TEXAS INSTRUMENTS
Calculator Products Division

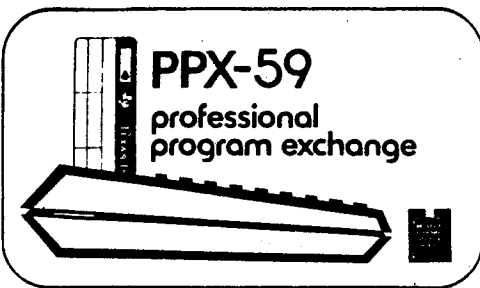
Submission Abstract

Program Title GOLF				Rev.	
Abstract of Program					
<p>One or two golfers play an 18 hole golf course stored in the calculator. You choose what clubs to use and your skill determines how well you will play.</p>					
Original Program written by M. K. Mizote, Gardena, California					
User Benefits:					
Category Name 91	Required Progs.	Prog. Steps 480	Card Sides 3	PC-100A Needed <input checked="" type="checkbox"/>	Library Module ID 1 <input checked="" type="checkbox"/>
Submittal Agreement				Submission Checklist	
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Signature _____ Date _____ Name Texas Instruments Tel. No. _____ Address _____ City _____ State _____ Zip _____					

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Program Description

Program Title: GOLF	Rev.
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Method, Equations, Sketches, Limitations, References, Error Recovery:

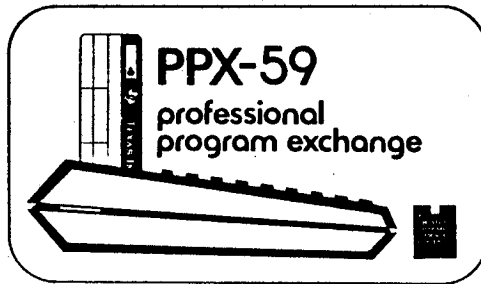
This program, designed for one or two players, simulates an actual game of golf played on an 18 hole golf course stored in the calculator. Each player is given golf clubs which have stated hitting distances. Their actual hitting distance is determined by multiplying the stated hitting distance of the club by a fractional random number between 0.2 and 1.2. The number of the hole, the distance of the hole and the par rating of the hole is printed. Each player chooses a club and continues hitting until their score for the hole is printed and their total score for the holes played is displayed.

When the club used is entered, the program calculates your new distance from the hole from:

$$D_n = D_{n-1} - (C_x \times (F + .2))$$

Where: D_n = Distance from the hole after hitting.
 D_{n-1} = Distance from the hole before hitting.
 C_x = Stated hitting distance of club x.
 F = Fractional random number.

NOTE: When the ball is within 5 of the hole, it is assumed that it can be made in one more shot and the final putt is added by the machine.



User Instructions

Program Title			
GOLF			
			INIT
Player A	Player B	Hole/YDS	
Partition (OP 17)		Parenthesis Levels	
479, 59		1	
Angular Mode (if applicable)		SBR Levels	
N/A		1	
Library Module ID		Disturbs Pending Operations	
1		<input type="checkbox"/>	

LABELS (Op 08)

INV	Ins	CE	CLR	ST	X ²
√	1/x	STO	RCL	SUM	Y ⁿ
EE	1	1	+	GTO	X
SBR	-	RST	+	R/S	.
+/	=	CLR	INV	log	CP
Exp	Pm	P-R	Exp	CMs	
Exp	Pm	Exp	Exp	Exp	
Exp	Pm	Exp	Exp	Exp	
Exp	Pm	Exp	Exp	Exp	
Exp	Pm	Exp	Exp	Exp	
Exp	Pm	Exp	Exp	Exp	
Exp	Pm	Exp	Exp	Exp	
Exp	Pm	Exp	Exp	Exp	

USER DEFINED KEYS

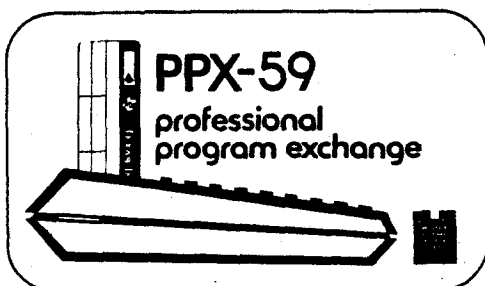
- A Player A
- B Player B
- C Hole/Yds.
- D Used
- E Used
- A' Used
- B' Used
- C' Used
- D' Used
- E' Initialize

FLAGS	0	1	2	3	4	5	6	7	8	9
-------	---	---	---	---	---	---	---	---	---	---

STEP	PROCEDURE	ENTER	PRESS	OUTPUT/MODE (see legend below)	DATA REGISTERS (INV 15)
1	Enter Program (Card sides 1 and 2)				Counter
2	Initialize (use a random seed $0 \leq x \leq 199017$)		2nd E	Club no. and their stated hitting distances will be printed	1 Counter
3	Player A's turn		C	"0" will be displayed Hole no., yds. par will be printed	2
4	Player A enters club to be used	Club No.	A	Yds. to hole will be printed Strokes for hole will be displayed	3
	Player A repeats step 4, varying clubs as needed, until the No. of strokes is printed and the total score is displayed.				4 A's score
					5 B's score
					6 score for hole
					7 used
					8 distance to hole
					9 Used
					10 stores club used
					1
					2
					3
					4
					5
					6
					7
					8
					9

Modes: (n) * —Printed only (n) —Displayed Briefly (Pause)
n* —Printed and displayed

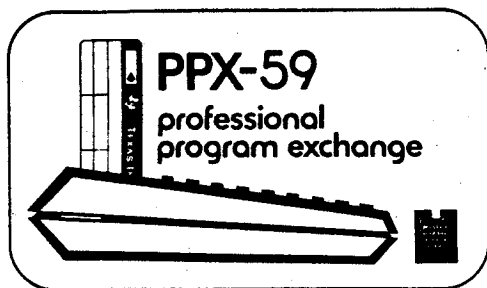
See Continuation Sheet



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Continued From: ☐ Program Description ☐ User Instructions ☐ Stmt. of Example

Program Title:				Rev.
STEP	PROCEDURE	ENTER	PRESS	OUTPUT/MODE
5	Player B's turn		C	Hole no., yds., par will be printed
6	Player B enters club to be used	Club #	B	Yds to hole will be printed Strokes for hole will be displayed
	Player B repeats step 6, varying clubs as needed, until the no. of strokes is printed and the total score is displayed			
7	Steps 3-6 are repeated until paper advances when C is pressed and the total scores for Players A and B are printed.			
8	To start new game, go to Step 2.			
	NOTE: When using 2 players, player A must start first at each hole.			
	When using only 1 player, player B must be used and steps 2 and 3 omitted.			



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Sample Problem

Statement of Example

Demonstrates the first hole of play by 2 players using 94033 as a seed. To play an entire game, do not press GT0 + R/S, but continue by pressing C. However, this key sequence may be used at anytime to view the current totals.

☐ See Continuation Sheet

ENTER	PRESS	OUTPUT/MODE (see legend below)	COMMENT
94033	2nd E	<div>Printed Only</div> <div>CLUBS</div> <div><div>1.</div><div>15.</div><div>YDS</div></div> <div><div>2.</div><div>40.</div><div>YDS</div></div> <div><div>3.</div><div>95.</div><div>YDS</div></div> <div><div>4.</div><div>135.</div><div>YDS</div></div> <div><div>5.</div><div>165.</div><div>YDS</div></div> <div><div>6.</div><div>195.</div><div>YDS</div></div> <div><div>7.</div><div>215.</div><div>YDS</div></div> <div>Modes: (n)•—Printed only (n)—Displayed Briefly (Pause) n•—Printed and displayed</div>	

☐ Over

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Exchange
Sample Problem (cont'd)

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ENTER	PRESS	OUTPUT/MODE (see legend below)		COMMENT
		8.		
		240.	YDS	
		9.		
		260.	YDS	"0" Displayed
	C	1.	HOLE	
		400.	YDS	
		4.	PAR	"0" Displayed
9	A	*	88.	Asterisk indicates Player A "1" Displayed
3	A	*	19.	"2" Displayed
2	A	*	15.	"3" Displayed
1	A	*	11.	"4" Displayed
1	A	*	7.	"5" Displayed
1	A	*	7.	STR
				Asterisk alternates as player alternates
	C	1.	HOLE	
		400.	YDS	
		4.	PAR	"0" Displayed
9	B	*	188.	"1" Displayed
7	B	*	97.	"2" Displayed
3	B	*	15.	"3" Displayed
2	B	*	5.	STR
	GTO + R/S	70.	PAR	That's All Folks!
		7.		
		5.		
Modes: (n) - Printed only (n) - Displayed Briefly (Pause) no - Printed and displayed				

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LOC	CODE	KEY	COMMENTS	LOC	CODE	KEY	COMMENTS	LOC	CODE	KEY	COMMENTS
000	76	LBL		054	76	LBL		107	00	0	
001	11	A		055	85	+		108	42	STD	
002	85	+		056	22	INV		109	06	06	
003	01	1		057	77	GE		110	91	R/S	
004	00	0		058	16	A'		111	76	LBL	
005	95	=		059	01	1		112	18	C'	
006	32	XIT		060	00	0		113	87	IFF	
007	01	1		061	75	-		114	00	00	
008	42	STD		062	43	RCL		115	19	D'	
009	39	39		063	08	08		116	03	3	
010	32	XIT		064	95	=		117	06	6	
011	29	CP		065	77	GE		118	03	3	
012	22	INV		066	65	x		119	07	7	
013	86	STF		067	43	RCL		120	03	3	
014	00	00		068	08	08		121	05	5	
015	42	STD		069	99	PRT		122	69	DP	
016	10	10		070	43	RCL		123	04	04	
017	05	5		071	06	06		124	43	RCL	
018	01	1		072	91	R/S		125	06	06	
019	69	DP		073	76	LBL		126	44	SUM	
020	00	00		074	12	B		127	04	04	
021	84	DP*		075	85	+		128	69	DP	
022	39	39		076	01	1		129	06	06	
023	69	DP		077	00	0		130	98	ADV	
024	05	05		078	95	=		131	43	RCL	
025	76	LBL		079	32	XIT		132	04	04	
026	75	-		080	04	4		133	91	R/S	
027	01	1		081	42	STD		134	76	LBL	
028	44	SUM		082	39	39		135	19	D'	
029	06	06		083	32	XIT		136	01	1	
030	73	RC*		084	29	CP		137	00	0	
031	10	10		085	61	GTO		138	42	STD	
032	65	x		086	00	00		139	11	11	
033	53	(087	13	13		140	01	1	
034	36	PGM		088	76	LBL		141	44	SUM	
035	15	15		089	13	C		142	00	00	
036	71	SBR		090	98	ADV		143	44	SUM	
037	88	DMS		091	03	3		144	01	01	
038	85	+		092	09	9		145	22	INV	
039	93	.		093	75	-		146	86	STF	
040	02	2		094	43	RCL		147	01	01	
041	54)		095	00	00					
042	85	+		096	95	=					
043	93	.		097	67	EQ					
044	05	5		098	55	÷					
045	95	=		099	73	RC*					
046	59	INT		100	00	00					
047	42	STD		101	59	INT					
048	10	10		102	42	STD					
049	22	INV		103	08	08					
050	44	SUM		104	22	INV					
051	08	08		105	58	FIX					
052	43	RCL		106	17	B'					
053	08	08									

MERGED CODES

62	Pgm	Ind	72	STD	Ind	83	GTO	Ind
63	Inv	Ind	73	RCL	Ind	84	Op	Ind
64	Pg	Ind	74	SUM	Ind	92	INV	SBR

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LOC	CODE	KEY	COMMENTS	LOC	CODE	KEY	COMMENTS	LOC	CODE	KEY	COMMENTS
148	03	3		199	76	LBL		253	02	2	
149	06	6		200	55	÷		254	06	6	
150	03	3		201	14	D		255	00	0	
151	07	7		202	07	7		256	42	STD	
152	03	3		203	00	0		257	19	19	
153	05	5		204	69	OP		258	04	4	
154	69	OP		205	06	06		259	00	0	
155	04	04		206	98	ADV		260	00	0	
156	43	RCL		207	43	RCL		261	93	.	
157	06	06		208	04	04		262	04	4	
158	44	SUM		209	99	FRT		263	42	STD	
159	05	05		210	43	RCL		264	21	21	
160	69	OP		211	05	05		265	05	5	
161	06	06		212	99	FRT		266	00	0	
162	98	ADV		213	91	R/S		267	00	0	
163	43	RCL		214	76	LBL		268	93	.	
164	05	05		215	68	NOP		269	05	5	
165	91	R/S		216	01	1		270	42	STD	
166	76	LBL		217	05	5		271	22	22	
167	10	E'		218	42	STD		272	04	4	
168	47	CMS		219	11	11		273	05	5	
169	29	CP		220	04	4		274	00	0	
170	42	STD		221	00	0		275	93	.	
171	09	09		222	42	STD		276	04	4	
172	61	GTO		223	12	12		277	42	STD	
173	68	NOP		224	09	9		278	23	23	
174	76	LBL		225	05	5		279	42	STD	
175	65	x		226	42	STD		280	28	28	
176	09	9		227	13	13		281	04	4	
177	42	STD		228	01	1		282	06	6	
178	11	11		229	03	3		283	05	5	
179	05	5		230	05	5		284	93	.	
180	75	-		231	42	STD		285	04	4	
181	43	RCL		232	14	14		286	42	STD	
182	08	08		233	01	1		287	24	24	
183	95	=		234	06	6		288	42	STD	
184	22	INV		235	05	5		289	26	26	
185	77	GE		236	42	STD		290	42	STD	
186	00	00		237	15	15		291	29	29	
187	67	67		238	01	1		292	42	STD	
188	01	1		239	09	9		293	38	38	
189	44	SUM		240	05	5		294	02	2	
190	06	06		241	42	STD		295	03	3	
191	18	C'		242	16	16		296	00	0	
192	76	LBL		243	02	2		297	93	.	
193	16	A'		244	01	1		298	03	3	
194	94	+/-		245	05	5		299	42	STD	
195	42	STD		246	42	STD		300	25	25	
196	08	08		247	17	17		301	42	STD	
197	61	GTO		248	02	2		302	35	35	
198	85	+		249	04	4					
				250	00	0					
				251	42	STD					
				252	18	18					

MERGED CODES

62	Fm	Ind	72	STD	Ind	83	GTO	Ind
63	Inv	Ind	73	RCL	Ind	84	OP	Ind
64	PA	Ind	74	SUM	Ind	92	INV	SBR

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LOC	CODE	KEY	COMMENTS	LOC	CODE	KEY	COMMENTS	LOC	CODE	KEY	COMMENTS
303	02	2		352	03	3		407	76	LBL	
304	02	2		353	09	9		408	17	B'	
305	05	5		354	00	0		409	02	2	
306	93	.		355	93	.		410	03	3	
307	03	3		356	04	4		411	03	3	
308	42	STD		357	42	STD		412	02	2	
309	27	27		358	37	37		413	02	2	
310	04	4		359	01	1		414	07	7	
311	00	0		360	05	5		415	01	1	
312	05	5		361	02	2		416	07	7	
313	93	.		362	07	7		417	69	DP	
314	04	4		363	04	4		418	00	00	
315	42	STD		364	01	1		419	69	DP	
316	30	30		365	01	1		420	04	04	
317	03	3		366	04	4		421	43	RCL	
318	06	6		367	03	3		422	01	01	
319	05	5		368	06	6		423	75	-	
320	93	.		369	69	DP		424	02	2	
321	04	4		370	00	00		425	00	0	
322	42	STD		371	69	DP		426	95	=	
323	31	31		372	02	02		427	69	DP	
324	01	1		373	69	DP		428	06	06	
325	08	8		374	05	05		429	15	E	
326	00	0		375	01	1		430	73	RC*	
327	93	.		376	01	1		431	01	01	
328	03	3		377	42	STD		432	59	INT	
329	42	STD		378	00	00		433	69	DP	
330	32	32		379	43	RCL		434	06	06	
331	04	4		380	00	00		435	14	D	
332	06	6		381	75	-		436	73	RC*	
333	00	0		382	01	1		437	01	01	
334	93	.		383	00	0		438	22	INV	
335	04	4		384	95	=		439	59	INT	
336	42	STD		385	99	PRT		440	65	x	
337	33	33		386	15	E		441	01	1	
338	04	4		387	73	RC*		442	00	0	
339	01	1		388	00	00		443	95	=	
340	00	0		389	69	DP		444	69	DP	
341	93	.		390	06	06		445	06	06	
342	04	4		391	98	ADV		446	98	ADV	
343	42	STD		392	01	1		447	86	STF	
344	34	34		393	44	SUM		448	01	01	
345	06	6		394	00	00		449	92	RTN	
346	02	2		395	43	RCL					
347	05	5		396	00	00					
348	93	.		397	75	-					
349	05	5		398	02	2					
350	42	STD		399	00	0					
351	36	36		400	95	=					
				401	67	EQ					
				402	04	04					
				403	50	50					
				404	61	GTO					
				405	03	03					
				406	79	79					

MERGED CODES

62	Pgm	Ind	72	STD	Ind	83	GTO	Ind
63	Loc	Ind	73	RCL	Ind	84	DP	Ind
64	Adv	Ind	74	SUM	Ind	92	INV	SR

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LOC	CODE	KEY	COMMENTS	LOC	CODE	KEY	COMMENTS	LOC	CODE	KEY	COMMENTS
450	02	2									
451	01	1									
452	42	STD					15.	11			
453	00	00					40.	12			Registers
454	42	STD					95.	13			11-19 contain the
455	01	01					135.	14			hitting distances
456	25	CLR					165.	15			of the clubs.
457	92	RTN					195.	16			
458	76	LBL					215.	17			
459	15	E					240.	18			
460	04	4					260.	19			
461	05	5					0.	20			
462	01	1					400.4	21			Registers 21-38
463	06	6					500.5	22			contain yds. and
464	03	3					450.4	23			par of the holes
465	06	6					465.4	24			
466	69	DP					230.3	25			
467	04	04					465.4	26			
468	92	RTN					225.3	27			
469	76	LBL					450.4	28			
470	14	D					465.4	29			
471	03	3					405.4	30			
472	03	3					365.4	31			
473	01	1					180.3	32			
474	03	3					460.4	33			
475	03	3					410.4	34			
476	05	5					230.3	35			
477	69	DP					625.5	36			
478	04	04					390.4	37			
479	92	RTN					465.4	38			
							0.	39			39 is a pointer

MERGED CODES

62	Pgm	Ind	72	STO	Ind	83	GTO	Ind
63	Exc	Ind	73	RCL	Ind	84	Up	Ind
64	Pd	Ind	74	SUM	Ind	92	INV	SBR