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## TSG: AN ANALYSIS

I am constitutionally incapable of leaving well enough alone. Instead of meddling in public affairs, as most people with the urge to do things better do, I sublimate by "improving" games. For the last couple of months, my free time has been spent diddling with TSG football. While I enjoy that game as it is, there are a few things which could stand improving.

The first thing that caught my eye with TSG was the PFI system. I could hardly believe that it really worked that way. I was tempted to simply play the game without it, it seemed so unrealistic.

After a bit, I got hold of some NFL data for the last season and found, to my surprise that a penalty, fumble or injury did occur on about one ball control play in six. Son of a gun. Of course, that wasn't quite enough to satisfy me. Even with the new fumble procedure, I wasn't entirely happy with the Fumble Recovery Chart. In terms of the League average, the chart will give you about the right split of offensive versus defensive recoveries. The drawback is that not every team comes close to the NFL average. In order to put the proper amount of grease or glue on the fingers of my cardboard players, I began working on a "better" way.

The easiest improvement on TSG is to steal the Ball Aggression Chart and Indices from a copy of T.H.E. That is a superior and realistic system; there must be a cheaper way, though.

So I evolved my own fumble recovery chart and ratings by messing around with the NFL stats for last season. At the end of this article is a chart of Fumble Recovery Ratings for the NFL based on last season's stats. Also included is the Fumble Recovery Chart. To find which team recovers any fumble, subtract the smaller FRR from the larger and roll two dice. The chart will tell you which team recovers. All NFL teams have been rated for both their offensive and defensive units. Use the FRR's for the units on the field when the fumble occurred. Specialty teams should be treated as offense or defense according to the way they are arrayed on the roster sheet.

To rate teams for fumble recovery, you'll need the number of fumbles and fumbles lost by each unit and the number of opponents fumbles recovered, as well as the NFL season average number of opposition fumbles recovered. The formula for rating units is

$$FRK = \frac{\text{Fumbles} - \text{Fumbles Lost}}{\text{Fumbles}} \times 10$$

Round this number up or down by comparison of the number of opposition fumbles recovered to the NFL average. If a unit recovered exceptionally many more or fewer opposition fumbles than the average, you may wish to add or subtract an extra point. No FRR can be greater than 10 or less than 0.

(Cont'd. p. 3)

## IN THE REALM OF PROBABILITY

When a single die is cast six things can happen, all of equal probability. When a second die is added there are three different ways to read the dice (5 really, but we'll not go into reading differences as it becomes cumbersome). The best known method is to sum the two dice for a result ranging from two to twelve. Another method, familiar to every table top enthusiast, is to make the dice distinguishable from each other and read one first as a pair of numbers from one-one to six-six. The third method is that currently used by Sher-Co; i.e., to read the dice as a pair of digits, but to read the lowest number first.

The "APBA-method" gives 36 different results, the "Sher-Co-method" gives 21, and the "sum-method" gives 11. These are the various combinations; there are always 36 permutations. The different number of combinations is a result of our different methods of reading the dice. The tables which follow give the probabilities of the various combinations as single events (discrete) and as all preceding events (continuous), and the chances out of the full 36 events.

## "APBA"

Discrete: each result has one chance out of thirty-six with a probability of .0278

Continuous					
#	Chance	Prob	#	Chance	Prob
11	1	.0278	41	19	.5278
12	2	.0556	42	20	.5556
13	3	.0833	43	21	.5833
14	4	.1111	44	22	.6111
15	5	.1389	45	23	.6389
16	6	.1667	46	24	.6667
21	7	.1944	51	25	.6944
22	8	.2222	52	26	.7222
23	9	.2500	53	27	.7500
24	10	.2778	54	28	.7778
25	11	.3056	55	29	.8056
26	12	.3333	56	30	.8333
31	13	.3611	61	31	.8611
32	14	.3889	62	32	.8889
33	15	.4167	63	33	.9167
34	16	.4444	64	34	.9444
35	17	.4722	65	35	.9722
36	18	.5000	66	36	1.0000

## SUM

Discrete			Continuous		
#	Chances	Prob	Chances	Prob	
2	1	.0278	1	.0278	
3	2	.0556	3	.0833	
4	3	.0833	6	.1667	
5	4	.1111	10	.2778	

(Cont'd. p. 5)



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## From the Editor

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Continuing with last issue's somewhat negative editorial, we need to cover one more area of confusion. We oftentimes receive game orders that are contained in the midst of letters. The problem is that orders and letters are handled by different people. The orders for games are handled by the shipping clerk each day; orders for classified ads are taken care of by the typesetter once every two months; letters are handled by me. When everything is on one sheet of paper this leaves us with a heck of a problem. When the shipping clerk finishes with an order, the order form is filed away in a special place so that if, say, six weeks later we get a complaint from the purchaser that he has never received his merchandise, we can then look it up and try to determine what happened. This can't be done if the order form has been filed away for some other purpose. You might think it could, but I promise you - from experience - it can't. When you are handling a thousand or so orders per month, there is no way to keep a running list in the back of your mind of purchases and correspondence. You have got to have a very organized system and you have got to follow it exactly if you want to avoid foul ups. Now for the solution: Place your letter (if you happen to write one) on a separate sheet of paper from your order. The same goes for any classified ads. Make sure your name and address are on each sheet. You can send everything in one envelope. No problem. You can send just one check. No problem. But, please, place orders and correspondence on separate sheets of paper!

Now, for the positive stuff. We wish to welcome Bob Jones back for this issue. He's an excellent writer and was gone too long.

Larry Green reports that he has had some returns on the baseball game survey, but not a heck of a lot. We're running it for the last time in this issue and we'll print the results in the next one. If we get enough response we'll cover all the major sports fields in the future. Please note that you don't have to use a fancy form to reply to Larry's survey. If you wish, simply take a postcard, write the names of your baseball games on it, place the rating beside each game, and mail it to Larry.

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## From the Readers

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Dear Jerry:

This letter is in response to Rich Berg's review of BLM II basketball. I have read other articles from Mr. Berg and he seems to be very knowledgeable in the fields of football and baseball, but after reading the Mar-Apr '78 review I think he is getting out of his area when tackling basketball. He obviously hasn't heard of Fast Break, Playoff or Hoop-Mania or even Real Life when he mentions APBA, SOM and SP as being the yardstick for comparison. He also doesn't seem to understand basketball in general when he states "...game controls the player and not the other way around. In baseball, where strategy is limited, I could accept that." What

ever happened to the sacrifice, hit and run, stolen base, intentional walk, infield in, etc.? In basketball the strategy is to shoot or not to shoot, and to a lesser degree--defensive match-ups (since there actually is so much "switching" on defense and even "zones".) BLM handles the strategy by having stall, fastbreak and press options that are relative to the team's strengths. The main strategy in BLM is working the ball for a better shot without increasing the playing time of the game. Each player has an assist rating that is added to the FG numbers of the player who receives a pass. This option on each "play" allows the coach to either get the result from the player with the ball or take a chance on another player getting a better shot. This is what most games are missing. They are just "shooting contests", i.e. field goal good or missed, go to rebound, etc..

Other points I would like to dispute are Rules-Rich says that they are terrible, yet he was able to figure out the procedure "after about 10 points for each team". Actually the Rules are 4 pages that go thru a few sequences of a game. He also stated that in explaining the Blocked shot the rules say it is fairly obvious and should not need further explanation. What the rules really say are "The Steal, Blocked Shot, Turnover and Pass plays are fairly obvious and should not need further explanation, except to say on the first three the ball changes hands and the player involved should be credited with the appropriate play." In Rich's explanation of the college game I guess he doesn't realize that offensive and defensive rebounds are not statistics as they are in the NBA. Also his defensive match-up system is subjective and speculative.

In conclusion, BLM has had a lot of criticism, some of which is justified. I think they should be defended though when it is unfounded and unjustified.

Sincerely,  
Rick Dean

Dear Jerry:

To those readers of "TTS" who may have purchased David Urban's "Real Baseball" I owe an apology. It was not until recently preparing to rate a few teams that I had occasion to notice a fallacy in the pitcher ratings. The way the game is presently set up the pitchers' walk and strikeout ratios will tend to cluster toward the league average. This is correctable to a great extent with a little extra work on the part of the "rater".

Begin rating as normal, but before multiplying the calculated percentages to find the number of chances allowed to any result, subtract 0.025 from the walk % and 0.042 from the strikeouts %. Then when it is time to rate the pitcher we have to compensate by multiplying his walk % by 4, then subtracting 0.3 before multiplying to find chances allowed. Similarly instead of strikeout % use 4 times strikeout % minus 0.5.

These alternatives are based on modern play. As one goes further into the past the values would probably have to change. The .025 & .042 figures are approximations of 25% of the league rates and the 0.3 and 0.5 are approximations of 3 times the league rate of these rating percentages.

I have considered further alterations, but they would (in total) constitute a major revision of the game - almost pulling them out of the rate-them-yourself market due to their complexity. I do, at some point in the future, intend to rate a few contemporary great teams. If this is of interest to anyone drop a line to TTS or include a note the next time you write,

(Cont'd. p. 14)



Once you've determined which team recovers, you are left to your own devices to find out which team member grabbed the ball. The easiest thing to do is roll against the TSG recovery chart until you get a member of the proper squad. Now, is there anything we can do about penalties?

TSG will assess a penalty on about one BCP in nine. In the NFL last year, the average was about one in ten. Seems close enough, if you can ignore the divergence of the teams you're playing from the average. If you're playing Dallas against New Orleans, it's not comforting to have the Cowboys flagged for as many penalties as the Saints.

Again, one way to fix this is to steal from T.H.E. The penalty system works, if a little less well than the fumble system. There is a better way; a cheaper way, at least.

Once more, you'll have to rate teams on the basis of penalties incurred during the season. As an improvement over T.H.E. procedure, we'll establish a penalty rating for both the offense and defense. A glance at NFL stats will show that there is sometimes quite a difference in the number of penalties incurred by offensive and defensive squads of the same team.

At the end of this article are offensive and defensive penalty ratings for the NFL from last season. To use them, when a penalty is indicated by the PFI roll, subtract the smaller penalty rating from the larger and roll against the proper column for the differential. This roll will indicate which team is to be penalized but not which penalty has resulted. To find that, I suggest that you roll against the TSG table until you have a penalty against the proper team or offsetting penalties -- they happen sometimes.

To rate teams for penalties, you'll need rather complete NFL penalty stats. The least penalized offensive and defensive units will be rated "0". Ratings for the other squads will be done by comparing the number of penalties assessed against each offensive squad to the number taken by the least penalized defense. For defensive units, the comparison is made to the least penalized offense. Any team which was penalized two or more times the number of penalties given to the least penalized unit to which it is compared will be rated "10". For all other ratings, the upper limits for the categories are, in ascending order,

Rating	1	2	3	4	5	6	7	8	9
Ratio	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9

For example, the least penalized offense in the NFL last season was Miami with 70. The Cardinal defense was penalized 83 times, a ratio of 1.19 to the 0 rated Dolphin offense. This means the Card defense is rated "2".

I prefer fundamental football. Not quite the "three yards in a cloud of dust" sort but I'm not crazy about games which carry 34 flavors of pass patterns. Still, there must be somebody out there who likes them. For all of you who do, here's a way to increase the offensive options in TSG; the defensive options, too.

Since I hate to be repetitive, I won't begin by suggesting that you steal the Play Variability Chart from T.H.E. To tell the truth, that's not a bad idea but the game system in T.H.E. is different enough that what you'll have is mostly a load of names for plays and defenses.

The best thing I've found for TSG is a system for running plays to the left or right. Unlike T.H.E., TSG calculates a power index for all running plays that involves a comparison of the entire offensive and defensive lines. I think that this system, because of its ease and quickness

in set-up, is superior. Since some of you may like T.H.E.'s system of rating runners against the holes they run into, I have two suggested systems for figuring runs to the left or right.

Both systems will use the expansion of the play variability chart which appears with this article. Since the defense can shift to either side or remain balanced, you'll need to make some cards to record the side to which the offense has chosen to run. The changes in the expanded play chart are in addition to any changes from the choice of defense. If the defense shifts to either side and the offense chooses the plunge or draw, take the result from the "wrong" shift column. A balanced defense against the plunge or draw is read as "right".

With both systems, the shift can be made on any run or pass defense except middle guard key, pass prevent or any pass blitz. This allows some flexibility to the defense since they may call a pass defense and shift to provide some coverage on runs against the weak side of the line.

Now, as promised, here's the other running method. With this system a runner may have a different running index for each run against each side of the defensive line. The Index Variability Chart shows how the runner's running index is varied by the run rating of the defender in each hole.

The defender for the plunge or draw is the middle guard. Consequently, the rating for runs by the backs up the middle is the same as it would be in the standard game. Do not figure a change of index for the draw or plunge, only for off tackle or end run plays. I also suggest that the end-around ratings for receivers not be modified. Let's keep this simple and not too unrealistic; each modification made to the basic game system represents another way for things to go wrong.

The defender against off tackle plays is the onside end. To find the new running index for each back off either tackle, index the back's basic run rating against the rating of the proper defensive end against the run. The letter you find is the new running rating against that hole.

The defender for end runs is the onside linebacker. For teams that array 3/4, use the rating of the player listed at linebacker for each side. Coaches are advised that it is now of some interest to get the strongest rated players in the linebacker slots, as well as getting the best running and passing defensive indices.

For simplicity of play, it's a good idea for each coach to make a record of the running index for each spot in the defensive line. Since the running index for the plunge and draw is the same as the basic game running index, this means you only need tabulate the modified indices for off-tackle and end run to each side -- four extra ratings in all.

Now to put these methods to work. Follow the standard procedure for plays from scrimmage. In addition to the defensive alignment the coach must announce, if he has selected a defense which can shift, he must announce to which side he has shifted or if he has maintained a balanced setting. When the offensive coach announces the play and runner or receiver he has chosen, he must also reveal a card showing to which side the play has gone. For camouflage, he should always lay a card for shift even if he has not chosen to run off tackle or around the end. The defensive coach has shifted correctly if his choice of shift is the opposite of the side the offense has chosen or if he has remained balanced against a power play or draw. If the defensive coach has chosen the same



side as the offense he has shifted incorrectly. The same is true if the defense has chosen either shift against a run up the middle.

On the expanded play variability chart, there are columns for "Right" and "Wrong" shift and also for "Balanced". This last is used if the defense has not shifted against either the end run or run off-tackle. The numbers in the expanded chart are found by cross indexing the play against the proper column. These numbers are used as additional modifiers to the numbers in the Play Variability Chart. The final up or down change on the play board numbers is the sum of the changes from the Play Variability Chart and the expanded chart.

In addition to this system, if you have calculated the run indices for the various spots in the line, use the new index for each as the column on the play board. A third possible method exists for handling runs to either side without the complexity of the expanded Play Variability Chart. This is by introduction of the "Onside Run Blitz" defense. This defense must be called against either side of the line or the center. Two columns for Run Blitz play variability follow this article. The "Right" column is used if the defense has chosen the hole at which the offense is running, the "Wrong" column is used otherwise. When using this defense, it is the only defense which shifts. The effect of all other defenses is taken from the basic Play Variability Chart.

And now, here's how to add some pass patterns. With this system, you can call any pass for a running back or the tight end to be thrown to either side of the field. Passes for these receivers will be run against different defenders on different sides of the field. Thus, each of these receivers will have two passing indices. Each index is figured in the conventional manner using the rating for the defender on each side of the field. The defenders for each receiver on each side of the field are

Receiver	Left-side Defender	Right-side Defender
HB	RLB	LLB
FB	LLB	RLB
TE	FS	TS

If the defender against a pass called by the offense is blitzing, use the receiver's rating against the defender on the other side of the field as the column on the play board.

There ought to be enough there to keep everybody busy 'til next season.

Team	Offense	Defense
Atlanta	4	3
Chicago	6	3
Dallas	3	6
Detroit	4	5
Green Bay	3	6
Los Angeles	3	5
Minnesota	4	5
New Orleans	6	3
New York Giants	5	4
Philadelphia	5	5
St. Louis	5	5
San Francisco	6	5
Seattle	4	5
Washington	4	5

Team	NFL Penalty Ratings	
	Offense	Defense
Baltimore	3	3
Buffalo	3	4
Cincinnati	2	3
Cleveland	6	3
Denver	5	3
Houston	4	6
Kansas City	4	3
Miami	0	4
New England	5	2
New York Jets	0	3
Oakland	6	4
Pittsburgh	6	2
San Diego	1	4
Tampa Bay	6	7

Atlanta	2	5
Chicago	7	3
Dallas	4	0
Detroit	4	3
Green Bay	3	5
Los Angeles	2	2
Minnesota	1	1
New Orleans	5	5
New York Giants	3	5
Philadelphia	3	5
St. Louis	2	2
San Francisco	5	4
Seattle	2	6
Washington	3	4

Team	NFL Fumble Recovery Ratings	
	Offense	Defense
Baltimore	3	3
Buffalo	5	5
Cincinnati	4	6
Cleveland	5	6
Denver	4	4
Houston	4	4
Kansas City	6	4
Miami	4	3
New England	6	3
New York Jets	5	6
Oakland	3	6
Pittsburgh	6	5
San Diego	5	5
Tampa Bay	4	4

Dice Roll	Fumble Recovery Chart										
	FRR Difference										
2	0	*	*	*	*	*	*	*	*	*	*
3	0		*	*	*	*	*	*	*	*	*
4	D	*		*	*	*	*	*	*	*	*
5	D		*	*	*	*	*	*	*	*	*
6	D	*		*	*	*	*	*	*	*	*
7	0		*	*	*	*	*	*	*	*	*
8	D	*	*	*	*	*	*	*	*	*	*
9	0	*		*	*	*	*	*	*	*	*
10	0		*	*	*	*	*	*	*	*	*
11	0	*		*	*	*	*	*	*	*	*
12	D		*	*	*	*	*	*	*	*	*



		Penalty Chart										
		Penalty Rating Difference										
Dice Roll		0	1	2	3	4	5	6	7	8	9	10
3	0	*	*	*						*	*	*
4	D	*	*	*	*	*	*			*	*	*
5	0	*	*			*	*			*	*	*
6	D				*			*	*	*	*	
7	0	*	*	*								*
8	D											
9	0	*	*	*	*	*	*	*	*	*	*	*
10	D				*	*	*	*	*	*	*	*
11	0	*	*	*	*	*	*	*	*	*	*	*
12	D					*	*	*	*	*	*	
13	0	*	*	*								*
14	D											
15	0	*	*	*	*	*	*	*	*	*	*	*
16	D		*	*							*	*
17	0	*					*	*	*	*		*
18	D	*	*	*								

"0" and "D" in the 0 column indicate fumble recovered or penalty charged to Offense or Defense. "\*" indicates fumble recovered by, or penalty charged to, team with higher FRR or penalty rating. Blank space indicates team with lower rating.

Index Variability Chart

Basic Running Index	Defender				
	6	5	4	3	2
A	C	B	A	A	A
B	D	C	B	A	A
C	E	D	C	B	A
D	E	E	D	C	B
E	E	E	E	D	C

Expanded Play Variability Chart

	Shift Right	Shift Wrong	Line
Plunge	-1	+1	Balanced
Off Tackle	-1	+1	NA
End Run	-2	+2	nc
Draw	-3	+2	+1

Onside Run Blitz

	Right	Wrong
Plunge	-3	-1
Off Tackle	-3	-1
End Run	-3	+2
Draw	-3	-2
Screen		-1
Quick Toss		+2
Circle		+1
Zig Out		-2
Fly		+1
QB Run		-2

## MOVING?

If you are planning a change of address, please notify Table Top Sports giving both your old address and your new address, as well as both your OLD AND NEW ZIP CODES.

(In the Realm of Probability, cont'd.)

6	5	.1389	15	.4167
7	6	.1667	21	.5833
8	5	.1389	26	.7222
9	4	.1111	30	.8333
10	3	.0833	33	.9167
11	2	.0556	35	.9722
12	1	.0278	36	1.0000

"Sher-Co"

#	Discrete		Continuous	
	Chances	Prob.	Chances	Prob
1-1	1	.0278	1	.0278
1-2	2	.0556	3	.0833
1-3	2	.0556	5	.1389
1-4	2	.0556	7	.1944
1-5	2	.0556	9	.2500
1-6	2	.0556	11	.3056
2-2	1	.0278	12	.3333
2-3	2	.0556	14	.3889
2-4	2	.0556	16	.4444
2-5	2	.0556	18	.5000
2-6	2	.0556	20	.5556
3-3	1	.0278	21	.5833
3-4	2	.0556	23	.6389
3-5	2	.0556	25	.6944
3-6	2	.0556	27	.7500
4-4	1	.0278	28	.7778
4-5	2	.0556	30	.8333
4-6	2	.0556	32	.8889
5-5	1	.0278	33	.9167
5-6	2	.0556	35	.9722
6-6	1	.0278	36	1.0000

When a third die is added we have increased the different ways of reading the dice. If each is discernible from the others we have 216 three-digit combinations. Discretely read each of these has a probability of 1 out of 216 or 0.0046. As the Master Rating Chart of "Extra Innings" gives the continuous probabilities we will not repeat the table here.

If one die is differentiable from the other two we can read the odd die first and the other two as a sum (like Strat-O-Matic), as a difference, or low number first. All of which are too cumbersome to handle in this article. Leave it that each of the six columns of the Strat-O-Matic card occurs with equal probability, hence the probability of any particular sum (2 to 12) is one-sixth of that given in the previous chart. Also we could sum the two like dice and subtract the odd one, but such will give us the same probabilities as summing three dice except they'd run from -4 to 11 instead of 3 to 18.

When the three like dice are summed we have

#	Discrete		Continuous	
	Chances	Prob	Chances	Prob
3	1	.0046	1	.0046
4	3	.0139	4	.0185
5	6	.0278	10	.0463
6	10	.0463	20	.0926
7	15	.0694	35	.1620
8	21	.0972	56	.2593
9	25	.1157	81	.3750
10	27	.1250	108	.5000
11	27	.1250	135	.6250
12	25	.1157	160	.7407
13	21	.0972	181	.8380
14	15	.0694	196	.9074



15	10	.0463	206	.9537
16	6	.0278	212	.9815
17	3	.0139	215	.9954
18	1	.0046	216	1.0000

If we read the dice as low number first (the method employed by the now defunct Be A Manager and by "J. Henry" in the Universal Baseball Association), we get 56 combinations. The discrete probabilities are:

all three the same	1/216 = .0046
2 alike and one odd	3/216 = .0139
all three different	6/216 = .0278

The continuous probabilities are:

#	Chances	Prob	#	Chances	Prob
111	1	.0046	136	64	.2963
112	4	.0185	144	67	.3102
113	7	.0324	145	73	.3380
114	10	.0463	146	79	.3657
115	13	.0602	155	82	.3796
116	16	.0741	156	88	.4074
122	19	.0880	166	91	.4213
123	25	.1157	222	92	.4259
124	31	.1435	223	95	.4398
125	37	.1713	224	98	.4537
126	43	.1991	225	101	.4676
133	46	.2130	226	104	.4815
134	52	.2407	233	107	.4954
135	58	.2685	234	113	.5231
#	Chances	Prob	#	Chances	Prob
235	119	.5509	346	177	.8194
236	125	.5787	355	180	.8333
244	128	.5926	356	186	.8611
245	134	.6204	366	189	.8750
246	140	.6481	444	190	.8796
255	143	.6620	445	193	.8935
256	149	.6898	446	196	.9074
266	152	.7037	455	199	.9213
333	153	.7083	456	205	.9491
334	156	.7222	466	208	.9630
335	159	.7361	555	209	.9676
336	162	.7500	556	212	.9815
344	165	.7639	566	215	.9954
345	171	.7917	666	216	1.0000

Now you have tables to create games from (not just baseball, but any type). If you've been through EI you should be able to understand how to apply these, if not all you're really doing is converting from actual stats to a decimal then, through these tables, converting that decimal into a combination of dice rolls. For instance, if you want a stolen base to be successful 75% of the time you could use:

11 to 53 (APBA)  
4 to 9 (SUM)  
11 to 36 (SHERCO)  
8 to 14 (SUM of 3)  
111 to 536 (EI)

or 111 to 162 (UBA) depending on how you want

to set up your game.

GAME DESIGN PART V/Dave Minch

## WHERE, OH WHERE, HAS MY LITTLE BALL GONE?

The overwhelming majority of plays in baseball involve a ball hit somewhere by the batter. Where the ball was hit is as important as whether it goes for a hit or an out. Not only for the sake of defensive statistics but for the sake of realistic play, we'll need to know where batted balls have gone.

We have, so far, separated outs into infield and outfield chances. Some of these will be "X-chances", which may turn into hits or errors but most of them will go for outs. Outfield chances are necessarily fly balls and there is already a system proposed for allocating the putout. A little bit later I'll discuss some ways of trimming that system up. If you don't care about putout allocation, you may ignore it. Infield chances can be flies, liners and sometimes foul pop-ups, or they can be groundballs. It will be important to, at least, distinguish between flies and grounders.

Regrettably, the league statisticians don't tabulate the different types of infield putouts. We'll have to manufacture the data we need. The easiest way to get an indication of the number of infield balls hit on the ground is to look at the putout and assist figures for third basemen. The majority of putouts at third base will be on flies. The majority of assists will come on grounders. Last season's fielding data shows that putouts were about 27% of total chances at third. Trimming this down to filter out putouts on rundowns and assists on lineout DP's, we are left with the information that about one ball in four hit to the infield will stay in the air. There are several ways to get a one-in-four split. For instance, each of the dice has two sets of number markings, one of which can be marked. If one set is marked (a dot of paint, say) on each of two dice, there is one chance in four that both dice will turn up a marked face. Another way is to use the chips. Two chances in nine approximates 25%. Draw two chips; if they total three, it's a fly ball. Think about it for awhile and you'll probably arrive at a few more ways to make the separation.

Now, if it was hit on the ground, where does the out go? Is it a ground out, fielder's choice or double play? The conventional wisdom of baseball is that the first attempt is made on the lead runner, unless the fielder is behind him. Conventionally, runners are expected to advance on balls hit behind them, hold otherwise. Add to this soup of constraints the fact that a scoring runner will almost always draw a throw and that the depth of the fielders' placement and of the hit can affect the play. A detailed discussion of these items could fill a book. To keep things manageable, I'm going to dodge it all. These things are the stuff of design decisions. Their handling is the real difference between games.

The practical issue at hand is the allocation of double plays. In the majors last year, about 80% of DP's began with ground balls. This proportion is probably reasonable for the history of baseball since the Infield Fly Rule. About a quarter of the remaining DP's come on outfield flies, runner caught stealing. The remainder come from sloppy offensive play and misexecuted squeeze plays, hit-and-runs, etc. We can take care of ground ball DP's by allocating a portion of the infield chance results on players' cards. Next question: how?

Quite obviously, some teams have a greater ability to turn the double play. Unfortunately, tabulated club fielding doesn't separate ground ball DP's from the others. There are still some ways to get around this.



First, we can use 80% of DP's as an estimator of ground ball DP's. This is an artificial method and will reward teams with good outfields while penalizing those with strong infields. This method works but it does have drawbacks. Let's also look at some other ways to work it.

However we work it (the mechanism is yet to be discussed), we'll need data. Of course the mechanism will determine the data we need. One mechanism is to list DP's as a fraction of infield chances on each batter's card. This will allow us to make use of tabulated data on double plays grounded into. "GIDP" is usually listed with slugging percentage for individuals and with miscellaneous data for teams. If DP's are listed only on batters' cards, the available data can be used. This eliminates the searching through fielding stats necessary to figure team performances but it also eliminates the differences between team fielding abilities. Naturally another procedure is to list DP's only on pitchers' cards. To get a good figure for DP's will require examining the team fielding data in order to filter out all but the ground ball DP's. There are other disadvantages than the research involved. As an example, there will be no advantage in putting better fielders behind a pitcher. Finally, you could list DP's on both batters' and pitchers' cards on the assumption that this "compromise" will properly lay the burden on all parties involved and also minimize the noise. I'm afraid that discovering the data will be your problem. Let's move on to adapting the data to a mechanism for play.

Table 5 presents offensive and defensive data for DP's. It includes double plays and an estimated number of ground ball double plays per batter faced pitching for each team for defensive calculations and grounded into double play per plate appearance for each team for offensive calculations. The simplest mechanism is to allot a portion of infield chances on batters' and pitchers' cards to "double play". The occurrence of a double play is dependent on a runner on base, of course. Whether a runner on any base is sufficient or whether a runner on first is required is another designer's decision. You should note, however, that the greatest number of DP's go 6-4-3 or 4-6-3, depending on whether the batter is right or left handed. The next greatest number go 5-4-3 but they are only a sizeable minority.

If you don't wish to separately indicate DP's you can use a system wherein every ground ball with men on base may become a DP. This has the advantage of being slightly more realistic in play, while being somewhat more difficult to research and actually use in play.

You will need to assign to every player a number or grade representing his chance of turning a grounder into a DP. This number is based on the ratio of DP's to "corrected" total chances for each infielder. For first and third basemen and for pitchers, simply use total chances. For shortstops, subtract 25% of DP's from total chances and for second basemen subtract 75% of DP's from total chances. A comparison to this number can be used to decide whether a ground ball the fielder handles can become a double play. This system can add a great deal of realism to a game, provided only that you can come up with a mechanism which decreases the clumsiness of repeated numerical tests.

To close things out, let's take care of the direction travelled by batted balls. In the infield, batters rarely hit to the same side. More often, balls are "pulled" across the infield. Ignoring the pitcher and catcher,

who figure in few plays in comparison to the others, there are four fielders. One of these will rarely receive a ball, depending on the side the batter swings from. This leaves three likely fielders, second, short and third for right handers, short, second and first for lefties. Since most balls go up the middle, you can achieve good realism by using the chips to refer to these three fielders rather than first, second/short and third. If you really want accuracy in allocating putouts, the pitcher, catcher and same side fielder (first/third) can be involved by combining the chips with dice numbers or just using the digit on the third die to place the ball. El players should know what I mean. For the rest of you, this is to suggest that you write a chart which places batted balls according to the digit on the third die. For example, 1 means the pitcher, 2-5 indicates the second basemen and so forth.

You can allocate balls hit to the outfield that way or you can use the chips. In most parks (not Fenway, or Yankee Stadium) about half the balls go to center, a third are pulled to the far side and the rest go to the same side. This can be approximated by dividing balls hit to the same side (according to the drawn chip) between the indicated fielder and the center fielder. To get the necessary split you could use a marked die or whether the third die turned up even or odd; zero is an even number.

At this point, we have covered enough to construct a workable game, given the time and energy to do the work. I hope you have all noticed the amount of work, particularly research, that game design requires. With the next installment, we shall begin considering ways to polish it up and some other ways to do things we've already done. Next time: batter-pitcher match-ups.

TABLE 5

	DP BFP	GBDP BFP	GIDP PA
Cincinnati	.025	.020	.016
Philadelphia	.025	.020	.020
Los Angeles	.025	.020	.022
New York	.020	.016	.021
Chicago	.023	.018	.021
San Diego	.024	.019	.020
Houston	.025	.020	.021
Montreal	.028	.023	.018
Pittsburgh	.023	.018	.022
Atlanta	.024	.019	.022
St. Louis	.026	.021	.021
San Francisco	.024	.020	.020
NL Average	.024	.020	.020
Baltimore	.029	.023	.020
Cleveland	.030	.024	.024
New York	.026	.021	.016
Chicago	.028	.026	.017
Kansas City	.027	.021	.017
Boston	.026	.021	.021
Oakland	.023	.019	.015
California	.025	.020	.022
Texas	.025	.020	.023
Milwaukee	.030	.024	.019
Detroit	.030	.024	.027
Minnesota	.033	.027	.019
AL Average	.028	.022	.020
Major League Average	.026	.021	.020



## RANDOM NUMBER GENERATION

In the Spring 1977 issue of TTS, David Minch related a system to generate random numbers on a calculator, but without detail, really. In this article I hope to make the method clearer and to give a few decades of random digits. The assumption is you have a 4-function calculator with floating point decimal; i.e., an inexpensive one.

Preparation involves finding the "basic" number and the "range". If you want random numbers from "A" to "B", then the "basic" number is "A" and the "range" is "B minus A plus 1" (one more than the difference of A and B). For example, if you want random numbers from 17 to 25, the "basic" number is 17 and the "range" is  $25 - 17 + 1 = 9$ . Then select a random decade (26 are included at the end of this article) and enter it into your calculator as a decimal.

You are now ready to generate random numbers. The repetitive process is outlined below. The term "generator" at all times refers to the quantity displayed on the calculator.

1. Multiply generator by "range".
2. Add "basic" number to generator.
3. The integer portion of the generator is your random number. You may record it for future use or use it as you go along.
4. Subtract the integer portion (which is your current random number) from the generator. This should leave the generator as a decimal.
5. Go back to step 1 and secure a new random number.

When you are done using random numbers in order to maintain a base of decades to generate from, record the last decimal "generator" displayed on the calculator as a new decade. In this manner you have a never ending supply of decades for your use.

The listing of decades which follows are simply the square roots of the first 26 prime numbers less their integer portion. If you are capable of extracting square roots of primes; these are, by definition, strings of random digits. Big League Game Company offers random number booklets sequenced 00 to 99, 1 to 32 and 11 to 66.

The only problem you'll run into is when you choose a multiple of 5 as your range (10 wipes you out 2 digits at a time) since the decades will not last; i.e., you'll reach a point when your generator is zero.

.4142135623	.5574385243
.7320508075	.8556546004
.2360679774	.2801098892
.6457513110	.6811457478
.3166247903	.8102496759
.6055512754	.1853527718
.1231056256	.4261497731
.3588989435	.5440037453
.7958315233	.8881944173
.3851648071	.1104335791
.5677643628	.4339811320
.0827625302	.8488578017
.4031242374	.0049875621

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## LONDON PRIZE RING RULES FOR DBII

Way back in the nineteenth century, before the rise of civilization, boxing was conducted under very different rules from current Marquis of Queensberry doctrine. Fighters went into the ring with knuckles bared and beat each other into insensibility; well, not really. This is the opinion many have of bare-knuckles boxing, still. References I've consulted seem to have another opinion, so now you can all decide for yourselves whether bare-knuckles boxing was a brutal ordeal, or really somewhat easier on the contestants than gloved bouts. Here's how to add the London Prize Ring Rules to Data Boxing II.

The Broughton Rules, later elaborated into the London Prize Ring Rules, have only a few provisions which can affect the play of Data Boxing. There are also a few minor modifications to the game rules and system which are necessary to make the conversion. Let's take the changes one at a time.

First, the ordinary play procedure of DBII must be slightly modified. Before beginning play, shuffle the flip-deck thoroughly and divide into two piles. Set one aside and use the other for play. When you reach the end of the first deck, shuffle the two together. If you need one or two more cards to finish a sequence at the end of the first half-deck, take them from the other portion. In no case should you use the deck to completion before reshuffling.

To play, decide which fighter will lead the round, subject to the modification that may occur to any fighter's boxing rating. This will be explained later. Then draw a card and take the number of points scored boxing from the center of the card. These points score immediately. Next, discard this card and draw another to find any scoring from offensive power numbers. If any of these require a defensive number, draw any cards necessary to find the final results. Last, if the boxer has any power ratings operating, draw a card for the offensive power round rating. Any defensive number should come from a separate card. Each card drawn should be used for only one reading. After this sequence has been completed for the first boxer, if the other has not suffered a knockdown through any combination of events -- some special cases will be discussed later -- repeat the process for the second fighter. A round ends only when one fighter falls, either voluntarily or otherwise, and the fight continues until one fighter cannot go on. A feature of the London Rules is that a championship can only change hands by a knockout or surrender. As long as the champion is willing and able to walk to the center of the ring, he is effectively the winner.

The alternation of offensive checks for each fighter should continue until one fighter falls. That constitutes the end of a round. Fights are never stopped by the referee, so if one fighter sustains cuts and injuries equal to his TKO resistance, or knockdowns equal to his TKO resistance, the fight will continue. We'll see how a fight can end by what would nowadays be called a TKO a bit later. Right now, let's explore the different types of knockdowns that can occur.

A knockdown may be either voluntary or involuntary. The fighter who leads a round may voluntarily fall to the mat without setting to. This ends the round with no punches exchanged. After he has made his offensive checks, the second fighter may also choose to stop the round by falling. If this happens, it is not scored as a knockdown and no



damage is suffered by the fighter. For the purposes of deciding whether N1, N2, K0, K1 or K2 ratings are operating, only involuntary knockdowns should be counted, all of which score five points.

Besides the voluntary knockdowns previously mentioned, a fighter may choose to voluntarily go down on any N or TKO offensive rating. This scores three points and also ends the round. If the boxer chooses not to fall immediately and makes the check for defense, he may still elect to fall. If the TKO blow landed and was not negated by offensive power reduction, he suffers nine points damage and may still fall to the mat. If no defensive check is made for either an N or TKO offensive reading, the knockdown is voluntary if chosen and scores three points damage. To summarize, the fighter who leads the round may choose to fall before any of his turns begin and suffers no damage. The second fighter may choose to fall after any of his turns, at no cost. Otherwise, fighters may not voluntarily fall unless the opponent scores a TKO or N result on offense. Voluntarily falling before any defensive check scores three points damage. If the result is matched on defense, a knockdown even if voluntary scores five points or nine points for a TKO blow. A fighter may also voluntarily fall before an offensive K reading but this will end the match.

To give the boxers some reason to want to stay on their feet, make the following change to the ordinary rules of Data Boxing. Effects of power and TKO resistance decline are not felt immediately. Instead, they only take effect after he has been knocked down or has scored an involuntary knockdown against his opponent. This last is to prevent a fighter from forcing the effects of "battle damage" to take effect on an opponent by falling himself. In addition, each time a boxer's offensive and defensive power ratings are reduced, lower his boxing rating by one letter. A B rated boxer suffering 33% reduction of offensive power becomes a C boxer. The power indexes are also reduced, according to the ordinary rules of DBII. Note that the changes in boxing rating may also affect which boxer will lead a round, as the fight progresses. Another factor that acts to determine who will lead a round is this; no fighter who voluntarily falls to end a round may lead the next round.

Since the ordinary structure of DB is oriented towards the Queensberry Rules, with regular three minute rounds, something must be done to reconcile the different "timing". When should a power rating used in the ordinary third round take effect?

For the purpose of figuring when Control, Power or Aggression ratings come into play, count each three cards played on offense as one "round". To make it easy to see where the fight stands, lay the cards used by each fighter beside his card, after they are played. Lay cards played for defensive ratings crosswise and it will be easier to count to see how many "rounds" have gone by. Notice that it's likely that each fighter will be in a different "round" as the fight goes on.

To end a fight early, without a knockout requires special circumstances. The event that must occur is a fighter's decision that the punishment he's taking is not worth the possible rewards of winning. Since DB managers are removed from the pain their champion is undergoing, we must add something to keep it realistic. At any time that the fight might be stopped by the referee, were it conducted by Queensberry Rules, roll three dice or turn a card and read the defensive number for a random roll of three dice. If the boxer who might fall has not yet reached his TKO rating, an 18 means he's had enough and he resigns the fight. His seconds throw in the towel and the decision goes to the other fighter. If he has reached his TKO rating (33% or more reduced), compare the random

dice roll to the numbers for Offensive Power Reduction at his level of reduction. If the number is one of those that would negate a power blow, he has chosen to quit. If he is 100% reduced, an 18 means he has chosen not to quit. A similar check should be made at any time his reduction increases by 11% or more, using the numbers for negation at his new level.

I've found that this system simulates bare-knuckles boxing fairly well. It would be interesting to see what effects there would have been on the history of boxing, in any division, if the London Rules had continued to the present. A lot of champions, particularly among the heavyweights, would never have gotten that far. Try it and see. It can be a lot of fun.

One of the most interesting things to do is to experiment with the probable changes in London Rules, through history. It is probable that, at some point, referees would have been allowed to stop contests when one fighter was being badly beaten. It's also likely that time limitations of some sort would have been imposed. The Sullivan-Kilrain match, last of the bare-knuckles heavyweight fights, went 75 rounds and far into the night. Sooner or later, promoters would have realized that such was costing them money. You might want to experiment with some of the possible solutions they might have found. You might also wish to make some adjustments to the way some or all fighters score. I recommend that a change be made in the way cuts and injuries are scored, since a bare fist does much more damage than a padded glove. Try it; you might like it.

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GAME REVIEW/Robert Jones

## BIG LEAGUE PLAYING CARD BASEBALL

Any baseball game which allows the table gamer to throw a fastball, curve, slider, or knuckleball when he is the defensive team has something on the rest of the market. Any tabletop baseball game which has a different situation chart for the different baserunner situations which may exist also has something to offer. In addition, a game which allows you to watch the scoreboard to see how the other scheduled games are turning out is a unique one in the ever-growing field of tabletop baseball games. Such a game is Big League Playing Card Baseball. For the reader who was familiar with the game Playing Card Baseball, this game is intended as a revision. This reviewer is not familiar with its predecessor so the review will be based upon the game's own merits.

A quick summary of the game components and procedures must precede any evaluation. The game comes in two plastic covered folders. One folder contains the rosters with ratings for the twenty-six major league teams. Twenty-five men are rated for the game per team, and it is not always the same number of pitchers or reserves. The teams which used few pitchers and many reserves will be so rated and vice versa. A suggested batting order of the frequently used regulars is given for each team. The other folder contains the directions for the game. Also included are the Situation Charts which cover all possible combinations of base runners to be used whenever appropriate during the game.

To play the game solitaire two playing cards are drawn from a shuffled pile of two decks. The first is read by suit



as the pitch thrown and the second is found below that suit according to suit and rank on the Situation Chart. The result of the play is directly read from the chart with indications as to what happens to the baserunners. For two-handed play with a large amount of strategy, each player receives four cards of different suits to be used as his "pitch" cards throughout the game. When a player comes to bat for the first time he is dealt nine cards from the top of the shuffled cards to be used as his offensive cards. He replenishes his supply before each new turn at bat with the used offensive cards shuffled back into the pile. Each player lays down a card face down, trying to outguess the opponent to his best advantage. Results then are read in the same way.

This reviewer played four games of Big League Playing Card Baseball solitaire using major league teams. Cleveland nipped Detroit 2-1 on Wayne Garland's five-hitter and Buddy Bell's two-run single in the second after a two-base error by Ben Oglivie. St. Louis bombed San Francisco 14-4 on a five-homer twenty-hit attack. California topped the White Sox 3-2 as Terry Humphrey's homer in the ninth was the winning margin in spite of homers by Garr and Gamble. In a fifteen inning contest Atlanta defeated the Cubs 4-2 after two leadoff walks surrendered by Paul Reuschel came home to score in the top of the fifteenth after the Cubs had tied the game at two with single runs in the seventh and eighth. A few observations are in order. The combined batting average after all of the games was a feeble .209. Removing St. Louis from the total leaves an even weaker .168. There were apparently too many walks (36) and strikeouts (61) in spite of using top pitchers for each staff. Only three errors occurred in all of the games, and only five double plays were turned over.

The Situation Charts apply to all pitchers and all hitters with each player having ratings which affect some of the outcomes. Hitters have numerical ratings which transform outs into hits and homer ratings which transform outs or small hits into homers. Pitchers have letter grade ratings based upon earned run average which transform some hits, errors, and walks into outs. Players also have speed ratings which affect only steal attempts and error ratings which may negate some possible errors transforming them into outs. Pitchers in the National League occasionally have hitting and homer ratings based upon individual performance, a factor which more baseball games should incorporate. Pitchers may also be graded for extra strikeouts or walks. Pitchers may weaken according to whether they were starters, starter-relievers, or relievers. The letter grade rating will decrease in such cases.

In my opinion, the game is worthwhile if pure statistical accuracy is not as important as fast-moving fun. It does take awhile to get used to shuffling two decks of cards after each inning and to locating the proper situation chart after each play, but those may not be major factors. Those charts are a positive feature of the game which I have only seen elsewhere in *Langball*. They allow the lower hitting fellow who drives in the runs to come through in those situations (i.e. Butch Hobson of the Red Sox). There are no individual cards for each player which may be a drawback for some gamers. It does play well solitaire with the charts even telling when to steal and to sacrifice if you do not wish to make those decisions (they came up too rarely, however, in my opinion). In all, this is a simple game with its modest measure of accuracy. It seemed to have been too low scoring, but four games may not have been a fair sample. I will probably continue to play some games, and I would recommend it to the

readers unless the price exceeds some normal amount for smaller games (My copy was complementary). The Scoreboard game poses interesting possibilities with cards drawn in similar fashion to determine the inning-by-inning scores of teams. If that might turn you on, here's a recommendation of it for that reason. It is produced by Bell Productions, 36 Miller Hts. Rd., Middletown, NY 10940.

NEWS COLUMN/Larry Green

## TABLE TOP NOTES

I found the comments of Kerry Brassell regarding CALCU-BALL in the last issue very interesting. His rating formula seems accurate and should prove quite useful. I think he was expecting too much from CALCU-BALL with respect to statistical accuracy. You can't expect a \$3.50 game to compare with a \$12.00 or \$15.00 game in statistical accuracy. The current edition, incidentally, contains some more changes to improve the statistical accuracy of CALCU-BALL as well as add additional play variety. After playing about 40 games of last year's edition, I noticed that low average power hitters were not getting their share of homers, so I suggested to the designer that he switch play results 3 and 9. This was done along with a number of changes. The allocation of homeruns seems much more realistic now. The game now sells at \$4.95 but it is still a real bargain considering the enjoyment potential.

You may have noticed that there hasn't been a "Table Top News" section lately. That is because there hasn't been much news. Things should really start popping at Avalon Hill, though, because they much repackaged all the STATIS-PRO games and redesign the old SPORTS ILLUSTRATED BASEBALL GAME. One change already made with STATIS-PRO was to put two sets of fast action card results on one, thus reducing the size of the deck in half. They will be printed in multi-colors. I suggested to Bruce Milligan, AH's sports game head, that the player cards also be printed in multi-colors. He was surprised -- he hadn't thought of that. SPORTS ILLUSTRATED BASEBALL will get larger, more durable player cards among other changes. "Avalon Hill" is also working on developing player ratings for BASEBALL STRATEGY.

Jim Barnes' publication "Table Action" was interesting and informative. I hope it is just the first in a long line of publications on sports tablegaming.

When is Pat Premo going to tell us how THEY'RE OFF is played instead of recreating some of his races? I haven't the faintest idea how the game is played despite two newsletters.

A good way to obtain needed games is to trade seldom used games for those you have been wanting to purchase, but didn't want to spend the \$12.00 to \$15.00 for. I have made several trades (I feel like Frank Lane) for games I have wanted, the last of which brought me REAL LIFE BASKETBALL. Although I haven't had a chance to play a game yet, a review of the instructions, charts, etc. leads me to believe that I finally found a simple, easy to play basketball game. A detailed review is promised for the September-October issue.



## THE SPORT OF KINGS

Horse racing is one of the few sports in which a game can be rated playable if it takes longer to play than the actual sport. That means in this case that playability is more closely tied to the recreation of excitement and realistic results than to time of play.

With that in mind, there are two different divisions in which there is competition. One division attempts to recreate only the excitement of horse racing without using any real horses, or at least any real horses which the average sports fan would recognize. The other attempts to get the real horses and make them perform as they would or did in real life. The second division also has to create the exciting feel of being at the track, so the second division game requires a lot more work.

In the first division there are three entries - Johnny Longdon's Triple Crown Horse Racing Game; Win, Place & Show; and Across the Board.

Johnny Longdon's game is a farce. It plays more like Monopoly and it also lacks the excitement and feel of horse racing. Avoid it.

Win, Place & Show, now put out by Avalon Hill, is the best of this group as it gives a feel for horse racing, betting as well as excitement. The board, horses and game parts are all top quality.

The visual impact of this game is much higher than any other game in either class, but the results are too confined and predictable. After a while, with only a few slight variations, most races will look a lot like the previous one. There is a full day of races included, but with only six horses per race, the results get stale quickly. After once or twice through the race package, a longing begins for some real horses with real names.

The third entry is Across the Board, which can be bought several places, such as from the Big League Game Company or from several other turf product outlets. Across the Board isn't really worth the money. It is nothing more than a mildly entertaining dice game, which just happens to use horse racing as an excuse for the dice game.

Some attempt is made to capture the feeling of being at the track and, with the accessories included, that job is adequately done, but when it comes to capturing the excitement of a horse race, it doesn't come close.

Taking pad of paper and making half an "X" or a full "X" across the sheet and the first horse to get to the other side wins, isn't my idea of a fun way to spend the evening.

Of this group's game, only Win, Place & Show is worth the money, but if true authenticity is your sports bag, then read what shows up in division three.

APBA's horse racing game is probably the most over-rated game of its type (not counting APBA baseball). One correspondent wrote to me that APBA horse racing was valuable because it taught fractions and decimals to his children. That is the only thing I have found the game good for so far. This is the only game of the half dozen covered here which is too long to play.

One especially close race took 40 minutes to run, with its countless chart references and complicated score pad, which must be kept for each race. The game parts are

adequate, though not nearly as impressive as those in Win, Place & Show. It does have a solid box and a game board that makes the race visually more exciting.

The results are none too realistic as lesser horses (by record, not by my opinion) constantly come up with upset wins against respected favorites.

That leaves Gamecraft's "They're Off!" and Vic Hasselblad's "Thoroughbred Racing Game." Both are excellent buys. Both have drawbacks, but both have enough pluses to withstand the bad points.

They're Off is the most versatile of the two, including not only thoroughbreds, but also harness race horses and quarter horses. Hasselblad's entry is obviously restricted to thoroughbreds, but it isn't restricted to the great or nearly great horses, which, at least currently, They're Off is limited to.

Both games move well and show plenty of excitement. Both also have complicated but realistic methods of computing odds for each horse in each race. Both have price tags which are very easy on the pocketbook. Then the pluses split to one side or the other.

They're Off has a slightly more attractive package, most likely attributed directly to the fact that Gamecraft, a successful and most often efficient organization, is backing the effort and Thoroughbred Racing is sold now by Hasselblad himself since Statis-Pro went under and Avalon Hill decided not to continue the game because it was "too complicated."

They're Off also has a better stock of horse cards than does Thoroughbred Racing. The above reasons probably hold true there also.

Now to Thoroughbred Racing. It has a timing system, which They're Off does not. Hasselblad's entry also has a timing system for each track and for many tracks which aren't included, a difference from They're Off, since the latter game doesn't differentiate tracks.

Thoroughbred Racing also includes lines for each horse for different conditions of the racing surface and even a case where the track is so bad that the race must be moved to the turf track inside. There are turf tracks included for all the major outlets that hold turf races.

But as I said, both games have drawbacks and both are similar in those drawbacks.

Neither game has a board or horse pieces to run the race. When I get time I'm going to draw my own up as I don't want to keep records of every race I've run and I don't want to keep buying racecourse charts. Hasselblad does include more of those charts than does They're Off. The visual impact is much better with a board.

Each game then has one drawback separate of each other.

They're Off is hampered by too much strategy. In all of my first six text races and some races even later than that, I hurt certain horses by not using all the strategy and extra handling each horse has at its disposal.

A scorepad is needed to keep track of those things, but I get wrapped up in watching them run and I forget. It also is a chore to keep track of all those things when running a 10-horse race in solitaire. I think They're Off, under the guise of gamesmanship, tries very hard to put factors in the control of the gamer which is under the control of no one except the horse. It is also too easy in They're Off to cut down in front of a horse as no allowance is made for no cutting down right in front of the other horse.

Thoroughbred Racing though hasn't much of anything for the gamer to do for head-to-head competition. Thus



for the gamer who has lots of people who know a lot about horse racing to play head-to-head competition, then maybe They're Off is for you. For those who play alone much of the time, Thoroughbred Racing is probably your best bet. Both are good buys.

**LATE NOTE** -- Pat Premo, creator of They're Off, has announced a supplemental package for his game which would include timing and a Seattle Slew card, along with nearly 100 others. It will be a welcome addition..



## NEWSLETTER

Game Designers: Jerry Faulk  
Larry Davenport

Dear Mr. Davenport & Faulk:

I have recently purchased your Real/Life Basketball game and enjoy the exciting action. During play, however, a few questions have popped up and I hope you can help me so I can enjoy all the action intended.

### 1. TIPOFF - 2 questions

- What do you do when both centers are of equal height?
- No college or Old-Time Pro teams have height ratings so what do you do at tipoffs to determine who controls the tip?

2. **AVG SHOOTING AVG** - In the basic game you can ignore the I or O designations and give avg shooting avg - but some have an avg with a .5 like Westphal 1976-77 with a I 7, O 10. Now when you get the basic shooting rating your number should be divided evenly between I and O shots. Westphal has an 8(51.8%) basic avg and he should be divided either 8/8, 9/7, 10/6 outside/inside respectively - but it was divided out 10/ in 7 - now why is this and do you round up or down when this is encountered with other players?

3. **TIMING**: It states you should use more or less cards depending upon the method of play and level - can you give me how many cards should be used per quarter per method:

PRO	BASIC	ADVANCED
COLLEGE		

If you have to add or subtract cards per quarter should you do it by random or should specific cards be added back in or taken out?

### 4. Refer to cards at top of next column.

- Card A has a blank top - in basic game what player should be there?
- Card B - Act - does this mean the shot is from zone O?
- Card C - should the FD rating be higher than the score before or after the shot was made?
- Card D again player tip-in before or after shot was made?
- Card E - does post stand for center?

5. **INTENTIONAL FOULS**: can be called during the last minute of play - how do you decide when one minute is left in the game?

6. **24 SECOND CLOCK**: have trouble understanding how many cards are to be drawn till 24 sec is in effect, is this right; Team A draws a card and it's a pass so Team A draws a second card and this also calls for a pass to the next card; Team A draws a third card and it reads a shot by C from post; now when he draws the fourth card to read the shot if a condition exists, subtract 5 from shooting rating, is this what was meant? If that third card when it was drawn was another pass, 24 sec clock was violated and the ball is turned over to the other team, is this right?

7. **PLAYING SAFE**: How many times can a player lower

RG

ACT: A pass to RG who attempts to penetrate the lane for a shot. Subtract 5 from shot rating unless dribbling rating is 8,9, or 10

SHOT: Miss

REB: LG! OLG(!) vs DLG

FT: Miss

PRESS: PM fouled by defender if defender's foul rating is greater than last digit of team's score

BB

B X

ACT: A pass to I who passes to next player who makes a bad pass for a turnover unless passing rating is greater than last digit of his team's score. Otherwise, use Action

SHOT: Good if -4 or better

REB: OLF who shoots from area 1

FT: Good

PRESS: Travelling by ORF if dribble rating is less than last digit of team's score.

AA

A X

RG

ACT: A pass to RG who passes to next player

SHOT: Good. Shooter fouled if FD rating is higher than last digit of team's score.

REB: OC

FT: Good

PRESS: ORF fouled by defender if defender's foul rating is greater than last digit of team's score

WW

C X

C

ACT: A pass to POST who gets a double screen for OPEN SHOT in 2

SHOT: Good

REB: DRF

FT: 64

PRESS: Ball stolen from SG by defender FASTBREAK.

PP

E X

1\* or 2

ACT: A pass to 1\* or 2 who passes to next player who carries ball. **TURNOVER!**

SHOT: Miss, shooter fouled by RF

REB: Rebound & Tip In by (last digit of score)  
0-1 OC, 2-4 OLF, 5-7, ORF, 8 OLG, 9 ORG

FT: Good

PRESS: Charging by Playmaker

WW

D

his personal foul rating by two? Is it until his def rating is 1 or 0 or something else?

8. **TEAM RATING** - This deals with only the first seven players in minutes played. Now how do you figure out the def rating of the remainder of the teams' players?

9. In the Jan-Feb 1978 TT Sports, Mr. Compton's review mentions a per-minute stat chart, is this the scoresheet that was in the game or is this something else that I don't seem to have?

10. **SUBSTITUTION**: Should it be made the same way in the basic game as in the advanced game, no rule for substitution in the basic? Big question - what do you do if the game goes into overtime? In most cases all the starters will have used up all their fatigue rating. What do you do in this situation and how many cards are used in an overtime period, I mean play action cards?

11. How about these situations when the last **PLAY ACTION** card is drawn for the quarter:



- a) if the shot is being checked and it indicates the player is fouled and foul shots are awarded, the deck is shaken and one or two cards will be drawn for the shots, is this right?
- b) Now if the last card is the one that indicates who will shoot in the basic game or the zone in the advanced game, will you consider the shooter to have gotten the shot off before the buzzer and shake the deck and draw another card to read the result of the shot or consider the buzzer to have gone off before the shot, what do you think?

Thank you for your help and will be waiting for your answers.

Don Loughney Jr.

Dear Don:

It's hard to believe how many holes keep popping up that need to be plugged. Well here goes:

1a) When both centers are of equal height, the tipoff goes to the team of the center with the highest total (offensive and defensive added) rebound rating. If still tied, draw another card. For Special Play Keys AA through QQ the Home team is given the ball; RR - ZZ, the Visiting team.

1b) For college and Old Time Pro teams use the alternate rules as in 1a above.

2) The formulas for RLB are set up by us here at Gamecraft. The actual tedious chore of applying them to the new ratings each year, however, is done by computer, in this case by a service run by Rick Dean of POWER PLAY! hockey fame. For various reasons Rick never gets everything done exactly according to our instructions and we are then left with answering numerous queries each year, such as yours. I recall Rick explaining to me why he had the computer do such strange roundoffs on the shooting averages instead of following our charts but I don't recall the content of his explanation. The best thing to do would be for me to get him to provide an answer for the next issue of the newsletter.

3) The number of cards you need depends upon whether or not (and how often) you use certain options. The average pro score should be about 104; the average college score, about 73. Use the following initially:

	BASIC	ADVANCED
PRO	160	200
COLLEGE	112	140

As you continue playing, make adjustments to bring your average score (say, over ten games) in line with the usual norms of 104 or 73. Cards should be added or subtracted each time at random.

4a) Card A should have a "1" at the top; another card in the game with the designation missing should have an "RF."

4b) Yes

4c) Before the shot was made.

4d) Before the shot was made. This is covered in paragraph 7, page 4. We'll always use the convention of using the scale before any shot was made.

4e) Yes

5. One minute corresponds to 1/2 of your Play Action Deck for pro play; 1/10 for college play. I suggest just using 12 cards as corresponding to a minute for both college and pro. If this seems too short, try any number up to 17 for the pro.

6. Yes, to both parts. No need for me to amplify further; your example was exactly right.

7. Yes, except you will usually run out of room on the personal foul rating first. Example: Rick Barry, Fouls 1, Def 8; foul rating cannot be lowered since 1 is the lowest. Kevin Porter, Fouls 7, Def 4; alternate ratings could be Fouls 5, Def 3; Fouls 3, Def 2; Fouls 1, Def 1. Taylor (KC), Fouls 3, Def 3; the only alternate would be Fouls 1, Def 2. Remember, the lowest rating is 1. You are not permitted to lower either rating to 0 (except for college).

8. The remaining players are rated completely subjectively by comparing them to the top seven players on the team. When you have no idea you'll have to guess. In general, if a fringe player's offensive stats are good, his defense probably isn't. After all, there's got to be something that is preventing him from getting more playing time. (That is, assuming he's not an injured player.)

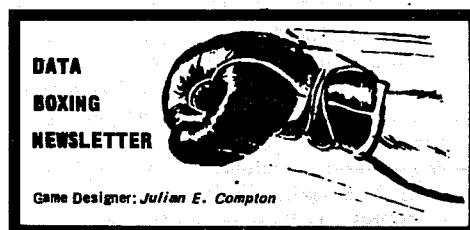
9. I think Julian was referring to the ratings charts, most of which are on a per-minute basis, but I'm not sure.

10. Actually I didn't mean for there to be no substitution rule in the basic game, except for the first game or two. After that, I meant for the coach to then begin using the regular substitution rule as outlined in the advanced section. Unfortunately, I forgot to write this into the instructions for the basic game.

If the game goes into overtime, all fatigue factors should be ignored and substitutions made at will. The players are now inspired and on their second wind. Overtime play is five minutes per period or about 67 cards for the basic game; 83 for the advanced.

11. At the end of a deck, the deck is shuffled and again readied for use. Any factors that needed checking to properly end the quarter are checked by drawing the necessary cards off the top of the newly prepared deck. Then the new quarter is started even though the new deck won't be completely full.

If the last card of a deck results in only a pass, say, then the quarter ends there. If, for example, it results in a shot, then the shot was taken before the buzzer and a card or cards should be drawn from the newly shuffled deck to check the result and carry out any necessary checking for possible fouls, etc.



#### DATA BOXING REMEMBERS WILLIE PEP

The Boxing Writers Association, for Home Box Office, recently voted Sugar Ray Robinson, Muhammad Ali and Joe Louis as the top three boxers of all time. For some time it has been a cliché to refer to Robinson as "the best boxer, pound-for-pound." But Data Boxing fans know that Harry Greb, Mickey Walker and Stanley Ketchel all give Robinson trouble in establishing himself as even the best middleweight.

As the results have come in, I have been on the lookout for the boxers who most dominated their divisions, and therefore became candidates for the best all-time boxer. As of now the leaders in tournament wins are:

- 1) Willie Pep, featherweight - 5 wins in 7 tournaments;
- 2) Benny Leonard, lightweight - 4 of 7;
- 3) Harry Greb, middleweight - 4 of 11.

At this time, Willie Pep is the one who is most effectively dominating his division. Pep, in 7 tourneys, has a winning record against all 16 opponents he has met. His record is 30 wins, 3 losses - with 5 KOs, 2 TKOs, 23 decision wins, 2 decision losses, and one KO loss. Abe Attell and Henry Armstrong were his toughest opponents. Against Armstrong he is 3-1: KO 1, W12, W15,



and KO by 12. Against Atell he is 4-2: KO2, W10, W12, W15, L12, and L12(s).

Pep's A 85/48 rating indicates he should be able to win decisions hand over fist. After winning 62 of 65 as an amateur, he compiled the most impressive string of victories in professional boxing history. Beginning in 1940, he won 62 in a row, before losing to ex-light-weight champ Sammy Angott in 1943. Then he won 73 more in a row, marred by one draw to Jimmy McAllister in 1945. His string was broken by Sandy Saddler who KOed him in 1948. In over eight years he had 134 wins, 1 loss, and 1 draw. (Robinson was closest to this, with one loss to Jake LaMotta, and 3 draws, in 132 bouts over 11 years, while boxing primarily as a welterweight. Contrary to public opinion, Robinson lost about once a year as a middleweight from 1951 on.)

William Guiglermo Papaleo was 20 when he won the featherweight title from Chalky Wright in 1942. In January, 1947 Pep suffered a broken left leg and two broken vertebrae in his back, and kept the streak going until the Saddler KO on Oct. 29, 1948.

Saddler was Pep's nemesis. Saddler knocked him down twice and then out in 4 rounds, in 1948 when Pep was 26. Pep rewon the title by a W15 in February, 1949. Pep was winning on rounds but was knocked down, cut, and forced to quit with a shoulder separation after 7 rounds, in September, 1950. Both were suspended for rough tactics. Pep tried to outpoint him in Sept., 1951, but was knocked down and cut in round two, and the cut led to a ninth round TKO loss.

Pep lost but 5 decisions in 241 bouts, but was stopped 6 times - 3 by Saddler. Obviously Pep was a great points-scoring boxer, but those 3 losses to the KO artist Saddler, will leave the question of Pep's chin for boxing fans to ponder. In Data Boxing, only Armstrong has reached his chin thus far. And Willie Pep is currently considered The All-Time Best Boxer in the Data Boxing World!

CORRECTIONS: In Data Boxing II, there should be nine each of the numbers 13 through 18 in the upper right corner of the Rounds Cards. If you have not heard, DB II is a fast version of DB I which uses one Rounds Card for each boxer per round, giving a summary of the round rather than the blow-by-blow detail of DB I. It sells for \$7.95.

BOOK SUGGESTION: Serious students of boxing may want to purchase THE RING BOXING ENCYCLOPEDIA. (\$13.50, Ring Book Shop, 120 West 31st Street, New York, NY 10001) The 1978 Edition is the first to include all Junior Division Champs, as well as all other historical champs.

#### THE DATA BOXING WORLD

Ring #11 Millard Wells, Rockford, IL. Norton versus the World; was 20-5 vs. champs thru Foreman, 27-4 against all others. 16 Heavies single elim White Hope Tourney, Greb W15 G. Smith in finals, Moran & Coffey to semis. #29 Rex Young, Monroe, IN. 31 S Elim Middies, 12 rds. Greb TKO8 Turpin, Gibbons & Robinson to semis. #37 Jim Currie, Parsippany, NJ. 20 Heavy bouts, Ali W15 Dempsey in finals. 21 LH bouts, Loughran W15 Foster in finals; 21 Middies, Walker K8 Greb.

#38 James Chaffin, Melbourne, FL. 96 Heavy bouts. 16 Heavies Single Elim Tourney, Ali K8 Johnson, Foreman & Marciano to semis. 32 Heavies Single Elim Tourney, Ali TKO7 Foreman, Dempsey & Liston to semis.

(From the Readers, cont'd)

maybe TTS could run them as one of their freebie games. Of course the individual player cards won't be of much use without the game and I don't want to advertise for Mr. Urban any more than my original review and this letter.

Best,  
John Swistak

Dear Larry Green:

I appreciate the opportunity to reply to you about comments by a TTS reader that Calcu-Ball's statistical accuracy "stinks". Actually, the reader was playing 1977 rosters with 1976 ratings --- the way Calcu-Ball is marketed. But as previously pointed out to you, Jerry Faulk, and John Swistak --- Calcu-Ball is not a rehash of previous season results. It is the previous season carried over into the current season excitement with some degree of unpredictability.

Trades and free agents' team switches will be reflected with a difference in the individual and team records. Therefore, the 1978 roster edition with 1977 ratings will show a different outcome than if you were to use the 1977 rosters and 1977 ratings. Calcu-Ball is relatively unique in that it has up-to-date rosters for the current season (through April).

I do appreciate comments from people who have played out an entire season (league) or a high proportion of it, but the one given in TTS was based on an "apples and oranges" set of conditions. With each new season is a new set of conditions and variables, new pitcher-batter match-ups that can affect overall results.

The 1978 edition also has another major facelifting in the play results list (about 1/3 has been changed to reflect more statistical accuracy and play variations, plus more expanded pitching ratings). A few more changes may be made in '79. The new "Table Action" guide to table top sports games by Statis-Pro Publications mentions playability as an important factor in the design of games by many companies. Let us not lose sight that recreating or simulating major league baseball games can be fun. Calcu-Ball was created with 1-step playability at a fair price very much in mind. It will not satisfy every advanced table gamer perfectly, but more improvements in the already released 1978 edition make Calcu-Ball a very good all-around game to play (even from a statistical point of view when you take player transactions and player use variables into account between table game owners).

Here is one of many positive comments received from around the nation from one of our Calcu-Ball owners: "I enjoy your game better than such highly rated games as Extra Innings and Sports Illustrated, due to the fact that without dice, the stats are better represented. Control pitchers such as Jim Palmer cannot be fully represented in dice games."

Regarding the rating system, your reader cracked some



of the Calcu-Ball code but not the rationale for it. It is meant to be simple to work with when playing the game. However, what was shown in TTS is only a close approximation, not the official way of rating the players and teams. The pitching ratings' criteria is more complex than shown in TTS (several number difference between official rating and improvised rating). It is based on more factors than is apparent from one rating number.

The rating system will not be released, because only the pre-calculated, officially compiled ratings are to be used ideally. You may improvise your own ratings for additional players you may want to include in your own Calcu-Ball set, but the complete formula to include complex pitching criteria is the complete property of Mid-America Marketing. Actually, the Calcu-Ball numerical pitching rating system is more precise (vs. A-B-C-D system of other games) because they more closely reflect specific ERA performance records with our ratings.

Sincerely,  
John W. Lederer, President  
Mid-America Marketing

Dear Jerry Faulk:

Please accept my congratulations for the fine basketball game you and Larry Davenport have developed. I first played Negamco basketball (fast, fun, lousy stats) then I tried BLM (took me longer to play a game than to watch one on TV). RLB is exciting and seems reasonably accurate. I am playing a short schedule with the five best pro teams of 1976-77 (Portland, Denver, Philadelphia, Houston, and Los Angeles).

What I like most about RLB is the fact that it recreates the flow and excitement of a basketball game. In this regard, it is similar to Statis-Pro. However, it is superior to Statis-Pro in shot distribution and the fatigue system for insuring accurate playing time for each player.

The only reservation I have about RLB is that my rebounding stats seem slightly unbalanced in that the guards are averaging too many rebounds and the forwards and centers too few. I will analyze the stats at season's end and send you my conclusions.

One request, please. I have also enclosed a stamped, self-addressed envelope and a card on which I wish you would write the address of Replay Baseball. (I think your reviewers should include this information in their reviews.)

The article by Mike Stephens on a shot distribution system for Statis-Pro basketball was excellent. I have not had an opportunity to try it yet, but it seems to be a solid, workable idea.

I also enjoy your editorials very much. Maintain your irreverence!

Thanks.

Sincerely,  
George C. Thomas

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## Classified Ads

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(\$0.05 per word)

FOR SALE: Real-Life Basketball game. Must sell by September 1. Contact Michael Augsdorfer, 12 Edgewood Avenue, Clifton, NJ 07012.

FOR SALE: APBA Baseball (1957, 1962, 1966 All-Time Greats), APBA Football (1964, 1966, 1967), APBA Horse Racing (1973, 1975), SOM Baseball (1977). All in excellent condition. Best offer. Stephen Read, 13405 Lake Avenue, RR, Lakewood, OH 44107.

FOR SALE OR TRADE: '77 and '78 season of Extra Innings baseball. Interested in obtaining Statis-Pro Basketball but will consider all offers. Ken Baughman, 2508 W. 40th St., Lorain, OH 44053.

FOR SALE OR TRADE: '74-'75 season APBA Basketball and '75 season TSG Football. I will take any offer! Write Todd Tomasic, 2043 East Homestead St., Pittsburgh, PA 15212.

FOR SALE: 1975-76 Power Play Hockey; 1976 Negamco Football; Both hardly used. Also, many sports books. Write for complete list to Jeff Cristaldi, 18 Dorothy Dr., Torrington, CT 06790.

FOR SALE OR TRADE: Brand new 1978 edition of SOM Baseball. All 26 teams plus extras. Also, Power Play Hockey ('77). Both games in mint condition. Contact Simone Fevola, 7815 11 Avenue, Brooklyn, NY 11228.

FOR SALE OR TRADE: APBA Football, THE Football, Real-Life Basketball, Basketball Pro-Style, Negamco Baseball, Statis-Pro Hockey, Hoop Mania ATA Basketball game. Contact Dan Shaughnessy, 6605 1st Ave. S, Richfield, MN 55423.

FOR SALE: Every card printed by TSG from 1970 to 1975 seasons. This offer includes all extra player cards and lineup sheets whenever printed. All cards are in excellent to mint condition. Send offer to Bill Kozack, 26 Fourteenth Avenue, Haverhill, MA 01830. Telephone (617) 373-0511.

FOR TRADE: 1978 Power Play Hockey in even trade for 1978 Face-Off Hockey. 3 teams ready for use. For info write Mike Naftolin, 695 Aberdeen, Westmount, Quebec, CANADA H3Y 3A9. Phone 481-2672.

WANTED: Like to unload unused, unliked Tabletop Games of any type (especially sports)? Send Price (Cheap, I hope) and condition. Also want TTS Vol. 1, No. 3. Contact Ron Seamans, 226 Lepore Dr., Lancaster, PA 17602.

WANTED: '71 Strat-O-Matic Baseball. Desperate! Any TSG Leagues? Contact Rubert Hannigan, 165 Sterling Avenue, Jersey City, NJ 07305.

WANTED: Table Sports games publications such as APBA Journal, ASD, etc. Send list of available issues and asking price to Mike Stephens, 312 Newton Ave., Oakland, CA 94606.

LEAGUE MANAGERS WANTED: for a Draft Basketball League beginning in November. Contact Dan Shaughnessy, 6605 1st Avenue S, Richfield, MN 55423.



# BASEBALL SURVEY

Larry Green is conducting a survey of the popularity of the various baseball games on the market. Please list the baseball games that you are personally familiar with on a separate sheet of paper and rate them according to the rating chart given below.

Larry Green  
16 Monroe St.  
Springfield, MA 01104

- 10 A SUPERB game. One of the 1 or 2 best table sports games for any field, period.  
9 Between 10 and 8.  
8 An EXCELLENT game. One of the very top games for its particular sports field.  
7 Between 8 and 6.  
6 A GOOD game. I don't like it as much as I do some others, but I'm still glad I bought it. A lot of good features.  
5 Between 6 and 4.  
4 A FAIR game. I've played some better, some worse. It's just sort of mediocre.  
3 Between 4 and 2.  
2 A POOR game. Quite a few design faults. So many, in fact, that I wish I hadn't wasted my money on this dinker.  
1 Between 2 and 0.  
0 A TERRIBLE game. One of the very worst examples of a table sports game that I've ever come across.

TABLE TOP SPORTS  
Box 68  
Tempe, AZ 85281

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