LWA Station-Level Metadata
Ver. 5

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Contents

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1   Introduction

This memo documents the format of station-level metadata for the LWA-1 initial operational capability (IOC) monitoring and control system (MCS). The metadata described in this document consists of "station static" and "station dynamic" information, which is distinct from the observation-related metadata described in [1].

2   Format of a Station Static MIB Initialization File

Initialization files for the station static MIB is a human-readable text files. See the example provided in Appendix A. These files consist of lines, with each line having one of the following structures:

- *keyword data* # *comment*

- # *comment*

- empty line

where

- *keyword* is a keyword, identifying a parameter. Internal whitespace not allowed.

- *data* is data intended to be assigned to the parameter. Only printable non-whitespace characters are allowed, with the exception that the "#" character is not allowed. The data field is interpreted to begin with the first non-whitespace character following *keyword*, and end with the last non-whitespace character preceding either a "#" character, or the end of the line.

- *comment* text is preceded by the character "#" and may include only printable non-whitespace characters, with the exception that spaces are allowed.

A line may be up to 4096 characters long. Empty lines are allowed, ignored, and encouraged as a way to improve the readability.

The following is a list of defined parameters, in the order in which it is required that they appear in the file. For each parameter, the identifying keyword is given, followed by a definition and information on valid values.

- `FORMAT_VERSION`: An integer equal to the version number of this document. Included to account for the possibility of format modifications over time.

- `STATION_ID`: Station Identification. This is a two-letter code intended to enable concise, unambiguous identification of the station.

- `GEO_N`: WGS84 latitude of the origin of the station's local coordinate system. Decimal degrees, with North and South being indicated as "+" and "−", respectively. This position is an arbitrarily-selected reference point and may not necessarily correspond to the location of the phase center of the station during an observation.

- `GEO_E`: WGS84 longitude of the origin of the station's local coordinate system. Decimal degrees, with East and West being indicated as "+" and "−", respectively. This position is an arbitrarily-selected reference point and may not necessarily correspond to the location of the phase center of the station during an observation.

- `GEO_EL`: Elevation (above mean sea level) of the origin of the station's local coordinate system, meters. This position is an arbitrarily-selected reference point and may not necessarily correspond to the location of the phase center of the station during an observation.

- `N_STD`: Maximum number of stands; expected to be ≤ 260.

- Stand locations: These must be specified in order of stand ID n, with each stand being specified using `STD_LX[n]`, `STD_LY[n]`, and `STD_LZ[n]` keywords, in that order.

  - `STD_LX[n]`: x coordinate [m] of the feedpoints of stand n ($1 \leq n \leq$ `N_STD`) in the local coordinate system. The $+x$ points East.

  - `STD_LY[n]`: y coordinate [m] of feedpoints of stand n ($1 \leq n \leq$ `N_STD`) in the local coordinate system. The $+y$ points North.

- **STD_LZ[n]**: z coordinate [m] of feedpoints of stand n ($1 \leq n \leq$ N_STD) in the local coordinate system. The $+z$ points to the Zenith.

- **ANT_STD[n]**: The stand on which antenna n ($1 \leq n \leq 2\times$N_STD) is mounted. This will be set to floor$((n-1)/2) + 1$ if not otherwise specified.

- **ANT_ORIE[n]**: The intended orientation (polarization) of antenna n ($1 \leq n \leq 2\times$N_STD); 0 = "intended to be North-South"; 1 = "intended to be East-West". This will be set to $(n-1)$ mod 2 if not otherwise specified.

- **ANT_STAT[n]**: The status of antenna n ($1 \leq n \leq 2\times$N_STD). See Note 1. This will be set to 3 ("OK") if not otherwise specified.

- **ANT_THETA[n]**: The undesired rotation [deg] of the North or East arm of antenna n ($1 \leq n \leq 2\times$N_STD) in the elevation plane, relative to nominal ($0°$). Positive sign means increasing angle with respect to the $+z$-axis of the local coordinate system, in the direction of the $+x$ axis. Will be set to 0.0 (no error) if not otherwise specified.

- **ANT_PHI[n]**: The undesired rotation [deg] of the North or East arm of antenna n ($1 \leq n \leq 2\times$N_STD) in the azimuth plane, relative to nominal ($0°$). Positive sign means increasing angle with respect to the $+x$-axis of the local coordinate system in the direction of the $+y$ axis. Will be set to 0.0 (no error) if not otherwise specified.

- **ANT_DESI[n]**: An integer code which identifies the design of antenna n ($1 \leq n \leq 2\times$N_STD). See Note 2. Design information expected to be indexed by this code includes the mechanical specification (specific design/manufacture/model), complex vector effective length vs. frequency and pattern direction, and self-impedance vs. frequency. This will be set to "1" unless otherwise specified. Use "0" to indicate a different but unknown/undocumented design. "ANT_DESI" (without "[n]") will result in ANT_DESI[n] being set to ANT_DESI for *all* n; although subsequent uses of ANT_DESI[n] can override this for selected n.

- **N_FEE**: Number of FEEs to be described in this file.

- **FEE_ID[m]**: Label or serial number which unambiguously identifies FEE m ($1 \leq m \leq$ N_FEE). Set to "UNK" unless otherwise specified. Limited to 10 characters.

- **FEE_STAT[m]**: The status of FEE m ($1 \leq m \leq$ N_FEE). See Note 1. This will be set to 3 ("OK") unless otherwise specified.

- **FEE_DESI[m]**: An integer code which identifies the design of FEE m ($1 \leq m \leq$ N_FEE). See Note 2. Design information expected to be indexed by this code includes electrical and mechanical descriptions and frequency-domain transfer function described as (a) coefficients in a polynomial fit (representative of all FEEs with this design code) and (b) measurements of a representative FEE. This will be set to "1" unless otherwise specified. Use "0" to indicate a different but unknown/undocumented design. "FEE_DESI" (without "[n]") will result in FEE_DESI[n] being set to FEE_DESI for *all* n; although subsequent uses of FEE_DESI[n] can override this for selected n.

- **FEE_GAI1[m]**: Gain [dB] of FEE m ($1 \leq m \leq$ N_FEE) port 1, assuming nominal input and output terminations, at the reference frequency of 38 MHz. This will be set to 35.7 unless otherwise specified. "FEE_GAI1" (without "[n]") will result in FEE_GAI1[n] being set to FEE_GAI1 for *all* n; although subsequent uses of FEE_GAI1[n] can override this for selected n.

- **FEE_GAI2[m]**: Gain [dB] of FEE m ($1 \leq m \leq$ N_FEE) port 2, assuming nominal input and output terminations, at the reference frequency of 38 MHz. If this FEE has only one port, then this should be -200. This will be set to 35.7 unless otherwise specified. "FEE_GAI2" (without "[n]") will result in FEE_GAI2[n] being set to FEE_GAI2 for *all* n; although subsequent uses of FEE_GAI2[n] can override this for selected n.

- `FEE_ANT1[m]`: Antenna to which port 1 of FEE m ($1 \leq m \leq$ N_FEE) is connected. Normally in the range 1 to 2×N_STD. A value of 0 means the FEE input is open-circuited. If not specified, then `FEE_ANT1[1]` will be 1, `FEE_ANT2[1]` will be 2, `FEE_ANT1[2]` will be 3, `FEE_ANT2[2]` will be 4, and so on.

- `FEE_ANT2[m]`: Antenna to which port 2 of FEE m ($1 \leq m \leq$ N_FEE) is connected. Normally in the range 1 to 2×N_STD. A value of 0 means the FEE input is open-circuited or has only one port. See `FEE_ANT1[m]` (above) for default ordering.

- FEE power sources must be identified in order of FEE index n, with each FEE's source being specified using `FEE_RACK[m]` and `FEE_PORT[m]` keywords, in that order.

  - `FEE_RACK[m]`: From the perspective of SHL, this is the rack (1-6) in which the power supply powering this FEE is located. A value of 0 means this parameter is unknown. This parameter is used in conjunction with `FEE_PORT[m]` to identify the power source for this FEE.

  - `FEE_PORT[m]`: From the perspective of SHL, this is the power port corresponding to the power supply powering this FEE. A value of 0 means this parameter is unknown. This parameter is used in conjunction with `FEE_RACK[m]` to identify the power source for this FEE.

- `N_RPD`: Maximum number of cables connecting to FEEs to SEP; typically 520.

- `RPD_ID[m]`: Label or tag which unambiguously identifies cable m ($1 \leq m \leq$ N_RPD). Set to "UNK" unless otherwise specified. Maximum 25 characters.

- `RPD_STAT[m]`: The status of cable m ($1 \leq m \leq$ N_RPD). See Note 1. Set to 3 ("OK") unless otherwise specified.

- `RPD_DESI[m]`: An integer code which identifies the design of cable m ($1 \leq m \leq$ N_RPD). See Note 2. Design information expected to be indexed by this code includes cable type, electrical and mechanical descriptions, frequency-domain transfer function described as coefficients in a polynomial fit (representative of all cables with this design code). Set to "1" unless otherwise specified. Use "0" to indicate that design is unknown or undocumented. *The value "2" has been used for the (primarily) LMR-400 runs to Stand 258.* "RPD_DESI" (without "[n]") will result in RPD_DESI[n] being set to RPD_DESI for *all* n; although subsequent uses of RPD_DESI[n] can override this for selected n.

- `RPD_LENG[m]`: Length [m] of cable m ($1 \leq m \leq$ N_RPD). Set to 0.0 unless otherwise specified.

- Cable parameters: Order is RPD_VF, RPD_DD, RPD_A0, RPD_A1, RPD_FREF, RPD_STR. This is followed by parameters for specific cables, in order of index m, with the order for each cable being RPD_VF[m], RPD_DD[m], RPD_A0[m], RPD_A1[m], RPD_FREF[m], RPD_STR[m]. Specific definitions below.

  - `RPD_VF[m]`: Velocity factor [%] of cable m ($1 \leq m \leq$ N_RPD) at the reference frequency of 10 MHz. Set to 83 unless specified otherwise. "RPD_VF" (without "[n]") will result in RPD_VF[n] being set to RPD_VF for *all* n; although subsequent uses of RPD_VF[n] can override this for selected n.

  - `RPD_DD[m]`: Dispersive delay [ns] of cable m ($1 \leq m \leq$ N_RPD) at the reference frequency of 10 MHz and reference length of 100 m. This is the additional propagation time (beyond that expected by dividing length by (velocity factor × the speed of light in free space)) due to cable dispersion. Set to 2.4 unless specified otherwise. "RPD_DD" (without "[n]") will result in RPD_DD[n] being set to RPD_DD for *all* n; although subsequent uses of RPD_DD[n] can override this for selected n.

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- RPD_A0[m]: α_0 [m^{-1}] of cable m ($1 \leq m \leq$ N_RPD) at the reference frequency RPD_FREF[m]. This is used to calculate cable gain given length and frequency via the Memo 170 model. Set to 0.00428 unless otherwise specified. "RPD_A0" (without "[n]") will result in RPD_A0[n] being set to RPD_A0 for *all* n; although subsequent uses of RPD_A0[n] can override this for selected n.

- RPD_A1[m]: α_1 [m^{-1}] of cable m ($1 \leq m \leq$ N_RPD) at the reference frequency RPD_FREF[m]. This is an additional parameter included to improve accuracy, but is not implemented in the Memo 170 model as of Version 3. Set to 0.0 unless otherwise specified. "RPD_A1" (without "[n]") will result in RPD_A1[n] being set to RPD_A1 for *all* n; although subsequent uses of RPD_A1[n] can override this for selected n.

- RPD_FREF[m]: Frequency [Hz] at which the parameters RPD_A0[m] and RPD_A0[m] of cable m ($1 \leq m \leq$ N_RPD) are specified. Set to 10.0e+6 (10 MHz) unless otherwise specified. "RPD_FREF" (without "[n]") will result in RPD_FREF[n] being set to RPD_FREF for *all* n; although subsequent uses of RPD_FREF[n] can override this for selected n.

- RPD_STR[m]: "Coefficient of stretching" [unitless] for cable m ($1 \leq m \leq$ N_RPD). RPD_LENG[m] is multiplied by this prior to computation of cable gain or delay. Set to 1.0 unless otherwise specified. "RPD_STR" (without "[n]") will result in RPD_STR[n] being set to RPD_STR for *all* n; although subsequent uses of RPD_STR[n] can override this for selected n.

- RPD_ANT[m]: Antenna to which cable m ($1 \leq m \leq$ N_RPD) is ultimately connected. Normally in the range 1 to 2×N_STD. A negative value means the cable is connected at its input, but not at its output. A value of 0 means this cable is disconnected at both ends, or that its connections are unknown. Will be set to m unless otherwise specified.

- N_SEP: Maximum number of ports through SEP; typically 520. Note that a "SEP port" is defined as the path from the jack on the outside of the shelter, to the end of the cable that connects to the ASP input.

- SEP_ID[m]: Label which unambiguously identifies SEP port m ($1 \leq m \leq$ N_SEP) on the SEP panel. Set to "UNK" unless otherwise specified.

- SEP_STAT[m]: The status of SEP port m ($1 \leq m \leq$ N_SEP). See Note 1. Will be set to 3 ("OK") unless otherwise specified.

- SEP_CABL[m]: Label or tag which unambiguously identifies the cable that connects the SEP panel to the ASP input. Set to "UNK" unless otherwise specified.

- SEP_LENG[m]: Length [m] of the cable that connects the SEP panel to the ASP input. Will be set to 0 unless otherwise specified. "SEP_LENG" (without "[n]") will result in SEP_LENG[n] being set to SEP_LENG for *all* n; although subsequent uses of SEP_LENG[n] can override this for selected n.

- SEP_DESI[m]: An integer code which identifies the design of SEP port m ($1 \leq m \leq$ N_SEP), including the cable to ASP. See Note 2. Design information expected to be indexed by this code includes cable type, electrical and mechanical descriptions, frequency-domain transfer function described as coefficients in a polynomial fit (representative of all cables with this design code). Will be set to "1" unless otherwise specified. Use "0" to indicate that design is unknown or undocumented. "SEP_DESI" (without "[n]") will result in SEP_DESI[n] being set to SEP_DESI for *all* n; although subsequent uses of SEP_DESI[n] can override this for selected n.

- SEP_GAIN[m]: Gain [dB] of SEP port m ($1 \leq m \leq$ N_SEP) including the cable to ASP, at the reference frequency of 38 MHz. Will be set to 0 unless otherwise specified. "SEP_GAIN" (without "[n]") will result in SEP_GAIN[n] being set to SEP_GAIN for *all* n; although subsequent uses of SEP_GAIN[n] can override this for selected n.

- SEP_ANT[m]: Antenna to which SEP port m ($1 \leq m \leq$ N_SEP) is ultimately connected. Normally in the range 1 to 2×N_STD. A negative value means the SEP port is connected at its input, but not at its output. A value of 0 means this SEP port is disconnected at both ends, or that its connections are unknown. Will be set to m unless otherwise specified.

- N_ARB: Maximum number of ARX boards.

- N_ARBCH: Maximum number of channels per ARX board; expected to be 16.

- ARB_ID[m]: Label or serial number which unambiguously identifies ARX board m ($1 \leq m \leq$ N_ARB). Will be set to "UNK" unless otherwise specified. Maximum 10 characters.

- ARB_SLOT[m]: Unambiguous identification of the slot of the ASP chassis in which ARX board m ($1 \leq m \leq$ N_ARB) is installed. Will be set to 0 unless otherwise specified.

- ARB_DESI[m]: An integer code which identifies the design of ARX board m ($1 \leq m \leq$ N_ARB). See Note 2. Design information expected to be indexed by this code includes board revision number, electrical and/or mechanical descriptions, frequency-domain transfer function described as coefficients in a polynomial fit (representative of all ARX board channels with this design code). Will be set to "1" unless otherwise specified. Use "0" to indicate that design is unknown or undocumented. *Currently the value "1" is taken to mean "of the same design as the first four ARX boards installed in the station" and the value "2" is taken to mean "of the same design as the generation of ARX boards following the first four".* "ARB_DESI" (without "[n]") will result in ARB_DESI[n] being set to ARB_DESI for *all* n; although subsequent uses of ARB_DESI[n] can override this for selected n.

- ASP power sources must be identified in order of ARB index n, with each ARBs's source being specified using ASP_RACK[m] and ASP_PORT[m] keywords, in that order.

  - ARB_RACK[m]: From the perspective of SHL, this is the rack (1-6) in which the power supply powering this ARX board is located. A value of 0 means this parameter is unknown. This parameter is used in conjunction with ARB_PORT[m] to identify the power source for this ARX board. Will be set to 0 unless otherwise specified.

  - ARB_PORT[m]: From the perspective of SHL, this is the power port corresponding to the power supply powering this ARX board. A value of 0 means this parameter is unknown. This parameter is used in conjunction with ARB_RACK[m] to identify the power source for this ARX board. Will be set to 0 unless otherwise specified.

- ARB_STAT[m][p]: The status of channel p ($1 \leq p \leq$ N_ARBCH) of ARX board m ($1 \leq m \leq$ N_RPD). See Note 1. This will be set to 3 ("OK") unless otherwise specified.

- ARB_GAIN[m][p]: Maximum gain [dB] of channel p ($1 \leq p \leq$ N_ARBCH) of ARX board m ($1 \leq m \leq$ N_ARB), at the reference frequency of 38 MHz in full-bandwidth mode. "Maximum gain" means gain when programmable attenuation is minimum. Will be set to 67.0 unless otherwise specified. "ARB_GAIN" (without "[m][p]") will result in ARB_GAIN[m][p] being set to ARB_GAIN for *all* n; although subsequent uses of ARB_GAIN[m][p] can override this for the selected m and p.

- ARB_ANT[m][p]: Antenna that channel p ($1 \leq p \leq$ N_ARBCH) of ARX board m ($1 \leq m \leq$ N_ARB) is ultimately connected to. A negative value means the channel is connected at its input, but not at its output. A value of 0 means this channel is disconnected at both ends, or that its connections are unknown; this is the default if not specified.

- ARB_IN[m][p]: Label unambiguously identifying the input connector to channel p ($1 \leq p \leq$ N_ARBCH) of ARX board m ($1 \leq m \leq$ N_ARB) on the ASP rack. Will be set to "UNK" unless otherwise specified. Maximum 10 characters.

- `ARB_OUT[m][p]`: Label unambiguously identifying the output connector from channel p ($1 \leq p \leq$`N_ARBCH`) of ARX board m ($1 \leq m \leq$`N_ARB`) on the ASP rack. Will be set to "`UNK`" unless otherwise specified. Maximum 10 characters.

- `N_DP1`: Maximum number of DP1 boards. Expected to be 26.

- `N_DP1CH`: Number of channels per DP1 board. Expected to be 20, where 1 & 2 are a stand, 3 & 4 are a stand, and so on.

- `DP1_ID[m]`: Label or serial number which unambiguously identifies DP1 board m ($1 \leq m \leq$`N_DP1`). Will be set to "`UNK`" unless otherwise specified. Maximum 10 characters.

- `DP1_SLOT[m]`: Unambiguous identification of the slot of the DP chassis in which DP1 board m ($1 \leq m \leq$`N_ARB`) is installed. Will be set to "`UNK`" unless otherwise specified. Maximum 10 characters.

- `DP1_DESI[m]`: An integer code which identifies the design of DP1 board m ($1 \leq m \leq$`N_DP1`). See Note 2. Design information expected to be indexed by this code includes board revision number, firmware version, TBN bandpasses described as coefficients in a polynomial fit. Will be set to "1" unless otherwise specified. Use "0" to indicate unknown/undocumented design.

- `DP1_STAT[m][p]`: The status of channel p ($1 \leq p \leq$`N_DP1CH`) of DP1 board m ($1 \leq m \leq$`N_RPD`). See Note 1. Will be set to 3 ("OK") unless otherwise specified.

- `DP1_INR[m][p]`: Label unambiguously identifying the *rack* input connector for channel p ($1 \leq p \leq$`N_DP1CH`) of DP1 board m ($1 \leq m \leq$`N_DP1`) on the DP rack. Will be set to "`UNK`" unless otherwise specified. Maximum 10 characters.

- `DP1_INC[m][p]`: Label unambiguously identifying the *chassis* (i.e., inside the *rack*) input connector for channel p ($1 \leq p \leq$`N_DP1CH`) of DP1 board m ($1 \leq m \leq$`N_DP1`) on the DP rack. Will be set to "`UNK`" unless otherwise specified. Maximum 10 characters.

- `DP1_ANT[m][p]`: Antenna that channel p ($1 \leq p \leq$`N_ARBCH`) of DP1 board m ($1 \leq m \leq$`N_DP1`) is ultimately connected to. A value of 0 means this channel is not connected, or that its connection is unknown. If not specified otherwise, will be set to 0.

- `N_DP2`: Maximum number of DP2 boards. Expected to be 2.

- `DP2_ID[m]`: Label or serial number which unambiguously identifies DP2 board m ($1 \leq m \leq$`N_DP2`). Will be set to "`UNK`" unless otherwise specified. Maximum 10 characters.

- `DP2_SLOT[m]`: Unambiguous identification of the slot of the DP chassis in which DP2 board m ($1 \leq m \leq$`N_DP2`) is installed. Will be set to "`UNK`" unless otherwise specified. Maximum 10 characters.

- `DP2_STAT[m]`: The status of DP2 board m ($1 \leq m \leq$`N_DP2`). See Note 1. Will be set to 3 ("OK") unless otherwise specified.

- `DP2_DESI[m]`: An integer code which identifies the design of DP2 board m ($1 \leq m \leq$`N_DP2`). See Note 2. Design information expected to be indexed by this code includes board revision number, firmware version, DRX bandpasses described as coefficients in a polynomial fit. Will be set to 1 unless otherwise specified. Use 0 to indicated design is unknown or undocumented.

- `N_DR`: Maximum number of MCS-DR subsystems. Expected to be 5.

- `DR_STAT[m]`: The status of MCS-DR m ($1 \leq m \leq$`N_MDR`). See Note 1. Will be set to 3 ("OK") unless otherwise specified.

- `DR_ID[m]`: Serial number which unambiguously identifies MCS-DR m ($1 \leq m \leq$`N_MDR`). Will be set to "`UNK`" unless otherwise specified. Maximum 10 characters.

- `DR_SHLF[m]`: Unambiguous identification of the shelf in the MCS-DR chassis in which this MCS-DR PC is installed. Will be set to 0 unless otherwise specified.

- `DR_PC[m]`: The model of this MCS-DR PC. Will be set to "UNK" unless otherwise specified. *Values currently in use are "XPS435" and "T1500".*

- `DR_DP[m]`: Which DP output this MCS-DR is connected to. Values are 1-4 for beam outputs, and 5 for TBN/TBW. Will be set to 0 (not connected) unless otherwise specified.

- `N_PWR_RACK`: Maximum number of racks, from the perspective of SHL. Expected to be 6 at IOC.

- `N_PWR_PORT[m]`: Maximum number of power ports in rack m ($1 \le m \le$`N_PWR_RACK`), from the perspective of SHL. Will be set to 0 (no ports) unless otherwise specified.

- The following parameters identify the routing of power to subsystems (`PWR_SS[m][p]`), and to components within subsystems (`PWR_NAME[m][p]`). Keywords must appear in order by m, then p, with `PWR_SS[m][p]` followed by `PWR_NAME[m][p]` for any given m and n.

  - `PWR_SS[m][p]`: Subsystem that receives power from port p ($1 \le p \le$`N_PWR_PORT`) of rack m ($1 \le m \le$`N_PWR_RACK`). Valid values are `SHL`, `ASP`, `DP_`, `MCS`, `DR1`, `DR2`, `DR3`, `DR4`, and `DR5`. A value of `UNK` means this port is not connected, or that its connection is unknown.

  - `PWR_NAME[m][p]`: Specific item that receives power from port p ($1 \le p \le$`N_PWR_PORT`) of rack m ($1 \le m \le$`N_PWR_RACK`). A value of `UNK` means this port is not connected, or that its connection is unknown. Valid values are:
    * For `PWR_SS[m][p]` = `SHL`, valid values are `MCS`, *others TBD*
    * For `PWR_SS[m][p]` = `ASP`, valid values are `MCS`, `FEE`, `ARX`, `FAN`.
    * For `PWR_SS[m][p]` = `DP_`, valid values are `MCS`, `DC1` (DP chassis 1), `DC2` (DP chassis 2), `FAN`, `SYN` (synthesizer module), and `SWI` (TBW/TBN 10GbE switch).
    * For `PWR_SS[m][p]` = `MCS`, valid values are `SCH` (Scheduler), `EXE` (Executive), `TP` (Task Processor), `CH` (Command Hub), and `GW` (Gateway).
    * For `PWR_SS[m][p]` = `DR1`, `DR2`, `DR3`, `DR4`, and `DR5`, valid values are `PC`, `DS1` (DRSU 1), and `DS2` (DRSU 2)

    It should be noted that while this information is largely (but not exactly) redundant with respect to the the "_RACK" and "_PORT" parameters for subsystems, the former is intended primarily as an aid to operators and maintainers. MCS may use either for actionable control decisions, so it is important that they be consistent.

- `MCS_CRA`: "Configuration request authority" policy to be used by MCS when processing requests to set FEE and ASP parameters (which obviously apply station-wide) in session definition files. "0" means that MCS sets FEE and ASP parameters according to the information in the SSMIF, and any requests for changes are ignored. "1" means that the FEE and ASP parameters set by the SSMIF are treated as defaults, and that a session may be able to change them. See the discussion of the `SESSION_CRA` keyword in MCS0030 for additional details.

- `MRP_sss`: This sets the starion default recording period for the MIB associated with the level-1 subsystem *sss*, where *sss* is the usual three-letter acronym (e.g., "ASP", "DP_", etc.). Integer minutes. For example: `MRP_ASP` = 5 will cause MCS to archive (record) a copy of the ASP MIB every 5 minutes for the duration of the observation. The recorded MIB files are then available as metadata following the observation. "0" = "never record" (default). Note that the setting of this parameter does not imply anything about how often the MIB is *updated*; see "`MUP_sss`". Typically, `MRP_sss` $\ge$ `SESSION_MUP_sss`. When invoked, the order of invokation of subsystems must be: ASP, DP_, DR1, DR2, DR3, DR4, DR5, SHL, MCS. Note also that it is possible for observation sessions to temporarily override these settings depending on `MCS_CRA` and the session definition.

- `MUP_sss`: This sets the station default update period for the MIB associated with the level-1 subsystem *sss*, where *sss* is the usual three-letter acronym (e.g., "ASP", "DP_", etc.). Integer minutes. For example: `MUP_ASP = 5` will request MCS to force a 100% update of the ASP MIB every 5 minutes for the duration of the observation. "0" = "request no updates (but don't prevent them either)" (default). It should be noted that there is only one set of MIBs for the station, and that they are common to all sessions. When invoked, the order of invocation of subsystems must be: ASP, DP_, DR1, DR2, DR3, DR4, DR5, SHL, MCS. Note also that it is possible for observation sessions to temporarily override these settings depending on `MCS_CRA` and the session definition.

- `FEE[n]`: Controls power for the FEE on stand n. "1" = "on", "0" = "off". $1 \le n \le 260$. "FEE" (without "[n]") will result in `FEE[n]` being set to `FEE` for *all* n; although subsequent uses of `FEE[n]` can override this for the selected n. Otherwise, must be listed in order of increasing n. Note also that it is possible for observation sessions to temporarily override these settings depending on `MCS_CRA` and the session definition.

- `ASP_FLT[n]`: Selects the "filter setting" for the ARX corresponding to stand n. This corresponds to the ASP MIB parameter "FIL". "0" = "split", "1" = "full" (default), "2" = "reduced", and "3" = "off". $1 \le n \le 260$. "ASP_FLT" (without "[n]") will result in `ASP_FLT[n]` being set to `ASP_FLT` for *all* n; although subsequent uses of `ASP_FLT[n]` can override this for the selected n. Otherwise, must be listed in order of increasing n. Note also that it is possible for observation sessions to temporarily override these settings depending on `MCS_CRA` and the session definition.

- `ASP_AT1[n]`: Selects the first attenuator setting for the ARX corresponding to stand n. This corresponds to the ASP MIB parameter "AT1". This is an integer value between 0 (default) and 15. $1 \le n \le 260$. "ASP_AT1" (without "[n]") will result in `ASP_AT1[n]` being set to `ASP_AT1` for *all* n; although subsequent uses of `ASP_AT1[n]` can override this for the selected n. Otherwise, must be listed in order of increasing n. Note also that it is possible for observation sessions to temporarily override these settings depending on `MCS_CRA` and the session definition.

- `ASP_AT2[n]`: Selects the second attenuator setting for the ARX corresponding to stand n. This corresponds to the ASP MIB parameter "AT2". This is an integer value between 0 (default) and 15. $1 \le n \le 260$. "ASP_AT2" (without "[n]") will result in `ASP_AT2[n]` being set to `ASP_AT2` for *all* n; although subsequent uses of `ASP_AT2[n]` can override this for the selected n. Otherwise, must be listed in order of increasing n. Note also that it is possible for observation sessions to temporarily override these settings depending on `MCS_CRA` and the session definition.

- `ASP_ATS[n]`: Selects the split attenuator setting for the ARX corresponding to stand n. This corresponds to the ASP MIB parameter "ATS". This is an integer value between 0 (default) and 15. $1 \le n \le 260$. "ASP_ATS" (without "[n]") will result in `ASP_ATS[n]` being set to `ASP_ATS` for *all* n; although subsequent uses of `ASP_ATS[n]` can override this for the selected n. Otherwise, must be listed in order of increasing n. Note also that it is possible for observation sessions to temporarily override these settings depending on `MCS_CRA` and the session definition.

- `TBN_GAIN`: This corresponds to the DP TBN command parameter "TBN_GAIN". This is an integer value between 0 (default) and 30. Note it is possible for observation sessions to temporarily override these settings depending on `MCS_CRA` and the session definition.

- `DRX_GAIN`: This corresponds to the DP DRX command parameter "DRX_GAIN". This is an integer value between 0 (default) and 12. Note it is possible for observation sessions to temporarily override these settings depending on `MCS_CRA` and the session definition.

Note 1: For status ("_STAT") entries, 3 = "OK", 2 = "Suspect; possibly bad (If used, provide warning)", 1 = "Bad (Don't use)", 0 = "Not Installed".

Note 2: The details of the use of "_DESI" parameters has not yet been worked out.

3 Format of the Station Dynamic MIB

The station dynamic MIB (SDM) is a file, typically named "sdm.dat". This file can be read and interpreted using the MCS / Task Processor utility `tprs`. For reference, the format of this file is defined in the form of a C-language structure, as follows:

```
#include <sys/time.h>

/* subsystem status */
struct subsystem_status_struct {
  int summary;         /* SUMMARY; one of LWA_SIDSUM_* */
  char info[256];      /* INFO */
  struct timeval tv;   /* time SUMMARY and INFO were last updated */
  };

/* sub-sub-system status */
/* note: this is the subset of the SSMIF with things that can change */
struct subsubsystem_status_struct {
  int     eFEEStat[ME_MAX_NFEE];                  /* FEE_STAT[] */
  int     eRPDStat[ME_MAX_NRPD];                  /* RPD_STAT[] */
  int     eSEPStat[ME_MAX_NSEP];                  /* SEP_STAT[] */
  int     eARBStat[ME_MAX_NARB][ME_MAX_NARBCH];   /* ARB_STAT[][] */
  int     eDP1Stat[ME_MAX_NDP1][ME_MAX_NDP1CH];   /* DP1_STAT[][] */
  int     eDP2Stat[ME_MAX_NDP2];                  /* DP2_STAT[] */
  int     eDRStat[ME_MAX_NDR];                    /* DR_STAT[] */
  };

/* this sub-structure is used in both the ssmif and sdm */
struct station_settings_struct {
  signed short int mrp_asp; // SESSION_MRP_ASP
  signed short int mrp_dp;  // SESSION_MRP_DP_
  signed short int mrp_dr1; // SESSION_MRP_DR1
  signed short int mrp_dr2; // SESSION_MRP_DR2
  signed short int mrp_dr3; // SESSION_MRP_DR3
  signed short int mrp_dr4; // SESSION_MRP_DR4
  signed short int mrp_dr5; // SESSION_MRP_DR5
  signed short int mrp_shl; // SESSION_MRP_SHL
  signed short int mrp_mcs; // SESSION_MRP_MCS
  signed short int mup_asp; // SESSION_MUP_ASP
  signed short int mup_dp;  // SESSION_MUP_DP_
  signed short int mup_dr1; // SESSION_MUP_DR1
  signed short int mup_dr2; // SESSION_MUP_DR2
  signed short int mup_dr3; // SESSION_MUP_DR3
  signed short int mup_dr4; // SESSION_MUP_DR4
  signed short int mup_dr5; // SESSION_MUP_DR5
  signed short int mup_shl; // SESSION_MUP_SHL
  signed short int mup_mcs; // SESSION_MUP_MCS
  signed short int fee[LWA_MAX_NSTD];     // OBS_FEE[LWA_MAX_NSTD][2]
  signed short int asp_flt[LWA_MAX_NSTD]; // OBS_ASP_FLT[LWA_MAX_NSTD]
  signed short int asp_at1[LWA_MAX_NSTD]; // OBS_ASP_AT1[LWA_MAX_NSTD]
  signed short int asp_at2[LWA_MAX_NSTD]; // OBS_ASP_AT2[LWA_MAX_NSTD]
  signed short int asp_ats[LWA_MAX_NSTD]; // OBS_ASP_ATS[LWA_MAX_NSTD]
  signed short int tbn_gain; // OBS_TBN_GAIN
  signed short int drx_gain; // OBS_DRX_GAIN
  };

/* station dynamic MIB (SDM) */
struct sdm_struct  {
  struct   subsystem_status_struct station;       /* Station overall status */
```

```
struct    subsystem_status_struct shl;          /* SHL status */
struct    subsystem_status_struct asp;          /* ASP status */
struct    subsystem_status_struct dp;           /* DP_ status */
struct    subsystem_status_struct dr[ME_MAX_NDR]; /* DR# status (0=DR1,1=DR2,...) */
struct subsubsystem_status_struct ssss;  /* correspond to SSMIF "stat" items */
int ant_stat[ME_MAX_NSTD][2]; /* corresponds to sc.Stand[i].Ant[k].iSS, but dynamically updated */
int dpo_stat[ME_MAX_NDR];     /* corresponds to sc.DPO[i].iStat, but dynamically updated */
struct station_settings_struct settings; /* these are the current, dynamically-varying settings */
};
```

```
struct sdm_struct sdm; /* so finally this is the sdm */
```

In the above code segment, the "`int`" type is a 4-byte little-endian integer and the "`short int`" type is a 4-byte little-endian integer. Additional notes on this format:

- `summary`: For level-1 subsystems, this maps to MCS Common ICD MIB entry 1.1 ("SUMMARY"). The overall station status is determined by MCS using (among possibly other things) the subsystem SUMMARY values. Valid values are as follows:

    0 (`LWA_SIDSUM_NULL`) Not normally used.

    1 (`LWA_SIDSUM_NORMAL`) Normal.

    2 (`LWA_SIDSUM_WARNING`) Warning – issue(s) found, but still fully operational.

    3 (`LWA_SIDSUM_ERROR`) Error – problems found which limit or prevent proper operation.

    4 (`LWA_SIDSUM_BOOTING`) Booting – initializing; not yet fully operational.

    5 (`LWA_SIDSUM_SHUTDWN`) Shutdown – shutting down; not ready for operation.

    6 (`LWA_SIDSUM_UNK`) Status is unknown.

- `info`: A human-readable text string which provides further explanation of `summary`.

- `tv`: Update time, expressed as a Linux/C "`timeval`" type [2].

- `e...Stat[]`: These are status codes for each indicated component. The integer value of this parameter can only be equal to or less than the value of the associated parameter in the station static MIB. When this value is less than the value appearing in the station static MIB, it is either because (1) MCS demoted it, perhaps as a result of a diagnostic; or (2) an operator demoted it. Status codes are as follows:

    0   Not installed.

    1   Bad – won't use.

    2   Suspect; possibly bad – will use anyway.

    3   OK.

- `ant_stat[][]`: status codes determined for the entire path from a given stand and antenna, through the associated DP1 path.

- `dpo_stat[]`: status codes determined for the entire path from DP2 to the associated DR.

- Members of the `settings` structure correspond to comparably-named items defined in MCS0030, except that they always reflect the current state. "−1" indicates that the current state of this setting is unknown.

A   Example of a Station Static MIB Initialization File

```
# ---------------------------------------------
# --- Station Static MIB Initialization File ---
# ---------------------------------------------
# 2011 Mar 31 by S. Ellingson
# See MCS0031 for format info
# Search "FIXME" for things that need work

FORMAT_VERSION 5
STATION_ID VL
GEO_N  +34.070
GEO_E -107.628
GEO_EL 2124.0
N_STD 258


# -----------------------------------
# --- Stand Positions  ----------------
# -----------------------------------
# from M.170 v.2
# includes 1-256, plus:
#   257 (close to the SW edge of the array)
#   RTA is included as stand 258.
# Stands 259, 260 do not yet exist, and are not specified.
# -----------------------------------
# These will be set to 0.0 for any stand #'s <= N_STD not identified
# *** STD_LX[stand_id] [m] goes here
# *** STD_LY[stand_id] [m] goes here
# *** STD_LZ[stand_id] [m] goes here
STD_LX[1]    -0.67
STD_LY[1]   -54.63
STD_LZ[1]    +1.63
STD_LX[2]    +0.54
STD_LY[2]   -49.33
STD_LZ[2]    +1.50
STD_LX[3]    -2.36
STD_LY[3]   -43.50
STD_LZ[3]    +1.23
STD_LX[4]    +1.59
STD_LY[4]   -39.43
STD_LZ[4]    +1.13
STD_LX[5]    -3.19
STD_LY[5]   -31.62
STD_LZ[5]    +0.93
STD_LX[6]    +1.87
STD_LY[6]   -26.05
STD_LZ[6]    +0.72
STD_LX[7]    +0.03
STD_LY[7]   -16.60
STD_LZ[7]    +0.45
STD_LX[8]    +0.38
STD_LY[8]   -10.81
STD_LZ[8]    +0.25
STD_LX[9]    -0.76
STD_LY[9]    -4.40
STD_LZ[9]    +0.11
STD_LX[10]   +1.90
STD_LY[10]   +0.88
STD_LZ[10]   -0.40
```

```
STD_LX[11]    -0.67
STD_LY[11]    +5.67
STD_LZ[11]    -0.17
STD_LX[12]    -1.33
STD_LY[12]   +14.44
STD_LZ[12]    -0.52
STD_LX[13]    -0.93
STD_LY[13]   +19.83
STD_LZ[13]    -0.68
STD_LX[14]    -0.20
STD_LY[14]   +25.22
STD_LZ[14]    -0.88
STD_LX[15]    +1.79
STD_LY[15]   +29.77
STD_LZ[15]    -1.06
STD_LX[16]    +2.66
STD_LY[16]   +35.47
STD_LZ[16]    -1.28
STD_LX[17]    -1.42
STD_LY[17]   +42.29
STD_LZ[17]    -1.40
STD_LX[18]    -0.98
STD_LY[18]   +47.40
STD_LZ[18]    -1.42
STD_LX[19]    -2.45
STD_LY[19]   +53.44
STD_LZ[19]    -1.51
STD_LX[20]    +7.90
STD_LY[20]   -51.44
STD_LZ[20]    +1.58
STD_LX[21]    -8.85
STD_LY[21]   -53.71
STD_LZ[21]    +1.57
STD_LX[22]    +7.09
STD_LY[22]   -46.38
STD_LZ[22]    +1.44
STD_LX[23]    -6.92
STD_LY[23]   -49.12
STD_LZ[23]    +1.47
STD_LX[24]    +6.19
STD_LY[24]   -41.31
STD_LZ[24]    +1.19
STD_LX[25]    -3.07
STD_LY[25]   -36.59
STD_LZ[25]    +1.09
STD_LX[26]    +4.19
STD_LY[26]   -32.99
STD_LZ[26]    +0.98
STD_LX[27]    -8.18
STD_LY[27]   -32.20
STD_LZ[27]    +0.96
STD_LX[28]    +6.96
STD_LY[28]   -26.09
STD_LZ[28]    +0.79
STD_LX[29]    -6.78
STD_LY[29]   -27.39
STD_LZ[29]    +0.82
STD_LX[30]    +5.98
STD_LY[30]   -21.09
```

```
STD_LZ[30]    +0.60
STD_LX[31]    -3.87
STD_LY[31]   -21.81
STD_LZ[31]    +0.61
STD_LX[32]    +4.51
STD_LY[32]   -13.84
STD_LZ[32]    +0.39
STD_LX[33]    -4.94
STD_LY[33]   -14.90
STD_LZ[33]    +0.42
STD_LX[34]    +5.39
STD_LY[34]    -8.24
STD_LZ[34]    +0.19
STD_LX[35]    -5.82
STD_LY[35]    -9.96
STD_LZ[35]    +0.27
STD_LX[36]    +4.35
STD_LY[36]    -3.51
STD_LZ[36]    +0.02
STD_LX[37]    -7.95
STD_LY[37]    -5.21
STD_LZ[37]    +0.17
STD_LX[38]    +7.10
STD_LY[38]    +0.98
STD_LZ[38]    -0.13
STD_LX[39]    -6.80
STD_LY[39]    +2.82
STD_LZ[39]    -0.10
STD_LX[40]    +3.36
STD_LY[40]   +11.26
STD_LZ[40]    -0.44
STD_LX[41]    -4.71
STD_LY[41]    +8.77
STD_LZ[41]    -0.24
STD_LX[42]    +7.00
STD_LY[42]   +15.43
STD_LZ[42]    -0.56
STD_LX[43]    -5.88
STD_LY[43]   +16.55
STD_LZ[43]    -0.51
STD_LX[44]    +4.06
STD_LY[44]   +19.53
STD_LZ[44]    -0.64
STD_LX[45]    -7.73
STD_LY[45]   +21.13
STD_LZ[45]    -0.73
STD_LX[46]    +4.95
STD_LY[46]   +25.55
STD_LZ[46]    -0.86
STD_LX[47]    -5.24
STD_LY[47]   +25.50
STD_LZ[47]    -0.90
STD_LX[48]    +7.01
STD_LY[48]   +30.14
STD_LZ[48]    -1.11
STD_LX[49]    -4.71
STD_LY[49]   +31.33
STD_LZ[49]    -1.15
STD_LX[50]    +7.62
```

```
STD_LY[50]    +37.09
STD_LZ[50]     -1.35
STD_LX[51]     -5.87
STD_LY[51]    +38.51
STD_LZ[51]     -1.25
STD_LX[52]     +6.05
STD_LY[52]    +41.84
STD_LZ[52]     -1.42
STD_LX[53]     -6.03
STD_LY[53]    +44.37
STD_LZ[53]     -1.40
STD_LX[54]     +5.30
STD_LY[54]    +54.73
STD_LZ[54]     -1.60
STD_LX[55]     -7.50
STD_LY[55]    +53.57
STD_LZ[55]     -1.62
STD_LX[56]    +13.00
STD_LY[56]    -52.04
STD_LZ[56]     +1.61
STD_LX[57]    -12.85
STD_LY[57]    -50.58
STD_LZ[57]     +1.49
STD_LX[58]    +12.50
STD_LY[58]    -46.62
STD_LZ[58]     +1.42
STD_LX[59]     -9.77
STD_LY[59]    -45.09
STD_LZ[59]     +1.32
STD_LX[60]    +10.25
STD_LY[60]    -38.33
STD_LZ[60]     +1.21
STD_LX[61]    -10.39
STD_LY[61]    -39.96
STD_LZ[61]     +1.07
STD_LX[62]     +9.69
STD_LY[62]    -30.15
STD_LZ[62]     +0.95
STD_LX[63]    -14.82
STD_LY[63]    -30.49
STD_LZ[63]     +0.90
STD_LX[64]    +11.74
STD_LY[64]    -24.93
STD_LZ[64]     +0.73
STD_LX[65]    -10.13
STD_LY[65]    -23.70
STD_LZ[65]     +0.69
STD_LX[66]    +12.88
STD_LY[66]    -18.20
STD_LZ[66]     +0.55
STD_LX[67]    -10.53
STD_LY[67]    -18.69
STD_LZ[67]     +0.57
STD_LX[68]     +9.08
STD_LY[68]    -11.85
STD_LZ[68]     +0.30
STD_LX[69]    -11.11
STD_LY[69]    -13.71
STD_LZ[69]     +0.43
```

```
STD_LX[70]    +10.52
STD_LY[70]     -7.11
STD_LZ[70]     +0.17
STD_LX[71]    -11.55
STD_LY[71]     -8.71
STD_LZ[71]     +0.25
STD_LX[72]    +11.10
STD_LY[72]     -2.06
STD_LZ[72]     -0.04
STD_LX[73]    -12.12
STD_LY[73]     +1.26
STD_LZ[73]     -0.10
STD_LX[74]     +6.63
STD_LY[74]     +6.79
STD_LZ[74]     -0.25
STD_LX[75]     -9.57
STD_LY[75]     +6.95
STD_LZ[75]     -0.24
STD_LX[76]     +9.28
STD_LY[76]    +10.99
STD_LZ[76]     -0.47
STD_LX[77]     -9.13
STD_LY[77]    +12.91
STD_LZ[77]     -0.41
STD_LX[78]    +11.33
STD_LY[78]    +17.90
STD_LZ[78]     -0.70
STD_LX[79]    -11.05
STD_LY[79]    +17.52
STD_LZ[79]     -0.63
STD_LX[80]    +10.76
STD_LY[80]    +23.13
STD_LZ[80]     -0.85
STD_LX[81]    -12.77
STD_LY[81]    +24.90
STD_LZ[81]     -0.92
STD_LX[82]    +12.00
STD_LY[82]    +30.39
STD_LZ[82]     -1.15
STD_LX[83]    -10.94
STD_LY[83]    +29.41
STD_LZ[83]     -1.03
STD_LX[84]    +13.33
STD_LY[84]    +36.03
STD_LZ[84]     -1.29
STD_LX[85]     -8.66
STD_LY[85]    +34.38
STD_LZ[85]     -1.18
STD_LX[86]    +12.01
STD_LY[86]    +44.35
STD_LZ[86]     -1.55
STD_LX[87]    -10.99
STD_LY[87]    +41.95
STD_LZ[87]     -1.39
STD_LX[88]    +13.69
STD_LY[88]    +51.43
STD_LZ[88]     -1.64
STD_LX[89]    -15.59
STD_LY[89]    +52.33
```

```
STD_LZ[89]    -1.65
STD_LX[90]   +18.73
STD_LY[90]   -46.34
STD_LZ[90]    +1.39
STD_LX[91]   -16.14
STD_LY[91]   -46.74
STD_LZ[91]    +1.39
STD_LX[92]   +14.55
STD_LY[92]   -42.12
STD_LZ[92]    +1.28
STD_LX[93]   -17.66
STD_LY[93]   -40.97
STD_LZ[93]    +1.14
STD_LX[94]   +14.36
STD_LY[94]   -33.78
STD_LZ[94]    +1.18
STD_LX[95]   -16.30
STD_LY[95]   -36.15
STD_LZ[95]    +1.07
STD_LX[96]   +16.77
STD_LY[96]   -27.92
STD_LZ[96]    +0.84
STD_LX[97]   -17.47
STD_LY[97]   -26.17
STD_LZ[97]    +0.80
STD_LX[98]   +17.42
STD_LY[98]   -20.65
STD_LZ[98]    +0.61
STD_LX[99]   -14.87
STD_LY[99]   -21.90
STD_LZ[99]    +0.64
STD_LX[100]  +16.65
STD_LY[100]  -14.89
STD_LZ[100]   +0.42
STD_LX[101]  -15.19
STD_LY[101]  -16.89
STD_LZ[101]   +0.55
STD_LX[102]  +13.96
STD_LY[102]  -10.75
STD_LZ[102]   +0.27
STD_LX[103]  -16.19
STD_LY[103]  -11.57
STD_LZ[103]   +0.43
STD_LX[104]  +15.71
STD_LY[104]   -5.38
STD_LZ[104]   +0.09
STD_LX[105]  -14.93
STD_LY[105]   -5.03
STD_LZ[105]   +0.24
STD_LX[106]  +13.44
STD_LY[106]   +2.67
STD_LZ[106]   -0.16
STD_LX[107]  -16.29
STD_LY[107]   +4.02
STD_LZ[107]   -0.07
STD_LX[108]  +13.37
STD_LY[108]   +7.67
STD_LZ[108]   -0.35
STD_LX[109]  -13.52
```

```
STD_LY[109]    +10.07
STD_LZ[109]     -0.51
STD_LX[110]    +13.79
STD_LY[110]    +13.47
STD_LZ[110]     -0.54
STD_LX[111]    -16.68
STD_LY[111]    +15.52
STD_LZ[111]     -0.43
STD_LX[112]    +15.73
STD_LY[112]    +22.03
STD_LZ[112]     -0.82
STD_LX[113]    -16.09
STD_LY[113]    +20.98
STD_LZ[113]     -0.66
STD_LX[114]    +16.67
STD_LY[114]    +28.59
STD_LZ[114]     -1.08
STD_LX[115]    -16.44
STD_LY[115]    +29.26
STD_LZ[115]     -1.01
STD_LX[116]    +17.96
STD_LY[116]    +33.41
STD_LZ[116]     -1.30
STD_LX[117]    -13.76
STD_LY[117]    +33.50
STD_LZ[117]     -1.11
STD_LX[118]    +15.43
STD_LY[118]    +40.57
STD_LZ[118]     -1.41
STD_LX[119]    -15.97
STD_LY[119]    +38.32
STD_LZ[119]     -1.26
STD_LX[120]    +17.40
STD_LY[120]    +47.88
STD_LZ[120]     -1.64
STD_LX[121]    -18.96
STD_LY[121]    +44.32
STD_LZ[121]     -1.47
STD_LX[122]    +23.55
STD_LY[122]    -44.98
STD_LZ[122]     +1.27
STD_LX[123]    -25.70
STD_LY[123]    -43.34
STD_LZ[123]     +1.22
STD_LX[124]    +18.89
STD_LY[124]    -37.03
STD_LZ[124]     +1.18
STD_LX[125]    -22.37
STD_LY[125]    -36.54
STD_LZ[125]     +1.11
STD_LX[126]    +20.61
STD_LY[126]    -32.43
STD_LZ[126]     +0.94
STD_LX[127]    -19.67
STD_LY[127]    -32.31
STD_LZ[127]     +0.99
STD_LX[128]    +23.43
STD_LY[128]    -25.37
STD_LZ[128]     +0.73
```

```
STD_LX[129]    -21.67
STD_LY[129]    -21.14
STD_LZ[129]     +0.69
STD_LX[130]    +22.40
STD_LY[130]    -19.86
STD_LZ[130]     +0.55
STD_LX[131]    -19.86
STD_LY[131]    -14.94
STD_LZ[131]     +0.50
STD_LX[132]    +21.76
STD_LY[132]    -14.91
STD_LZ[132]     +0.39
STD_LX[133]    -22.71
STD_LY[133]    -10.75
STD_LZ[133]     +0.40
STD_LX[134]    +21.94
STD_LY[134]     -7.98
STD_LZ[134]     +0.18
STD_LX[135]    -22.08
STD_LY[135]     -5.28
STD_LZ[135]     +0.15
STD_LX[136]    +19.90
STD_LY[136]     -2.69
STD_LZ[136]     -0.02
STD_LX[137]    -19.65
STD_LY[137]     +0.34
STD_LZ[137]     +0.05
STD_LX[138]    +19.75
STD_LY[138]     +3.62
STD_LZ[138]     -0.26
STD_LX[139]    -22.37
STD_LY[139]     +6.83
STD_LZ[139]     -0.14
STD_LX[140]    +19.50
STD_LY[140]     +9.99
STD_LZ[140]     -0.42
STD_LX[141]    -20.83
STD_LY[141]    +11.62
STD_LZ[141]     -0.28
STD_LX[142]    +18.53
STD_LY[142]    +15.19
STD_LZ[142]     -0.55
STD_LX[143]    -20.87
STD_LY[143]    +18.75
STD_LZ[143]     -0.51
STD_LX[144]    +20.94
STD_LY[144]    +25.29
STD_LZ[144]     -0.98
STD_LX[145]    -21.59
STD_LY[145]    +26.43
STD_LZ[145]     -0.76
STD_LX[146]    +22.72
STD_LY[146]    +29.94
STD_LZ[146]     -1.18
STD_LX[147]    -21.75
STD_LY[147]    +31.59
STD_LZ[147]     -0.97
STD_LX[148]    +22.44
STD_LY[148]    +35.86
```

```
STD_LZ[148]    -1.41
STD_LX[149]   -20.81
STD_LY[149]   +36.64
STD_LZ[149]    -1.18
STD_LX[150]   +24.66
STD_LY[150]   +46.16
STD_LZ[150]    -1.69
STD_LX[151]   -25.04
STD_LY[151]   +47.80
STD_LZ[151]    -1.44
STD_LX[152]   +29.06
STD_LY[152]   -38.45
STD_LZ[152]    +1.11
STD_LX[153]   -28.84
STD_LY[153]   -37.45
STD_LZ[153]    +1.13
STD_LX[154]   +26.82
STD_LY[154]   -33.13
STD_LZ[154]    +1.03
STD_LX[155]   -27.08
STD_LY[155]   -30.53
STD_LZ[155]    +0.83
STD_LX[156]   +28.35
STD_LY[156]   -28.28
STD_LZ[156]    +0.81
STD_LX[157]   -22.83
STD_LY[157]   -26.43
STD_LZ[157]    +0.80
STD_LX[158]   +28.13
STD_LY[158]   -23.07
STD_LZ[158]    +0.63
STD_LX[159]   -26.45
STD_LY[159]   -23.01
STD_LZ[159]    +0.76
STD_LX[160]   +27.10
STD_LY[160]   -16.73
STD_LZ[160]    +0.45
STD_LX[161]   -24.48
STD_LY[161]   -17.03
STD_LZ[161]    +0.52
STD_LX[162]   +25.52
STD_LY[162]   -11.57
STD_LZ[162]    +0.28
STD_LX[163]   -26.55
STD_LY[163]    -7.50
STD_LZ[163]    +0.28
STD_LX[164]   +24.92
STD_LY[164]    -2.79
STD_LZ[164]    -0.02
STD_LX[165]   -28.14
STD_LY[165]    -2.66
STD_LZ[165]    +0.13
STD_LX[166]   +25.46
STD_LY[166]    +3.75
STD_LZ[166]    -0.22
STD_LX[167]   -25.56
STD_LY[167]    +2.87
STD_LZ[167]    +0.00
STD_LX[168]   +24.28
```

```
STD_LY[168]     +8.60
STD_LZ[168]     -0.39
STD_LX[169]    -26.03
STD_LY[169]    +12.47
STD_LZ[169]     -0.19
STD_LX[170]    +25.16
STD_LY[170]    +14.43
STD_LZ[170]     -0.59
STD_LX[171]    -26.50
STD_LY[171]    +17.41
STD_LZ[171]     -0.42
STD_LX[172]    +29.13
STD_LY[172]    +22.24
STD_LZ[172]     -0.82
STD_LX[173]    -25.15
STD_LY[173]    +23.01
STD_LZ[173]     -0.66
STD_LX[174]    +26.93
STD_LY[174]    +26.74
STD_LZ[174]     -1.09
STD_LX[175]    -26.49
STD_LY[175]    +28.30
STD_LZ[175]     -0.83
STD_LX[176]    +29.11
STD_LY[176]    +31.18
STD_LZ[176]     -1.26
STD_LX[177]    -27.75
STD_LY[177]    +33.70
STD_LZ[177]     -1.03
STD_LX[178]    +29.34
STD_LY[178]    +37.97
STD_LZ[178]     -1.55
STD_LX[179]    -30.18
STD_LY[179]    +40.32
STD_LZ[179]     -1.25
STD_LX[180]    +35.19
STD_LY[180]    -39.46
STD_LZ[180]     +1.12
STD_LX[181]    -32.85
STD_LY[181]    -41.84
STD_LZ[181]     +1.18
STD_LX[182]    +34.39
STD_LY[182]    -32.19
STD_LZ[182]     +0.91
STD_LX[183]    -33.83
STD_LY[183]    -32.41
STD_LZ[183]     +0.91
STD_LX[184]    +32.64
STD_LY[184]    -25.66
STD_LZ[184]     +0.70
STD_LX[185]    -31.41
STD_LY[185]    -25.41
STD_LZ[185]     +0.74
STD_LX[186]    +32.00
STD_LY[186]    -17.77
STD_LZ[186]     +0.51
STD_LX[187]    -29.42
STD_LY[187]    -17.67
STD_LZ[187]     +0.57
```

```
STD_LX[188]    +30.67
STD_LY[188]    -11.47
STD_LZ[188]     +0.28
STD_LX[189]    -31.55
STD_LY[189]    -11.58
STD_LZ[189]     +0.47
STD_LX[190]    +29.10
STD_LY[190]     -5.39
STD_LZ[190]     +0.04
STD_LX[191]    -35.01
STD_LY[191]     -6.97
STD_LZ[191]     +0.24
STD_LX[192]    +30.91
STD_LY[192]     -0.68
STD_LZ[192]     -0.03
STD_LX[193]    -30.60
STD_LY[193]     +1.82
STD_LZ[193]     +0.01
STD_LX[194]    +29.71
STD_LY[194]     +6.43
STD_LZ[194]     -0.33
STD_LX[195]    -29.19
STD_LY[195]     +8.48
STD_LZ[195]     -0.10
STD_LX[196]    +30.87
STD_LY[196]    +11.31
STD_LZ[196]     -0.49
STD_LX[197]    -33.49
STD_LY[197]    +13.13
STD_LZ[197]     -0.25
STD_LX[198]    +31.95
STD_LY[198]    +16.22
STD_LZ[198]     -0.63
STD_LX[199]    -32.46
STD_LY[199]    +18.06
STD_LZ[199]     -0.36
STD_LX[200]    +33.04
STD_LY[200]    +27.10
STD_LZ[200]     -1.08
STD_LX[201]    -30.60
STD_LY[201]    +25.65
STD_LZ[201]     -0.69
STD_LX[202]    +33.35
STD_LY[202]    +35.02
STD_LZ[202]     -1.38
STD_LX[203]    -32.62
STD_LY[203]    +32.47
STD_LZ[203]     -1.00
STD_LX[204]    +33.92
STD_LY[204]    +39.96
STD_LZ[204]     -1.57
STD_LX[205]    -35.12
STD_LY[205]    +39.41
STD_LZ[205]     -1.22
STD_LX[206]    -36.68
STD_LY[206]    -36.47
STD_LZ[206]     +1.09
STD_LX[207]    +37.33
STD_LY[207]    -27.26
```

```
STD_LZ[207]    +0.72
STD_LX[208]   -39.72
STD_LY[208]   -29.82
STD_LZ[208]    +0.88
STD_LX[209]   +35.81
STD_LY[209]   -21.04
STD_LZ[209]    +0.52
STD_LX[210]   -35.52
STD_LY[210]   -22.66
STD_LZ[210]    +0.71
STD_LX[211]   +37.04
STD_LY[211]   -14.43
STD_LZ[211]    +0.36
STD_LX[212]   -35.11
STD_LY[212]   -17.61
STD_LZ[212]    +0.58
STD_LX[213]   +36.17
STD_LY[213]    -8.45
STD_LZ[213]    +0.19
STD_LX[214]   -37.21
STD_LY[214]   -12.67
STD_LZ[214]    +0.40
STD_LX[215]   +38.55
STD_LY[215]    -2.75
STD_LZ[215]    -0.01
STD_LX[216]   -34.07
STD_LY[216]    -2.05
STD_LZ[216]    +0.18
STD_LX[217]   +36.56
STD_LY[217]    +3.15
STD_LZ[217]    -0.20
STD_LX[218]   -35.75
STD_LY[218]    +3.78
STD_LZ[218]    +0.05
STD_LX[219]   +37.01
STD_LY[219]   +10.01
STD_LZ[219]    -0.37
STD_LX[220]   -36.80
STD_LY[220]    +8.84
STD_LZ[220]    -0.13
STD_LX[221]   +38.72
STD_LY[221]   +15.91
STD_LZ[221]    -0.61
STD_LX[222]   -38.94
STD_LY[222]   +14.22
STD_LZ[222]    -0.30
STD_LX[223]   +36.74
STD_LY[223]   +20.53
STD_LZ[223]    -0.18
STD_LX[224]   -35.60
STD_LY[224]   +22.38
STD_LZ[224]    -0.62
STD_LX[225]   +37.39
STD_LY[225]   +30.01
STD_LZ[225]    -1.12
STD_LX[226]   -35.85
STD_LY[226]   +28.46
STD_LZ[226]    -0.81
STD_LX[227]   +43.10
```

```
STD_LY[227]    -27.61
STD_LZ[227]     +0.82
STD_LX[228]    -40.56
STD_LY[228]    -22.44
STD_LZ[228]     +0.71
STD_LX[229]    +40.88
STD_LY[229]    -22.76
STD_LZ[229]     +0.59
STD_LX[230]    -41.59
STD_LY[230]    -17.38
STD_LZ[230]     +0.54
STD_LX[231]    +41.95
STD_LY[231]    -15.76
STD_LZ[231]     +0.42
STD_LX[232]    -44.62
STD_LY[232]    -12.20
STD_LZ[232]     +0.46
STD_LX[233]    +40.93
STD_LY[233]    -10.18
STD_LZ[233]     +0.29
STD_LX[234]    -40.82
STD_LY[234]     -8.13
STD_LZ[234]     +0.31
STD_LX[235]    +43.98
STD_LY[235]     -2.20
STD_LZ[235]     -0.07
STD_LX[236]    -39.63
STD_LY[236]     +0.27
STD_LZ[236]     +0.13
STD_LX[237]    +42.43
STD_LY[237]     +3.45
STD_LZ[237]     -0.28
STD_LX[238]    -41.95
STD_LY[238]     +4.71
STD_LZ[238]     -0.04
STD_LX[239]    +41.86
STD_LY[239]    +11.13
STD_LZ[239]     -0.41
STD_LX[240]    -43.20
STD_LY[240]    +10.93
STD_LZ[240]     -0.18
STD_LX[241]    +43.55
STD_LY[241]    +16.93
STD_LZ[241]     -0.68
STD_LX[242]    -40.57
STD_LY[242]    +20.20
STD_LZ[242]     -0.53
STD_LX[243]    +41.51
STD_LY[243]    +23.72
STD_LZ[243]     -0.94
STD_LX[244]    -39.79
STD_LY[244]    +25.17
STD_LZ[244]     -0.63
STD_LX[245]    +46.71
STD_LY[245]    -19.97
STD_LZ[245]     +0.52
STD_LX[246]    -47.73
STD_LY[246]    -16.77
STD_LZ[246]     +0.59
```

```
STD_LX[247]   +47.38
STD_LY[247]   -12.43
STD_LZ[247]    +0.28
STD_LX[248]   -49.23
STD_LY[248]    -7.21
STD_LZ[248]    +0.34
STD_LX[249]   +47.05
STD_LY[249]    -7.39
STD_LZ[249]    +0.10
STD_LX[250]   -48.60
STD_LY[250]    -2.24
STD_LZ[250]    +0.15
STD_LX[251]   +49.29
STD_LY[251]    -0.40
STD_LZ[251]    -0.16
STD_LX[252]   -48.25
STD_LY[252]    +2.95
STD_LZ[252]    +0.00
STD_LX[253]   +48.66
STD_LY[253]    +5.26
STD_LZ[253]    -0.28
STD_LX[254]   -47.37
STD_LY[254]   +13.74
STD_LZ[254]    -0.23
STD_LX[255]   +48.83
STD_LY[255]   +11.21
STD_LZ[255]    -0.38
STD_LX[256]   -47.09
STD_LY[256]   +18.72
STD_LZ[256]    -0.49
STD_LX[257]   -45.58
STD_LY[257]   -44.47
STD_LZ[257]    +1.30
STD_LX[258]  +339.61
STD_LY[258]   +15.32
STD_LZ[258]    -0.08


# -----------------------------------
# --- Antenna # -> Stand # mapping ---
# -----------------------------------
# This will be set to floor((n-1)/2)+1 for any antenna n <= 2*N_STD not identified
# Strongly recommmended to leave this alone, so that antennas 1 & 2 are on stand 1,
#   antennas 3 & 4 are on stand 2, and so on.
# *** ANT_STD[antenna_id] goes here:


# ----------------------------
# --- Antenna orientations ---
# ----------------------------
# For any antenna n <= 2*N_STD not identified, this will be set to (n-1) mod 2
# Strongly recommended to leave this alone, so that antennas 1 & 2 are 0 (N-S) and
#   and 1 (E-W) respectively, and so on.
# *** ANT_ORIE[antenna_id] goes here: (0 = N-S, 1 = E-W)


# ----------------------
# --- Antenna Status ---
# ----------------------
# Status codes 0-3 summarized defined at end of this document (and in MCS0031)
# This refers to the *antenna*, not the FEE or some combination of the two.
# This will be set to 3 ("OK") for any antenna n <= 2*N_STD not identified.
```

```
# *** ANT_STAT[antenna_id] goes here:
ANT_STAT[61] 2   # per JC 110331, added by SE 110331
ANT_STAT[249] 2  # per JC 110331, added by SE 110331
ANT_STAT[347] 2  # per JC 110331, added by SE 110331
ANT_STAT[362] 2  # per JC 110331, added by SE 110331
ANT_STAT[365] 2  # per JC 110331, added by SE 110331
ANT_STAT[411] 2  # per JC 110331, added by SE 110331
ANT_STAT[415] 2  # per JC 110331, added by SE 110331
# NOTE: below are commented out because N_STD=258 (not 260), so setting these causes an error
# ANT_STAT[517] 0
# ANT_STAT[518] 0
# ANT_STAT[519] 0
# ANT_STAT[520] 0


# -----------------------------
# --- Antenna mis-orientation ---
# -----------------------------
# These will be set to 0.0 (no error) for any antenna n <= 2*N_STD not identified
# *** ANT_THETA[antenna_id] in degrees goes here:
# *** ANT_PHI[antenna_id] in degrees goes here:
ANT_PHI[7]   +15.0 # Stand 4
ANT_PHI[8]   +15.0
ANT_PHI[315] +15.0 # Stand 158
ANT_PHI[316] +15.0
ANT_PHI[409] +15.0 # Stand 205
ANT_PHI[410] +15.0
ANT_PHI[491] +15.0 # Stand 246
ANT_PHI[492] +15.0
ANT_PHI[507] +15.0 # Stand 254
ANT_PHI[508] +15.0


# --------------------------------
# --- Antenna design information ---
# --------------------------------
ANT_DESI 1 # DEFAULT: This will set ANT_DESI[n]=1 for all n
# You should set it to 0 if different but not known, or >1 if appropriate
# *** ANT_DESI[antenna_id] goes here:


# -------------------------------------------------------
# --- FEEs (number, status, design, nominal gain) -------
# -------------------------------------------------------
N_FEE 258

# This will be set to "UNK" (unknown) for any FEE #'s <= N_FEE not identified
# *** FEE_ID[fee_id] goes here:

# Status codes 0-3 summarized defined at end of this document (and in MCS0031)
# This will be set to 3 ("OK") for any FEE #'s <= N_FEE not identified
# *** FEE_STAT[fee_id] goes here:
FEE_STAT[16] 0 # per JC 110309, added by SE 110331
FEE_STAT[17] 0 # per JC 110309, added by SE 110331
FEE_STAT[19] 0 # per JC 110309, added by SE 110331
FEE_STAT[45] 0 # per JC 110309, added by SE 110331
FEE_STAT[49] 0 # per JC 110309, added by SE 110331
FEE_STAT[51] 0 # per JC 110309, added by SE 110331
FEE_STAT[54] 0 # per JC 110309, added by SE 110331
FEE_STAT[55] 0 # per JC 110309, added by SE 110331
FEE_STAT[81] 0 # per JC 110309, added by SE 110331
FEE_STAT[83] 0 # per JC 110309, added by SE 110331
```

```
FEE_STAT[85] 0 # per JC 110309, added by SE 110331
FEE_STAT[87] 0 # per JC 110309, added by SE 110331
FEE_STAT[88] 0 # per JC 110309, added by SE 110331
FEE_STAT[119] 0 # per JC 110309, added by SE 110331
FEE_STAT[120] 0 # per JC 110309, added by SE 110331
FEE_STAT[121] 0 # per JC 110309, added by SE 110331
FEE_STAT[123] 1 # per JC 110309, added by SE 110331
FEE_STAT[145] 0 # per JC 110309, added by SE 110331
FEE_STAT[147] 0 # per JC 110309, added by SE 110331
FEE_STAT[149] 0 # per JC 110309, added by SE 110331
FEE_STAT[150] 0 # per JC 110309, added by SE 110331
FEE_STAT[151] 0 # per JC 110309, added by SE 110331
FEE_STAT[153] 1 # per JC 110309, added by SE 110331
FEE_STAT[173] 0 # per JC 110309, added by SE 110331
FEE_STAT[175] 0 # per JC 110309, added by SE 110331
FEE_STAT[177] 0 # per JC 110309, added by SE 110331
FEE_STAT[179] 0 # per JC 110309, added by SE 110331
FEE_STAT[181] 1 # per JC 110309, added by SE 110331
FEE_STAT[187] 1 # per JC 110309, added by SE 110331
FEE_STAT[197] 0 # per JC 110309, added by SE 110331
FEE_STAT[199] 0 # per JC 110309, added by SE 110331
FEE_STAT[201] 0 # per JC 110309, added by SE 110331
FEE_STAT[203] 0 # per JC 110309, added by SE 110331
FEE_STAT[222] 0 # per JC 110309, added by SE 110331
FEE_STAT[224] 0 # per JC 110309, added by SE 110331
FEE_STAT[226] 0 # per JC 110309, added by SE 110331
FEE_STAT[240] 0 # per JC 110309, added by SE 110331
FEE_STAT[242] 0 # per JC 110309, added by SE 110331
FEE_STAT[244] 0 # per JC 110309, added by SE 110331
FEE_STAT[256] 0 # per JC 110309, added by SE 110331
# N_STD is currently 258, so these are commented out to avoid error:
# FEE_STAT[259] 0
# FEE_STAT[260] 0

FEE_DESI 1 # DEFAULT: This will set FEE_DESI[n]=1 for all n
# You should set FEE_DESI[] to 0 if different but not known, or >1 if appropriate
# *** FEE_DESI[fee_id] goes here:

FEE_GAI1 35.7 # DEFAULT: This will set FEE_GAI1[n]=35.7 dB for all n
# *** FEE_GAI1[fee_id] goes here:
# JC 110309: No known deviations from default

FEE_GAI2 35.7 # DEFAULT: This will set FEE_GAI1[n]=35.7 dB for all n
# *** FEE_GAI2[fee_id] goes here:
# JC 110309: No known deviations from default

# ----------------------------------
# --- Antenna # -> FEE # mapping -----
# ----------------------------------
# Format (example) "FEE_ANT1[2] 3" means antenna 3 is connected to port 1 of FEE 2.
# If not specified, then FEE_ANT1[1] will be 1, FEE_ANT2[1] will be 2,
#   FEE_ANT1[2] will be 3, FEE_ANT2[2] will be 4, and so on.
# Strongly recommmended to leave this alone, and that only exceptions are noted.
# *** FEE_ANT1[fee_id] goes here:
# *** FEE_ANT2[fee_id] goes here:

# ---------------------------------------
# --- FEE Power Source Identification ----
# ---------------------------------------
```

```
# Note that FEE_RACK[] and FEE_PORT[] are used by MCS only to identify power sources;
#  the control of application of power to FEEs is controlled using ARX
# Format (example) "FEE_RACK[2] 3" means FEE 2 is powered via a supply in Rack 3.
# FEE_RACK[] will be set to 0 (unknown) for any FEE #'s <= N_FEE not identified
# Format (example) "FEE_PORT[2] 7" means FEE 2 is powered via port 7 on whatever rack
#   is specified by FEE_RACK[2].
# FEE_PORT[] will be set to 0 (unknown) for any FEE #'s <= N_FEE not identified
# *** FEE_RACK[fee_id] goes here:
# *** FEE_PORT[fee_id] goes here:
# All FEEs are currently on Rack 1, Port 1:
FEE_RACK[1] 1
FEE_PORT[1] 1
FEE_RACK[2] 1
FEE_PORT[2] 1
FEE_RACK[3] 1
FEE_PORT[3] 1
FEE_RACK[4] 1
FEE_PORT[4] 1
FEE_RACK[5] 1
FEE_PORT[5] 1
FEE_RACK[6] 1
FEE_PORT[6] 1
FEE_RACK[7] 1
FEE_PORT[7] 1
FEE_RACK[8] 1
FEE_PORT[8] 1
FEE_RACK[9] 1
FEE_PORT[9] 1
FEE_RACK[10] 1
FEE_PORT[10] 1
FEE_RACK[11] 1
FEE_PORT[11] 1
FEE_RACK[12] 1
FEE_PORT[12] 1
FEE_RACK[13] 1
FEE_PORT[13] 1
FEE_RACK[14] 1
FEE_PORT[14] 1
FEE_RACK[15] 1
FEE_PORT[15] 1
FEE_RACK[16] 1
FEE_PORT[16] 1
FEE_RACK[17] 1
FEE_PORT[17] 1
FEE_RACK[18] 1
FEE_PORT[18] 1
FEE_RACK[19] 1
FEE_PORT[19] 1
FEE_RACK[20] 1
FEE_PORT[20] 1
FEE_RACK[21] 1
FEE_PORT[21] 1
FEE_RACK[22] 1
FEE_PORT[22] 1
FEE_RACK[23] 1
FEE_PORT[23] 1
FEE_RACK[24] 1
FEE_PORT[24] 1
FEE_RACK[25] 1
```

```
FEE_PORT[25]  1
FEE_RACK[26]  1
FEE_PORT[26]  1
FEE_RACK[27]  1
FEE_PORT[27]  1
FEE_RACK[28]  1
FEE_PORT[28]  1
FEE_RACK[29]  1
FEE_PORT[29]  1
FEE_RACK[30]  1
FEE_PORT[30]  1
FEE_RACK[31]  1
FEE_PORT[31]  1
FEE_RACK[32]  1
FEE_PORT[32]  1
FEE_RACK[33]  1
FEE_PORT[33]  1
FEE_RACK[34]  1
FEE_PORT[34]  1
FEE_RACK[35]  1
FEE_PORT[35]  1
FEE_RACK[36]  1
FEE_PORT[36]  1
FEE_RACK[37]  1
FEE_PORT[37]  1
FEE_RACK[38]  1
FEE_PORT[38]  1
FEE_RACK[39]  1
FEE_PORT[39]  1
FEE_RACK[40]  1
FEE_PORT[40]  1
FEE_RACK[41]  1
FEE_PORT[41]  1
FEE_RACK[42]  1
FEE_PORT[42]  1
FEE_RACK[43]  1
FEE_PORT[43]  1
FEE_RACK[44]  1
FEE_PORT[44]  1
FEE_RACK[45]  1
FEE_PORT[45]  1
FEE_RACK[46]  1
FEE_PORT[46]  1
FEE_RACK[47]  1
FEE_PORT[47]  1
FEE_RACK[48]  1
FEE_PORT[48]  1
FEE_RACK[49]  1
FEE_PORT[49]  1
FEE_RACK[50]  1
FEE_PORT[50]  1
FEE_RACK[51]  1
FEE_PORT[51]  1
FEE_RACK[52]  1
FEE_PORT[52]  1
FEE_RACK[53]  1
FEE_PORT[53]  1
FEE_RACK[54]  1
FEE_PORT[54]  1
```

```
FEE_RACK[55] 1
FEE_PORT[55] 1
FEE_RACK[56] 1
FEE_PORT[56] 1
FEE_RACK[57] 1
FEE_PORT[57] 1
FEE_RACK[58] 1
FEE_PORT[58] 1
FEE_RACK[59] 1
FEE_PORT[59] 1
FEE_RACK[60] 1
FEE_PORT[60] 1
FEE_RACK[61] 1
FEE_PORT[61] 1
FEE_RACK[62] 1
FEE_PORT[62] 1
FEE_RACK[63] 1
FEE_PORT[63] 1
FEE_RACK[64] 1
FEE_PORT[64] 1
FEE_RACK[65] 1
FEE_PORT[65] 1
FEE_RACK[66] 1
FEE_PORT[66] 1
FEE_RACK[67] 1
FEE_PORT[67] 1
FEE_RACK[68] 1
FEE_PORT[68] 1
FEE_RACK[69] 1
FEE_PORT[69] 1
FEE_RACK[70] 1
FEE_PORT[70] 1
FEE_RACK[71] 1
FEE_PORT[71] 1
FEE_RACK[72] 1
FEE_PORT[72] 1
FEE_RACK[73] 1
FEE_PORT[73] 1
FEE_RACK[74] 1
FEE_PORT[74] 1
FEE_RACK[75] 1
FEE_PORT[75] 1
FEE_RACK[76] 1
FEE_PORT[76] 1
FEE_RACK[77] 1
FEE_PORT[77] 1
FEE_RACK[78] 1
FEE_PORT[78] 1
FEE_RACK[79] 1
FEE_PORT[79] 1
FEE_RACK[80] 1
FEE_PORT[80] 1
FEE_RACK[81] 1
FEE_PORT[81] 1
FEE_RACK[82] 1
FEE_PORT[82] 1
FEE_RACK[83] 1
FEE_PORT[83] 1
FEE_RACK[84] 1
```

```
FEE_PORT[84]  1
FEE_RACK[85]  1
FEE_PORT[85]  1
FEE_RACK[86]  1
FEE_PORT[86]  1
FEE_RACK[87]  1
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FEE_PORT[88]  1
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FEE_PORT[90]  1
FEE_RACK[91]  1
FEE_PORT[91]  1
FEE_RACK[92]  1
FEE_PORT[92]  1
FEE_RACK[93]  1
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FEE_RACK[94]  1
FEE_PORT[94]  1
FEE_RACK[95]  1
FEE_PORT[95]  1
FEE_RACK[96]  1
FEE_PORT[96]  1
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FEE_PORT[97]  1
FEE_RACK[98]  1
FEE_PORT[98]  1
FEE_RACK[99]  1
FEE_PORT[99]  1
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FEE_PORT[100]  1
FEE_RACK[101]  1
FEE_PORT[101]  1
FEE_RACK[102]  1
FEE_PORT[102]  1
FEE_RACK[103]  1
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FEE_RACK[105]  1
FEE_PORT[105]  1
FEE_RACK[106]  1
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FEE_RACK[107]  1
FEE_PORT[107]  1
FEE_RACK[108]  1
FEE_PORT[108]  1
FEE_RACK[109]  1
FEE_PORT[109]  1
FEE_RACK[110]  1
FEE_PORT[110]  1
FEE_RACK[111]  1
FEE_PORT[111]  1
FEE_RACK[112]  1
FEE_PORT[112]  1
FEE_RACK[113]  1
FEE_PORT[113]  1
```

```
FEE_RACK[114]  1
FEE_PORT[114]  1
FEE_RACK[115]  1
FEE_PORT[115]  1
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FEE_PORT[116]  1
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FEE_PORT[119]  1
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FEE_PORT[120]  1
FEE_RACK[121]  1
FEE_PORT[121]  1
FEE_RACK[122]  1
FEE_PORT[122]  1
FEE_RACK[123]  1
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FEE_RACK[139]  1
FEE_PORT[139]  1
FEE_RACK[140]  1
FEE_PORT[140]  1
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FEE_RACK[142]  1
FEE_PORT[142]  1
FEE_RACK[143]  1
```

```
FEE_PORT[143]  1
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FEE_PORT[144]  1
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FEE_PORT[148]  1
FEE_RACK[149]  1
FEE_PORT[149]  1
FEE_RACK[150]  1
FEE_PORT[150]  1
FEE_RACK[151]  1
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FEE_RACK[158]  1
FEE_PORT[158]  1
FEE_RACK[159]  1
FEE_PORT[159]  1
FEE_RACK[160]  1
FEE_PORT[160]  1
FEE_RACK[161]  1
FEE_PORT[161]  1
FEE_RACK[162]  1
FEE_PORT[162]  1
FEE_RACK[163]  1
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FEE_RACK[168]  1
FEE_PORT[168]  1
FEE_RACK[169]  1
FEE_PORT[169]  1
FEE_RACK[170]  1
FEE_PORT[170]  1
FEE_RACK[171]  1
FEE_PORT[171]  1
FEE_RACK[172]  1
FEE_PORT[172]  1
```

```
FEE_RACK[173]  1
FEE_PORT[173]  1
FEE_RACK[174]  1
FEE_PORT[174]  1
FEE_RACK[175]  1
FEE_PORT[175]  1
FEE_RACK[176]  1
FEE_PORT[176]  1
FEE_RACK[177]  1
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FEE_RACK[182]  1
FEE_PORT[182]  1
FEE_RACK[183]  1
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FEE_RACK[191]  1
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FEE_RACK[194]  1
FEE_PORT[194]  1
FEE_RACK[195]  1
FEE_PORT[195]  1
FEE_RACK[196]  1
FEE_PORT[196]  1
FEE_RACK[197]  1
FEE_PORT[197]  1
FEE_RACK[198]  1
FEE_PORT[198]  1
FEE_RACK[199]  1
FEE_PORT[199]  1
FEE_RACK[200]  1
FEE_PORT[200]  1
FEE_RACK[201]  1
FEE_PORT[201]  1
FEE_RACK[202]  1
```

```
FEE_PORT[202]  1
FEE_RACK[203]  1
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FEE_PORT[204]  1
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FEE_RACK[213]  1
FEE_PORT[213]  1
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FEE_PORT[214]  1
FEE_RACK[215]  1
FEE_PORT[215]  1
FEE_RACK[216]  1
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FEE_RACK[218]  1
FEE_PORT[218]  1
FEE_RACK[219]  1
FEE_PORT[219]  1
FEE_RACK[220]  1
FEE_PORT[220]  1
FEE_RACK[221]  1
FEE_PORT[221]  1
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FEE_PORT[222]  1
FEE_RACK[223]  1
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FEE_RACK[224]  1
FEE_PORT[224]  1
FEE_RACK[225]  1
FEE_PORT[225]  1
FEE_RACK[226]  1
FEE_PORT[226]  1
FEE_RACK[227]  1
FEE_PORT[227]  1
FEE_RACK[228]  1
FEE_PORT[228]  1
FEE_RACK[229]  1
FEE_PORT[229]  1
FEE_RACK[230]  1
FEE_PORT[230]  1
FEE_RACK[231]  1
FEE_PORT[231]  1
```

```
FEE_RACK[232] 1
FEE_PORT[232] 1
FEE_RACK[233] 1
FEE_PORT[233] 1
FEE_RACK[234] 1
FEE_PORT[234] 1
FEE_RACK[235] 1
FEE_PORT[235] 1
FEE_RACK[236] 1
FEE_PORT[236] 1
FEE_RACK[237] 1
FEE_PORT[237] 1
FEE_RACK[238] 1
FEE_PORT[238] 1
FEE_RACK[239] 1
FEE_PORT[239] 1
FEE_RACK[240] 1
FEE_PORT[240] 1
FEE_RACK[241] 1
FEE_PORT[241] 1
FEE_RACK[242] 1
FEE_PORT[242] 1
FEE_RACK[243] 1
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FEE_RACK[244] 1
FEE_PORT[244] 1
FEE_RACK[245] 1
FEE_PORT[245] 1
FEE_RACK[246] 1
FEE_PORT[246] 1
FEE_RACK[247] 1
FEE_PORT[247] 1
FEE_RACK[248] 1
FEE_PORT[248] 1
FEE_RACK[249] 1
FEE_PORT[249] 1
FEE_RACK[250] 1
FEE_PORT[250] 1
FEE_RACK[251] 1
FEE_PORT[251] 1
FEE_RACK[252] 1
FEE_PORT[252] 1
FEE_RACK[253] 1
FEE_PORT[253] 1
FEE_RACK[254] 1
FEE_PORT[254] 1
FEE_RACK[255] 1
FEE_PORT[255] 1
FEE_RACK[256] 1
FEE_PORT[256] 1
FEE_RACK[257] 1
FEE_PORT[257] 1
FEE_RACK[258] 1
FEE_PORT[258] 1

# ----------------------
# --- RPD --------------
# ----------------------
N_RPD 516
```

```
# RPD_ID[] will be set to "UNK" (no identification) for any cables #'s <= N_RPD not identified
# *** RPD_ID[cable#] goes here:
RPD_ID[1] EXK-001-138 (Gray)
RPD_ID[2] EXK-001-138 (Black)
RPD_ID[3] EXK-002-133 (Gray)
RPD_ID[4] EXK-002-133 (Black)
RPD_ID[5] EXK-003-134 (Gray)
RPD_ID[6] EXK-003-134 (Black)
RPD_ID[7] EXK-004-126 (Gray)
RPD_ID[8] EXK-004-126 (Black)
RPD_ID[9] EXK-005-117 (Gray)
RPD_ID[10] EXK-005-117 (Black)
RPD_ID[11] EXK-006-121 (Gray)
RPD_ID[12] EXK-006-121 (Black)
RPD_ID[13] EXK-007-105 (Gray)
RPD_ID[14] EXK-007-105 (Black)
RPD_ID[15] EXK-008-100 (Gray)
RPD_ID[16] EXK-008-100 (Black)
RPD_ID[17] EXK-009-091 (Gray)
RPD_ID[18] EXK-009-091 (Black)
RPD_ID[19] EXK-010-086 (Gray)
RPD_ID[20] EXK-010-086 (Black)
RPD_ID[21] EXK-011-096 (Gray)
RPD_ID[22] EXK-011-096 (Black)
RPD_ID[23] EXK-012-089 (Gray)
RPD_ID[24] EXK-012-089 (Black)
RPD_ID[25] EXK-013-083 (Gray)
RPD_ID[26] EXK-013-083 (Black)
RPD_ID[27] EXK-014-081 (Gray)
RPD_ID[28] EXK-014-081 (Black)
RPD_ID[29] EXK-015-082 (Gray)
RPD_ID[30] EXK-015-082 (Black)
RPD_ID[31] EXK-016-077 (Gray)
RPD_ID[32] EXK-016-077 (Black)
RPD_ID[33] EXK-017-076 (Gray)
RPD_ID[34] EXK-017-076 (Black)
RPD_ID[35] EXK-018-076 (Gray)
RPD_ID[36] EXK-018-076 (Black)
RPD_ID[37] EXK-019-074 (Gray)
RPD_ID[38] EXK-019-074 (Black)
RPD_ID[39] EXK-020-132 (Gray)
RPD_ID[40] EXK-020-132 (Black)
RPD_ID[41] EXK-021-141 (Gray)
RPD_ID[42] EXK-021-141 (Black)
RPD_ID[43] EXK-022-131 (Gray)
RPD_ID[44] EXK-022-131 (Black)
RPD_ID[45] EXK-023-137 (Gray)
RPD_ID[46] EXK-023-137 (Black)
RPD_ID[47] EXK-024-133 (Gray)
RPD_ID[48] EXK-024-133 (Black)
RPD_ID[49] EXK-025-122 (Gray)
RPD_ID[50] EXK-025-122 (Black)
RPD_ID[51] EXK-026-124 (Gray)
RPD_ID[52] EXK-026-124 (Black)
RPD_ID[53] EXK-027-120 (Gray)
RPD_ID[54] EXK-027-120 (Black)
RPD_ID[55] EXK-028-116 (Gray)
RPD_ID[56] EXK-028-116 (Black)
```

```
RPD_ID[57] EXK-029-119 (Gray)
RPD_ID[58] EXK-029-119 (Black)
RPD_ID[59] EXK-030-119 (Gray)
RPD_ID[60] EXK-030-119 (Black)
RPD_ID[61] EXK-031-120 (Gray)
RPD_ID[62] EXK-031-120 (Black)
RPD_ID[63] EXK-032-105 (Gray)
RPD_ID[64] EXK-032-105 (Black)
RPD_ID[65] EXK-033-103 (Gray)
RPD_ID[66] EXK-033-103 (Black)
RPD_ID[67] EXK-034-092 (Gray)
RPD_ID[68] EXK-034-092 (Black)
RPD_ID[69] EXK-035-099 (Gray)
RPD_ID[70] EXK-035-099 (Black)
RPD_ID[71] EXK-036-088 (Gray)
RPD_ID[72] EXK-036-088 (Black)
RPD_ID[73] EXK-037-101 (Gray)
RPD_ID[74] EXK-037-101 (Black)
RPD_ID[75] EXK-038-083 (Gray)
RPD_ID[76] EXK-038-083 (Black)
RPD_ID[77] EXK-039-100 (Gray)
RPD_ID[78] EXK-039-100 (Black)
RPD_ID[79] EXK-040-094 (Gray)
RPD_ID[80] EXK-040-094 (Black)
RPD_ID[81] EXK-041-093 (Gray)
RPD_ID[82] EXK-041-093 (Black)
RPD_ID[83] EXK-042-082 (Gray)
RPD_ID[84] EXK-042-082 (Black)
RPD_ID[85] EXK-043-092 (Gray)
RPD_ID[86] EXK-043-092 (Black)
RPD_ID[87] EXK-044-079 (Gray)
RPD_ID[88] EXK-044-079 (Black)
RPD_ID[89] EXK-045-097 (Gray)
RPD_ID[90] EXK-045-097 (Black)
RPD_ID[91] EXK-046-076 (Gray)
RPD_ID[92] EXK-046-076 (Black)
RPD_ID[93] EXK-047-091 (Gray)
RPD_ID[94] EXK-047-091 (Black)
RPD_ID[95] EXK-048-071 (Gray)
RPD_ID[96] EXK-048-071 (Black)
RPD_ID[97] EXK-049-087 (Gray)
RPD_ID[98] EXK-049-087 (Black)
RPD_ID[99] EXK-050-076 (Gray)
RPD_ID[100] EXK-050-076 (Black)
RPD_ID[101] EXK-051-101 (Gray)
RPD_ID[102] EXK-051-101 (Black)
RPD_ID[103] EXK-052-071 (Gray)
RPD_ID[104] EXK-052-071 (Black)
RPD_ID[105] EXK-053-081 (Gray)
RPD_ID[106] EXK-053-081 (Black)
RPD_ID[107] EXK-054-064 (Gray)
RPD_ID[108] EXK-054-064 (Black)
RPD_ID[109] EXK-055-078 (Gray)
RPD_ID[110] EXK-055-078 (Black)
RPD_ID[111] EXK-056-129 (Gray)
RPD_ID[112] EXK-056-129 (Black)
RPD_ID[113] EXK-057-143 (Gray)
RPD_ID[114] EXK-057-143 (Black)
RPD_ID[115] EXK-058-126 (Gray)
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RPD_ID[132] EXK-066-105 (Black)
RPD_ID[133] EXK-067-113 (Gray)
RPD_ID[134] EXK-067-113 (Black)
RPD_ID[135] EXK-068-094 (Gray)
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RPD_ID[172] EXK-086-076 (Black)
RPD_ID[173] EXK-087-095 (Gray)
RPD_ID[174] EXK-087-095 (Black)
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RPD_ID[219] EXK-110-069 (Gray)
RPD_ID[220] EXK-110-069 (Black)
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RPD_ID[225] EXK-113-102 (Gray)
RPD_ID[226] EXK-113-102 (Black)
RPD_ID[227] EXK-114-066 (Gray)
RPD_ID[228] EXK-114-066 (Black)
RPD_ID[229] EXK-115-096 (Gray)
RPD_ID[230] EXK-115-096 (Black)
RPD_ID[231] EXK-116-061 (Gray)
RPD_ID[232] EXK-116-061 (Black)
RPD_ID[233] EXK-117-094 (Gray)
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RPD_ID[285] EXK-143-106 (Gray)
RPD_ID[286] EXK-143-106 (Black)
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RPD_ID[290] EXK-145-114 (Black)
RPD_ID[291] EXK-146-067 (Gray)
RPD_ID[292] EXK-146-067 (Black)
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RPD_ID[294] EXK-147-108 (Black)
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RPD_ID[302] EXK-151-101 (Black)
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RPD_ID[312] EXK-156-102 (Black)
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RPD_ID[314] EXK-157-123 (Black)
RPD_ID[315] EXK-158-094 (Gray)
RPD_ID[316] EXK-158-094 (Black)
RPD_ID[317] EXK-159-127 (Gray)
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RPD_ID[336] EXK-168-070 (Black)
RPD_ID[337] EXK-169-120 (Gray)
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RPD_ID[340] EXK-170-065 (Black)
RPD_ID[341] EXK-171-111 (Gray)
RPD_ID[342] EXK-171-111 (Black)
RPD_ID[343] EXK-172-052 (Gray)
RPD_ID[344] EXK-172-052 (Black)
RPD_ID[345] EXK-173-115 (Gray)
RPD_ID[346] EXK-173-115 (Black)
RPD_ID[347] EXK-174-051 (Gray)
RPD_ID[348] EXK-174-051 (Black)
RPD_ID[349] EXK-175-110 (Gray)
RPD_ID[350] EXK-175-110 (Black)
RPD_ID[351] EXK-176-047 (Gray)
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RPD_ID[354]  EXK-177-107  (Black)
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RPD_ID[356]  EXK-178-050  (Black)
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RPD_ID[360]  EXK-180-108  (Black)
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RPD_ID[370]  EXK-185-132  (Black)
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RPD_ID[376]  EXK-188-083  (Black)
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RPD_ID[380]  EXK-190-088  (Black)
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RPD_ID[390]  EXK-195-119  (Black)
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RPD_ID[392]  EXK-196-062  (Black)
RPD_ID[393]  EXK-197-131  (Gray)
RPD_ID[394]  EXK-197-131  (Black)
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RPD_ID[396]  EXK-198-060  (Black)
RPD_ID[397]  EXK-199-128  (Gray)
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RPD_ID[400]  EXK-200-046  (Black)
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RPD_ID[402]  EXK-201-114  (Black)
RPD_ID[403]  EXK-202-044  (Gray)
RPD_ID[404]  EXK-202-044  (Black)
RPD_ID[405]  EXK-203-111  (Gray)
RPD_ID[406]  EXK-203-111  (Black)
RPD_ID[407]  EXK-204-049  (Gray)
RPD_ID[408]  EXK-204-049  (Black)
RPD_ID[409]  EXK-205-117  (Gray)
RPD_ID[410]  EXK-205-117  (Black)
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RPD_ID[412] EXK-206-141 (Black)
RPD_ID[413] EXK-207-100 (Gray)
RPD_ID[414] EXK-207-100 (Black)
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RPD_ID[416] EXK-208-145 (Black)
RPD_ID[417] EXK-209-092 (Gray)
RPD_ID[418] EXK-209-092 (Black)
RPD_ID[419] EXK-210-137 (Gray)
RPD_ID[420] EXK-210-137 (Black)
RPD_ID[421] EXK-211-082 (Gray)
RPD_ID[422] EXK-211-082 (Black)
RPD_ID[423] EXK-212-133 (Gray)
RPD_ID[424] EXK-212-133 (Black)
RPD_ID[425] EXK-213-077 (Gray)
RPD_ID[426] EXK-213-077 (Black)
RPD_ID[427] EXK-214-135 (Gray)
RPD_ID[428] EXK-214-135 (Black)
RPD_ID[429] EXK-215-073 (Gray)
RPD_ID[430] EXK-215-073 (Black)
RPD_ID[431] EXK-216-129 (Gray)
RPD_ID[432] EXK-216-129 (Black)
RPD_ID[433] EXK-217-071 (Gray)
RPD_ID[434] EXK-217-071 (Black)
RPD_ID[435] EXK-218-127 (Gray)
RPD_ID[436] EXK-218-127 (Black)
RPD_ID[437] EXK-219-058 (Gray)
RPD_ID[438] EXK-219-058 (Black)
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RPD_ID[454] EXK-227-094 (Black)
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RPD_ID[456] EXK-228-140 (Black)
RPD_ID[457] EXK-229-089 (Gray)
RPD_ID[458] EXK-229-089 (Black)
RPD_ID[459] EXK-230-139 (Gray)
RPD_ID[460] EXK-230-139 (Black)
RPD_ID[461] EXK-231-085 (Gray)
RPD_ID[462] EXK-231-085 (Black)
RPD_ID[463] EXK-232-144 (Gray)
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RPD_ID[465] EXK-233-076 (Gray)
RPD_ID[466] EXK-233-076 (Black)
RPD_ID[467] EXK-234-138 (Gray)
RPD_ID[468] EXK-234-138 (Black)
RPD_ID[469] EXK-235-071 (Gray)
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RPD_ID[471] EXK-236-141 (Gray)
RPD_ID[472] EXK-236-141 (Black)
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RPD_ID[474] EXK-237-065 (Black)
RPD_ID[475] EXK-238-146 (Gray)
RPD_ID[476] EXK-238-146 (Black)
RPD_ID[477] EXK-239-055 (Gray)
RPD_ID[478] EXK-239-055 (Black)
RPD_ID[479] EXK-240-134 (Gray)
RPD_ID[480] EXK-240-134 (Black)
RPD_ID[481] EXK-241-052 (Gray)
RPD_ID[482] EXK-241-052 (Black)
RPD_ID[483] EXK-242-125 (Gray)
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RPD_ID[496] EXK-248-145 (Black)
RPD_ID[497] EXK-249-076 (Gray)
RPD_ID[498] EXK-249-076 (Black)
RPD_ID[499] EXK-250-145 (Gray)
RPD_ID[500] EXK-250-145 (Black)
RPD_ID[501] EXK-251-063 (Gray)
RPD_ID[502] EXK-251-063 (Black)
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RPD_ID[505] EXK-253-059 (Gray)
RPD_ID[506] EXK-253-059 (Black)
RPD_ID[507] EXK-254-134 (Gray)
RPD_ID[508] EXK-254-134 (Black)
RPD_ID[509] EXK-255-057 (Gray)
RPD_ID[510] EXK-255-057 (Black)
RPD_ID[511] EXK-256-131 (Gray)
RPD_ID[512] EXK-256-131 (Black)
RPD_ID[513] (not_installed)      # JC 110309: Not installed
RPD_ID[514] (not_installed)      # JC 110309: Not installed
RPD_ID[515] (not_labeled)        # JC 110309: Not labeled
RPD_ID[516] (not_labeled)        # JC 110309: Not labeled
# These commented out because N_STD = 258 (avoids error)
# RPD_ID[517] UNK # stand 259
# RPD_ID[518] UNK
# RPD_ID[519] UNK # stand 260
# RPD_ID[520] UNK

# Status codes 0-3 summarized defined at end of this document (and in MCS0031)
# This will be set to 3 ("OK") for any cable #'s <= N_RPD not identified
# *** RPD_STAT[cable#] goes here:
# Cables to Stand 257 are not currently installed:
RPD_STAT[513] 0
RPD_STAT[514] 0
```

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# These commented out because N_STD = 258 (avoids error):
# RPD_STAT[517] 0
# RPD_STAT[518] 0
# RPD_STAT[519] 0
# RPD_STAT[520] 0

RPD_DESI 1 # DEFAULT: This will set RPD_DESI[n]=1 for all n
# You should set it to 0 if different / not known, or >1 if appropriate
# "2" is LMR400
# *** RPD_DESI[cable#] goes here:
# Cables to Stand 257 are not currently installed, but would go here:
RPD_DESI[513] 0 # not installed
RPD_DESI[514] 0 # not installed
# Electrical length of cables to Stand 258:
RPD_DESI[515] 2 # LMR400 (possibly with some short jumpers near shelter
RPD_DESI[516] 2 # LMR400 (possibly with some short jumpers near shelter
# Cables to Stand 259 are not currently installed (since 259 doesn't exist):
# RPD_DESI[517]
# RPD_DESI[518]
# Cables to Stand 260 are not currently installed (since 260 doesn't exist):
# RPD_DESI[519]
# RPD_DESI[520]

# RPD_LENG[] will be set to 0 for any cable #'s <= N_RPD not identified
# *** RPD_LENG[cable#] [m] goes here:
RPD_LENG[1] 138.00
RPD_LENG[2] 138.00
RPD_LENG[3] 133.00
RPD_LENG[4] 133.00
RPD_LENG[5] 134.00
RPD_LENG[6] 134.00
RPD_LENG[7] 126.00
RPD_LENG[8] 126.00
RPD_LENG[9] 117.00
RPD_LENG[10] 117.00
RPD_LENG[11] 121.00
RPD_LENG[12] 121.00
RPD_LENG[13] 105.00
RPD_LENG[14] 105.00
RPD_LENG[15] 100.00
RPD_LENG[16] 100.00
RPD_LENG[17]  91.00
RPD_LENG[18]  91.00
RPD_LENG[19]  86.00
RPD_LENG[20]  86.00
RPD_LENG[21]  96.00
RPD_LENG[22]  96.00
RPD_LENG[23]  89.00
RPD_LENG[24]  89.00
RPD_LENG[25]  83.00
RPD_LENG[26]  83.00
RPD_LENG[27]  81.00
RPD_LENG[28]  81.00
RPD_LENG[29]  82.00
RPD_LENG[30]  82.00
RPD_LENG[31]  77.00
RPD_LENG[32]  77.00
RPD_LENG[33]  76.00
RPD_LENG[34]  76.00
```

```
RPD_LENG[35]   76.00
RPD_LENG[36]   76.00
RPD_LENG[37]   74.00
RPD_LENG[38]   74.00
RPD_LENG[39] 132.00
RPD_LENG[40] 132.00
RPD_LENG[41] 141.00
RPD_LENG[42] 141.00
RPD_LENG[43] 131.00

RPD_LENG[44] 131.00
RPD_LENG[45] 137.00
RPD_LENG[46] 137.00
RPD_LENG[47] 133.00
RPD_LENG[48] 133.00
RPD_LENG[49] 122.00
RPD_LENG[50] 122.00
RPD_LENG[51] 124.00
RPD_LENG[52] 124.00
RPD_LENG[53] 120.00
RPD_LENG[54] 120.00
RPD_LENG[55] 116.00
RPD_LENG[56] 116.00
RPD_LENG[57] 119.00
RPD_LENG[58] 119.00
RPD_LENG[59] 119.00
RPD_LENG[60] 119.00
RPD_LENG[61] 120.00
RPD_LENG[62] 120.00
RPD_LENG[63] 105.00
RPD_LENG[64] 105.00
RPD_LENG[65] 103.00
RPD_LENG[66] 103.00
RPD_LENG[67]   92.00
RPD_LENG[68]   92.00
RPD_LENG[69]   99.00
RPD_LENG[70]   99.00
RPD_LENG[71]   88.00
RPD_LENG[72]   88.00
RPD_LENG[73] 101.00
RPD_LENG[74] 101.00
RPD_LENG[75]   83.00
RPD_LENG[76]   83.00
RPD_LENG[77] 100.00
RPD_LENG[78] 100.00
RPD_LENG[79]   94.00
RPD_LENG[80]   94.00
RPD_LENG[81]   93.00
RPD_LENG[82]   93.00
RPD_LENG[83]   82.00
RPD_LENG[84]   82.00
RPD_LENG[85]   92.00
RPD_LENG[86]   92.00
RPD_LENG[87]   79.00
RPD_LENG[88]   79.00
RPD_LENG[89]   97.00
RPD_LENG[90]   97.00
RPD_LENG[91]   76.00
RPD_LENG[92]   76.00
```

```
RPD_LENG[93]   91.00
RPD_LENG[94]   91.00
RPD_LENG[95]   71.00
RPD_LENG[96]   71.00
RPD_LENG[97]   87.00
RPD_LENG[98]   87.00
RPD_LENG[99]   76.00
RPD_LENG[100]   76.00
RPD_LENG[101]  101.00
RPD_LENG[102]  101.00
RPD_LENG[103]   71.00
RPD_LENG[104]   71.00
RPD_LENG[105]   81.00
RPD_LENG[106]   81.00
RPD_LENG[107]   64.00
RPD_LENG[108]   64.00
RPD_LENG[109]   78.00
RPD_LENG[110]   78.00
RPD_LENG[111]  129.00
RPD_LENG[112]  129.00
RPD_LENG[113]  143.00
RPD_LENG[114]  143.00
RPD_LENG[115]  126.00
RPD_LENG[116]  126.00
RPD_LENG[117]  134.00
RPD_LENG[118]  134.00
RPD_LENG[119]  131.00
RPD_LENG[120]  131.00
RPD_LENG[121]  130.00
RPD_LENG[122]  130.00
RPD_LENG[123]  113.00
RPD_LENG[124]  113.00
RPD_LENG[125]  127.00
RPD_LENG[126]  127.00
RPD_LENG[127]  113.00
RPD_LENG[128]  113.00
RPD_LENG[129]  116.00
RPD_LENG[130]  116.00
RPD_LENG[131]  105.00
RPD_LENG[132]  105.00
RPD_LENG[133]  113.00
RPD_LENG[134]  113.00
RPD_LENG[135]   94.00
RPD_LENG[136]   94.00
RPD_LENG[137]  106.00
RPD_LENG[138]  106.00
RPD_LENG[139]   91.00
RPD_LENG[140]   91.00
RPD_LENG[141]  105.00
RPD_LENG[142]  105.00
RPD_LENG[143]   86.00
RPD_LENG[144]   86.00
RPD_LENG[145]  114.00
RPD_LENG[146]  114.00
RPD_LENG[147]   84.00
RPD_LENG[148]   84.00
RPD_LENG[149]   97.00
RPD_LENG[150]   97.00
RPD_LENG[151]   74.00
```

```
RPD_LENG[152]   74.00
RPD_LENG[153]   95.00
RPD_LENG[154]   95.00
RPD_LENG[155]   81.00
RPD_LENG[156]   81.00
RPD_LENG[157]  106.00
RPD_LENG[158]  106.00
RPD_LENG[159]   78.00
RPD_LENG[160]   78.00
RPD_LENG[161]   94.00
RPD_LENG[162]   94.00
RPD_LENG[163]   66.00
RPD_LENG[164]   66.00
RPD_LENG[165]   91.00
RPD_LENG[166]   91.00
RPD_LENG[167]   63.00
RPD_LENG[168]   63.00
RPD_LENG[169]   89.00
RPD_LENG[170]   89.00
RPD_LENG[171]   76.00
RPD_LENG[172]   76.00
RPD_LENG[173]   95.00
RPD_LENG[174]   95.00
RPD_LENG[175]   57.00
RPD_LENG[176]   57.00
RPD_LENG[177]   86.00
RPD_LENG[178]   86.00
RPD_LENG[179]  124.00
RPD_LENG[180]  124.00
RPD_LENG[181]  137.00
RPD_LENG[182]  137.00
RPD_LENG[183]  126.00
RPD_LENG[184]  126.00
RPD_LENG[185]  133.00
RPD_LENG[186]  133.00
RPD_LENG[187]  110.00
RPD_LENG[188]  110.00
RPD_LENG[189]  132.00
RPD_LENG[190]  132.00
RPD_LENG[191]  107.00
RPD_LENG[192]  107.00
RPD_LENG[193]  123.00
RPD_LENG[194]  123.00
RPD_LENG[195]  100.00
RPD_LENG[196]  100.00
RPD_LENG[197]  114.00
RPD_LENG[198]  114.00
RPD_LENG[199]   91.00
RPD_LENG[200]   91.00
RPD_LENG[201]  113.00
RPD_LENG[202]  113.00
RPD_LENG[203]   89.00
RPD_LENG[204]   89.00
RPD_LENG[205]  111.00
RPD_LENG[206]  111.00
RPD_LENG[207]   85.00
RPD_LENG[208]   85.00
RPD_LENG[209]  113.00
RPD_LENG[210]  113.00
```

```
RPD_LENG[211]   86.00
RPD_LENG[212]   86.00
RPD_LENG[213]  114.00
RPD_LENG[214]  114.00
RPD_LENG[215]   73.00
RPD_LENG[216]   73.00
RPD_LENG[217]  100.00
RPD_LENG[218]  100.00
RPD_LENG[219]   69.00
RPD_LENG[220]   69.00
RPD_LENG[221]  105.00
RPD_LENG[222]  105.00
RPD_LENG[223]   82.00
RPD_LENG[224]   82.00
RPD_LENG[225]  102.00
RPD_LENG[226]  102.00
RPD_LENG[227]   66.00
RPD_LENG[228]   66.00
RPD_LENG[229]   96.00
RPD_LENG[230]   96.00
RPD_LENG[231]   61.00
RPD_LENG[232]   61.00
RPD_LENG[233]   94.00
RPD_LENG[234]   94.00
RPD_LENG[235]   67.00
RPD_LENG[236]   67.00
RPD_LENG[237]   95.00
RPD_LENG[238]   95.00
RPD_LENG[239]   62.00
RPD_LENG[240]   62.00
RPD_LENG[241]   94.00
RPD_LENG[242]   94.00
RPD_LENG[243]  129.00
RPD_LENG[244]  129.00
RPD_LENG[245]  142.00
RPD_LENG[246]  142.00
RPD_LENG[247]  114.00
RPD_LENG[248]  114.00
RPD_LENG[249]  140.00
RPD_LENG[250]  140.00
RPD_LENG[251]  110.00
RPD_LENG[252]  110.00
RPD_LENG[253]  127.00
RPD_LENG[254]  127.00
RPD_LENG[255]   98.00
RPD_LENG[256]   98.00
RPD_LENG[257]  119.00
RPD_LENG[258]  119.00
RPD_LENG[259]   96.00
RPD_LENG[260]   96.00
RPD_LENG[261]  118.00
RPD_LENG[262]  118.00
RPD_LENG[263]   90.00
RPD_LENG[264]   90.00
RPD_LENG[265]  119.00
RPD_LENG[266]  119.00
RPD_LENG[267]   83.00
RPD_LENG[268]   83.00
RPD_LENG[269]  115.00
```

```
RPD_LENG[270]  115.00
RPD_LENG[271]   81.00
RPD_LENG[272]   81.00
RPD_LENG[273]  111.00
RPD_LENG[274]  111.00
RPD_LENG[275]   77.00
RPD_LENG[276]   77.00
RPD_LENG[277]  121.00
RPD_LENG[278]  121.00
RPD_LENG[279]   68.00
RPD_LENG[280]   68.00
RPD_LENG[281]  110.00
RPD_LENG[282]  110.00
RPD_LENG[283]   64.00
RPD_LENG[284]   64.00
RPD_LENG[285]  106.00
RPD_LENG[286]  106.00
RPD_LENG[287]   70.00
RPD_LENG[288]   70.00
RPD_LENG[289]  114.00
RPD_LENG[290]  114.00
RPD_LENG[291]   67.00
RPD_LENG[292]   67.00
RPD_LENG[293]  108.00
RPD_LENG[294]  108.00
RPD_LENG[295]   66.00
RPD_LENG[296]   66.00
RPD_LENG[297]   99.00
RPD_LENG[298]   99.00
RPD_LENG[299]   69.00
RPD_LENG[300]   69.00
RPD_LENG[301]  101.00
RPD_LENG[302]  101.00
RPD_LENG[303]  109.00
RPD_LENG[304]  109.00
RPD_LENG[305]  136.00
RPD_LENG[306]  136.00
RPD_LENG[307]  106.00
RPD_LENG[308]  106.00
RPD_LENG[309]  129.00
RPD_LENG[310]  129.00
RPD_LENG[311]  102.00
RPD_LENG[312]  102.00
RPD_LENG[313]  123.00
RPD_LENG[314]  123.00
RPD_LENG[315]   94.00
RPD_LENG[316]   94.00
RPD_LENG[317]  127.00
RPD_LENG[318]  127.00
RPD_LENG[319]   90.00
RPD_LENG[320]   90.00
RPD_LENG[321]  123.00
RPD_LENG[322]  123.00
RPD_LENG[323]   87.00
RPD_LENG[324]   87.00
RPD_LENG[325]  120.00
RPD_LENG[326]  120.00
RPD_LENG[327]   83.00
RPD_LENG[328]   83.00
```

```
RPD_LENG[329]  120.00
RPD_LENG[330]  120.00
RPD_LENG[331]   72.00
RPD_LENG[332]   72.00
RPD_LENG[333]  122.00
RPD_LENG[334]  122.00
RPD_LENG[335]   70.00
RPD_LENG[336]   70.00
RPD_LENG[337]  120.00
RPD_LENG[338]  120.00
RPD_LENG[339]   65.00
RPD_LENG[340]   65.00
RPD_LENG[341]  111.00
RPD_LENG[342]  111.00
RPD_LENG[343]   52.00
RPD_LENG[344]   52.00
RPD_LENG[345]  115.00
RPD_LENG[346]  115.00
RPD_LENG[347]   51.00
RPD_LENG[348]   51.00
RPD_LENG[349]  110.00
RPD_LENG[350]  110.00
RPD_LENG[351]   47.00
RPD_LENG[352]   47.00
RPD_LENG[353]  107.00
RPD_LENG[354]  107.00
RPD_LENG[355]   50.00
RPD_LENG[356]   50.00
RPD_LENG[357]  113.00
RPD_LENG[358]  113.00
RPD_LENG[359]  108.00
RPD_LENG[360]  108.00
RPD_LENG[361]  141.00
RPD_LENG[362]  141.00
RPD_LENG[363]  101.00
RPD_LENG[364]  101.00
RPD_LENG[365]  139.00
RPD_LENG[366]  139.00
RPD_LENG[367]   99.00
RPD_LENG[368]   99.00
RPD_LENG[369]  132.00
RPD_LENG[370]  132.00
RPD_LENG[371]   91.00
RPD_LENG[372]   91.00
RPD_LENG[373]  130.00
RPD_LENG[374]  130.00
RPD_LENG[375]   83.00
RPD_LENG[376]   83.00
RPD_LENG[377]  131.00
RPD_LENG[378]  131.00
RPD_LENG[379]   88.00
RPD_LENG[380]   88.00
RPD_LENG[381]  136.00
RPD_LENG[382]  136.00
RPD_LENG[383]   72.00
RPD_LENG[384]   72.00
RPD_LENG[385]  124.00
RPD_LENG[386]  124.00
RPD_LENG[387]   67.00
```

```
RPD_LENG[388]   67.00
RPD_LENG[389]  119.00
RPD_LENG[390]  119.00
RPD_LENG[391]   62.00
RPD_LENG[392]   62.00
RPD_LENG[393]  131.00
RPD_LENG[394]  131.00
RPD_LENG[395]   60.00
RPD_LENG[396]   60.00
RPD_LENG[397]  128.00
RPD_LENG[398]  128.00
RPD_LENG[399]   46.00
RPD_LENG[400]   46.00
RPD_LENG[401]  114.00
RPD_LENG[402]  114.00
RPD_LENG[403]   44.00
RPD_LENG[404]   44.00
RPD_LENG[405]  111.00
RPD_LENG[406]  111.00
RPD_LENG[407]   49.00
RPD_LENG[408]   49.00
RPD_LENG[409]  117.00
RPD_LENG[410]  117.00
RPD_LENG[411]  141.00
RPD_LENG[412]  141.00
RPD_LENG[413]  100.00
RPD_LENG[414]  100.00
RPD_LENG[415]  145.00
RPD_LENG[416]  145.00
RPD_LENG[417]   92.00
RPD_LENG[418]   92.00
RPD_LENG[419]  137.00
RPD_LENG[420]  137.00
RPD_LENG[421]   82.00
RPD_LENG[422]   82.00
RPD_LENG[423]  133.00
RPD_LENG[424]  133.00
RPD_LENG[425]   77.00
RPD_LENG[426]   77.00
RPD_LENG[427]  135.00
RPD_LENG[428]  135.00
RPD_LENG[429]   73.00
RPD_LENG[430]   73.00
RPD_LENG[431]  129.00
RPD_LENG[432]  129.00
RPD_LENG[433]   71.00
RPD_LENG[434]   71.00
RPD_LENG[435]  127.00
RPD_LENG[436]  127.00
RPD_LENG[437]   58.00
RPD_LENG[438]   58.00
RPD_LENG[439]  126.00
RPD_LENG[440]  126.00
RPD_LENG[441]   53.00
RPD_LENG[442]   53.00
RPD_LENG[443]  129.00
RPD_LENG[444]  129.00
RPD_LENG[445]   57.00
RPD_LENG[446]   57.00
```

```
RPD_LENG[447]  123.00
RPD_LENG[448]  123.00
RPD_LENG[449]   43.00
RPD_LENG[450]   43.00
RPD_LENG[451]  116.00
RPD_LENG[452]  116.00
RPD_LENG[453]   94.00
RPD_LENG[454]   94.00
RPD_LENG[455]  140.00
RPD_LENG[456]  140.00
RPD_LENG[457]   89.00
RPD_LENG[458]   89.00
RPD_LENG[459]  139.00
RPD_LENG[460]  139.00
RPD_LENG[461]   85.00
RPD_LENG[462]   85.00
RPD_LENG[463]  144.00
RPD_LENG[464]  144.00
RPD_LENG[465]   76.00
RPD_LENG[466]   76.00
RPD_LENG[467]  138.00
RPD_LENG[468]  138.00
RPD_LENG[469]   71.00
RPD_LENG[470]   71.00
RPD_LENG[471]  141.00
RPD_LENG[472]  141.00
RPD_LENG[473]   65.00
RPD_LENG[474]   65.00
RPD_LENG[475]  146.00
RPD_LENG[476]  146.00
RPD_LENG[477]   55.00
RPD_LENG[478]   55.00
RPD_LENG[479]  134.00
RPD_LENG[480]  134.00
RPD_LENG[481]   52.00
RPD_LENG[482]   52.00
RPD_LENG[483]  125.00
RPD_LENG[484]  125.00
RPD_LENG[485]   57.00
RPD_LENG[486]   57.00
RPD_LENG[487]  125.00
RPD_LENG[488]  125.00
RPD_LENG[489]   85.00
RPD_LENG[490]   85.00
RPD_LENG[491]  149.00
RPD_LENG[492]  149.00
RPD_LENG[493]   81.00
RPD_LENG[494]   81.00
RPD_LENG[495]  145.00
RPD_LENG[496]  145.00
RPD_LENG[497]   76.00
RPD_LENG[498]   76.00
RPD_LENG[499]  145.00
RPD_LENG[500]  145.00
RPD_LENG[501]   63.00
RPD_LENG[502]   63.00
RPD_LENG[503]  147.00
RPD_LENG[504]  147.00
RPD_LENG[505]   59.00
```

```
RPD_LENG[506]   59.00
RPD_LENG[507]  134.00
RPD_LENG[508]  134.00
RPD_LENG[509]   57.00
RPD_LENG[510]   57.00
RPD_LENG[511]  131.00
RPD_LENG[512]  131.00
RPD_LENG[513]    0.00 # JC 110309: Not installed
RPD_LENG[514]    0.00 # JC 110309: Not installed


# Length of cables to Stand 258 (old RTA):
RPD_LENG[515] 311.2  # SE's guess; see comment below
RPD_LENG[516] 311.2  # SE's guess; see comment below
# FIXME SE: Here's how I came up with this length:
# ... I started by assuming RPD_VF=85 [%] and RPD_DD=2 [ns]; see those entries for more info.
# ... On or about July 9, 2010, JC and I measured the one-way prop time to be about 1222.5 ns.
# ... ... using the TenTec VNA.
# ... I then assumed the M.170 model assuming 50 MHz center frequency, and solved for length.
# JC 110309: No better info currently available


# Cable propagation time will be calculated from RPD_VF, RPD_DD, and RPD_STR using the M.170 model
RPD_VF    83.0     # DEFAULT: This will set RPD_VD[n]=83% for all n
RPD_DD     2.4     # DEFAULT: This will set RPD_VD[n]=2.4 ns for all n
RPD_A0   0.00428  # DEFAULT: This will set RPD_A0[n]  =0.00428/m for all n
RPD_A1    0.0     # DEFAULT: This will set RPD_A1[n]  =0.0/m     for all n
RPD_FREF 10.0e+6  # DEFAULT: This will set RPD_FREF[n]=10 MHz    for all n
RPD_STR  1.005    # DEFAULT: This will set RPD_STR[n] =1.005     for all n
# FIXME SE - Need values for stands using other than the KingSignal stuff


# only stands using cable other than the KingSignal stuff need entries here.
# *** RPD_VF[cable#] goes here:
# *** RPD_DD[cable#] goes here:
# Cables to Stand 257 are not currently installed, but info would go here:
# RPD_VF[513]
# RPD_DD[514]
# Cables to Stand 258 (RTA)
RPD_VF[515] 85.0 # this is the known value for LMR-400
RPD_DD[515]  2.0 # this is SE's guess; see comment below
RPD_VF[516] 85.0 # this is the known value for LMR-400
RPD_DD[516]  2.0 # this is SE's guess; see comment below
# FIXME SE Above: I guessed RPD_DD = 2 ns, because I expect it to be better than
# ... a LMR-200-like cable, but I'm not sure by how much.
# Cables to Stand 259 are not currently installed (since 259 doesn't exist):
# RPD_VF[517]
# RPD_DD[518]
# Cables to Stand 260 are not currently installed (since 260 doesn't exist):
# RPD_VF[519]
# RPD_DD[520]



# ------------------------------------
# --- Antenna # -> cable # mapping -----
# ------------------------------------
# Format (example) "RPD_ANT[2] 3" means antenna 3 is connected to cable 2.
# RPD_ANT[n] will be set to n for any cables #'s <= N_RPD not identified
#   ...so you should only need to note exceptions here
# Set RPD_ANT[] to the corresponding negative value to indicated that only the input is connected.
# *** RPD_ANT[cable#] goes here:
```

```
# ----------------------
# --- SEP --------------
# ----------------------
N_SEP 520

# SEP_ID[] will be set to "UNK" (no identification) for any SEP port #'s <= N_SEP not identified
# *** SEP_ID[port#] goes here:
# JC 110309: Steve Tremblay will provide this

# Status codes 0-3 summarized defined at end of this document (and in MCS0031)
# This will be set to 3 ("OK") for any port #'s <= N_SEP not identified
# *** SEP_STAT[port#] goes here:

# SEP_CABL[] will be set to "UNK" (no identification) for any SEP port #'s <= N_SEP not identified
# *** SEP_CABL[port#] goes here:
SEP_CABL[1] 001-NS
SEP_CABL[2] 001-EW
SEP_CABL[3] 002-NS
SEP_CABL[4] 002-EW
SEP_CABL[5] 003-NS
SEP_CABL[6] 003-EW
SEP_CABL[7] 004-NS
SEP_CABL[8] 004-EW
SEP_CABL[9] 005-NS
SEP_CABL[10] 005-EW
SEP_CABL[11] 006-NS
SEP_CABL[12] 006-EW
SEP_CABL[13] 007-NS
SEP_CABL[14] 007-EW
SEP_CABL[15] 008-NS
SEP_CABL[16] 008-EW
SEP_CABL[17] 009-NS
SEP_CABL[18] 009-EW
SEP_CABL[19] 010-NS
SEP_CABL[20] 010-EW
SEP_CABL[21] 011-NS
SEP_CABL[22] 011-EW
SEP_CABL[23] 012-NS
SEP_CABL[24] 012-EW
SEP_CABL[25] 013-NS
SEP_CABL[26] 013-EW
SEP_CABL[27] 014-NS
SEP_CABL[28] 014-EW
SEP_CABL[29] 015-NS
SEP_CABL[30] 015-EW
SEP_CABL[31] 016-NS
SEP_CABL[32] 016-EW
SEP_CABL[33] 017-NS
SEP_CABL[34] 017-EW
SEP_CABL[35] 018-NS
SEP_CABL[36] 018-EW
SEP_CABL[37] 019-NS
SEP_CABL[38] 019-EW
SEP_CABL[39] 020-NS
SEP_CABL[40] 020-EW
SEP_CABL[41] 021-NS
SEP_CABL[42] 021-EW
SEP_CABL[43] 022-NS
SEP_CABL[44] 022-EW
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SEP_CABL[45]  023-NS
SEP_CABL[46]  023-EW
SEP_CABL[47]  024-NS
SEP_CABL[48]  024-EW
SEP_CABL[49]  025-NS
SEP_CABL[50]  025-EW
SEP_CABL[51]  026-NS
SEP_CABL[52]  026-EW
SEP_CABL[53]  027-NS
SEP_CABL[54]  027-EW
SEP_CABL[55]  028-NS
SEP_CABL[56]  028-EW
SEP_CABL[57]  029-NS
SEP_CABL[58]  029-EW
SEP_CABL[59]  030-NS
SEP_CABL[60]  030-EW
SEP_CABL[61]  031-NS
SEP_CABL[62]  031-EW
SEP_CABL[63]  032-NS
SEP_CABL[64]  032-EW
SEP_CABL[65]  033-NS
SEP_CABL[66]  033-EW
SEP_CABL[67]  034-NS
SEP_CABL[68]  034-EW
SEP_CABL[69]  035-NS
SEP_CABL[70]  035-EW
SEP_CABL[71]  036-NS
SEP_CABL[72]  036-EW
SEP_CABL[73]  037-NS
SEP_CABL[74]  037-EW
SEP_CABL[75]  038-NS
SEP_CABL[76]  038-EW
SEP_CABL[77]  039-NS
SEP_CABL[78]  039-EW
SEP_CABL[79]  040-NS
SEP_CABL[80]  040-EW
SEP_CABL[81]  041-NS
SEP_CABL[82]  041-EW
SEP_CABL[83]  042-NS
SEP_CABL[84]  042-EW
SEP_CABL[85]  043-NS
SEP_CABL[86]  043-EW
SEP_CABL[87]  044-NS
SEP_CABL[88]  044-EW
SEP_CABL[89]  045-NS
SEP_CABL[90]  045-EW
SEP_CABL[91]  046-NS
SEP_CABL[92]  046-EW
SEP_CABL[93]  047-NS
SEP_CABL[94]  047-EW
SEP_CABL[95]  048-NS
SEP_CABL[96]  048-EW
SEP_CABL[97]  049-NS
SEP_CABL[98]  049-EW
SEP_CABL[99]  050-NS
SEP_CABL[100]  050-EW
SEP_CABL[101]  051-NS
SEP_CABL[102]  051-EW
SEP_CABL[103]  052-NS
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SEP_CABL[104]  052-EW
SEP_CABL[105]  053-NS
SEP_CABL[106]  053-EW
SEP_CABL[107]  054-NS
SEP_CABL[108]  054-EW
SEP_CABL[109]  055-NS
SEP_CABL[110]  055-EW
SEP_CABL[111]  056-NS
SEP_CABL[112]  056-EW
SEP_CABL[113]  057-NS
SEP_CABL[114]  057-EW
SEP_CABL[115]  058-NS
SEP_CABL[116]  058-EW
SEP_CABL[117]  059-NS
SEP_CABL[118]  059-EW
SEP_CABL[119]  060-NS
SEP_CABL[120]  060-EW
SEP_CABL[121]  061-NS
SEP_CABL[122]  061-EW
SEP_CABL[123]  062-NS
SEP_CABL[124]  062-EW
SEP_CABL[125]  063-NS
SEP_CABL[126]  063-EW
SEP_CABL[127]  064-NS
SEP_CABL[128]  064-EW
SEP_CABL[129]  065-NS
SEP_CABL[130]  065-EW
SEP_CABL[131]  066-NS
SEP_CABL[132]  066-EW
SEP_CABL[133]  067-NS
SEP_CABL[134]  067-EW
SEP_CABL[135]  068-NS
SEP_CABL[136]  068-EW
SEP_CABL[137]  069-NS
SEP_CABL[138]  069-EW
SEP_CABL[139]  070-NS
SEP_CABL[140]  070-EW
SEP_CABL[141]  071-NS
SEP_CABL[142]  071-EW
SEP_CABL[143]  072-NS
SEP_CABL[144]  072-EW
SEP_CABL[145]  073-NS
SEP_CABL[146]  073-EW
SEP_CABL[147]  074-NS
SEP_CABL[148]  074-EW
SEP_CABL[149]  075-NS
SEP_CABL[150]  075-EW
SEP_CABL[151]  076-NS
SEP_CABL[152]  076-EW
SEP_CABL[153]  077-NS
SEP_CABL[154]  077-EW
SEP_CABL[155]  078-NS
SEP_CABL[156]  078-EW
SEP_CABL[157]  079-NS
SEP_CABL[158]  079-EW
SEP_CABL[159]  080-NS
SEP_CABL[160]  080-EW
SEP_CABL[161]  081-NS
SEP_CABL[162]  081-EW
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SEP_CABL[163] 082-NS
SEP_CABL[164] 082-EW
SEP_CABL[165] 083-NS
SEP_CABL[166] 083-EW
SEP_CABL[167] 084-NS
SEP_CABL[168] 084-EW
SEP_CABL[169] 085-NS
SEP_CABL[170] 085-EW
SEP_CABL[171] 086-NS
SEP_CABL[172] 086-EW
SEP_CABL[173] 087-NS
SEP_CABL[174] 087-EW
SEP_CABL[175] 088-NS
SEP_CABL[176] 088-EW
SEP_CABL[177] 089-NS
SEP_CABL[178] 089-EW
SEP_CABL[179] 090-NS
SEP_CABL[180] 090-EW
SEP_CABL[181] 091-NS
SEP_CABL[182] 091-EW
SEP_CABL[183] 092-NS
SEP_CABL[184] 092-EW
SEP_CABL[185] 093-NS
SEP_CABL[186] 093-EW
SEP_CABL[187] 094-NS
SEP_CABL[188] 094-EW
SEP_CABL[189] 095-NS
SEP_CABL[190] 095-EW
SEP_CABL[191] 096-NS
SEP_CABL[192] 096-EW
SEP_CABL[193] 097-NS
SEP_CABL[194] 097-EW
SEP_CABL[195] 098-NS
SEP_CABL[196] 098-EW
SEP_CABL[197] 099-NS
SEP_CABL[198] 099-EW
SEP_CABL[199] 100-NS
SEP_CABL[200] 100-EW
SEP_CABL[201] 101-NS
SEP_CABL[202] 101-EW
SEP_CABL[203] 102-NS
SEP_CABL[204] 102-EW
SEP_CABL[205] 103-NS
SEP_CABL[206] 103-EW
SEP_CABL[207] 104-NS
SEP_CABL[208] 104-EW
SEP_CABL[209] 105-NS
SEP_CABL[210] 105-EW
SEP_CABL[211] 106-NS
SEP_CABL[212] 106-EW
SEP_CABL[213] 107-NS
SEP_CABL[214] 107-EW
SEP_CABL[215] 108-NS
SEP_CABL[216] 108-EW
SEP_CABL[217] 109-NS
SEP_CABL[218] 109-EW
SEP_CABL[219] 110-NS
SEP_CABL[220] 110-EW
SEP_CABL[221] 111-NS
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SEP_CABL[222]  111-EW
SEP_CABL[223]  112-NS
SEP_CABL[224]  112-EW
SEP_CABL[225]  113-NS
SEP_CABL[226]  113-EW
SEP_CABL[227]  114-NS
SEP_CABL[228]  114-EW
SEP_CABL[229]  115-NS
SEP_CABL[230]  115-EW
SEP_CABL[231]  116-NS
SEP_CABL[232]  116-EW
SEP_CABL[233]  117-NS
SEP_CABL[234]  117-EW
SEP_CABL[235]  118-NS
SEP_CABL[236]  118-EW
SEP_CABL[237]  119-NS
SEP_CABL[238]  119-EW
SEP_CABL[239]  120-NS
SEP_CABL[240]  120-EW
SEP_CABL[241]  121-NS
SEP_CABL[242]  121-EW
SEP_CABL[243]  122-NS
SEP_CABL[244]  122-EW
SEP_CABL[245]  123-NS
SEP_CABL[246]  123-EW
SEP_CABL[247]  124-NS
SEP_CABL[248]  124-EW
SEP_CABL[249]  125-NS
SEP_CABL[250]  125-EW
SEP_CABL[251]  126-NS
SEP_CABL[252]  126-EW
SEP_CABL[253]  127-NS
SEP_CABL[254]  127-EW
SEP_CABL[255]  128-NS
SEP_CABL[256]  128-EW
SEP_CABL[257]  129-NS
SEP_CABL[258]  129-EW
SEP_CABL[259]  130-NS
SEP_CABL[260]  130-EW
SEP_CABL[261]  131-NS
SEP_CABL[262]  131-EW
SEP_CABL[263]  132-NS
SEP_CABL[264]  132-EW
SEP_CABL[265]  133-NS
SEP_CABL[266]  133-EW
SEP_CABL[267]  134-NS
SEP_CABL[268]  134-EW
SEP_CABL[269]  135-NS
SEP_CABL[270]  135-EW
SEP_CABL[271]  136-NS
SEP_CABL[272]  136-EW
SEP_CABL[273]  137-NS
SEP_CABL[274]  137-EW
SEP_CABL[275]  138-NS
SEP_CABL[276]  138-EW
SEP_CABL[277]  139-NS
SEP_CABL[278]  139-EW
SEP_CABL[279]  140-NS
SEP_CABL[280]  140-EW
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SEP_CABL[281] 141-NS
SEP_CABL[282] 141-EW
SEP_CABL[283] 142-NS
SEP_CABL[284] 142-EW
SEP_CABL[285] 143-NS
SEP_CABL[286] 143-EW
SEP_CABL[287] 144-NS
SEP_CABL[288] 144-EW
SEP_CABL[289] 145-NS
SEP_CABL[290] 145-EW
SEP_CABL[291] 146-NS
SEP_CABL[292] 146-EW
SEP_CABL[293] 147-NS
SEP_CABL[294] 147-EW
SEP_CABL[295] 148-NS
SEP_CABL[296] 148-EW
SEP_CABL[297] 149-NS
SEP_CABL[298] 149-EW
SEP_CABL[299] 150-NS
SEP_CABL[300] 150-EW
SEP_CABL[301] 151-NS
SEP_CABL[302] 151-EW
SEP_CABL[303] 152-NS
SEP_CABL[304] 152-EW
SEP_CABL[305] 153-NS
SEP_CABL[306] 153-EW
SEP_CABL[307] 154-NS
SEP_CABL[308] 154-EW
SEP_CABL[309] 155-NS
SEP_CABL[310] 155-EW
SEP_CABL[311] 156-NS
SEP_CABL[312] 156-EW
SEP_CABL[313] 157-NS
SEP_CABL[314] 157-EW
SEP_CABL[315] 158-NS
SEP_CABL[316] 158-EW
SEP_CABL[317] 159-NS
SEP_CABL[318] 159-EW
SEP_CABL[319] 160-NS
SEP_CABL[320] 160-EW
SEP_CABL[321] 161-NS
SEP_CABL[322] 161-EW
SEP_CABL[323] 162-NS
SEP_CABL[324] 162-EW
SEP_CABL[325] 163-NS
SEP_CABL[326] 163-EW
SEP_CABL[327] 164-NS
SEP_CABL[328] 164-EW
SEP_CABL[329] 165-NS
SEP_CABL[330] 165-EW
SEP_CABL[331] 166-NS
SEP_CABL[332] 166-EW
SEP_CABL[333] 167-NS
SEP_CABL[334] 167-EW
SEP_CABL[335] 168-NS
SEP_CABL[336] 168-EW
SEP_CABL[337] 169-NS
SEP_CABL[338] 169-EW
SEP_CABL[339] 170-NS
```

```
SEP_CABL[340]  170-EW
SEP_CABL[341]  171-NS
SEP_CABL[342]  171-EW
SEP_CABL[343]  172-NS
SEP_CABL[344]  172-EW
SEP_CABL[345]  173-NS
SEP_CABL[346]  173-EW
SEP_CABL[347]  174-NS
SEP_CABL[348]  174-EW
SEP_CABL[349]  175-NS
SEP_CABL[350]  175-EW
SEP_CABL[351]  176-NS
SEP_CABL[352]  176-EW
SEP_CABL[353]  177-NS
SEP_CABL[354]  177-EW
SEP_CABL[355]  178-NS
SEP_CABL[356]  178-EW
SEP_CABL[357]  179-NS
SEP_CABL[358]  179-EW
SEP_CABL[359]  180-NS
SEP_CABL[360]  180-EW
SEP_CABL[361]  181-NS
SEP_CABL[362]  181-EW
SEP_CABL[363]  182-NS
SEP_CABL[364]  182-EW
SEP_CABL[365]  183-NS
SEP_CABL[366]  183-EW
SEP_CABL[367]  184-NS
SEP_CABL[368]  184-EW
SEP_CABL[369]  185-NS
SEP_CABL[370]  185-EW
SEP_CABL[371]  186-NS
SEP_CABL[372]  186-EW
SEP_CABL[373]  187-NS
SEP_CABL[374]  187-EW
SEP_CABL[375]  188-NS
SEP_CABL[376]  188-EW
SEP_CABL[377]  189-NS
SEP_CABL[378]  189-EW
SEP_CABL[379]  190-NS
SEP_CABL[380]  190-EW
SEP_CABL[381]  191-NS
SEP_CABL[382]  191-EW
SEP_CABL[383]  192-NS
SEP_CABL[384]  192-EW
SEP_CABL[385]  193-NS
SEP_CABL[386]  193-EW
SEP_CABL[387]  194-NS
SEP_CABL[388]  194-EW
SEP_CABL[389]  195-NS
SEP_CABL[390]  195-EW
SEP_CABL[391]  196-NS
SEP_CABL[392]  196-EW
SEP_CABL[393]  197-NS
SEP_CABL[394]  197-EW
SEP_CABL[395]  198-NS
SEP_CABL[396]  198-EW
SEP_CABL[397]  199-NS
SEP_CABL[398]  199-EW
```

```
SEP_CABL[399]  200-NS
SEP_CABL[400]  200-EW
SEP_CABL[401]  201-NS
SEP_CABL[402]  201-EW
SEP_CABL[403]  202-NS
SEP_CABL[404]  202-EW
SEP_CABL[405]  203-NS
SEP_CABL[406]  203-EW
SEP_CABL[407]  204-NS
SEP_CABL[408]  204-EW
SEP_CABL[409]  205-NS
SEP_CABL[410]  205-EW
SEP_CABL[411]  206-NS
SEP_CABL[412]  206-EW
SEP_CABL[413]  207-NS
SEP_CABL[414]  207-EW
SEP_CABL[415]  208-NS
SEP_CABL[416]  208-EW
SEP_CABL[417]  209-NS
SEP_CABL[418]  209-EW
SEP_CABL[419]  210-NS
SEP_CABL[420]  210-EW
SEP_CABL[421]  211-NS
SEP_CABL[422]  211-EW
SEP_CABL[423]  212-NS
SEP_CABL[424]  212-EW
SEP_CABL[425]  213-NS
SEP_CABL[426]  213-EW
SEP_CABL[427]  214-NS
SEP_CABL[428]  214-EW
SEP_CABL[429]  215-NS
SEP_CABL[430]  215-EW
SEP_CABL[431]  216-NS
SEP_CABL[432]  216-EW
SEP_CABL[433]  217-NS
SEP_CABL[434]  217-EW
SEP_CABL[435]  218-NS
SEP_CABL[436]  218-EW
SEP_CABL[437]  219-NS
SEP_CABL[438]  219-EW
SEP_CABL[439]  220-NS
SEP_CABL[440]  220-EW
SEP_CABL[441]  221-NS
SEP_CABL[442]  221-EW
SEP_CABL[443]  222-NS
SEP_CABL[444]  222-EW
SEP_CABL[445]  223-NS
SEP_CABL[446]  223-EW
SEP_CABL[447]  224-NS
SEP_CABL[448]  224-EW
SEP_CABL[449]  225-NS
SEP_CABL[450]  225-EW
SEP_CABL[451]  226-NS
SEP_CABL[452]  226-EW
SEP_CABL[453]  227-NS
SEP_CABL[454]  227-EW
SEP_CABL[455]  228-NS
SEP_CABL[456]  228-EW
SEP_CABL[457]  229-NS
```

```
SEP_CABL[458]  229-EW
SEP_CABL[459]  230-NS
SEP_CABL[460]  230-EW
SEP_CABL[461]  231-NS
SEP_CABL[462]  231-EW
SEP_CABL[463]  232-NS
SEP_CABL[464]  232-EW
SEP_CABL[465]  233-NS
SEP_CABL[466]  233-EW
SEP_CABL[467]  234-NS
SEP_CABL[468]  234-EW
SEP_CABL[469]  235-NS
SEP_CABL[470]  235-EW
SEP_CABL[471]  236-NS
SEP_CABL[472]  236-EW
SEP_CABL[473]  237-NS
SEP_CABL[474]  237-EW
SEP_CABL[475]  238-NS
SEP_CABL[476]  238-EW
SEP_CABL[477]  239-NS
SEP_CABL[478]  239-EW
SEP_CABL[479]  240-NS
SEP_CABL[480]  240-EW
SEP_CABL[481]  241-NS
SEP_CABL[482]  241-EW
SEP_CABL[483]  242-NS
SEP_CABL[484]  242-EW
SEP_CABL[485]  243-NS
SEP_CABL[486]  243-EW
SEP_CABL[487]  244-NS
SEP_CABL[488]  244-EW
SEP_CABL[489]  245-NS
SEP_CABL[490]  245-EW
SEP_CABL[491]  246-NS
SEP_CABL[492]  246-EW
SEP_CABL[493]  247-NS
SEP_CABL[494]  247-EW
SEP_CABL[495]  248-NS
SEP_CABL[496]  248-EW
SEP_CABL[497]  249-NS
SEP_CABL[498]  249-EW
SEP_CABL[499]  250-NS
SEP_CABL[500]  250-EW
SEP_CABL[501]  251-NS
SEP_CABL[502]  251-EW
SEP_CABL[503]  252-NS
SEP_CABL[504]  252-EW
SEP_CABL[505]  253-NS
SEP_CABL[506]  253-EW
SEP_CABL[507]  254-NS
SEP_CABL[508]  254-EW
SEP_CABL[509]  255-NS
SEP_CABL[510]  255-EW
SEP_CABL[511]  256-NS
SEP_CABL[512]  256-EW
SEP_CABL[513]  257-NS
SEP_CABL[514]  257-EW
SEP_CABL[515]  258-NS
SEP_CABL[516]  258-EW
```

```
SEP_CABL[517] 259-NS
SEP_CABL[518] 259-EW
SEP_CABL[519] 260-NS
SEP_CABL[520] 260-EW


SEP_LENG 0.0 # DEFAULT: This will set SEP_LENG[n]=0 for all n
# *** SEP_LENG[port#] goes here:

SEP_DESI 1 # DEFAULT: This will set SEP_DESI[n]=1 for all n
# You should set it to 0 if different but not known, or >1 if appropriate
# *** SEP_DESI[port#] goes here:

SEP_GAIN 0 # DEFAULT: This will set SEP_GAIN[n]=0 for all n
# *** SEP_GAIN[port] [dB] goes here:


# ----------------------------------------
# --- Antenna # -> SEP port # mapping -----
# ----------------------------------------
# Format (example) "SEP_ANT[2] 3" means antenna 3 is connected to SEP port 2.
# SEP_ANT[n] will be set to n for any port #'s <= N_SEP not identified
#    ... so only need to note exceptions below
# Set SEP_ANT[] to the corresponding negative value to indicated that only the input is connected.
# *** SEP_ANT[port#] goes here:


# ----------------------
# --- ASP --------------
# ----------------------
# Maximum (not necessarily actual) number of ARX boards:
N_ARB 33
# Maximum (not necessarily actual) number or channels per ARX board:
N_ARBCH 16

# ARB_ID[] will be set to "UNK" (no identification) for any ARX board #'s <= N_ARB not identified
# *** ARB_ID[arb#] goes here:
ARB_ID[1] 0103
ARB_ID[2] 0106
ARB_ID[3] 0107
ARB_ID[4] 0101

# ARB_SLOT[] will be set to 0 (not known/not applicable) for any ARX board #'s <= N_ARB not identified
# *** ARB_SLOT[arb#] goes here:

ARB_DESI 2 # DEFAULT: This will set ARB_DESI[n]=2 for all n
# *** ARB_DESI[arb#] goes here:


# Format (example) "ARB_RACK[2] 3" means ARX board 2 is powered via a supply in Rack 2.
# ARB_RACK[] will be set to 0 (no power source) for any ARX board #'s <= N_ARB not identified
# Format (example) "ARB_PORT[2] 7" means ARX board 2 is powered via port 7 (on whatever rack is specified
# ARB_PORT[] will be set to 0 (no power source) for any ARX board #'s <= N_ARB not identified
# *** ARB_RACK[arb#] goes here:
# *** ARB_PORT[arb#] goes here:
ARB_RACK[1] 1
ARB_PORT[1] 2
ARB_RACK[2] 1
ARB_PORT[2] 2
ARB_RACK[3] 1
ARB_PORT[3] 2
ARB_RACK[4] 1
```

```
ARB_PORT[4]  2
ARB_RACK[5]  1
ARB_PORT[5]  2
ARB_RACK[6]  1
ARB_PORT[6]  2
ARB_RACK[7]  1
ARB_PORT[7]  2
ARB_RACK[8]  1
ARB_PORT[8]  2
ARB_RACK[9]  1
ARB_PORT[9]  2
ARB_RACK[10]  1
ARB_PORT[10]  2
ARB_RACK[11]  1
ARB_PORT[11]  2
ARB_RACK[12]  1
ARB_PORT[12]  2
ARB_RACK[13]  1
ARB_PORT[13]  2
ARB_RACK[14]  1
ARB_PORT[14]  2
ARB_RACK[15]  1
ARB_PORT[15]  2
ARB_RACK[16]  1
ARB_PORT[16]  2
ARB_RACK[17]  1
ARB_PORT[17]  2
ARB_RACK[18]  1
ARB_PORT[18]  2
ARB_RACK[19]  1
ARB_PORT[19]  2
ARB_RACK[20]  1
ARB_PORT[20]  2
ARB_RACK[21]  1
ARB_PORT[21]  2
ARB_RACK[22]  1
ARB_PORT[22]  2
ARB_RACK[23]  1
ARB_PORT[23]  2
ARB_RACK[24]  1
ARB_PORT[24]  2
ARB_RACK[25]  1
ARB_PORT[25]  2
ARB_RACK[26]  1
ARB_PORT[26]  2
ARB_RACK[27]  1
ARB_PORT[27]  2
ARB_RACK[28]  1
ARB_PORT[28]  2
ARB_RACK[29]  1
ARB_PORT[29]  2
ARB_RACK[30]  1
ARB_PORT[30]  2
ARB_RACK[31]  1
ARB_PORT[31]  2
ARB_RACK[32]  1
ARB_PORT[32]  2
ARB_RACK[33]  1
ARB_PORT[33]  2
```

```
# Status codes 0-3 summarized defined at end of this document (and in MCS0031)
# This will be set to 3 ("OK") for any ARX board-channels not identified
# *** ARB_STAT[arb#][ch#] goes here:

ARB_GAIN 67.0 # DEFAULT. Sets ARB_GAIN[m][p]=67.0 dB for all m,p.
# *** ARB_GAIN[arb#][ch#] goes here:


# -----------------------------------------------
# --- Antenna # -> ARX board-channel mapping ---
# -----------------------------------------------
# Format (example) "ARB_ANT[2][3] 4" means antenna 4 is connected to ARX Board 2, channel 3.
# If not indicated otherwise, ARB_ANT[1][1] will be set to 1, ARB_ANT[1][2] will be set to 2, etc.
#   ... so best is to note only the exceptions below.
# Set ARB_ANT[][] to the corresponding negative value to indicated that only the input is connected.
# *** ARB_ANT[arb#][ch#] goes here:
# The following are provided by JC 110309 (email):
ARB_ANT[1][1] 365
ARB_ANT[1][2] 366
ARB_ANT[1][3] 399
ARB_ANT[1][4] 400
ARB_ANT[1][5] 377
ARB_ANT[1][6] 378
ARB_ANT[1][7] 235
ARB_ANT[1][8] 236
ARB_ANT[1][9] 411
ARB_ANT[1][10] 412
ARB_ANT[1][11] 355
ARB_ANT[1][12] 356
ARB_ANT[1][13] 459
ARB_ANT[1][14] 460
ARB_ANT[1][15] 91
ARB_ANT[1][16] 92
ARB_ANT[2][1] 361
ARB_ANT[2][2] 362
ARB_ANT[2][3] 407
ARB_ANT[2][4] 408
ARB_ANT[2][5] 373
ARB_ANT[2][6] 374
ARB_ANT[2][7] 223
ARB_ANT[2][8] 224
ARB_ANT[2][9] 245
ARB_ANT[2][10] 246
ARB_ANT[2][11] 343
ARB_ANT[2][12] 344
ARB_ANT[2][13] 427
ARB_ANT[2][14] 428
ARB_ANT[2][15] 295
ARB_ANT[2][16] 296
ARB_ANT[3][1] 415
ARB_ANT[3][2] 416
ARB_ANT[3][3] 351
ARB_ANT[3][4] 352
ARB_ANT[3][5] 423
ARB_ANT[3][6] 424
ARB_ANT[3][7] 27
ARB_ANT[3][8] 28
ARB_ANT[3][9] 249
ARB_ANT[3][10] 250
```

```
ARB_ANT[3][11]  449
ARB_ANT[3][12]  450
ARB_ANT[3][13]  419
ARB_ANT[3][14]  420
ARB_ANT[3][15]  159
ARB_ANT[3][16]  160
ARB_ANT[4][1]   313
ARB_ANT[4][2]   314
ARB_ANT[4][3]   347
ARB_ANT[4][4]   348
ARB_ANT[4][5]   455
ARB_ANT[4][6]   456
ARB_ANT[4][7]   29
ARB_ANT[4][8]   30
ARB_ANT[4][9]   253
ARB_ANT[4][10]  254
ARB_ANT[4][11]  305
ARB_ANT[4][12]  306
ARB_ANT[4][13]  403
ARB_ANT[4][14]  404
ARB_ANT[4][15]  381
ARB_ANT[4][16]  382
ARB_ANT[5][1]   101
ARB_ANT[5][2]   102
ARB_ANT[5][3]   507
ARB_ANT[5][4]   508
ARB_ANT[5][5]   175
ARB_ANT[5][6]   176
ARB_ANT[5][7]   165
ARB_ANT[5][8]   166
ARB_ANT[5][9]   451
ARB_ANT[5][10]  452
ARB_ANT[5][11]  479
ARB_ANT[5][12]  480
ARB_ANT[5][13]  107
ARB_ANT[5][14]  108
ARB_ANT[5][15]  161
ARB_ANT[5][16]  162
ARB_ANT[6][1]   357
ARB_ANT[6][2]   358
ARB_ANT[6][3]   447
ARB_ANT[6][4]   448
ARB_ANT[6][5]   239
ARB_ANT[6][6]   240
ARB_ANT[6][7]   89
ARB_ANT[6][8]   90
ARB_ANT[6][9]   37
ARB_ANT[6][10]  38
ARB_ANT[6][11]  511
ARB_ANT[6][12]  512
ARB_ANT[6][13]  487
ARB_ANT[6][14]  488
ARB_ANT[6][15]  97
ARB_ANT[6][16]  98
ARB_ANT[7][1]   349
ARB_ANT[7][2]   350
ARB_ANT[7][3]   237
ARB_ANT[7][4]   238
ARB_ANT[7][5]   483
```

```
ARB_ANT[7][6] 484
ARB_ANT[7][7] 169
ARB_ANT[7][8] 170
ARB_ANT[7][9] 409
ARB_ANT[7][10] 410
ARB_ANT[7][11] 173
ARB_ANT[7][12] 174
ARB_ANT[7][13] 393
ARB_ANT[7][14] 394
ARB_ANT[7][15] 33
ARB_ANT[7][16] 34
ARB_ANT[8][1] 405
ARB_ANT[8][2] 406
ARB_ANT[8][3] 241
ARB_ANT[8][4] 242
ARB_ANT[8][5] 397
ARB_ANT[8][6] 398
ARB_ANT[8][7] 31
ARB_ANT[8][8] 32
ARB_ANT[8][9] 345
ARB_ANT[8][10] 346
ARB_ANT[8][11] 301
ARB_ANT[8][12] 302
ARB_ANT[8][13] 443
ARB_ANT[8][14] 444
ARB_ANT[8][15] 299
ARB_ANT[8][16] 300
ARB_ANT[9][1] 69
ARB_ANT[9][2] 70
ARB_ANT[9][3] 215
ARB_ANT[9][4] 216
ARB_ANT[9][5] 197
ARB_ANT[9][6] 198
ARB_ANT[9][7] 193
ARB_ANT[9][8] 194
ARB_ANT[9][9] 15
ARB_ANT[9][10] 16
ARB_ANT[9][11] 335
ARB_ANT[9][12] 336
ARB_ANT[9][13] 257
ARB_ANT[9][14] 258
ARB_ANT[9][15] 309
ARB_ANT[9][16] 310
ARB_ANT[10][1] 63
ARB_ANT[10][2] 64
ARB_ANT[10][3] 137
ARB_ANT[10][4] 138
ARB_ANT[10][5] 201
ARB_ANT[10][6] 202
ARB_ANT[10][7] 369
ARB_ANT[10][8] 370
ARB_ANT[10][9] 283
ARB_ANT[10][10] 284
ARB_ANT[10][11] 13
ARB_ANT[10][12] 14
ARB_ANT[10][13] 321
ARB_ANT[10][14] 322
ARB_ANT[10][15] 317
ARB_ANT[10][16] 318
```

```
ARB_ANT[11][1] 339
ARB_ANT[11][2] 340
ARB_ANT[11][3] 65
ARB_ANT[11][4] 66
ARB_ANT[11][5] 261
ARB_ANT[11][6] 262
ARB_ANT[11][7] 125
ARB_ANT[11][8] 126
ARB_ANT[11][9] 147
ARB_ANT[11][10] 148
ARB_ANT[11][11] 73
ARB_ANT[11][12] 74
ARB_ANT[11][13] 151
ARB_ANT[11][14] 152
ARB_ANT[11][15] 133
ARB_ANT[11][16] 134
ARB_ANT[12][1] 19
ARB_ANT[12][2] 20
ARB_ANT[12][3] 205
ARB_ANT[12][4] 206
ARB_ANT[12][5] 219
ARB_ANT[12][6] 220
ARB_ANT[12][7] 129
ARB_ANT[12][8] 130
ARB_ANT[12][9] 211
ARB_ANT[12][10] 212
ARB_ANT[12][11] 141
ARB_ANT[12][12] 142
ARB_ANT[12][13] 279
ARB_ANT[12][14] 280
ARB_ANT[12][15] 61
ARB_ANT[12][16] 62
ARB_ANT[13][1] 207
ARB_ANT[13][2] 208
ARB_ANT[13][3] 57
ARB_ANT[13][4] 58
ARB_ANT[13][5] 189
ARB_ANT[13][6] 190
ARB_ANT[13][7] 353
ARB_ANT[13][8] 354
ARB_ANT[13][9] 323
ARB_ANT[13][10] 324
ARB_ANT[13][11] 9
ARB_ANT[13][12] 10
ARB_ANT[13][13] 117
ARB_ANT[13][14] 118
ARB_ANT[13][15] 293
ARB_ANT[13][16] 294
ARB_ANT[14][1] 379
ARB_ANT[14][2] 380
ARB_ANT[14][3] 331
ARB_ANT[14][4] 332
ARB_ANT[14][5] 121
ARB_ANT[14][6] 122
ARB_ANT[14][7] 401
ARB_ANT[14][8] 402
ARB_ANT[14][9] 267
ARB_ANT[14][10] 268
ARB_ANT[14][11] 275
```

```
ARB_ANT[14][12] 276
ARB_ANT[14][13] 185
ARB_ANT[14][14] 186
ARB_ANT[14][15] 289
ARB_ANT[14][16] 290
ARB_ANT[15][1] 327
ARB_ANT[15][2] 328
ARB_ANT[15][3] 199
ARB_ANT[15][4] 200
ARB_ANT[15][5] 51
ARB_ANT[15][6] 52
ARB_ANT[15][7] 109
ARB_ANT[15][8] 110
ARB_ANT[15][9] 135
ARB_ANT[15][10] 136
ARB_ANT[15][11] 263
ARB_ANT[15][12] 264
ARB_ANT[15][13] 49
ARB_ANT[15][14] 50
ARB_ANT[15][15] 177
ARB_ANT[15][16] 178
ARB_ANT[16][1] 383
ARB_ANT[16][2] 384
ARB_ANT[16][3] 203
ARB_ANT[16][4] 204
ARB_ANT[16][5] 7
ARB_ANT[16][6] 8
ARB_ANT[16][7] 297
ARB_ANT[16][8] 298
ARB_ANT[16][9] 387
ARB_ANT[16][10] 388
ARB_ANT[16][11] 271
ARB_ANT[16][12] 272
ARB_ANT[16][13] 53
ARB_ANT[16][14] 54
ARB_ANT[16][15] 181
ARB_ANT[16][16] 182
ARB_ANT[17][1] 23
ARB_ANT[17][2] 24
ARB_ANT[17][3] 83
ARB_ANT[17][4] 84
ARB_ANT[17][5] 145
ARB_ANT[17][6] 146
ARB_ANT[17][7] 143
ARB_ANT[17][8] 144
ARB_ANT[17][9] 21
ARB_ANT[17][10] 22
ARB_ANT[17][11] 87
ARB_ANT[17][12] 88
ARB_ANT[17][13] 273
ARB_ANT[17][14] 274
ARB_ANT[17][15] 139
ARB_ANT[17][16] 140
ARB_ANT[18][1] 79
ARB_ANT[18][2] 80
ARB_ANT[18][3] 167
ARB_ANT[18][4] 168
ARB_ANT[18][5] 329
ARB_ANT[18][6] 330
```

```
ARB_ANT[18][7] 67
ARB_ANT[18][8] 68
ARB_ANT[18][9] 153
ARB_ANT[18][10] 154
ARB_ANT[18][11] 231
ARB_ANT[18][12] 232
ARB_ANT[18][13] 269
ARB_ANT[18][14] 270
ARB_ANT[18][15] 75
ARB_ANT[18][16] 76
ARB_ANT[19][1] 81
ARB_ANT[19][2] 82
ARB_ANT[19][3] 217
ARB_ANT[19][4] 218
ARB_ANT[19][5] 265
ARB_ANT[19][6] 266
ARB_ANT[19][7] 71
ARB_ANT[19][8] 72
ARB_ANT[19][9] 287
ARB_ANT[19][10] 288
ARB_ANT[19][11] 149
ARB_ANT[19][12] 150
ARB_ANT[19][13] 213
ARB_ANT[19][14] 214
ARB_ANT[19][15] 17
ARB_ANT[19][16] 18
ARB_ANT[20][1] 163
ARB_ANT[20][2] 164
ARB_ANT[20][3] 77
ARB_ANT[20][4] 78
ARB_ANT[20][5] 155
ARB_ANT[20][6] 156
ARB_ANT[20][7] 209
ARB_ANT[20][8] 210
ARB_ANT[20][9] 291
ARB_ANT[20][10] 292
ARB_ANT[20][11] 85
ARB_ANT[20][12] 86
ARB_ANT[20][13] 25
ARB_ANT[20][14] 26
ARB_ANT[20][15] 325
ARB_ANT[20][16] 326
ARB_ANT[21][1] 131
ARB_ANT[21][2] 132
ARB_ANT[21][3] 115
ARB_ANT[21][4] 116
ARB_ANT[21][5] 481
ARB_ANT[21][6] 482
ARB_ANT[21][7] 433
ARB_ANT[21][8] 434
ARB_ANT[21][9] 195
ARB_ANT[21][10] 196
ARB_ANT[21][11] 243
ARB_ANT[21][12] 244
ARB_ANT[21][13] 43
ARB_ANT[21][14] 44
ARB_ANT[21][15] 477
ARB_ANT[21][16] 478
ARB_ANT[22][1] 259
```

```
ARB_ANT[22][2]  260
ARB_ANT[22][3]  1
ARB_ANT[22][4]  2
ARB_ANT[22][5]  47
ARB_ANT[22][6]  48
ARB_ANT[22][7]  441
ARB_ANT[22][8]  442
ARB_ANT[22][9]  371
ARB_ANT[22][10]  372
ARB_ANT[22][11]  5
ARB_ANT[22][12]  6
ARB_ANT[22][13]  119
ARB_ANT[22][14]  120
ARB_ANT[22][15]  437
ARB_ANT[22][16]  438
ARB_ANT[23][1]  315
ARB_ANT[23][2]  316
ARB_ANT[23][3]  3
ARB_ANT[23][4]  4
ARB_ANT[23][5]  179
ARB_ANT[23][6]  180
ARB_ANT[23][7]  391
ARB_ANT[23][8]  392
ARB_ANT[23][9]  255
ARB_ANT[23][10]  256
ARB_ANT[23][11]  41
ARB_ANT[23][12]  42
ARB_ANT[23][13]  39
ARB_ANT[23][14]  40
ARB_ANT[23][15]  395
ARB_ANT[23][16]  396
ARB_ANT[24][1]  319
ARB_ANT[24][2]  320
ARB_ANT[24][3]  113
ARB_ANT[24][4]  114
ARB_ANT[24][5]  111
ARB_ANT[24][6]  112
ARB_ANT[24][7]  485
ARB_ANT[24][8]  486
ARB_ANT[24][9]  59
ARB_ANT[24][10]  60
ARB_ANT[24][11]  45
ARB_ANT[24][12]  46
ARB_ANT[24][13]  183
ARB_ANT[24][14]  184
ARB_ANT[24][15]  445
ARB_ANT[24][16]  446
ARB_ANT[25][1]  285
ARB_ANT[25][2]  286
ARB_ANT[25][3]  389
ARB_ANT[25][4]  390
ARB_ANT[25][5]  495
ARB_ANT[25][6]  496
ARB_ANT[25][7]  95
ARB_ANT[25][8]  96
ARB_ANT[25][9]  221
ARB_ANT[25][10]  222
ARB_ANT[25][11]  337
ARB_ANT[25][12]  338
```

```
ARB_ANT[25][13]  499
ARB_ANT[25][14]  500
ARB_ANT[25][15]  227
ARB_ANT[25][16]  228
ARB_ANT[26][1]  341
ARB_ANT[26][2]  342
ARB_ANT[26][3]  333
ARB_ANT[26][4]  334
ARB_ANT[26][5]  105
ARB_ANT[26][6]  106
ARB_ANT[26][7]  475
ARB_ANT[26][8]  476
ARB_ANT[26][9]  225
ARB_ANT[26][10]  226
ARB_ANT[26][11]  431
ARB_ANT[26][12]  432
ARB_ANT[26][13]  171
ARB_ANT[26][14]  172
ARB_ANT[26][15]  467
ARB_ANT[26][16]  468
ARB_ANT[27][1]  157
ARB_ANT[27][2]  158
ARB_ANT[27][3]  277
ARB_ANT[27][4]  278
ARB_ANT[27][5]  103
ARB_ANT[27][6]  104
ARB_ANT[27][7]  463
ARB_ANT[27][8]  464
ARB_ANT[27][9]  233
ARB_ANT[27][10]  234
ARB_ANT[27][11]  435
ARB_ANT[27][12]  436
ARB_ANT[27][13]  99
ARB_ANT[27][14]  100
ARB_ANT[27][15]  471
ARB_ANT[27][16]  472
ARB_ANT[28][1]  229
ARB_ANT[28][2]  230
ARB_ANT[28][3]  439
ARB_ANT[28][4]  440
ARB_ANT[28][5]  35
ARB_ANT[28][6]  36
ARB_ANT[28][7]  503
ARB_ANT[28][8]  504
ARB_ANT[28][9]  93
ARB_ANT[28][10]  94
ARB_ANT[28][11]  281
ARB_ANT[28][12]  282
ARB_ANT[28][13]  385
ARB_ANT[28][14]  386
ARB_ANT[28][15]  491
ARB_ANT[28][16]  492
ARB_ANT[29][1]  413
ARB_ANT[29][2]  414
ARB_ANT[29][3]  429
ARB_ANT[29][4]  430
ARB_ANT[29][5]  509
ARB_ANT[29][6]  510
ARB_ANT[29][7]  127
```

```
ARB_ANT[29][8]  128
ARB_ANT[29][9]  303
ARB_ANT[29][10] 304
ARB_ANT[29][11] 425
ARB_ANT[29][12] 426
ARB_ANT[29][13] 505
ARB_ANT[29][14] 506
ARB_ANT[29][15] 11
ARB_ANT[29][16] 12
ARB_ANT[30][1]  363
ARB_ANT[30][2]  364
ARB_ANT[30][3]  501
ARB_ANT[30][4]  502
ARB_ANT[30][5]  465
ARB_ANT[30][6]  466
ARB_ANT[30][7]  191
ARB_ANT[30][8]  192
ARB_ANT[30][9]  461
ARB_ANT[30][10] 462
ARB_ANT[30][11] 473
ARB_ANT[30][12] 474
ARB_ANT[30][13] 493
ARB_ANT[30][14] 494
ARB_ANT[30][15] 251
ARB_ANT[30][16] 252
ARB_ANT[31][1]  457
ARB_ANT[31][2]  458
ARB_ANT[31][3]  307
ARB_ANT[31][4]  308
ARB_ANT[31][5]  469
ARB_ANT[31][6]  470
ARB_ANT[31][7]  55
ARB_ANT[31][8]  56
ARB_ANT[31][9]  453
ARB_ANT[31][10] 454
ARB_ANT[31][11] 359
ARB_ANT[31][12] 360
ARB_ANT[31][13] 497
ARB_ANT[31][14] 498
ARB_ANT[31][15] 187
ARB_ANT[31][16] 188
ARB_ANT[32][1]  417
ARB_ANT[32][2]  418
ARB_ANT[32][3]  311
ARB_ANT[32][4]  312
ARB_ANT[32][5]  421
ARB_ANT[32][6]  422
ARB_ANT[32][7]  247
ARB_ANT[32][8]  248
ARB_ANT[32][9]  489
ARB_ANT[32][10] 490
ARB_ANT[32][11] 367
ARB_ANT[32][12] 368
ARB_ANT[32][13] 375
ARB_ANT[32][14] 376
ARB_ANT[32][15] 123
ARB_ANT[32][16] 124
```

```
# ----------------------------------------------
# --- ASP input/output labeling ----------------
# ----------------------------------------------
# ARB_IN[][] will be set to "UNK" ("unknown") for any boards/channels not identified
# ARB_OUT[][] will be set to "UNK" ("unknown") for any boards/channels not identified
# *** ARB_IN[][] goes here:
# Below is provided by JC 110309 by email:
#   (label = panel#_input#)
ARB_IN[1][1] 4_1
ARB_IN[1][2] 4_2
ARB_IN[1][3] 4_3
ARB_IN[1][4] 4_4
ARB_IN[1][5] 4_5
ARB_IN[1][6] 4_6
ARB_IN[1][7] 4_7
ARB_IN[1][8] 4_8
ARB_IN[1][9] 4_9
ARB_IN[1][10] 4_10
ARB_IN[1][11] 4_11
ARB_IN[1][12] 4_12
ARB_IN[1][13] 4_13
ARB_IN[1][14] 4_14
ARB_IN[1][15] 4_15
ARB_IN[1][16] 4_16
ARB_IN[2][1] 4_17
ARB_IN[2][2] 4_18
ARB_IN[2][3] 4_19
ARB_IN[2][4] 4_20
ARB_IN[2][5] 4_21
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ARB_IN[32][16] 1_128

# *** ARB_OUT[][] goes here:
# Below is provided by JC 110309 (by email):
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ARB_OUT[1][5] 4_2_1
ARB_OUT[1][6] 4_2_2
ARB_OUT[1][7] 4_2_3
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ARB_OUT[1][11] 4_3_3
ARB_OUT[1][12] 4_3_4
ARB_OUT[1][13] 4_4_1
ARB_OUT[1][14] 4_4_2
ARB_OUT[1][15] 4_4_3
ARB_OUT[1][16] 4_4_4
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ARB_OUT[2][2]  4_5_2
ARB_OUT[2][3]  4_5_3
ARB_OUT[2][4]  4_5_4
ARB_OUT[2][5]  4_6_1
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ARB_OUT[2][7]  4_6_3
ARB_OUT[2][8]  4_6_4
ARB_OUT[2][9]  4_7_1
ARB_OUT[2][10] 4_7_2
ARB_OUT[2][11] 4_7_3
ARB_OUT[2][12] 4_7_4
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ARB_OUT[2][16] 4_8_4
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ARB_OUT[3][7]  4_10_3
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ARB_OUT[4][11] 4_15_3
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ARB_OUT[5][2]  4_17_2
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```
ARB_OUT[5][3]  4_17_3
ARB_OUT[5][4]  4_17_4
ARB_OUT[5][5]  4_18_1
ARB_OUT[5][6]  4_18_2
ARB_OUT[5][7]  4_18_3
ARB_OUT[5][8]  4_18_4
ARB_OUT[5][9]  4_19_1
ARB_OUT[5][10] 4_19_2
ARB_OUT[5][11] 4_19_3
ARB_OUT[5][12] 4_19_4
ARB_OUT[5][13] 4_20_1
ARB_OUT[5][14] 4_20_2
ARB_OUT[5][15] 4_20_3
ARB_OUT[5][16] 4_20_4
ARB_OUT[6][1]  4_21_1
ARB_OUT[6][2]  4_21_2
ARB_OUT[6][3]  4_21_3
ARB_OUT[6][4]  4_21_4
ARB_OUT[6][5]  4_22_1
ARB_OUT[6][6]  4_22_2
ARB_OUT[6][7]  4_22_3
ARB_OUT[6][8]  4_22_4
ARB_OUT[6][9]  4_23_1
ARB_OUT[6][10] 4_23_2
ARB_OUT[6][11] 4_23_3
ARB_OUT[6][12] 4_23_4
ARB_OUT[6][13] 4_24_1
ARB_OUT[6][14] 4_24_2
ARB_OUT[6][15] 4_24_3
ARB_OUT[6][16] 4_24_4
ARB_OUT[7][1]  4_25_1
ARB_OUT[7][2]  4_25_2
ARB_OUT[7][3]  4_25_3
ARB_OUT[7][4]  4_25_4
ARB_OUT[7][5]  4_26_1
ARB_OUT[7][6]  4_26_2
ARB_OUT[7][7]  4_26_3
ARB_OUT[7][8]  4_26_4
ARB_OUT[7][9]  4_27_1
ARB_OUT[7][10] 4_27_2
ARB_OUT[7][11] 4_27_3
ARB_OUT[7][12] 4_27_4
ARB_OUT[7][13] 4_28_1
ARB_OUT[7][14] 4_28_2
ARB_OUT[7][15] 4_28_3
ARB_OUT[7][16] 4_28_4
ARB_OUT[8][1]  4_29_1
ARB_OUT[8][2]  4_29_2
ARB_OUT[8][3]  4_29_3
ARB_OUT[8][4]  4_29_4
ARB_OUT[8][5]  4_30_1
ARB_OUT[8][6]  4_30_2
ARB_OUT[8][7]  4_30_3
ARB_OUT[8][8]  4_30_4
ARB_OUT[8][9]  4_31_1
ARB_OUT[8][10] 4_31_2
ARB_OUT[8][11] 4_31_3
ARB_OUT[8][12] 4_31_4
ARB_OUT[8][13] 4_32_1
```

```
ARB_OUT[8][14] 4_32_2
ARB_OUT[8][15] 4_32_3
ARB_OUT[8][16] 4_32_4
ARB_OUT[9][1] 3_1_1
ARB_OUT[9][2] 3_1_2
ARB_OUT[9][3] 3_1_3
ARB_OUT[9][4] 3_1_4
ARB_OUT[9][5] 3_2_1
ARB_OUT[9][6] 3_2_2
ARB_OUT[9][7] 3_2_3
ARB_OUT[9][8] 3_2_4
ARB_OUT[9][9] 3_3_1
ARB_OUT[9][10] 3_3_2
ARB_OUT[9][11] 3_3_3
ARB_OUT[9][12] 3_3_4
ARB_OUT[9][13] 3_4_1
ARB_OUT[9][14] 3_4_2
ARB_OUT[9][15] 3_4_3
ARB_OUT[9][16] 3_4_4
ARB_OUT[10][1] 3_5_1
ARB_OUT[10][2] 3_5_2
ARB_OUT[10][3] 3_5_3
ARB_OUT[10][4] 3_5_4
ARB_OUT[10][5] 3_6_1
ARB_OUT[10][6] 3_6_2
ARB_OUT[10][7] 3_6_3
ARB_OUT[10][8] 3_6_4
ARB_OUT[10][9] 3_7_1
ARB_OUT[10][10] 3_7_2
ARB_OUT[10][11] 3_7_3
ARB_OUT[10][12] 3_7_4
ARB_OUT[10][13] 3_8_1
ARB_OUT[10][14] 3_8_2
ARB_OUT[10][15] 3_8_3
ARB_OUT[10][16] 3_8_4
ARB_OUT[11][1] 3_9_1
ARB_OUT[11][2] 3_9_2
ARB_OUT[11][3] 3_9_3
ARB_OUT[11][4] 3_9_4
ARB_OUT[11][5] 3_10_1
ARB_OUT[11][6] 3_10_2
ARB_OUT[11][7] 3_10_3
ARB_OUT[11][8] 3_10_4
ARB_OUT[11][9] 3_11_1
ARB_OUT[11][10] 3_11_2
ARB_OUT[11][11] 3_11_3
ARB_OUT[11][12] 3_11_4
ARB_OUT[11][13] 3_12_1
ARB_OUT[11][14] 3_12_2
ARB_OUT[11][15] 3_12_3
ARB_OUT[11][16] 3_12_4
ARB_OUT[12][1] 3_13_1
ARB_OUT[12][2] 3_13_2
ARB_OUT[12][3] 3_13_3
ARB_OUT[12][4] 3_13_4
ARB_OUT[12][5] 3_14_1
ARB_OUT[12][6] 3_14_2
ARB_OUT[12][7] 3_14_3
ARB_OUT[12][8] 3_14_4
```

```
ARB_OUT[12][9]  3_15_1
ARB_OUT[12][10] 3_15_2
ARB_OUT[12][11] 3_15_3
ARB_OUT[12][12] 3_15_4
ARB_OUT[12][13] 3_16_1
ARB_OUT[12][14] 3_16_2
ARB_OUT[12][15] 3_16_3
ARB_OUT[12][16] 3_16_4
ARB_OUT[13][1]  3_17_1
ARB_OUT[13][2]  3_17_2
ARB_OUT[13][3]  3_17_3
ARB_OUT[13][4]  3_17_4
ARB_OUT[13][5]  3_18_1
ARB_OUT[13][6]  3_18_2
ARB_OUT[13][7]  3_18_3
ARB_OUT[13][8]  3_18_4
ARB_OUT[13][9]  3_19_1
ARB_OUT[13][10] 3_19_2
ARB_OUT[13][11] 3_19_3
ARB_OUT[13][12] 3_19_4
ARB_OUT[13][13] 3_20_1
ARB_OUT[13][14] 3_20_2
ARB_OUT[13][15] 3_20_3
ARB_OUT[13][16] 3_20_4
ARB_OUT[14][1]  3_21_1
ARB_OUT[14][2]  3_21_2
ARB_OUT[14][3]  3_21_3
ARB_OUT[14][4]  3_21_4
ARB_OUT[14][5]  3_22_1
ARB_OUT[14][6]  3_22_2
ARB_OUT[14][7]  3_22_3
ARB_OUT[14][8]  3_22_4
ARB_OUT[14][9]  3_23_1
ARB_OUT[14][10] 3_23_2
ARB_OUT[14][11] 3_23_3
ARB_OUT[14][12] 3_23_4
ARB_OUT[14][13] 3_24_1
ARB_OUT[14][14] 3_24_2
ARB_OUT[14][15] 3_24_3
ARB_OUT[14][16] 3_24_4
ARB_OUT[15][1]  3_25_1
ARB_OUT[15][2]  3_25_2
ARB_OUT[15][3]  3_25_3
ARB_OUT[15][4]  3_25_4
ARB_OUT[15][5]  3_26_1
ARB_OUT[15][6]  3_26_2
ARB_OUT[15][7]  3_26_3
ARB_OUT[15][8]  3_26_4
ARB_OUT[15][9]  3_27_1
ARB_OUT[15][10] 3_27_2
ARB_OUT[15][11] 3_27_3
ARB_OUT[15][12] 3_27_4
ARB_OUT[15][13] 3_28_1
ARB_OUT[15][14] 3_28_2
ARB_OUT[15][15] 3_28_3
ARB_OUT[15][16] 3_28_4
ARB_OUT[16][1]  3_29_1
ARB_OUT[16][2]  3_29_2
ARB_OUT[16][3]  3_29_3
```

```
ARB_OUT[16][4] 3_29_4
ARB_OUT[16][5] 3_30_1
ARB_OUT[16][6] 3_30_2
ARB_OUT[16][7] 3_30_3
ARB_OUT[16][8] 3_30_4
ARB_OUT[16][9] 3_31_1
ARB_OUT[16][10] 3_31_2
ARB_OUT[16][11] 3_31_3
ARB_OUT[16][12] 3_31_4
ARB_OUT[16][13] 3_32_1
ARB_OUT[16][14] 3_32_2
ARB_OUT[16][15] 3_32_3
ARB_OUT[16][16] 3_32_4
ARB_OUT[17][1] 2_1_1
ARB_OUT[17][2] 2_1_2
ARB_OUT[17][3] 2_1_3
ARB_OUT[17][4] 2_1_4
ARB_OUT[17][5] 2_2_1
ARB_OUT[17][6] 2_2_2
ARB_OUT[17][7] 2_2_3
ARB_OUT[17][8] 2_2_4
ARB_OUT[17][9] 2_3_1
ARB_OUT[17][10] 2_3_2
ARB_OUT[17][11] 2_3_3
ARB_OUT[17][12] 2_3_4
ARB_OUT[17][13] 2_4_1
ARB_OUT[17][14] 2_4_2
ARB_OUT[17][15] 2_4_3
ARB_OUT[17][16] 2_4_4
ARB_OUT[18][1] 2_5_1
ARB_OUT[18][2] 2_5_2
ARB_OUT[18][3] 2_5_3
ARB_OUT[18][4] 2_5_4
ARB_OUT[18][5] 2_6_1
ARB_OUT[18][6] 2_6_2
ARB_OUT[18][7] 2_6_3
ARB_OUT[18][8] 2_6_4
ARB_OUT[18][9] 2_7_1
ARB_OUT[18][10] 2_7_2
ARB_OUT[18][11] 2_7_3
ARB_OUT[18][12] 2_7_4
ARB_OUT[18][13] 2_8_1
ARB_OUT[18][14] 2_8_2
ARB_OUT[18][15] 2_8_3
ARB_OUT[18][16] 2_8_4
ARB_OUT[19][1] 2_9_1
ARB_OUT[19][2] 2_9_2
ARB_OUT[19][3] 2_9_3
ARB_OUT[19][4] 2_9_4
ARB_OUT[19][5] 2_10_1
ARB_OUT[19][6] 2_10_2
ARB_OUT[19][7] 2_10_3
ARB_OUT[19][8] 2_10_4
ARB_OUT[19][9] 2_11_1
ARB_OUT[19][10] 2_11_2
ARB_OUT[19][11] 2_11_3
ARB_OUT[19][12] 2_11_4
ARB_OUT[19][13] 2_12_1
ARB_OUT[19][14] 2_12_2
```

```
ARB_OUT[19][15] 2_12_3
ARB_OUT[19][16] 2_12_4
ARB_OUT[20][1] 2_13_1
ARB_OUT[20][2] 2_13_2
ARB_OUT[20][3] 2_13_3
ARB_OUT[20][4] 2_13_4
ARB_OUT[20][5] 2_14_1
ARB_OUT[20][6] 2_14_2
ARB_OUT[20][7] 2_14_3
ARB_OUT[20][8] 2_14_4
ARB_OUT[20][9] 2_15_1
ARB_OUT[20][10] 2_15_2
ARB_OUT[20][11] 2_15_3
ARB_OUT[20][12] 2_15_4
ARB_OUT[20][13] 2_16_1
ARB_OUT[20][14] 2_16_2
ARB_OUT[20][15] 2_16_3
ARB_OUT[20][16] 2_16_4
ARB_OUT[21][1] 2_17_1
ARB_OUT[21][2] 2_17_2
ARB_OUT[21][3] 2_17_3
ARB_OUT[21][4] 2_17_4
ARB_OUT[21][5] 2_18_1
ARB_OUT[21][6] 2_18_2
ARB_OUT[21][7] 2_18_3
ARB_OUT[21][8] 2_18_4
ARB_OUT[21][9] 2_19_1
ARB_OUT[21][10] 2_19_2
ARB_OUT[21][11] 2_19_3
ARB_OUT[21][12] 2_19_4
ARB_OUT[21][13] 2_20_1
ARB_OUT[21][14] 2_20_2
ARB_OUT[21][15] 2_20_3
ARB_OUT[21][16] 2_20_4
ARB_OUT[22][1] 2_21_1
ARB_OUT[22][2] 2_21_2
ARB_OUT[22][3] 2_21_3
ARB_OUT[22][4] 2_21_4
ARB_OUT[22][5] 2_22_1
ARB_OUT[22][6] 2_22_2
ARB_OUT[22][7] 2_22_3
ARB_OUT[22][8] 2_22_4
ARB_OUT[22][9] 2_23_1
ARB_OUT[22][10] 2_23_2
ARB_OUT[22][11] 2_23_3
ARB_OUT[22][12] 2_23_4
ARB_OUT[22][13] 2_24_1
ARB_OUT[22][14] 2_24_2
ARB_OUT[22][15] 2_24_3
ARB_OUT[22][16] 2_24_4
ARB_OUT[23][1] 2_25_1
ARB_OUT[23][2] 2_25_2
ARB_OUT[23][3] 2_25_3
ARB_OUT[23][4] 2_25_4
ARB_OUT[23][5] 2_26_1
ARB_OUT[23][6] 2_26_2
ARB_OUT[23][7] 2_26_3
ARB_OUT[23][8] 2_26_4
ARB_OUT[23][9] 2_27_1
```

```
ARB_OUT[23][10]  2_27_2
ARB_OUT[23][11]  2_27_3
ARB_OUT[23][12]  2_27_4
ARB_OUT[23][13]  2_28_1
ARB_OUT[23][14]  2_28_2
ARB_OUT[23][15]  2_28_3
ARB_OUT[23][16]  2_28_4
ARB_OUT[24][1]  2_29_1
ARB_OUT[24][2]  2_29_2
ARB_OUT[24][3]  2_29_3
ARB_OUT[24][4]  2_29_4
ARB_OUT[24][5]  2_30_1
ARB_OUT[24][6]  2_30_2
ARB_OUT[24][7]  2_30_3
ARB_OUT[24][8]  2_30_4
ARB_OUT[24][9]  2_31_1
ARB_OUT[24][10]  2_31_2
ARB_OUT[24][11]  2_31_3
ARB_OUT[24][12]  2_31_4
ARB_OUT[24][13]  2_32_1
ARB_OUT[24][14]  2_32_2
ARB_OUT[24][15]  2_32_3
ARB_OUT[24][16]  2_32_4
ARB_OUT[25][1]  1_1_1
ARB_OUT[25][2]  1_1_2
ARB_OUT[25][3]  1_1_3
ARB_OUT[25][4]  1_1_4
ARB_OUT[25][5]  1_2_1
ARB_OUT[25][6]  1_2_2
ARB_OUT[25][7]  1_2_3
ARB_OUT[25][8]  1_2_4
ARB_OUT[25][9]  1_3_1
ARB_OUT[25][10]  1_3_2
ARB_OUT[25][11]  1_3_3
ARB_OUT[25][12]  1_3_4
ARB_OUT[25][13]  1_4_1
ARB_OUT[25][14]  1_4_2
ARB_OUT[25][15]  1_4_3
ARB_OUT[25][16]  1_4_4
ARB_OUT[26][1]  1_5_1
ARB_OUT[26][2]  1_5_2
ARB_OUT[26][3]  1_5_3
ARB_OUT[26][4]  1_5_4
ARB_OUT[26][5]  1_6_1
ARB_OUT[26][6]  1_6_2
ARB_OUT[26][7]  1_6_3
ARB_OUT[26][8]  1_6_4
ARB_OUT[26][9]  1_7_1
ARB_OUT[26][10]  1_7_2
ARB_OUT[26][11]  1_7_3
ARB_OUT[26][12]  1_7_4
ARB_OUT[26][13]  1_8_1
ARB_OUT[26][14]  1_8_2
ARB_OUT[26][15]  1_8_3
ARB_OUT[26][16]  1_8_4
ARB_OUT[27][1]  1_9_1
ARB_OUT[27][2]  1_9_2
ARB_OUT[27][3]  1_9_3
ARB_OUT[27][4]  1_9_4
```

```
ARB_OUT[27][5]  1_10_1
ARB_OUT[27][6]  1_10_2
ARB_OUT[27][7]  1_10_3
ARB_OUT[27][8]  1_10_4
ARB_OUT[27][9]  1_11_1
ARB_OUT[27][10] 1_11_2
ARB_OUT[27][11] 1_11_3
ARB_OUT[27][12] 1_11_4
ARB_OUT[27][13] 1_12_1
ARB_OUT[27][14] 1_12_2
ARB_OUT[27][15] 1_12_3
ARB_OUT[27][16] 1_12_4
ARB_OUT[28][1]  1_13_1
ARB_OUT[28][2]  1_13_2
ARB_OUT[28][3]  1_13_3
ARB_OUT[28][4]  1_13_4
ARB_OUT[28][5]  1_14_1
ARB_OUT[28][6]  1_14_2
ARB_OUT[28][7]  1_14_3
ARB_OUT[28][8]  1_14_4
ARB_OUT[28][9]  1_15_1
ARB_OUT[28][10] 1_15_2
ARB_OUT[28][11] 1_15_3
ARB_OUT[28][12] 1_15_4
ARB_OUT[28][13] 1_16_1
ARB_OUT[28][14] 1_16_2
ARB_OUT[28][15] 1_16_3
ARB_OUT[28][16] 1_16_4
ARB_OUT[29][1]  1_17_1
ARB_OUT[29][2]  1_17_2
ARB_OUT[29][3]  1_17_3
ARB_OUT[29][4]  1_17_4
ARB_OUT[29][5]  1_18_1
ARB_OUT[29][6]  1_18_2
ARB_OUT[29][7]  1_18_3
ARB_OUT[29][8]  1_18_4
ARB_OUT[29][9]  1_19_1
ARB_OUT[29][10] 1_19_2
ARB_OUT[29][11] 1_19_3
ARB_OUT[29][12] 1_19_4
ARB_OUT[29][13] 1_20_1
ARB_OUT[29][14] 1_20_2
ARB_OUT[29][15] 1_20_3
ARB_OUT[29][16] 1_20_4
ARB_OUT[30][1]  1_21_1
ARB_OUT[30][2]  1_21_2
ARB_OUT[30][3]  1_21_3
ARB_OUT[30][4]  1_21_4
ARB_OUT[30][5]  1_22_1
ARB_OUT[30][6]  1_22_2
ARB_OUT[30][7]  1_22_3
ARB_OUT[30][8]  1_22_4
ARB_OUT[30][9]  1_23_1
ARB_OUT[30][10] 1_23_2
ARB_OUT[30][11] 1_23_3
ARB_OUT[30][12] 1_23_4
ARB_OUT[30][13] 1_24_1
ARB_OUT[30][14] 1_24_2
ARB_OUT[30][15] 1_24_3
```

```
ARB_OUT[30][16] 1_24_4
ARB_OUT[31][1] 1_25_1
ARB_OUT[31][2] 1_25_2
ARB_OUT[31][3] 1_25_3
ARB_OUT[31][4] 1_25_4
ARB_OUT[31][5] 1_26_1
ARB_OUT[31][6] 1_26_2
ARB_OUT[31][7] 1_26_3
ARB_OUT[31][8] 1_26_4
ARB_OUT[31][9] 1_27_1
ARB_OUT[31][10] 1_27_2
ARB_OUT[31][11] 1_27_3
ARB_OUT[31][12] 1_27_4
ARB_OUT[31][13] 1_28_1
ARB_OUT[31][14] 1_28_2
ARB_OUT[31][15] 1_28_3
ARB_OUT[31][16] 1_28_4
ARB_OUT[32][1] 1_29_1
ARB_OUT[32][2] 1_29_2
ARB_OUT[32][3] 1_29_3
ARB_OUT[32][4] 1_29_4
ARB_OUT[32][5] 1_30_1
ARB_OUT[32][6] 1_30_2
ARB_OUT[32][7] 1_30_3
ARB_OUT[32][8] 1_30_4
ARB_OUT[32][9] 1_31_1
ARB_OUT[32][10] 1_31_2
ARB_OUT[32][11] 1_31_3
ARB_OUT[32][12] 1_31_4
ARB_OUT[32][13] 1_32_1
ARB_OUT[32][14] 1_32_2
ARB_OUT[32][15] 1_32_3
ARB_OUT[32][16] 1_32_4


# ----------------------
# --- DP1 -------------
# ----------------------
# Maximum number of DP1 boards:
N_DP1 26
# Maximum number or channels per DP1 board
N_DP1CH 20

# DP1_ID[] will be set to "UNK" (no identification) for any DP1 boards not identified
# *** DP1_ID[dp1#] goes here:

# DP1_SLOT[] will be set to 0 (not known/not applicable) for any DP1 boards not identified
# *** DP1_SLOT[dp1#] goes here:

# DP1_DESI[] be set to 1 for any DP1 boards not identified
# *** DP1_DESI[dp1#] goes here:

# Status codes 0-3 summarized defined at end of this document (and in MCS0031)
# This will be set to 3 ("OK") or any DP1 board-channels not identified
# *** DP1_STAT[dp1#][ch#] goes here:

# DP1_INR[][] will be set to "UNK" ("unknown") for any boards/channels not identified
# *** DP1_INR[dp1#][ch#] goes here:
# Here's where the rack labels go... JC 110309: Unknown at this time
```

```
# DP1_INC[][] will be set to "UNK" ("unknown") for any boards/channels not identified
# *** DP1_INC[dp1#][ch#] goes here:
# Here's where the chassis labels go... JC 110309: Unknown at this time


# ---------------------------------------------
# --- Antenna # -> DP1 board channel mapping ---
# ---------------------------------------------
# Format (example) "DP1_ANT[2][3] 4" means antenna 4 is connected to DP1 Board 2, channel 3.
# DP1_ANT[1][1] will be set to 1, DP1_ANT[1][2] will be set to 2, etc., if not indicated otherwise
#   ... so best is to note only the exceptions below.
# DP1_ANT[][] will be set to 0 (no connection, or only connected at outout) for any boards/channels not identi
# *** DP1_ANT[dp1#][ch#] goes here:
# Provided by JC 110309 by email:
DP1_ANT[1][1] 285
DP1_ANT[1][2] 286
DP1_ANT[1][3] 389
DP1_ANT[1][4] 390
DP1_ANT[1][5] 495
DP1_ANT[1][6] 496
DP1_ANT[1][7] 95
DP1_ANT[1][8] 96
DP1_ANT[1][9] 221
DP1_ANT[1][10] 222
DP1_ANT[1][11] 337
DP1_ANT[1][12] 338
DP1_ANT[1][13] 499
DP1_ANT[1][14] 500
DP1_ANT[1][15] 227
DP1_ANT[1][16] 228
DP1_ANT[1][17] 341
DP1_ANT[1][18] 342
DP1_ANT[1][19] 333
DP1_ANT[1][20] 334
DP1_ANT[2][1] 105
DP1_ANT[2][2] 106
DP1_ANT[2][3] 475
DP1_ANT[2][4] 476
DP1_ANT[2][5] 225
DP1_ANT[2][6] 226
DP1_ANT[2][7] 431
DP1_ANT[2][8] 432
DP1_ANT[2][9] 171
DP1_ANT[2][10] 172
DP1_ANT[2][11] 467
DP1_ANT[2][12] 468
DP1_ANT[2][13] 157
DP1_ANT[2][14] 158
DP1_ANT[2][15] 277
DP1_ANT[2][16] 278
DP1_ANT[2][17] 103
DP1_ANT[2][18] 104
DP1_ANT[2][19] 463
DP1_ANT[2][20] 464
DP1_ANT[3][1] 233
DP1_ANT[3][2] 234
DP1_ANT[3][3] 435
DP1_ANT[3][4] 436
DP1_ANT[3][5] 99
DP1_ANT[3][6] 100
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DP1_ANT[3][7]  471
DP1_ANT[3][8]  472
DP1_ANT[3][9]  229
DP1_ANT[3][10] 230
DP1_ANT[3][11] 439
DP1_ANT[3][12] 440
DP1_ANT[3][13] 35
DP1_ANT[3][14] 36
DP1_ANT[3][15] 503
DP1_ANT[3][16] 504
DP1_ANT[3][17] 93
DP1_ANT[3][18] 94
DP1_ANT[3][19] 281
DP1_ANT[3][20] 282
DP1_ANT[4][1]  385
DP1_ANT[4][2]  386
DP1_ANT[4][3]  491
DP1_ANT[4][4]  492
DP1_ANT[4][5]  413
DP1_ANT[4][6]  414
DP1_ANT[4][7]  429
DP1_ANT[4][8]  430
DP1_ANT[4][9]  509
DP1_ANT[4][10] 510
DP1_ANT[4][11] 127
DP1_ANT[4][12] 128
DP1_ANT[4][13] 303
DP1_ANT[4][14] 304
DP1_ANT[4][15] 425
DP1_ANT[4][16] 426
DP1_ANT[4][17] 505
DP1_ANT[4][18] 506
DP1_ANT[4][19] 11
DP1_ANT[4][20] 12
DP1_ANT[5][1]  363
DP1_ANT[5][2]  364
DP1_ANT[5][3]  501
DP1_ANT[5][4]  502
DP1_ANT[5][5]  465
DP1_ANT[5][6]  466
DP1_ANT[5][7]  191
DP1_ANT[5][8]  192
DP1_ANT[5][9]  461
DP1_ANT[5][10] 462
DP1_ANT[5][11] 473
DP1_ANT[5][12] 474
DP1_ANT[5][13] 493
DP1_ANT[5][14] 494
DP1_ANT[5][15] 251
DP1_ANT[5][16] 252
DP1_ANT[5][17] 457
DP1_ANT[5][18] 458
DP1_ANT[5][19] 307
DP1_ANT[5][20] 308
DP1_ANT[6][1]  469
DP1_ANT[6][2]  470
DP1_ANT[6][3]  55
DP1_ANT[6][4]  56
DP1_ANT[6][5]  453
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DP1_ANT[6][6]   454
DP1_ANT[6][7]   359
DP1_ANT[6][8]   360
DP1_ANT[6][9]   497
DP1_ANT[6][10]  498
DP1_ANT[6][11]  187
DP1_ANT[6][12]  188
DP1_ANT[6][13]  417
DP1_ANT[6][14]  418
DP1_ANT[6][15]  311
DP1_ANT[6][16]  312
DP1_ANT[6][17]  421
DP1_ANT[6][18]  422
DP1_ANT[6][19]  247
DP1_ANT[6][20]  248
DP1_ANT[7][1]   23
DP1_ANT[7][2]   24
DP1_ANT[7][3]   83
DP1_ANT[7][4]   84
DP1_ANT[7][5]   145
DP1_ANT[7][6]   146
DP1_ANT[7][7]   143
DP1_ANT[7][8]   144
DP1_ANT[7][9]   21
DP1_ANT[7][10]  22
DP1_ANT[7][11]  87
DP1_ANT[7][12]  88
DP1_ANT[7][13]  273
DP1_ANT[7][14]  274
DP1_ANT[7][15]  139
DP1_ANT[7][16]  140
DP1_ANT[7][17]  79
DP1_ANT[7][18]  80
DP1_ANT[7][19]  167
DP1_ANT[7][20]  168
DP1_ANT[8][1]   329
DP1_ANT[8][2]   330
DP1_ANT[8][3]   67
DP1_ANT[8][4]   68
DP1_ANT[8][5]   153
DP1_ANT[8][6]   154
DP1_ANT[8][7]   231
DP1_ANT[8][8]   232
DP1_ANT[8][9]   269
DP1_ANT[8][10]  270
DP1_ANT[8][11]  75
DP1_ANT[8][12]  76
DP1_ANT[8][13]  81
DP1_ANT[8][14]  82
DP1_ANT[8][15]  217
DP1_ANT[8][16]  218
DP1_ANT[8][17]  265
DP1_ANT[8][18]  266
DP1_ANT[8][19]  71
DP1_ANT[8][20]  72
DP1_ANT[9][1]   287
DP1_ANT[9][2]   288
DP1_ANT[9][3]   149
DP1_ANT[9][4]   150
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DP1_ANT[9][5] 213
DP1_ANT[9][6] 214
DP1_ANT[9][7] 17
DP1_ANT[9][8] 18
DP1_ANT[9][9] 163
DP1_ANT[9][10] 164
DP1_ANT[9][11] 77
DP1_ANT[9][12] 78
DP1_ANT[9][13] 155
DP1_ANT[9][14] 156
DP1_ANT[9][15] 209
DP1_ANT[9][16] 210
DP1_ANT[9][17] 291
DP1_ANT[9][18] 292
DP1_ANT[9][19] 85
DP1_ANT[9][20] 86
DP1_ANT[10][1] 25
DP1_ANT[10][2] 26
DP1_ANT[10][3] 325
DP1_ANT[10][4] 326
DP1_ANT[10][5] 131
DP1_ANT[10][6] 132
DP1_ANT[10][7] 115
DP1_ANT[10][8] 116
DP1_ANT[10][9] 481
DP1_ANT[10][10] 482
DP1_ANT[10][11] 433
DP1_ANT[10][12] 434
DP1_ANT[10][13] 195
DP1_ANT[10][14] 196
DP1_ANT[10][15] 243
DP1_ANT[10][16] 244
DP1_ANT[10][17] 43
DP1_ANT[10][18] 44
DP1_ANT[10][19] 477
DP1_ANT[10][20] 478
DP1_ANT[11][1] 259
DP1_ANT[11][2] 260
DP1_ANT[11][3] 1
DP1_ANT[11][4] 2
DP1_ANT[11][5] 47
DP1_ANT[11][6] 48
DP1_ANT[11][7] 441
DP1_ANT[11][8] 442
DP1_ANT[11][9] 371
DP1_ANT[11][10] 372
DP1_ANT[11][11] 5
DP1_ANT[11][12] 6
DP1_ANT[11][13] 119
DP1_ANT[11][14] 120
DP1_ANT[11][15] 437
DP1_ANT[11][16] 438
DP1_ANT[11][17] 315
DP1_ANT[11][18] 316
DP1_ANT[11][19] 3
DP1_ANT[11][20] 4
DP1_ANT[12][1] 179
DP1_ANT[12][2] 180
DP1_ANT[12][3] 391
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DP1_ANT[12][4] 392
DP1_ANT[12][5] 255
DP1_ANT[12][6] 256
DP1_ANT[12][7] 41
DP1_ANT[12][8] 42
DP1_ANT[12][9] 39
DP1_ANT[12][10] 40
DP1_ANT[12][11] 395
DP1_ANT[12][12] 396
DP1_ANT[12][13] 319
DP1_ANT[12][14] 320
DP1_ANT[12][15] 113
DP1_ANT[12][16] 114
DP1_ANT[12][17] 111
DP1_ANT[12][18] 112
DP1_ANT[12][19] 485
DP1_ANT[12][20] 486
DP1_ANT[13][1] 69
DP1_ANT[13][2] 70
DP1_ANT[13][3] 215
DP1_ANT[13][4] 216
DP1_ANT[13][5] 197
DP1_ANT[13][6] 198
DP1_ANT[13][7] 193
DP1_ANT[13][8] 194
DP1_ANT[13][9] 15
DP1_ANT[13][10] 16
DP1_ANT[13][11] 335
DP1_ANT[13][12] 336
DP1_ANT[13][13] 257
DP1_ANT[13][14] 258
DP1_ANT[13][15] 309
DP1_ANT[13][16] 310
DP1_ANT[13][17] 63
DP1_ANT[13][18] 64
DP1_ANT[13][19] 137
DP1_ANT[13][20] 138
DP1_ANT[14][1] 201
DP1_ANT[14][2] 202
DP1_ANT[14][3] 369
DP1_ANT[14][4] 370
DP1_ANT[14][5] 283
DP1_ANT[14][6] 284
DP1_ANT[14][7] 13
DP1_ANT[14][8] 14
DP1_ANT[14][9] 321
DP1_ANT[14][10] 322
DP1_ANT[14][11] 317
DP1_ANT[14][12] 318
DP1_ANT[14][13] 339
DP1_ANT[14][14] 340
DP1_ANT[14][15] 65
DP1_ANT[14][16] 66
DP1_ANT[14][17] 261
DP1_ANT[14][18] 262
DP1_ANT[14][19] 125
DP1_ANT[14][20] 126
DP1_ANT[15][1] 147
DP1_ANT[15][2] 148
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DP1_ANT[15][3] 73
DP1_ANT[15][4] 74
DP1_ANT[15][5] 151
DP1_ANT[15][6] 152
DP1_ANT[15][7] 133
DP1_ANT[15][8] 134
DP1_ANT[15][9] 19
DP1_ANT[15][10] 20
DP1_ANT[15][11] 205
DP1_ANT[15][12] 206
DP1_ANT[15][13] 219
DP1_ANT[15][14] 220
DP1_ANT[15][15] 129
DP1_ANT[15][16] 130
DP1_ANT[15][17] 211
DP1_ANT[15][18] 212
DP1_ANT[15][19] 141
DP1_ANT[15][20] 142
DP1_ANT[16][1] 279
DP1_ANT[16][2] 280
DP1_ANT[16][3] 62
DP1_ANT[16][4] 61
DP1_ANT[16][5] 207
DP1_ANT[16][6] 208
DP1_ANT[16][7] 57
DP1_ANT[16][8] 58
DP1_ANT[16][9] 189
DP1_ANT[16][10] 190
DP1_ANT[16][11] 353
DP1_ANT[16][12] 354
DP1_ANT[16][13] 323
DP1_ANT[16][14] 324
DP1_ANT[16][15] 9
DP1_ANT[16][16] 10
DP1_ANT[16][17] 117
DP1_ANT[16][18] 118
DP1_ANT[16][19] 293
DP1_ANT[16][20] 294
DP1_ANT[17][1] 379
DP1_ANT[17][2] 380
DP1_ANT[17][3] 331
DP1_ANT[17][4] 332
DP1_ANT[17][5] 121
DP1_ANT[17][6] 122
DP1_ANT[17][7] 401
DP1_ANT[17][8] 402
DP1_ANT[17][9] 267
DP1_ANT[17][10] 268
DP1_ANT[17][11] 275
DP1_ANT[17][12] 276
DP1_ANT[17][13] 185
DP1_ANT[17][14] 186
DP1_ANT[17][15] 289
DP1_ANT[17][16] 290
DP1_ANT[17][17] 327
DP1_ANT[17][18] 328
DP1_ANT[17][19] 199
DP1_ANT[17][20] 200
DP1_ANT[18][1] 51
```

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DP1_ANT[18][2]  52
DP1_ANT[18][3]  109
DP1_ANT[18][4]  110
DP1_ANT[18][5]  135
DP1_ANT[18][6]  136
DP1_ANT[18][7]  263
DP1_ANT[18][8]  264
DP1_ANT[18][9]  49
DP1_ANT[18][10]  50
DP1_ANT[18][11]  177
DP1_ANT[18][12]  178
DP1_ANT[18][13]  383
DP1_ANT[18][14]  384
DP1_ANT[18][15]  203
DP1_ANT[18][16]  204
DP1_ANT[18][17]  7
DP1_ANT[18][18]  8
DP1_ANT[18][19]  297
DP1_ANT[18][20]  298
DP1_ANT[19][1]  366
DP1_ANT[19][2]  365
DP1_ANT[19][3]  399
DP1_ANT[19][4]  400
DP1_ANT[19][5]  377
DP1_ANT[19][6]  378
DP1_ANT[19][7]  235
DP1_ANT[19][8]  236
DP1_ANT[19][9]  412
DP1_ANT[19][10]  411
DP1_ANT[19][11]  355
DP1_ANT[19][12]  356
DP1_ANT[19][13]  459
DP1_ANT[19][14]  460
DP1_ANT[19][15]  92
DP1_ANT[19][16]  91
DP1_ANT[19][17]  362
DP1_ANT[19][18]  361
DP1_ANT[19][19]  407
DP1_ANT[19][20]  408
DP1_ANT[20][1]  374
DP1_ANT[20][2]  373
DP1_ANT[20][3]  224
DP1_ANT[20][4]  223
DP1_ANT[20][5]  246
DP1_ANT[20][6]  245
DP1_ANT[20][7]  343
DP1_ANT[20][8]  344
DP1_ANT[20][9]  427
DP1_ANT[20][10]  428
DP1_ANT[20][11]  295
DP1_ANT[20][12]  296
DP1_ANT[20][13]  415
DP1_ANT[20][14]  416
DP1_ANT[20][15]  351
DP1_ANT[20][16]  352
DP1_ANT[20][17]  423
DP1_ANT[20][18]  424
DP1_ANT[20][19]  27
DP1_ANT[20][20]  28
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DP1_ANT[21][1] 250
DP1_ANT[21][2] 249
DP1_ANT[21][3] 449
DP1_ANT[21][4] 450
DP1_ANT[21][5] 419
DP1_ANT[21][6] 420
DP1_ANT[21][7] 159
DP1_ANT[21][8] 160
DP1_ANT[21][9] 313
DP1_ANT[21][10] 314
DP1_ANT[21][11] 347
DP1_ANT[21][12] 348
DP1_ANT[21][13] 455
DP1_ANT[21][14] 456
DP1_ANT[21][15] 29
DP1_ANT[21][16] 30
DP1_ANT[21][17] 253
DP1_ANT[21][18] 254
DP1_ANT[21][19] 306
DP1_ANT[21][20] 305
DP1_ANT[22][1] 403
DP1_ANT[22][2] 404
DP1_ANT[22][3] 381
DP1_ANT[22][4] 382
DP1_ANT[22][5] 101
DP1_ANT[22][6] 102
DP1_ANT[22][7] 507
DP1_ANT[22][8] 508
DP1_ANT[22][9] 175
DP1_ANT[22][10] 176
DP1_ANT[22][11] 165
DP1_ANT[22][12] 166
DP1_ANT[22][13] 451
DP1_ANT[22][14] 452
DP1_ANT[22][15] 479
DP1_ANT[22][16] 480
DP1_ANT[22][17] 107
DP1_ANT[22][18] 108
DP1_ANT[22][19] 161
DP1_ANT[22][20] 162
DP1_ANT[23][1] 357
DP1_ANT[23][2] 358
DP1_ANT[23][3] 447
DP1_ANT[23][4] 448
DP1_ANT[23][5] 239
DP1_ANT[23][6] 240
DP1_ANT[23][7] 89
DP1_ANT[23][8] 90
DP1_ANT[23][9] 37
DP1_ANT[23][10] 38
DP1_ANT[23][11] 511
DP1_ANT[23][12] 512
DP1_ANT[23][13] 487
DP1_ANT[23][14] 488
DP1_ANT[23][15] 97
DP1_ANT[23][16] 98
DP1_ANT[23][17] 349
DP1_ANT[23][18] 350
DP1_ANT[23][19] 237
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DP1_ANT[23][20] 238
DP1_ANT[24][1] 483
DP1_ANT[24][2] 484
DP1_ANT[24][3] 169
DP1_ANT[24][4] 170
DP1_ANT[24][5] 409
DP1_ANT[24][6] 410
DP1_ANT[24][7] 173
DP1_ANT[24][8] 174
DP1_ANT[24][9] 393
DP1_ANT[24][10] 394
DP1_ANT[24][11] 33
DP1_ANT[24][12] 34
DP1_ANT[24][13] 405
DP1_ANT[24][14] 406
DP1_ANT[24][15] 241
DP1_ANT[24][16] 242
DP1_ANT[24][17] 397
DP1_ANT[24][18] 398
DP1_ANT[24][19] 31
DP1_ANT[24][20] 32
DP1_ANT[25][1] 489
DP1_ANT[25][2] 490
DP1_ANT[25][3] 367
DP1_ANT[25][4] 368
DP1_ANT[25][5] 375
DP1_ANT[25][6] 376
DP1_ANT[25][7] 123
DP1_ANT[25][8] 124
DP1_ANT[25][9] 59
DP1_ANT[25][10] 60
DP1_ANT[25][11] 45
DP1_ANT[25][12] 46
DP1_ANT[25][13] 183
DP1_ANT[25][14] 184
DP1_ANT[25][15] 445
DP1_ANT[25][16] 446
DP1_ANT[25][17] 387
DP1_ANT[25][18] 388
DP1_ANT[25][19] 271
DP1_ANT[25][20] 272
DP1_ANT[26][1] 53
DP1_ANT[26][2] 54
DP1_ANT[26][3] 181
DP1_ANT[26][4] 182
DP1_ANT[26][5] 345
DP1_ANT[26][6] 346
DP1_ANT[26][7] 301
DP1_ANT[26][8] 302
DP1_ANT[26][9] 443
DP1_ANT[26][10] 444
DP1_ANT[26][11] 299
DP1_ANT[26][12] 300
DP1_ANT[26][13] 513
DP1_ANT[26][14] 514
DP1_ANT[26][15] 515
DP1_ANT[26][16] 516
# below are commented out because N_STD=258; avoids error
# DP1_ANT[26][17] 517
```

```
# DP1_ANT[26][18] 518
# DP1_ANT[26][19] 519
# DP1_ANT[26][20] 520


# ---------------------
# --- DP2 -------------
# ---------------------
# Maximum number of DP2 boards:
N_DP2 2

# DP2_ID[] will be set to "UNK" (no identification) for any DP2 boards not identified
# *** DP2_ID[dp2#] goes here:

# DP2_SLOT[] will be set to 0 (not known/not applicable) for any DP2 boards not identified
# *** DP2_SLOT[dp2#] goes here:

# Status codes 0-3 summarized defined at end of this document (and in MCS0031)
# This will be set to 3 ("OK") or any DP2 board-channels not identified
# *** DP2_STAT[dp2#] goes here:

# DP2_DESI[] be set to 1 for any DP2 boards not identified
# *** DP2_DESI[dp2#] goes here:

# ---------------------
# --- DR --------------
# ---------------------
# Maximum number of DR subsystems:
N_DR 5

# Status codes 0-3 summarized defined at end of this document (and in MCS0031)
# This will be set to 3 ("OK") or any DRs not identified
# *** DR_STAT[dr#] goes here:
DR_STAT[1] 3
DR_STAT[2] 3
DR_STAT[3] 3
DR_STAT[4] 0
DR_STAT[5] 3

# DR_ID[] will be set to "UNK" (no identification) for any DRs not identified
# *** DR_ID[dr#] goes here:
DR_ID[1] DR1
DR_ID[2] DR2
DR_ID[3] DR3
DR_ID[4] DR4
DR_ID[5] DR5

# DR_PC[] will be set to "UNK" (not known/not applicable) for any DRs not identified
# *** DR_PC[dr#] goes here:
DR_PC[1] UNK
DR_PC[2] UNK
DR_PC[3] UNK
DR_PC[4] T1500
DR_PC[5] UNK

# 1-4 are the beam outputs, 5 is TBW/TBN
# DR_DP[] will be set to 0 (no connection) for any DPs not identified
# *** DR_DP[] goes here:
DR_DP[1] 1
DR_DP[2] 2
```

```
DR_DP[3] 3
DR_DP[4] 4
DR_DP[5] 5


# ---------------------
# --- Power ------------
# ---------------------
N_PWR_RACK 6

# N_PWR_PORT[] will be set to 0 (no ports) for any rack power supplies not identified
# *** _N_PWR_PORT[rack#] goes here:
# provided by JC 110309 (email):
N_PWR_PORT[1] 8
N_PWR_PORT[2] 8
N_PWR_PORT[3] 8
N_PWR_PORT[4] 8
N_PWR_PORT[5] 8
N_PWR_PORT[6] 8


# Format (example) "PWR_SS[2][3] SHL" means power from Rack 2 Port 3 goes to SHL.
# Valid values are SHL, ASP, DP , MCS, DR1, DR2, DR3, DR4, and DR5.
# PWR_SS[][] will be set to "UNK" (unknown) for any power output ports not identified.
# Format (example) "PWR_NAME[2][3] MCS", assuming "PWR_SS[2][3] SHL", means power from Rack 2 Port 3 goes to S
#   For PWR SS[m][p] = SHL, valid values are MCS, others TBD
#   For PWR SS[m][p] = ASP, valid values are MCS, FEE, ARX, FAN
#   For PWR SS[m][p] = DP , valid values are MCS, others TBD
#   For PWR SS[m][p] = MCS, valid values are SCH, EXE, TP, CH, and GW.
#   For PWR SS[m][p] = DR1, DR2, DR3, DR4, and DR5; valid values are PC, DS1 (DRSU 1), and DS2 (DRSU 2)
# PWR_SS[][] will be set to "UNK" (unknown) for any power output ports not identified.
# *** PWR_SS[rack#][port#] goes here:
# *** PWR_NAME[rack#][port#] goes here:
# Below is per JC 110309 email:
# --- Rack 1 is ASP:
PWR_SS[1][1] ASP
PWR_NAME[1][1] FEE
PWR_SS[1][2] ASP
PWR_NAME[1][2] ARX
PWR_SS[1][3] ASP
PWR_NAME[1][3] FAN
PWR_SS[1][4] UNK
PWR_NAME[1][4] UNK
PWR_SS[1][5] UNK
PWR_NAME[1][5] UNK
PWR_SS[1][6] UNK
PWR_NAME[1][6] UNK
PWR_SS[1][7] ASP
PWR_NAME[1][7] MCS
# port 8 not used
# DPC1/2: chassis 1 & 2, SYN: synthesizer module, SWI: TBN/W 1-10 GbE switch
# --- Rack 2 is DP:
PWR_SS[2][1] DP_
PWR_NAME[2][1] DC1
PWR_SS[2][2] DP_
PWR_NAME[2][2] DC2
PWR_SS[2][3] DP_
PWR_NAME[2][3] FAN
PWR_SS[2][4] DP_
PWR_NAME[2][4] MCS
# port 5..8 not used
```

```
# .. Rack 3 is also DP:
PWR_SS[3][1] DP_
PWR_NAME[3][1] SYN
PWR_SS[3][2] DP_
PWR_NAME[3][2] SWI
# port 3-8 not used
# --- Rack 4 is MCS
PWR_SS[4][1] MCS
PWR_NAME[4][1] SCH
PWR_SS[4][2] MCS
PWR_NAME[4][2] EXE
PWR_SS[4][3] MCS
PWR_NAME[4][3] TP
PWR_SS[4][4] MCS
PWR_NAME[4][4] CH
PWR_SS[4][5] MCS
PWR_NAME[4][5] GW
PWR_SS[4][6] DR1
PWR_NAME[4][6] PC
PWR_SS[4][7] DR1
PWR_NAME[4][7] DS1
# port 8 not used
# ---Rack 5 is also MCS
PWR_SS[5][1] DR2
PWR_NAME[5][1] PC
PWR_SS[5][2] DR2
PWR_NAME[5][2] DS1
PWR_SS[5][3] DR3
PWR_NAME[5][3] PC
PWR_SS[5][4] DR3
PWR_NAME[5][4] DS1
PWR_SS[5][5] DR4
PWR_NAME[5][5] PC
PWR_SS[5][6] DR4
PWR_NAME[5][6] DS1
PWR_SS[5][7] DR5
PWR_NAME[5][7] PC
PWR_SS[5][8] DR5
PWR_NAME[5][8] DS1


# ----------------------
# --- MCS --------------
# ----------------------
# MCS_CRA=0 means station settings (above) used, requested settings ignored
# MCS_CRA=1 means station settings (above) are default, SESSION_CRA protocol is honored
MCS_CRA 1

# -----------------------
# --- Station Settings ---
# -----------------------

# Integer # of seconds between recordings of MIB of indicated subsystem
MRP_ASP 0
MRP_DP_ 0
MRP_DR1 0
MRP_DR2 0
MRP_DR3 0
MRP_DR4 0
MRP_DR5 0
```

```
MRP_SHL 0
MRP_MCS 0


# Integer # of seconds between updates of MIB of indicated subsystem
MUP_ASP 0
MUP_DP_ 0
MUP_DR1 0
MUP_DR2 0
MUP_DR3 0
MUP_DR4 0
MUP_DR5 0
MUP_SHL 0
MUP_MCS 0


# Power applied to indicated FEE in indicated STD?
FEE 1 # sets it for all

# ARX settings for indicated STD
ASP_FLT 1  # 0=split, 1=full, 2=reduced, 3=off
ASP_AT1 10 # per JC email 110405
ASP_AT2 10 # per JC email 110405
ASP_ATS 15 # per JC email 110405
TBN_GAIN 20 # per JC email 110405
DRX_GAIN 9  # per JC email 110405
```

B   Document History

- Version 5 (April 13, 2011):

  - For DP, `PWR_NAME` values now include `DC1`, `DC2`, `FAN`, `SYN`, and `SWI`.
  - "`settings`" structure added to the station dynamic MIB.
  - Added an example of a SSMIF (text) file.
  - Added keywords `MRP_sss`, `MUP_sss`, `FEE[]`, `ASP_FLT[]`, `ASP_AT1[]`, `ASP_AT2[]`, `ASP_ATS[]`, `TBN_GAIN[]`, `DRX_GAIN[]` to SSMIF.

- Version 4 (March 29, 2011):

  - Requirements imposed on ordering of appearance of keywords in SSMIF.
  - "Format of the Station Dynamic MIB" section is completely revised. The SDM is now a simple C structure as opposed to a dbm file.
  - Various small revisions and clarifications.

- Version 3 (Feb 27, 2011):

  - `GEO_EL` field added.
  - `RPD_GAIN[m]` deprecated; replaced by `RPD_A0[m]`, `RPD_A1[m]`, `RPD_FREF[m]`, and `RPD_STR[m]`.
  - For many indexed parameters, added ability to define the default value. The default value is indicated using the parameter without an index or square brackets.
  - `MCS_CRA` field added.

- Version 1 (June 16, 2010): First version.

References

[1] S. Ellingson, "LWA Station-Level Observing Procedure and Associated Metadata," Ver. 4, LWA Engineering Memo MCS0030, March 29, 2011.

[2] `http://linux.die.net/man/2/gettimeofday`