 0 -10 vdc = 0-200 m/s
* 15 Oct 91 ASG Changed all sources for new T5 @ ASDL-VI
* 21 Oct 87 TML Swapped offset & scale values for channel 11 & 12
* 17 Nov 86 RHS Scale values doubled on all channels marked with "**"
*               preceeding the channel number. ( EMEX +/-5 volt scaling.)
* 05 Jul 85 ASG First aircraft system
*
*
* Channel 0 - Dew Point : -5 to 5 Vdc is -20 to +40 Deg C
TD,0,-10,60     * -75 Deg C is 0 V, normalize -12.5 Deg C
*
**Channel 1 - Radar Altitude  0/5000 ft which is 0/1524 meters
**RA,1,-762.,1524.       * 2500 ft is 0 volts, normalize 2500 ft
*
*Channel 2 - True Air Speed : 0 to 10 Vdc is 0 to 200 m/s
TSM,2,0.,200
*
**Channel 3 - Drift Angle +/- 10 degrees
**SDA,3,0.,20.
*
**Channel 4 - True Air Speed  0 - 10 vdc equals 0 - 200m/sec.
*  5 volts equals 100 m/ sec
TSM,4,0.,200.  * use true air speed measured - TSM
*
* Channel 5 - Radar Altitude 0/32768 ft which is 0/9987.7 meters
RA,5,-4993.84,4993.84
*
* Channel 6 - Static Pressure 300.15/1031.01 mBars
PS,6,-665.58,365.43     * 365.43 = (1031.01-300.15)/2
*
**Channel 7 - Surface Radiometer +/- 50C
RD,7,0.,100.
*
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**Channel 8 - Ambient Temperature +/- 50C
TA,8,0.,100.
*
* Channel 9 - Pitch Angle -5 to 5 V = +/- 22.5 Degrees
SPC,9,0.,45.0      * selected pitch angle SPC
*
* Channel 10 - Roll Angle -5 to 5 V = +/- 45 Degrees
SRL,10,0.,90.0     * SRL
*
* Channel 11 - Heading  +/- 180 Degrees
**SHD,11,0.,180.  * SHD
*
* Channel 12 - Heading+180  -5 to 5 V = 0/360 Degrees
SHD,12,-180.,360.
*
* Channel 13 - Vertical Speed +/- 26.4 m/s
VS,13,0.,26.4     * aircraft vertical speed VS
*
*Channel 14 - TA to TDL   -60 Deg to +40 Deg : 0-10 VDC
TA,14,60,100
*
**Channel 15 - PS for TDL Hygrometer, 400 to 1100 mB 0-10 VDC
PS,15,-400,700        * PS
*
&D
*
* IT1 array - global control flags
*   This section initializes the flags that control some basic
*    functions and options.
*
*  6 Dec 03 ASG user pattern, Lan & SFMRsel
* 21 jun 96 ASG new assignments for interim EMA config
* 15 Oct 91 ASG Changed all for ASDL-VI & Metpx select changes
* 05 Jul 86 ASG First aircraft system
*
1          *  1 - Temp probe selection - start with #2  29 Sept 92
3          *  2 - Select nav. - start with INE #2 with GPS
0          *  3 - Altitude source for Met. calc - start w/ PA
2          *  4 - Select Dewpointer - start with #2
0          *  5 - Print rate - start with no printing
0          *  6 - Select flow angle sensors - start with AP1,BP1
1          *  7 - Vert. accel. for FWZ - VA #1
1          *  8 - Primary display switch - start w/ display on
1          *  9 - Secondary display switch - start w/ display on
1          * 10 - Tertiary display switch - start w/ display on
1          * 11 - Disk recording switch - start w/ disk on
1          * 12 - Secondary slow tape switch - yes sec tape
-8         * 13 - Primary mag tape lu - start with 8; but leave disabled
13         * 14 - Lu of ASDL-VI Comm. Link - set to Lu 13
1          * 15 - Resync flag - try resync on startup
30         * 16 - Length of RECCO data filter - set to 30 seconds
-1         * 17 - ASDL-VI transmit slots - start with default
2          * 18 - Selected PS - use PS2 (Copilot Rosemount 1281)
2          * 19 - Selected PQ - use PQ2 (Copilot Rosemount 1281)
1          * 20 - Radar Alt. & GA select - APN-159 SYNCHRO
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30          * 21 - Time between ASDL flight level data captures - 30 seconds
10          * 22 - Time between flight level blocks to ASDL-VI - 10 min
0           * 23 - User Data Pattern 1 - umass sfmr, 3 words to ISEC (120-122)
0           * 24 - User Data Pattern 2 - also NU
0           * 25 - LAN broadcast enable - not enabled
0           * 26 - SFMR Select for MinOb data - use 1st avail
*
&E
*
* CNS array constants - 25 real numbers; seperate entries
*
* 14 Sep 02  TL New AA and SA per ABD
* 18 Aug 98 JHR new AA and SA per ABD
* 10 Jul 97  TL New AAM & SAM per Stan C.
* 21 Sep 93 ASG major change in PQ and PS calc - see METP ver 2.6 for info
* 15 Oct 91 ASG Changes for sys common assigns @ ASDL-VI
* 15 May 89 ASG  Changed PQ/PS dynamic cal assign; removed Garretts
*
0.87511     *  1 - AAM offset - converts attack pressure to angle of attack
5.98502     *  2 - AAM slope
0.35000     *  3 - SAM offset - converts sideslip pres to angle of sideslip
7.25071     *  4 - SAM slope
0           *  5 - spare since no nose flow angle sensors installed
0           *  6 -   "
0           *  7 -   "
0           *  8 -   "
-3.3        *  9 - PQWNG offset - PQ1M correction because it's on the wingtip
3.7         * 10 - PSWNG offset - PS1M     "         "     "   "   "     "
.177001     * 11 - PQER1 coefficient (x^1) for PQERR equation
-.0129067   * 12 - PQER2 coefficient (x^2)  "    "       "
.00190547   * 13 - PQER3 coefficient (x^2.5) "   "       "
-.000078284 * 14 - PQER4 coefficient (x^3)  "    "       "
-.35        * 15 - PSerr offset - 1st term in PSerr calc
.5          * 16 - PSerr slope1 - multiplier for 2nd term in PSerr calc
410.        * 17 - PSerr scale1 - scale factor (divisor) for 2nd term
-25.        * 18 - PSerr power1 - exponent for 2nd term in PSerr calc
-.15        * 19 - PSerr slope2 - multiplier for 3rd term; =0 if no 3rd term
640.        * 20 - PSerr scale2 - divisor for 3rd term; =1 if no 3rd term
-12.        * 21 - PSerr power2 - exponent for 3rd term; =0 if no 3rd term
+0.0        * 22 - TDC - dewpoint correction
0.          * 23 - spare
-11.0       * 24 - RAC - APN-159 Radar Alt. correction for cable length
*
*
&F
*
* NAME files - FMP file names of all programs to be rp'ed and
*  scheduled.  In addition, the first four files must be the parallel
*  and serial poll interrupt handlers.  These are not put in NAME.
*  Setup uses FmpRpName and fills NAME with the result passed back
*  Program names should have at least five characters to avoid clones
*
* 15 Aug 04   TL Added SFMR4_x for HRD SFMR
* 15 Oct 91  ASG ASDL-VI assigns
* 05 Jul 86  ASG First aircraft system
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```
*
IASRV.RUN::rams             * IAU burst interrupt handler
AFSRV.RUN::rams             * ADC fast burst interrupt handler
ASSRV.RUN::rams             * ADC slow burst interrupt handler
SSERV.RUN::rams             * SRQ interrupt handler routine
*
* The following programs are inserted in the NAME array
* !! NOTE !! - Program assignments are slot-dependent.  Each slot must have
*     an entry or a 0 placeholder, otherwise all following entries will be
*     in the wrong place and will not be found by calling programs.
*
0                          * Slot 1 - SRQ handler - nothing for now
0                          * Slot 2 - Extended status handler - none now
FAST4_6.RUN::rams          * Slot 3 - Fast Data Handler - sched by IASRV
TAPE2_1.RUN::rams          * Slot 4 - Mag Tape Handler - sched by FASTx
METP2_9.RUN::rams          * Slot 5 - Met Calc. Program - sched by FASTx
IOUT1.RUN::rams            * Slot 6 - IAU Data Output - sched by METPx
DAC01.RUN::rams            * Slot 7 - DAC Output Routine - sched by METPx
GROUT1_0.RUN::rams         * Slot 8 - Graphics Data Output - sched by METPx
AFLT2.RUN::rams            * Slot 9 - ASDL Flight Level Data - sched by METPx
0 *SFMR5_3.RUN::rams         * Slot 10- AOC Step Freq. Calc - sched by METPx
0 *SFMR4_5.RUN::rams         * Slot 11- HRD Step Freq. Calc - sched by METPx
0                          * Slot 12- not used - sched by METPx
0                          * Slot 13- not used - sched by METPx
0                          * Slot 14- not used - sched by METPx
0                          * Slot 15- not used - sched by METPx
0                          * Slot 16- not used
DISK1.RUN::rams            * Slot 17- Disk Recording Pgm - sched by TAPEx
ACOM1.RUN::rams            * Slot 18- ASDL-VI comm. handler for AFLTx & ASDLx
0                          * Slot 19- not used
LDLBL.RUN::rams            * Slot 20- Label load routine for DSPL2x
*
&G
*
* Assignment of IAU channels to devices
* This data is put into the IAUCH array by setup.  The comments tell
*  what device is associated with each entry.  Fast program determines
*  the assignment of each list entry.  Entries are in the range 0-39.
*  Specifying chan. 0 corresponds to card 0 side A, etc.
*  Set all unused channels to -1
*
* 22 Aug 06 STM Added AUX serial feed to OZONE Channel 3
* 14 Aug 03 ASG Moved CBPS&DGPS to chan 16&17, bump old 16-23 up +2
* 13 Aug 03  TL Moved AOC SFMR from IAU ch 32 to 2
*  5 Aug 03 ASG added AOC SFMR
* 26 Jun 03 ASG setup for Vaisala Cabin Pres input on IAU chan 24
* 15 Jul 98 STM setup for major config change of iua card positions
* 21 Feb 97 jhr Added VAPS I/O
* 07 Nov 95 JHR Set ADterms to output via IAU, moved Frmvar to chn 30
* 18 Sep 95  TL Set ADTERM slots to unused (Status Channels 34-39)
* 02 May 94 ASG Removed GPS Output - not required by Collins 3M
* 10 Oct 92 DuG Removed DRI Charg Probe & added NCAR UV Hygrometer
* 23 JUL 92 JHR ADDED GPS INPUT AND GPS PRESS ALT OUT
* 15 Oct 91 ASG Removed ASDL - always on a Mux port
* 01 Aug 91 TL  Added Formvar for Hurricane '91
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* 15 May 89 ASG Removed Garretts; added charge probe for COPS
* 17 Nov 88 TML Moved TCG #2 to channel 15 (other half of TCG #1 card)
* 29 Jul 88 TML Assigned Hassablad to channel 32
* 02 Sep 86 ASG New assignment scheme
*
5    *  1 - INE #1
4    *  2 - INE #2
10   *  3 - GPS - ACIA
12   *  4 - APN-232 Radar Altimeter
-1   *  5 - Averaged digital channel - spare
-1   *  6 - Averaged digital channel - spare
28   *  7 - APN-159 Radar Altimeter - syncro->parallel
-1   *  8 - APN-159 Radar Altimeter - parallel - not used
18   *  9 - Time Code Generator #1 - ACIA
15   * 10 - Time Code Generator #2 - 32 bit serial
6    * 11 - AVAPS input - ACIA
17   * 12 - Ashtech BR2G GPS - ACIA
2    * 13 - AOC Stepped Freq uWave Radiometer - ACIA
* Single Status channels - spot values stuffed in ISEC(108-119)
-1   * 14 - Status from Wing Wiring Junction Box - Not Used
-1   * 15 - Status from Cloud Physics Sta. - Not Used
-1   * 16 - Status from Flight Director Sta. - Not Used
-1   * 17 - Single stat for isec(111) - Not Used
22   * 18 - Event switch word 1 - 32 bits serial
23   * 19 - Event switch word 2 - 32 bits serial
-1   * 20 - Event switch word 3 - 16 bits serial - Not Used
-1   * 21 - single stat for isec(115)
-1   * 22 - single stat for isec(116)
30   * 23 - single stat for isec(117) - Formvar count
31   * 24 - single stat for isec(118) - Formvar speed
16   * 25 - Vaisala Cabin Pressure - ACIA
22   * 26 - ET Printer Status channel - 8 bit Parallel
* User data input channels - entries 27-28
-1   * 27 - User Input data #1 - Not Used
-1   * 28 - User Input data #2 - Not Used
-1   * 29 - Not Used
* Output Channels start at IAUCH(30)
19   * 30 - Dspl1 alphanumeric output - ACIA
20   * 31 - Dspl2 alphanumeric output - ACIA
21   * 32 - Dspl3 alphanumeric output - ACIA
27   * 33 - Laptop Output - ACIA
23   * 34 - ET printer output - 8 bit Parallel
26   * 35 - Radar data system output - ACIA
7    * 36 - AVAPS out - ACIA
3    * 37 - FL LEV Feed To OZONE
-1   * 38
-1   * 39
-1   * 40
*
&H
*
* IAU Configuration Data File
*
* This file is read in by the setup program and transfered to the IAU.
*  Each line is an entry of 6 bytes seperated by spaces or commas.  One
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*  line has data for one channel.  Only the first 6 byte entries are used
*  on a line, and only 40 lines (channels) are used.  Each byte entry
*  is assumed to be a decimal number unless an H or B is appended to the
*  end of the number.  H signifies that this entry is a hex number and
*  B denotes an octal number.  All entries are case folded so f3h and
*  176b are acceptable.
*
* 22 Aug 06 STM Configured ACIA at slot 3 for AUX Feed out to Ozone
* 14 Aug 03 ASG Moved CBPS&DGPS to chan 16&17, bump old 16-23 up +2
* 13 Aug 03  TL Moved AOC SFMR from ch 32 to ch 2
* 15 Feb 03 STM configured IAU to input data from USFMR on chan 24
* 15 Jul 98 STM configured IAU to be more similar to N42RF
* 11 Jun 97  TL VAPS Input changed to 19.2 kb & buffer set to 200 bytes
* 21 Feb 97 jhr VAPS Config added
* 07 Nov 95 JHR added setup for ADterm output
* 18 Sep 95  TL Removed Status Channels from Ch 34-39 (ADTERMS use them)
* 02 May 94 ASG Changed to Collins 3M GPS, removed UV Hygr
* 10 Oct 92 DuG Removed Charge Probe & added NCAR UV Hygrometer
* 23 JUL 92 JHR ADDED GPS INPUT AND GPS PRESS. ALT OUT
* 01 Aug 91 TL  Added Formvar to channel 16 & 17
* 15 May 89 ASG Removed Garretts; added Charge Probe for COPS
* 17 Nov 88 TML Moved TCG #2 to chan 15 ( other half of TCG #1 card)
* 04 Aug 88 TML Added APN-232 RA
* 29 Jul 88 TML Moved Hassablad to channel 32
* 15 May 87 TML Update for IAU 32 bit srin card configuration
* 05 Sep 86 ASG 1st acft system
*
*
*
* INE word channel - SRIN card,ine;size-5*40bytes;lsb first,int start,
*      ext clock,int sync on ldot,retrig env,env intr,rst on read;envcnt
*      is eclk/4,bitclk-don't care,intr enabled;32 bit count;24 usec env
*
0,0,0,0,0,0                                     * chan 0 - spare
0,0,0,0,0,0                                     * chan 1 - spare
*
*
* ACIA Card
* AOC SFMR Input  8 bit, no par, 1 stop, 9600
d4h,150,0,1eh,0,0                               * chan 2 - AOC SFMR
* AUX Ozone Output 8 bit, no par,1 stop, 9600
c1h,0,0,1eh,0,0                                 * chan 3 - AUX out to Ozone
*
*
* SRIN card
52h,240,00,b4h,dfh,f9h                          * chan 4 - INE #2
52h,240,00,b4h,dfh,f9h                          * chan 5 - INE #1
*
*
* ACIA card
* RS232:19.2 kbaud, 8 data, 2 stop, no parity
d4h,200,0,9fh,0,0                               * chan 6 - Avaps Sonde In
* RS232:9600 baud, 8 data, 1 stop, no parity
c1h,0,0,1eh,0,0                                 * chan 7 - Avaps Flt Lvl Out
*
```

```
*
*
0,0,0,0,0,0                                     * chan 8
0,0,0,0,0,0                                     * chan 9
*
*
* ACIA card !RS-422! : 19.2K baud, 8 data, 1 stop, no parity, !RS-422!
d4h,220,0,1fh,0,0                               * chan 10 - GPS In
0,0,0,0,0,0                                     * chan 11 - spare
*
*
* SRIN card
56h,28,28h,a4h,e7h,14h                          * chan 12 - APN 232 alt
0,0,0,0,0,0                                     * chan 13 - spare
*
*
*SRIN card
0,0,0,0,0,0                                     * chan 14 - spare
56h,04h,08h,84h,dfh,dfh                         * chan 15 - TCG #2
*
*
* ACIA card
* Vaisala Cabin Pressure - input 8 bit,no par,1stop,9600baud
d4h,150,0,1eh,0,0                               * chan 16 - Vaisala Cabin Pres
* 8 bits, no parity, 1 stop, 4800 baud
d4h,100,0,1ch,0,0                               * chan 17 - Ashtech BR2G GPS
*
* ACIA card  for output to ADTerm card / TCG #1
d4h,16,0,1eh,0,0                                * chan 18 - TCG #1
c1h,0,00h,9fh,0,0                               * chan 19 - Dspl1
*
*
* ACIA card
c1h,0,00h,9fh,0,0                               * chan 20 - Dspl2
c1h,0,00h,9fh,0,0                               * chan 21 - Dspl3
*
*
* PIA card
98h,2,34h,0,0,0                                 * chan 22 - printer status
81h,0,2ch,0,0,0                                 * chan 23 - printer output
*
*
* SRIN card   32 bits
56h,8,30h,f4h,dfh,19h                           * chan 24 - Event Sw #1
56h,8,30h,f4h,dfh,19h                           * chan 25 - Event Sw #2
*
*
* ACIA card
* 8 bits, space parity, 2 stop, 9600 baud
c1h,0,E0h,9eh,0,0                               * chan 26 - MARS output
* 8 bits, no parity, 2 stop, 9600 baud
c1h,0,0,9eh,0,0                                 * chan 27 - Lapt Output
*
*
* SRIN card : 16 bits
```

```
5ah,2,10h,32h,efh,75h                              * chan 28 - APN 159
0,0,0,0,0,0                                        * chan 29 - spare
*
*
* SRIN card - DRI Formvar
5ah,02h,19h,02h,EFh,EFh                            * chan 30 - Formvar Cnt
5ah,02h,19h,02h,EFh,EFh                            * chan 31 - Formvar Spd
*
*
*
* ACIA card
* AOC Stepped Freq uWave Radiometer - input 8 bit, no par, 1 stop, 9600 baud
*
* Moved to channel 2 8/13/03  TL
0,0,0,0,0,0
*d4h,150,0,1eh,0,0                                 * chan 32 - AOC SFMR
0,0,0,0,0,0                                        * chan 33 - spare
*
*
0,0,0,0,0,0                                        * chan 34 - spare
0,0,0,0,0,0                                        * chan 35 - spare
*
*
0,0,0,0,0,0                                        * chan 36 - spare
0,0,0,0,0,0                                        * chan 37 - spare
*
*
0,0,0,0,0,0                                        * chan 38 - spare
0,0,0,0,0,0                                        * chan 39 - spare
*
*
*
&I
*
* 10 Mar 95 STM Updated for VORTEX 95
* 25 Aug 94  TL Set rate to 80 for 8 channels for testing
*
* ADC configuration file
*  Fast data rate specification for ADC
*  Each entry is for one channel.  The allowable values are 0,1,2,4
*  and 8; corresponding to NONE,10,20,40, or 80 samples per second
*  on a channel.  A max. of 32 channel entries can be put on a line.
*
* 14 Jul 99  TL Updated for Ozone '99
* 13 Nov 95 JHR updated for C.O.A.S.T.
* 15 May 89 ASG Channel assignment update
*
4     * 0  J&W Liquid water
4     * 1  temp #1
4     * 2  temp #2
4     * 3  dwpt
4     * 4  ap
4     * 5  dap
4     * 6  bp
4     * 7  dbp
```

```
4     * 8  PS1 - Wingtip Rsmt 1281
4     * 9  PQ1 - Wingtip Rsmt 1281
4     *10  SST Radiometer
0     *11  Side Radiometer Window Temp
4     *12  Side Radiometer (CO2)
0     *13  Ice Rate Sensor
4     *14  v. accel #2
4     *15  v. accel #1
4     *16  Radome Attack Press
4     *17  Radome Sideslip Press
4     *18  RAdome Diff Press
4     *19  Radome impact press
4     *20  Radome air temp #1
4     *21  Radome air temp #2
4     *22  Radome air temp #3
4     *23 Radome box temp
4     *24 AOC Dewpoint #2 Signal
4     *25 AOC Dewpoint #2 Balance
4     *26 Lyman Alpha hygrometer
4     *27 Gerber PSA surface area
4     *28 Gerber R(eff) droplet radius
0,0   *29-30
4     *31 King Liquid Water
4     *32 PS2 Co-pilot Rosemount 1281
4     *33 PQ2 Co-Pilot 1281
4     *34 PQ3 Co-Pilot 1221F
4     *35 Total Temp #1 Heater Current
4     *36 Total TEmp #2 Heater Current
4     *37
4     *38  Ozone Hu'97
4     *39  Ozone HU'97
4     *40 FIELD MILLS
4     *41 40 THRU 45
4     *42
4     *43
4     *44
4,4,4,4,4,4,0,0,0,0,0,0,0,0,0,0   *45-60, nothing BUT 45 FIELD MILL
0     *61
0     *62
4     *63 Up PRT-5 Radiometer
4,4,4,4,4,4,4,4,4,4,4,4,4,4,4,4   *64-79, nothing
*
&J
*
* ADC Sampling Order Configuration  6 May 86 ASG
*  List ADC channel numbers in the order that they should be sampled
*  every 12.5 msec.  Skew between channels can be minimized by sampling
*  them consecutively.  The setup program reads up to 24 channel
*  specifications per line, loading the channel numbers in sequential
*  order. Channel values range from 0 to 79.
*     Use a -1 as a non-specific sequence placeholder.  The setup
*  program reads all channels listed here and then fills in the rest of
*  the sequence slots with the unspecified channels.  Do not specify a
*  channel more than once.
*
```

```
* no special order for now, but here is an example:
*
*16,-1,14,13,-1,11 * the sample order would be 16,0,14,13,1,11,2,3,4...
*
*
&K
* T3 array constants - format is Source 1 address (any KCon), Source 2
*  address (any KCon), Operation (1-4 correspond to +,-,*,/), Dest address
*  (in T5 array), Source 1 multiplier, Source 1 offset, Source 2 multiplier,
*  Source 2 offset.  Both source addresses, the operation number and the
*  destination address must be integers, and both multipliers and offsets
*  are real numbers. Each source address can run from 0 to 330 (251 to 330
*  correspond to ADC 0-79); the dest addr is in the range 1-250 in T5.
*
* 23 Jul 03  TL Added RA1-RA2 into T5(240)
* 18 Aug 03  TL WS to Knot, PS1-PS2 and TT1-TT2 dest for new T5 assigmnt
* 21 Jan 03  TL Added WS * AMR for Salljex
* 16 Apr 96 STM FOCI Added longitude and knot conversion
* 18 Aug 98  TL Added PS1-PS2
* 15 Apr 95  TL Vortex
* 22 Sep 89 ASG 1st cut
WS,WS,1,KC239,1.9435,0,0,0   * WS to Knots for Graphics Sys
PS1,PS2,2,KC238,1,0,1,0      * PS1 - PS2
RA1,RA2,2,KC240,1,0,1,0      * RA1-RA2
WS, AMR,3,KC236,1,0,1,0      * GPS GGY - INE#1 AGY
281, 281,1,241,8000,0,0,0    * WVSS * 8000 = ppmv into T5(241)
* 005,018,2,x  ,1,0,1,0      * GPS GGX - INE#1 AGX
* 004,027,2,x  ,1,0,1,0      * GPS GGY - INE#2 BGY
* 005,028,2,x  ,1,0,1,0      * GPS GGX - INE#2 BGX
* 324,325,1,x  ,1.,0.,1.,0.  * Field mills - Upper Sen + Lower Sen
* 202,191,2,x  ,1.,0.,1.,0.  *   "     "   - Upper Sen - Lower Sen
* 203,192,1,147,1.,0.,1.,0.  *   "     "   - Upper InSen + Lower InSen
* 203,192,2,148,1.,0.,1.,0.  *   "     "   - Upper InSen - Lower InSen
* 204,193,1,149,1.,0.,1.,0.  *   "     "   - Upper SupInSen + Lower SupInSen
* 204,193,2,150,1.,0.,1.,0.  *   "     "   - Upper SupInSen - Lower SupInSen
TT1,TT2,2,KC237,1,0,1,0      *   TT1 - TT2
*126,126,1,146,-.5,0,-.5,0  *   Longitude conv for NEMA stream
*104,104,1,147,.9719,0,.9719,0  * Convert m/s knots for NEMA stream
-1                          * Terminator for Metp
*
*
```