

Name	Full 16 Bit MTI calculation							Complete Value
	DID? Y/N	EID? C/O	Carry Flags? M/I	Simple Flags? M/I	Priority Group	Type	DID/EID/Flags	
	(1 bit)	(1 bit)	(1 bit)	(1 bit)	(2 bits)	(4 bits)	(3 bits)	16 bits hex
<b>Base Messages</b>								
Initialization Complete	N	N			0	8	0	3080
Verify Node ID Number	Y	N			0	10	4	30A4
Verified Node ID Number	N	N		Y	0	10	0	10A0
Optional Interaction Rejected	Y	N			0	11	0	30B0
Terminate Due to Error	Y	N			0	12	4	30C4
	Y	N			0	13	4	30D4
<b>Protocol Support Messages</b>								
Protocol Support Inquiry	Y	N		Y	1	14	4	12E4
Protocol Support Reply	Y	N		Y	1	15	4	12F4
<b>Event Exchange Messages</b>								
Identify Consumers	N	Y		Y	1	4	2	1242
Consumer Identify Range	N	Y			1	5	2	3252
Consumer Identified	N	Y	Y		1	6	3	3263
Identify Producers	N	Y		Y	1	8	2	1282
Producer Identify Range	N	Y			1	9	2	3292
Producer Identified	N	Y	Y		1	10	3	32A3
Identify Events	Y	N			1	11	4	32B4
Identify Events	N	N		Y	1	11	0	12B0
Learn Event	N	Y		Y	1	12	2	12C2
Producer/Consumer Event Report	N	Y		Y	1	13	2	12D2
<b>Datagram Messages</b>								
Datagram (General)	Y	N			2	0	4	3404
Datagram Received OK	Y	N			2	12	4	34C4
Datagram Rejected	Y	N			2	13	4	34D4
<b>Stream Messages</b>								
Stream Initiate Request	Y	N			2	14	4	34E4
Stream Initiate Reply	Y	N			2	15	4	34F4
Stream Data Send	Y	N			3	9	4	3694
Stream Data Proceed	Y	N			3	10	4	36A4
Stream Data Complete	Y	N			3	11	4	36B4

Y means  
carries  
flags in  
CAN header

0 gets  
more  
priority

coding  
2=carries EID  
4=carries DID  
1=carries flags

Full value  
must be checked!

CAN Calculation							CAN MTI	CAN Content MTI Byte
Format	Type Byte	Flag bit A EID->1	Flag bit B Flags->0	Flag bit C 0 default	Flag bit D 1 default			
3 bits	8 bits hex	1 bit	1 bit	1 bit	1 bit	15 bits hex	Goes at start of CAN data, if present	
1	08			1	1	1087		Full Source Node ID
6	dest NIDa	-	-	-	-	6ddd	0A	MTI byte 0x0A
0	0A			1	1	00A7		
1	0B			1	1	10B7		Full Source Node ID
6	dest NIDa	-	-	-	-	6ddd	0C	MTI byte 0x0C, MTI, error, optional information
6	dest NIDa	-	-	-	-	6ddd	0D	MTI byte 0x0D, MTI, error, optional information
6	dest NIDa	-	-	-	-	6ddd	2E	MTI byte 0x2E
6	dest NIDa	-	-	-	-	6ddd	2F	MTI byte 0x2F, protocol flags
0	24	Y		1	1	024F		EventID (no room for DestID!)
1	25	Y		1	1	125F		EventID w mask (no room for DestID!)
1	26	Y	Y	valid	uncertain	126B		EventID (no room for DestID!)
0	28	Y		1	1	028F		EventID (no room for DestID!)
1	29	Y		1	1	129F		EventID w mask (no room for DestID!)
1	2A	Y	Y	valid	uncertain	12AB		EventID (no room for DestID!)
6	dest NIDa	-	-	-	-	6ddd	2B	MTI byte 0x2B
0	2B			1	1	02B7		
0	2C	Y		1	1	02CF		EventID
0	2D	Y		1	1	02DF		EventID
4,5	dest NIDa	-	-	-	-	4/5ddd		Data (0-8 bytes)
6	dest NIDa	-	-	-	-	6ddd	4C	MTI byte
6	dest NIDa	-	-	-	-	6ddd	4D	MTI byte, error code
6	dest NIDa	-	-	-	-	6ddd	4E	MTI byte, buffer size (2 bytes), Source Stream ID (1 byte), reserved byte, flags (tagged=0x80)
6	dest NIDa	-	-	-	-	6ddd	4F	MTI byte 0x4B, buffer size (2 bytes), Source Stream ID (1 byte), Dest Stream ID, flags (tagged=0x80; error info)
7	dest NIDa	-	-	-	-	7ddd		(stream IDs inferred on CAN); 8 bytes data
6	dest NIDa	-	-	-	-	6ddd	6A	MTI byte, Stream IDs (2 bytes)
6	dest NIDa	-	-	-	-	6ddd	6B	MTI byte, Stream IDs (2 bytes); optional length (4 bytes)

0=simple MTI  
1=complex MTI

4=DestID datagram  
5=DestID datagram last segment  
6=DestID non-Stream  
7=DestID stream data

If flags not specified, send and check 1 bits

d=dest NIDa  
f=flags

Places these appear in code:

prototypes/C/libraries/OlcbTestCAN/obj/test  
prototypes/C/libraries/OlcbCommonCAN/OpenLcbCan.h  
prototypes/C/libraries/OpenLcb/OLCB\_CAN\_Buffer.cpp

prototypes/Arduino/libraries/OpenLcb/OpenLcbCan.h  
prototypes/CBUS-PI/C/canlib/frametypen.c

prototypes/ObjectiveC/OpenLcbLib/OlcbMtiDefinitions.h  
prototypes/ObjectiveC/OpenLcbLib/OlcbTestDefinitions.h  
prototypes/ObjectiveC/OpenLcbLib/MtiReformat.c

prototypes/java/src/org/openlcb/can/MessageBuilder.java