SPC-16 documentation summary
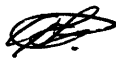
SPC-16 documentation summary

GENERAL AUTOMATION, INC.
1055 East Street
Anaheim, California 92805
(714) 778-4800

REVISION

Symbol	Description	Mgr. Publications	Engineering Approval	Date
A	Original Issue			

CONTENTS

CONTENTS (continued)

SPC-16 DOCUMENTATION SUMMARY MANUAL

This Summary Manual has been compiled to facilitate the user in referencing avail-
able documentation for SPC-16 hardware and software. The summaries depict the
type of information the documents contain so the user may be able to determine
which manual would be most helpful for a particular situation.

Manuals pertaining to individual peripheral controllers (disk units, card and
paper tape readers, etc.) describe controllers that operate with the SPC-16/30,
50 and 70 computers. Manuals for SPC-16/40 series controllers are currently
being published, but are not available for summary at this time.

SPC-16 INPUT/OUTPUT SYSTEM (IOS) (88A00028A)

The SPC-16 Input/Output System (IOS) Manual gives programming information for the I/O software that is supplied with GA operating systems. It describes how the user codes calling sequences in assembly language and FORTRAN to have IOS perform input/output operations. The manual also contains a functional description of individual IOS components, including flow charts for the I/O drivers and other IOS routines. In addition to a general philosophical overview, the manual details IOS organization and its relationship to other system components to guide the user who wishes to add I/O drivers or otherwise modify IOS.

RTX-16 REAL TIME EXECUTIVE SYSTEM USERS' (88A00114A)

The RTX-16 Users' Manual describes the Real Time Executive System for the SPC-16 on two levels of detail. The first level is concerned with the overall application and working of an RTX System: the component parts, the parts the customer-programmer must supply, and the interaction of these parts. The second level of detail is concerned with the specific points of an RTX-16 System the customer-programmer must know in order to build an efficient, integrated Real Time System.

SPC-16 DISK/DRUM BASED OPERATING SYSTEM (DBOS-16) REFERENCE (88A00115A)

This manual describes the structure, use and loading of the Disk/Drum Based Operating System, the loading and execution of stand-alone Utility Programs, and standard System Processors. It also explains how the user can write a specific processor, using the existing operating system, and how to configure a Disk/Drum Based Operating System so it is tailored for a particular installation. Each command accepted by the operating system is described with prototype and examples. A section of the manual details general usage of control commands, enabling the user to combine individual commands for his desired effect.

QUALITY ASSURANCE (88A00118A)

The Quality Assurance manual details the responsibilities of various General Auto-
mation departments in assuring the quality of the product, from design, to work-
manship standards, to the reliability of the unit. The Quality Assurance manual
also gives standards for vendors of materials and parts who sell to General
Automation.

The information contained in this manual is primarily concerned with procedures,
rather than specific inspection and testing criteria. For example, included in the
manual are the types and meanings of Inspection Stamps and a description of when
each is used. However, the standards necessary for a particular product to meet
in order to receive a stamp are not discussed.

WORKMANSHIP STANDARDS (88A00119A)

Although available as any ordinary manual, the Workmanship Standards manual is
essentially an internal document. The manual defines acceptable standards for
the preparation and assembly of basic components, covering:

1. Mechanical Assembly

2. Wire Preparation

3. Terminals, Connectors and Taper Pins

4. Harnesses and Cables

5. Soldering

6. Printed Circuit Boards

7. Solderless Wrapped Electrical Connections

8. Printed Circuit Rework

and includes a glossary of terms.

CARD READER CONTROLLER - 1311/1316/1317/1318 (88A00124A)

The 1311 Card Reader Controller Manual provides a user with a basic introduction to the uses, functions and workings of this controller. Basic programming of the Card Reader is discussed as related to both 18/30 and SPC-16 systems. The interface to the SPC-16 programmed I/O is also described. It should be noted, however, that prior knowledge of GA system programming (18/30 or SPC-16) is necessary to fully understand the material in the text.

The maintenance information includes a theory of operation, pin charts and a major function breakdown. No preventive maintenance, corrective maintenance or troubleshooting is described.

1313 CARD PUNCH CONTROLLER (TECHNICAL) (88A00125A)

The 1313 Card Punch Controller Technical Manual provides the user with a basic introduction to the uses, functions and workings of this controller. Basic programming of the card punch is discussed as related to both 18/30 and SPC-16 systems. The interface to the SPC-16 programmed I/O is also described. The maintenance information includes a theory of operation, pin charts and a major function breakdown. Installation information for the 1313 to an 18/30 system is also provided.

This manual does not describe preventive maintenance, corrective maintenance, or troubleshooting. Prior knowledge of GA system programming (18/30/SPC-16) is required to fully understand the material covered.

1321 TAPE READER CONTROLLER (TECHNICAL) (88A00126A)

The 1321 Paper Tape Reader Controller Technical Manual will familiarize the user
with the uses, functions and workings of this controller. Programming of the
1321 controller is discussed as related to both 18/30 and SPC-16 systems. The
interface to the SPC-16 programmed I/O is also described. Theory of operation,
pin charts and a major function breakdown are included in the maintenance
section. The manual does not include preventive maintenance, corrective main-
tenance or troubleshooting. The user should be familiar with GA system program-
ming (18/30/SPC-16) before reading this manual to better understand the material
covered.

1322 TAPE PUNCH CONTROLLER (TECHNICAL) (88A00127A)

The 1322 Paper Tape Punch Controller Technical Manual provides the user with a
basic description of the uses, functions and workings of this controller. Pro-
gramming of the 1322 controller is discussed as related to both 18/30 and SPC-16
systems. The interface to the SPC-16 programmed I/O is also described. The main-
tenance section includes a theory of operation, pin charts and a major function
breakdown. This manual does not include preventive maintenance, corrective main-
tenance or troubleshooting. The user should be familiar with GA system programming
(18/30/SPC-16) before reading this manual to better understand the material covered.

1352 LINE PRINTER CONTROLLER (TECHNICAL) (88A00130A)

The 1352 Line Printer Controller Technical Manual contains a brief summary of the workings of the controller and printer. The functioning of the line printer controller is explained through a functional description, theory of operation and a pin chart. Programming the controller in an 18/30 system is described. Emphasis is placed on how the programming works, rather than on actual programming techniques. No maintenance information, other than the theory of operation, is provided.

1362/1363 CONSOLE TELETYPE CONTROLLER (TECHNICAL) (88A00131A)

The Console Teletype Controller Technical Manual provides the user with a basic introduction to the uses, functions and workings of this controller. Programming is discussed as related to both 18/30 and SPC-16 systems. A theory of operation, major function breakdown and flow, timing and pin charts are included. Maintenance information such as installation, checkout and troubleshooting are also depicted. The teletype unit itself is not described in this manual.

1344 DISK CONTROLLER (TECHNICAL) (88A00132A)

The 1344 Disk Controller Technical Manual is mainly a programming document. Although a maintenance section is provided to explain the general functioning of the controller, this manual primarily contains programming information. GA 18/30 and SPC-16 programming is discussed and word formats are shown. No maintenance techniques are included in the maintenance section, and the workings of the disk storage unit are not described.

1341 DISK CONTROLLER (TECHNICAL) (88A00133A)

The 1341 Disk Controller Technical Manual contains a detailed description of the workings of a disk storage unit. The operations performed, recording method employed and formatting technique are depicted. The 1341 Disk Controller is explained through a functional description, theory of operation and numerous diagrams and tables.

The philosophy of programming the disk controller is described for 18/30 and SPC-16 systems. The reader should be familiar with GA system programming to fully understand the material covered. No maintenance techniques are provided; but the technician will find the information provided in this manual helpful in understanding the workings of the disk controller.

1361 SELECTRIC PRINTER/KEYBOARD CONTROLLER (TECHNICAL) (88A00134A)

The Selectric Printer/Keyboard Controller Technical Manual provides a basic introduction to familiarize users with the operation and programming of this controller. Programming as related to the 18/30 and SPC-16 systems is discussed. A functional theory of operation, pin chart, flow and timing diagrams are included in the text. No maintenance information is depicted. The Selectric Printer/ Keyboard unit itself is not described.

1351 LINE PRINTER CONTROLLER (TECHNICAL) (88A00135A)

The 1351 Line Printer Controller Technical Manual provides a brief summary of the workings of the controller and printer. A functional description and theory of operation are provided along with a pin chart to explain the general functioning of the Line Printer Controller. Programming with the 1804 Processor is depicted. Emphasis is placed on how the programming works. No maintenance information is included; but the technician may find the functional description helpful in understanding the controller.

1331/1332/1333 MAGNETIC TAPE TRANSPORT CONTROLLER (88A00136A)

The Magnetic Tape Transport Controller Manual provides a good introduction to the GA magnetic tape system. Users will find the manual useful in explaining the tape controller, tape transport and tape formats (7 and 9 tracks are depicted).

The philosophy of programming the tape controller is described for 18/30 and SPC-16 systems. A theory of operation and controller board functions are included in the maintenance section. While pin charts and numerous timing diagrams are provided, no maintenance techniques are discussed. The user should have prior knowledge of GA system programming (18/30 or SPC-16) to fully understand the material covered.

1345 DISK CONTROLLER (TECHNICAL) (88A00137A)

The 1345 Disk Controller Technical Manual provides the user with a basic explanation of a GA disk system. The disk controller, disk storage unit and disk formats are discussed. Flow charts and timing diagrams are included to assist in understanding of the text.

The philosophy of programming the disk controller is described for 18/30 and SPC-16 systems. A theory of operation, and controller function breakdown, by board, are included in the manual. While pin charts are included, no maintenance techniques are depicted. The user should be familiar with GA system programming (18/30 or SPC-16) before reading the manual.

1353 LINE PRINTER CONTROLLER (TECHNICAL) (88A00138A)

The 1353 Line Printer Controller Technical Manual provides the user with an introductory description of the uses, functions and workings of the controller. Printing, paperfeed and ribbonfeed mechanisms are depicted along with printer formatting. Programming of the 1353 Controller is discussed as related to both 18/30 and SPC-16 systems. The maintenance section contains a pin chart, theory of operation and functional description. This manual does not include any maintenance techniques. The user is required to have prior knowledge of GA system programming (18/30 or SPC-16) to better understand the material covered.

SPC-16 FREE STANDING OPERATING SYSTEM (REFERENCE) (88A00139A)

The reference manual for the SPC-16 Free Standing Operating System explains the use, loading and execution of the resident Monitor, stand-alone Utility Programs, standard System Processors and any user-written Processors. Instructions are given on how to configure a Free Standing Operating System so it is tailored for a particular installation. The reader should also be familiar with the SPC-16 Input/Output System Reference Manual for a thorough understanding of the Free Standing Operating System.

CAP-16 ASSEMBLER (REFERENCE) (88A00146A)

The CAP-16 Assembler Reference Manual is an adequate text for the applications programmer who will use the standard instruction set. The manual does discuss command format and syntax, the specification of constants, symbols and literals, and program organization; lists the standard CAP-16 Assembler instructions; lists and explains the CAP-16 Assembler directives; and explains macrodefinitions and references. The manual does not give a thorough discussion for the systems programmer of the "Raw Assembler", the directives it recognizes, and how these directives and the "Raw Assembler" work.

SPC-16 INPUT/OUTPUT INTERFACE (REFERENCE) (88A00147A)

This manual is addressed to the SPC-16 Model 1604 computer, but the information it contains is also appropriate for the SPC-16 Model 30 series computers. The Input/Output Interface is described on three levels: signals eminating from the SPC-16 processor via the Input/Output bus, signals eminating from line drivers and receivers via Input/Output cables and the third level for data processing peripheral controllers which allows direct memory access and cycle stealing. Each signal at each interface level is described. Additional information is included in appendices giving signals by pin number and a description of peripheral Input/Output Controller commands in their general format.

SPC-16 FORTRAN (REFERENCE) (88A00148A)

This manual describes General Automation's Fortran for the SPC-16 computer, listing its extensions to ASA Basic Fortran (X3.10-1966) and its restrictions to ASA Fortran IV (X3.9-1966). It also details every acceptable Fortran statement, giving prototype and examples. Some information about the operation of the compiler is included, particularly with regard to optimization which the compiler performs. A few coding hints are included to promote optimization.

SPC-16 AUTOMATION COMPUTER (REFERENCE) (88A00150A)

The SPC-16 Automation Computer Reference Manual provides the reader with a basic discussion of hardware and software associated with the SPC-16 Automation Computer. The first section of the manual familiarizes the user with the features, characteristics and specifications of the system.

A system description is provided in Section II. Word formats and system elements are listed in table form. A complete instruction repertoire for the computer follows in Section III. Section IV is devoted to the Input/Output system. I/O operations including Interfacing, DMA, Interrupt I/O and Program I/O are described.

Other information contained in the SPC-16 Automation Computer Reference Manual include:

o A complete description of console operation.

o SPC-16 Automation Computer options available

o Hardware packaging and pin charts

o Instruction summary with hexadecimal decoding.

o List of supporting documents for system

This manual can be a useful document for system users, programmers, technicians and operators.

This manual pertains to only the SPC-16 Model 1604. The reference manual for the SPC-16/30, 50, 70 series is 88A00238A; the reference manual for the SPC-16/40, 45, 60, 65, 80, 85 series is 88A00243A.

GENERAL AUTOMATION DESIGN LANGUAGE (GENCODE) PROGRAM MANUAL (88A00195A)

This program manual is primarily an internal document, detailing design and programming procedure as well as language definition and specifications for General Automation's Design Language. Examples show sample statements on appropriate forms.

SPC-16 REPRODUCE AND VERIFY PAPER TAPE (RVP) PROGRAM (88A00208A)

This program manual gives the operating instructions for the standard SPC-16 utility program which can reproduce or verify any paper tape. Also given are several specific examples which illustrate reproduction, verification and multiple copy reproduction of a paper tape. No explanation of loading procedures are included, but loading procedures and a description of operating instructions are included for each operating system and for the basic systems programs.

SPC-16 EXTENDED SUBROUTINE LIBRARY (REFERENCE) (88A00226A)

This manual describes the subroutines written by General Automation to support user programs. Part of the manual is concerned with explaining the operations of the intrinsic subroutines which the Fortran IV compiler calls to implement addition, subtraction, multiplication, division, exponentiation, data type conversion and input/output. The rest of the manual consists of specification sheets for each subroutine in the Extended library.

The extensions consist mainly of the Fortran IV compiler's ability to handle double precision real, complex and mixed type arithmetic.

However, this library is not interchangeable with the Standard Subroutine library for common functions.

SPC-16 STANDARD SUBROUTINE LIBRARY (REFERENCE) (88A00227A)

This manual describes the subroutines written by General Automation to support user programs. Part of the manual is concerned with explaining the operations of the intrinsic subroutines which the Fortran compiler calls to implement addition, , subtraction, multiplication, division, exponentiation, data type conversion and input/output. The rest of the manual consists of specification sheets for each subroutine in the Standard library.

This library is not interchangeable with the Extended Subroutine library for common functions.

SPC-16 REAL TIME OPERATING SYSTEM (RTOS-16) (REFERENCE) (88A00230A)

This manual describes the structure, loading and use of the SPC-16 Real Time Operating System. It gives format guidelines and organizational requirements for writing user programs to be run in the real time environment provided by RTOS-16. Procedures for loading and execution of Stand-Alone Utility Programs and System Processors under RTOS-16 are given. Each command accepted by the operating system is described with prototype and examples. The manual gives user information regarding RTOS-16 multiprogramming features and facilities. Both overall system functioning and individual module and data descriptions are included for primary components. Step-by-step instructions are provided for generating a Real Time Operating System tailored to the user's real time requirements.

SPC-16 BASIC SYSTEM PROGRAMS (REFERENCE) (88A00231A)

This manual describes the loading and operation of standard SPC-16 utility programs and special processors for basic computer configurations which do not have an operating system. The requirements which designate a basic or teletype-only configuration are given.

SPC-16/40, 45, 60, 65, 80, 85 MAINTENANCE (88A00234A)

The SPC-16/40+ Maintenance Manual is a troubleshooting guide to the SPC-16/40+ family of computers. This document is written to aid the GA field service representative or customer in isolating a malfunctioning component to one board in the processor; no chip-level troubleshooting techniques are described.

After giving a functional description and physical description of the processor series, the manual describes a step-by-step procedure to locate a malfunction. The procedure is documented in the following order:

o Perform a visual inspection of all connections, etc.

o Run available GA test programs. This section describes bootstrap loaders, the Teletype Test and Verify Program, the Processor Test and Verify Program and the Memory Test Program.

o If the malfunction involves a direct memory access device, check the Data Channel Module.

o Check power supply.

o Replace processor boards with available spares.

Although this manual deals mainly with the SPC-16/40+ processor, preventive maintenance schedules are also given for each of the most common GA-supplied peripheral units.

Appendices dealing with basic processor timing and instruction sequencing are also included.

SPC-16/30, 50, 70 AUTOMATION COMPUTERS (88A00238A)

This manual is intended to serve as the basic reference manual for the SPC-16/30, 50, 70 series.

Section 1 describes general features of the computer (construction, specifications, description, etc.).

Section 2 describes the organization of the basic system, a description of each of the system elements, word formats, memory addressing and the dedicated memory map.

Section 3 describes each of the instructions in the SPC-16 instruction set in terms of format, function and the indicators and/or registers affected.

Section 4 describes input/output operations from the standpoint of both hardware and software design philosophy.

Section 5 describes the operation of the Real Time Clock and Fail-Safe Group.

Section 6 is an orientation to the switches and indicators on the SPC-16 console.

Section 7 illustrates hardware packaging.

Section 8 lists available user's support documentation and training.

Section 9 describes the ROM bootstrap.

Section 10 describes the High-Speed, Signed Multiply/Divide option.

Most of the information in this manual is identical to information in the SPC-16/40 series System Reference Manual (88A00243A). Since the latter manual contains a much more complete discussion of the SPC-16 system, the SPC-16/30/50/70 user is advised to read that manual in addition to this one.

o Direct Memory Access (DMA) operations, both with and without
the Data Channel Module

The description of each type of operation includes an example schematic drawing
of the hardware implementation with the pertinent timing. A physical description
of the SPC-16/40+ I/O system is also included in this section.

Section 6 is an orientation to the switches and the indicators on the SPC-16
console.

Section 7 describes miscellaneous special features, options and capabilities
available with the system.

Section 8 includes physical planning information for the use of the installation
planner.

BASIC-16 REFERENCE (88A00256A)

This manual describes the operation of the Basic interpreter for the SPC-16
computer by discussing the commands the interpreter accepts and the Basic program
statements. Every Basic program statement is described, both for elementary
program statements and for advanced program statements, giving statement prototype.
Some information on the operation of the interpreter, particularly with regard
to size and integration with the operating system, is included.

SPC-16 FORTRAN IV (REFERENCE) (88A00257A)

This manual describes General Automation's Fortran IV for the SPC-16 computer,
lsiting its extensions to ASA Fortran IV (X3.9-1966). It also details every
acceptable Fortran IV statement, giving prototype and examples. Some information
about the operation of the compiler is included, particularly with regard to
optimization which the compiler performs. A few coding hints are included to
promote optimization.

SPC-16 R(EAD) O(NLY) M(EMORY): TELETYPE HIGH SPEED PAPER TAPE BOOTSTRAP LOADER PROGRAM (88A00322A)

This program manual gives the operating instructions for using either the Teletype Paper Tape Reader Bootstrap Loader or the High Speed Paper Tape Reader Bootstrap Loader, or an SPC-16 Model 30, 50 or 70. The sizes of and instructions comprising the Bootstrap Loaders are also given.

SPC-16 R(EAD) O(NLY) M(EMORY): 1341/1343 DISK BOOTSTRAP LOADER PROGRAM (88A00337A)

This Program Manual gives the operating instructions for using the 1341 or 1343 Disk Bootstrap Loader. The size of and instructions comprising the Bootstrap Loader are also given.

TELETYPE/HIGHSPEED PAPER TAPE BOOTSTRAP LOADER FOR THE SPC-16/40/45/60/65/80/85 PROGRAM (88A00710A)

This Program Manual gives the operating instructions for using the Teletype Paper Tape Reader Bootstrap Loader or the High Speed Paper Tape Reader Bootstrap Loader for an SPC-16 model 40, 45, 60, 65, 80 or 85. The sizes of and instructions comprising the Bootstrap Loaders are also given.

PROGRAMMING INFORMATION FOR SPC-16 M(AGNETIC) T(APE) U(NIT) 3331 (88A00715A)

Although the Programming Information Manual does not say so explicitly, it describes the control, function and status words sent or received to the 3331 Magnetic Tape Controller. It describes, bit by bit, each flag and what it determines or indicates. No examples of synthesized commands are given.

SPC-16/40 SERIES R(EAD) O(NLY) M(EMORY): 3341/43/46/47 DISK BOOTSTRAP LOADER
APPLICATION DOCUMENT (88A00725A)

This application document describes the operation and execution of the Read Only
Memory Bootstrap Loader for the Model 3341, 3343, 3346 and 3347 Disk Controller.
It also gives the instructions which comprise the Bootstrap Loader.

SPC-16/40/45 7- and 9-TRACK MAGNETIC TAPE UNIT DRIVER (MUX) PROGRAM (94A00245A)

This program manual describes the operation codes which the 7- and 9-Track
Magnetic Tape Unit Driver (MUX) will process, and the data formats it will accept.
In addition, it depicts the function word, returned status codes and the Device
Control Block and indicates the procedures undertaken for error recovery, to use
chaining, and to convert data formats on input or output.

SPC-16/40/45/60/65/80/85 C(OMPUTER) TO C(OMPUTER) I(NTER)F(ACE) USER'S MANUAL
(94A00264A)

This User's Manual describes the procedures by which a central processing unit
of an SPC-16 Model 40 computer may transfer information to or receive information
from another central processing unit of an SPC-16 Model 40 computer, using the
Computer to Computer Interface. Control of the interface bus, initiation and
response including recognition of identification codes, use of software pre-
determined message code, transfer completion and computer-to-interface/module
commands are discussed.

SPC-16 3342 HEAD PER TRACK DISK/DRUM DRIVER PROGRAM (94A00284A)

This Program Manual describes the operation codes which the 3342 Head Per Track Disk/Drum Driver will process, and the data formats it will accept. In addition, it depicts the function word, returned status codes, the Device Control Block and the procedures undertaken for error recover and chaining.

PGS TO CARD BOOTSTRAP FORMAT CONVERSION UTILITY (PGBT) PROGRAM (94A00289A)

This program manual describes the purpose and operation of the utility routine to convert PGS format programs to Card Reader Bootstrap Loader – readable format. This description includes the restrictions to the PGS code and the utility's error messages.

SPC-16 FAMILY R(EAD) O(NLY) M(EMORY): CARD READER AND TELETYPE BOOTSTRAP MODEL 16XX-0082 PROGRAM (94A00290A)

This program manual gives the operating instructions for the Teletype Bootstrap Loader, the Card Reader Bootstrap Loader and operating the Card Reader Bootstrap Loader specifically to load and operate the PGS Card Loader. The instructions which comprise the Bootstrap Loaders are also given.

SPC-16 CONCORDANCE PROGRAM (94A00295A)

This program manual describes the purpose of the Concordance Program, its loading instructions under DBOS-16 and RTOS-16, and describes its operation in detail.

SPC-16/40 FAMILY R(EAD) O(NLY) M(EMORY) 3342 HEAD/TRACK DRUM AND TELETYPE
BOOTSTRAP MODEL 16XX-0088 (94A00296A)

This program manual describes the operating instructions for the Teletype
Bootstrap Loader and the Model 3342 Drum Bootstrap Loader for the SPC-16/40
series computers Read Only Memory. The instructions which comprise the Boot-
strap Loaders are also given.

SPC-16 DEVICE INDEPENDENT PGS LOADER (PGLD) PROGRAM (94A00907A)

This program manual describes the loading procedures for the Device Independent
PGS Loader under DBOS-16 or RTOS-16, and indicates operation and error messages.

SPC-16/40 FAMILY R(EAD) O(NLY) M(EMORY): 3341/3343/3346/3347 AND TELETYPE
BOOTSTRAP MODEL 16XX-0085 PROGRAM (94A00920A)

This Program Manual gives the operating instructions for using the Model 3341/
3343/3346 or 3347 disk Bootstrap Loader or the Teletype Paper Tape Reader Boot-
strap Loader for an SPC-16 Model 40, 45, 60, 65, 80 or 85. The sizes of and
instructions comprising the Bootstrap Loaders are also given.

SPC-16 1561, 1581 and 1590 LOCAL TTY/HAZELTINE 2000/TEKTRONICS 4010 IOS DRIVER PROGRAM
(94A00935A)

This Program Manual describes the operation of the standard system driver for the
named communications terminals (1590 only for SPC-16/30 series computers) by
describing the operation codes and data formats the driver recognizes, the function
word, the line vector table, error recovery, the Device Control Block and pseudo
Device Control Block of the driver and the status codes the driver will return.

ANALOG TO DIGITAL CONVERTER DRIVER (D$ADP) PROGRAM (94A00937A)

This Program Manual describes the operation codes and data formats and modes recognized by the Analog-to-Digital Converter driver, and depicts the Device Control Block and the returned status codes of the driver for Model number 1440-1010.

DIGITAL TO ANALOG CONVERTER DRIVER (D$DAP) PROGRAM (94A00938A)

This Program Manual describes the operation code and data format the driver requires, and depicts the Device Control Block and returned status codes of the driver for Model Numbers 1450-0101/0102/0103/0104.

SPC-16 CALL LINK SUBROUTINE PROGRAM (94A00939A)

This program manual describes the purpose and operation of the Library Subroutine Link, its calling sequence in CAP-16 Assembly Language, Fortran and Fortran IV, and its error messages.

SPC-16 OVERLAY BUILDING AND MANAGEMENT SYSTEM PROGRAM (94A00953A)

This Program Manual describes the link-editor for the SPC-16, Core Load Overlay Builder, the commands it accepts and the structures it creates; the operating system loader which loads the linked output of the Core Load Overlay Builder; and the system routine which performs run-time management of the overlays and of SPC-16 extended memory.

FLOPPY DISK DRIVER PROGRAM (94A00954A)

This program manual describes the operations and returned status of the Floppy Disk Driver Model 3349 for an SPC-16, and depicts the function word, the Device Control Block, error checks and error recovery for this driver.

GENERAL AUTOMATION USER CORRECTION REQUEST

Document Number: _____   Today's Date:_____

Document Title: _____

Page Number: _____

Describe change or correction requested:

Name and Address of Requester:_____

_____

_____

(Leave blank below this line)

- -

Request Examined by: _____   Date:_____

Accepted ( )   Rejected ( )

If Rejected, Reason:_____

_____

_____

YOUR COMMENTS, PLEASE . . .

This publication serves as a reference for systems analysts, programmers and operators of General Automation systems. Your answers to the questions on the back of this form help us produce better publications for your use.

Fold   Fold

Fold   Fold

General Automation, Inc.
1055 East St.
Anaheim, Calif. 92805

Additional Comments:

GENERAL AUTOMATION, INC.