

LS-50 to LS-68M Configuration Procedure

Copy the indicated values from the LS-50 PCM Setup Screen to the LS-68M **Data>FrameSync** Screen as shown below.

LS-50-P2 (Stream 1) Setup :: EXAMPLE

File Load All Set Defaults

Decom Simulator Bitsync IIRIG

Word Attributes Load Decom

Common Word Length: 8
Words Per Minor Frame: 110
Bit Order: MSB FIRST
Frame Sync Location: TRAILS
Subframe Mode: SFID

Minor Frame Count Direction: UP
First Minor Frame Number: 1
Num Minor Frames: 8
Sync ID Word Number: 1
Sync ID Msb: 3

Msb Lsb
7 0

Frame Sync Window: 0
Frame Sync Tolerance: 1

Data Polarity: NORMAL
Clock Polarity: NORMAL
Data Source: SIMULATOR
Frames Per Interrupt: 1
Output Alignment: RIGHT
PCM Input Code: NRZL

Hex: FAF320 **ESP**
Binary: 111110101111001100100000
Octal: 76571440

Pattern Length: 24
Pattern: FAF320

Flush Frame Buffers

B/S Status: LOCK
Major Frame: LOCK
Minor Frame: LOCK
Clock: VALID CLOCK
Clock Rate: 1.024 Mbps

Dump Frame Buffers

LS68_App Version 1.02.25

WR 68M SN2052 192.168.15.222 c:\lumistar\DPE\SystemTools\Options\2008-2052_State\2008-2052Ls68.CFG

LUMISTAR Stream 1: Decom 0.000 Mbps 235:10:42:48:4697

Data Frame Sync

Frame Sync Enabled:

Frame Sync Data Source: ExtSE_1_Data

Frame Sync Input PCM Code: NRZ-L

Frame Sync Pattern Length: 24

Frame Sync Pattern (hex): 0xFAF320

Frame Sync Pattern Mask (hex): 0xFFFFFFFF

Frame Polarity: Normal

Frame Sync Clock Invert:

Frame Sync Window: 1

Frame Sync Bit Error Tolerance: 1

Frame Sync Check->Search: 1

Frame Sync Verify->Lock: 1

Sync State: SEARCH

Bit Rate (Mbps): 0.000000

Frame Count: 0

Bit Slips Count: 0

Bit Stuffs Count: 0

Ext CLK Status:

HOME Analog Digital Data Test

Record UDP Stream Sim Update ACI Super Sim ACI

Copy the indicated values from the **LS-50** PCM Setup Screen to the **LS-68M Data>Decom** Screen as shown below.

LS-50-P2 (Stream 1) Setup :: EXAMPLE

File Load All Set Defaults

Decom Simulator Bitsync IRIG

Word Attributes Load Decom

Common Word Length: 8

Words Per Minor Frame: 110

Bit Order: MSB FIRST

Frame Sync Location: TRAILS

Subframe Mode: SFID

Minor Frame Count Direction: UP

First Minor Frame Number: 1

Num Minor Frames: 8

Sync ID Word Number: 1

Sync ID Msb: 3

Msb Lsb

7 0

Hex: FAF320 FSP

Binary: 111110101111001100100000

Octal: 7637440

Pattern Length: 24

Pattern: FAF320

Frame Sync Window: 0

Frame Sync Tolerance: 1

Data Polarity: NORMAL

Clock Polarity: NORMAL

Data Source: SIMULATOR

Frames Per Interrupt: 1

Output Alignment: RIGHT

PCM Input Code: NRZL

G Mode:

Ext Sync:

Raw Data Mode:

Burst Mode:

Major Frame Mode:

FAC Enable:

B/S Status: LOCK

Major Frame: LOCK

Minor Frame: LOCK

Clock: VALID CLOCK

Clock Rate: 1.024 Mbps

Flush Frame Buffers

Dump Frame Buffers

Ls68_App Version 1.02.25

WR 68M SN2052 192.168.15.222 c:\lumistar\DPE\SystemTools\Options\2008-2052_State\2008-2052Ls68.CFG

LUMISTAR Stream 1: Decom 0.000 Mbps 235:11:29:02:0232

Data Decom

Decommutator Enabled:

Decommutator Mode: Frame Mode

FAC/Burst Mode Enabled: FAC Burst

Common Word Length: 8

Words per Minor Frame: 110

Number of Minor Frames: 8

First Bit of Word: LSB MSB

First Minor Frame Number: 0 1

Frame Sync Location: Leads Trails

Subframe Mode: SFID Count Up

SFID Word Number: 1

SFID Msb: 3

SFID Locator: 0000 0000 0000 1111

URC Sync Pattern (hex): 0xFE6B2840

URC Pattern Mask (hex): 0xFFFFFFFF

URC Tolerance: 1

Min. Frame Size (bits): 880

Maj. Frame Size (bits): 7,040

HOME Analog Digital Data Test

Record UDP Stream Sim Update ACI Super Sim ACI

Copy the indicated values from the **LS-50** PCM Setup Screen to the **LS-68M Data>Decom** Screen as shown below.

LS-50-P2 (Stream 1) Setup :: EXAMPLE

File Load All Set Defaults

Decom Simulator Bitsync IRIG

Word Attributes Load Decom

Common Word Length: 8
Words Per Minor Frame: 110
Bit Order: MSB FIRST
Frame Sync Location: TRAILS
Subframe Mode: SFID

Minor Frame Count Direction: UP
First Minor Frame Number: 1
Num Minor Frames: 8
Sync ID Word Number: 1
Sync ID Msb: 3

MSB Lsb
7 0

Frame Sync Window: 0
Frame Sync Tolerance: 1

Data Polarity: NORMAL
Clock Polarity: NORMAL
Data Source: SIMULATOR
Frames Per Interrupt: 1
Output Alignment: RIGHT
PCM Input Code: NRZL

Hex: FAF320 (FSP)
Binary: 111110101111001100100000
Octal: 76571440

Pattern Length: 24
Pattern: FAF320

Flush Frame Buffers

G Mode:
Ext Sync:
Raw Data Mode:
Burst Mode:
Major Frame Mode:
FAC Enable:

B/S Status: LOCK
Major Frame: LOCK
Minor Frame: LOCK
Clock: VALID CLOCK
Clock Rate: 1.024 Mbps

Dump Frame Buffers

LS68M App Version 1.02.25

WR 68M SN2052 192.168.15.222 c:\lumistar\DPE\SystemTools\Options\2008-2052_State\2008-2052Ls68.CFG

Stream 1: Decom 0.000 Mbps 235:11:29:02:0232

Data Decom

Decommutator Enabled:

Decommutator Mode: Frame Mode

FAC/Burst Mode Enabled: FAC Burst

Common Word Length: 8

Words per Minor Frame: 110

Number of Minor Frames: 8

First Bit of Word: LSB MSB

First Minor Frame Number: 0 1

Frame Sync Location: Leads Trails

Subframe Mode: SFID Count Up

SFID Word Number: 1

SFID Msb: 3

SFID Locator: 0000 0000 0000 1111

URC Sync Pattern (hex): 0xFE6B2840

URC Pattern Mask (hex): 0xFFFFFFFF

URC Tolerance: 1

Min. Frame Size (bits): 880

Maj. Frame Size (bits): 7,040

HOME Analog Digital Data Test

Record UDP Stream Sim Update ACI Super Sim ACI

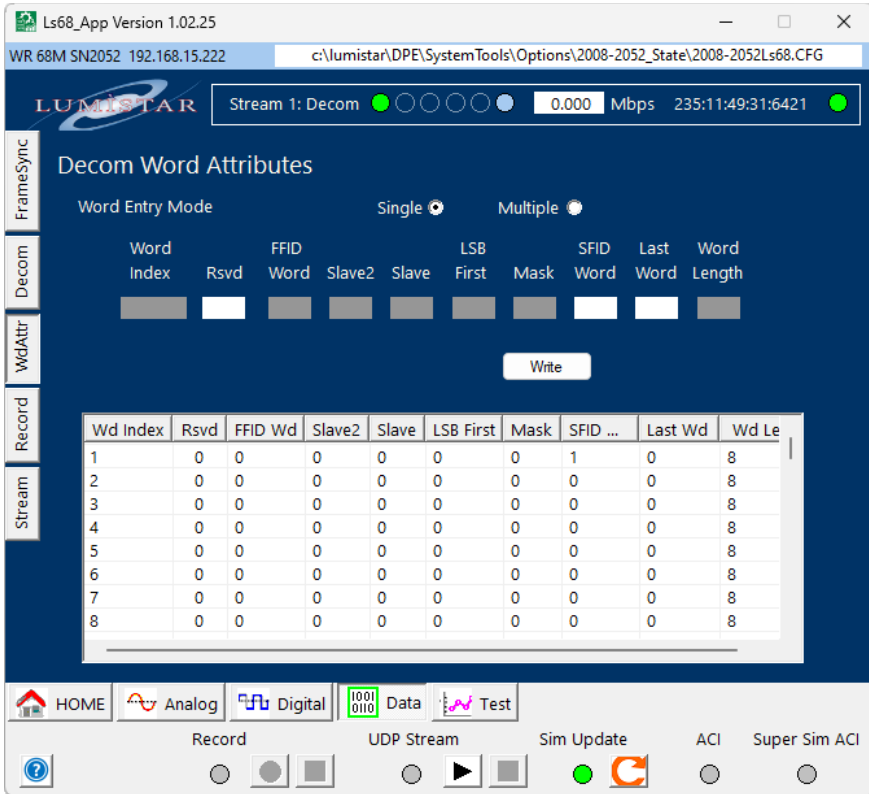
If you are using Variable Word Lengths for the LS-50 configuration, you will need to click the  **Word Attributes** button and find all variable words.

Adjust Word Length, MSB First, & Master/Slave

WORD NUMBER							
Word Number	1	2	3	4	5	6	7
Word Length	8	8	8	8	8	8	8
Bit Order	MSB FIRST	MSB FIRST	MSB FIRST	MSB FIRST	MSB FIRST	MSB FIRST	MSB FIRST
Master / SI	MASTER	MASTER	MASTER	MASTER	MASTER	MASTER	MASTER

Accept Cancel

And enter the corresponding word values into the **68M** on **Data>WdAttr** page.



The screenshot shows the 'Decom Word Attributes' configuration window in the Ls68_App software. The window title is 'Ls68_App Version 1.02.25'. The main area is titled 'Decom Word Attributes' and includes a 'Word Entry Mode' section with 'Single' selected. Below this is a table of attributes for each word index (1-8). A 'Write' button is present. At the bottom, there is a navigation bar with 'HOME', 'Analog', 'Digital', 'Data', and 'Test' tabs, and a control bar with 'Record', 'UDP Stream', 'Sim Update', 'ACI', and 'Super Sim ACI' buttons.

Wd Index	Rsvd	FFID Wd	Slave2	Slave	LSB First	Mask	SFID ...	Last Wd	Wd Le
1	0	0	0	0	0	0	1	0	8
2	0	0	0	0	0	0	0	0	8
3	0	0	0	0	0	0	0	0	8
4	0	0	0	0	0	0	0	0	8
5	0	0	0	0	0	0	0	0	8
6	0	0	0	0	0	0	0	0	8
7	0	0	0	0	0	0	0	0	8
8	0	0	0	0	0	0	0	0	8

If you haven't already, you can Simulate the **LS-50** PCM using it's onboard Simulator as follows:

Go to the Simulation Tab on the **LS-50** and insure the **Track Decom** CheckBox is checked.

The screenshot shows the 'LS-50-P2 (Stream 1) Setup :: EXAMPLE' window with the 'Simulator' tab selected. The 'Track Decom' checkbox is checked. A yellow arrow points to the 'Track Decom' checkbox.

Word Attributes

Common Word Length: 8
Words Per Minor Frame: 110
Bit Order: MSB FIRST
Frame Sync Location: TRAILS
Subframe Mode: SFID

Minor Frame Count Direction: UP
First Minor Frame Number: 1
Num Minor Frames: 8
Sync ID Word Number: 1
Sync ID Msb: 3

Bit Rate (bps): 1.024 Mbps
Output Code: NRZL
External Clock:
Convolution: NONE

Premod Filter: Pre Mod 0 kHz
BaseBand: 0.150 Vpp

B/S Status: LOCK

Major Frame: SEARCH
Minor Frame: SEARCH
Clock: VALID CLOCK
Bit Rate: 0.0 Mbps

Dynamic Words

	Wd Start	Wd Intvl	Wave Form
1	1	0	NOTHING
2	1	0	NOTHING
3	1	0	NOTHING
4	1	0	NOTHING
5	1	0	NOTHING

Unique Words

	Frame	Fr Intvl	Word	Wd Intvl	Value
1	1	0	4	0	177
2	4	0	26	0	179
3	7	0	48	0	181
4	2	0	70	0	178
5	5	0	92	0	180
6	1	0	-1	0	48879
7	1	0	-1	0	48879

Click the **Start** button to start the Simulator running. If the Decom is set to **Data Source** **SIMULATOR**, you will see Locks.

Major Frame	LOCK	<input checked="" type="checkbox"/>
Minor Frame	LOCK	<input checked="" type="checkbox"/>
Clock	VALID CLOCK	
Clock Rate	1.024 Mbps	

The Simulated Clock and Data signals are now available to send to the **LS-68M** to test the configuration.

Connect the **LS-50**:

SIM CLOCK OUT and **SIM PCM OUT**

to the **LS-68M**

(P8-1) DECOM1 SE CLK and **(P8-2) DECOM1 SE DAT**

On the **LS_68M HOME** page, set the **Frame Sync Data Source** to **ExtSE_1_Data** as shown.

You should now see Lock indications at whatever bit rate that the Simulator was set.



Save this **LS-68M** configuration.