Lumistar Basic LDPS_10x Building a Simple Project and Displays - Lesson 2

Presented by Wayne Rettig

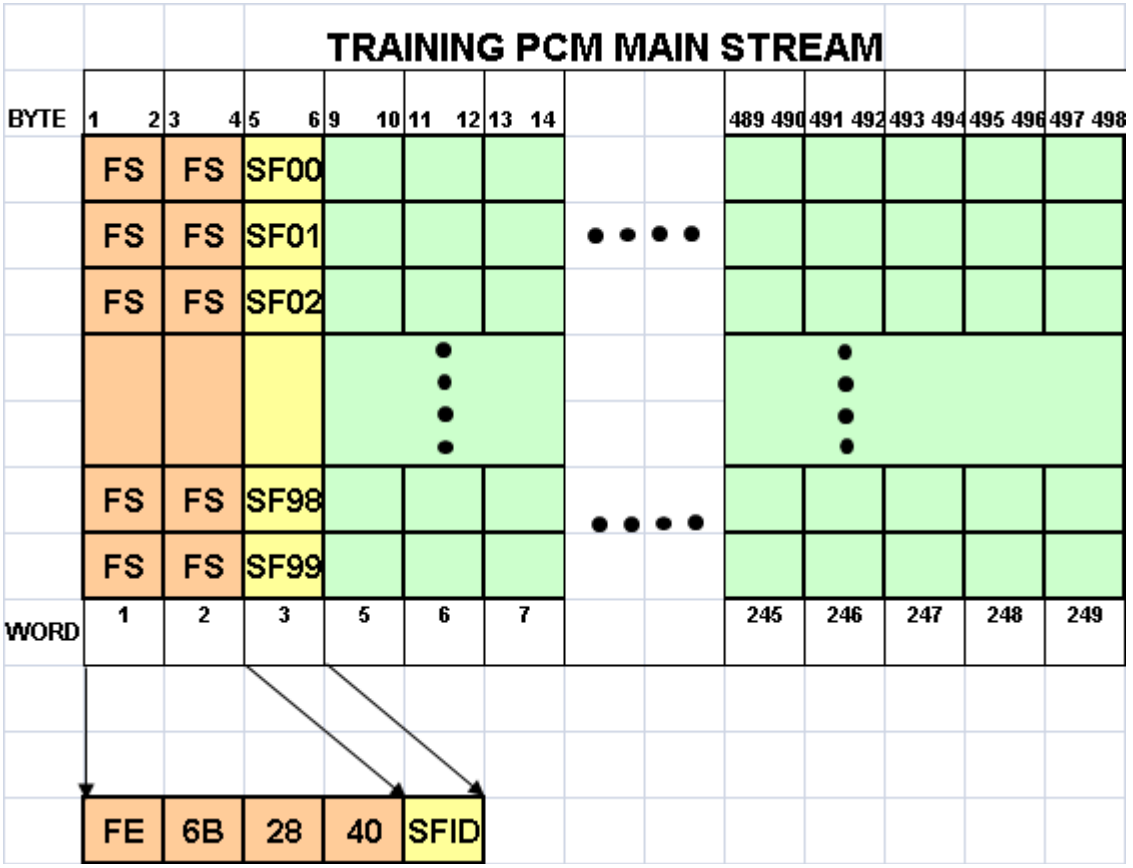
TRAINING FRAME CREATION

LET'S DEFINE OUR OWN FRAME AND SIMULATE IT

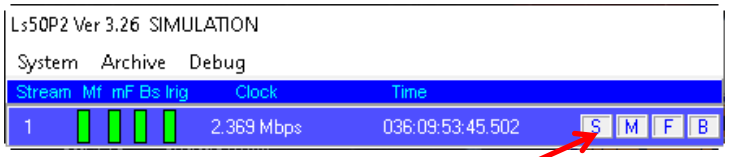
TRAINING PCM FRAME DEFINITION:

Common Word Length: **16 bits**
Words per Minor frame: **249**
Bit Order: **MSB First**
Frame Sync Location: **Leading**
Subframe Mode: **SFID**
Minor Frame Count Direction: **UP**
First Minor Frame Number: **0**
Number of Minor Frames: **100**
SFID Word Number: **3**
SFID MSB: **6**
Frame Sync Pattern: **0xFE6B2840**

Simulator & Bit Sync Information
Bit Rate **2.369 Mbps**
Input Code: **NRZL**

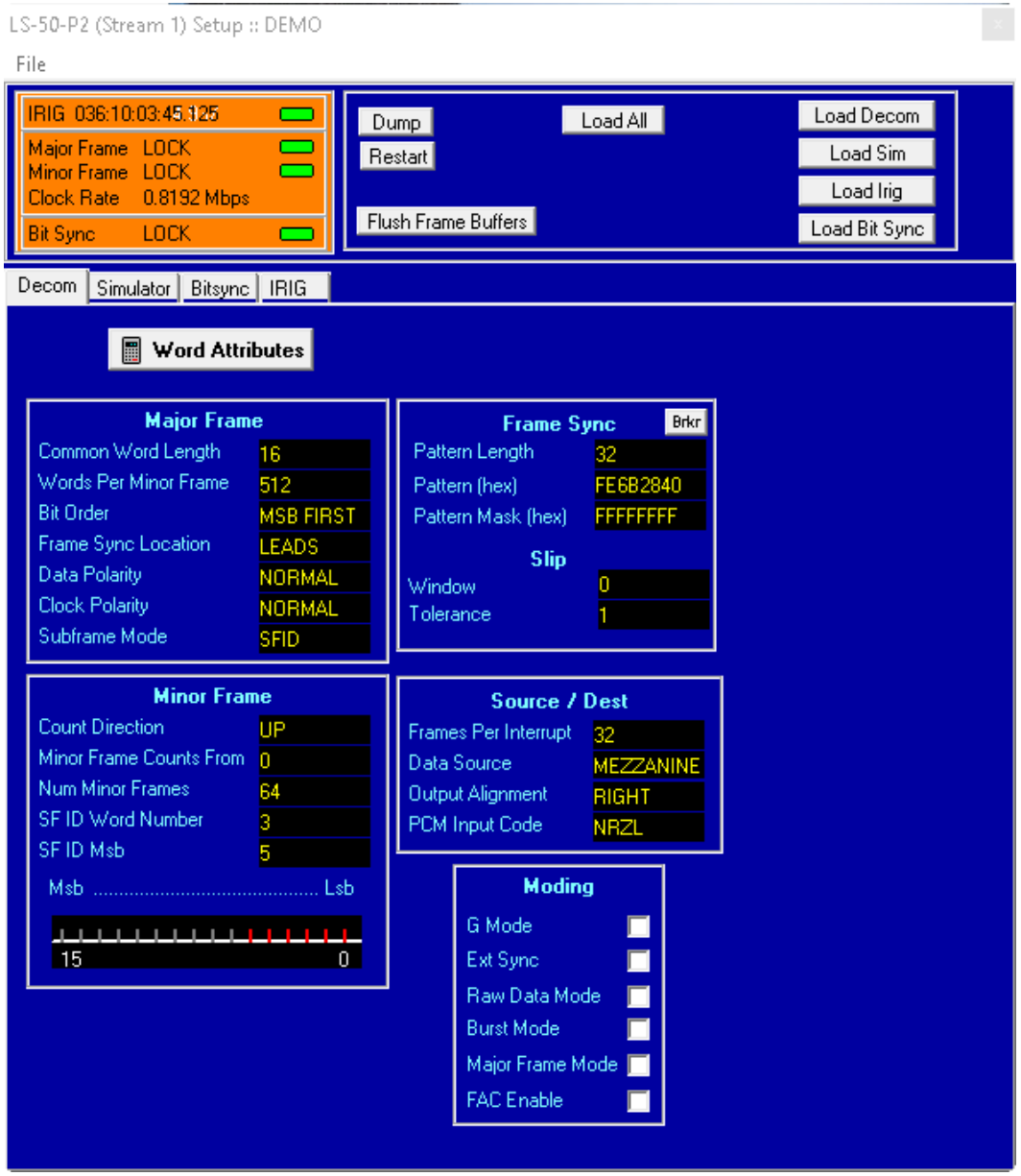


LS-50-P Decommutator Tab



Click the S Button to bring up the LS-50P2 Control

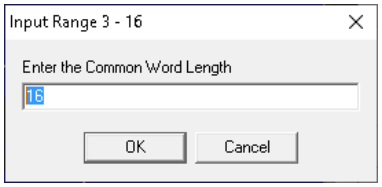
Select **File>Recall**, then Double-Click **DEMO.SCS** To load a default DEMO PCM Setup



Main PCM Decom Setup

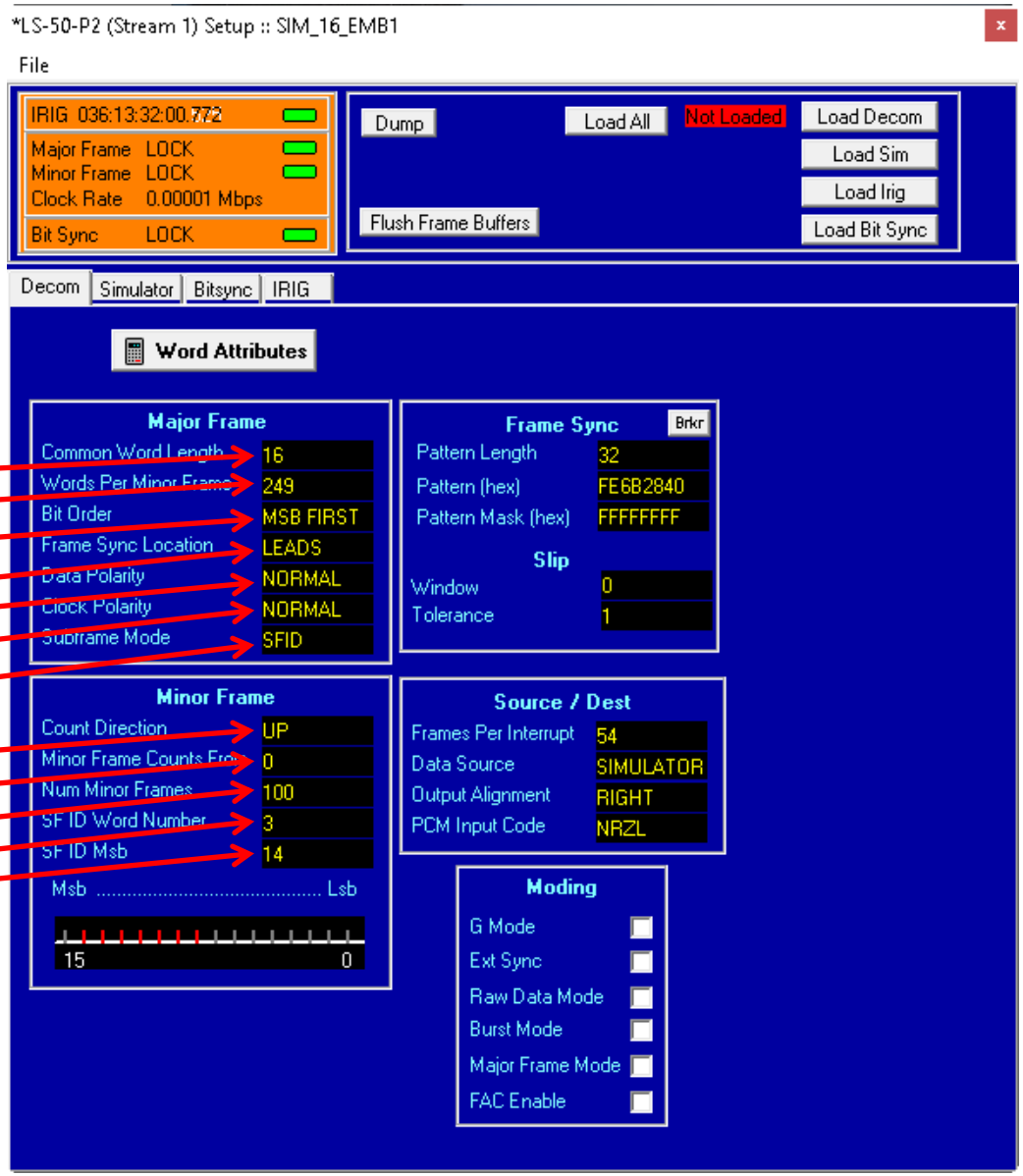
Load the **DEMO.SCS** and enter format info from previous slide

Click the Value and then to Edit, then update and Click **OK**



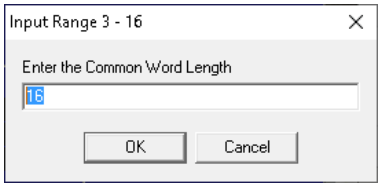
Some Entries will toggle through valid settings

Common Word Length: **16 bits**
Words per Minor frame: **249**
Bit Order: **MSB First**
Frame Sync Location: **Leading**
Data Polarity: **NORMAL**
Clock Polarity: **NORMAL**
Subframe Mode: **SFID**
Minor Frame Count Direction: **UP**
First Minor Frame Number: **0**
Number of Minor Frames: **100**
SFID Word Number: **3**
SFID MSB: **14**



Main PCM Decom Setup 2

Click the Value and then to Edit, then update and Click **OK**



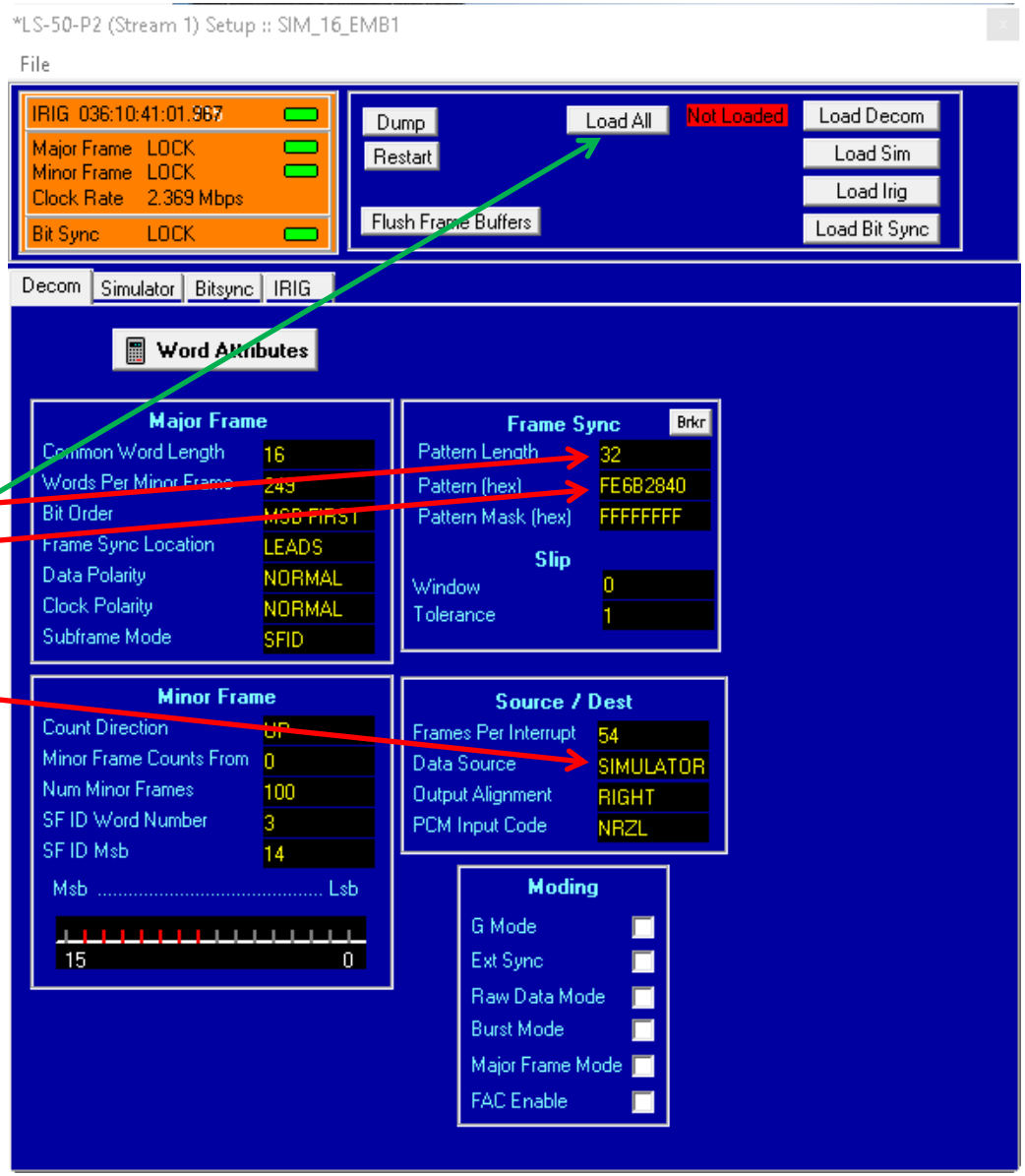
Some Entries will toggle through valid settings

Frame Sync Length: **32 bits**

Frame Sync Pattern: **0xFE6B2840**

Data Source: **Simulator**

Click the **Load All** button



LDPS_10x
Main PCM Simulator Setup

Fill in the new Simulation format:

Ensure **Track Decom** is Checked

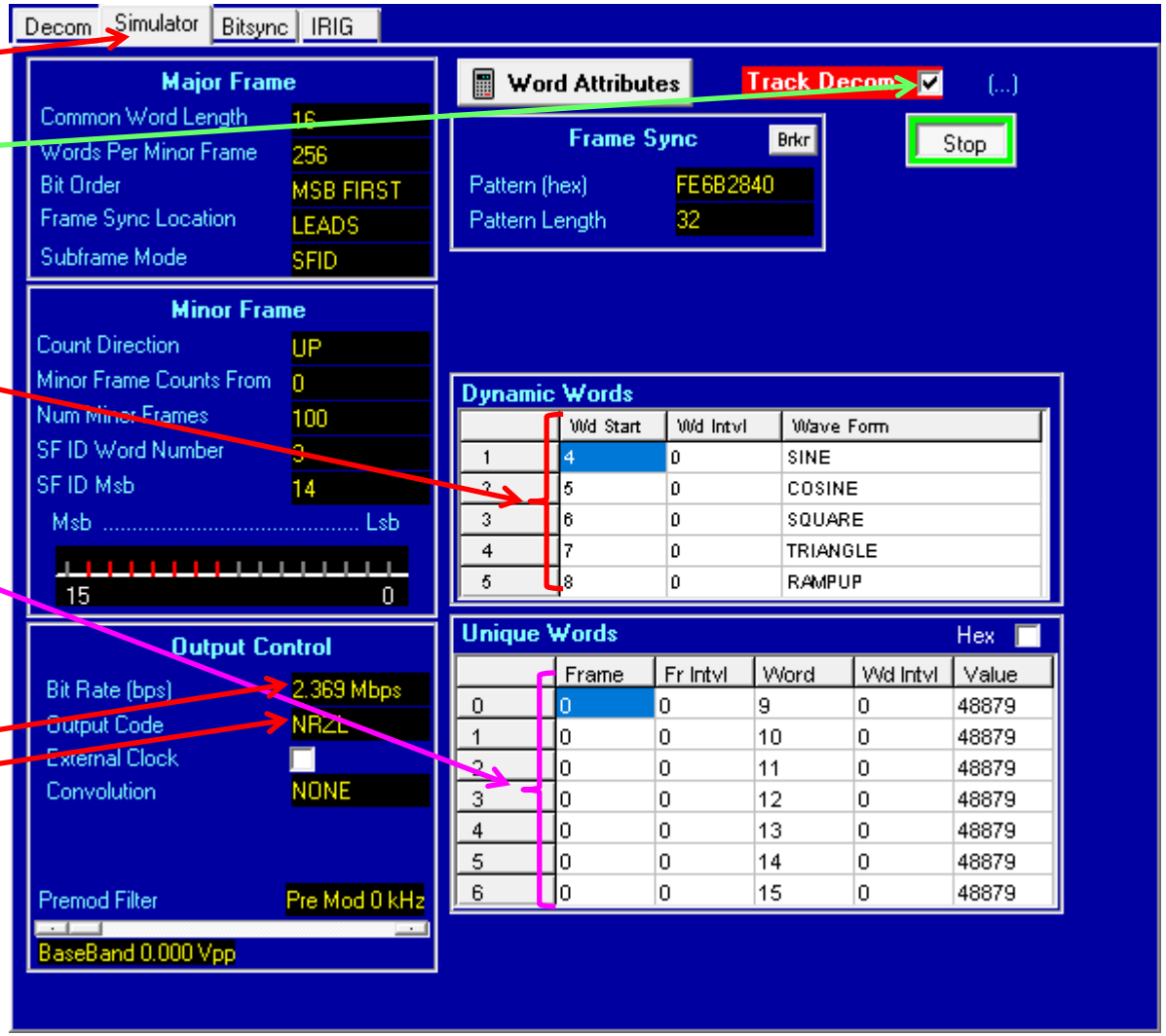
Fill in the **Dynamic Words** as shown:

Fill in the **Unique Words** as shown:

Bit Rate **2.369E6 Mbps**
Input Code: **NRZL**

Track Decom CheckBox must be checked

Then click the **Load Simulator** button



Main PCM Bit Sync Setup 3

Note: The asterisk '*' indicates that this configuration hasn't been save yet

Bit Rate: **2.369E6 Mbps**

Using Right-Clicking and fill in the new format:

Bit Sync information

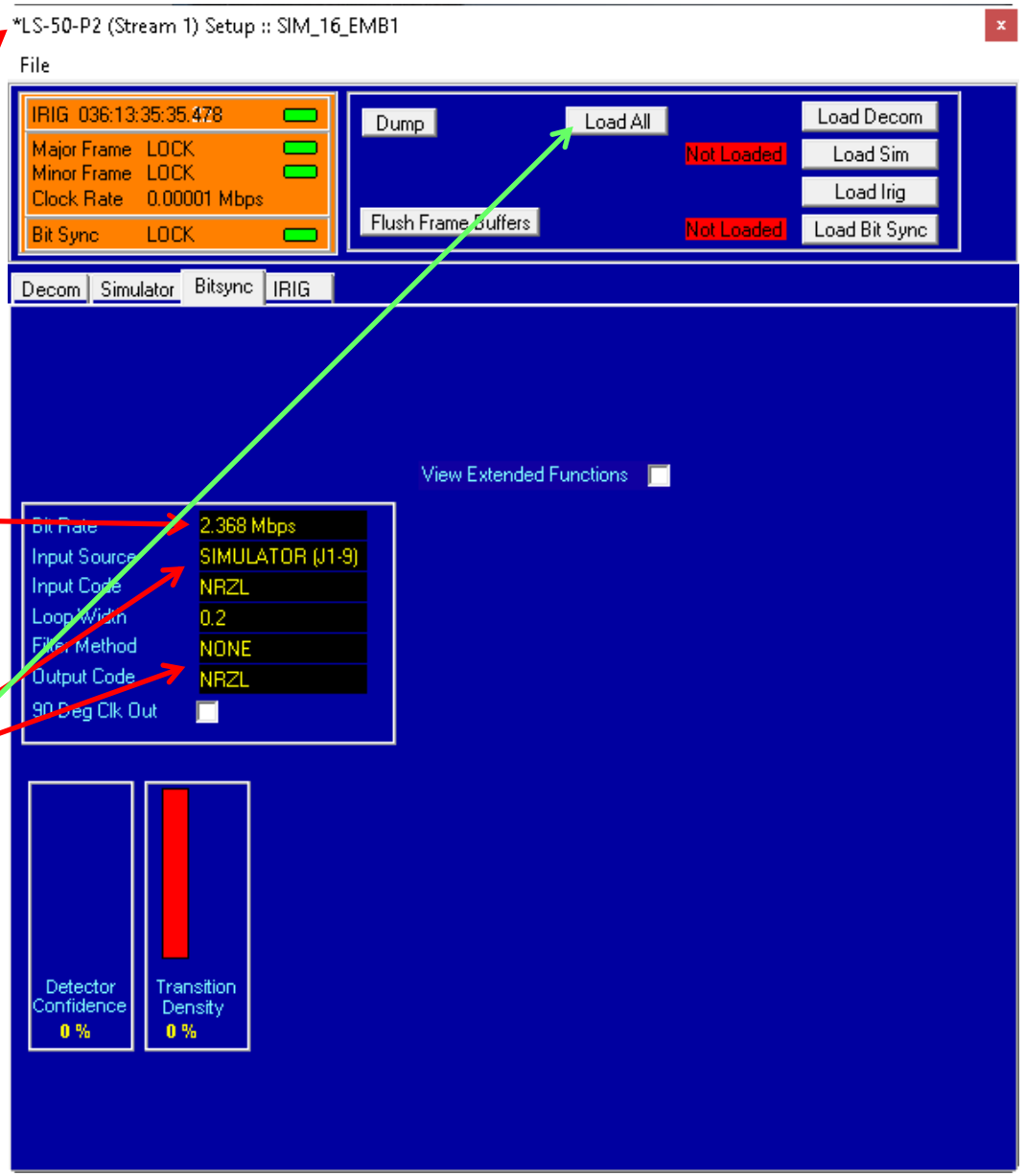
Bit Rate **1.1 Mbps**

Input Source: **SIMULATOR (J1-9)**

Input Code: **NRZL**

Then click the **Load All** Button

.

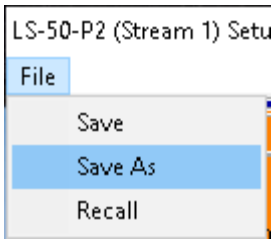


Main PCM .SCS Save & Test

Save the new PCM format:

From the Stream 1 Control Window select:

File>Save As:

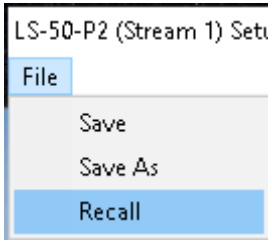


Type **TRAINING.SCS** in the File Name TextBox,

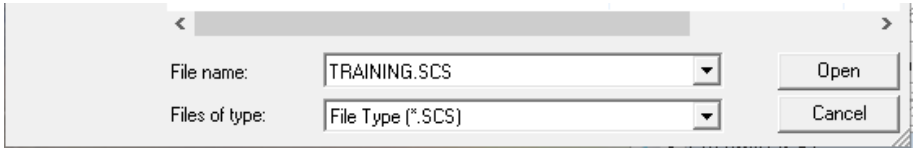
Then Click **SAVE**

Next, **Recall** the **TRAINING.SCS** file just saved**.** Go to the **L\S-50-P2** (Stream1) Setup and select:

File>Recall:

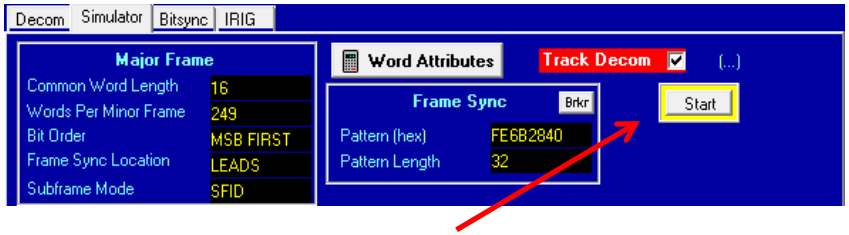


Select the **TRAINING.**SCS configuration file:

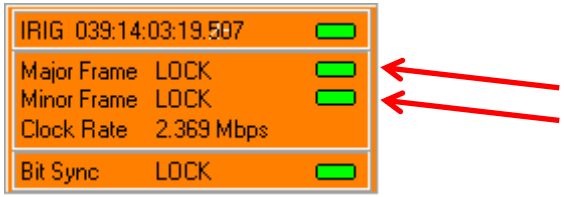


Click the **Open** Button.

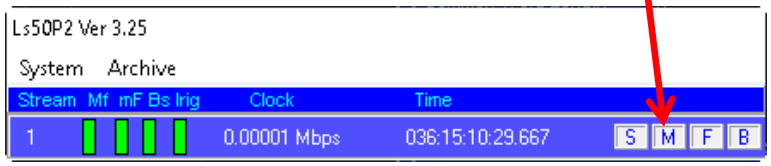
Select the **Simulator** Tab, then Click the **Start** Button to **Start** the **Simulator**.



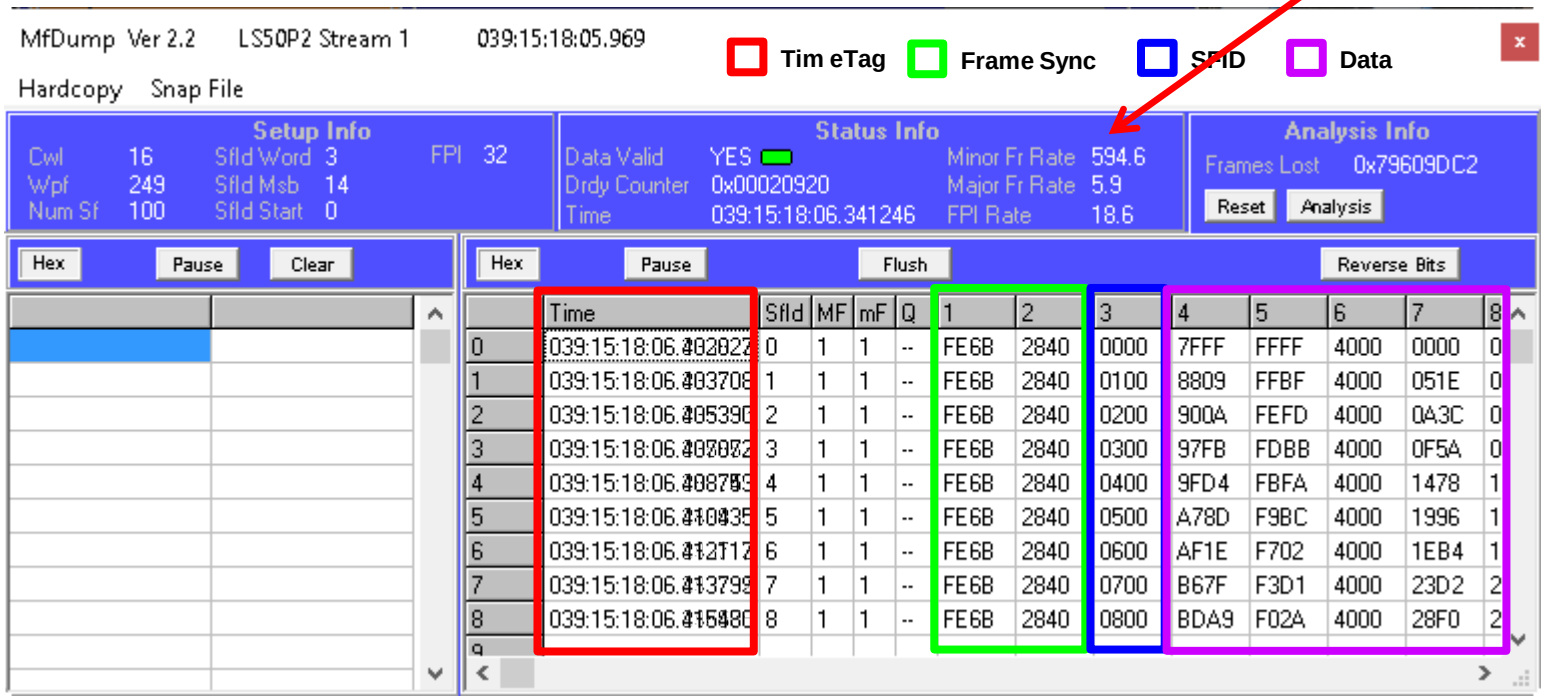
You should now see **Major** and **Minor Frame** Locks



Display the LS50P2 **CVT** by Clicking the M Button on the **Ls50P2** Control:

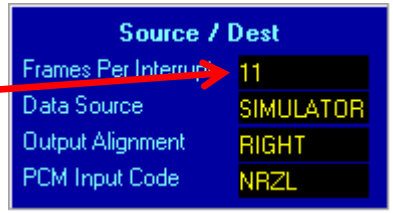


We find that configuring for a Frame Rate of <=60Hz optimal for all OSs. The Rule of thumb is to divide the **Minor Frame Rate** by **60** and round up to the next odd number.



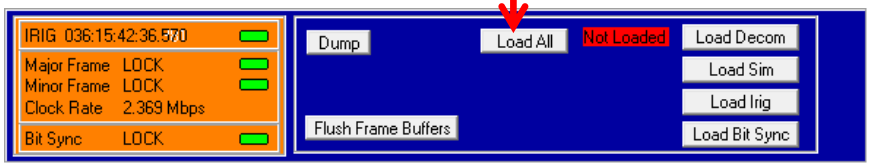
From the above numbers, we get **594.6/60 = 9.91 -> 11**.

From the Decom Tab, set **Frames Per Interrupt** to **11**,



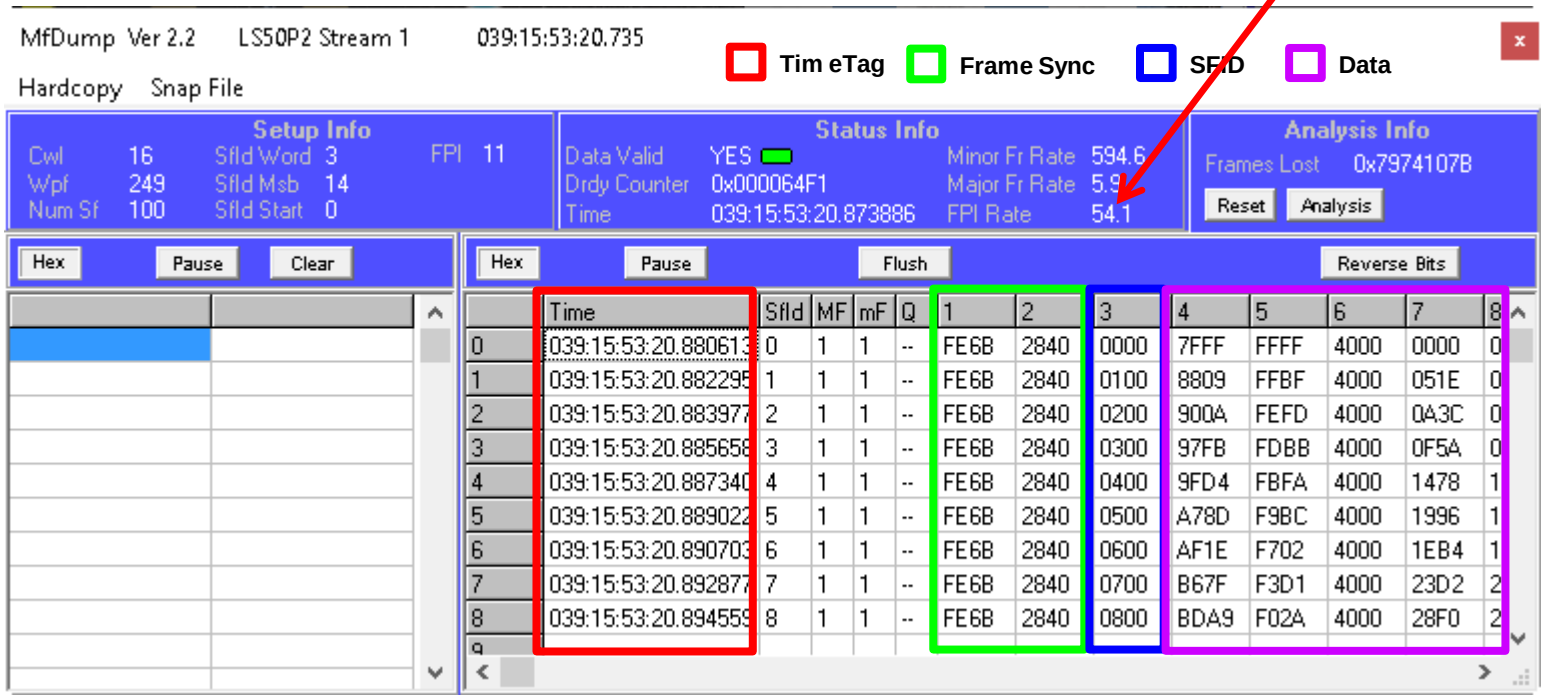
Set Proper Frames Per Interrupt

Click the **Load All Button**



then **Files>Save AS** to **TRAINING.SCS**

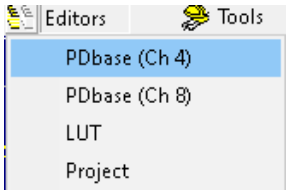
Now the FPI Rate should be below **60 Hz**



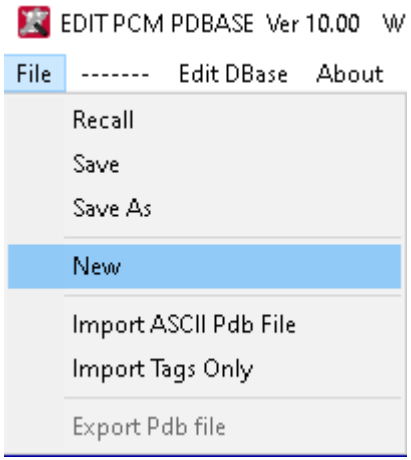
We will make a new Parameter Database (PDB) for this PCM Format. To do this we will start with the supplied **DEMO.PRJ** which already has parameters defined in **LDPS_10x_Training_Lesson-1.pdf**.

Build Training PCM Frame .PDB

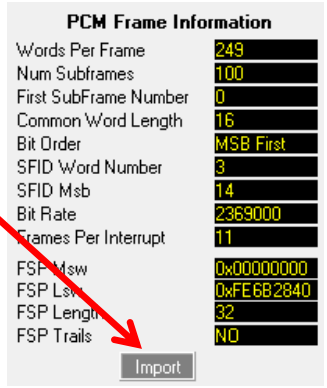
From the **LDPS Server** Control Banner, Select **Editors>Project**:



From the **Edit PCM PDBASE** Banner, Select: **New**

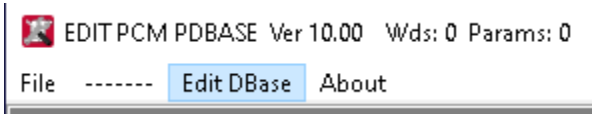


In the **PDM Frame Information** Window, Click the **Import** Button,

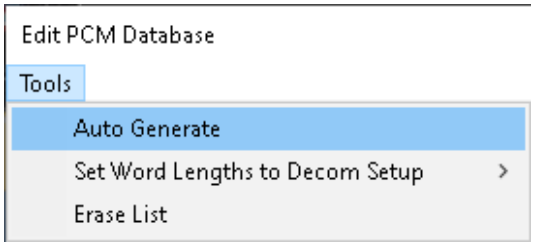


Then Select and Open **TRAINING.SCS.**

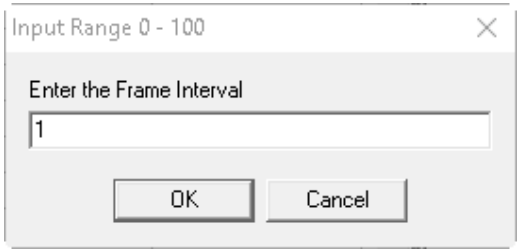
From the **Edit PCM PDBASE** Banner Select **Edit Dbase:**



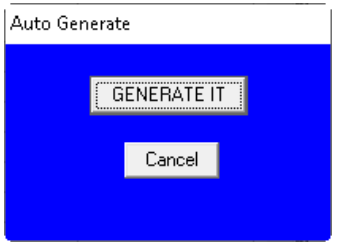
From the **Edit PCM Database** Banner, select **Tools>Auto Generate**:



Set the value to **1:**.

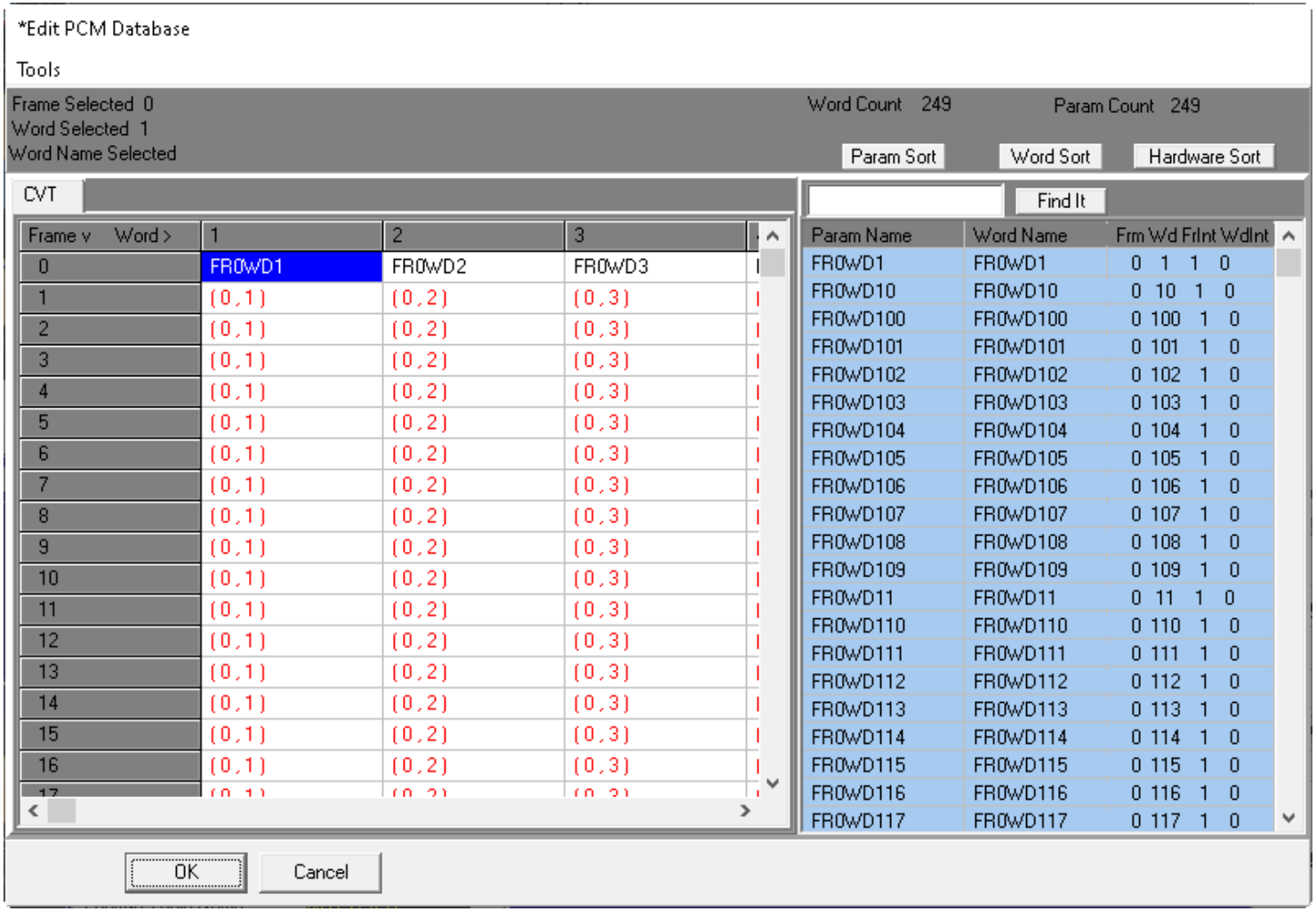


Click **OK**



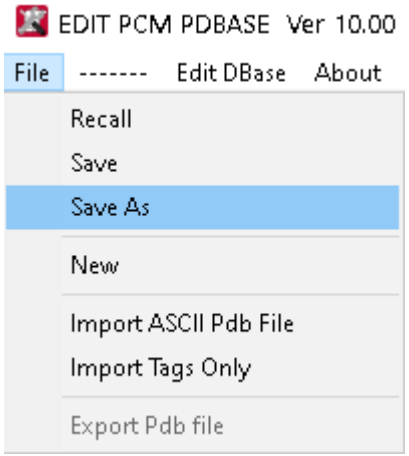
Click **Generate IT**

This has filled the Pdatabase with basic parameters

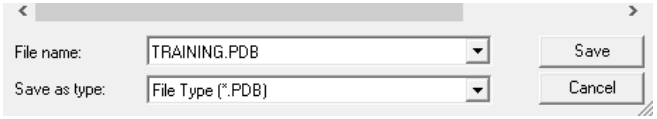


Build Training PCM Frame .PDB 3

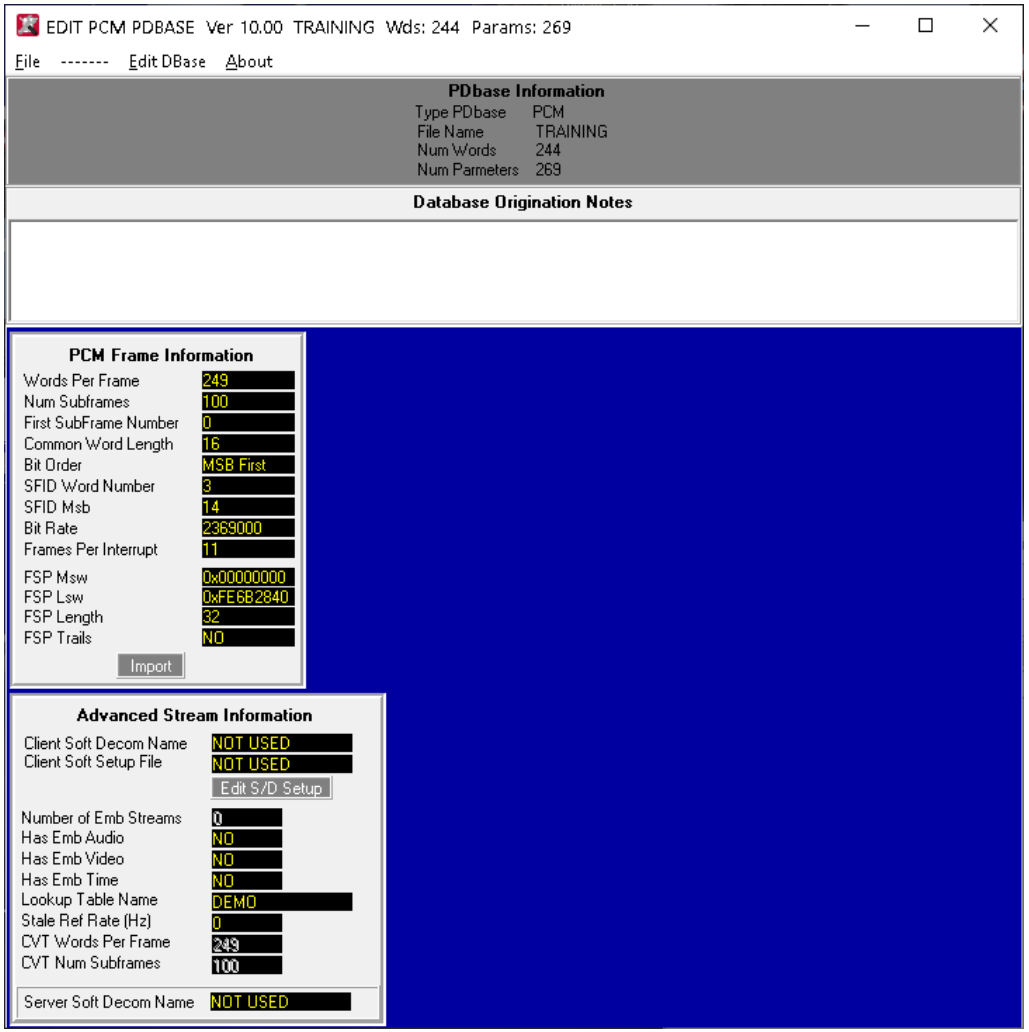
From the **EDIT PCM PDBASE** Banner Select **File>Save As**



Type: **TRAINING.PDB**

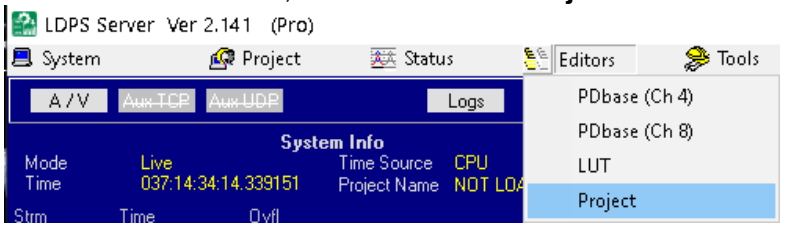


Then Click OK.

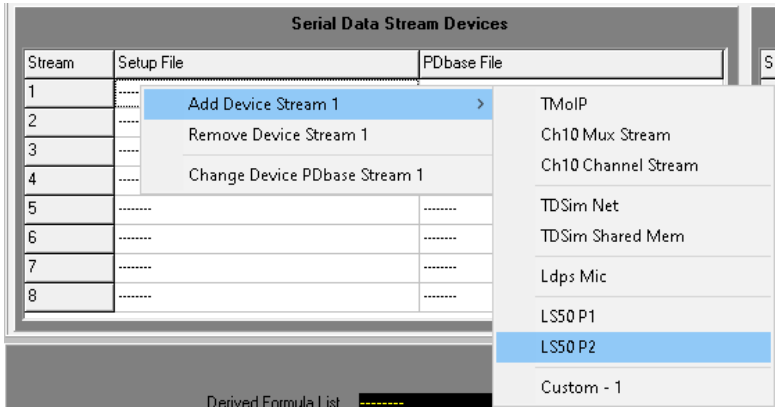


Build Training Project

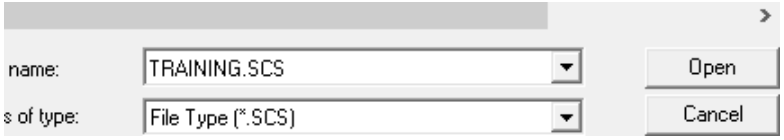
In the **Server** Banner, select: **Editors>Project**



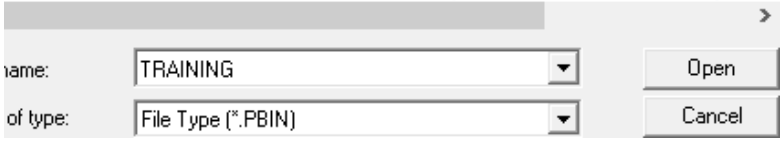
Right-Click in the **Serial Data Stream Cards** Section for Card 1: Select **Add Card> LS50 P2**

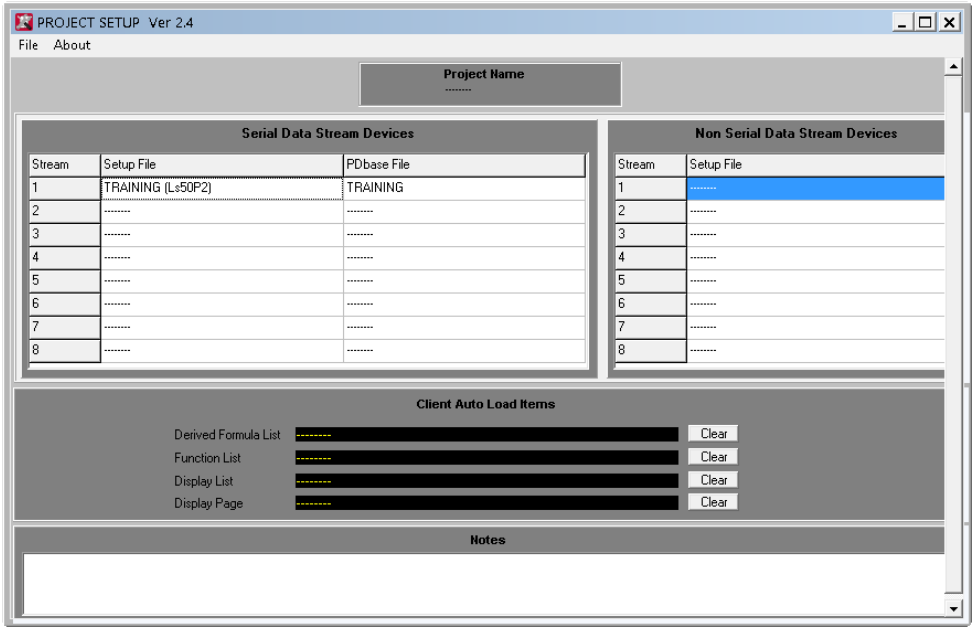


Open **TRAINING.SCS**

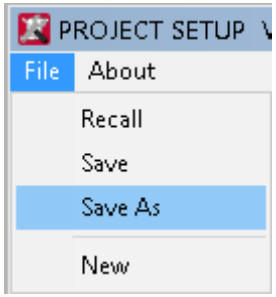


Open **TRAINING.PBIN**

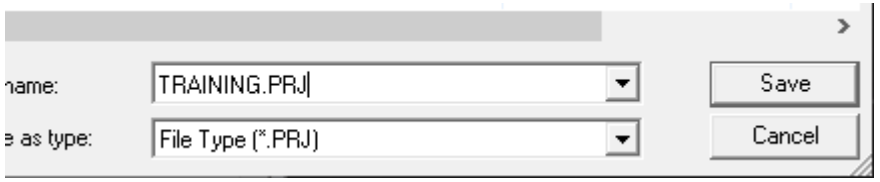




From the PROJECT SETUP Banner, Select **File>Save As**:



TRAINING.PRJ



Testing the initial Training Project

At this point, you have enough information to record your basic PCM stream using the onboard Simulator and you can even replay the data:

From the **Server** select **Project>Load**: **TRAINING.PRJ**

You can now Click **Record** Button to archive some of the simulated data.

The **Data Space Remaining** display will decrease with time

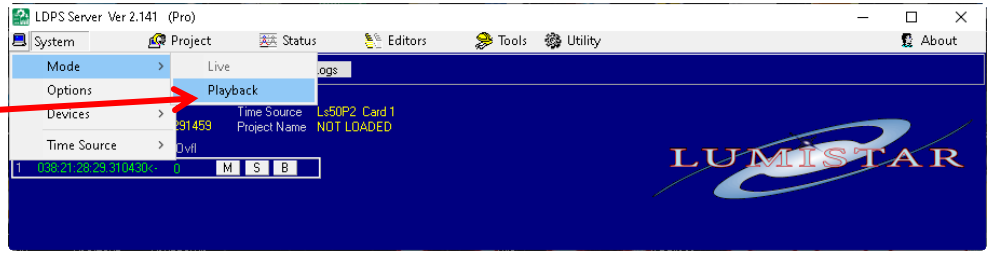
Click the **Record** button again to stop recording.

Close the Loaded Project from the Server **Project>Close**

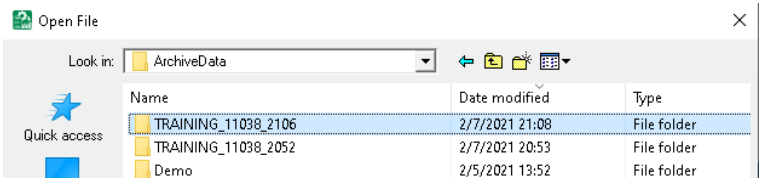
Testing the initial Training Project 2

Put the **Server** in the **Playback** mode:

Select: **System>Mode>Playback**

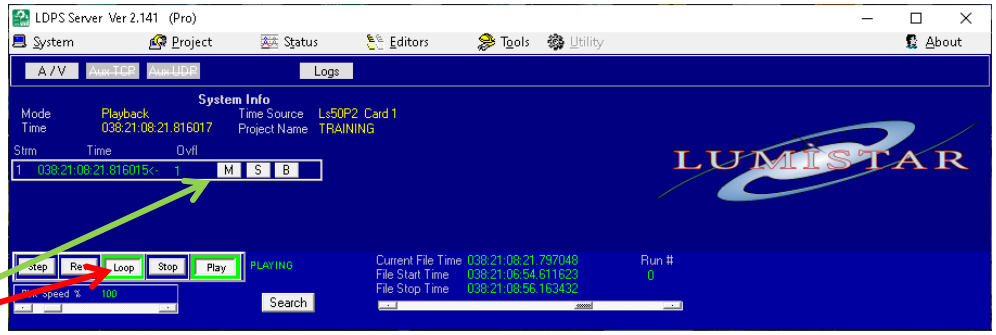


Select **TRAINING_11038_2106_11038_2106** will differ, then Click **OPEN**:



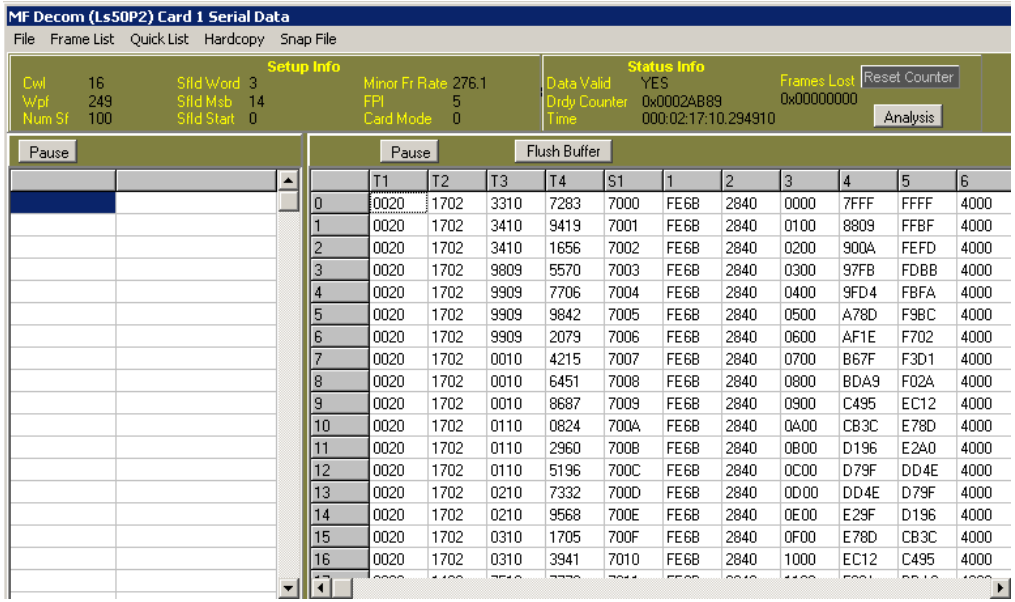
Double-click **TRAINING.PRJ**

Click the **Open** Button



Click the **Loop** Button

To display the Major Frame Buffer (CVT) Click the M Button

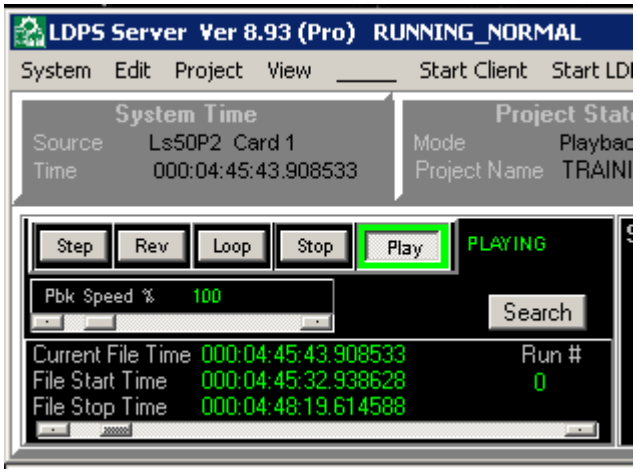


	T1	T2	T3	T4	S1	1	2	3	4	5	6
0	0020	1702	3310	7283	7000	FE6B	2840	0000	7FFF	FFFF	4000
1	0020	1702	3410	9419	7001	FE6B	2840	0100	8809	FFBF	4000
2	0020	1702	3410	1656	7002	FE6B	2840	0200	900A	FEFD	4000
3	0020	1702	9809	5570	7003	FE6B	2840	0300	97FB	FDBB	4000
4	0020	1702	9909	7706	7004	FE6B	2840	0400	9FD4	FBFA	4000
5	0020	1702	9909	9842	7005	FE6B	2840	0500	A78D	F9BC	4000
6	0020	1702	9909	2079	7006	FE6B	2840	0600	AF1E	F702	4000
7	0020	1702	0010	4215	7007	FE6B	2840	0700	B67F	F3D1	4000
8	0020	1702	0010	6451	7008	FE6B	2840	0800	BDA9	F02A	4000
9	0020	1702	0010	8687	7009	FE6B	2840	0900	C495	EC12	4000
10	0020	1702	0110	0824	700A	FE6B	2840	0A00	CB3C	E78D	4000
11	0020	1702	0110	2960	700B	FE6B	2840	0B00	D196	E2A0	4000
12	0020	1702	0110	5196	700C	FE6B	2840	0C00	D79F	DD4E	4000
13	0020	1702	0210	7332	700D	FE6B	2840	0D00	DD4E	D79F	4000
14	0020	1702	0210	9568	700E	FE6B	2840	0E00	E29F	D196	4000
15	0020	1702	0310	1705	700F	FE6B	2840	0F00	E78D	CB3C	4000
16	0020	1702	0310	3941	7010	FE6B	2840	1000	EC12	C495	4000

Testing the initial Training Project 3

Click **Flush Buffer** to clear out stale data

Click the **Play** Button on the **Server** Control

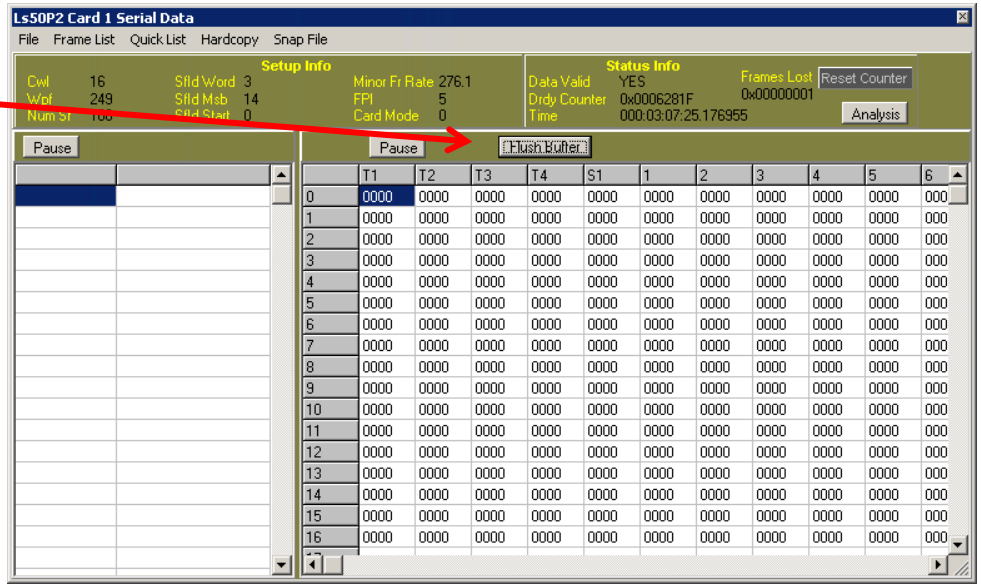


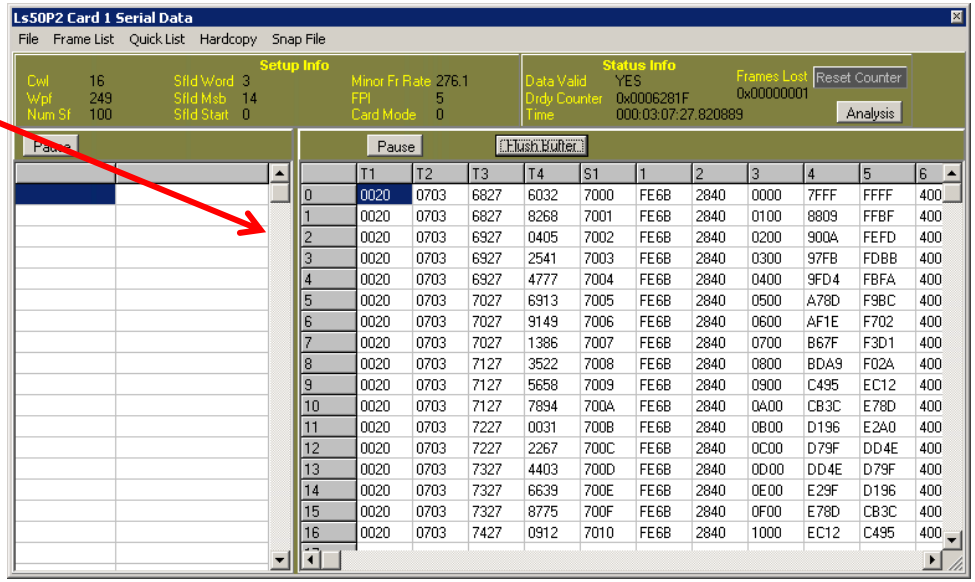
You will see data playing though the Serial Data Frame Buffer.

You can **Loop, Stop, Reverse & Stop** the data.

You can Slow it down, speed it up, move through the data with the Scroll control.

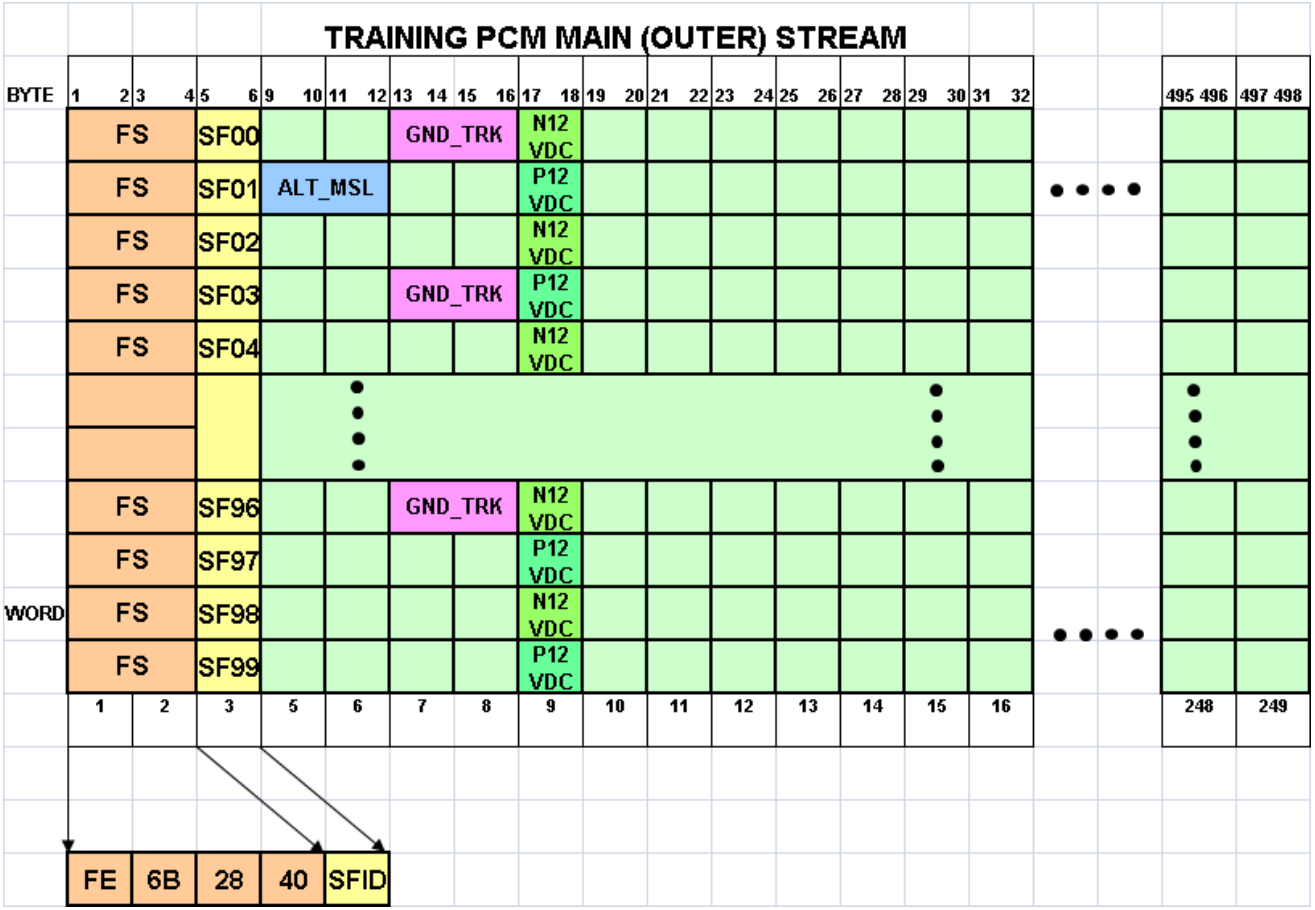
You can search for a time in the data, etc.





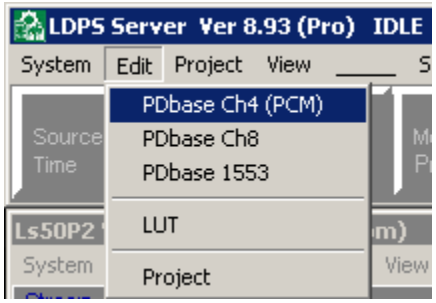
LDPS_10x
Training Parameters to be Created

Variable Name	Description	Type (Size)	Bias	Scale	Scale Units	Frame Start	Frame Interval	Word Start	Word Interval	Starting Bit	
FS	BARKER CODE	INT_U (32 bits)	0.000000E+00	1.000000E+00		0	1	1	0	15	
SFID	SUBFRAME ID	INT_U (8 bits)	0.000000E+00	1.000000E+00		0	1	3	0	15	8
ALT_MSL	ALTITUDE MSL	FLOAT (32 bits)	0.000000E+00	3.280840E+00	FT	2	0	5	0	15	
GND_TRK	GROUND TRACK ANGLE	FLOAT (32 bits)	0.000000E+00	5.729578E+01	DEG	0	4	7	0	15	
N12VDC	-12VDC	INT_U (8 bits)	0.0000000E+00	1.1110000E-01	VOLT	0	2	9	0	7	0
P12VDC	+12VDC	INT_U (8 bits)	0.0000000E+00	1.1110000E-01	VOLT	1	2	9	0	15	8



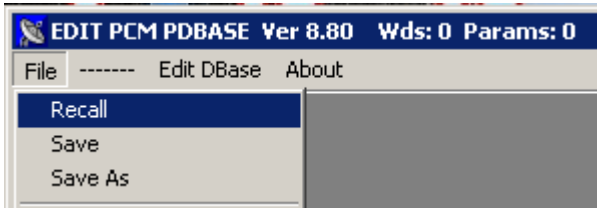
Populating The Training .PDB

In the **Server** Banner, select: **Edit>PDBase Ch4 (PCM)**

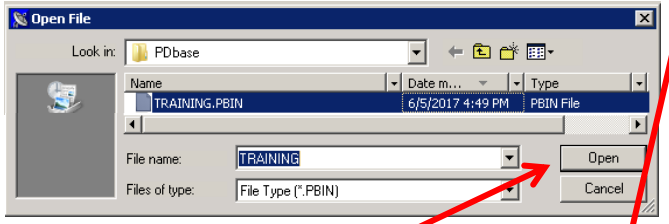


Recall the Training database

Select **File>Recall,**

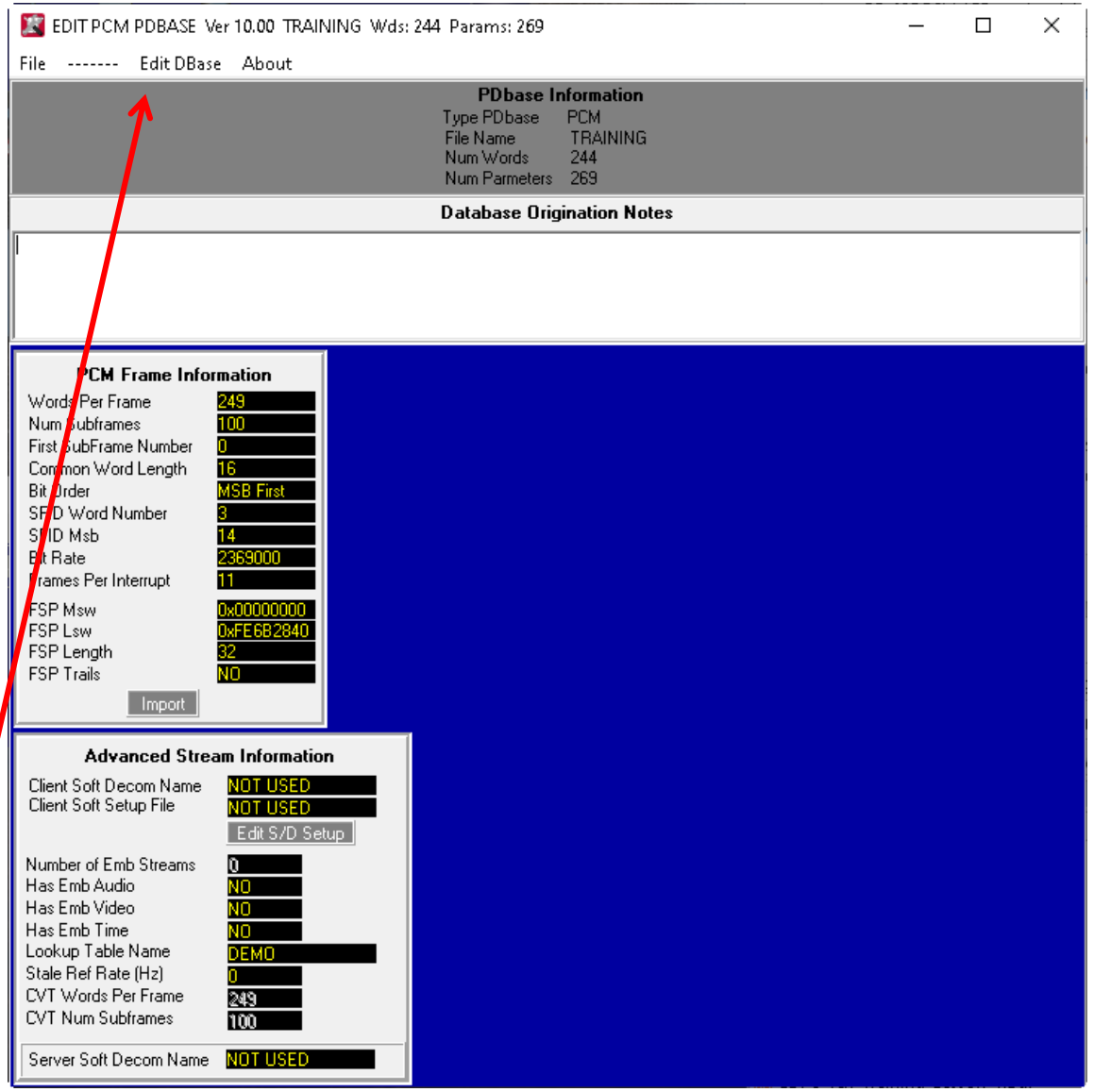


Select: **TRAINING.PBIN**



Click the **Open** Button

Click **Edit DBase**

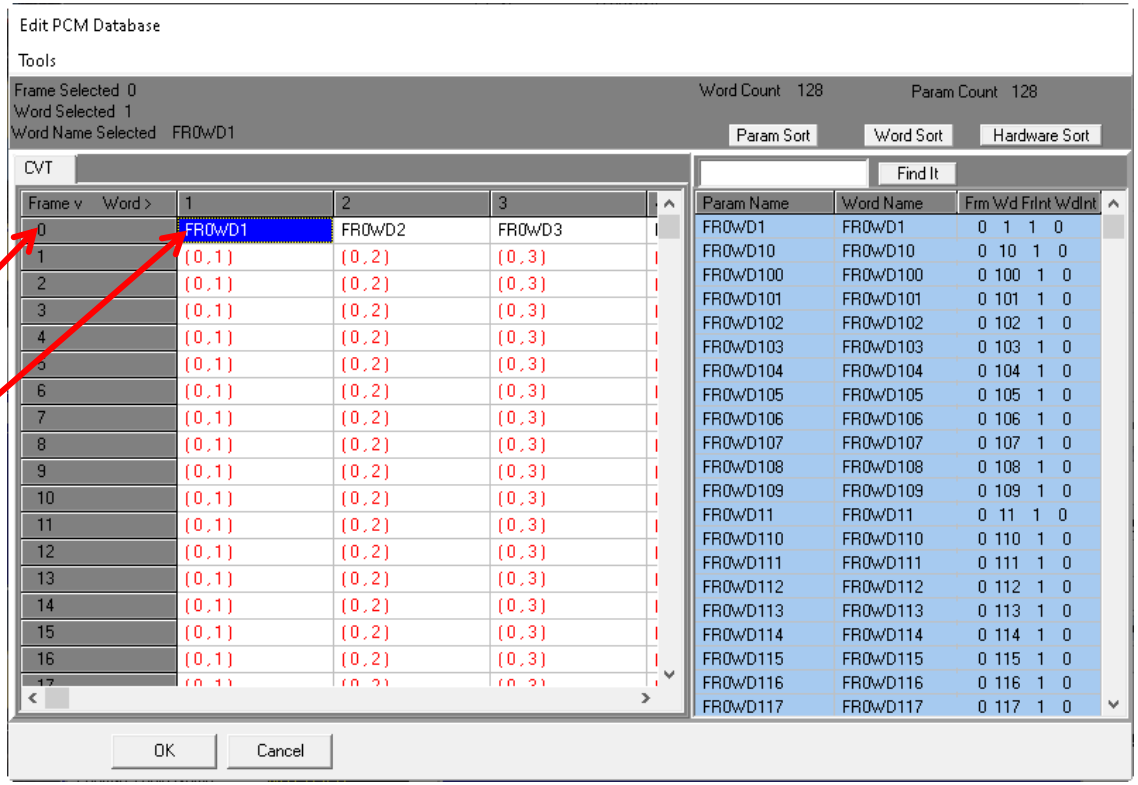


Populating The Training .PDB 2

On the **EDIT PCM Database** Window,

Starting with the definition of **FS**

Variable Name	FS
Description	BARKER CODE
Type (Size)	INT_U (32 bits)
Bias	0.000000E+00
Scale	1.000000E+00
Scale Units	
Frame Start	0
Frame Interval	1
Word Start	1
Word Interval	0
Starting Bit	15



Right-Click in **FR0WD1** and Select:

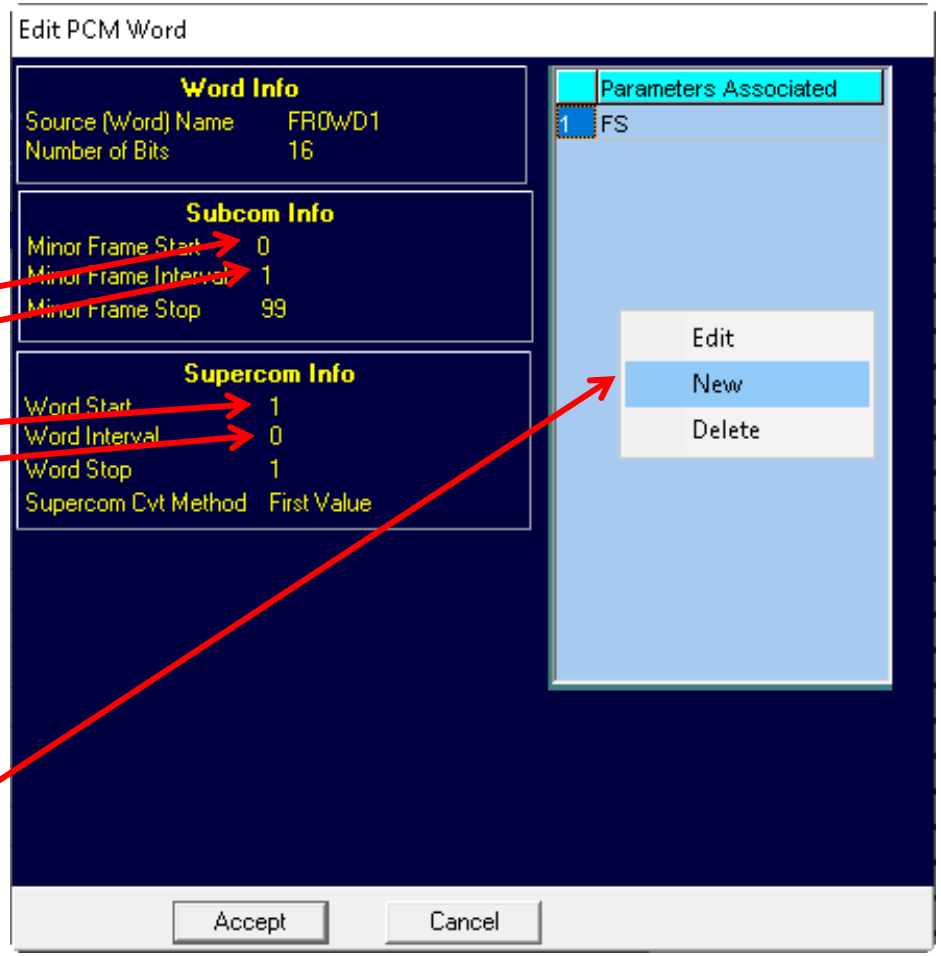
Edit Word FR0WD1

Populating The Training .PDB 3

This is a **Prime** Parameter

Right Click in the **Subcom Info** and the **Supercom Info** area and verify the indicated values below:

Variable Name	FS
Description	BARKER CODE
Type (Size)	INT_U (32 bits)
Bias	0.000000E+00
Scale	1.000000E+00
Scale Units	
Frame Start	0
Frame Interval	1
Word Start	1
Word Interval	0
Starting Bit	15

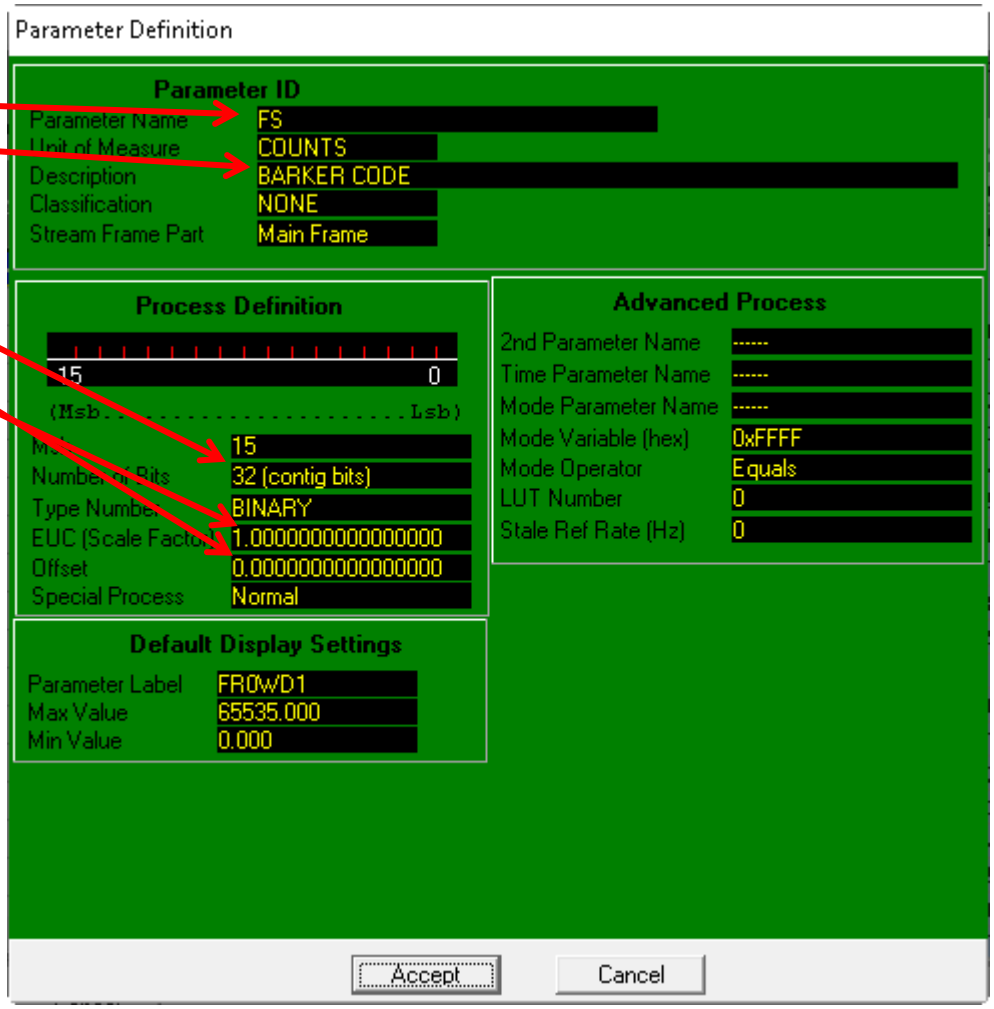


Right-click in the **Parameters Associated** Block and Select **New**

Populating The Training .PDB 4

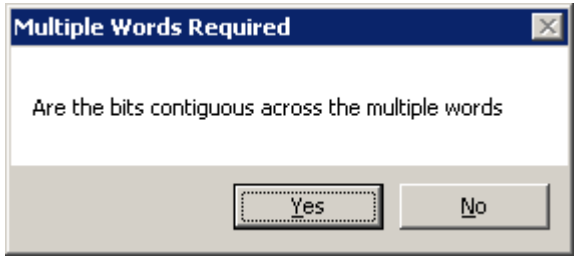
Right-click in the appropriate areas and Add the information shown

Variable Name	FS
Description	BARKER CODE
Type (Size)	INT U (32 bits)
Bias	0.000000E+00
Scale	1.000000E+00
Scale Units	
Frame Start	0
Frame Interval	1
Word Start	1
Word Interval	0
Starting Bit	15



When complete, Click **Accept** on both the **Parameter Definition** and the **Edit PCM Word** Windows

Note: Entering parameters larger than 16 bits will show the screen below

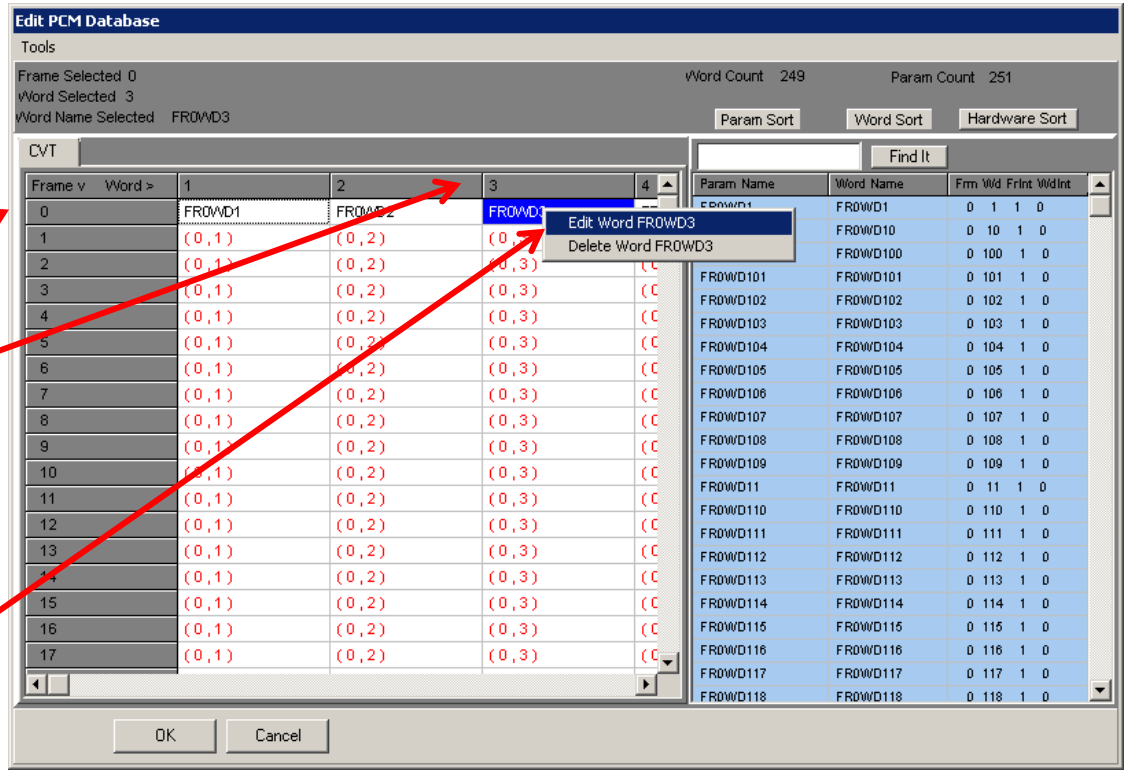


Click **Yes**

Populating The Training .PDB 5

Enter the **SFID** definition:

Variable Name	SFID
Description	SUBFRAME ID
Type (Size)	INT_U (8 bits)
Bias	0.000000E+00
Scale	1.000000E+00
Scale Units	
Frame Start	0
Frame Interval	1
Word Start	3
Word Interval	0
Starting Bit	15 8



Right-Click in **FR0WD3** and Select:

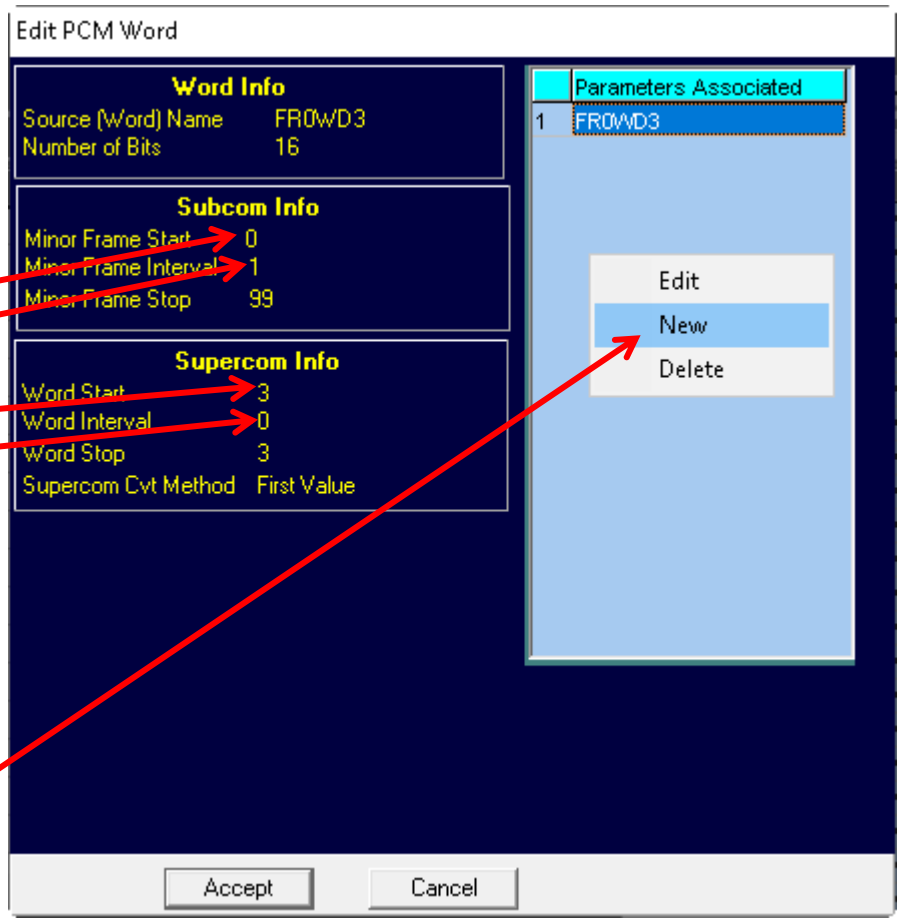
Edit Word FR0WD3

Populating The Training .PDB 6

This is another **Prime** Parameter

Right Click in the **Subcom Info** and the **Supercom Info** area and verify the indicated values below:

Variable Name	SFID
Description	SUBFRAME ID
Type (Size)	INT_U (8 bits)
Bias	0.000000E+00
Scale	1.000000E+00
Scale Units	
Frame Start	0
Frame Interval	1
Word Start	3
Word Interval	0
Starting Bit	15 8

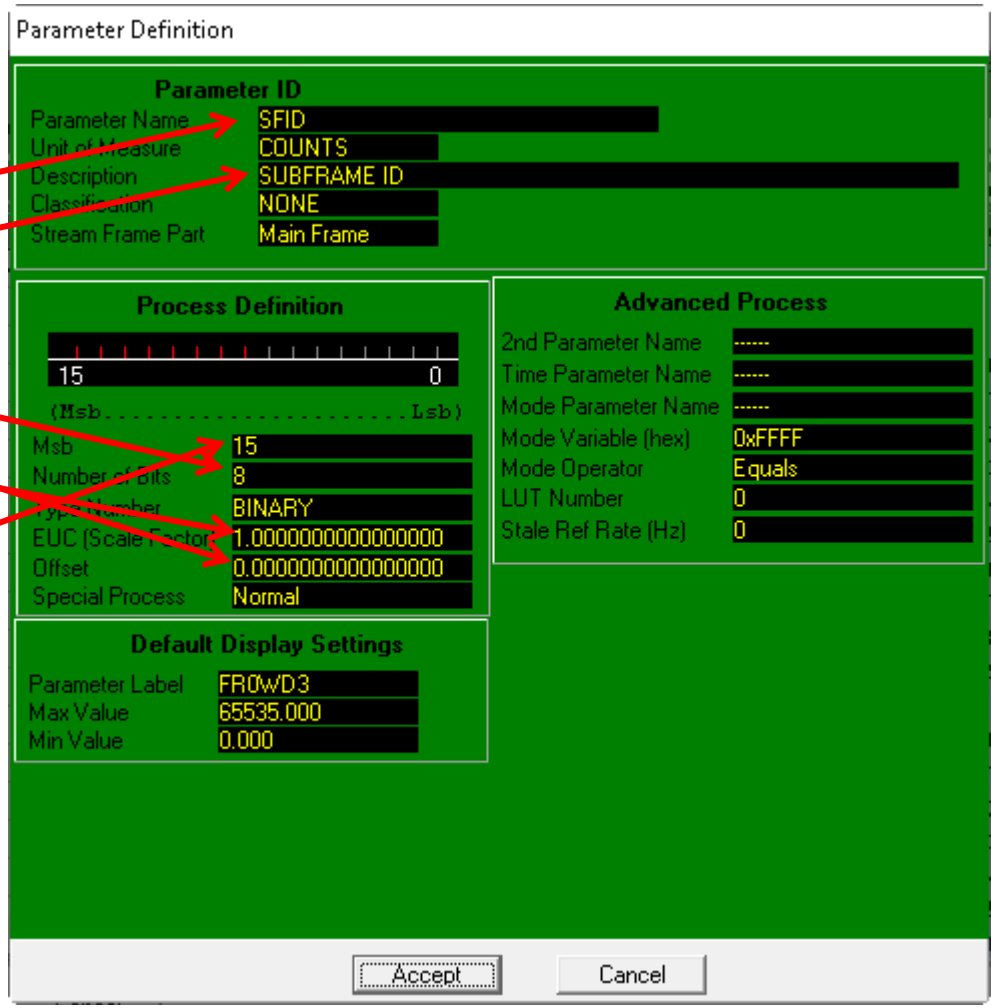


Right-click in the **Parameters Associated** Block and Select **New**

Populating The Training .PDB 7

Right-click in the appropriate areas and Add the information shown

Variable Name	SFID
Description	SUBFRAME ID
Type (Size)	INT U (8 bits)
Bias	0.000000E+00
Scale	1.000000E+00
Scale Units	
Frame Start	0
Frame Interval	1
Word Start	3
Word Interval	0
Starting Bit	15 8



When complete, Click **Accept** on both the **Parameter Definition** and the **Edit PCM Word** Windows

Populating The Training .PDB 8

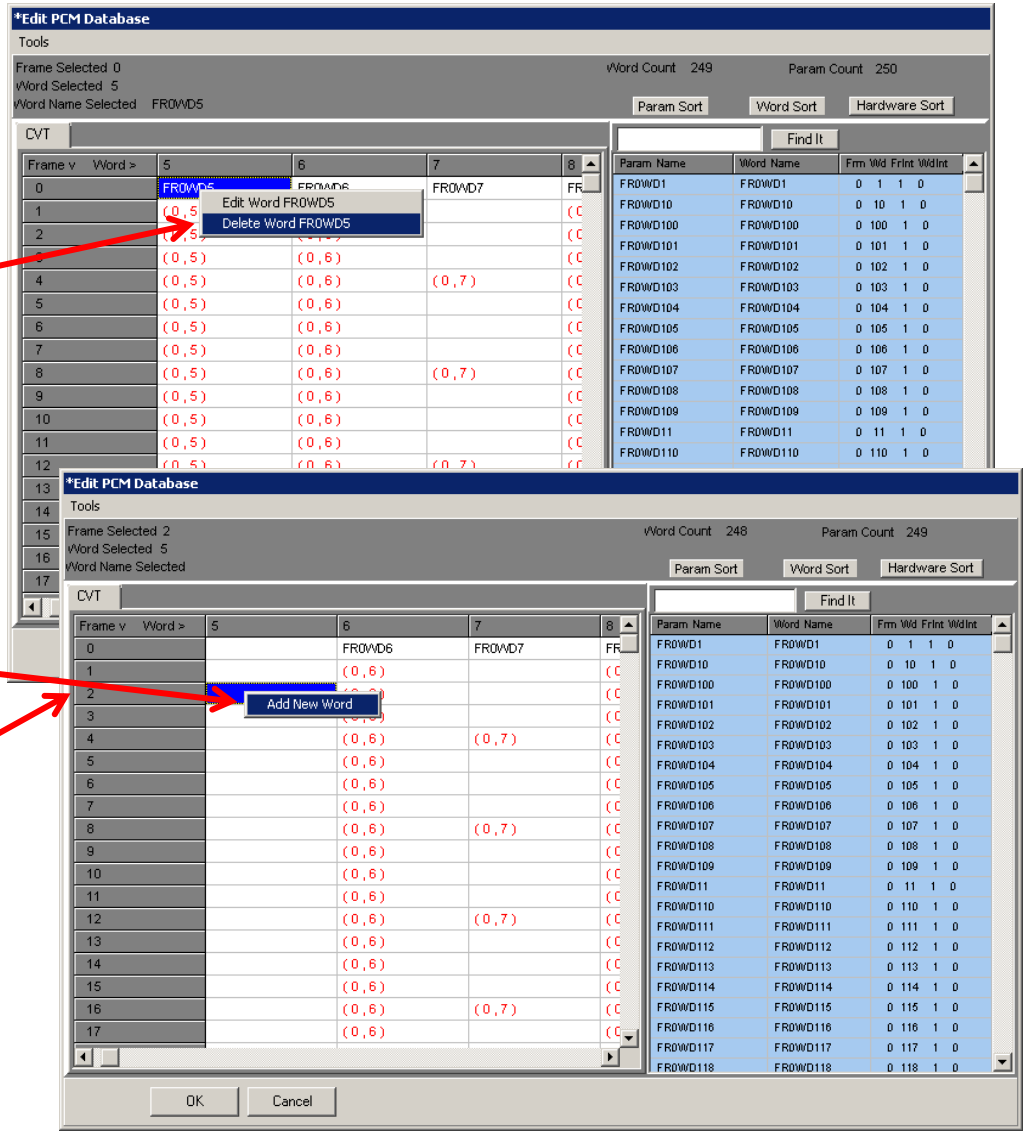
The definition of **ALT_MSL** is **Subcommutated**, Delete existing **Prime** word

Right - click on **FR0WD5** and Select: **Delete Word FR0WD5**

Click **FR0WD6** then back to **FR0WD5**

Right - click on **FR2WD5** and Select: **Add New Word**

Variable Name	ALT_MSL
Description	ALTITUDE MSL
Type (Size)	FLOAT (32 bits)
Bias	0.000000E+00
Scale	3.280840E+00
Scale Units	FT
Frame Start	2
Frame Interval	0
Word Start	5
Word Interval	0
Starting Bit	15



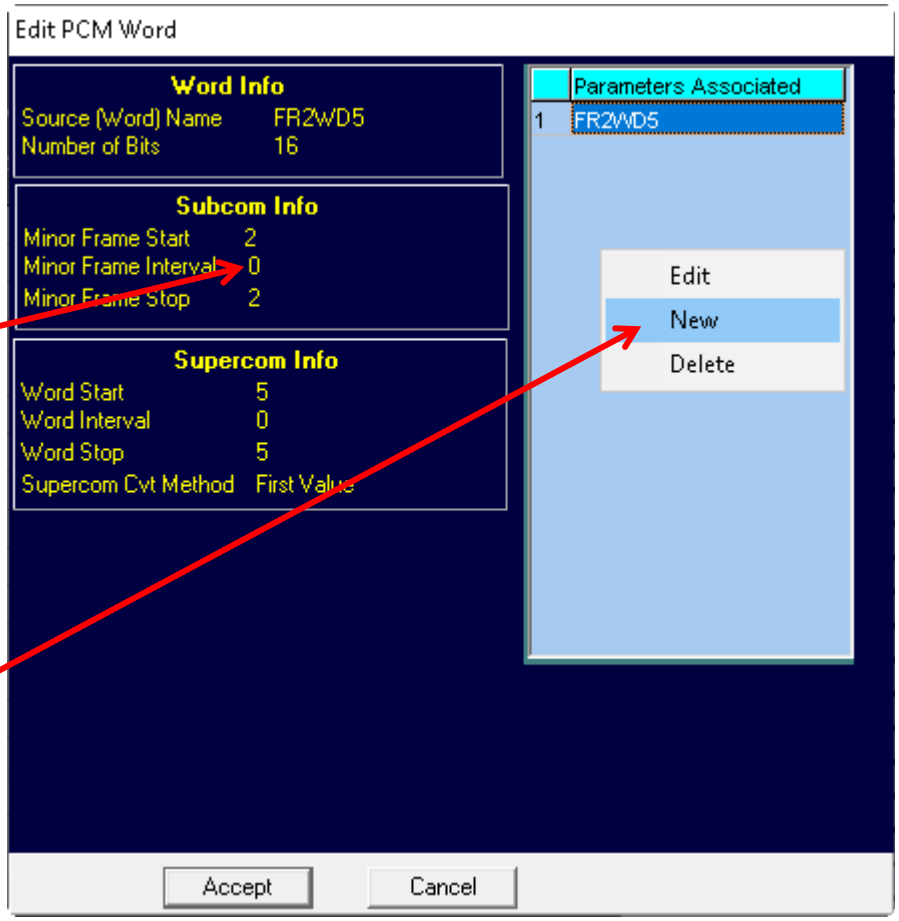
Populating The Training .PDB 9

Right Click in the **Subcom Info** and **Supercom Info** area set up the proper PCM Word values:

Variable Name	ALT_MSL
Description	ALTITUDE MSL
Type (Size)	FLOAT (32 bits)
Bias	0.000000E+00
Scale	3.280840E+00
Scale Units	FT
Frame Start	2
Frame Interval	0
Word Start	5
Word Interval	0
Starting Bit	15

Now that we have proper commutation, we need to add our new parameter

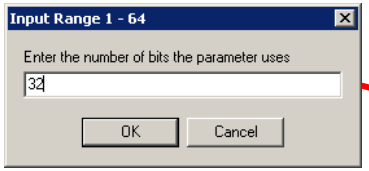
Right-click in the **Parameters Associated** Block and Select **New**

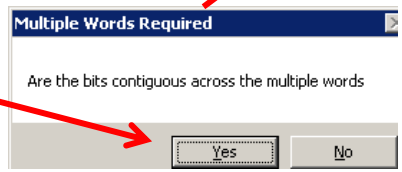


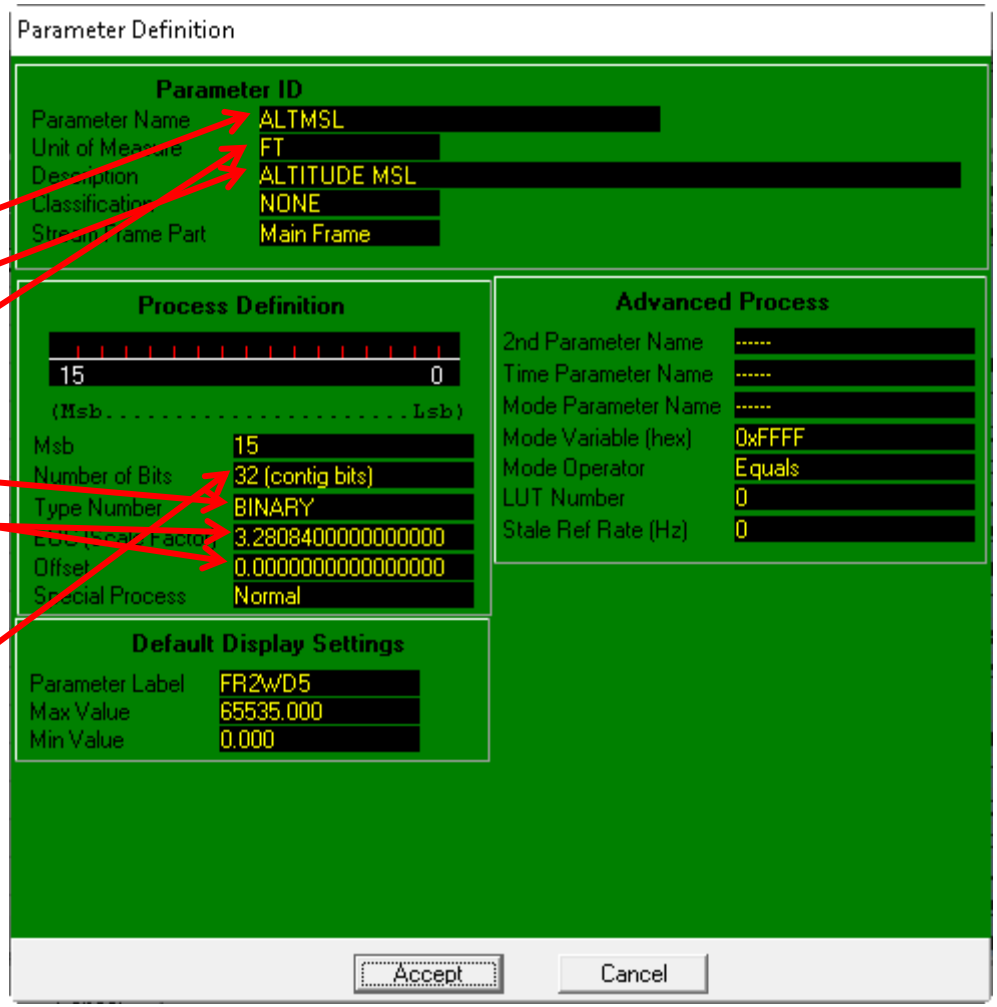
Populating The Training .PDB 10

Right Click in the **Subcom Info** and **Supercom Info** area and fill in the indicated values:

Variable Name	ALT_MSL
Description	ALTITUDE MSL
Type (Size)	FLOAT (32 bits)
Bias	0.000000E+00
Scale	3.280840E+00
Scale Units	FT
Frame Start	2
Frame Interval	0
Word Start	5
Word Interval	0
Starting Bit	15







When complete, Click **Accept** on both the **Parameter Definition** and the **Edit PCM Word** Windows

Populating The Training .PDB 11

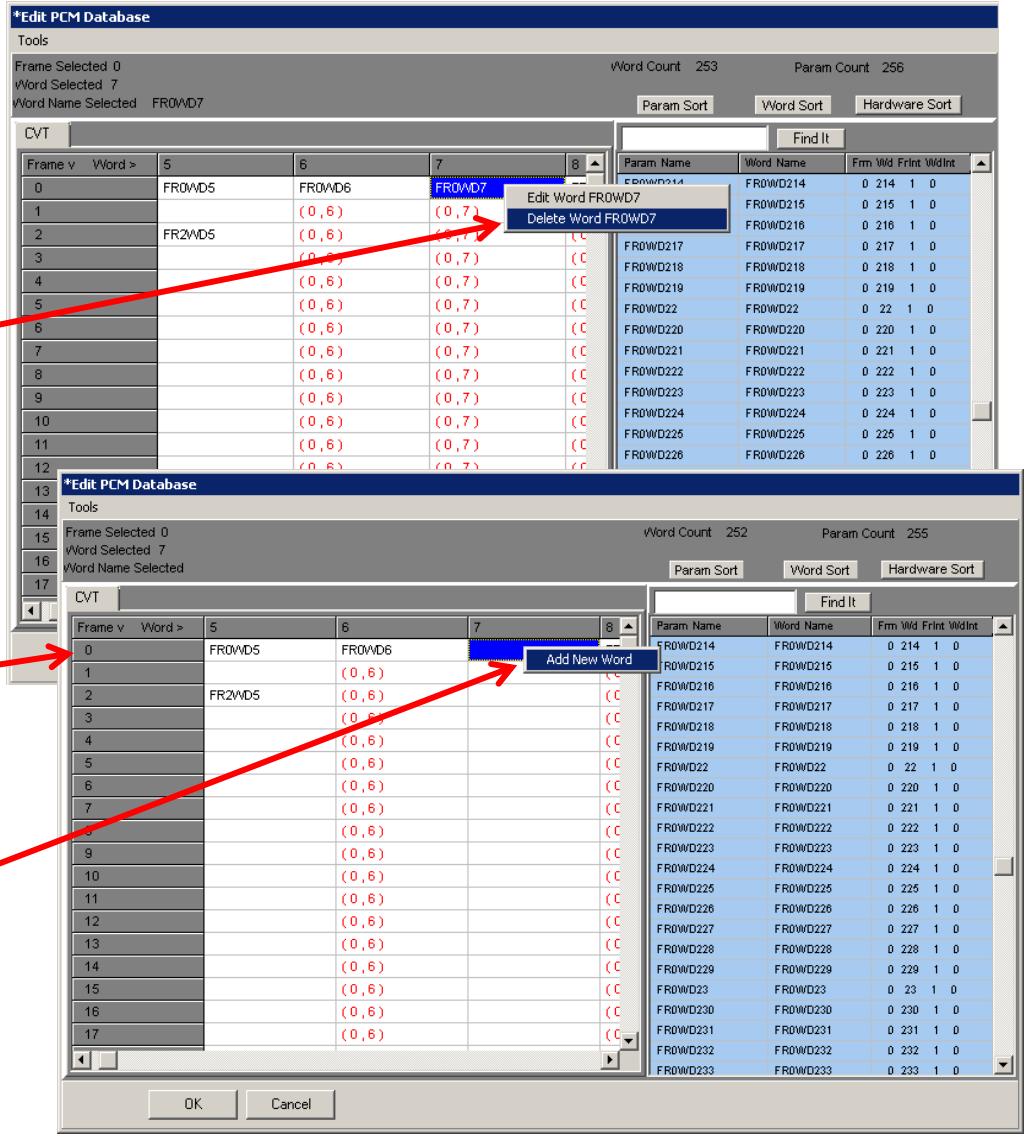
The definition of **GND_TRK** is **Subcommutated**, need to Delete existing **Prime** word **FR0WD7.**

Click **FR0WD6** then **FR0WD7**.

Right - click on **FR0WD7** and Select:

Delete Word FR0WD7

Variable Name	GND_TRK
Description	GROUND TRACK ANGLE
Type (Size)	FLOAT (32 bits)
Bias	0.000000E+00
Scale	5.729578E+01
Scale Units	DEG
Frame Start	0
Frame Interval	4
Word Start	7
Word Interval	0
Starting Bit	15



Right - click on **FR3WD7** and Select:

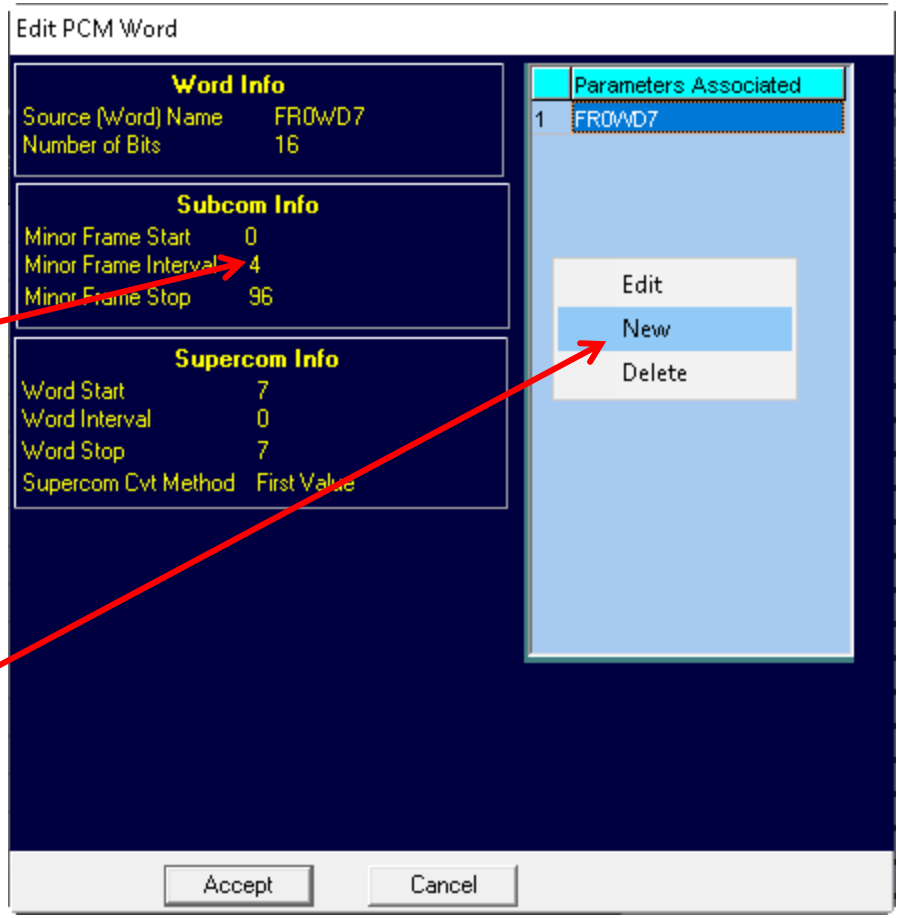
Add New Word

Right Click in the **Subcom Info** and **Supercom Info** area set up the proper PCM Word values:

Variable Name	GND_TRK
Description	GROUND TRACK ANGLE
Type (Size)	FLOAT (32 bits)
Bias	0.000000E+00
Scale	5.729578E+01
Scale Units	DEG
Frame Start	0
Frame Interval	4
Word Start	7
Word Interval	0
Starting Bit	15

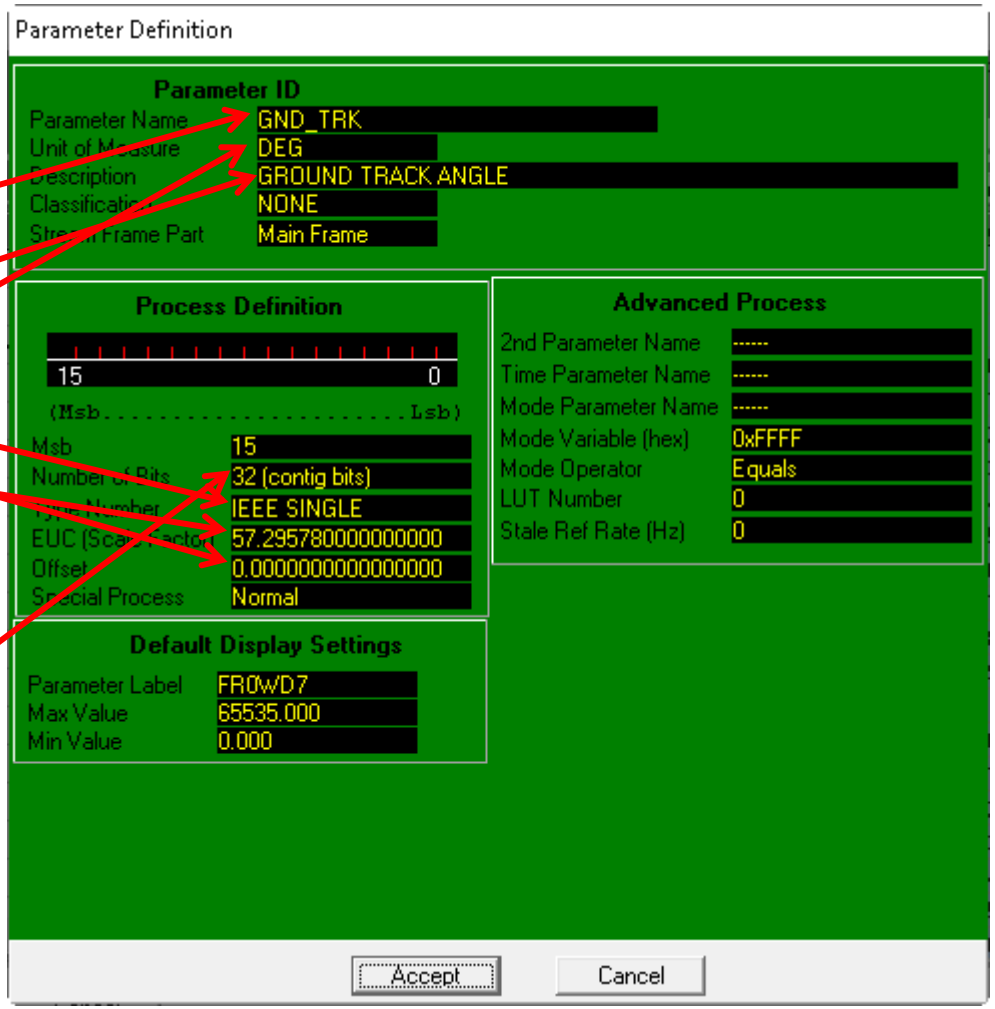
Now that we have proper commutation, we need to add our new parameter

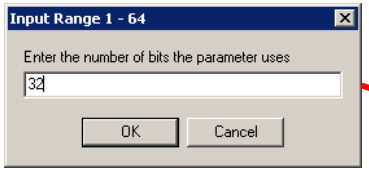
Right-click in the **Parameters Associated** Block and Select **New**

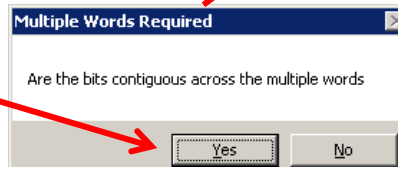


Right Click in the **Subcom Info** and **Supercom Info** area and fill in the indicated values:

Variable Name	GND_TRK
Description	GROUND TRACK ANGLE
Type (Size)	FLOAT (32 bits)
Bias	0.000000E+00
Scale	5.729578E+01
Scale Units	DEG
Frame Start	0
Frame Interval	4
Word Start	7
Word Interval	0
Starting Bit	15







When complete, Click **Accept** on both the **Parameter Definition** and the **Edit PCM Word** Windows

The definition of **N12VDC** is **Subcommutated**, Delete existing **Prime** word

Right - click on **FR0WD9** and Select:

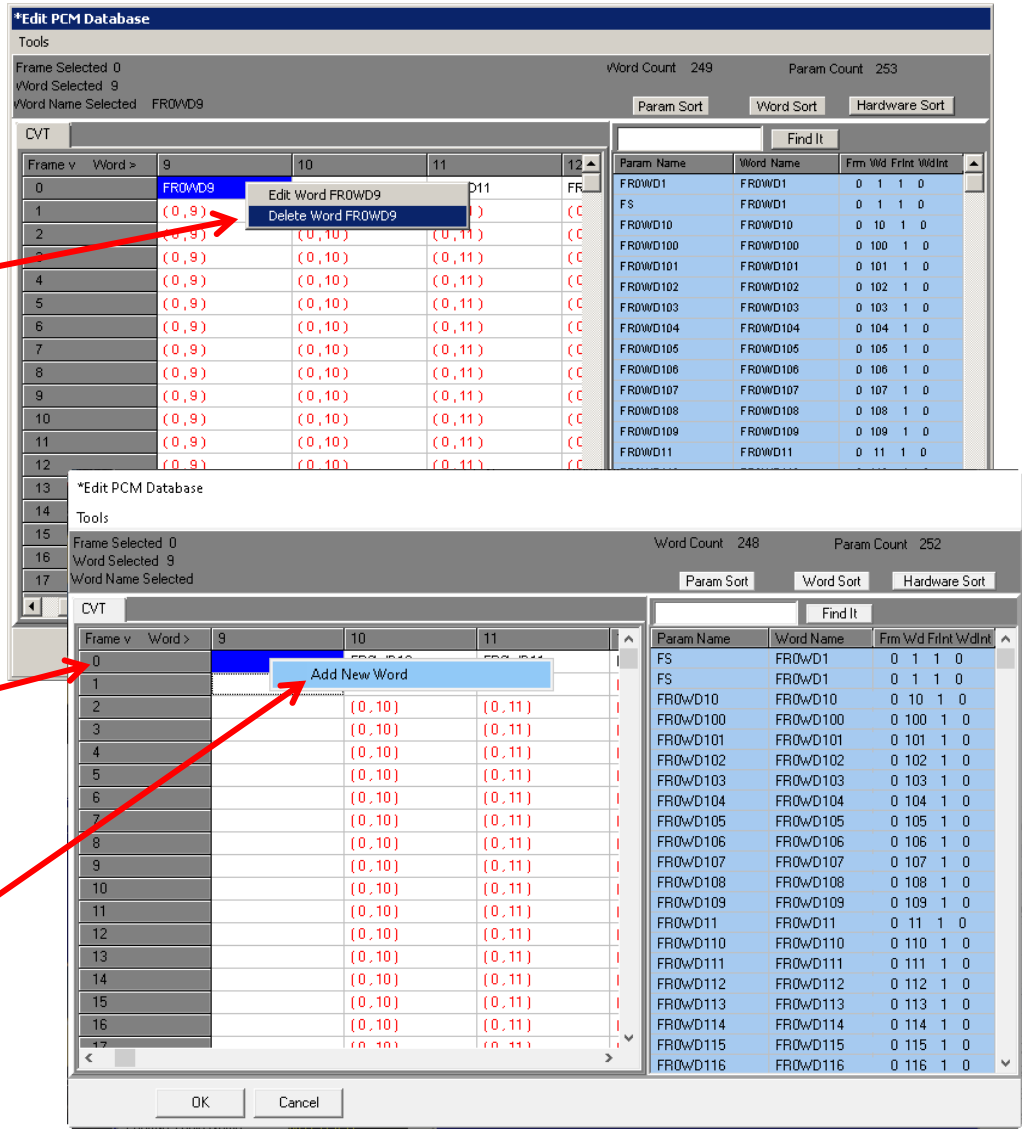
Delete Word FR0WD9

Click **FR0WD10** then **FR0WD9**.

Variable Name	N12VDC
Description	-12VDC
Type (Size)	INT_U (8 bits)
Bias	0.0000000E+00
Scale	1.1110000E-01
Scale Units	VOLT
Frame Start	0
Frame Interval	2
Word Start	9
Word Interval	0
Starting Bit	7 0

Right - click on **FR0WD9** and Select:

Add New Word

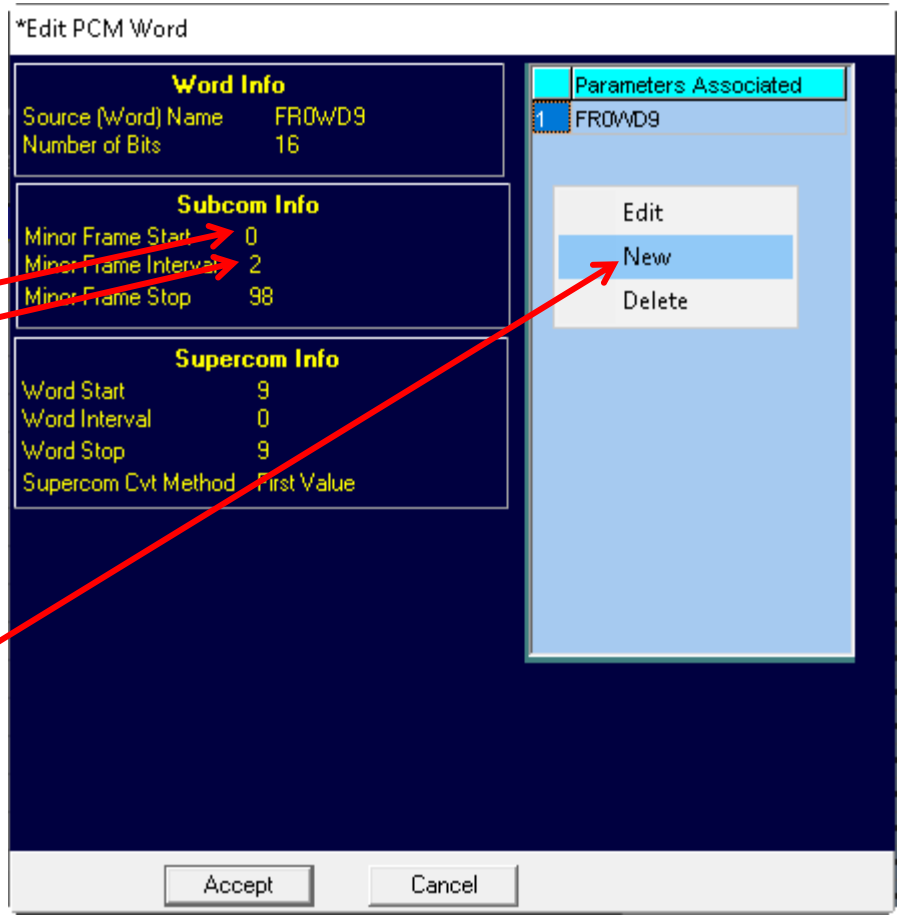


Right Click in the **Subcom Info** and **Supercom Info** area set up the proper PCM Word values:

Variable Name	N12VDC
Description	-12VDC
Type (Size)	INT_U (8 bits)
Bias	0.0000000E+00
Scale	1.1110000E-01
Scale Units	VOLT
Frame Start	0
Frame Interval	2
Word Start	9
Word Interval	0
Starting Bit	7 0

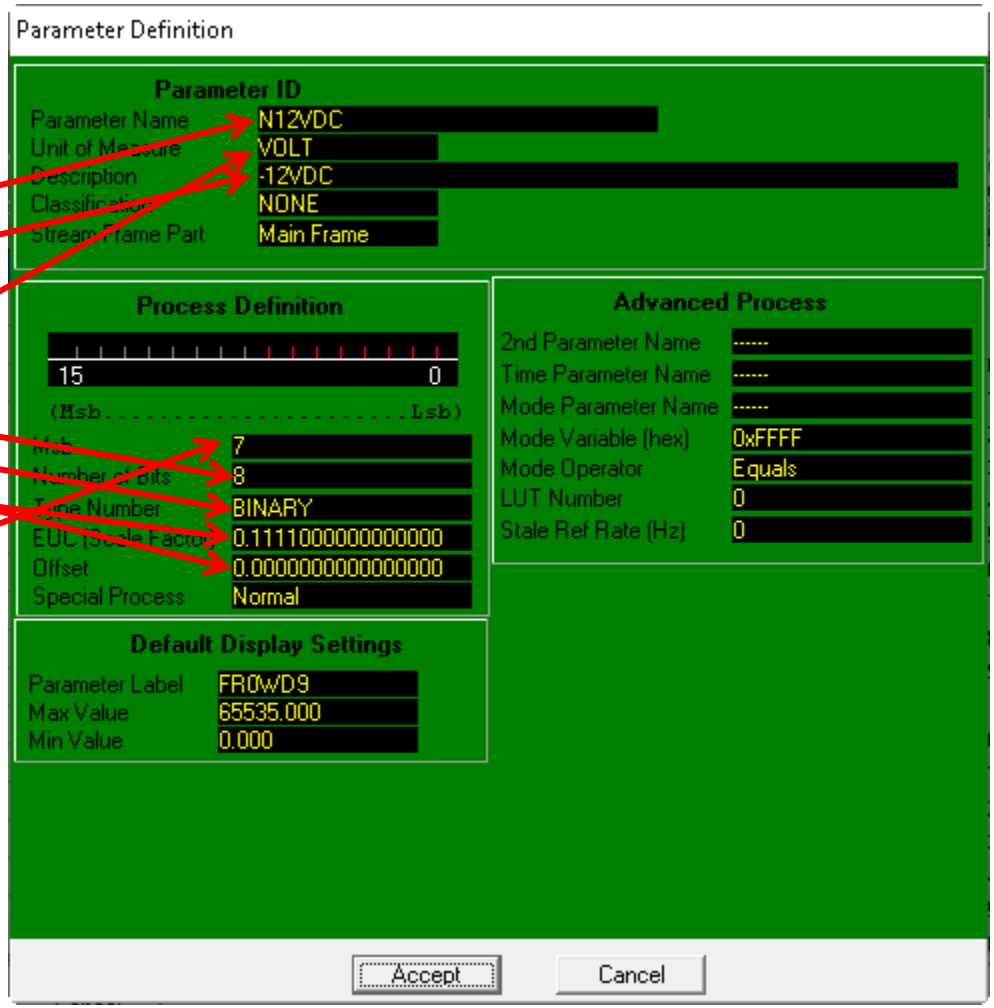
Now that we have proper commutation, we need to add our new parameter

Right-click in the **Parameters Associated** Block and Select **New**



Right Click in the **Subcom Info** and **Supercom Info** area and fill in the indicated values:

Variable Name	N12VDC
Description	-12VDC
Type (Size)	INT U (8 bits)
Bias	0.0000000E+00
Scale	1.1110000E-01
Scale Units	VOLT
Frame Start	2
Frame Interval	0
Word Start	9
Word Interval	0
Starting Bit	7 0

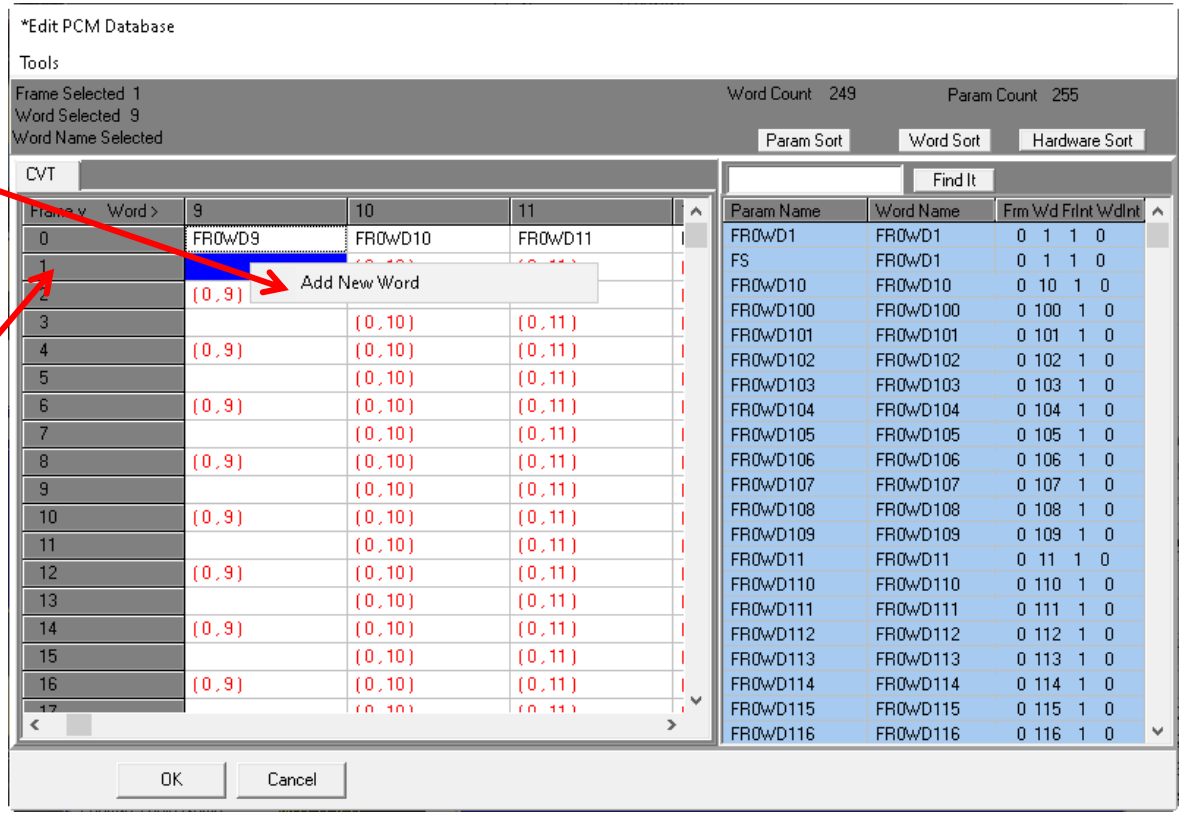


When complete, Click **Accept** on both the **Parameter Definition** and **Edit PCM Definition** Form.

The definition of **P12VDC** is **Subcommutated.**

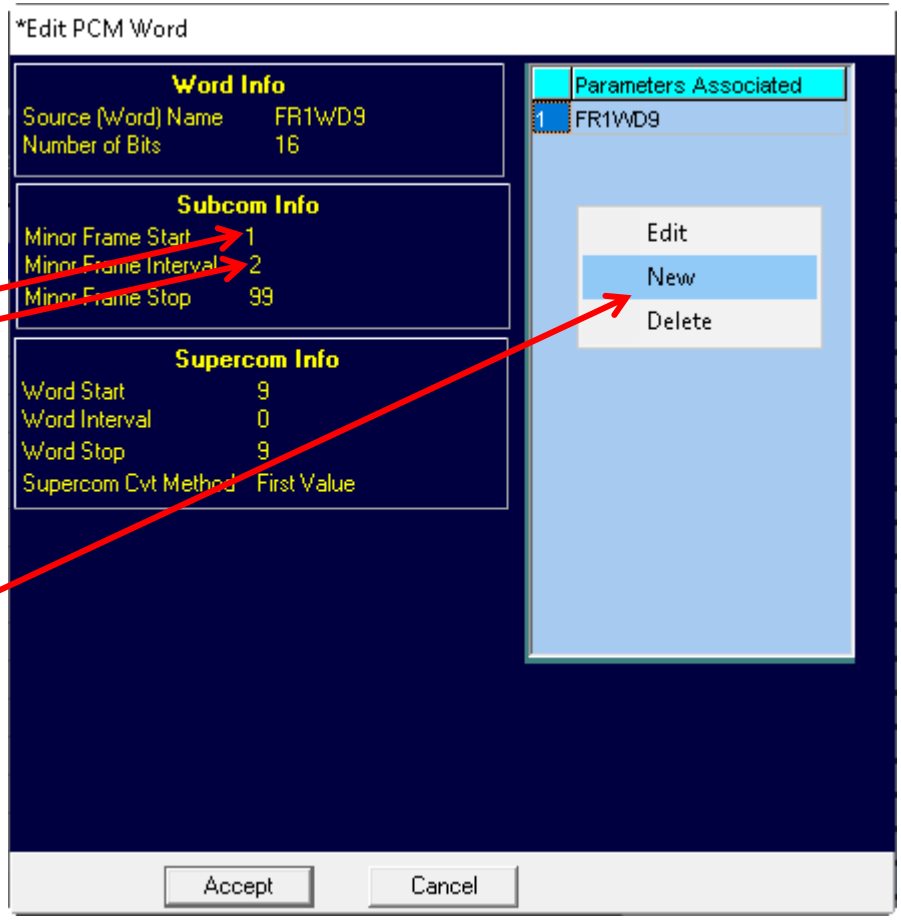
Right - click on **FR1WD9** and Select: **Add New Word**

Variable Name	P12VDC
Description	+12VDC
Type (Size)	INT_U (8 bits)
Bias	0.0000000E+00
Scale	1.1110000E-01
Scale Units	VOLT
Frame Start	1
Frame Interval	2
Word Start	9
Word Interval	0
Starting Bit	15 8



Right Click in the **Subcom Info** and **Supercom Info** area set up the proper PCM Word values:

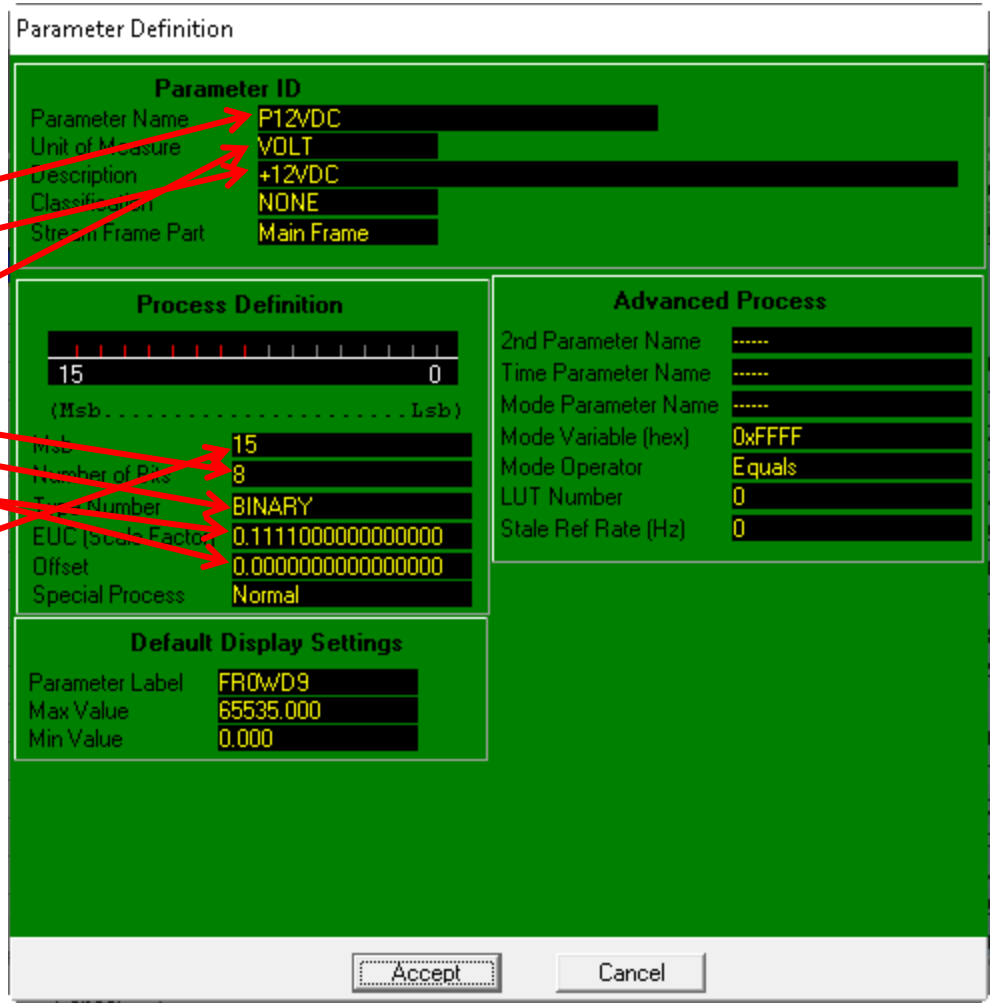
Variable Name	P12VDC
Description	+12VDC
Type (Size)	INT_U (8 bits)
Bias	0.0000000E+00
Scale	1.1110000E-01
Scale Units	VOLT
Frame Start	1
Frame Interval	2
Word Start	9
Word Interval	0
Starting Bit	15 8



Right-click in the **Parameters Associated** Block and Select **New**

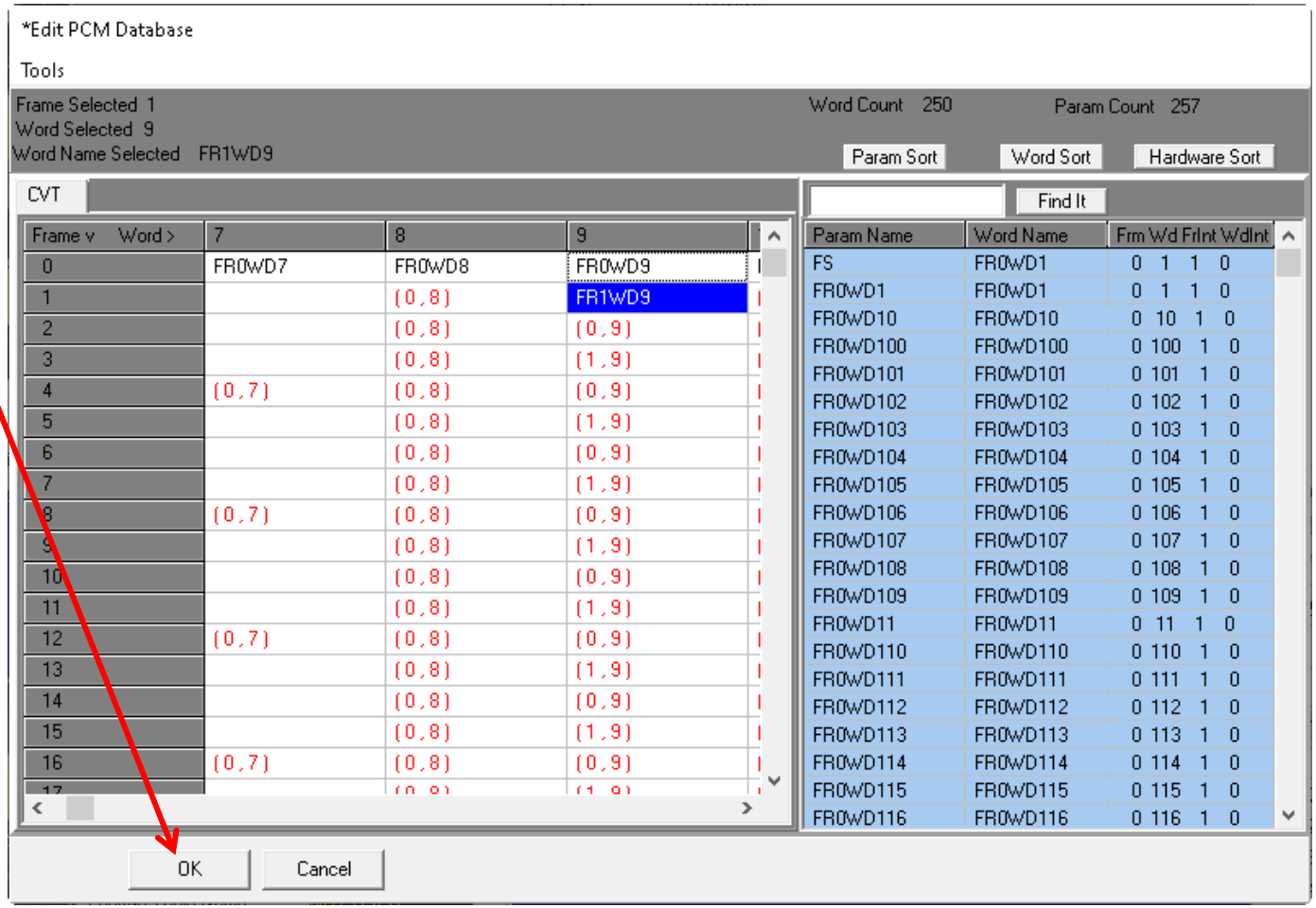
Right Click in the **Subcom Info** and **Supercom Info** area and fill in the indicated values:

Variable Name	P12VDC
Description	+12VDC
Type (Size)	INT_U (8 bits)
Bias	0.0000000E+00
Scale	1.1110000E-01
Scale Units	VOLT
Frame Start	1
Frame Interval	2
Word Start	9
Word Interval	0
Starting Bit	15 8



When complete, Click **Accept** on both the **Parameter Definition** and **Edit PCM Definition** Form.

Clock **OK**


*Edit PCM Database
Tools
Frame Selected 1
Word Selected 9
Word Name Selected FR1WD9
Word Count 250
Param Count 257
Param Sort
Word Sort
Hardware Sort
CVT
Find It
Frame v Word >
7
8
9
FR0WD7
FR0WD8
FR0WD9
FR1WD9
Param Name
Word Name
Frm Wd Frlnt Wdlnt
FS FR0WD1 0 1 1 0
FR0WD1 FR0WD1 0 1 1 0
FR0WD10 FR0WD10 0 10 1 0
FR0WD100 FR0WD100 0 100 1 0
FR0WD101 FR0WD101 0 101 1 0
FR0WD102 FR0WD102 0 102 1 0
FR0WD103 FR0WD103 0 103 1 0
FR0WD104 FR0WD104 0 104 1 0
FR0WD105 FR0WD105 0 105 1 0
FR0WD106 FR0WD106 0 106 1 0
FR0WD107 FR0WD107 0 107 1 0
FR0WD108 FR0WD108 0 108 1 0
FR0WD109 FR0WD109 0 109 1 0
FR0WD11 FR0WD11 0 11 1 0
FR0WD110 FR0WD110 0 110 1 0
FR0WD111 FR0WD111 0 111 1 0
FR0WD112 FR0WD112 0 112 1 0
FR0WD113 FR0WD113 0 113 1 0
FR0WD114 FR0WD114 0 114 1 0
FR0WD115 FR0WD115 0 115 1 0
FR0WD116 FR0WD116 0 116 1 0
OK
Cancel

You can add a comment in this Field

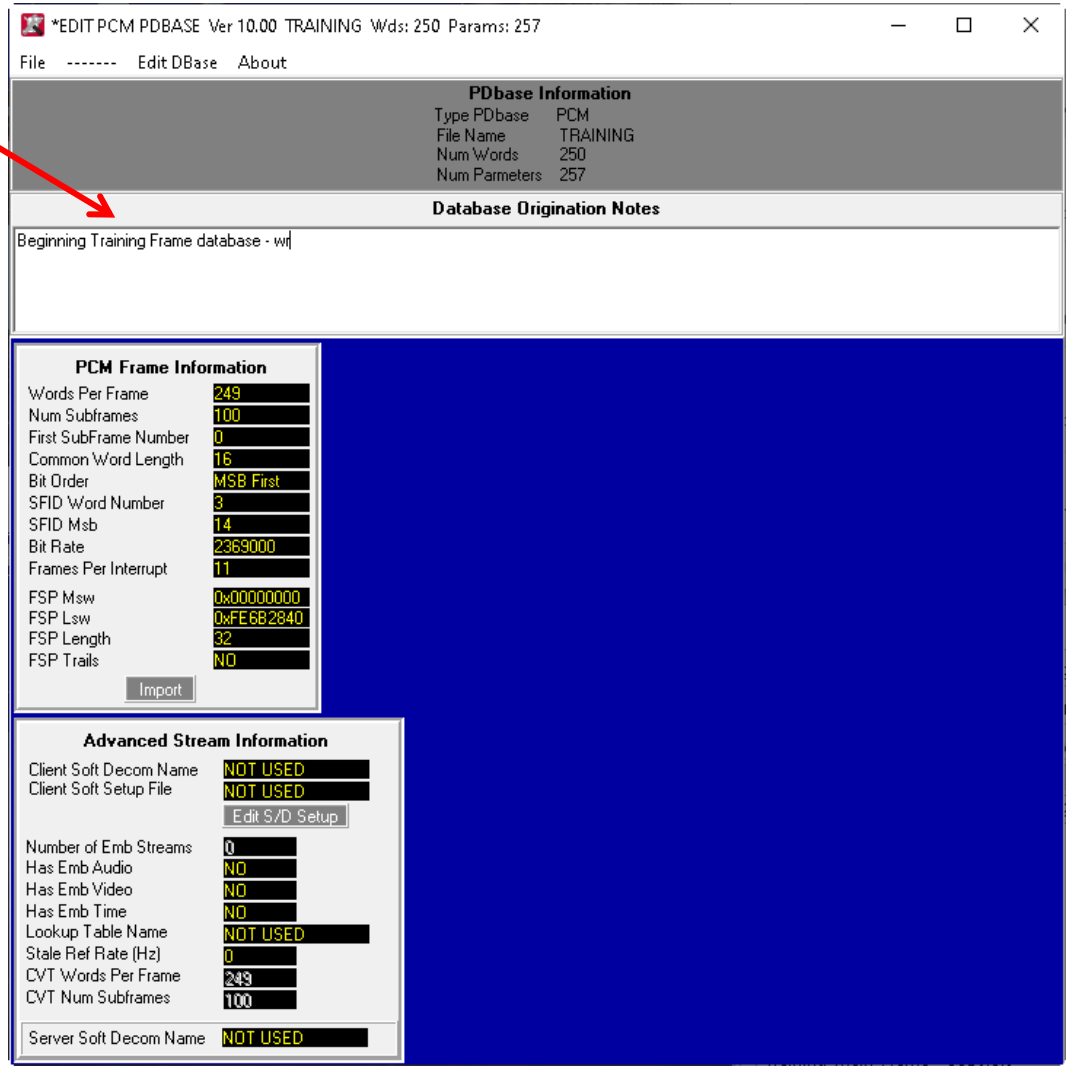
Select **File>Save**

This saves the Updated **TRAINING.PBIN** and **TRAINING.PDB.**

This updated .PBIN will be called by your previous **TRAINING.PRJ** Project.

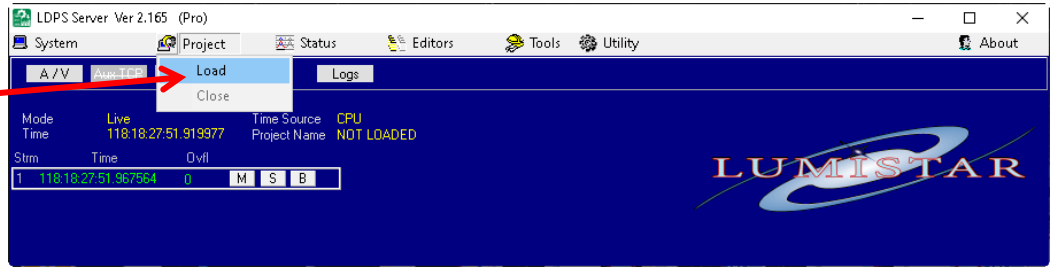
Note: The .PDB file is a Human Readable version of the .PBIN binary File. With a bit of effort you can import this Text file into EXCEL using Tab delimitation

Close the EDITPCMDATABSE application by clicking the ✕ Button.



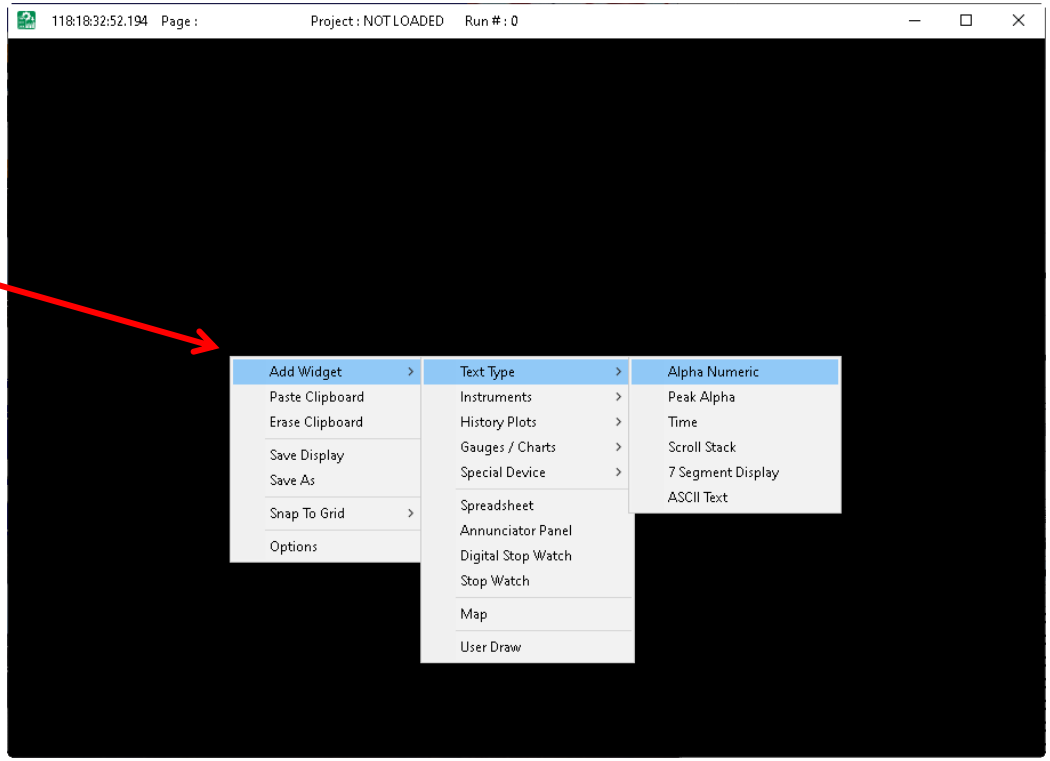
Make a Test Display Page

Load the **TRAINING.PRJ** using the **Server** Selecting **Project>Load**



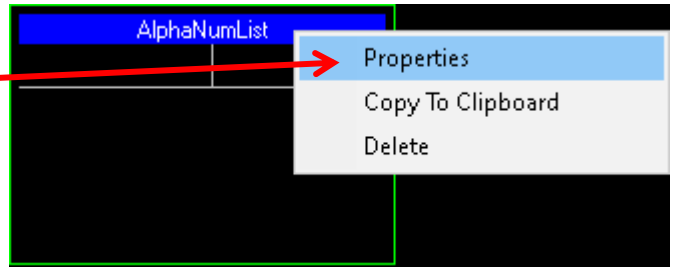
On the **Client** Click the New Pg Button **Display>New Page**

Right – click in the **Page** and Select **Add Widget>Text Type>Alpha Numeric**



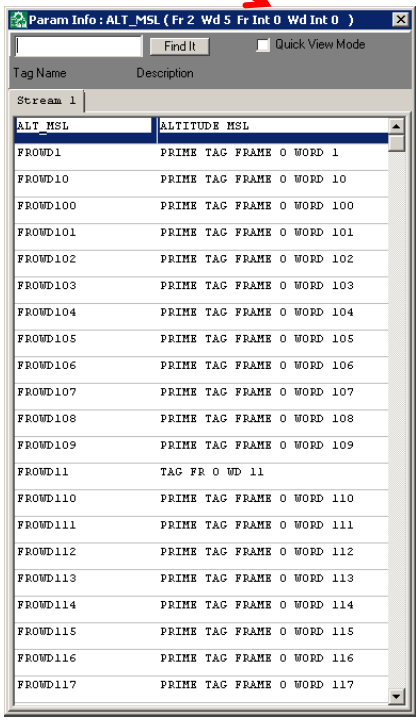
Make a Test Display Page 2

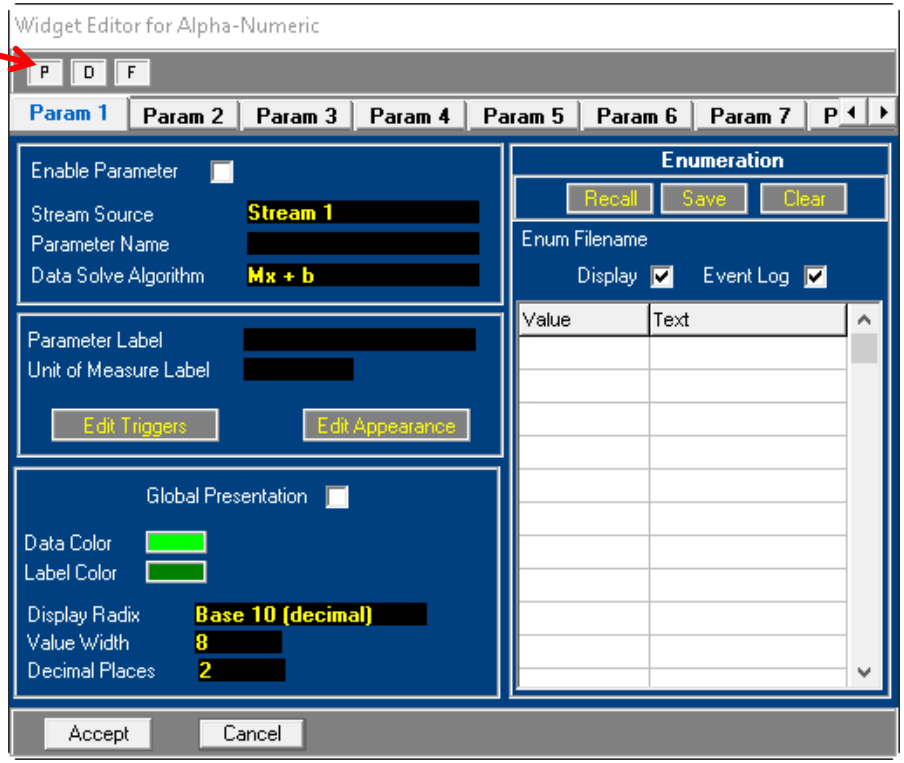
Right – click in the **AlphaNumList** and
Select **Properties**



Click the P Button

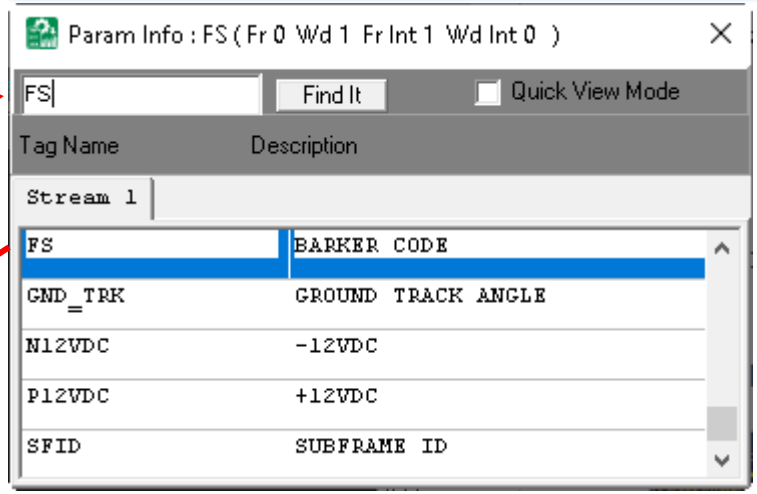
This brings up the **Param Info** List

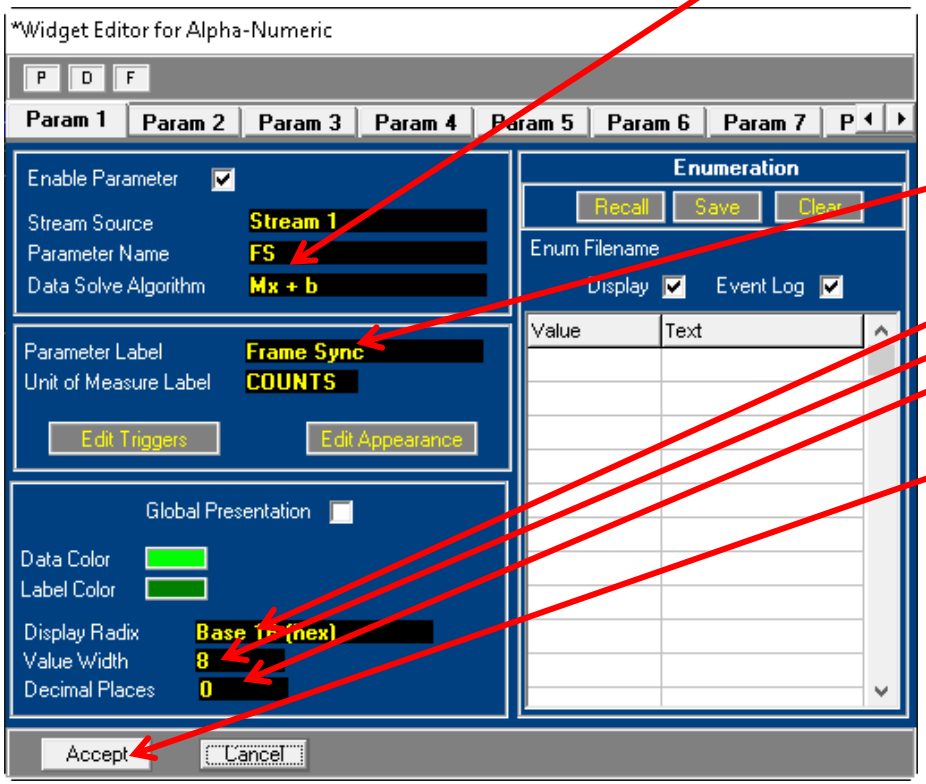




Make a Test Display Page 3

You populate your Widget finding your parameter possibly using the **Search** Windows, then left-click the parameter (a circle with a slash indicates you have selected the parameter and may drag it to the Widget **Parameter Name** CheckBox). My choice is **FS.**





Cick in the **Parameter Label** TextBox to change the Widget Label

Select the type of **Display Radix** and **Value Width**

Finish by clicking the **Accept** Button

Make a Test Display Page 4

Hover your cursor in the Banner of the **Display Page** to access its Options

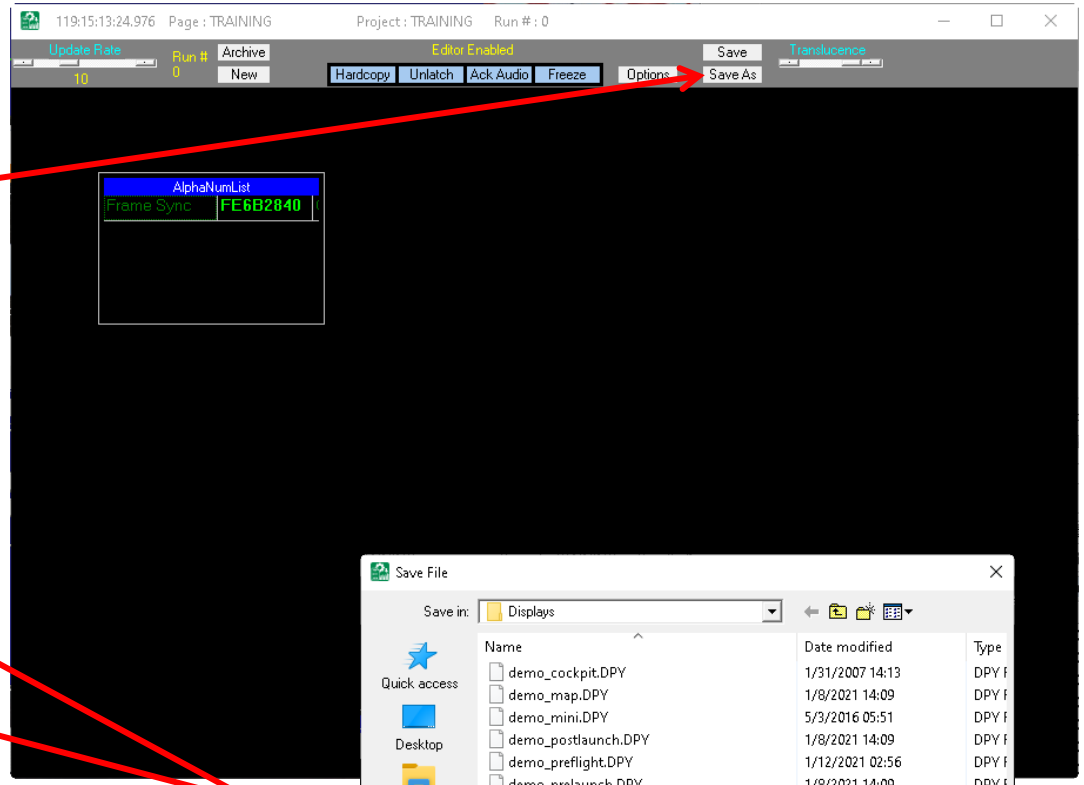
Click the **Save As** Button to save this new **Display Page**

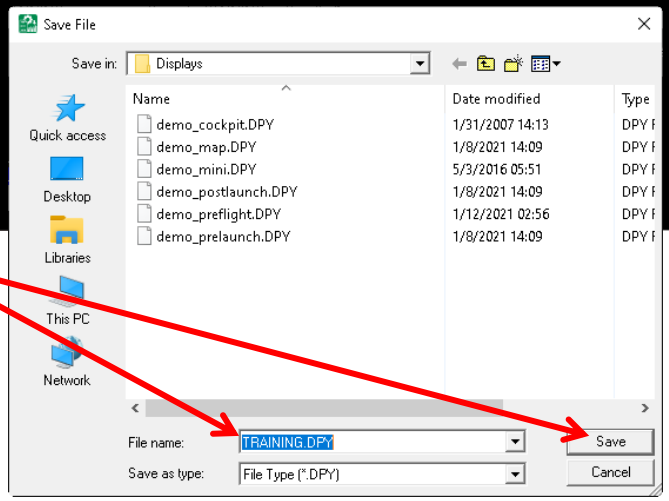
Enter the name, **Training** for this new **Display Page**

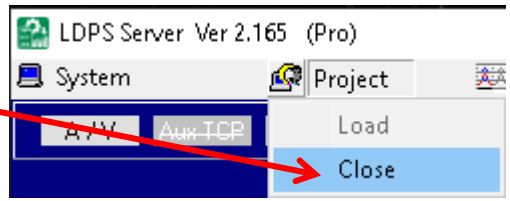
Click the **Save** Futton
To save this new
Display Page

Close the **Display Page** by
Clicking the × Button

From the **LDPS_10x** Banner close currently loaded **Training.PRJ** by selecting in the Banner
Project>Close







Finishing the TRAINING.PRJ

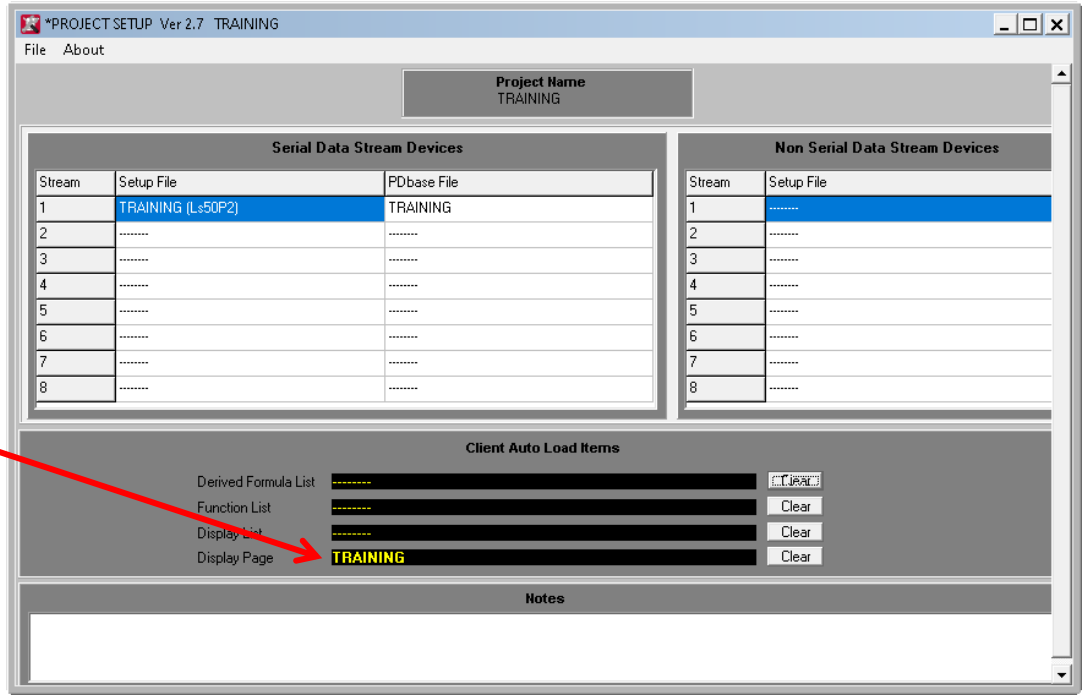
Open the **Project** Editor,
Recall the **TRAINING.PRJ**

Left-click in the **Display Page** area and steer to the recently saved **TRAINING.DPY**

Select: **File>Save**

Now when you load the Training Project you will see the Training Display also

Close the **Project** Setup application by Clicking the  Button



Load the TRAINING.PRJ

Load the **TRAINING.PRJ for Test.**

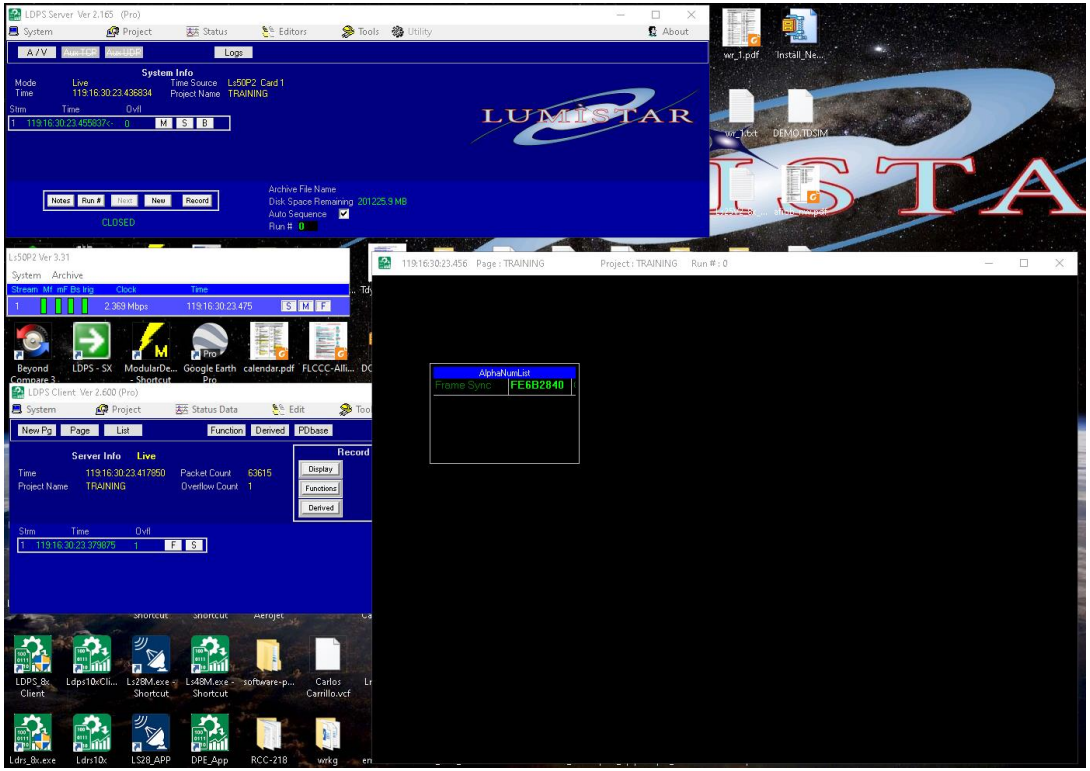
On the **Ls50P2** Control, click the [S] Button to bring up the Decom control windows.

Click the [Simulator] Button.

Stop the Simulator by Clicking the [Stop] Button.

Notice the display indicates Stale Data:

Restart the Simulator by Clicking the [Start] Button.



Load DemoSet.DPS List

Since the Simulated on-boad LS-50P2 Simulator has inherited the DEMO simulations, you can load the **DemoSet.DPS** and see how those Display Pages and Widgets are configured.

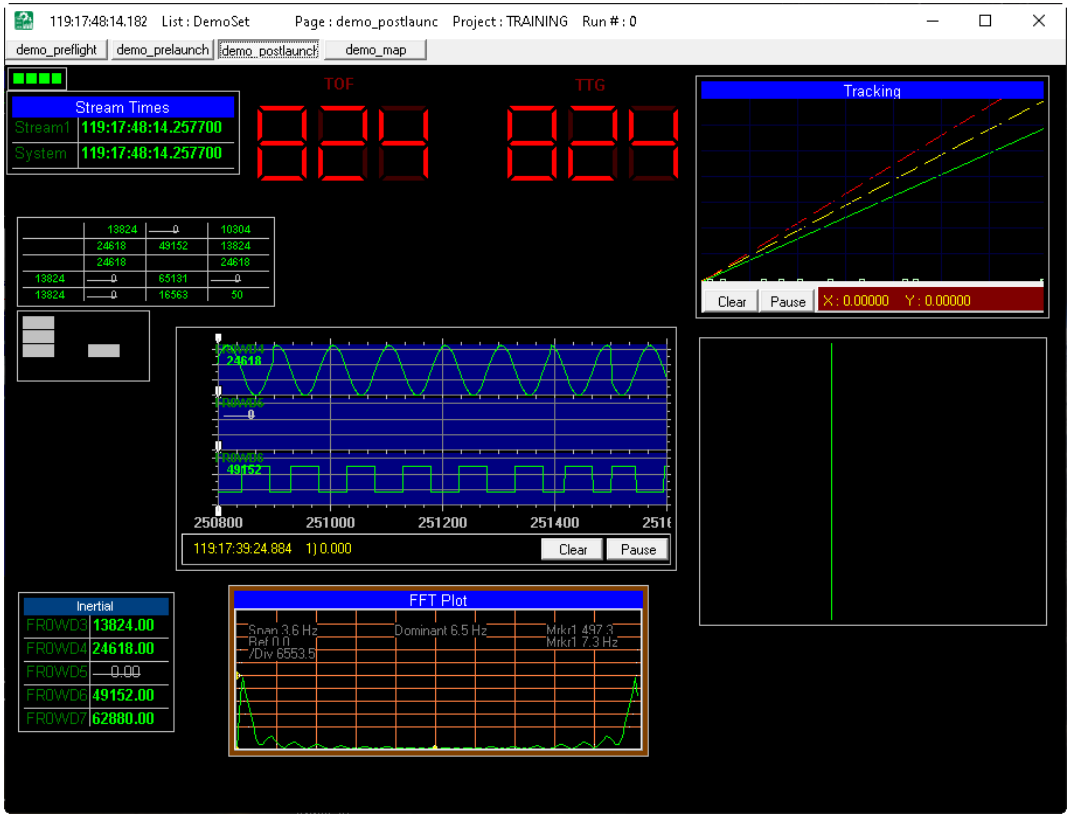
On the LDPS_10x **Client** click the List Button and load the **DemoSet.DPS.**

You can click through the Tabs to see each **DEMO** display.

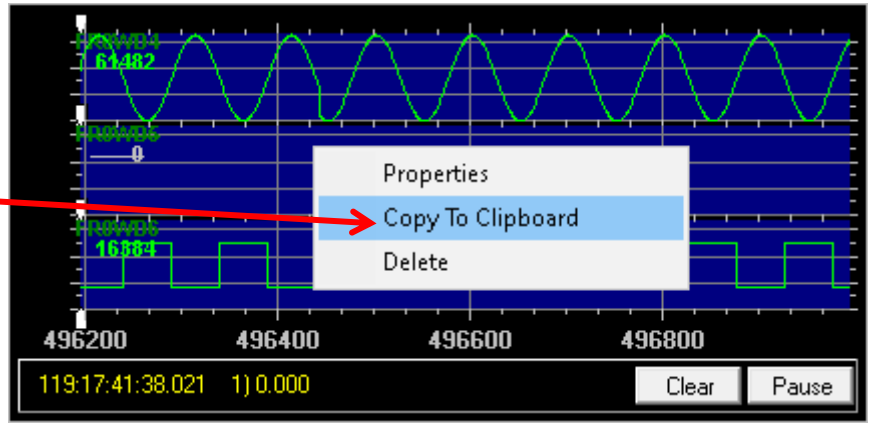
The **demo_postlaunch.DPY** Tab includes a Sample Based Strip Chart

Refer to the Training document:

LDPS_10x_Training_Lesson-1.pdf to understand the **DEMO.PRJ Displays, etc.**

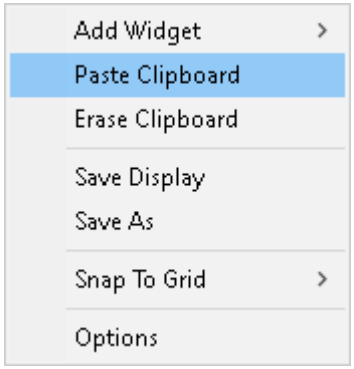


You can copy any of these **DEMO** Display Widgets by right-clicking in the Widget to copy and selecting the **Copy To Clipboard** option

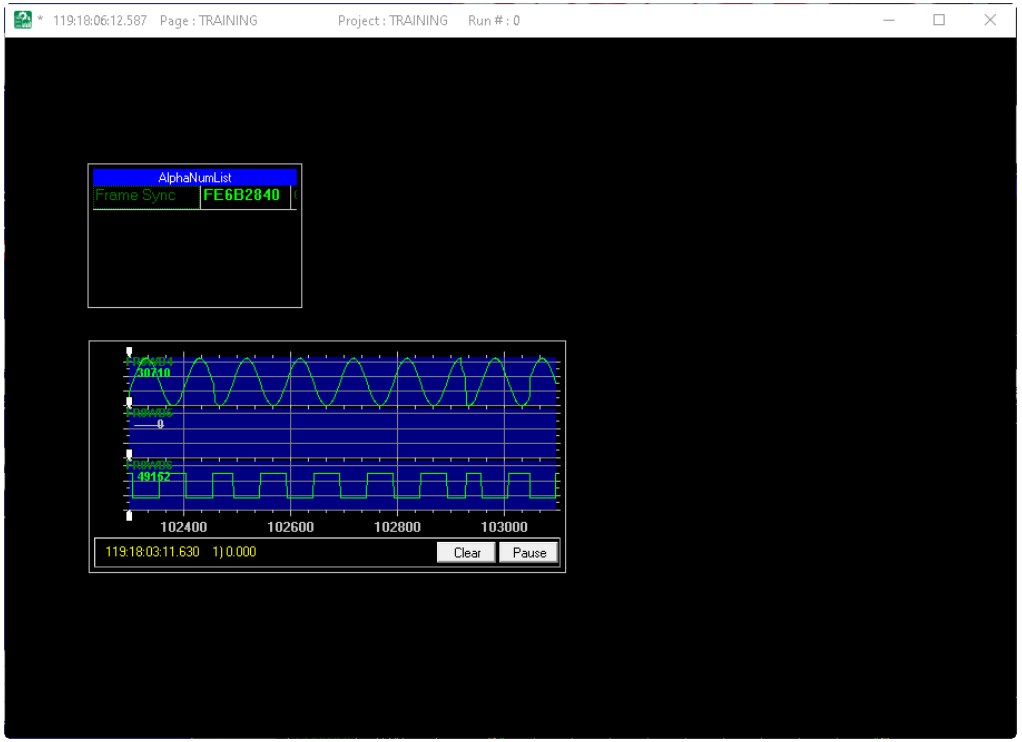


Select the **Training** Display. Place the cursor to where you want the Widget placed. Right-click

And select the **Paste Clipboard** To paste the Widget.



Save the updated **TRAINING.DPY**.



The next time you load **TRAINING.PRJ**, The Strip Chart will be included.

IT IS LEFT FOR THE CLASS TO COMPLETE THE REST OF THE TRAINING FRAME DISPLAYS