

RESEARCH BUDGET
FIREARMS & TRAP PROGRAMS

1977
Budget

SHOTGUNS

MODEL 3200 PROGRAMS

- | | | |
|----|---|----------------|
| 1. | Finalize design and development of single barrel M/3200 Trap Gun with a barrel assembly that is interchangeable with the standard trap gun. | \$ <u>15</u> M |
| 2. | Finalize development of M/3200 small gauge barrel set in anticipation of model announcement. | \$ <u>40</u> M |
| 3. | Continue to design and develop process improvements to reduce factory cost and improve model performance. | \$ <u>50</u> M |

Total M/3200 Program \$ 105 M

MODEL 1100A DEVELOPMENT

Continue to design and develop M/1100 to improve performance and appearance. New design features such as a screwed in magazine tube, action bar disconnect system, new locking system, wider extractor, a new feed latch, new trigger and contoured port and barrel extension will be incorporated in proposed model.

\$ 25 M

MODEL 870 TRAP IMPROVEMENTS

Development program to improve Model 870 Trap utilizing features of M/3200 Single Barrel Trap Gun: an adjustable point of impact rib, recoil reduction system, and a pattern control device.

\$ 75 M

-2-

1977
BudgetNEW PROCESS GUN\$ 57 M

Development program to design a gun that enables better component process and material/labor utilization, thus reducing factory cost.

MODEL 1100 PRODUCT IMPROVEMENT\$ 8.5 M

Continual program to improve design, appearance, endurance, function and to reduce manufacturing cost.

MODEL 870 PRODUCT IMPROVEMENTS\$ 15 M

Continual program of improving design and reducing production cost.

NEW BARREL MANUFACTURING\$ 16 M

ESD investigation to develop new processes and equipment for manufacturing no-turn, no-ream shotgun barrel at lower factory and investment costs.

PROVISION FOR PROBABLE PROJECTS\$ 12 MTOTAL SHOTGUN PROGRAMS \$ 140 MCENTER FIRE RIFLESNEW GENERATION M/742-760 RIFLES\$ 25 M

Continue development of new design for M/742-760 rifles, improving function, strength and endurance life.

MODEL 700 - 8mm REM. MAG. DEVELOPMENT\$ 7 M

Finalize design and model testing. Also assist production with pilot lot runs.

-3-

1977
BudgetBARREL LIFE EVALUATION\$ 5 M

A program to investigate and evaluate data to assist in improving barrel life.

NEW CALIBER FOR CENTER FIRE RIFLES\$ 34 M

To investigate and develop designs for new caliber and assist Bridgeport/Marketing to evaluate proposed new ammunition. The project also provides for developing 6mm bench rest bullet for manufacture.

FUNDAMENTAL ACCURACY PROGRAM\$ 9 M

Program provided for obtaining accuracy data such as velocity, bullet weights, hand loads and bedding accuracy to assist in rifle design and bench rest bullet manufacture.

PRODUCT IMPROVEMENTS TO BOLT ACTION CF RIFLES\$ 75 M

Continual program of designing and incorporating improvement into production for M/700, M/788 guns to reduce cost and improve function.

LONG STOCK PRESS FORMING DEVELOPMENT\$ 24 M

ESD program to develop a process and equipment for manufacturing long rifle stock.

TOTAL CENTER FIRE RIFLE PROGRAM\$ 407 M

-4-

1977
BudgetRIM FIRE RIFLERIM FIRE TARGET & ACCURACY DEVELOPMENT\$ 33 M

Development program to improve rim fire accuracy. Factors affecting accuracy will be determined, modified and tested.

PRODUCT IMPROVEMENTS - RIM FIRE RIFLES\$ 57 M

Continuing program to design and incorporate model improvements to reduce factory cost. Major design improvement on M/552-572 will be developed.

PROVISION FOR PROBABLE PROJECTS\$ 5 MTOTAL RIM FIRE RIFLE PROGRAM\$ 95 MFIREARMS - GENERALMISCELLANEOUS EXPLORATORY DESIGN JOBS\$ 63 M

Project provides for small preliminary investigation jobs which have potential for major design programs.

LONG RANGE DEVELOPMENT OF GUN PRINCIPLES\$ 27 M

Program to investigate internal ballistics, shoulder force, vibration, etc. to aid in gun design. Also, procedures for obtaining various pressure related data are to be developed.

COMPUTER AIDED DESIGN\$ 25 M

Research program to provide computer aided design services and capabilities to assist with the design and development of new models. Project also provides for assistance to production in preparing N/C machine tapes; to the Planning and Industrial Engineering Sections for maximum optimum machine grouping and scheduling/inventory of M/3200.

-5-

1977
BudgetCOMPUTER TECHNIQUES & INSTRUMENTATION FOR
MEASUREMENTS & TEST LABORATORY\$ 19 M

Project provides for the investigating and developing of new techniques to improve and automate the monitoring of firearms testing.

PRESSURE MEASUREMENTS TECHNIQUE\$ 9 M

Program for developing acceptable standards of measuring pressure.

IMPROVED PRESS FORM FINISH EVALUATIONS\$ 5 M

ESD program for investigating new processes, etc. to improve and reduce cost of production press form finish components.

MECHANIZED RECEIVER RADII POLISHING\$ 2 M

ESD project to investigate method to mechanize the polishing of receiver curved surfaces.

MECHANIZED FINAL ASSEMBLY\$ 10 M

ESD program to investigate and develop an automatic mechanism to assemble the common fire control components.

RECEIVER POLISHING\$ 6 M

ESD program to investigate method and technique to improve production polishing of receivers.

PROVISION FOR PROBABLE PROJECTS\$ 5 MPROVISION FOR PROBABLE PROJECT-SCOUTING STUDIES - ESD\$ 27 MTOTAL FIREARMS - GENERAL PROGRAM\$ 348 M

-6-

1977
BudgetFIREARMS - PROCESS & MATERIAL RESEARCHINVESTIGATION OF PROCESS FOR GUN PARTS\$ 120 M

Research program to investigate new process techniques and applications to improve gun design and reduce cost. The program has expanded with the organization of the New Process Research & Application Section.

NUMERICAL CONTROL PROCESS DEVELOPMENT\$ 78 M

Project for improving N/C model operations to further savings in prototype modelmaking. Funds are also provided for maintenance of equipment.

TOTAL FIREARMS PROCESS & MATERIAL RESEARCH PROGRAMS\$ 198 MTRAPNEW REMINGTON TRAP FAMILY\$ 58 M

Project to complete development and design of mechanical traps.

TOTAL TRAP PROGRAMS\$ 58 MOTHER WORK

Projects under this category cover work performed by Research personnel which is not chargeable to Research "Technical Activities" projects but is charged to production, Marketing and other department accounts.

\$ 449 MTOTAL OTHER WORK\$ 449 M

-6-

1977
Budget

SUMMARY

FIREARMS & TRAPS

Improvement of Established Business

Ilion Research Division

\$ 1,666 M

Engineering Service Department - Ilion

\$ 160 M

Total Improvement of Established Business

\$ 1,826 M

OTHER WORK

Ilion Research Division

\$ 449 M

TOTAL BUDGET - ILION RESEARCH & ESD

\$ 2,275 M

RLSessone:T
8-19-76