

```

130 FOR D=1 TO C (Sine Routine)
132 Z=Z+(B;28);B=B-(Z;28)
134 NEXT D
136 IF Z>512 Z=512
138 IF B<0 B=0
140 Z=Z;10;B=B;10
150 CX=-10;CY=22;PRINT"LBS.";NT=0
152 F=KN(R);3+48 (F is Powder)
154 IF M=1 CX=-53
156 IF M=-1 CX=45
158 CY=22;PRINT #0,F
160 IF TR(R)=1 GOTO 170
162 GOTO 152
170 IF M=1 CX=-72
172 IF M=-1 CX=65
174 CY=31;PRINT #0,Cx2
176 IF M=1 CX=-72
178 IF M=-1 CX=65
180 CY=22;PRINT #0,F
182 BOX 0,26,120,20,2;NT=3;F=Fx4 (Clear Prompters)
190 G=ZxF;51;H=BxF;51 (Velocity Vectors)
192 W=0;X=0;H=HxM;E=1 (Initialize Movement)
200 U=(HxL):800;U=UxM (Movement Routine)
202 W=W+(H;4)+(U;4)
204 X=X+(G;4)-2
206 H=H+U;G=G-B;P=W;10
208 IF M=1 P=P+I
210 IF M=-1 P=P+U
212 Q=X;10;IF M=1 Q=Q+J+2 (What to do with position)
213 IF M=-1 Q=Q+K+2
214 IF P<-80 GOTO 400
216 IF P>80 GOTO 400
218 IF Q<-43 GOTO 400
220 IF M=1 IF P>(V-4) IF P<(V+4) GOTO 226
222 IF M=-1 IF P>(I-4) IF P<(I+4) GOTO 226
224 GOTO 230
226 IF M=1 IF Q>(K-4) IF Q<(K+4) GOTO 500
228 IF M=-1 IF Q>(J-4) IF Q<(J+4) GOTO 500
230 IF Q>-4 GOTO 300
232 IF PX(P,Q)=1 GOTO 600
300 MU=2;IF Q>44 GOTO 200 (Paint Dot Routine)
302 BOX P,Q,1,1,3
304 @(E)=P;@(E+1)=Q;E=E+2 (Remember Dot Position)
306 GOTO 200
400 M=-M (No Hit. Clear Dots)
402 FOR S=1 TO E-1 STEP 2
404 BOX @(S),@(S+1),1,1,3
406 NEXT S
408 GOTO 100
500 FOR N=-5 TO 5 (Hit. Make Explosion)
501 FC=RND(32)x8+4;BC=FC-4
502 IF M=-1 K=J;V=I
504 LINE V,K,4
506 LINE NxRND(5)+V,K+RND(10),3;MU=1
508 NEXT N
510 M=-M (Switch Players)
512 IF TR(1)=1 GOTO 50
514 GOTO 512
600 IF M=1 IF P<1+3 GOTO 200 (Shell Impacted Ground)
602 IF M=-1 IF P>V-3 GOTO 200
604 FOR T=1 TO 5
606 MU=4
608 BOX P+T-3,Q+1,1,RND(4),2
610 NEXT T
612 GOTO 400

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Bally Artillery Listing by John W. Rhodes.

Note: Parenthetical comments are not part of the program.

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10 CLEAR                                     (Introduction)
12 PRINT*          ARTILLERY* (9 spaces)
14 PRINT
18 PRINT* WIND-MPH (OR)*      (1 space)
20 PRINT* ELEVATION-DEGREES-6 TO 90*
22 PRINT* POWDER-LBS.-6 TO 90*
24 PRINT* TR 1 = START*
26 IF TR(1)=1 GOTO 40
28 GOTO 26
40 M=1                                       (Start with Player 1)
50 CLEAR;FC=165;BC=9                       (Generate Terrain)
52 B=RND(40);B=-B
54 I=RND(40)-70;V=RND(40)+30
60 FOR A=1 TO 4
62 C=fix 40-120;D=RND(3)
64 FOR E=1 TO 40
66 H=RND(3);IF D=1 B=B+H
68 IF D=2 B=B+H-2
70 IF D=3 B=B-H
72 IF B>-5 B=-5;D=2
74 IF B<-42 B=-42;D=2
76 C=C+1;LINE C,-44,4;LINE C,B,1
78 IF C=I J=B
80 IF C=V K=B
82 NEXT E
84 NEXT A
86 BOX I,J+2,4,4,3                         (Fix Gun Emplacement)
88 BOX V,K+2,4,4,3
90 L=RND(61)-31                             (Generate Wind)
92 CX=-8;CY=40;IF L>0 PRINT* ".#0,L,#0,"*
94 IF L<0 PRINT* "#0,-L
100 Z=0;B=512;R=1;E=1                      (Initialize Sine Routine)
102 IF M=-1 R=2                             (Start Input Routine)
104 CX=-5;CY=31;PRINT*EL*;NT=0
106 C=KN(R);6+24                            (C is Elevation)
108 IF M=1 CX=-53
110 IF M=-1 CX=45
112 CY=31;PRINT #0,Cx2
114 IF TR(R)=1 GOTO 120
116 GOTO 106
120 NT=3

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Figure 4. The aftermath of a startling explosion (complete with bells and whistles).

