

## Fattore di Cresta del segnale musicale Aristi Vari : Super test SACD IsoMike

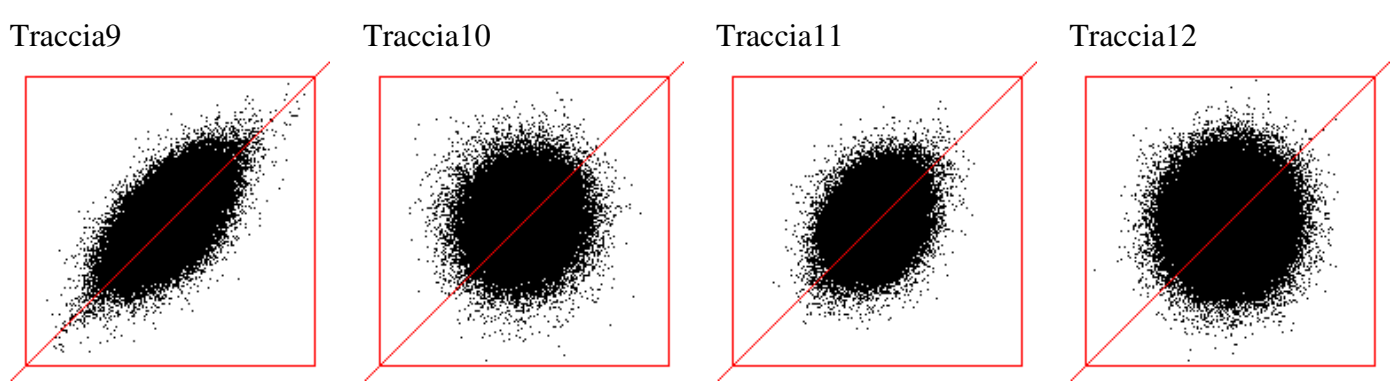
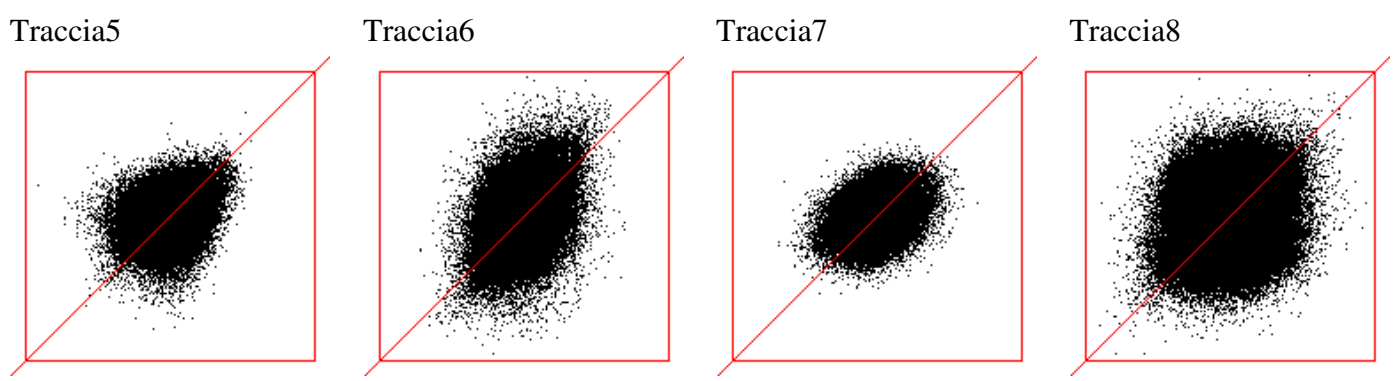
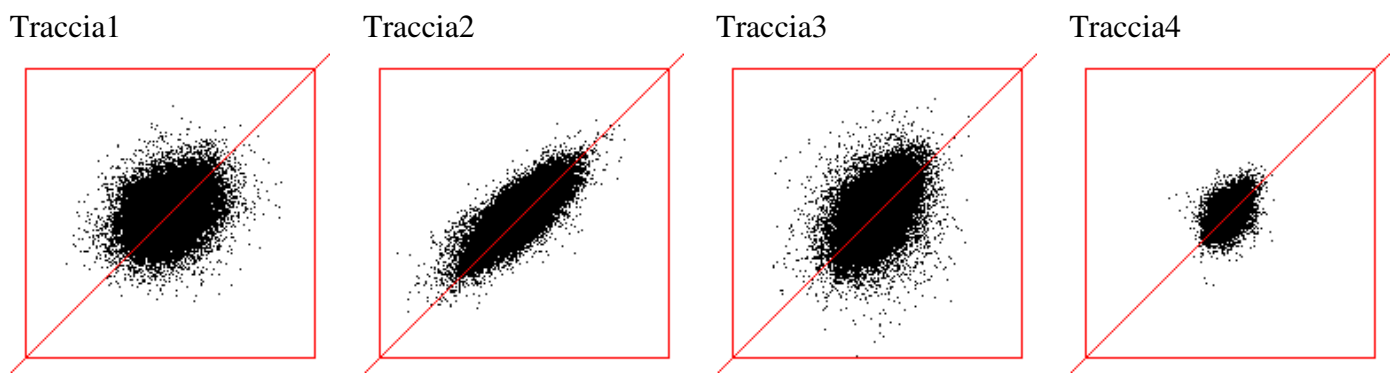
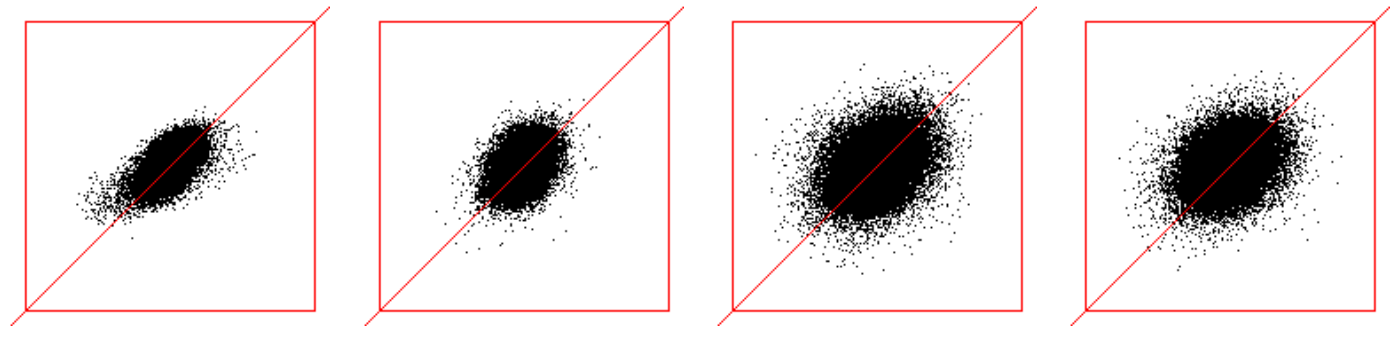
Super Test SACD IsoMike, allegato al numero 79 (settembre 2008) di Audiophile Sound (AUD079). Qui vengono analizzate le tracce del layer CD (16bit/44100Hz). I brani sono stati registrati con un pannello IsoMike in formato DSD e convertiti in formato PCM con un dispositivo Philips. Si noti che i primi 5 brani sono stati registrati all'aperto con il pannello IsoMike a 11 metri dallo strumento più vicino. Anche nelle tracce che raggiungono la massima Modulazione Assoluta (sempre con un numero esiguo di campioni) il picco viene raggiunto una sola volta. Il segnale non è mai appiattito, al massimo stonato. Il fattore di cresta è sempre maggiore di dieci tranne che nelle tracce 16 e 17 dove si trova il minimo di 7.33. Il CF massimo raggiunge 22.12 (valore alto in assoluto per un CD) ma si vedono anche 19, 17 e alcuni 15. La ASDA mostra sempre la prevalenza di occorrenze sotto al 3% della MMR tranne nelle tracce con i CF minori di 10. Nella versione CD è un ottimo prodotto. Nell'articolo di presentazione di questa realizzazione si dice che la versione SACD delle stesse tracce suona meglio. Il DSD (Direct Stream Digital) è la tecnologia usata per registrare e produrre i contenuti audio dei SACD (suoner audio CD). La DSD campiona il segnale audio a una frequenza molto elevata (2.8224Mhz pari ad un oversampling x 64) con conversione delta-sigma a 1 bit. Questa tecnica non richiede l'uso dei filtri (digitali e non) presenti nella conversione PCM e da questo sembra derivare una migliore qualità.



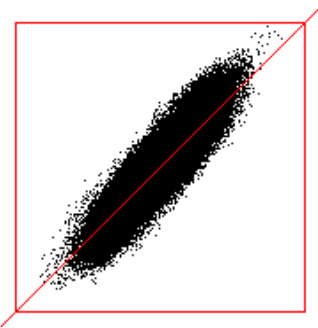
Il Dispositivo IsoMike è il alto a destra (la foto proviene dal sito IsoMike)

Traccia	Max	CF	Slew rate	
IsoMike1_01	21185	21.12	0.22	cf max
IsoMike1_02	21447	15.92	0.56	
IsoMike1_03	29285	12.23	0.43	
IsoMike1_04	26407	11.72	0.32	
IsoMike1_05	31787	11.78	0.44	
IsoMike1_06	28977	13.14	0.53	
IsoMike1_07	32766	13.19	0.33	
IsoMike1_08	17130	17.58	0.15	
IsoMike1_09	32766	10.63	0.76	
IsoMike1_10	32766	13.08	0.30	
IsoMike1_11	23665	15.51	0.17	
IsoMike1_12	32767	10.25	0.35	<<
IsoMike1_13	32767	11.94	1.59	<<
IsoMike1_14	32767	12.32	1.06	<<
IsoMike1_15	27547	10.60	0.51	

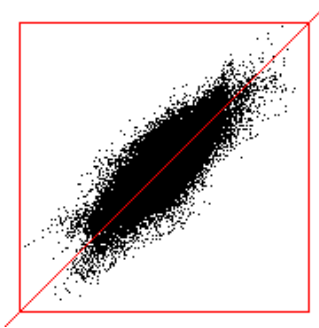
IsoMike1_16	32767	9.43	0.42 <<	
IsoMike1_17	32767	7.33	0.36 <<	cf min
IsoMike1_18	32767	12.93	0.58 <<	
IsoMike1_19	32767	12.61	0.19 <<	
IsoMike1_19	32767	12.61	0.19 <<	
IsoMike1_20	27962	19.88	0.18	
IsoMike1_21	18953	12.59	0.12	



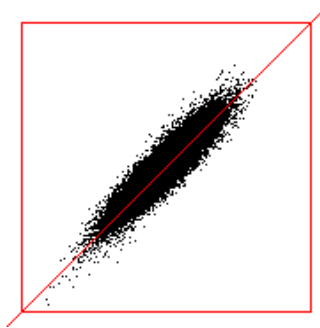
Traccia13      Traccia14      Traccia15      Traccia16



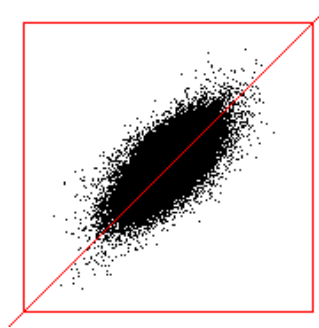
Traccia17



Traccia18



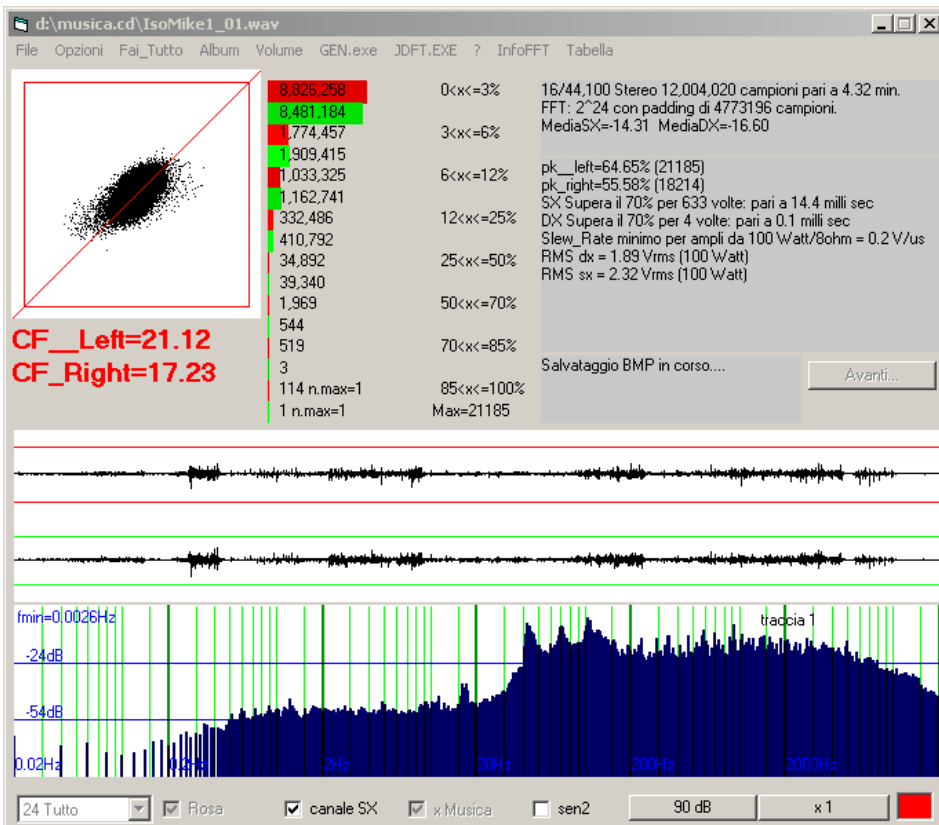
Traccia19

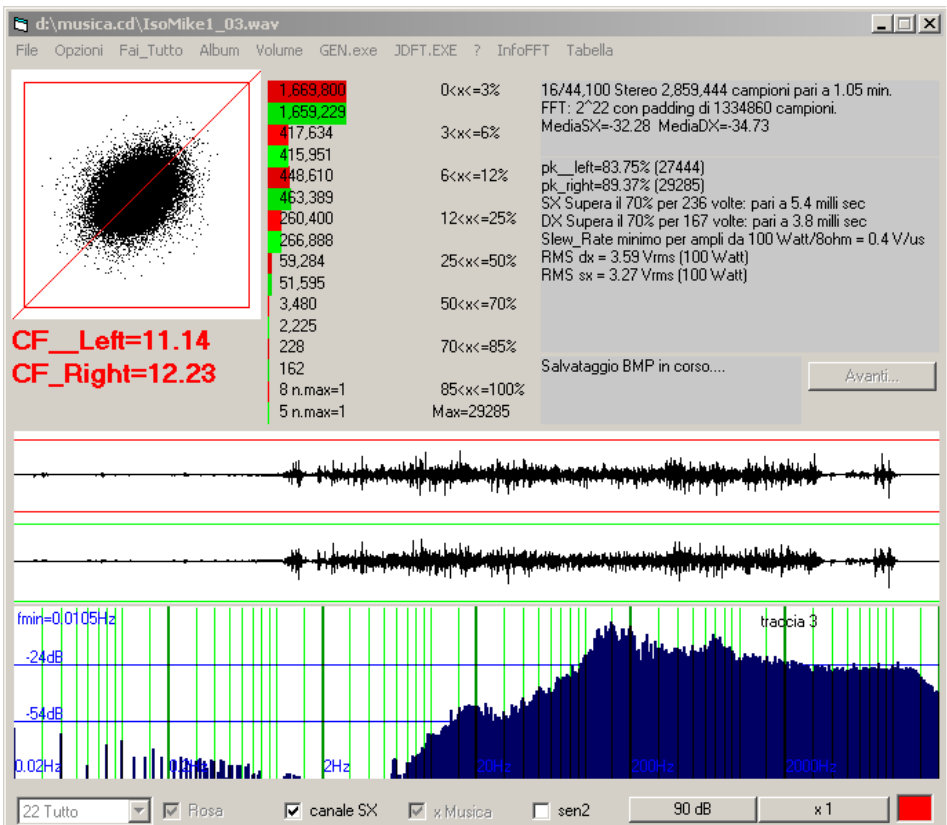
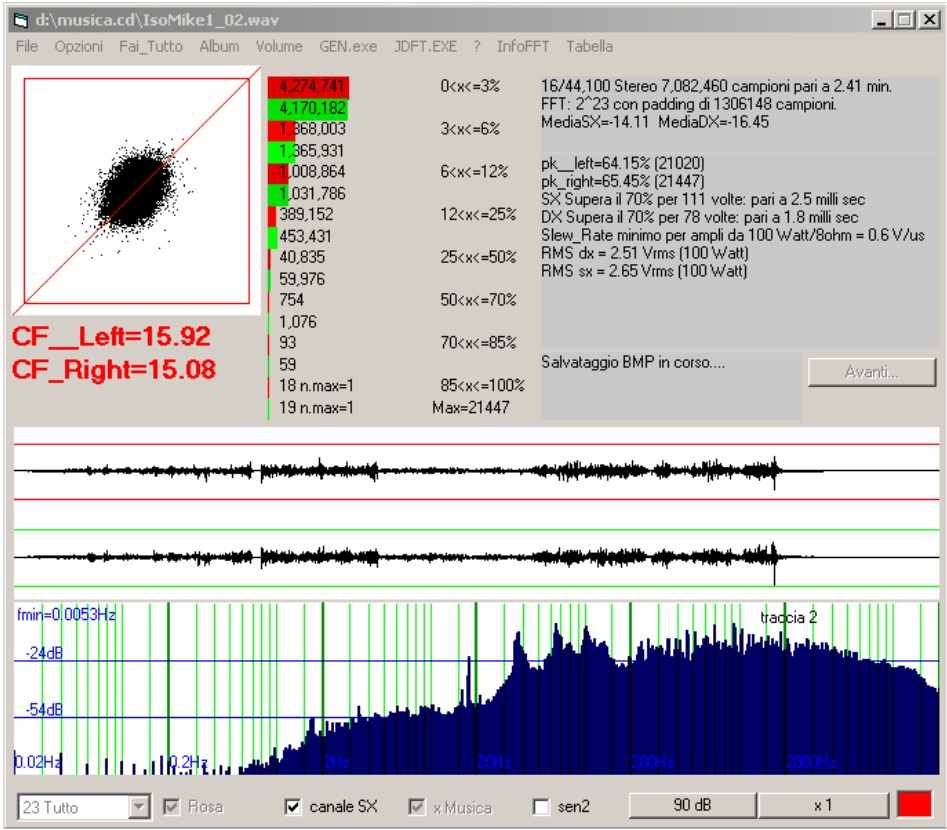


Traccia20



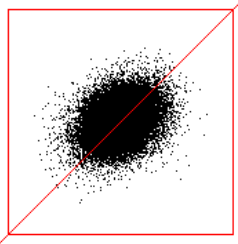
Traccia21





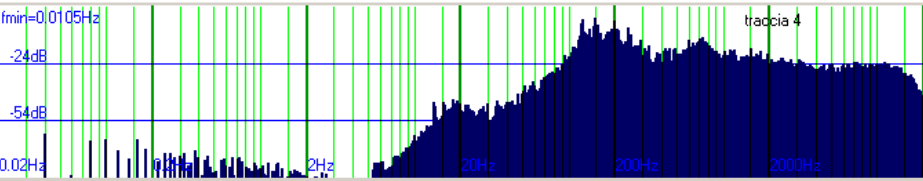


d:\musica.cd\IsoMike1\_04.wav

File Opzioni Fai\_Tutto Album Volume GEN.exe JDFT.EXE ? InfoFFT Tabella



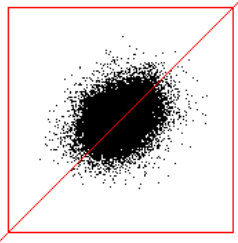
1,770,186	0<x<=3%	16/44,100 Stereo 2,932,944 campioni pari a 1.07 min.
1,743,137		FFT: 2^22 con padding di 1261360 campioni.
406,436	3<x<=6%	MediaSX=-21.75 MediaDX=-21.49
403,355		
421,513	6<x<=12%	pk_left=80.59% (26407)
444,049		pk_right=75.36% (24694)
265,725	12<x<=25%	SX Supera il 70% per 503 volte: pari a 11.4 milli sec
280,057		DX Supera il 70% per 193 volte: pari a 4.4 milli sec
64,148	25<x<=50%	Slew_Rate minimo per ampli da 100 Watt/8ohm = 0.3 V/us
59,881		RMS_dx = 3.41 Vrms (100 Watt)
4,433	50<x<=70%	RMS_sx = 3.56 Vrms (100 Watt)
2,272		
423	70<x<=85%	
179		Salvataggio BMP in corso....
80 n.max=1	85<x<=100%	Avanti...
14 n.max=1	Max=26407	



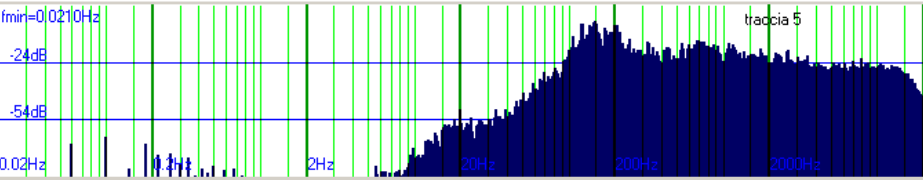
22 Tutto  Rosa  canale SX  x Musica  sen2 90 dB x 1

d:\musica.cd\IsoMike1\_05.wav

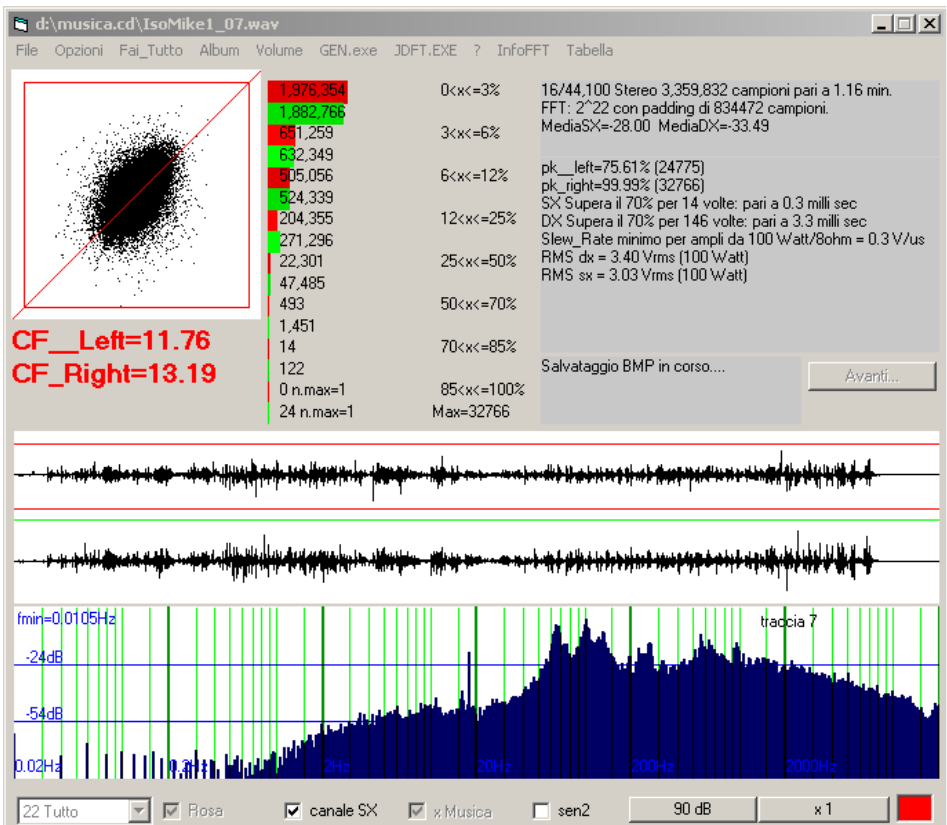
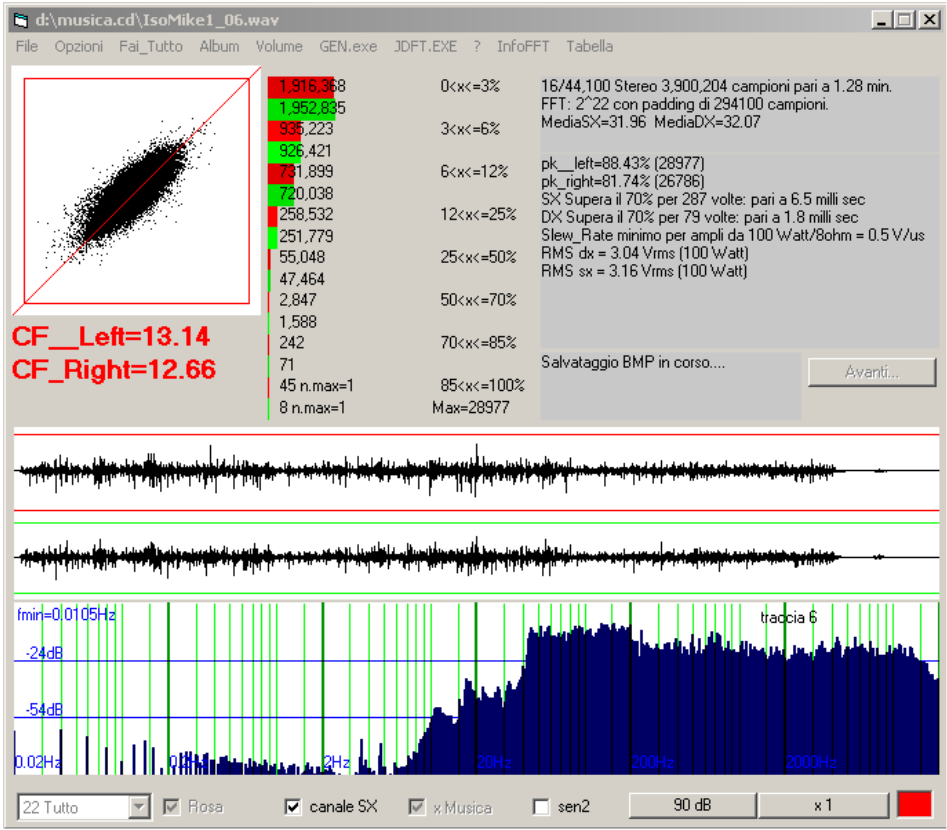
File Opzioni Fai\_Tutto Album Volume GEN.exe JDFT.EXE ? InfoFFT Tabella



833,946	0<x<=3%	16/44,100 Stereo 1,676,976 campioni pari a 38.03 sec.
832,956		FFT: 2^21 con padding di 420176 campioni.
330,756	3<x<=6%	MediaSX=-37.67 MediaDX=-41.11
331,943		
308,611	6<x<=12%	pk_left=97.01% (31787)
314,506		pk_right=75.91% (24875)
171,032	12<x<=25%	SX Supera il 70% per 63 volte: pari a 1.4 milli sec
168,873		DX Supera il 70% per 13 volte: pari a 0.3 milli sec
31,650	25<x<=50%	Slew_Rate minimo per ampli da 100 Watt/8ohm = 0.4 V/us
28,127		RMS_dx = 3.40 Vrms (100 Watt)
1,018	50<x<=70%	RMS_sx = 4.22 Vrms (100 Watt)
558		
59	70<x<=85%	Salvataggio BMP in corso....
13		Avanti...
4 n.max=1	85<x<=100%	
0 n.max=1	Max=31787	

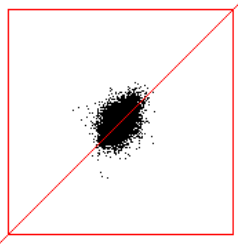




21 Tutto  Rosa  canale SX  x Musica  sen2 90 dB x 1


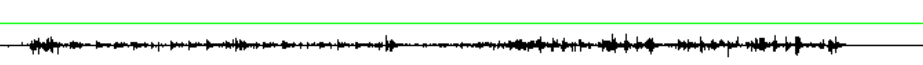
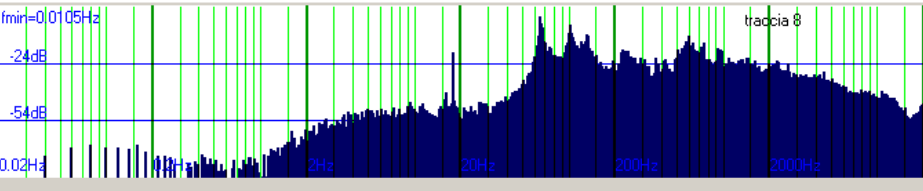


d:\musica.cd\IsoMike1\_08.wav

File Opzioni Fai\_Tutto Album Volume GEN.exe JDFT.EXE ? InfoFFT Tabella



1,658,675	0<x<=3%	16/44,100 Stereo 2,349,648 campioni pari a 53.28 sec.
1,637,803		FFT: 2^22 con padding di 1844656 campioni.
366,473	3<x<=6%	MediaSX=-12.87 MediaDX=-15.30
358,102		pk_left=42.62% (13966)
235,201	6<x<=12%	pk_right=52.28% (17130)
238,865		SX Supera il 70% per 14 volte: pari a 0.3 milli sec
80,218	12<x<=25%	DX Supera il 70% per 26 volte: pari a 0.6 milli sec
96,868		Slew_Rate minimo per ampli da 100 Watt/8ohm = 0.1 V/us
8,955	25<x<=50%	RMS_dx = 2.48 Vrms (100 Watt)
17,531		RMS_sx = 2.27 Vrms (100 Watt)
112	50<x<=70%	
447		
14	70<x<=85%	
7		Salvataggio BMP in corso....
0 n.max=1	85<x<=100%	Avanti...
19 n.max=1	Max=17130	

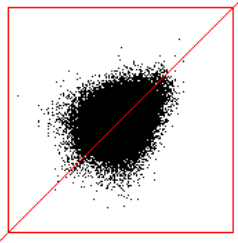




CF\_Left=16.16  
CF\_Right=17.58



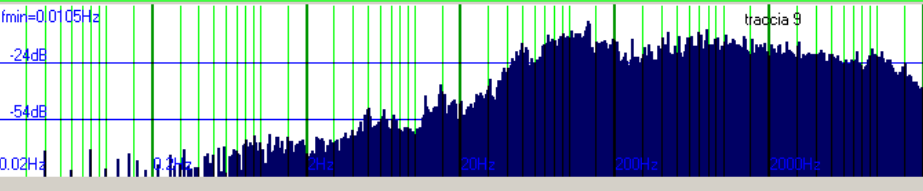
22 Tutto  Rosa  canale SX  x Musica  sen2 90 dB x 1

d:\musica.cd\IsoMike1\_09.wav

File Opzioni Fai\_Tutto Album Volume GEN.exe JDFT.EXE ? InfoFFT Tabella



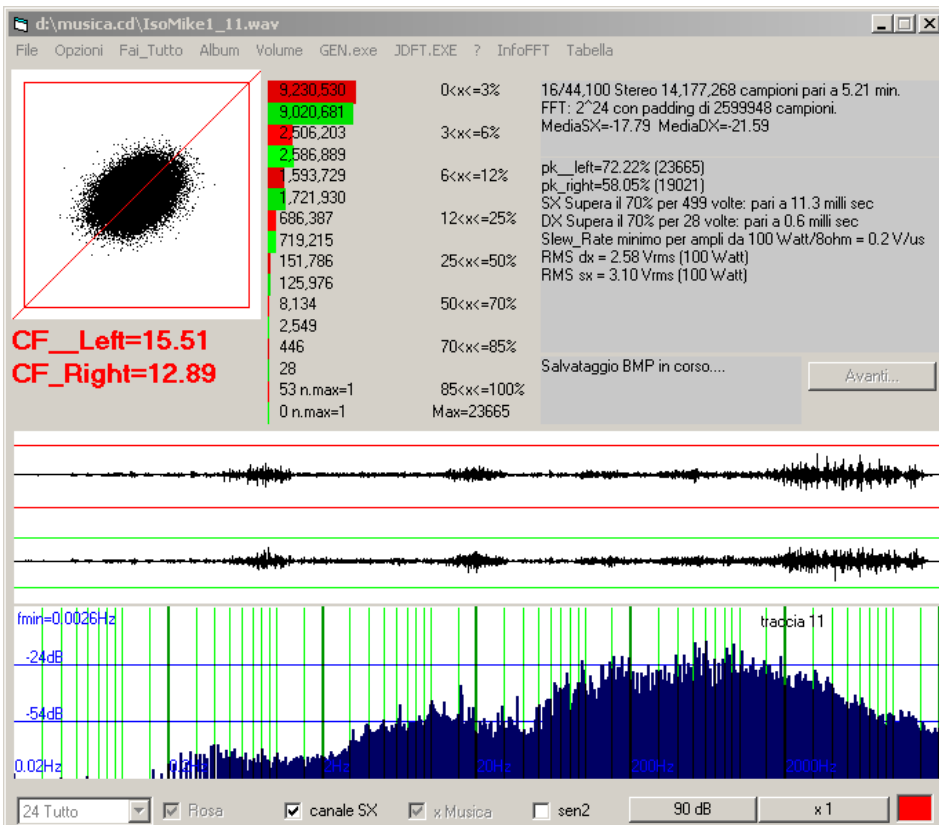
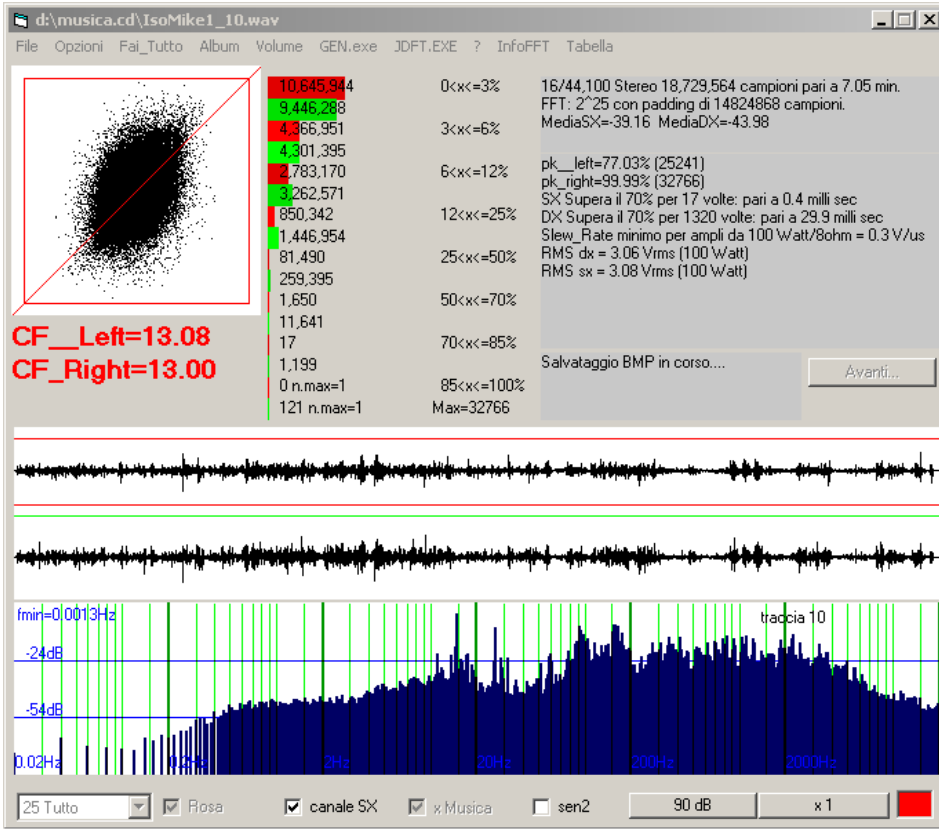
1,067,098	0<x<=3%	16/44,100 Stereo 2,973,516 campioni pari a 1.07 min.
1,057,851		FFT: 2^22 con padding di 1220788 campioni.
666,965	3<x<=6%	MediaSX=-21.94 MediaDX=-28.48
664,306		pk_left=99.99% (32766)
767,105	6<x<=12%	pk_right=93.91% (30771)
782,980		SX Supera il 70% per 35 volte: pari a 0.8 milli sec
410,405	12<x<=25%	DX Supera il 70% per 52 volte: pari a 1.2 milli sec
415,398		Slew_Rate minimo per ampli da 100 Watt/8ohm = 0.8 V/us
60,976	25<x<=50%	RMS_dx = 3.76 Vrms (100 Watt)
51,929		RMS_sx = 3.95 Vrms (100 Watt)
932	50<x<=70%	
1,000		
28	70<x<=85%	
48		Salvataggio BMP in corso....
7 n.max=1	85<x<=100%	Avanti...
4 n.max=1	Max=32766	

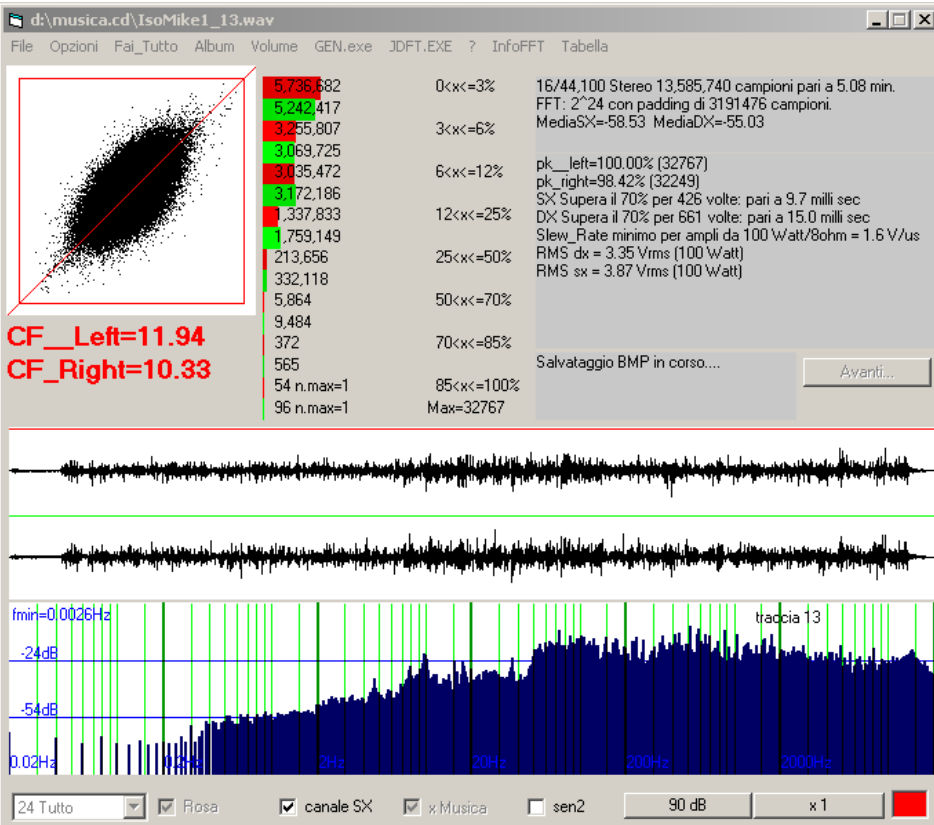
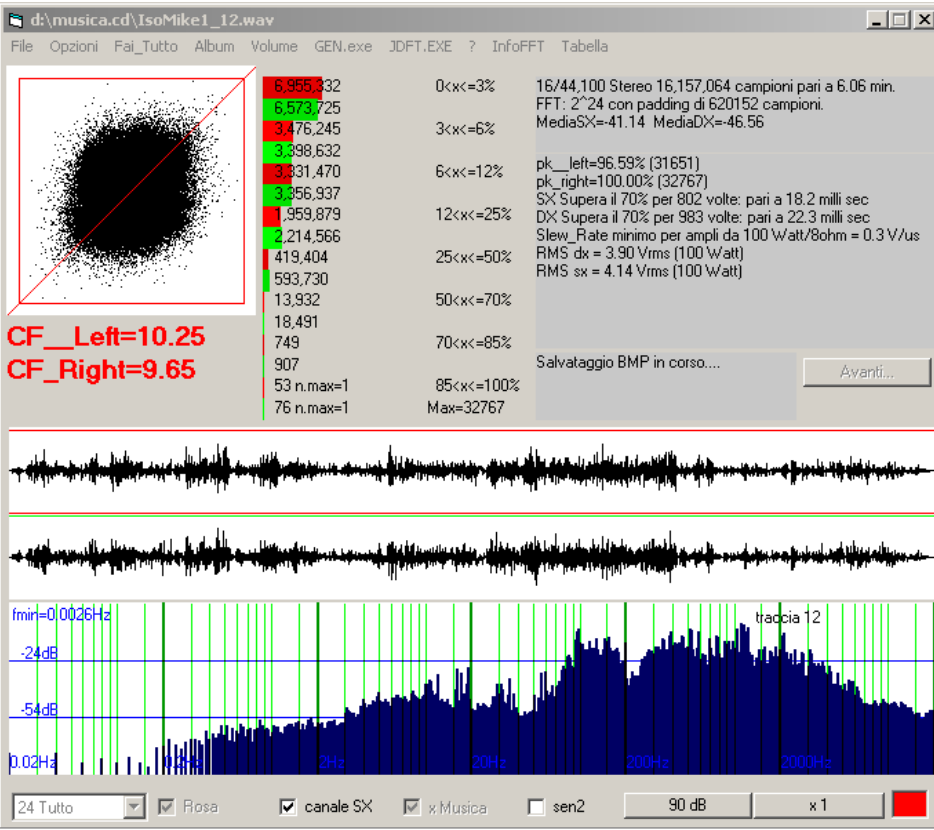
CF\_Left=10.63  
CF\_Right=10.13

22 Tutto  Rosa  canale SX  x Musica  sen2 90 dB x 1



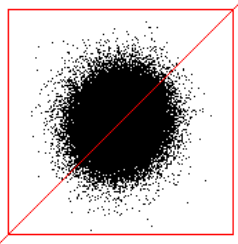





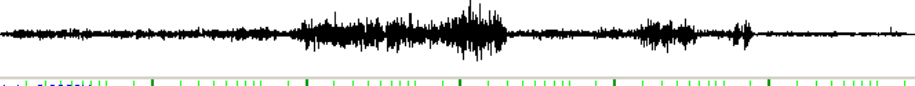
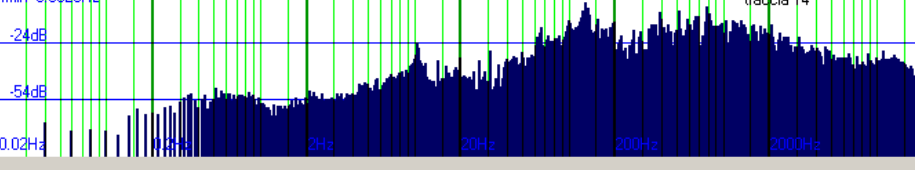


d:\musica.cd\IsoMike1\_14.wav

File Opzioni Fai\_Tutto Album Volume GEN.exe JDFT.EXE ? InfoFFT Tabella



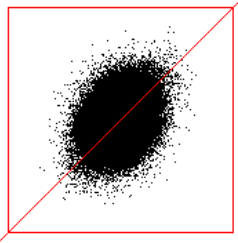
5,581,682	0<x<=3%	16/44,100 Stereo 9,419,172 campioni pari a 3.34 min.
5,423,146		FFT: 2^24 con padding di 7358044 campioni.
1,804,040	3<x<=6%	MediaSX=-54.59 MediaDX=-47.68
1,824,879		
1,149,878	6<x<=12%	pk_left=90.06% (29510)
1,216,403		pk_right=100.00% (32767)
711,588	12<x<=25%	SX Supera il 70% per 129 volte: pari a 2.9 milli sec
739,651		DX Supera il 70% per 505 volte: pari a 11.5 milli sec
167,874	25<x<=50%	Slew_Rate minimo per ampli da 100 Watt/8ohm = 1.1 V/us
207,183		RMS_dx = 3.38 Vrms (100 Watt)
3,981	50<x<=70%	RMS_sx = 3.25 Vrms (100 Watt)
7,405		
125	70<x<=85%	
448		Salvataggio BMP in corso....
4 n.max=1	85<x<=100%	Avanti...
57 n.max=1	Max=32767	

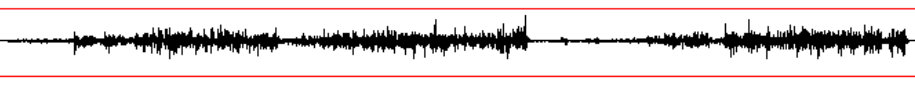

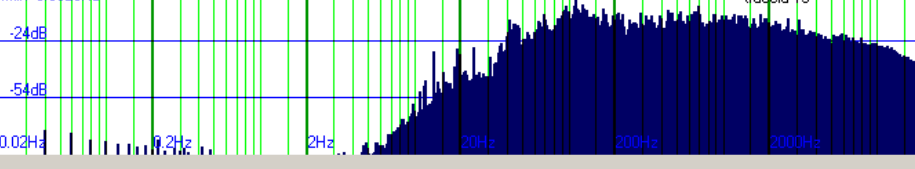
24 Tutto  Rosa  canale SX  x Musica  sen2 90 dB x 1

d:\musica.cd\IsoMike1\_15.wav

File Opzioni Fai\_Tutto Album Volume GEN.exe JDFT.EXE ? InfoFFT Tabella



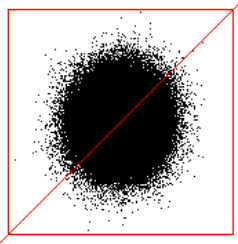
4,165,209	0<x<=3%	16/44,100 Stereo 8,938,188 campioni pari a 3.23 min.
4,130,611		FFT: 2^24 con padding di 7839028 campioni.
1,790,315	3<x<=6%	MediaSX=-14.67 MediaDX=-14.48
1,750,852		
1,787,870	6<x<=12%	pk_left=78.70% (25789)
1,747,195		pk_right=84.07% (27547)
1,001,809	12<x<=25%	SX Supera il 70% per 159 volte: pari a 3.6 milli sec
1,039,190		DX Supera il 70% per 798 volte: pari a 18.1 milli sec
188,519	25<x<=50%	Slew_Rate minimo per ampli da 100 Watt/8ohm = 0.5 V/us
257,895		RMS_dx = 3.77 Vrms (100 Watt)
4,307	50<x<=70%	RMS_sx = 3.83 Vrms (100 Watt)
11,647		
149	70<x<=85%	Salvataggio BMP in corso....
706		Avanti...
10 n.max=1	85<x<=100%	
92 n.max=1	Max=27547	

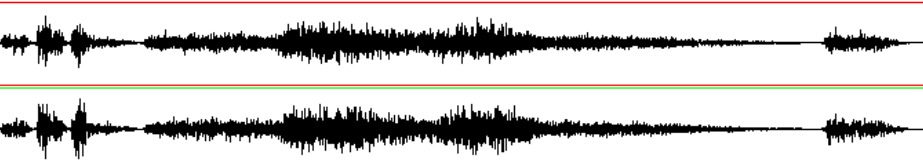
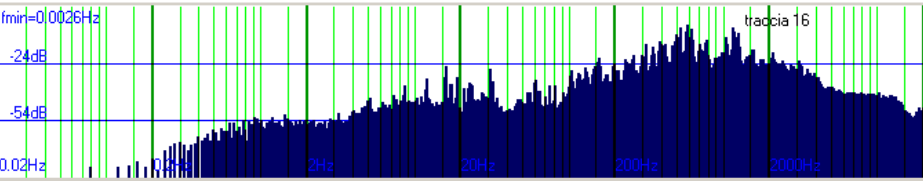
24 Tutto  Rosa  canale SX  x Musica  sen2 90 dB x 1

d:\musica.cd\IsoMike1\_16.wav

File Opzioni Fai\_Tutto Album Volume GEN.exe JDFT.EXE ? InfoFFT Tabella



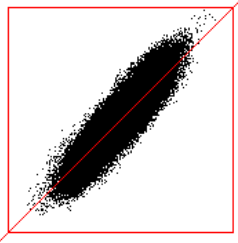
3,739,150	0<x<=3%	16/44,100 Stereo 8,730,624 campioni pari a 3.18 min.
3,618,407		FFT: 2^24 con padding di 8046592 campioni.
1,697,499	3<x<=6%	MediaSX=-31.33 MediaDX=-38.23
1,654,227		
1,828,249	6<x<=12%	pk_left=95.25% (31211)
1,330,913		pk_right=100.00% (32767)
1,155,334	12<x<=25%	SX Supera il 70% per 123 volte: pari a 2.8 milli sec
1,217,159		DX Supera il 70% per 819 volte: pari a 18.6 milli sec
302,593	25<x<=50%	Slew_Rate minimo per ampli da 100 Watt/8ohm = 0.4 V/us
390,862		RMS_dx = 4.24 Vrms (100 Watt)
7,676	50<x<=70%	RMS_sx = 4.41 Vrms (100 Watt)
18,237		
114	70<x<=85%	
751		Salvataggio BMP in corso....
9 n.max=1	85<x<=100%	<input type="button" value="Avanti..."/>
68 n.max=1	Max=32767	

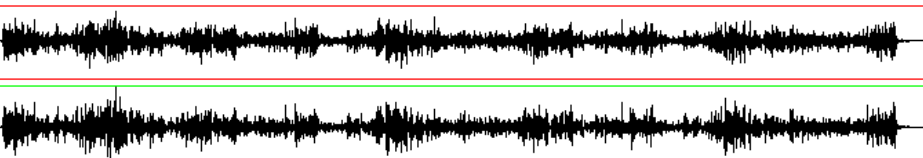
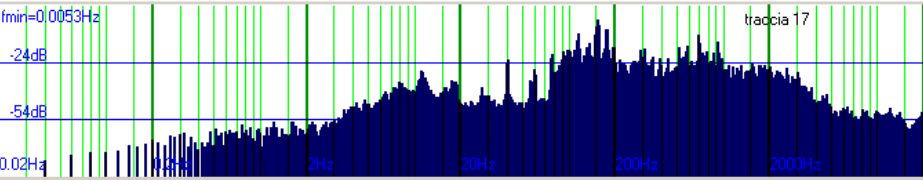
24 Tutto  Rosa  canale SX  x Musica  sen2 90 dB x 1

d:\musica.cd\IsoMike1\_17.wav

File Opzioni Fai\_Tutto Album Volume GEN.exe JDFT.EXE ? InfoFFT Tabella



2,124,816	0<x<=3%	16/44,100 Stereo 7,238,280 campioni pari a 2.44 min.
2,060,724		FFT: 2^23 con padding di 1150328 campioni.
1,530,989	3<x<=6%	MediaSX=-34.22 MediaDX=-36.79
1,465,090		
1,370,915	6<x<=12%	pk_left=84.45% (27674)
1,301,652		pk_right=100.00% (32767)
1,309,598	12<x<=25%	SX Supera il 70% per 321 volte: pari a 7.3 milli sec
1,337,020		DX Supera il 70% per 1638 volte: pari a 37.1 milli sec
389,659	25<x<=50%	Slew_Rate minimo per ampli da 100 Watt/8ohm = 0.4 V/us
531,795		RMS_dx = 5.72 Vrms (100 Watt)
11,982	50<x<=70%	RMS_sx = 5.46 Vrms (100 Watt)
40,360		
321	70<x<=85%	Salvataggio BMP in corso....
1,537		<input type="button" value="Avanti..."/>
0 n.max=1	85<x<=100%	
101 n.max=0	Max=32767	

23 Tutto  Rosa  canale SX  x Musica  sen2 90 dB x 1

d:\musica.cd\IsoMike1\_18.wav

File Opzioni Fai\_Tutto Album Volume GEN.exe JDFT.EXE ? InfoFFT Tabella

4,209,346	0<x<=3%	16/44,100 Stereo 9,055,788 campioni pari a 3,25 min.
4,100,003		FFT: 2^24 con padding di 7721428 campioni.
2,281,011	3<x<=6%	MediaSX=-29.70 MediaDX=-32.69
2,276,611		
1,798,619	6<x<=12%	pk_left=95.30% (31227)
1,866,322		pk_right=100.00% (32767)
660,188	12<x<=25%	SX Supera il 70% per 662 volte: pari a 15.0 milli sec
701,042		DX Supera il 70% per 793 volte: pari a 18.0 milli sec
99,539	25<x<=50%	Slew_Rate minimo per ampli da 100 Watt/8ohm = 0.6 V/us
104,443		RMS_dx = 3.16 Vrms (100 Watt)
5,823	50<x<=70%	RMS_sx = 3.09 Vrms (100 Watt)
6,574		
589	70<x<=85%	
718		Salvataggio BMP in corso....
73 n.max=1	85<x<=100%	Avanti...
75 n.max=1	Max=32767	

CF\_Left=12.64  
CF\_Right=12.93

24 Tutto  Rosa  canale SX  x Musica  sen2 90 dB x 1

d:\musica.cd\IsoMike1\_19.wav

File Opzioni Fai\_Tutto Album Volume GEN.exe JDFT.EXE ? InfoFFT Tabella

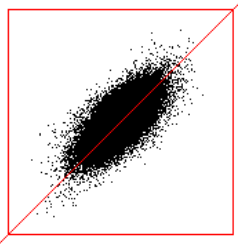
4,364,464	0<x<=3%	16/44,100 Stereo 9,311,568 campioni pari a 3,31 min.
4,440,022		FFT: 2^24 con padding di 7465648 campioni.
2,032,202	3<x<=6%	MediaSX=-41.69 MediaDX=-65.92
1,991,421		
1,894,850	6<x<=12%	pk_left=88.72% (29073)
1,862,389		pk_right=100.00% (32767)
804,088	12<x<=25%	SX Supera il 70% per 54 volte: pari a 1.2 milli sec
895,369		DX Supera il 70% per 114 volte: pari a 2.6 milli sec
114,389	25<x<=50%	Slew_Rate minimo per ampli da 100 Watt/8ohm = 0.2 V/us
120,352		RMS_dx = 3.56 Vrms (100 Watt)
1,521	50<x<=70%	RMS_sx = 3.17 Vrms (100 Watt)
1,901		
47	70<x<=85%	Salvataggio BMP in corso....
98		Avanti...
7 n.max=1	85<x<=100%	
16 n.max=1	Max=32767	

CF\_Left=11.22  
CF\_Right=12.61

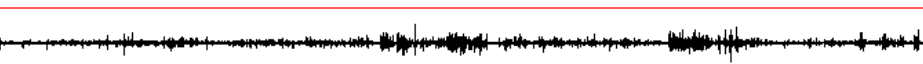

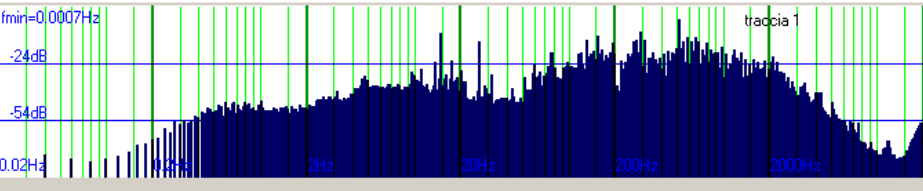
24 Tutto  Rosa  canale SX  x Musica  sen2 90 dB x 1

d:\musica.cd\IsoMike1\_20.wav

File Opzioni Fai\_Tutto Album Volume GEN.exe JDFT.EXE ? InfoFFT Tabella



24,552,631	0<x<=3%	16/44,100 Stereo 35,758,044 campioni pari a 13.31 min.
25,003,301		FFT: 2^26 con padding di 31350820 campioni.
6,395,922	3<x<=6%	MediaSX=-17.67 MediaDX=-20.83
6,176,937		pk_left=82.66% (27086)
3,482,503	6<x<=12%	pk_right=85.33% (27962)
3,311,856		SX Supera il 70% per 337 volte: pari a 7.6 milli sec
1,175,978	12<x<=25%	DX Supera il 70% per 513 volte: pari a 11.6 milli sec
1,121,850		Slew_Rate minimo per ampli da 100 Watt/8ohm = 0.2 V/us
146,253	25<x<=50%	RMS_dx = 2.12 Vrms (100 Watt)
139,582		RMS_sx = 2.01 Vrms (100 Watt)
4,420	50<x<=70%	
4,005		
320	70<x<=85%	
392		Salvataggio BMP in corso....
17 n.max=1	85<x<=100%	Avanti...
121 n.max=1	Max=27962	

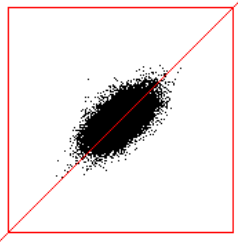




CF\_Left=18.85  
CF\_Right=19.88



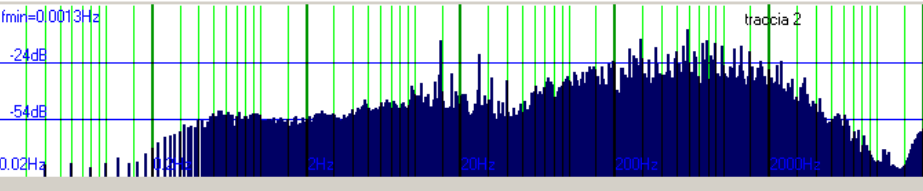
26 Tutto  Rosa  canale SX  x Musica  sen2 90 dB x 1

d:\musica.cd\IsoMike1\_21.wav

File Opzioni Fai\_Tutto Album Volume GEN.exe JDFT.EXE ? InfoFFT Tabella



7,916,822	0<x<=3%	16/44,100 Stereo 17,360,700 campioni pari a 6.34 min.
8,435,349		FFT: 2^25 con padding di 16193732 campioni.
4,071,662	3<x<=6%	MediaSX=-16.06 MediaDX=-18.14
4,098,291		pk_left=57.84% (18953)
3,550,318	6<x<=12%	pk_right=52.90% (17335)
3,309,795		SX Supera il 70% per 442 volte: pari a 10.0 milli sec
1,592,721	12<x<=25%	DX Supera il 70% per 293 volte: pari a 6.6 milli sec
1,348,131		Slew_Rate minimo per ampli da 100 Watt/8ohm = 0.1 V/us
222,622	25<x<=50%	RMS_dx = 3.18 Vrms (100 Watt)
165,528		RMS_sx = 3.20 Vrms (100 Watt)
6,113	50<x<=70%	
3,313		
377	70<x<=85%	
281		Salvataggio BMP in corso....
65 n.max=1	85<x<=100%	Avanti...
12 n.max=1	Max=18953	

CF\_Left=12.59  
CF\_Right=12.50

25 Tutto  Rosa  canale SX  x Musica  sen2 90 dB x 1