SDR GATEWAY MAINTENANCE INTERFACE PANEL

USER'S MANUAL

(version 2.0)

www.dbiaero.com

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Maintenance Panel Overview:

The SDR Gateway Maintenance Interface Panel (MIP) is a custom made, rack mounted unit with the ability to break out every interface available on the *SD Avionics* TN-2000 (SDR Gateway) ALRU. It is also backwards compatible with the TN-1000 (Simphonē) ALRU. The unit fits into a standard 19" rack with a 3RU height. There is built-in ARINC 429 navigation injection with switching capabilities to interface either ports 1 or 1&2 simultaneously. For purposes of this manual, SDR Gateway (TN-2000) will be mentioned for all options.

User's Manual Applicability:

Unit Hardware Version	Unit Software Version
Version 3	Version 2.0

Equipment Part Numbers:

Description	Part Number
SDR Gateway MIP	DB10-1330-01

Physical Specifications:

SDR Gateway Maintenance Interface Panel Physical Specifications	
Part Number:	DB10-1330-01
Dimensions:	19" wide x 5.30" tall x 9.50" deep
Power:	120-240VAC (50-60 HZ)

Interfaces and Power:

The SDR Gateway Maintenance Interface Panel communicates with the TN1000/TN2000 LRUs via four CPC connectors on the back side with custom made harnesses. Connections to a PC are established through either the USB-B female connectors or the provided RJ45 jacks, depending on communication type. It gets powered by a built-in 24VDC power supply capable of driving 5 amps.

Databoss-II Interface:

The Maintenance Interface Panel incorporates one ARINC 429 channel which runs off of *DB Integrations*' proprietary Databoss-II software. The indications of this transceiver are carried out to the touchscreen which can help determine the status of the unit without the need to connect to a PC and view the Graphical User Interface (GUI). The ARINC 429 output can be mapped to channel 1 or 1&2 combined databus outputs to the TN-2000 LRU. Upon startup, the databus is automatically mapped to the #1 and #2 ports (paralleled) of the TN-2000. Pressing the ARINC 429 mapping button will route this data to its respective TN-2000 ports.

Discrete Indication:

The Maintenance Interface Panel incorporates multiple styles of indication depending on the discrete type. The input discretes (upper button bank) have red (open) and green (grounded) indicators built into the individual buttons. The lower annunciator bank is a representation of the output discretes of the ALRU. A red indication means that the individual discrete is high and a green one means that the discrete is grounded.

Panel Pinout Overview:

The next sections show all of the pinouts for the Maintenance Interface Panel. Items highlighted in yellow indicate a direct pass-through to the J101 connector. The nomenclatures are suggestive; therefore, the pins may be used for any actual signals as desired. Each signal must be below a maximum of 1 ampere each.

Panel J101 Connector Pinouts:

J101, 57 pin female CPC TE Connectivity, P/N: 1-796329-1 Mates With: TE Connectivity, P/N: 206437-1 Pin P/N: M39029/64-369 pins Backshell: TE Connectivity, P/N: 182930-1			
Pin 1	DTE 2 RI	Pin 22	Ground
Pin 2	DTE 1 RI	Pin 23	Ground
Pin 3	DTE 1 Rx	Pin 24	DTE 2 RTS
Pin 4	DTE 1 DCD	Pin 25	DTE 1 DTR
Pin 5	ARINC 429 Rx - 1A (from TN-2000)	Pin 26	Iridium 1 Rx
Pin 6	ARINC 429 Rx - 1B (from TN-2000)	Pin 27	Iridium 1 CTS
Pin 7	DTE 2 CTS	Pin 28	24VDC Switched Power (four wire 2)
Pin 8	DTE 1 CTS	Pin 29	Ground
Pin 9	DTE 1 DSR	Pin 30	Ground
Pin 10	DTE 1 RTS	Pin 31	24VDC Switched Power (four wire 1)
Pin 11	Iridium 1 RTS	Pin 32	DTE 2 Tx
Pin 12	Iridium 1 DTR	Pin 33	DTE 2 DTR
Pin 13	Iridium 2 DCD	Pin 34	Iridium 1 RI
Pin 14	DTE 2 Rx	Pin 35	Iridium 2 DSR
Pin 15	DTE 2 DSR	Pin 36	Four Wire Handset 2 Tx-
Pin 16	DTE 2 DCD	Pin 37	Ground
Pin 17	DTE 1 Tx	Pin 38	Ground
Pin 18	Iridium 1 DCD	Pin 39	Four Wire Handset 2 Hookswitch
Pin 19	Iridium 1 Tx	Pin 40	Four Wire Handset 1 PU
Pin 20	Iridium 1 DSR	Pin 41	Four Wire Handset 1 Hookswitch
Pin 21	Ground	Pin 42	Iridium 2 RTS

J101, 57 pin female CPC TE Connectivity, P/N: 1-796329-1 Mates With: TE Connectivity, P/N: 206437-1 Pin P/N: M39029/64-369 pins Backshell: TE Connectivity, P/N: 182930-1			
Pin 43	Iridium 2 Rx	Pin 50	Iridium 2 CTS
Pin 44	Four Wire Handset 2 Tx+	Pin 51	Iridium 2 DTR
Pin 45	Four Wire Handset 2 Rx+	Pin 52	Four Wire Handset 2 PU
Pin 46	Four Wire Handset 2 RI	Pin 53	Four Wire Handset 1 Tx+
Pin 47	Four Wire Handset 1 Rx-	Pin 54	Four Wire Handset 1 Rx+
Pin 48	Four Wire Handset 1 RI	Pin 55	Iridium 2 RI
Pin 49	Iridium 2 Tx	Pin 56	Four Wire Handset 2 Rx-
		Pin 57	Four Wire Handset 1 Tx-

Panel J1 Connector Pinouts:

J1, 57 pin female CPC TE Connectivity, P/N: 1-796329-1 Mates With: TE Connectivity, P/N: 206437-1 Pin P/N: M39029/64-369 pins Backshell: TE Connectivity, P/N: 182930-1			
Pin 1	Discrete 9 Input (from TN-2000)	Pin 13	Discrete 11 Input (from TN-2000)
Pin 2	Discrete 7 Input (from TN-2000)	Pin 14	Discrete 6 Input (from TN-2000)
Pin 3	Discrete 5 Input (from TN-2000)	Pin 15	DTE 1 DTR (J101, pin 25)
Pin 4	Discrete 3 Input (from TN-X000)	Pin 16	DTE 1 RI (J101, pin 2)
Pin 5	Discrete 12 Input (from TN-2000)	Pin 17	DTE 1 Tx (J101, pin 17)
Pin 6	Discrete 10 Input (from TN-2000)	Pin 18	Forward ISDN 2 Port, Pin 5
Pin 7	Discrete 8 Input (from TN-2000)	Pin 19	Forward ISDN 1 Port, Pin 5
Pin 8	Discrete 4 Input (from TN-2000)	Pin 20	Forward CNDU 1/2 Port, Pin 8
Pin 9	Discrete 2 Input (from TN-X000)	Pin 21	Forward CNDU 1/2 Port, Pin 6
Pin 10	Discrete 1 Input (from TN-X000)	Pin 22	DTE 1 DSR (J101, pin 9)
Pin 11	No Connection	Pin 23	Ground
Pin 12	No Connection	Pin 24	DTE 1 CTS (J101, pin 8)

J1, 57 pin female CPC
TE Connectivity, P/N: 1-796329-1

Mates With:
TE Connectivity, P/N: 206437-1
Pin P/N: M39029/64-369 pins

Backshell:
TE Connectivity, P/N: 182930-1

Pin 25	DTE 1 Rx (J101, pin 3)	Pin 41	Forward FXO 2 Port, Pin 2
Pin 26	Forward ISDN 2 Port, Pin 4	Pin 42	Forward ISDN 2 Port, Pin 3
Pin 27	Forward ISDN 1 Port, Pin 4	Pin 43	Forward ISDN 1 Port, Pin 3
Pin 28	Forward CNDU 1/2 Port, Pin 7	Pin 44	Forward CNDU 1/2 Port, Pin 4
Pin 29	Forward CNDU 1/2 Port, Pin 3	Pin 45	Forward CNDU 1/2 Port, Pin 1
Pin 30	Ground	Pin 46	Forward FXS 1 Port, Pin 3
Pin 31	Ground	Pin 47	Forward FXO 1 Port, Pin 3
Pin 32	DTE 1 RTS (J101, pin 10)	Pin 48	Forward FXO 1 Port, Pin 2
Pin 33	DTE 1 DCD (J101, pin 4)	Pin 49	Forward CEPT-E1 1 Port, Pin 1
Pin 34	Forward ISDN 2 Port, Pin 6	Pin 50	Forward CEPT-E1 1 Port, Pin 2
Pin 35	Forward ISDN 1 Port, Pin 6	Pin 51	Forward CEPT-E1 1 Port, Pin 6
Pin 36	Forward CNDU 1/2 Port, Pin 5	Pin 52	Forward CEPT-E1 2 Port, Pin 2
Pin 37	Forward CNDU 1/2 Port, Pin 2	Pin 53	Forward CEPT-E1 2 Port, Pin 6
Pin 38	Forward FXS 2 Port, Pin 2	Pin 54	Forward FXS 1 Port, Pin 2
Pin 39	Forward FXS 2 Port, Pin 3	Pin 55	Forward CEPT-E1 1 Port, Pin 3
Pin 40	Forward FXO 2 Port, Pin 3	Pin 56	Forward CEPT-E1 2 Port, Pin 1
		Pin 57	Forward CEPT-E1 2 Port, Pin 3

Panel J2 Connector Pinouts:

J2, 28 pin female CPC TE Connectivity, P/N: 206038-1 Mates With: TE Connectivity, P/N: 206039-1 Pin P/N: M39029/64-369 pins Backshell: TE Connectivity, P/N: 182661-1			
Pin 1	Iridium 2 CTS (J101, pin 50)	Pin 15	Iridium 2 DCD (J101, pin 13)
Pin 2	Iridium 2 RI (J101, pin 55)	Pin 16	Ground
Pin 3	Four Wire Handset 1 RI (J101, pin 48)	Pin 17	Ground
Pin 4	Iridium 2 RTS (J101, pin 42)	Pin 18	Ground
Pin 5	Iridium 2 Tx (J101, pin 49)	Pin 19	Ground
Pin 6	Iridium 2 DTR (J101, pin 51)	Pin 20	Four Wire Handset 1 Tx- (J101, pin 57)
Pin 7	Four Wire Handset 1 PU (J101, pin 40)	Pin 21	Iridium 1 DSR (J101, pin 20)
Pin 8	Four Wire Handset 1 RX- (J101, pin 47)	Pin 22	Iridium 1 RX (J101, pin 26)
Pin 9	Iridium 2 DSR (J101, pin 35)	Pin 23	Iridium 1 CTS (J101, pin 27)
Pin 10	Iridium 2 Rx (J101, pin 43)	Pin 24	Iridium 1 RI (J101, pin 34)
Pin 11	Ground	Pin 25	Iridium 1 DTR (J101, pin 12)
Pin 12	Four Wire Handset 1 HS (J101, pin 41)	Pin 26	Iridium 1 DCD (J101, pin 18)
Pin 13	Four Wire Handset 1 Rx+ (J101, pin 54)	Pin 27	Iridium 1 RTS (J101, pin 11)
Pin 14	Four Wire Handset 1 Tx+ (J101, pin 53)	Pin 28	Iridium 1 Tx (J101, pin 19)

Panel J3 Connector Pinouts:

J3, 63 pin male CPC TE Connectivity, P/N: 206455-2 Mates With: TE Connectivity, P/N: 205842-1 Pin P/N: M39029/63-368 pins Backshell: TE Connectivity, P/N: 182930-1			
Pin 1	No Connection	Pin 27	No Connection
Pin 2	Discrete 4 Switched Lo (to TN-X000)	Pin 28	Ground
Pin 3	No Connection	Pin 29	Ground
Pin 4	Discrete 7 Switched Lo (to TN-2000)	Pin 30	Ground
Pin 5	No Connection	Pin 31	Ground
Pin 6	No Connection	Pin 32	Ground
Pin 7	Discrete 3 Switched Lo (to TN-X000)	Pin 33	Ground
Pin 8	Discrete 5 Switched Lo (to TN-2000)	Pin 34	Ground
Pin 9	Discrete 8 Switched Lo (to TN-2000)	Pin 35	No Connection
Pin 10	ARINC 429 Tx - 1A (to TN-2000)	Pin 36	No Connection
Pin 11	ARINC 429 Tx - 1B (to TN-2000)	Pin 37	24VDC Switched Power (LRU)
Pin 12	ARINC 429 Rx - 1A (from TN-2000)	Pin 38	Ground
Pin 13	Ground	Pin 39	Ground
Pin 14	Discrete 2 Switched Lo (to TN-X000)	Pin 40	Ground
Pin 15	No Connection	Pin 41	Ground
Pin 16	No Connection	Pin 42	Ground
Pin 17	No Connection	Pin 43	Ground
Pin 18	ARINC 429 Tx - 2A (to TN-2000)	Pin 44	Four Wire Handset 2 Tx- (J101, pin 36)
Pin 19	ARINC 429 Tx - 2B (to TN-2000)	Pin 45	24VDC Switched Power (LRU)
Pin 20	ARINC 429 Rx - 1B (from TN-2000)	Pin 46	24VDC Switched Power (LRU)
Pin 21	Ground	Pin 47	Ground
Pin 22	Discrete 1 Switched Lo (to TN-X000)	Pin 48	DTE 2 Tx (J101, pin 32)
Pin 23	Ground	Pin 49	DTE 2 RI (J101, pin 1)
Pin 24	Discrete 6 Switched Lo (to TN-2000)	Pin 50	Ground
Pin 25	No Connection	Pin 51	Four Wire Handset 2 Rx+ (J101, pin 45)
Pin 26	No Connection	Pin 52	Four Wire Handset 2 Tx+ (J101, pin 44)

J3, 63 pin male CPC TE Connectivity, P/N: 206455-2 Mates With: TE Connectivity, P/N: 205842-1 Pin P/N: M39029/63-368 pins Backshell: TE Connectivity, P/N: 182930-1			
Pin 53	24VDC Switched Power (LRU)	Pin 58	Four Wire Handset 2 PU (J101, pin 52)
Pin 54	DTE 2 DCD (J101, pin 16)	Pin 59	Four Wire Handset 2 Rx- (J101, pin 56)
Pin 55	DTE 2 RTS (J101, pin 24)	Pin 60	DTE 2 DSR (J101, pin 15)
Pin 56	DTE 2 CTS (J101, pin 7)	Pin 61	DTE 2 Rx (J101, pin 14)
Pin 57	Four Wire Handset 2 HS (J101, pin 39)	Pin 62	DTE 2 DTR (J101, pin 33)
		Pin 63	Four Wire Handset 2 RI (J101, pin 46)

Panel J4 (CNDU) Connector Pinouts:

J4, 9 pin male CPC TE Connectivity, P/N: 206486-1 Mates With: TE Connectivity, P/N: 206485-1 Pin P/N: M39029/63-368 pins Backshell: TE Connectivity, P/N: 1-206062-6			
Pin 1	CNDU Ethernet Tx+ (tied to Eth1, pin 1)	Pin 5	24VDC Switched Power (CNDU)
Pin 2	CNDU Ethernet Tx- (tied to Eth1, pin 2)	Pin 6	Ground
Pin 3	Ground	Pin 7	CNDU Ethernet Rx+ (tied to Eth1, pin 3)
Pin 4	24VDC Switched Power (CNDU)	Pin 8	CNDU Ethernet Rx- (tied to Eth1, pin 6)
		Pin 9	Ground

Getting Started:

The Maintenance Interface Panel incorporates one ARINC 429 channel which runs off of *DB Integrations*' proprietary Databoss-II software. Install the Databoss-II GUI program onto a laptop or PC. This program is provided free of charge and can be downloaded from our website at:

http://www.dbiaero.com/uploads/1/0/8/3/10835831/db2_setup.exe.

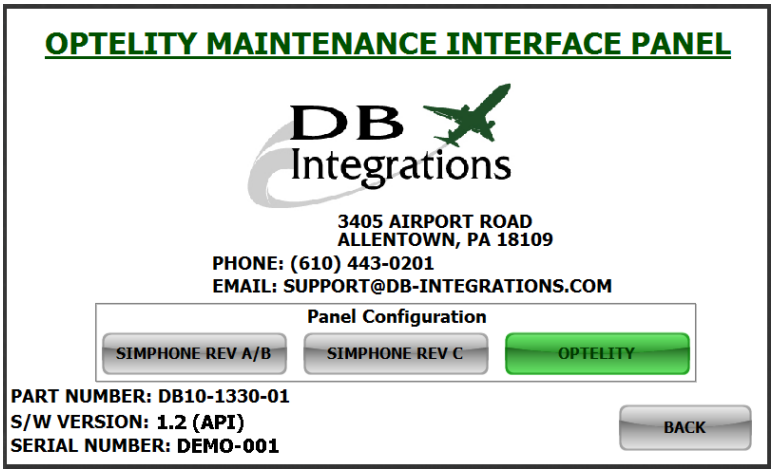
The default answers will most likely suffice during the installation process, but can be manipulated for specific needs. Once installed, the PC is ready to communicate with the SDR Gateway MIP.

Powering On/Off The Panel:

Plug the Maintenance Interface Panel into the proper electrical receptacle. Initiate power by pressing the "ON/OFF" button located at the top, right hand side of the panel face. Press it a second time to turn the unit off.

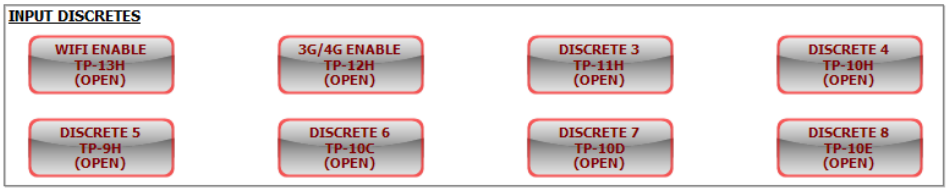
Simphonē (TN-1000) Compatibility:

The Maintenance Interface Panel has all of the input and output discretes for a TN-2000 ALRU. Older versions, such as the TN-1000 Simphonē have less discretes. At any point, the panel can be configured to show these discretes (and their associated pins) should there be a need. In the ABOUT page, there are three buttons. Click the one associated with the ALRU the panel is connected to. The MIP will return to the home screen and configure itself accordingly. The MIP will also save this setting and boot as necessary next time it powers up.



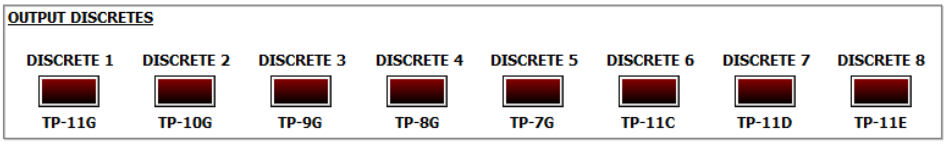
TN-2000 Input Discretes:

The Maintenance Interface Panel has eight buttons that represent the discrete inputs to the TN-2000. Each button corresponds to its respective input discrete and can either be open or grounded. A red (disabled) indication means that the TN-2000 input is open and green (grounded) indicates that it is shorted to ground.

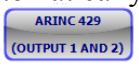


TN-2000 Output Discretes:

The Maintenance Interface Panel has eight lights that represent the discrete outputs from the TN-2000. Each light corresponds to its respective output and can either be red or green. A red indication means that the TN-2000 output is high and green indicates that it is grounded.



ARINC 429 Mapping:

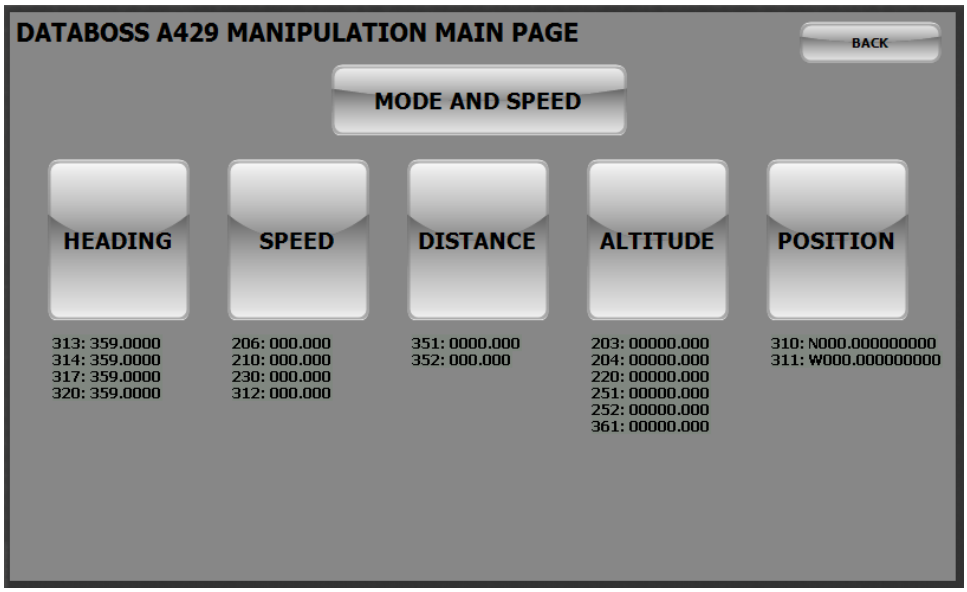
The Maintenance Interface Panel has the ability to route the ARINC 429 self-generated data to channel 1 or 1&2 combined databus outputs to the TN-2000. Upon startup, the databus is automatically mapped to the #1 and #2 ports (paralleled) of the TN-2000. Pressing the 

button will route this data to its respective TN-2000 ports.

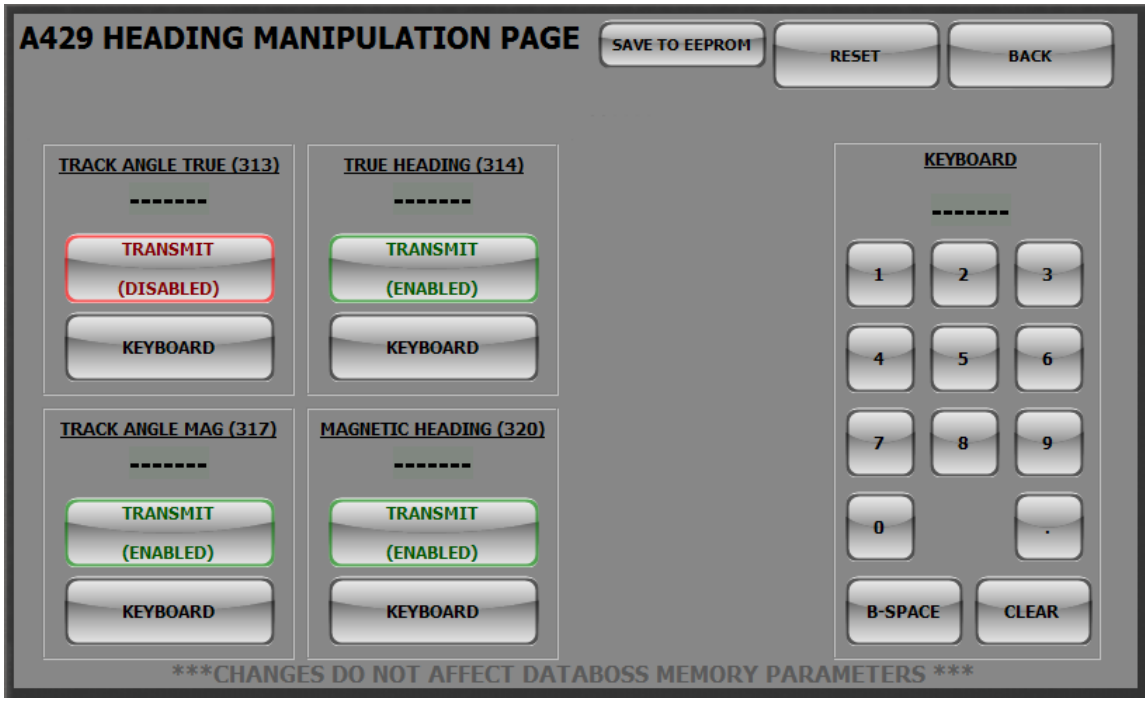
Navigational Manipulation:

The Maintenance Interface Panel has the ability to change the ARINC 429 navigational words by inputs to the touchscreen. The starting point for these words comes from the internal memory of the unit and can be manipulated from there. 18 of the IRS transmitted words can be changed from the touchscreen by pressing 

The ARINC 429 home screen will display a snapshot of the IRS words that are currently set. These values represent the parameters that are either set in memory or have been changed from the touchscreen. Words preceded with an asterisk are set to transmit.



Pressing one of the bigger function buttons will display the ARINC 429 manipulation page for that function. To change a value for any given ARINC 429 word, simply type the value at the keyboard area. When complete, press any one of the KEYBOARD buttons to transfer the value to that specific label. The unit will automatically calculate the ARINC 429 word for the entered value and transmit accordingly. These changes do NOT affect the values that are stored in the unit's memory. Therefore, rebooting the unit will bring these values back to their stored defaults.



Pressing the 

button will enable or disable the transmissions of that specific ARINC 429 word. This change does NOT affect the value that is stored in the unit's memory. Therefore, rebooting the unit will bring this value back to its stored default.

Pressing the 

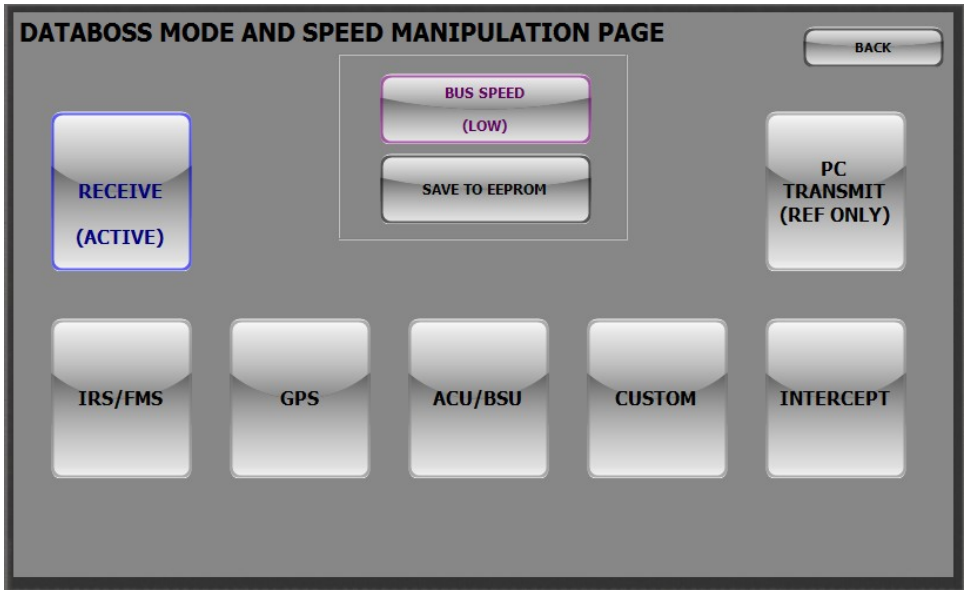
button will save these states of the current page in the unit's memory.

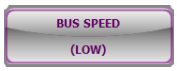
Pressing the 

button will bring all values that were changed in the touchscreen back to their internal memory values.

Pressing the 

button on the main A429 page will pull up the Databoss mode and speed page.



Pressing the 

button will toggle the ARINC 429 bus speed between 12.5kbps (low speed) and 100kbps (high speed). This change does NOT affect the bus speed value that is stored in the MIP's memory. Therefore, rebooting the unit will bring this value back to its stored default.

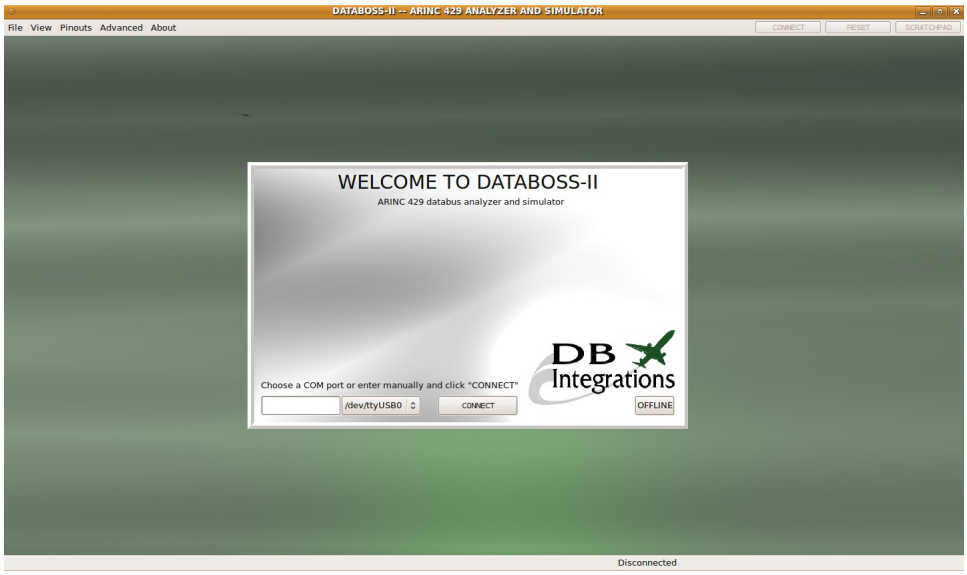
Pressing the 

button will save the current bus speed setting in the MIP's memory.

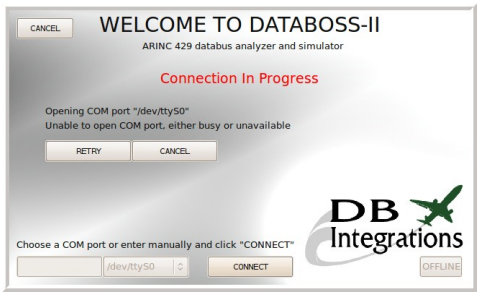
Pressing one of the bigger function buttons will change the Databoss's mode. This will put the unit in a state where it's using it's internal memory for the ARINC 429 values. This change does NOT affect the startup mode that is stored in the MIP's memory. Therefore, rebooting the unit will bring this value back to its stored default.

Databoss-II PC Communication:

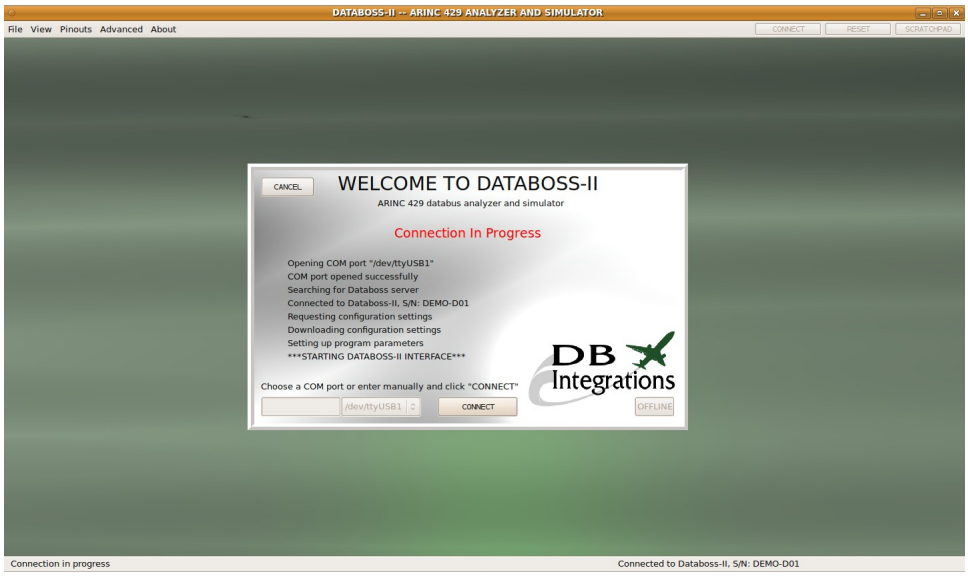
The Databoss-II communicates with a PC via an RS232 serial interface. The MIP has built-in USB-Serial conversion circuitry which will enable for a virtual COM port on a PC. Determine which COM port the PC is using and select it from the drop down list. The GUI will provide the user with the most likely COM ports needed and make those options first on the list. A custom port option is also available. Once, the proper port has been selected, click the CONNECT button.



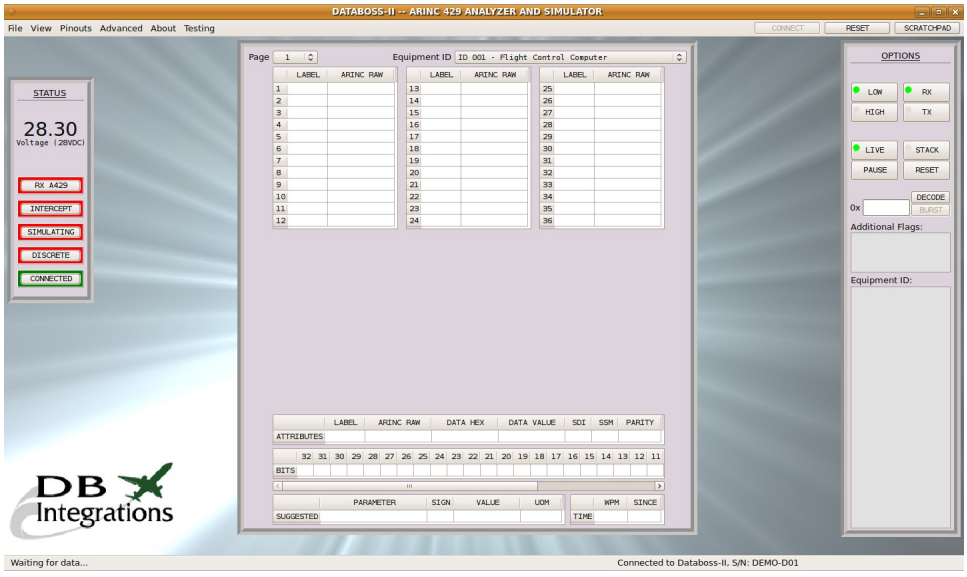
If the chosen COM port fails to open, the program will display the port as unavailable. Simply re-try the connection or click either CANCEL button to start again.



If the chosen COM port opens successfully, negotiation with the Databoss-II hardware begins. Any saved configuration settings from the Databoss will transfer to the program, which configures itself accordingly.

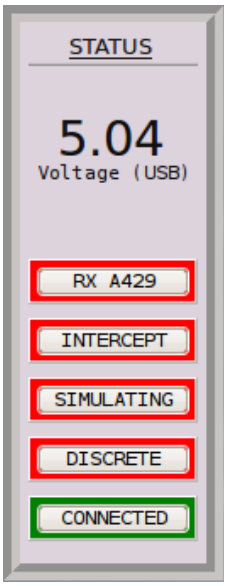


When the program is ready, the main page will appear.



Status Dashboard:

The left hand dashboard is a representation of how the lights on SDR Gateway MIP face are behaving, along with the input voltage and connection status.



RX A429 - Shows the receiving status of the ARINC 429 data under test.

INTERCEPT - Shows if ARINC 429 intercept mode is active. **Note: This is inoperative on the SDR Gateway MIP.**

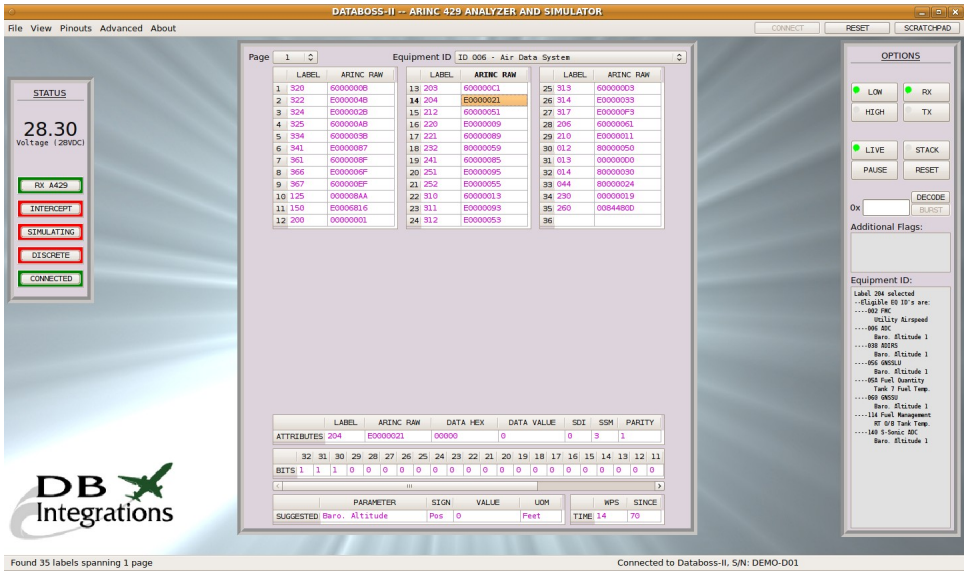
SIMULATING - Shows if the MIP is transmitting any ARINC 429 data under its own processing.

DISCRETE - Shows the status of the input discrete. **Note: This is inoperative on the SDR Gateway MIP.**

CONNECTED - Shows if the GUI has a valid connection with a Databoss unit.

Receiving Data:

ARINC 429 data that is received will display in the tables on the main page. The bottom, left hand status message will indicate how many individual labels have been received and how many pages (of tables) the program is displaying them on.



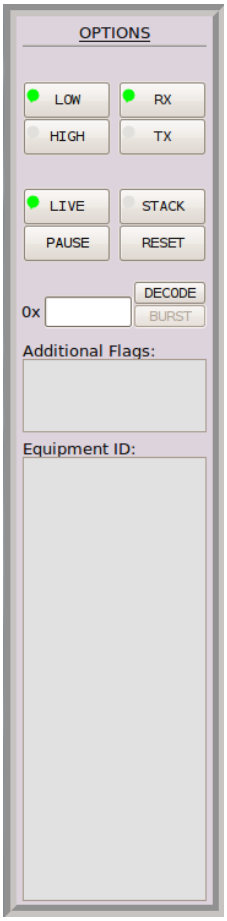
Click on an ARINC 429 word in the receive tables. All of the translation parameters will display in the tables below. On the right hand side, there is an area that will display the eligible equipment types for that particular label. Choose one from the drop-down menu at the top to translate accordingly. If a word is clicked and there is not a valid equipment type selected, the GUI will choose one. These selections are geared more toward navigational equipment.

Important Stack Mode Note:

When the Databoss-II is in Stack Mode, it no longer truncates the ARINC 429 input, but relays every single received word to the PC so the user can see the literal reception order of the data. This could cause the program to slow down depending on the speed of the ARINC 429 databus and the processing power of the PC. Removing the Databoss from its ARINC 429 input will alleviate the PC from having to process so much data and will usually unlock a sticky program.

Options:

The right hand dashboard allows for various options during operation.



LOW / HIGH - Selects the speed of the ARINC 429 databus.

RX / TX - Selects the mode of operation.

LIVE - Displays the ARINC 429 data in the tables as a whole (default).

STACK - Displays the ARINC 429 data in a progressive list (viewing the order of the words as received).

PAUSE - Stops the data from being displayed.

RESET - Clears the tables and stack list. Waits for more data.

DECODE - Decodes the ARINC 429 word in the edit box. Results display in the lower tables.

BURST - Performs a single transmission of the ARINC 429 word in the edit box. The format is a HEX representation of the 32 bits and must be 8 characters long.

Note: This option only becomes available while holding down the "CONTROL" button, to prevent inadvertent transmitting of ARINC 429 data.

Decoding Custom ARINC 429 Words:

Enter a valid ARINC 429 word in the edit box of the right hand dashboard. This word must be formatted as an 8 character HEX representation of the 32 bits with the most significant bit to the left. Press the DECODE button to display translated data in the lower tables.

Custom ARINC 429 Decoding Example:

ARINC 429 word: 0x60110017
Bit layout: MSB ⇨01100000 00010001 00000000 00010111⇦ LSB
Word to enter in decode edit box: 60110017

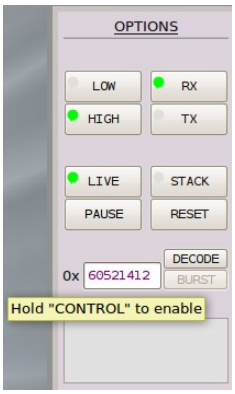
Transmitting Data:

There are six ways to transmit user defined ARINC 429 data.

- Burst transmission
- Loop transmissions:
  - IRS/FMS simulation
  - BSU/ACU simulation
  - GPS simulation
  - Custom transmission
  - Intercept transmission

Burst Transmission:

Enter a valid ARINC 429 word in the edit box of the right hand dashboard. This word must be formatted as an 8 character HEX representation of the 32 bits with the most significant bit to the left. Hold the "CONTROL" key and click the BURST button for each single transmission. This can only be done while in "receive" mode.

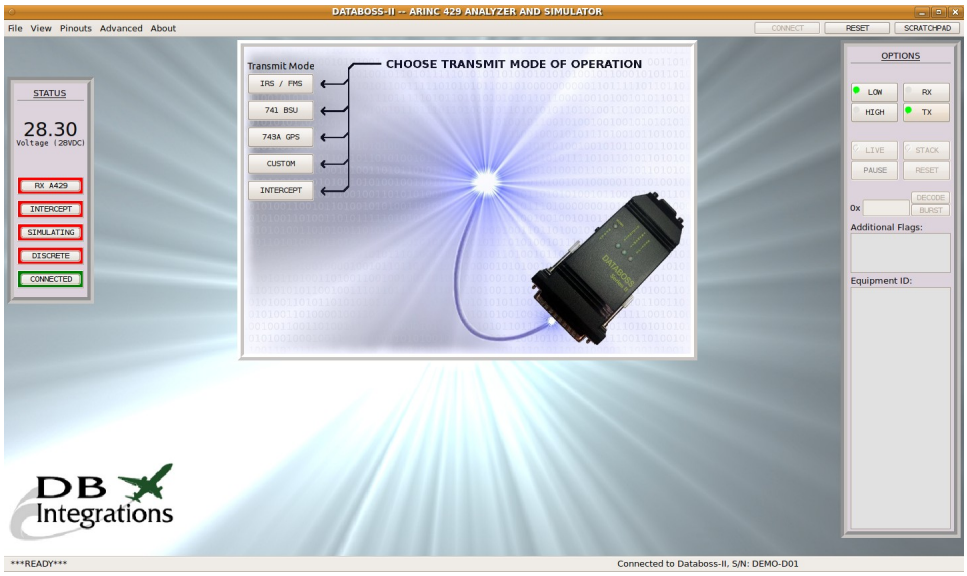


Custom ARINC 429 Burst Transmit Example:

ARINC 429 word: 0x60521412
Bit layout: MSB ⇨01100000 01010010 00010100 00010010⇦ LSB
Word to enter in decode edit box: 60521412

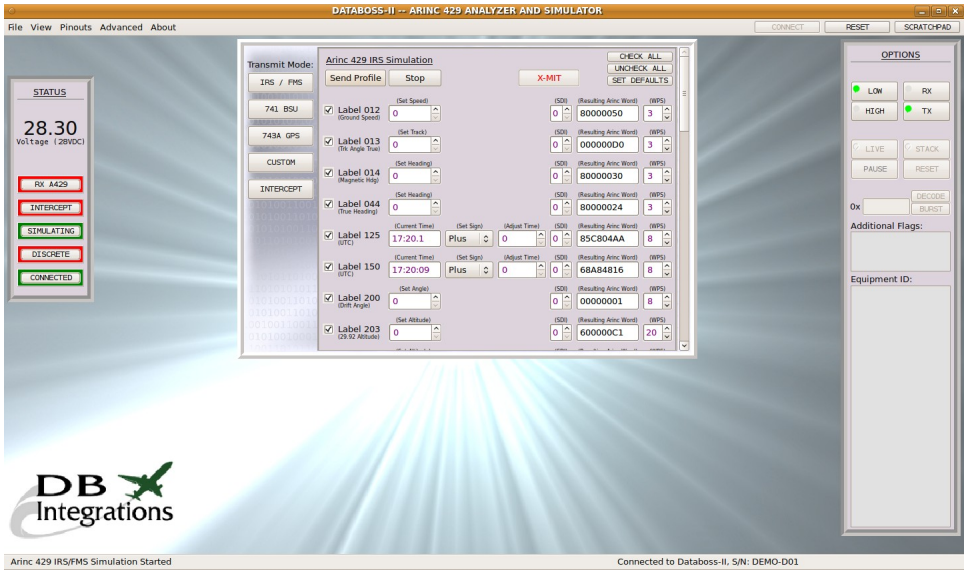
Loop Transmissions:

Click the TX button and choose the desired mode of transmit operation by clicking on one of the buttons to the left of the center window.



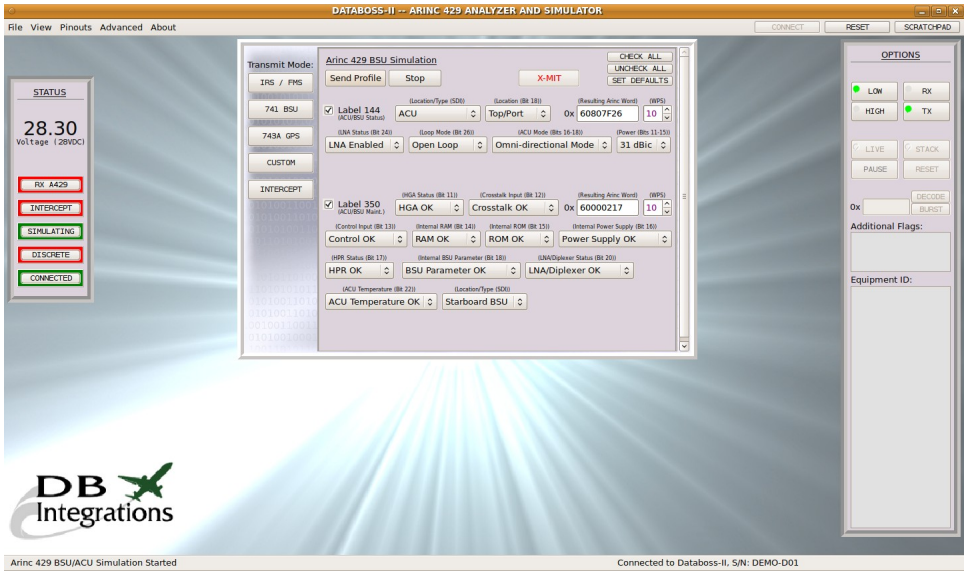
IRS/FMS Simulation:

The Databoss-II can simulate an Inertial Reference or Flight Management System using up to 35 pre-defined labels and user defined values and speeds. Time and date are automatically taken from the PC and the rest of the individual values can be changed on the fly. The words will be transmitted when their respective checkboxes to the left are selected. Version 2.4 and above incorporates an equipment prefill dropdown box. Click the Send Profile button to begin the transmissions and the Stop button to cease.



BSU/ACU Simulation:

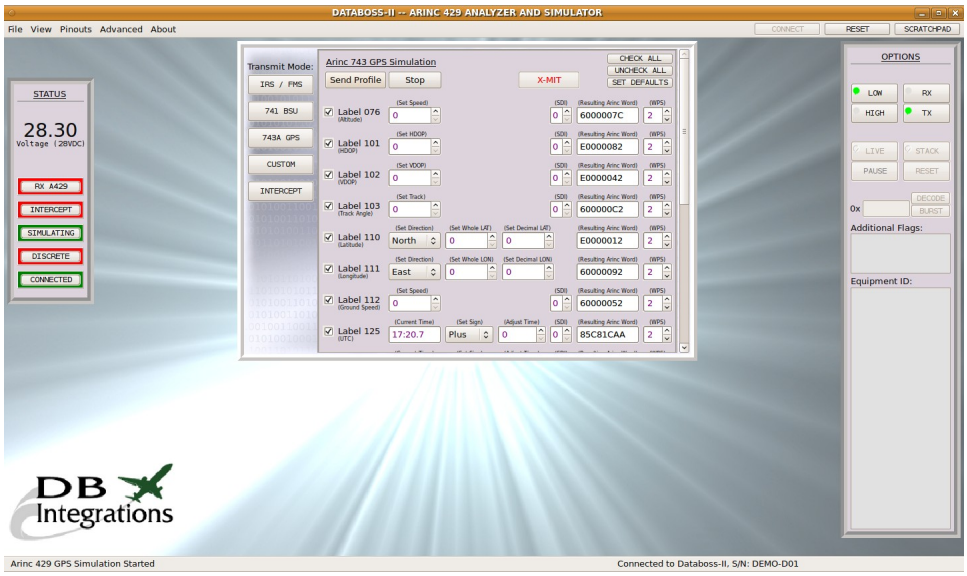
The Databoss-II can simulate an ARINC 741 Beam Steering or Antenna Control Unit using up to 2 pre-defined labels and user defined values and speeds. The words will be transmitted when their respective checkboxes to the left are selected. Click the Send Profile button to begin the transmissions and the Stop button to cease.



GPS Simulation:

The Databoss-II can simulate an ARINC 734A Global Positioning Satellite System (GNSS) using up to 12 pre-defined labels and user defined values and speeds. Time and date are automatically taken from the PC and the rest of the individual values can be changed on the fly. The words will be transmitted when their respective checkboxes to the left are selected. Click the Send Profile button to begin the transmissions and the Stop button to cease.

Note: Label 060 will be transmitted sequentially for each enabled version of the word at the transmission interval rate as defined by the first word.

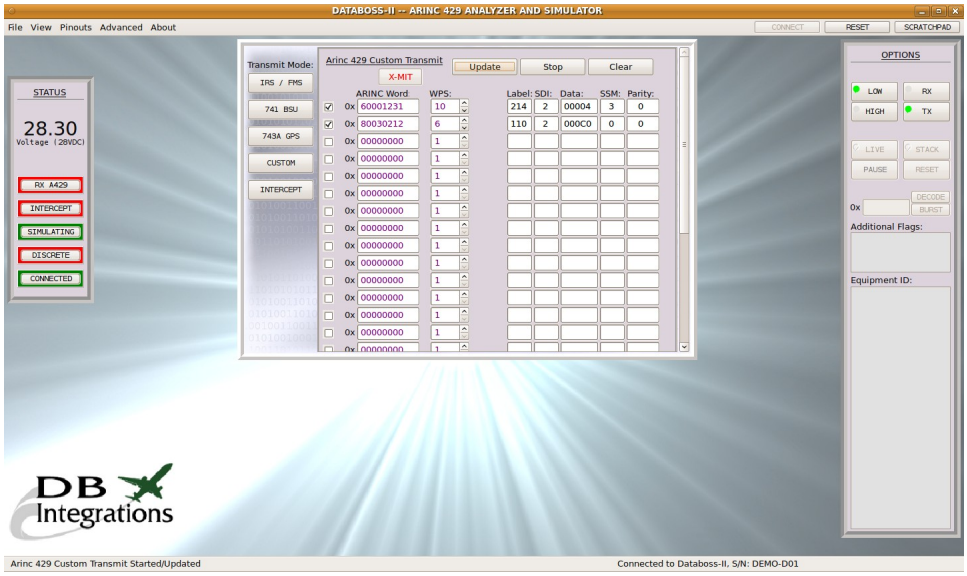


Custom Loop Transmissions:

The Databoss-II can transmit up to 25 ARINC 429 words using user defined values and speeds. The words will be transmitted when their respective checkboxes to the left are selected. Click the Send Profile button to begin the transmissions and the Stop button to cease.

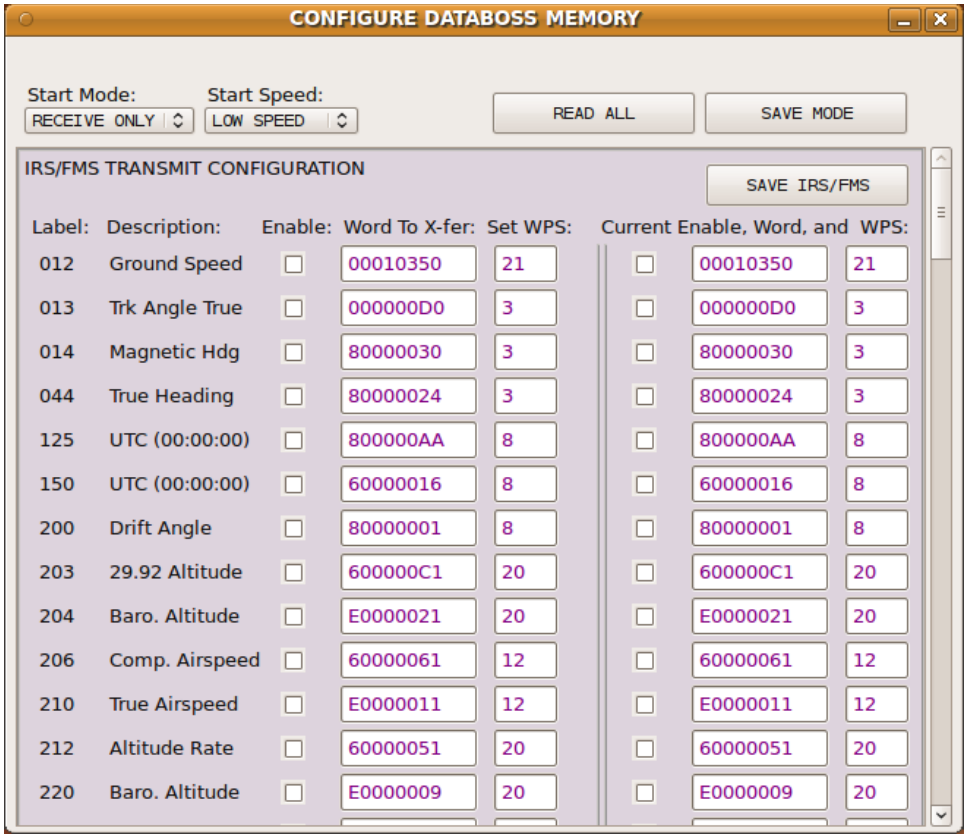
Note: The fields to the right will automatically fill in as the characters are entered.

In this mode, changing a word while the unit is actually transmitting will not automatically change the transmission word until the Update button is clicked. This is so a user can manipulate the words as necessary without disturbing the current transmissions; however, changing the rate (WPS) will dynamically set the transmission frequency without the need to press the Update button.



Configuring the Databoss:

The Databoss-II has the ability to store ARINC 429 transmit and intercept values and perform these functions upon start-up without the need for a user interface. To configure the Databoss for these options, click on "Advanced" and then "Configure Databoss" in the upper menu. This will immediately stop all transmissions and bring up the configuration page.



Configuring Databoss Mode:

The top section of the configuration page is the mode and databus speed settings for the Databoss and pertains to how the unit will perform on start-up.

START MODE:

RECEIVE ONLY –

The Databoss will do nothing on start-up except wait for incoming ARINC 429 data (normal operation).

TX IRS/FMS, TX GPS, TX BSU, or TX CUSTOM –

The Databoss will automatically transmit the ARINC 429 data with intervals and values that are stored in its non-volatile memory.

START SPEED:

Choose “Low Speed” or “High Speed” to configure the Databoss for the incoming ARINC 429 databus speed.

READ ALL:

Click to fill in all of the information currently stored in the Databoss.

SAVE MODE:

Click to save the MODE and SPEED parameters in the Databoss's memory.

Important Time Note:

When the Databoss is transmitting data from its own memory, all time words are self-calculated from 00:00:00 on start-up. The date words are calculated from January 01 of the last year that was saved through label 260.

Configuring ARINC 429 Data:

All of the sections other than MODE and SPEED are automatically updated as the user changes values and checkbox settings in the normal transmit pages. The individual settings on this page can NOT be manipulated. The intent is that the user can make changes to the transmissions during normal operation and confirm satisfactory functionality of whichever system is being interfaced to and then save these settings via the configuration page.

On start-up, the configuration page will automatically update all of it's settings in accordance with the Databoss's memory. Each mode of operation is separated into its own section. Simply click the SAVE button for each section to transfer these values to the Databoss's non-volatile memory. The screen will become disabled once this process begins and will re-enable once complete. The values to the right (current Databoss values) should then match the values to the left (of their respective section).

More Options:

Reset:

Click the RESET button at the upper, right hand corner to bring both the GUI and Databoss back to default settings. This will NOT affect the internal configuration of the Databoss. Default parameters are:

- Receive mode
- Table display
- Tables cleared
- ARINC 429 receive un-paused
- Intercept mode deactivated
- TCAS mode deactivated

Scratchpad:

Click the SCRATCHPAD button at the upper, right hand corner to bring up a window which can be used to enter any notes or relevant information during operation.

Contact Us:

Please feel free to contact us if you need any additional help with the operation of this device. In addition, we would like to know if there are any errors with our ARINC 429 calculations or translations. It is our goal to produce the most helpful troubleshooting tools possible and if something can be improved, please let us know.

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Allentown, PA 18109

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Email: support@dbiaero.com
Web: www.dbiaero.com

Warranty:

DB Integrations offers a 1 year warranty on any malfunction of this device that does not relate to abuse. Technicians are available during normal working hours to help diagnose and approve units for return should they become defective. See contact information above. Warranty information is tracked internally by sales figures.