

CD Notes

EFM STREAM ENCODED

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| SYNC SUB CHANNELDATA CIRC CHANNELDATA CIRC | - SMALL FRAME
| 1 1 12 4 12 4 | - 34 Bytes
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1 CD FRAME = 98xSMALL FRAMES
- 24x98 = 2352/0x930 sector data
- 1x98 = 98 sub channel data

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-- Small Frame 1 SubChannel SyncByte1 24 Bytes ChannelData
| - Small Frame 2 SubChannel SyncByte2 24 Bytes ChannelData
F - Small Frame 3 SubChannel DATAByte1 24 Bytes ChannelData
R - Small Frame 4 SubChannel DATAByte2 24 Bytes ChannelData
A - .
M - .
E - .
| - Small Frame 97 SubChannel DATAByte95 24 Bytes ChannelData
-- Small Frame 98 SubChannel DATAByte96 24 Bytes ChannelData

```

SUBCHANNEL DATA

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SMALL FRAME SUBCHANNEL BYTE

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| P Q R S T U V W | 1 Byte from
| 7 6 5 4 3 2 1 0 | small frame
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each 'channel(PQRSTUW) byte' distributed over 8 frames

P BYTE 1

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Small Frame 3 - P.Bit 7 SubChannel Byte, bit 7
Small Frame 4 - P.Bit 6 SubChannel Byte, bit 7
Small Frame 5 - P.Bit 5 SubChannel Byte, bit 7
Small Frame 6 - P.Bit 4 SubChannel Byte, bit 7
Small Frame 7 - P.Bit 3 SubChannel Byte, bit 7
Small Frame 8 - P.Bit 2 SubChannel Byte, bit 7
Small Frame 9 - P.Bit 1 SubChannel Byte, bit 7
Small Frame 10 - P.Bit 0 SubChannel Byte, bit 7
... . . .

```



... ..
 98

P Q - Info about recording
 R -> W - CDText/GFX

QCHANNEL

CONTROL/ADR	DATAQ	CRC
1	9	2

CONTROL - 0 2 Audio Channels without pre-emphasis
 - 1 2 Audio Channels with pre-emphasis
 -8 4 Audio Channels without pre-emphasis
 -9 4 Audio Channels with pre-emphasis
 -4 Data track, recorded uninterrupted
 -5 Data track, recorded increment
 -12 reserved

ADR - 1 MODE 1 Q
 - 2 MODE 2 Q
 - 3 MODE 3 Q

DATAQ - TNO POINT MIN SEC FRAME ZERO PMIN PSEC PFRAME
 - DATAQ is MODE Dependant

 Main channel Data

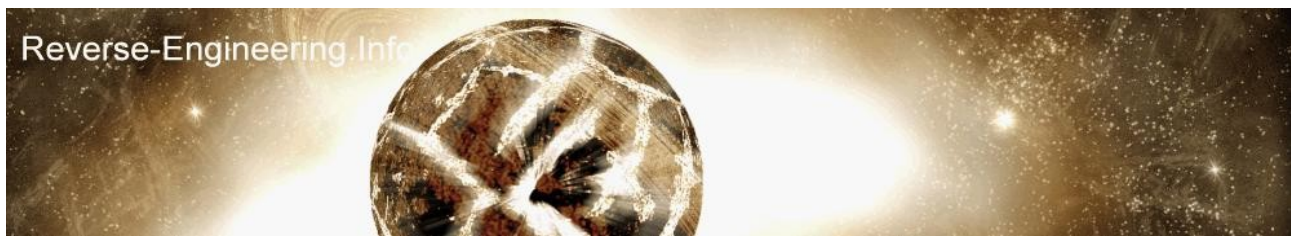
Synchronisation Field Pattern.
 00h FFh FFh FFh FFh FFh FFh FFh FFh FFh FFh 00h

4 Byte Header.

MIN SEC FRAM MODE

MODE BYTE

00 / 000 / 000			
			0 User Data 4 1st Run-in
		0	1 4th Run-in 5 EFM linking
			2 3rd Run-in 6 2nd Run-out
	0 Mode 0		3 2nd Run-in 7 1st Run-out
	1 Mode 1		
	2 Mode 2		
	3 Reserved		



Mode 0 Data

Offset	Length	Content
12	3	Block MSF bcd
15	1	DateMode = 0
16	2336	UserData(NULL!)

Mode 1 Data

Offset	Length	Content
12	3	Block MSF bcd
15	1	DateMode = 01
16	2048	UserData
2064	4	CRC
2068	8	Zero
2076	172	P parity
2248	104	Q parity

Mode 2 Data

Formless and Formed - wutever.