 Sturnt ＂${ }^{\text {pace }}$ C


ToTkL：as 比hed thonsint，at is
（35）＂reg．＂and＂8 reay dissav．tipes
70 Th ： 43 tut the 8 will be
so iffoctivitut 35 ．CF
（1）CDbEbE $=C_{\text {H }}^{\text {H }}$ AqMs
（2）Db Eb $F=D^{b \Delta q^{\prime \prime}}$

（4）CDSEG＝EDT／6N


（7）朝 $\boldsymbol{B}^{b}=E^{b} 7 / 6 \mathrm{mos}$
C故 $=1$＝same os zabove

（9）CDb EGb $=G b T \# 11 \mathrm{mos}=A b T+0 R / D^{b}$
（10）$C$ ）$E G=E^{b} 13 b 9 \mu_{0} R, 5=A 7^{*} 9 \mathrm{moR}$
（ii）$C D^{b} E=C A_{\text {m }} A^{4}$

（13）$C D^{b} E Z^{b}=c 7 b 9 \mathrm{mas}=F \# 7^{\# \prime \prime} \mathrm{moR}$
CDE $D=$ same as 3 abore



（18）
（17） $\begin{aligned} C \\ C\end{aligned}$
（23）CDD $A=A 7 \# 7_{\text {mos }}=E^{b}-1 B \# 11 \mathrm{moR}, 3,5$

$$
\begin{aligned}
& \text { (24) } C
\end{aligned}
$$

> (25)
> c) ${ }^{2} A^{\circ} B=$ same $a d$ abore

H $4 B_{B}=\operatorname{same} 4$（1）abore C）$K=5$ ame as 8 above

C）
CIEFE＝Sameac 8 above
$C D E^{5}=$ same as（7）abore
cyteg＝same as（13）abore
C 4 保 $=$ same as 18 abore
$=$ same as 224 abore
$=$ samear（25）obove CDI它＝sameses（1）above
7）EF $=$ Sama as 25 above

$27 C D E G_{b}=C 19$
（28）$C$ D $E A^{b}=E 77^{\circ}$
（29）$C D E A=C 6 / 9$ mos $=D 9 \mathrm{mo3}$
C）$B=$ sarre $a n(2 \theta$ abore
c
（32）

$$
\text { C) } \frac{1}{b}=\operatorname{sam}=-27
$$

$$
\text { cht }=\text { sameas (3) }
$$

（33）

$$
\begin{aligned}
& \text { CD } b_{G}=\text { same as } \\
& C D
\end{aligned}
$$

$$
C D G A=D 7
$$

$$
\cos +\frac{b}{6}=\text { same as (28) }
$$

$$
C D C D=\text { same }
$$

CGb

$$
\begin{aligned}
& \text { C) } G 6=\text { seme as (23) } \\
& =366 / 940 R \\
& \text { (30) CDEG }{ }^{6}=F 6 / 9 \mathrm{mo3}=\mathrm{Dm} 7 / 11 \mathrm{mos}=5 / 500 \mathrm{SA}
\end{aligned}
$$



# Systematically Invertible (no doubles) 4-Note Chord Types <br> Final Recheck of Possibilities 

Reminder Notes to Myself
( $3^{1 / 2} \mathrm{hrs}$ - compared to $\mathbf{4 0 - 5 0} \mathrm{hrs}$ the 1 st time)
(I've done it too many times, I'm not doing it again!)
Ted Greene - Saturday, 5-18-1985
Total: As I had thought, it is 35 "regular" and 8 very dissonant types.
Total $=43$, but the 8 will be marginal, so effectively, for now, it is 35 .
Starting from C

## C Db

More Dissonant

|  | Notes |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| (1) | C | Db | D | Eb |
| (2) | C | Db | D | E |
| (3) | C | Db | D | F |
| (4) | C | Db | D | Gb |
| (5) | C | Db | D | G |
| (6) | C | Db | D | Ab |
| (7) | C | Db | D | A |
| (8) | C | Db | D | Bb |
| (9) | C | Db | D | B |



| 1. | C | Db | Eb | E | $=\mathrm{C} \# \mathrm{~m}^{\Delta} 9 \mathrm{no5}$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2. | C | Db | Eb | F | $=\mathrm{Db}^{\Delta} 9$ no5 |  |  |  |  |  |  |
| 3. | C | Db | Eb |  | $=\mathrm{Ab} 7 / \mathrm{Db}$ noR $=\mathrm{Ebm} 7 / 6 \mathrm{no5}=\mathrm{Gb} \% \# 11$ no3 |  |  |  |  |  |  |
| 4. | C | Db |  | G | $=\mathrm{Eb} 7 / 6 \mathrm{no5}$ |  |  |  |  |  |  |
| 5. | C | Db | Eb | Ab | $=\mathrm{Eb} 7 / 6$ sus4 no5 $=\mathrm{Db}^{\Delta} 9 \mathrm{no3}=\mathrm{Bbm} 11$ noR,5 5 Ab add11 |  |  |  |  |  |  |
| 6. | C | Db | Eb | A | $=\mathrm{F} 7 \mathrm{~b} 6$ no $\mathrm{R}=\mathrm{Ab}(7) \mathrm{b} 9$ noR/Db $=\mathrm{A}^{\mathrm{o}}$ add ${ }^{4} 3=\mathrm{F} \#^{\circ} 7$ noR $/ \& 5$ |  |  |  |  |  |  |
|  | C |  |  |  | $\begin{aligned} & =\mathrm{Eb} 7 / 6 \text { no } 3 \\ & =\text { same as }(2) \text { [dissonant group] above } \end{aligned}$ |  |  |  |  |  |  |
| 7. | C | Db |  |  |  |  |  |  |  |  |  |
| 8. | C | Db |  | F | $=\mathrm{Db}^{\Delta} 7 \# 9$ no5 $=\mathrm{C}[7] \mathrm{b} 9$ no5/F |  |  |  |  |  |  |
| 9. | C | Db |  | Gb | $=\mathrm{Gb} 7 \# 11 \mathrm{no} 3=\mathrm{Ab} 7+\mathrm{noR} / \mathrm{Db}$ |  |  |  |  |  |  |
| 10. | C | Db |  | G | $=\mathrm{Eb} 13 \mathrm{~b} 9 \mathrm{noR}, 5=\mathrm{A} 7 \# 9 \mathrm{noR}$ |  |  |  |  |  |  |
| 11. | C | Db |  | Ab | $=\mathrm{CHm}{ }^{\Delta} 7$ |  |  |  |  |  |  |
| 12. | C | Db |  | A | $=\mathrm{Eb} 13 \mathrm{~b} 9 \# 11$ noR,3,5 $=$ Am addC\# (for ease of recognition) |  |  |  |  |  |  |
| 13. | C | Db |  |  | $\begin{aligned} & =\mathrm{C} 7 \mathrm{~b} 9 \text { no } 5=\mathrm{F} \# 7 \# 11 \text { noR } \\ & =\text { same as (3) [dissonant group] above } \end{aligned}$ |  |  |  |  |  |  |
|  | C Db E B |  |  |  |  |  |  |  |  |  |  |
| 14. | C | Db | F |  | $=\mathrm{Ab} 7 / 6 \mathrm{noR}, 5 / \mathrm{Db}=\mathrm{Gb}^{\Delta} 7 \# 11 \mathrm{no} 3=\mathrm{Bbm} 9 / 13 \mathrm{noR}, 5$ |  |  |  |  |  |  |
| 15. | C | Db |  | G | $=\mathrm{Eb} 13$ noR, $5=\mathrm{Bbm6} / 9 \mathrm{noR}, 5$ |  |  |  |  |  |  |
| 16. | C | Db |  | Ab | $=\mathrm{Db}^{\Delta} 7$ |  |  |  |  |  |  |
| 17. | C | Db |  | A | $=\mathrm{Db}^{\Delta} 7+=\mathrm{Bbm}^{\Delta} 9$ noR $=\mathrm{E} 13 \# 11$ noR,3,5 |  |  |  |  |  |  |
| 18. | C | Db |  | Bb | $=\mathrm{Db}^{\Delta} 7 / 6$ no5 5 Bbm/9 |  |  |  |  |  |  |
|  | C | Db : | F | B | $=$ same as (4) [dissonant group] above |  |  |  |  |  |  |


| 19. | C $\quad \mathrm{Db} \quad \mathrm{Gb} \quad \mathrm{G}$ | $=\mathrm{Eb} 13 \# 9 \mathrm{noR}, 5=\mathrm{A} 13 \# 9$ noR,5 $=2$ tritones $1 / 2$ step apart |
| :---: | :---: | :---: |
| 20. | C $\mathrm{Db} \quad \mathrm{Gb} \mathrm{Ab}$ | $=\mathrm{Ab} 7$ no5/Db $=\mathrm{Db}^{\Delta} 7$ sus4 |
| 21. | C $\quad \mathrm{Db} \quad \mathrm{Gb} \quad \mathrm{A}$ | $=\mathrm{Ab} 7 \mathrm{~b} 9$ noR,5/Db |
| 22. | C $\mathrm{Db} \quad \mathrm{Gb} \quad \mathrm{Bb}$ | $=\mathrm{Ab} 9$ noR,5/Db $(\mathrm{Ab} 9 / 11)=\mathrm{Gb}$ add\#11 |
|  | $\mathrm{C} \quad \mathrm{Db} \quad \mathrm{Gb} \quad \mathrm{B}$ | $=$ same as (5) [dissonant group] above |
|  | $\mathrm{C} \quad \mathrm{Db} \mathrm{G}^{\text {a }} \mathrm{Ab}$ | $=$ same as \#14 ${ }^{\Delta} 7 \# 11 \mathrm{no3}$ |
| 23. | C $\mathrm{Db} \quad \mathrm{G}$ A | $=\mathrm{A} 7 \# 9$ no5 $=\mathrm{Eb} 7 / 6 \# 11 \mathrm{noR}, 3,5$ |
| $24 .$ | C Db G Bb | $=\mathrm{Bbm6} / 9 \mathrm{no5}=\mathrm{Db}^{\Delta} 7 / 6 \# 11$ no3,5 |
|  | C Db G B | $=$ same as (6) [dissonant group] above |
|  | $\mathrm{C} \quad \mathrm{Db} \times \mathrm{Ab}$ A | = same as \#8 above |
| 25. | C $\mathrm{Db} \quad \mathrm{Ab} \quad \mathrm{Bb}$ | $=\mathrm{Bbm} 9$ no5 $=\mathrm{Db}^{\Delta} 7 / 6$ no3 |
|  | $\mathrm{C} \quad \mathrm{Db} \times \mathrm{Ab} \quad \mathrm{B}$ | $=$ same as (7) [dissonant group] above |
|  | $\mathrm{C} \times \mathrm{Db} \mathrm{A}_{\triangle} \mathrm{Bb}$ | $=$ same as \#1 above |
|  | $\mathrm{C} \quad \mathrm{Db} \times \mathrm{A} \times \mathrm{B}$ | $=$ same as (8) [dissonant group] above |
|  | $\mathrm{C} \quad \mathrm{Db} \times \mathrm{Bb} \quad \mathrm{B}$ | = same as \#1 (9) [dissonant group] above |

## C D

| C D Eb E | $=$ same as (8) [dissonant group] above |
| :---: | :---: |
| C D Eb F | = same as \#7 above |
| $C \quad D E b \quad \mathrm{~Gb}$ | = same as \#13 above |
| $C \quad D \quad E b \quad G$ | = same as \#18 above |
| $C$ D Eb Ab | = same as \#22 above |
| $C \quad D \quad E b$ A | = same as \#24 above |
| $C \quad D \quad E b \quad B b$ | = same as \#25 above |
| $C \quad D \quad E b \quad B$ | = same as \#1 above |
| $C \quad D E F$ | = same as \#25 above |
| C D E Gb | = D9 no5 |
| C D E G | = C/9 |
| C D E Ab | = E7+ |
| C $\quad \mathrm{D}$ E A | = C6/9 no5 = D9 no3 |
| $C D E B b$ | = same as \#26 above |
| $C D E B$ | = same as \#2 above |

30. 

| C | $\mathrm{D} \times \mathrm{F} \quad \mathrm{Gb}$ | same as \#23 |  |
| :--- | :--- | :--- | :--- |
| C | D | F | G |

31. $\mathrm{C} \mathrm{D} \mathrm{F} \mathrm{Ab}=\mathrm{D}^{\not} 7=\mathrm{Fm} 6=\mathrm{Bb} 9$ noR
32. C D F A $=\mathrm{Dm} 7=\mathrm{F} 6$
33. 

$\mathrm{C} D \mathrm{D} \mathrm{F}$ B $\quad=$ same as \#27
$C D=B=$ same as \#3

= same as \#20
33. $\mathrm{C} \mathrm{D} \mathrm{Gb} \mathrm{Ab}=\mathrm{D} 7 \mathrm{~b} 5=\mathrm{Ab} 7 \mathrm{~b} 5$
34. $\mathrm{C} \quad \mathrm{D}$ Gb A $=\mathrm{D} 7$
$\mathrm{C} \quad \mathrm{D} \quad \mathrm{Gb} \quad \mathrm{B} \quad=$ same as $\# 4$

| $C \quad \mathrm{D} \times \mathrm{G} \quad \mathrm{Ab}$ | $=$ same as \#15 |
| :---: | :---: |
| $C \quad D \quad G \quad A$ | = same as \#30 |
| $C \quad \mathrm{D} \times \mathrm{G} \times \mathrm{Bb}$ | $=$ same as \#29 |
| $C \quad D \quad G \quad B$ | = same as \#5 |
| $C \quad D \quad A b \quad A$ | = same as \#9 |
| $C \quad D \quad \mathrm{Ab}-\mathrm{Bb}$ | = same as \#26 |
| $C \quad D \quad A b \quad B$ | $=$ same as \#6 |
| C D $\mathrm{A} \rightarrow \mathrm{Bb}$ | = same as \#2 |
| $C \quad D \quad A \quad B$ | $=$ same as \#7 |
| $\mathrm{C} \quad \mathrm{D} \times \mathrm{Bb} \quad \mathrm{B}$ | $=$ same as (2) [dissonant group] |

## C Eb

| C Eb E F | $=$ same as (7) [dissonant group] |
| :---: | :---: |
| C Eb ${ }^{\text {E }} \quad \mathrm{Gb}$ | = same as \#6 |
| $C \quad E b \quad E \quad G$ | = same as \#12 |
| $C \quad \mathrm{~Eb} \quad \mathrm{E} \quad \mathrm{Ab}$ | = same as \#17 |
| C Eb E A | = same as \#21 |
| $C \quad \mathrm{~Eb} \quad \mathrm{E} \quad \mathrm{Bb}$ | = same as \#23 |
| $C \quad E b \quad E \quad B$ | $=$ same as \#8 |


| $C \quad E b \quad F \quad \mathrm{~Gb}$ | = same as \#24 |
| :---: | :---: |
| $C \quad E b \quad F \quad G$ | $=$ same as \#29 |
| $C \quad E b \sim$ F ${ }^{\text {c }}$ | $=$ same as \#32 |
| $\mathrm{C} \quad \mathrm{Eb} \quad \mathrm{F} \quad \mathrm{A}$ | $=$ same as \#34 |
| $C \quad E b \quad F \quad B b$ | $=$ same as \#30 |
| $C \quad E b \quad F \quad B$ | = same as \#9 |


| $\mathrm{C} \quad \mathrm{Eb} \times \mathrm{Gb} \mathrm{G}$ | = same as \#21 |
| :---: | :---: |
| $\mathrm{C} \quad \mathrm{Eb} \quad \mathrm{Cb}$ Ab | = same as \#34 |
| C Eb Gb A | $=\mathrm{C}^{0} 7$ |
| $\mathrm{C} \quad \mathrm{Eb} \quad \mathrm{Gb}$ Bb | = same as \#31 |
| $C \quad \mathrm{~Eb} \quad \mathrm{~Gb} \ldots$ | = same as \#10 |
| $C \quad E b \quad G \quad A b$ | = same as \#16 |
| C Eb G A | = same as \#31 |
| $C \quad E b \quad \mathrm{G}$ B | = same as \#32 |
| $C \quad E b \quad G \quad B$ | = same as \#11 |
| $\mathrm{C} \quad \mathrm{Eb} \times \mathrm{Ab} \quad \mathrm{A}$ | = same as \#10 |
| $\mathrm{C} \quad \mathrm{Eb} \cdot \mathrm{Ab} \quad \mathrm{Bb}$ | = same as \#27 |
| $\mathrm{C} \quad \mathrm{Eb} \cdot \mathrm{Ab} \quad \mathrm{B}$ | = same as \#12 |
| $\mathrm{C} \quad \mathrm{Eb} \mathrm{A} \quad \mathrm{Bb}$ | = same as \#3 |
| C Eb A B | $=$ same as \#13 |
| $\mathrm{C} \quad \mathrm{Eb} \cdot \mathrm{Bb} \ldots \mathrm{B}$ | = same as (3) [dissonant group] |

35. 

## C E

| $C \quad E \quad F \quad G b$ | = same as (6) [dissonant group] |
| :---: | :---: |
| $C \quad E \quad F \quad G$ | = same as \#5 |
| C E F F Ab | = same as \#11 |
| $C \quad E \quad F A$ | = same as \#16 |
| $C \quad E \quad F \quad B b$ | - same as \#20 |
| $C \quad E \quad F \quad B$ | = same as \#14 |



| C E G Ab | = same as \#17 |
| :---: | :---: |
| $C \quad E \quad G \quad A$ | = same as \#32 |
| $C \quad E \quad G \quad B b$ | = same as \#34 |
| $C E G B$ | - same as \#16 |


| $C \quad E \quad A b \quad A$ | = same as \#11 |
| :---: | :---: |
| $\mathrm{C} E \quad \mathrm{Ab}$ Bb | same as \#28 |
| $C \quad E \quad A b \quad B$ | same as \# |


| $\mathrm{C} E \quad \mathrm{~A} \quad \mathrm{Bb}$ | = same as \#4 |
| :---: | :---: |
| $C \quad E \quad A \quad B$ | = same as \#18 |
| $C \quad E \quad B b \quad B$ | = same as (4) [dissonant group] |

## C F

| $\mathrm{C} F=\mathrm{Gb} \quad \mathrm{G}$ | $=$ same as (5) [dissonant group] |
| :---: | :---: |
| $C \quad F \quad G b \quad A b$ | = same as \#4 |
| $C \quad F=G b \quad A$ | = same as \#10 |
| $\mathrm{C} \quad \mathrm{F} \quad \mathrm{Gb} \quad \mathrm{Bb}$ | = same as \#15 |
| $C \quad F=G b \quad B$ | = same as \#19 |
| $C \quad F \quad A B$ | = same as \#18 |
| $C \quad F \quad G \quad A$ | = same as \#27 |
| C F G B $\quad \mathrm{Bb}$ | = same as \#30 |
| $C \quad F \quad G \quad B$ | = same as \#20 |
| $\mathrm{C} \quad \mathrm{F} \quad \mathrm{Ab} \quad \mathrm{A}$ | = same as \#12 |
| C F Ab Bb | = same as \#29 |
| $C \quad F \quad A b \quad B$ | = same as \#21 |
| $C \quad \mathrm{~F} \quad \mathrm{~A}$ Bb | = same as \#5 |
| C F A B | = same as \#22 |
| $\mathrm{C} P \mathrm{Bb} \quad \mathrm{B}$ | $=$ same as (5) [dissonant group] |

## C Gb

| $\mathrm{C} \quad \mathrm{Gb} \mathrm{G}$ Ab | $=$ same as (4) [dissonant group] |
| :---: | :---: |
| C Gb G A | = same as \#3 |
| $\mathrm{C} \quad \mathrm{Gb} G \mathrm{Bb}$ | = same as \#9 |
| C Gb G B | $=$ same as \#14 |
| $\mathrm{C} \quad \mathrm{Gb} \mathrm{Ab}$ A | $=$ same as \#13 |
| $\mathrm{C} \quad \mathrm{Gb} \mathrm{Ab} \mathrm{Bb}$ | = same as \#26 |
| $\mathrm{C} \quad \mathrm{Gb} \mathrm{Ab}^{\text {B }}$ | = same as \#23 |
| $\mathrm{C} \quad \mathrm{Gb}$ A Bb | = same as \#6 |
| $\mathrm{C} \quad \mathrm{Gb} \quad \mathrm{A} \quad \mathrm{B}$ | = same as \#24 |
| $\mathrm{C} \quad \mathrm{Gb} \quad \mathrm{Bb}$ B | $=$ same as (6) [dissonant group] |

## C G

| $C \quad \mathrm{G}$ Ab A | $=$ same as (3) [dissonant group] |
| :---: | :---: |
| $C \quad G A b \quad B b$ | = same as \#2 |
| $C \quad G A b \quad B$ | = same as \#8 |
| $\mathrm{C} \quad \mathrm{G} A \quad \mathrm{Bb}$ | = same as \#7 |
| $C \quad A \quad B$ | = same as \#25 |
| $\mathrm{C} \quad \mathrm{G} \quad \mathrm{Bb} \quad \mathrm{B}$ | $=$ same as (7) [dissonant group] |

## C Ab

$$
\begin{array}{ll}
\mathrm{C} A b \mathrm{~A} B \mathrm{~B} & =\text { same as }(2) \text { [dissonant group] } \\
\mathrm{C} \mathrm{Ab} A \mathrm{~B} & =\text { same as } \# 1 \\
\mathrm{C} A \mathrm{Ab} \mathrm{Bb} \quad \mathrm{~B} & =\text { same as }(8) \text { [dissonant group] }
\end{array}
$$

C A
$\mathrm{C} \quad \mathrm{A}=\mathrm{Bb} \quad \mathrm{B} \quad=$ same as (1) [dissonant group]

