

**M-156
STUDENT MANUAL
FOR THE
BRIDGEPORT CNC
MILLING, DRILLING & BORING MACHINES**

JUNE 1981

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This manual carries additional safety precautions and warnings. Read and observe the requirements of the preface and the entire procedures contained in this manual.

Bridgeport® **TEXTRON**

Bridgeport Machines Division of Textron Inc.

COMPENDIUM

Day 1

Machine description-- M-128 1-1,
Machine operations -- M-128 2-1, 3-1
Setting Tool length offsets M-128 -- 3-5
Film - safety in milling, drilling and boring
Basic rectangular coordinate system -- M-129 4-1
Introduction to "G" codes (G0, G90, G91, G92, G70, G71)--M-129 5-1
Basic miscellaneous functions (M2, M6) -- M-129 5-9
Speeds, Feeds & Tool selection -- M-129 5-33
Drilling & Boring cycles (G80-G89, G04 Dwell) -- M-129 5-11
Practice programs
Editor -- M-128 4-5

Day 2

Review
Explain "G" code system -- M-129 5-1
Canned cycles -- M-129 5-7
Polar coordinate drilling -- M-129 9-37
Practice programs

Day 3

Review
Basic Circular Interpolation (G74) M-129 5-3
Multi-Quadrant Circular Interpolation (G75) - M-129 9-2
Deceleration override (G99) - M-129 5-24
Prorated Feedrates - M-129 5-34
Practice programs

Day 4

Review
Loops & Macros (Repetitive programming) - M-129 6-1
Multi-hole drilling routines - M-129 5-20
Cutter compensation - M-129 9-3
Practice program

Day 5

Review of week
Polar coordinate milling - M-129 9-38
Transformation (Rotation & Scaling G73) - M-129 9-42
Plant Tour

Notes

1. Hands on machine and editor time will be available at the end of each day, plus two evenings per week.
2. All students will be responsible for homework nightly.
3. Familiarity with right angle trigonometry is expected, and a calculator with trig functions, if available, should be brought with you.