ANSWER SET

Bridgeport® TEXTRON
Bridgeport Machines Division of Textron Inc.

PREPARED BY RLD	DATE
CHECKED BY	DATE
SHEET	OF TAPE NO.

Bridgeport TEXTRON
Bridgeport Machines Division of Textron Inc.

PART NO. Program #1	
PART NAME	
COMPANY NAME	

NUMERICAL CONTROL PROGRAM

NOTES	N	G	X/Y	X/Y/Z	Y/Z/I/J	Y/Z/J/K	F	S	T	M
	%									
ST.	n1	G0 G90	X-4.	Y2.5				S2830	T1	M6
1	n5		X0	Y1.75	Z .05					
1	n10	G1			Z-.2		F75			
2	n15		X1.25				F150			
3	n20	G0	X2.25		Z .05					
3	n25	G1			Z-.2		F75			
4	n30		X3.25				F150			
5	n35			Y.75						
6	n40	G0	X2.	Y.5	Z .05					
6	n45	G1			Z-.2		F75			
7	n50		X.75				F150			
8	n55	G0	X2.25	Y0	Z .05					
8	n60	G1			Z-.2		F75			
9	n65		X0				F150			
10	n70			Y1.						
ST	n75	G0	X-4.	Y2.5						M2
	E									

F-137A 1078 50M

PREPARED BY L.W.P	DATE 12/14/79
CHECKED BY	DATE
SHEET OF	TAPE NO.

Bridgeport TEXTRON
Bridgeport Machines Division of Textron Inc.

PART NO. PROGRAM #2
PART NAME
COMPANY NAME

NUMERICAL CONTROL PROGRAM

NOTES	N	G	X/Y	X/Y/Z	Y/Z/I/J	Y/Z/J/K	F	S	T	M
START	%N1	G0 G90	X -1.	Y 2.				S3120	T1	M6
1	N5		X 1.	Y -.5	Z .05					
1	N10	G81			Z .625		F80			
1	N15		X 1.							
2	N20			Y -1.25						
3	N25		X 2.25							
4	N30		X 4.	Y -1.5						
5	N35		X 2.75	Y -2.5						
6	N40		X .5	Y -2.25						
START	N45	G0	X -1.	Y 2.						M2
	E									

F-137A 1078 50M

PREPARED BY RLD	DATE
CHECKED BY	DATE
SHEET	OF TAPE NO

Bridgeport TEXTRON
Bridgeport Machines Division of Textron Inc.

PART NO. Program # 3
PART NAME
COMPANY NAME

NUMERICAL CONTROL PROGRAM

NOTES	N	G	X/Y	X/Y/Z	Y/Z/I/J	Y/Z/J/K	F	S	T	M
ST	%n1	G0 G90	X0	Y2.				S3120	T1	M6
1	n5		X1.25	Y-.75	Z .05					
1	n10	G81			Z -.625		F80			
1	n15		X1.25							
2	n20		X2.	Y0						
3	n25		X3.							
4	n30		X3.5	Y-1.25						
TC	n35	G0	X3.	Y2.				S1270	T2	M6
5	n40			Y-1.75	Z .05					
5	n45	G81			Z -.825		F63			
5	n50		X3.							
6	n55		X2.5	Y-2.25						
7	n60		X .5	Y-2.						
ST	n65	G0	X0	Y2.						M2
	E									

PREPARED BY R.L.D	DATE
CHECKED BY	DATE
SHEET	OF TAPE NO.

Bridgeport TEXTRON
Bridgeport Machines Division of Textron Inc.

PART NO. Program #4
PART NAME
COMPANY NAME

NUMERICAL CONTROL PROGRAM

NOTES	N	G	X/Y	X/Y/Z	Y/Z/I/J	Y/Z/J/K	F	S	T	M
ST	%n1	G0 G90	X-1.	Y4.				S2700	T1	m6
1	n5		X .75	Y- .875	Z .05					
1	n10	G1			Z- .25		F80			
2	n15		X 1.75				F150			
3	n20	G0	X2.75	Y-1.125	Z .05					
3	n25	G1			Z- .312		F80			
4	n30		X 3.5				F150			
5	n35	G0		Y-2.125	Z .05					
5	n40	G1			Z- .375		F80			
6	n45		X .5				F150			
T.C.	n50	G0	X-4.	Y-3.25				S2300	T2	m6
7	n55		X .75		Z .05					
7	.n60	G81			Z .625		F70			
7	n65		X .75							
8	n70		X2.	Y-3.						
9	n75			Y-3.5						
10	n80		X3.25	Y-3.25						
ST	n85	G0	X-1.	Y4.						m2
	E									

F-137A 1078 50M

COORDINATES

PROGRAM # 4

LOCATION	"X" COORDINATE	"Y" COORDINATE
START	-1.0	4.0
1	.75	- .875
2	1.75	- .875
3	2.75	-1.125
4	3.5	-1.125
5	3.5	-2.125
6	.5	-2.125
7	.75	-3.25
8	2.0	-3.0
9	2.0	-3.5
10	3.25	-3.25
TC	-4.0	-3.25

PREPARED BY	L.W.P.	DATE	12/14/78
CHECKED BY		DATE	
SHEET	1	OF	2
TAPE NO			

Bridgeport TEXTRON
Bridgeport Machines Division of Textron Inc.

PART NO.	PROGRAM #5
PART NAME	
COMPANY NAME	

NUMERICAL CONTROL PROGRAM

NOTES	N	G	X/Y	X/Y/Z	Y/Z/I/J	Y/Z/J/K	F	S	T	M
S1	%N1	G0 G90	X-5.75	Y 2.75				S2830	T1	M6
1	N5		X-2.26	Y 2.	Z -.1					
2	N10	G1	X 2.				F120			
3	N15			Y-2.						
4	N20		X-2.							
1A	N25			Y 2.26						
ST	N30	G0	X-5.75	Y 2.75				S3120	T2	M6
5	N35		X0	Y 1.25	Z .05					
5	N40	G81			Z .375		F80			
5	N45		X0							
6	N50		X- .625	Y 1.0825						
7	N55		X-1.0825	Y .625						
8	N60		X-1.25	Y0						
9	N65		X-1.0825	Y- .625						
10	N70		X- .625	Y-1.0825						
11	N75		X0	Y-1.25						
12	N80		X .625	Y-1.0825						
13	N85		X 1.0825	Y- .625						
14	N90		X 1.25	Y0						
15	N95		X 1.0825	Y .625						
16	N100		X .625	Y 1.0825						
16	N105	G81			Z .437					
17	N110		X0	Y .75						

F-137A 1078 50M

PREPARED BY	L.W.P.	DATE	12/14/79
CHECKED BY		DATE	
SHEET	2	OF 2	TAPE NO.

Bridgeport. TEXTRON
Bridgeport Machines Division of Textron Inc.

PART NO.	PROGRAM #5
PART NAME	
COMPANY NAME	

NUMERICAL CONTROL PROGRAM

NOTES	N	G	X/Y	X/Y/Z	Y/Z/I/J	Y/Z/J/K	F	S	T	M
18	N115		X- .5302	Y .5302						
19	N120		X- .75	Y0						
20	N125		X- .5302	Y- .5302						
21	N130		X0	Y- .75						
22	N135		X .5302	Y- .5302						
23	N140		X .75	Y0						
24	N145		X .5302	Y .5302						
ST	N150	GO	X-5.75	Y2.75						M2
	E									

COORDINATES

PROGRAM #5

LOCATION	"X" COORDINATE	"Y" COORDINATE
START	-5.75	2.75
1	-2.26	2.
2	2.	2.
3	2.	-2.
4	-2.	-2.
1A	-2.	2.26
5	0	1.25
6	-.625	1.0825
7	-1.0825	.625
8	1.25	0
9	-1.0825	-.625
10	-.625	-1.0825
11	0	-1.25
12	.625	-1.0825
13	1.0825	-.625
14	1.25	0
15	1.0825	.625
16	.625	1.0825
17	0	.75
18	-.5302	.5302
19	-.75	0
20	-.5302	-.5302
21	0	-.75
22	.5302	-.5302
23	.75	0
24	.5302	.5302

PREPARED BY	RLD	DATE	
CHECKED BY		DATE	
SHEET	OF	TAPE NO.	

Bridgeport. TEXTRON
Bridgeport Machines Division of Textron Inc.

PART NO.	#5
PART NAME	Polar
COMPANY NAME	

NUMERICAL CONTROL PROGRAM

NOTES	N	G	X/Y	X/Y/Z	Y/Z/I/J	Y/Z/J/K	F	S	T	M
	%									
Start	N1	G0 G90	X-5.75	Y2.75				S2830	T1	M6
5	N5		R1.25	A90.0	I0	J0				
5	N10			Z.05						
5	N15	G81	A60.	A30.	Z.375		F120			
17	N20	G0	R.75	A90.	I0	J0				
17	N25	G81	A45.	A45.	Z.437		F120			
Start	N30	G0	X-5.75	Y2.75						M2
	E									

PREPARED BY R.L.D	DATE
CHECKED BY	DATE
SHEET	OF TAPE NO.

Bridgeport TEXTRON
Bridgeport Machines Division of Textron Inc.

PART NO.	Program #6
PART NAME	
COMPANY NAME	

NUMERICAL CONTROL PROGRAM

NOTES	N	G	X/Y	X/Y/Z	Y/Z/I/J	Y/Z/J/K	F	S	T	M
ST	%n11	G0 G90	X-3.	Y3.				S1800	T1	m6
A	n5		X0	Y2.	Z .05					
A	n10	G1			Z-.1		F75			
A→B	n15	G2 G99	X2.	Y0	I0	J2.	F150			
B→C	n20	G99	X0	Y-2.	I2.	J0				
C→D	n25	G99	X-2.	Y0	I0	J2.				
D→A	n30		X0	Y2.	I2.	J0				
ST	n35	G0	X-3.	Y3.						M2
	E									

PREPARED BY RLD	DATE
CHECKED BY	DATE
SHEET	OF TAPE NO.

Bridgeport TEXTRON
Bridgeport Machines Division of Textron Inc.

PART NO. Program #7
PART NAME 1 & 2
COMPANY NAME

NUMERICAL CONTROL PROGRAM

NOTES	N	G	X/Y	X/Y/Z	Y/Z/I/J	Y/Z/J/K	F	S	T	M
①	A→D	Origin	in	The	Center of	the	arc,	Cutter	on	Line.
	%									
ST	n1	G0 G90	X-3.	Y0				S1800	T1	m6
	.n5	G75								
A	n10		X0	Y3.	Z .05					
A	n15	G1			Z- .1		F75			
A→D	n20	G2	X2.5981	Y-1.5	I0	J0	F150			
ST	n25	G0	X-3.	Y0						m2
	E									
②	B→G	.5" Dia.	E.M	Cut	Outside					
	%									
ST	n1	G0 G90	X-3.	Y0				S1800	T1	m6
	.n5	G75								
B	n10		X2.2981	Y2.2981	Z .05					
B	n15	G1			Z- .1		F75			
B→G	n20	G2	X-.8412	Y-3.1393	I0	J0	F150			
ST	n25	G0	X-3.	Y0						m2
	E									

PREPARED BY	DATE
CHECKED BY	DATE
SHEET OF	TAPE NO.

Bridgeport TEXTRON
Bridgeport Machines Division of Textron Inc.

PART NO. PROGRAM #7 3+4
PART NAME
COMPANY NAME

NUMERICAL CONTROL PROGRAM

NOTES	N	G	X/Y	X/Y/Z	Y/Z/I/J	Y/Z/J/K	F	S	T	M
③	G→D	.5" DIA. EM CUT INSIDE LINE. ORIGIN AT "F", CHANGE TOOL AT (X-3., Y0)								
T/C	%N1	G0 G90	X-3.	Y0				S1450	T1	M6
	N5	G75								
G	N10		X- .7118	Y .3437	Z .05					
	N15	G1			Z-.1		F60			
D	N20	G3	X 2.3816	Y 1.625	I0	J3.	F120			
	N25	G0	X-3.	Y0						M2
	E									
④	E→A	1." DIA. EM CUT INSIDE OF LINE. ORIGIN AT "F" CHANGE TOOL AT (X-3., Y0)								
T/C	%N1	G0 G90	X-3.	Y0				S1450	T1	M6
	N5	G75								
E	N10		X 1.25	Y .8349	Z .05					
	N15	G1			Z-.1		F60			
A	N20	G3	X0	Y5.5	I0	J3.	F120			
	N25	G0	X-3.	Y0						M2
	E									

F-137A 1078 50M

PREPARED BY LWP	DATE 12/17/79
CHECKED BY	DATE
SHEET 1 OF 1	TAPE NO.

Bridgeport TEXTRON
Bridgeport Machines Division of Textron Inc.

PART NO. PROGRAM #8	
PART NAME	
COMPANY NAME	

NUMERICAL CONTROL PROGRAM

NOTES	N	G	X/Y	X/Y/Z	Y/Z/I/J	Y/Z/J/K	F	S	T	M
START	%N1	G0G90	X0	Y0				S3600	T1	M6
	.N5	G75								
1	N10		X-1.	Y-3.5	Z .05					
	N15	G1G91			Z-.15		F60			
2	N20			Y 1.25			F120			
3	N25		X-1.	Y 1.25						
4	N30		X-.75							
5	N35	G99	X-.889	Y-1.775						
6	N40	G3G99	X .448	Y-.725	I-.448	J .225				
1	N45	G1	X 2.191							
START	N50	G0G90	X0	Y0						M2
	E									

F-137A 1078 50M

PREPARED BY	R.L.D	DATE
CHECKED BY		DATE
SHEET 1	OF 2	TAPE NO

Bridgeport. TEXTRON
Bridgeport Machines Division of Textron Inc.

PART NO.	Program #9
PART NAME	
COMPANY NAME	

NUMERICAL CONTROL PROGRAM

NOTES	N	G	X/Y	X/Y/Z	Y/Z/I/J	Y/Z/J/K	F	S	T	M
	%									
ST	n1	G0 G90	X4.5	Y3.				S1270	T1	M6
	.n5	G75								
1	n10		X3.75	Y .55	Z-.1					
2	n15	G1 G99		Y-1.75			F120			
3	n20	G2 G99	X2.75	Y-2.75	I2.75	J-1.75	F160			
4	n25	G1	X2.164				F120			
5	n30	G99	X1.457	Y-3.457						
6	n35	G2 G99	X-.25	Y-2.75	I .75	J-2.75	F160			
7	n40	G1 G99		Y-.75			F120			
8	n45	G2 G99	X .75	Y .25	I .75	J-.75	F160			
1A	n50	G1	X4.01				F120			
TC#1	n55	G0	X3.75	Y-6.75				S1500	T2	M6
9	n60		X3.125	Y-.375	Z .05					
9	.n65	G81			Z .2		F80			
9	n70			Y-.375						
10	n75			Y-.75						
11	n80			Y-1.125						
12	n85			Y-1.5						
13	n90	G81	X .75	Y-2.75	Z .3					
T.C.#2	n95	G0	X-.25	Y-6.75				S1450	T3	M6
13	n100		X .75	Y-2.75	Z .05					
13	n105	G81	X .75		Z .7		F80			
T.C.#2	n110	G0	X-.25	Y-6.75				S725	T4	M6
13	n115		X .75	Y-2.75	Z .05					
13	n120	G85	X .75		Z .65		F 50			
T.C.#2	n125	G0	X-.25	Y-6.75				S3120	T5	M6

F-137A 1078 50M

PREPARED BY	RLD	DATE	
CHECKED BY		DATE	
SHEET	OF	TAPE NO.	
2	2		

Bridgeport. TEXTRON
Bridgeport Machines Division of Textron Inc.

PART NO.	Program #9
PART NAME	
COMPANY NAME	

NUMERICAL CONTROL PROGRAM

NOTES	N	G	X/Y	X/Y/Z	Y/Z/I/J	Y/Z/J/K	F	S	T	M
14	n130		X .75	Y-1.75	Z .05					
14	n135	G1			Z- .125		F60			
15	n140		X 1.25	Y- .75			F120			
16	n145		X .75							
14	n150			Y-1.75						
17	n155		X1.	Y- .76						
18	n160	G0	X 1.75	Y- .75	Z .05					
18	n165	G1			Z- .01		F60			
20	n170		X1 .25	Y- 1.75			F120			
19	n175		X 1.75							
18	n180			Y- .75						
21	n185		X1.5	Y-1.74						
T.C.#1	n190	G0	X3 .75	Y-6.75				S3300	T6	M6
9	n195		X3 .125	Y- .375	Z .05					
9	n200	G81			Z .65		F80			
9	n205			Y- .375						
10	n210			Y- .75						
11	n215			Y-1.125						
12	n220			Y-1.5						
T.C.#1	n225	G0	X3 .75	Y-6.75				S200	T7	M6
12	n230		X3 .125	Y-1.5	Z .2					
12	n235	G84			Z .95			F99		
12	n240		X3 .125							
11	n245			Y-1.125						
10	n250			Y- .75						
9	n255			Y- .375						
ST	n260	G0	X4.5	Y3.						M2
	E									

F-137A 1078 50M

COORDINATES

PROGRAM #9

LOCATION	"X" COORDINATE	"Y" COORDINATE
START	4.5	3.
1	3.75	.55
2	3.75	-1.75
3	2.75	-2.75
4	2.164	-2.75
5	1.457	-3.457
6	-.25	-2.75
7	-.25	- .75
8	.75	.25
9	4.01	.25
10	3.125	- .375
11	3.125	- .75
12	3.125	-1.125
13	3.125	-1.5
14	.75	-2.75
TC #2	-.25	-6.75
15	.75	-1.75
16	1.25	- .75
17	.75	- .75
18	1.	- .76
19	1.75	- .75
20	1.25	-1.75
21	1.75	-1.75
22	1.5	-1.74
TC #1	3.75	-6.75

PREPARED BY	R.L.D	DATE	
CHECKED BY		DATE	
SHEET	OF	TAPE NO	

Bridgeport TEXTRON
Bridgeport Machines Division of Textron Inc.

PART NO.	Program # 9
PART NAME	Comp.
COMPANY NAME	

NUMERICAL CONTROL PROGRAM

NOTES	N	G	X/Y	X/Y/Z	Y/Z/I/J	Y/Z/J/K	F	S	T	M
	%									
ST	n1	G0 G90	X4.5	Y3.				S1270	T1	m6
	n5	G75								
Setup Comp	n10		X4.25	Y .55	Z-.05					
Comp	n15	G41	X4.25	Y .55						
1	n20	G1	X3.75				F120			
2	n25			Y-1.75						
3	n30	G2	X2.75	Y-2.75	I2.75	J-1.75	F160			
4	n35	G1	X2.164				F120			
5	n40		X1.457	Y-3.457						
6	n45	G2	X-.25	Y-2.75	I .75	J-2.75	F160			
7	n50	G1		Y-.75			F120			
8	n55	G2	X .75	Y .25	I .75	J-.75	F160			
1A	n60	G1	X4.01				F120			
Comp off	n65	G40 G1		Y .75						
ST	n70	G0	X4.5	Y3.						m2
	E									

F-137A 1078 50M

PREPARED BY	RLD	DATE	
CHECKED BY		DATE	
SHEET	OF	TAPE NO.	

Bridgeport TEXTRON
Bridgeport Machines Division of Textron Inc.

PART NO.	Program #10
PART NAME	Loops & macro
COMPANY NAME	

NUMERICAL CONTROL PROGRAM

NOTES	N	G	X/Y	X/Y/Z	Y/Z/I/J	Y/Z/J/K	F	S	T	M
	%0									
	#1									
	N1001	G0	X .8	Y .125	Z .05					
	=N10	20/2								
	N1005	G91G*	Y .75	Z*	Z*	Z*	F*			
=	N1010/8									
	N1010		X .3001							
	N1015			Y .75						
=	N1020/8									
	N1020		X- .3001							
	$									
	N1	G0 G90	X-4.	Y3.				S1500	T1	m6
	=#1	G* 81 Z*	.175 Z*0	Z*0 F*80						
	N5	G0 G90	X-4.	Y3.				S3300	T2	m6
	=#1	G* 87 Z*	.63 Z*.15	Z*.1 F*90						
	N10	G0 G90	X-4.	Y3.						m2
	E									

F-137A 1078 50M

PREPARED BY RLD	DATE
CHECKED BY	DATE
SHEET	OF TAPE NO

Bridgeport. TEXTRON
Bridgeport Machines Division of Textron Inc.

PART NO. Program #11
PART NAME
COMPANY NAME

NUMERICAL CONTROL PROGRAM

NOTES	N	G	X/Y	X/Y/Z	Y/Z/I/J	Y/Z/J/K	F	S	T	M
	%									
START	n1	G90 G0	X2.5	Y.5						
	n5	G75 G92	A0.					S3300		
1	n10		X1.875	Y0	Z.05					
1	n15	G1			Z-.1		F50			
	=n45/4									
2	n20	G90G2 G99	X1.5	Y-.375	I1.5	J0	F150			
3	n25	G1	X.7906	Y-.375			F100			
4	n30	G2	X.375	Y-.7906	I0	J0	F150			
5	n35	G1 G99	X.375	Y-1.5			F100			
6	n40	G2	X0	Y-1.875	I0	J-1.5	F150			
Rotate	n45	G91 G73	A-90.							
cancel	n50	G90 G72								
START	n55	G0	X2.5	Y.5						m2
	E									

CORRECTION -- EDITOR PROBLEM

Reference Program 5

```
BOSS 6.0
>EDIT
*T
N1G0G90X-5.75Y3.75S2830T1M6
*C/3/2
N1G0G90X-5.75Y2.75S2830T1M6
*FN30
N30G0X5.75Y2.75S3120T2M6
*C/X/X-
N30G0X-5.75Y2.75S3120T2M6
*FN40
N40G81Z.375F80
*C/N/.N
.N40G81Z.375F80
*I
N35X0Y1.25Z.05

*FN60
N60X-1.25Y0
*D
N60X-1.25Y0
*FN90
N90X1.25
*C/5/5Y0
N90X1.25Y0
*FN105
N105G81Z.437
*C/N/.N
.N105G81Z.437
*FN110
N110XX.75Y0
*RN110X0Y.75
*FN125
N125X-.5302YY-53022
*C/Y/
N125X-.5302Y-53022
*C/53022/.5302
N125X-.5302Y-.5302
*B
*N-1
N150X-5.75Y2.75M6
*C/M6/N\M2
N150X-5.75Y2.75M2
*>EXIT
```