Free in the kodedyal

E F# G A B C D
1 2 b3 4 5 b6 b7

intro | I- Em | V- Bm | bVI^Δ7 Cmaj7 | 1-5-6

verso | I- Em | III A | I M. Jonico | b VII D | III sus Gsus2 | 1-9-7-3

coro | V- Bm | bVI^Δ7 Cmaj7 | V- Bm | IV m^9 Am7 | V- Bm | bVI^Δ7 Cmaj7

| V- Bm | IV -7 Am7 | V- Bm | bVI^Δ7 C | 5-6
5-4
5-6
5-4
5-6

| Puente pt1 = Intro x4 | Puente 2: IV -7 Am7 | V- Bm | bVI^Δ7 C | b VII D | 4-5-6-7

Outro IV -7 Am7 | V- Bm | bVI^Δ7 C | % | 4-5-6

MAJ

1 2 3 4 5 6 7

C_{maj7}	Dm^7	Em^7	F_{maj7}	G^7	Am^7	Bm^{7b5}
Jonico	dorico	frigio	lidio	mixo	eolico	Locrio
9,13	9,11,13	11	9,#11,13	9,13	9,11	11,b13

M. MEL

1 2 b3 4 5 6 7

C_mMaj7	Dm^7	$E_{maj7}^{\#5}$	$F7$	$G7$	Am^{7b5}	B^7 Alt (Bm^{7b5})
9 11 13	dorico b9 11,13	lidio aug 9,#11	lidio b7 9,#11,13 SUBS	mixo 9 b13 9,b13	locrio b9 9,11, b13	Alt DOM. b9,#9, b5, b13

M. ARMO

1 2 b3 4 5 b6 7

C_mMaj7	Dm^{7b5}	$E_{maj7}^{\#5}$	Fm^7	$G7$	A_{maj7}	B^{o7}
9, 11	locrio b6 11,13	Jonico Aug 9	Dorico #11 9,#11,13	mixo b9 b13 b9 b13	lidio #9 #9, #11, 13	Alt bb7 b13

M. NAT

1 2 b3 4 5 b6 b7

$Cm7$	Dm^{7b5}	E_{maj7}	fm^7	Gm^7	A_{maj7}	B^7
~~eolico~~ ~~#11~~	~~jonico~~ ~~9,11,13~~	~~dorico~~ ~~9,11,13~~	~~Frigio~~ ~~b2~~	~~lidio~~ ~~9,#11,13~~	~~mixo~~ ~~9,13~~	6
eolico 9,11	Locrio 11	Jonico 9, 13	Dorio 9,11,13	Frigio 11	lidio 9,#11,13	mixo 9,13

* Resuelve a maj

2-5-1 MAJ

Dm^7 $G7$ C_{maj7}

dorico 9,11,13 — mixo 9,13 — Jonico 9,13

* V^7/II^{-7}

2-5-1 M. MEL

Dm^7 $G7$ C_mMaj7

dorico b9 11,13 — mixo 9 b13 — m.Mel 9,11,13

* Para menor

2-5-1 m. ARMO

Dm^{7b5} $G7$ C_mMaj7

Locrio b13 11,13 — mixo b9 b13 — m.armo 9,11

2-5-1 M. NAT

Dm^{7b5} $Gm7$ C_mMaj7

Locrio 11 — Frigio 11 — eolio 9,11

Dominante Secundario

V^7/II^{-7}	A7	Dm7
V^7/III^{-7}	B7	Em7
V^7/IV^{a7}	C7	Fmaj7
V^7/V^7	D7	G7
V^7/VI^{-7}	E7	Am7

Subs

Sub V^7/II^{-7}	Eb7	Dm7
Sub V^7/III^{-7}	F7	Em7
Sub V^7/IV^{o7}	Gb7	Fmaj7
Sub V^7/V^7	Ab7	G7
Sub V^7/VI^{-7}	Bb7	Am7

escala = lidio b7 9,#11,13

Resuelven Maj

V^7/III^{-7} → Dorico 9,11,13 — mixo 9 13

V^7/VI^{-7} → Locrio b13 11,13 — mixo b9 b13

Resuelven menor

V^7/II^{-7} → dorico b9 11,13 — mixo 9 b13

Reggae (mento (Sub))

- 50's / 60's
- Previo al Reggae 15 ka
- Ejemplos
  - Harry Belafonte (Banana Boat song day O)
    (Jamaica Farewell)
  - Count Easter, Calypso ejemplo (water in bottom)

Regalías & Sync

tarifas

└TV

└TV abierta / Cable satelital: USD $2,500 ($5,000)

Proyecto en Extranjero USD $15,000

Video donado: Pago total $8,500 - 10,00

theme Song: $4,000 - 10,000

Portadas Comun (carolc, corridos, Beat) $1,000 - $3,000

Comerciales y Videoclips

└comercial (Año) $75,000 - 500,000

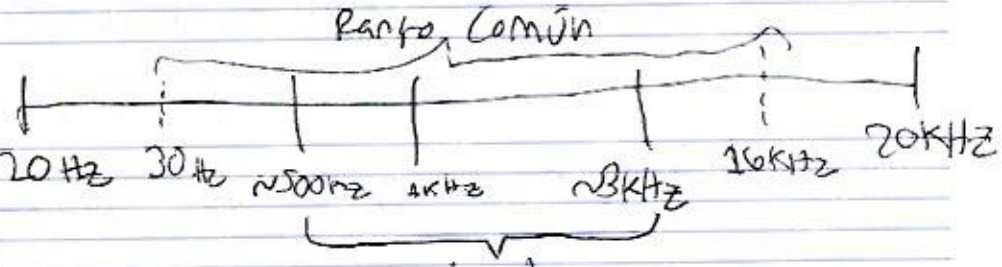
└videoclips $5000 - 60,000

audio-metria "250-500"

500 Hz → convuelo
1000 Hz → Blip de Cue
5000 Hz → ~~Frecuencia~~ mas alto
250 Hz → "Bajo"
2500 Hz → TMK ← cabeza mes

① 5000, 2500
② 1000
③ 2500, 5000
④ 500
⑤ 250
⑥ 1000
⑦ 5000
⑧ 280
⑨ 1000
⑩ 2500, 5000

ING. 20 jun



Zona donde ~~Percibimos~~ percibimos mas detalle (Sensibilidad auditiva)

~~Fletcher~~

Fletcher Munsson → Curvas Isofónicas
Curvas Fletcher-Munsson

Robinson + Dadson → estandarizan (curvas Isofónicas)

ISO 226 : equal loudness level digital

mas sensibil a ~2000 - 5000

Curvas de ponderación

FREQ – AMP

3 curvas

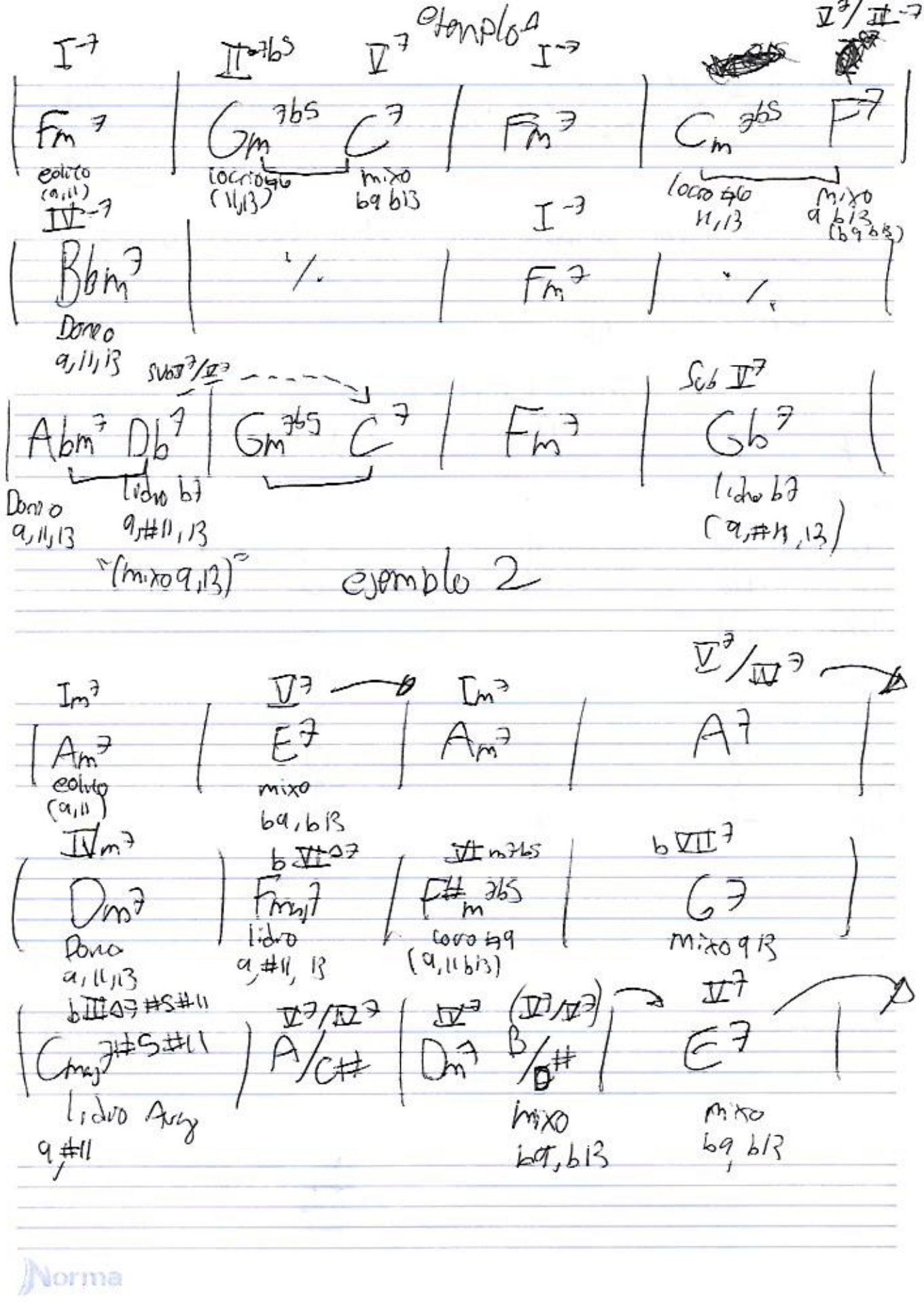
- A (Bajos) — niveles dB SPL 35-45
- B (medios) — 45-80
- C (altos) — 80-120

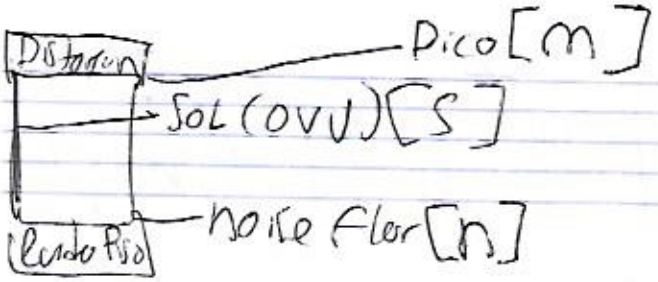
Ruido de Piso

- eléctrico
- acústico
- digital

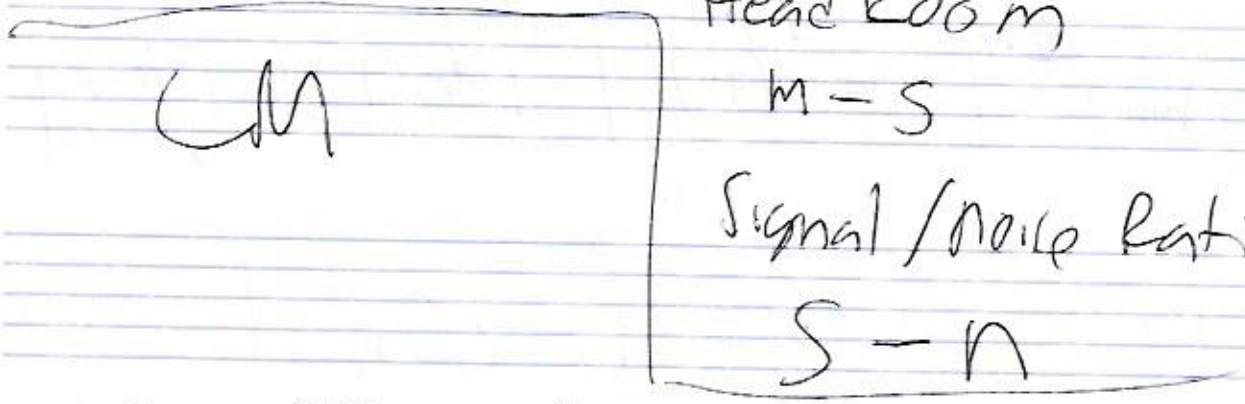
Curvas (dB SPL)

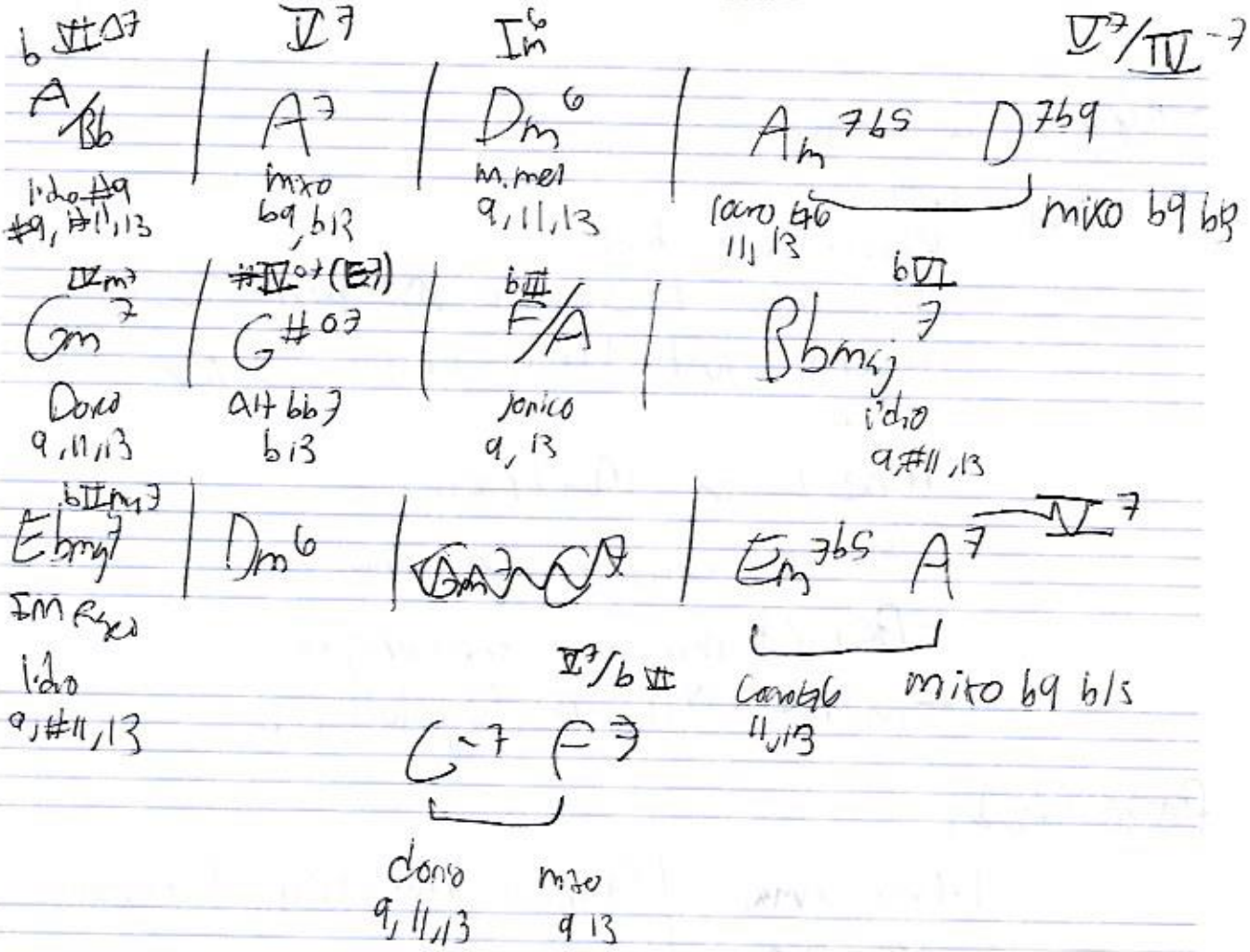
Fq	A	B	C
31.5	-39	-17	-3
63	-26	-9	-1
125	-16	-4	0
250	-9	-1	0
500	-3	0	0
1000	0	0	0
2000	+1	0	0
4000	+1	-1	-1
8000	+1	-3	-3

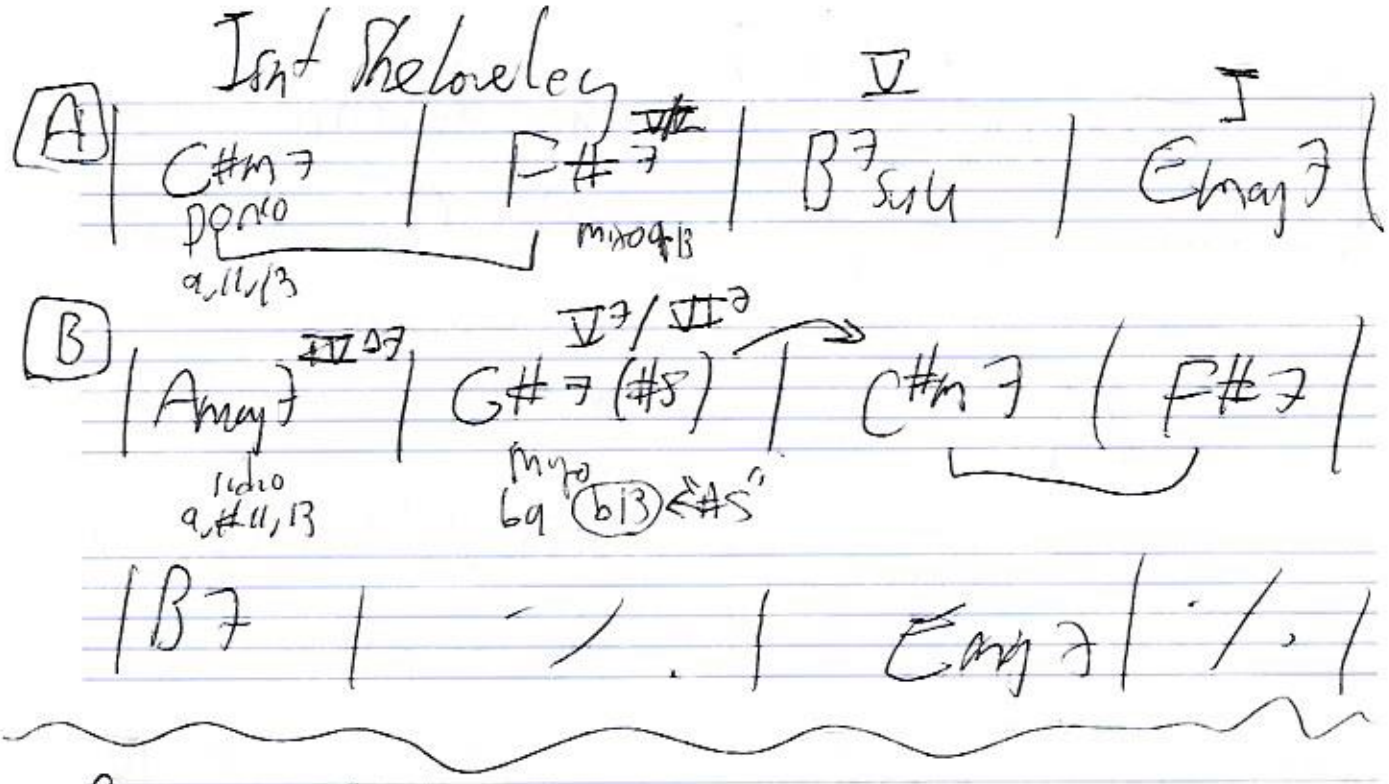

ejemplo 4
I-7
II-7b5
V7
I-7
V7/IV-7
Fm7
eolico (9,11)
Gm7b5
locrio#9 (11,13)
C7
mixo 69 b13
Fm7
Cm7b5
F7
locro#9 11,13
mixo 9 b13 (b9 b13)
IV-7
I-7
Bbm7
Dorio 9,11,13
Fm7
SubV7/IV7
Abm7
Db7
Gm7b5
C7
Fm7
SubV7 IV7
Gb7
Dorio 9,11,13
lidio b7 9,#11,13
lidio b7 (9,#11,13)
"(mixo 9,13)"
ejemplo 2
Im7
V7
Im7
V7/IV7
Am7
eolico (9,11)
E7
mixo 69,b13
Am7
A7
IVm7
bVII7
IVm7b5
Dm7
Dorio 9,11,13
Fm/Eb7
lidio 9,#11,13
F#m7b5
locro#9 (9,11,b13)
G7
mixo 9 13
bIII7 #5#11
V7/IV7
IV7
(IV7/V7)
IV7
Cmaj7#5#11
lidio Aug 9,#11
A/C#
Dm7
B/D#
mixo 69,b13
E7
mixo 69,b13



Rango dinamico
m - n
Head Room
m - s
Signal / noise Ratio
s - n







Reggae de Jamaica

Ska: - 60's
- evolución de RnB
- Exponentes: Derrick Morgan, Toots Hibbert, Justin Hinds, Prince Buster

- Prince Buster - Madness
- One step beyond - madness
- Derick morgan: the conqueror
- Millie small: My Boy lollipop

Rock Steady

1966 Jamaica
- Sister Nancy
- Prince Jazz

Gaylads, mystics, Pergons

Johnny nash: hold me tight

dm 27

SKHz 2.5K 1K 500Hz 250Hz

1 2.5K/5K	6 1K
2 1K	7 5K
3 250	8 2.5K
4 5K	9 1K
5 500Hz	10 250

dm 27

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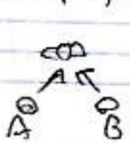
Sensaciones Psicoacusticas

- Efecto Hass
  - Nvoluck tiempo (fase)



"helmut Hass"

- 30 ms como ventana (25-30)

- percepción
- interacción
- sensación

Refuerzo Sonoro – en vivo
– Grabación (Mix)
– mezcla (RF)

"Curva Hass"

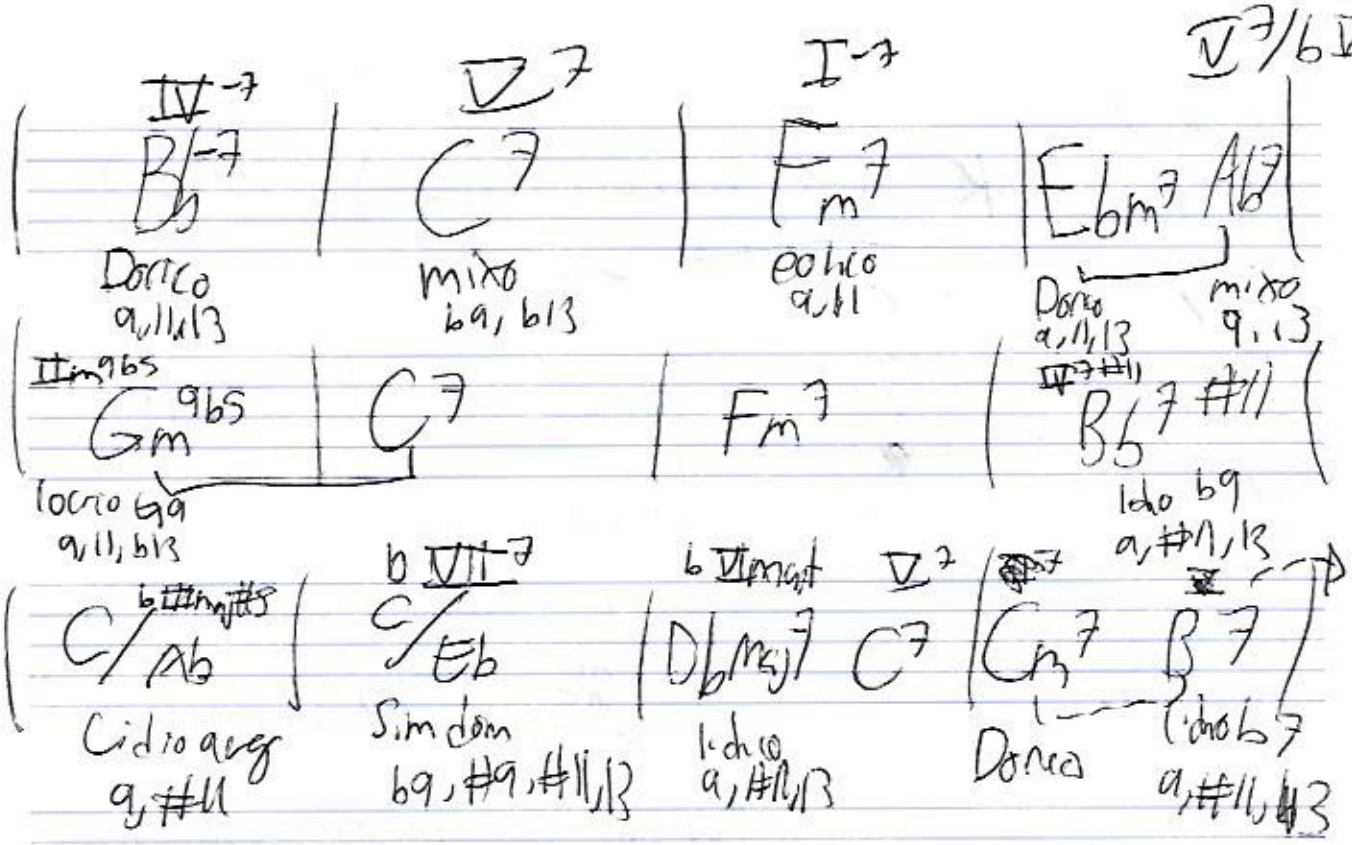
- Enmascaramiento

se pierden 6dB cada octava

White noise

Pink noise

- mecanicamente
- Plechor



Sim dif

1 2 b3 4 b5 b6 bb7 7

IN6

125 250 500 1000 2.5K 5K 10K

① 1000
② SK+ → 10K
③ SK / 5K
④ 2.5K 5K
⑤ 500? ✓
⑥ 2.5K 5K 10K
⑦ 250 → 125

⑩ 1000 ✓
⑪ White
⑫ Pink

Efecto Doppler

Pitch acc.

$$F_R = F_E\left(\frac{V_s \pm V_R}{V_s \pm V_E}\right)$$

Frente Receptor

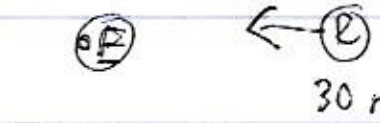
Fuente Emisor

^ = Vs (Freq)

Vs (TEMP)(.6)+REF

(300Hz)
Fuente estatica

Receptor



30 m/s

TEMP = 21°C

$$F_R = F_E \left(\frac{V_s \pm V_R}{V_s \pm V_E} \right)$$

$$V_s = (21°C)(0.6) + 331.4$$

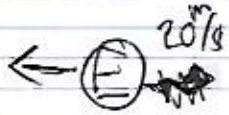
$$V_s = 344 \text{ m/s}$$

$$F_R = 300\text{Hz} \left(\frac{344 \text{ m/s} + 30 \text{ m/s}}{344 \text{ m/s} + 0 \text{ m/s}} \right)$$

$$F_R = 300\text{Hz} \left(\frac{374}{344} \right)$$

$$F_R = 300\text{Hz} (1.08)$$

$$F_R = 326.16\text{ Hz}$$



20 m/s

300Hz

$V_s = 340$ m/s

$$F_R = F_E \left(\frac{V_s \pm V_R}{V_s \pm V_E} \right)$$

$$F_R = 300 \left(\frac{340 + 0}{340 - 20} \right)$$

$$F_R = 300 \left(\frac{340}{320} \right)$$

$$F_R = 318.75$$

20 m/s 35 m/s

(E) → ← (O)

300 Hz

$V_s = 340$

$$f_R = F_E \left(\frac{V_s \pm V_O}{V_s \pm V_E} \right)$$

$$f_R = 300 \left(\frac{340 - 35}{340 - 20} \right)$$

$$F_R = 300 \left(\frac{305}{320} \right)$$

$$F_R = 300(0.95)$$

$$F_R = 285 \text{ Hz}$$

Batimento Amplitud en Frec cercanas $\text{Periodo} = \frac{1}{\text{Frec}}$

$$F_{Bat} = F_1 - F_2$$

ING Repaso II Jul 22

① $\lambda = 256$ Hz @18

$$\lambda = \frac{vel}{Frec}$$

REF

$$\lambda = \frac{(n°C)(0.6) + 331.4}{Frec}$$

$$\lambda = \frac{(18)(0.6) + 331.4}{256}$$

$\lambda \approx 1.33$ m

② $P_a = 0.0035$

Ref $dB_v = 0.775\ V$

$dB_v = ?$

$dB_v = ?$

Ref $dB_v = 1_v$

$dB_w = ?$

Ref $dB_w = 1_w$

$P_a \rightarrow^{dB} SPL$

$dB_{SIL} = dB$ ~~SWL~~ W

$SPL = 20\log\left(\frac{P_a?}{2\times10^{-5}}\right)$

$SPL = 20\log\left(\frac{0.0035}{2e-5}\right)$

$SPL = 44.8\ dB_{SPL}$

$dB_v = 20\log\left(\frac{44.8\ SPL}{0.775\ V}\right)$

$dB_v = 20\log(57.8)$

$dB_v = 35.23\ dB_v$

$dB_w = 20\log\left(\frac{P_a}{2\times10^{-5}}\right)$

$= 20\log\left(\frac{44.8\ dB_{SPL}}{2\times10^{-5}}\right)$

$= 20\log(2,240,000)$

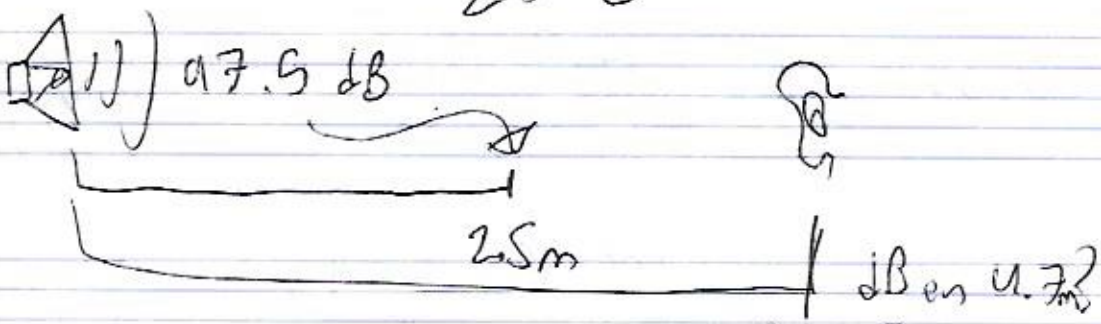
$dB_w = 127$ $dB_w = 20\log\left(\frac{P_a}{1}\right)$

127 dB_w

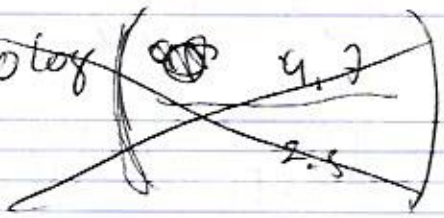
$dB_v = 20\log\left(\frac{44.8}{1}\right)$

$= 33.dB_v$

27°C



$20 \log\left(\frac{2.5}{4.7}\right) = -5.4$



21.4

~~97.5 - 21.4 = 76.1~~

$97.5 - 5.4 = 92.1\ dB_{SPL}$

Tonalidad Menor — menor NAT / menor ARMO / menor MELO

Tonico menor: Diferentes fuentes Para "1"

Im7 menor NAT

Im6/ImMaj7 menor MELO

Im6 / Im7 DORICO

Segundo Grado

II$_{m^{7\flat5}}$ ~~[illegible]~~ men. NAT

II$_{m^{7\flat5}}$ men. ARMO
(locrio $\natural$6)

tercer Grado

$\flat$III$_{maj7}$ men. NAT

$\flat$III$_{maj7\#5}$ m. MEL
(lidio Aug)

Cuarto Grado

IV$_{m7}$ men. NAT

IV^7 m. melodica
(lidio $\flat$7) men MEL

Quinto Grado

V$_{m^7}$ men. NAT

V^7 men. ARMO
(mixto $\flat$9 $\flat$13)

V^7 men. MEL
(mixto 9, $\flat$13)

Sexto Grado

$\flat$VI$_{maj7}$ men NAT

($\flat$VI$_{maj7^{\#9}}$) men. ARMO
[lidio #9]

VI$_{m^{7\flat5}}$ m. MEL
(locrio $\natural$9)

Septimo Grado

$\flat$VII^7 mel NAT

VII^{o7} mel ARMO

VII$_{m^{7\flat5}}$ men. MELO
AEOLIAN ($\flat$9, #9, $\flat$5, $\flat$13)
(#11 = #5)

G7$^{\#5\#9}$ = G7$^{\flat13\#9}$

GALL

Dominantes secundarios en Menor (en A menor)

① no es un Dominante Secund. $E^7 \rightarrow Am^7$

② $\frac{V^7}{II\,m^{7b5}}$ $F\# \rightarrow Bm^{7b5}$
(no existe)

③ dom. sin Función de dom.
$\left(\frac{V^7}{\flat III\,maj^7}\right)$ $G^7 \rightarrow Cmaj^7$
mixto 9, 13

④ $\frac{V^7}{IIIm^7}$ $A^7 \rightarrow Dm^7$
mixto 9, b13

⑤ $\frac{V^7}{\cancel{IIIm^7}\ IVm^7}$ $B^7 \rightarrow Em^7$
mixto b9, b13

⑥ $\frac{V^7}{\cancel{IV}}$ $C^7 \rightarrow Fmaj^7$
$\flat\cancel{VII}maj^7$
mixto 9, 13

⑦ dom sin Función d dom
$\left(\frac{V^7}{\flat VII^7}\right)$ $D^7 \rightarrow G^7$
mixto 9, 13

Projeto Ideal #1

| Dm^{b13} | C^{9} | Am^{7} | Bb^{13} C^{7} |

↑ C#

~~| Dm^{b13} | Am |~~

I
Num 2

| Bm | F#m | ⇒ | C#m | G#m | ~~G#m~~

Dm → Eb^{b5} / D → A7 → Dm

n2 | F#m | E D |

C# B E D C#

~~Bm~~ | D | A | G | | ~~F#m7~~ C#7 EMAJ7 DMAJ7

IIm7 IV I bVII

Repaso Efectos psico acústicos

Hass: • dif. entre 25 ms - 30 ms
• filtro de peine

Doppler: aparente cambio de tono (en movimiento)

$$F_R = F_E \left(\frac{V_s \pm V_R}{V_s \pm V_E} \right)$$

— Vel Receptor
— Vel Emisor

Frente Receptor
Frente Emisor
Vel Sonido

alejan	resta
alegra	suma

$$V_s = (TEMP)(0.6) + REF$$

$$REF = 331.4$$

20 m/s $F_{eq} = 850\,Hz$

F_E ← F_R 344 m/s vel sonido

$F_E \rightarrow \leftarrow F_R$ (−)

$F_E \leftarrow \rightarrow F_R$ (+)

~~$F_R \; F_E$ (−)~~

~~$F_R \; F_E$ (+)~~

F_R F_E no mov

$$F_R = F_E \left(\frac{V_s \pm V_R}{V_s \pm V_E} \right)$$

$$F_R = F_E \left(\frac{344 + 20}{344 + 0} \right)$$

F_R no mov $\rightarrow$ F_E (−)

$$F_R = F_E (1.0581)$$

$$F_R = 850_{Hz} (1.0581)$$

F_R $\rightarrow$ F_E no mov. (+)

$$F_R = 899.385$$

Batimento

$$Freq_1 - Freq_2 = Freq_{Rate}$$

"Rate" = de Batimento

Longitud de onda

$Freq$ = 456 Hz $\lambda = \frac{Vel\ sonido}{Freq}$

TEMP = 18°

$\lambda = ?$

$$\lambda = \frac{(18)(0.6)+331.4}{456} = 0.75$$

Umbral de audición

0.00002 Pa → 20 μPa = 20 Pa

Umbral Dolor

120 dB → 20 Pa

Curvas Isofónicas

"mini" = Repaso CM

V^7/IIm^7 A^7 I^7/IVm^7

en MAJ en min

mixo 9 b13

ALL OF ME

A I MAJ7 | V7/VIm7

Cmaj7	%	E7	%
Jonico (9,13)	C Jonico (9,13)	Mixo b9 b13	

V7/IIm7 | II m7

A7	%	D-	%
mixo 9 b13	A mixo 9 b13	Dorico (9,11,13)	D dorico (9,11,13)

V7/VIIm7 | VIIm7

E7	%	A-	%
mixo 9, b13	E mixo 9 b13	Eolico (9,11	A Eolico (9,11)

V7/V | IIm7 | V7

D7	%	D-7	G7
mixo 9 13	D mixo 9 13	Dorico (9,11,13)	mixo

B Imaj7 | V7/IIIm7

Cmaj7	%	E7	%
Jonico (9,13)		mixo b9 b13	

V7/IIIm7 mixo b9 b13 | IIm7 Dorico

A7		D-	=

IVmaj7 | IIIm7 | IIm7 Imaj7 | VIm7 | VI7/IIm7

F	Fm	Cmaj7	Em7	A7
lidio	Im Eolico (Dorico [9,11,13])			mixto 9, b13

D-7	G7	C6 (E♭	