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Heavier weighting of COM run/pass ratio ?

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By buck, January 13, 2009 in Hacking Documentation

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buck
DARRELL GREEN
●●●●●●●●●●●●●●●●●
●●●●●●●●●●●●●●

Members
⊕ **2,060**
6,332 posts
Location: Tecmo Super Street
Tecmo Titles: Lincoln V (2015)

Posted January 13, 2009

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How/where (0x) is the COM run/pass ratio set? I'd bet there's an adjustable probability setting somewhere - that tells COM to pick a run or pass, using the setting (0,1,2,3). I don't know where to look...
I'm specifically interested in amplifying the "extreme" settings -> settings of 1 (heavy rush) or 3 (heavy pass).
***For example, I'd like a team with a "1" (heavy rush) to run the ball "even more" when I'm playing against them.

[+] Quote   ♡

"The right to speak and the right to refrain from speaking are complementary components of ...   ✕ ▾
'individual freedom of mind.'"

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cxrom
Veteran
●●●●

Members
⊕ **19**

Posted January 14, 2009

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i believe this is the code. the run/pass ratio is saved into $A2 prior to executing $AA84.
changing the **CMP #$99** and **CMP #$B3** should do the trick.
(sorry, but the code tags always kill my tabs)

```
$AA84:A5 A2     LDA $00A2 = #$00          ; get run/pass ratio
```

```
$AA86:0A       ASL              ;
$AA87:AA       TAX              ;
$AA88:BD 4E AA LDA $AA4E,X @ $AA4F = #$AA      ; set jump address
$AA8B:85 3E    STA $003E = #$00        ;
$AA8D:BD 4F AA LDA $AA4F,X @ $AA50 = #$9E      ;
$AA90:85 3F    STA $003F = #$00
$AA92:6C 3E 00 JMP ($003E) = $0000                            ; jump t


               ;----------------------------------------;-#00------------------
$AA95:A5 40    LDA $0040 = #$7C         ; keep play index from 0 to 7
$AA97:29 07    AND #$07         ;
$AA99:85 40    STA $0040 = #$7C         ; save play index
$AA9B:4C 2A A7 JMP $A72A        ; continue...
               ;----------------------------------------;-#01------------------
$AA9E:A5 40    LDA $0040 = #$7C         ; if ( RAND > #$99 )
$AAA0:C9 99    CMP #$99         ;
$AAA2:90 0C    BCC $AAB0        ;
$AAA4:A5 41    LDA $0041 = #$81         ;   get PLAY_RAND
$AAA6:29 03    AND #$03         ;   keep play index from 0 to 3
$AAA8:18       CLC              ;
$AAA9:69 04    ADC #$04         ;   adjust index into pass plays
$AAAB:85 40    STA $0040 = #$7C         ;   save play index
$AAAD:4C 2A A7 JMP $A72A        ;   continue...
               ; else
$AAB0:A5 41    LDA $0041 = #$81         ;   get PLAY_RAND
$AAB2:29 03    AND #$03         ;   mask play index to run plays
$AAB4:85 40    STA $0040 = #$7C         ;   save play index
$AAB6:4C 2A A7 JMP $A72A        ;   continue...
               ;----------------------------------------;-#02------------------
$AAB9:A5 40    LDA $0040 = #$7C         ; if ( RAND > #$99 )
$AABB:C9 99    CMP #$99         ;
$AABD:90 09    BCC $AAC8        ;
$AABF:A5 41    LDA $0041 = #$81         ;   get PLAY_RAND
$AAC1:29 03    AND #$03         ;   mask play index to run plays
$AAC3:85 40    STA $0040 = #$7C         ;   save play index
$AAC5:4C 2A A7 JMP $A72A        ;   continue...

$AAC8:A5 41    LDA $0041 = #$81         ;   get PLAY_RAND
$AACA:29 03    AND #$03         ;   keep play index from 0 to 3
$AACC:18       CLC              ;
$AACD:69 04    ADC #$04         ;   adjust index into pass plays
$AACF:85 40    STA $0040 = #$7C         ;   save play index
$AAD1:4C 2A A7 JMP $A72A        ;   continue...
               ;-----------------------------------------;-#03------------------
$AAD4:A5 40    LDA $0040 = #$7C         ; if ( RAND > #$B3 )
$AAD6:C9 B3    CMP #$B3         ;
$AAD8:90 09    BCC $AAE3        ;
```

```
$AADA:A5 41      LDA $0041 = #$81       ;   get PLAY_RAND
$AADC:29 03      AND #$03        ;    mask play index to run plays
$AADE:85 40      STA $0040 = #$7C       ;   save play index
$AAE0:4C 2A A7   JMP $A72A       ;    continue...

$AAE3:A5 41      LDA $0041 = #$81       ;   get PLAY_RAND
$AAE5:29 03      AND #$03        ;    keep play index from 0 to 3
$AAE7:18         CLC             ;
$AAE8:69 04      ADC #$04        ;    adjust index into pass plays
$AAEA:85 40      STA $0040 = #$7C       ;   save play index
$AAEC:4C 2A A7   JMP $A72A       ;    continue...
```

 + Quote ♡

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buck
DARRELL GREEN
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●●●●●●●●●●●●●●●

Members
➕ 2,060
6,332 posts
Location: Tecmo Super
Street
Tecmo Titles: Lincoln V
(2015)

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Thanks. So, CMP #$99 is comparing Accumulator (what's just been loaded) with Memory immediately at #$99...How do I translate where #$99 is? Because that will be the value to tweak, right?

+ Quote ♡

"The right to speak and the right to refrain from speaking are complementary components of ... ✕ ▾
'individual freedom of mind.'"

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cxrom
Veteran
●●●●

Members
➕ 19
373 posts
Location: Phoenix, AZ

Report post ⤴

correct. these are the addresses i have:

```
$AAA0:C9 99      CMP #$99        at 0x018AB0
...
$AABB:C9 99      CMP #$99        at 0x018ACB
...
$AAD6:C9 B3      CMP #$B3        at 0x018AE6
```

add 1 to each address to get to the immediate operand.

+ Quote

buck
DARRELL GREEN

Members
+ 2,060
6,332 posts
Location: Tecmo Super Street
Tecmo Titles: Lincoln V (2015)

Posted January 14, 2009

> **cxrom said:**
>
> correct. these are the addresses i have:
>
> ```
> $AAA0:C9 99     CMP #$99       at 0x018AB0
> ...
> $AABB:C9 99     CMP #$99       at 0x018ACB
> ...
> $AAD6:C9 B3     CMP #$B3       at 0x018AE6
> ```
>
> add 1 to each address to get to the immediate operand.

yep, thanks again cxrom.

I found that increasing the number results in the COM doing more of "it".

So, to make a "1 team" run "more", increase the number at 0x018AB1. Likewise, to make a "3 team" pass more, increase the number at 0x018AE7.

Now, just need to keep COM v COM testing to find the right amount of "more"...

+ Quote

"The right to speak and the right to refrain from speaking are complementary components of ... 'individual freedom of mind.'"

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Yak
Tecmo Fanatic

Members
+ 1,541
5,286 posts
Location: Boston, MA

Posted January 18, 2009

Much interested in your results, sir.

+ Quote

buck

DARRELL GREEN

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●●●●●●●●●●●●●●●●

Members

⊕ 2,060

6,332 posts

Location: Tecmo Super Street

Tecmo Titles: Lincoln V (2015)

Posted January 18, 2009

> **YakMolester said:**
>
> Much interested in your results, sir.

Since I was focusing on the 1 and 3 levels, that's all I'll report here. I found that a value of xC0 causes a play ratio of 70% to 30%...which is what I was shooting for. Values higher (up to FF) will result in "whatever" being called at an even higher percentage.

In summary:

Teams with a "1 (heavy rush)" and "C0" results: 209 plays = 147 runs + 62 passes => around 70% run.

Teams with a "3 (heavy pass)" and "C0" results: 149 plays = 107 passes + 42 runs => around 71% pass.

I've actually set this aside for a while - once I start doing more serious matchup testing with the rom I'm working on, I'll decide if xC0 is really enough (I'm dealing with Bronko Nagurski, here...)

+ Quote

♡

"The right to speak and the right to refrain from speaking are complementary components of ... ✕ ⌄ 'individual freedom of mind.'"

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Yak

Tecmo Fanatic

●●●●●●●●●●●●●●●●●●
●●●●●●●●●●●●●●●

Members

⊕ 1,541

5,286 posts

Location: Boston, MA

Posted January 18, 2009

Nice, nice.

+ Quote

♡

SBlueman

Tecmo Legend

●●●●●●

Posted February 11, 2017

@buck , would this be the set command to use for your take on the code:

```
#Heavier weighting of COM run/pass ratio
#http://tecmobowl.org/forums/topic/10511-heavier-weighting-of-com-runpas
```

```
SET(0x018AB1,xC0)
SET(0x018AE7,xC0)
```

and would setting 0x018ACB to a value affect teams with more balanced offenses?

+   Quote   Edit   Options ▾

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bruddog

Down with button mashing

●●●●●●●●●●●●●●●●●●
●●●●●●●●●●●●●●●●

Moderators

⊕ **3,074**

11,466 posts

Location: Ca

Posted February 11, 2017

Report post

The 4 offensive styles which are run if situational logic doesn't override them are

0 = random
1 = 60% run, 40% pass
2 = 40% run, 60% pass
3= 30% run, 70% pass

The value at 0x18AB1 sets how often the team runs for offensive playstyle 1= run heavy. The defalut value of 0x99 sets the default to 60% run/ 40% pass. Changing it to 0xC0 would make it 75% run. That's super heavy run.

However that value is also used if the com is leading in the 4th with less than 2 minutes left.

The value at 0x18AE7 is only used for the team style. Again changing to 0xC0 would make it 75% pass.

+   Quote

⬆ 1

buck reacted to this

buck
DARRELL GREEN
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●●●●●●●●●●●●●●

Members

⊕ 2,060

6,332 posts

Location: Tecmo Super
Street
Tecmo Titles: Lincoln V
(2015)

Posted February 11, 2017   ⤴

yeah, that 75% run was for a specific old-school (1934 CHI) rom I was messing with.

➕   Quote

                                                                         ⬆ **1**
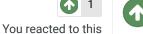
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