



Graymark®

COMMANDER®

PC TROUBLESHOOTING & REPAIR TRAINING SYSTEM

A+ Certification™
A CompTIA Certification Program

The Commander® PC Troubleshooting & Repair Training System is a comprehensive package of courseware, hardware, software, tools and instructor training aids. The Commander prepares students for careers in computer service and repair. Students who successfully complete the course are equipped with an impressive inventory of high-level, hands-on performance-based skills, and they are ready for the knowledge-based A+ Certification Exam. Students acquire the following knowledge, skills and abilities:

- Thorough knowledge of PC computer systems and each system component.
- Comprehensive understanding of computer technology and concepts.
- Ability to assemble and test state-of-the-art computer hardware, including extensive hands-on experience with software and hardware.
- Marketable skills of diagnosing, troubleshooting, and repairing computer problems.
- Equipped for the CompTIA A+ Certification Examinations.

The Commander is affordable, flexible, and top-quality. When education and training budgets are becoming increasingly constrained, school administrators are seeking creative ways to deliver affordable programs without sacrificing quality. Graymark® meets this need with systems, priced to accommodate shrinking school budgets and expanding educational requirements.

A+ CERTIFICATION

The A+ Certification program is an industry-wide, vendor-neutral program developed and sponsored by CompTIA. Today, many companies are requiring both new and current employees to be A+ Certified. A+ Certification is considered the standard by which the computer industry judges PC troubleshooting and repair technicians. Graymark answers that need with the best value, service, and support to provide schools and students the certification edge in the marketplace.

CompTIA Authorized Quality Curriculum (CAQC)

A voluntary quality review program for IT training material that uses quality standards set by the IT industry.

TROUBLESHOOTING & REPAIR TRAINING SYSTEM

The Commander Training System accomplishes its objectives through three interrelated elements:

- Student Trainer
- Instructor's Package
- PC Service Tool Set

STUDENT TRAINER

The Commander's Student Trainer, pictured above, is a fully-loaded, workplace-quality computer in kit form. The Trainer is comprised of the following components:

- Student Courseware
- Computer Hardware
- Computer Software

STUDENT COURSEWARE

The Student Courseware is comprised of several coordinated elements:

- Student Theory Manual
- Student Lab Manual
- "A+ In Depth" Reference Book
- A+ Practice Tests

Manuals are supplied in 3-ring binders and CD-ROM. Student courseware has been thoroughly reviewed by industry experts to ensure that they meet strict quality standards, exacting requirements and that Commander training materials cover the content of the CompTIA's A+ Certification Exam Objectives.

STUDENT THEORY MANUAL

The Student Theory Manual covers topics such as:

- Background of the IBM Personal Computer
- Personal Safety
- Power Supply
- Motherboard

- Video Display System
- Keyboard
- CMOS Setup
- IDE with RAID Interface Card
- Floppy Disk Drive
- CD-RW Drive
- Hard Disk Drive
- Sound Card
- Software Installation and Use
- Installing Drivers
- Application Software
- Basic Networking
- Connecting Accessories
- Operation
- Maintenance
- Component Troubleshooting

STUDENT LAB MANUAL

Students assemble the kit as part of the course using the Student Lab Manual. The Manual contains clear, well-illustrated, step-by-step instructions. Students also learn to analyze and diagnose PC problems. This Manual includes step-by-step diagnosis and troubleshooting procedures for all PC components and sub-systems, including:

- How to become an A+ Certified Technician
- Hardware Assembly and Testing
- Personal Safety
- Component Troubleshooting
- System Troubleshooting
- Maintenance Procedures
- Reference Data
- Unit Tests
- BIOS Post Codes
- PC Trainer Configuration Data
- BIOS Screens
- Keyboard Scan Codes

Following completion of the Student Lab Manual, the instructor inserts student-transparent faults to assess each student's troubleshooting skills.

A+ PRACTICE TESTS

When the instructor is satisfied that a student has the performance-based skills necessary to service computers, the student then uses the A+ Practice Tests to prepare for the knowledge-based A+ Certification Examinations.

TRAINER DISASSEMBLY

At the end of the course, the student uses the step-by-step illustrated instructions in the Student Lab Manual to disassemble the Trainer and prepare it for the next class.

COMPUTER HARDWARE

The Commander hardware is frequently upgraded. The following specifications are provided only to represent the minimum specifications.

- Motherboard, Pentium 4 (LGA775)
- Processor, Intel Pentium 4 2.8 GHz or better
- 256 MB DDR RAM
- Hard Disk Drive, 80GB or better
- CD-RW Drive, 52X or better
- ATX Tower Case & 350/400w Power Supply

- Floppy Disk Drive, 3.5"
- Video Card, PCI 32MB
- Sound Card
- Stereo Headphones
- Keyboard
- Scrolling Mouse
- Mouse Pad
- RAID IDE Card
- 10 Floppy Disks
- Assembly Tools
- 15" LCD Monitor (Optional)

COMPUTER SOFTWARE

The Commander software is frequently upgraded. The following specifications are provided only to represent the minimum specifications.

- Windows XP Professional
- Microsoft Works
- Several CD Titles

INSTRUCTOR'S PACKAGE

Each classroom needs only one Instructor's Package. The contents of the Instructor's Package are:

- Instructor's Guide
- Full Set of Student Courseware
- Faulted Parts Set
- TechRef Book
- IC Puller and Grounding Wrist Strap

INSTRUCTOR'S GUIDE

The Instructor's Guide helps the instructors manage their curriculum. The 250+ page Guide provides thorough information on how to implement the course, and how to manage the hardware aspects of the training program. The instructor learns how to increase or decrease the total class hours to meet a school's educational objectives.



Instructor's Package

Other key topics in the instructors guide include:

- Course Objectives
- How to Use PC Service Tools
- How to Use Test Equipment
- How to Use Diagnostic Software
- How to Insert Each Fault

FAULTED PARTS SET

The Faulted Parts Set provides the instructor a simple means of giving students real-world experience in a wide variety of component and sub-system failures. Using Faulted Parts and Fault Techniques, more than 50 different faults can be inserted into more than 50 separate Trainers at the same time. The student-transparent Faulted Parts included in the Instructor's Package are:

- Keyboard
- Power Y Cable with Fault #1
- Power Y Cable with Fault #2
- Power Y Cable with Fault #3
- 40-pin Hard Drive Cable
- IDE RAID Card
- AC Cord
- 34-pin Floppy Drive Cable
- 3.5" Floppy Disk
- Video Card
- RAM Module

CUSTOMER SERVICE REPORTS

The Instructor's Guide includes a blank customer service report form similar to those used in PC repair shops. An instructor's reference form for each fault is provided. Each reference form indicates the diagnostic/analysis steps that the student should follow to troubleshoot a particular fault.

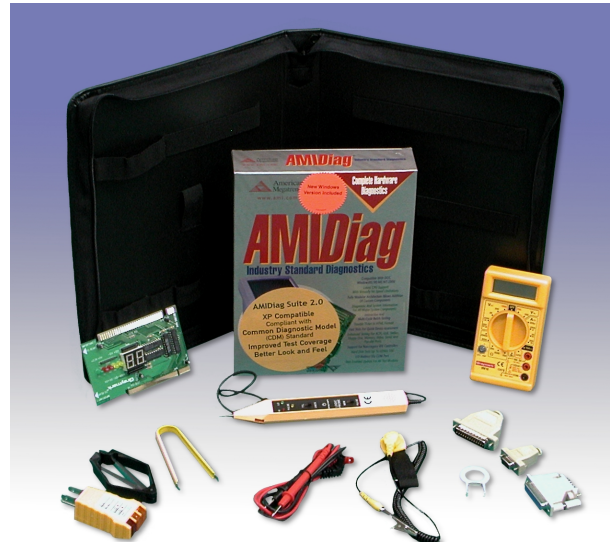
Once a fault is in place, the instructor gives the student a blank customer service report. After a student completes the diagnostic work, the instructor compares the student's completed customer service report with the reference report for the fault that was inserted in the student's PC.

Students gain practical experience in taking a customer complaint and logically determining the appropriate action needed to resolve the problem. Instructors gain quantitative information relative to the student's ability to troubleshoot computer problems.

Students' knowledge, confidence and self esteem grow exponentially as a result of this series of troubleshooting exercises. The design of the Faulted Parts and Techniques makes instructor preparation time a breeze.

PC SERVICE TOOL SET

The PC Service Tool Set contains every tool needed for the Commander course and for diagnosing and repairing computers in the field. The Tool Set includes a POST card which provides students with a quick and simple means of determining the exact nature of any POST failure on a personal computer during boot up.



PC Service Tool Set

The Tool Set also includes the award winning AMI diagnostic software, which provides professional state-of-the-art analysis of all PC parts. The Tool Set includes:

- POST Card, PCI/ISA
- AMIDiagnostic Software
- Digital Multi Meter
- Logic Probe
- AC Receptacle Tester
- Key Top Puller
- 9-Pin to 25-Pin Serial Port Adapter
- Serial & Parallel Loopback Connector
- DIP IC Puller
- PLCC IC Puller
- Grounding Wrist Strap
- Zipper Tool Pouch

SUMMARY

Today, when education and training budgets are becoming increasingly constrained, school administrators are seeking creative ways to deliver affordable programs without sacrificing quality. Graymark meets that need with training systems priced to accommodate shrinking school budgets and expanding educational requirements.

SUPPORT

Graymark provides a multi faceted support package for instructors and schools, including:

- Toll-Free Help Line for technical assistance and support
- StudentProof Parts Exchange Program
- Immediate Support for Parts Replacement

ORDERING INFORMATION

Model Description

50033-xx	Commander PC Troubleshooting & Repair Trainer * (Includes: PC, Software, Courseware and A+ Practice Tests)
50093-xx	Commander Instructor's Package
50093-xx	Commander Instructor's Package w/ PC Service Tool Set
56250	PC Service Tool Set
56055	Commander Courseware Site License

* The suffix is determined by the options ordered

Specifications subject to change without notice.

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P/N 9006-8, 08-06

