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October 24, 1972

MEMORANDUM TO: Users of CALL-OS, 360A-CX-42X

SUBJECT: Transmittal of Version 2, Modification
Level 0 of 360A-CX-42X

Enclosed with this memorandum are the program materials you have ordered.

The Basic program material consists of:

1. A Program Directory updated to Version 2, Modification Level 0.
2. Revised editions of the following manuals:

CALL-OS System Description Manual (GH20-0673-4)
CALL-OS Executive and Utilities Program Description
Manual (GH20-0786-3) and TNL GN20-2780.
CALL-OS Terminal Operations Manual (GH20-0787-2)
and TNL GN20-2782
CALL-OS Operator's Manual (GH20-0788-2) and
TNL GN20-2781

New terminal command language reference card for the user at his terminal:

CALL-OS Terminal Command Language Reference Card
(GX20-1830)

Any discrepancy between the material received and the material ordered, or any errors in reproduction, should be reported to the Manager of the Program Library providing your programming systems.

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OCTOBER 24, 1972

Memorandum to: Recipients of CALL-OS Executive and Utilities
Program, 360A-CX-42X

Subject: Transmittal of Version 2, Modification Level 0 of
360A-CX-42X

This letter transmits Version 2, Modification Level 0 of 360A-CX-42X.

The program materials you have ordered are enclosed. The following
describes the contents of the Basic and Optional program packages.

Basic program material consists of:

A Program Directory (attached)
CALL-OS System Description Manual (GH20-0673-4)
CALL-OS Executive and Utilities Program Description Manual
(GH20-0786-3) and TNL GN20-2780.
CALL-OS Terminal Operations Manual (SH20-0787-2) and TNL GN20-2782.
CALL-OS Operator's Manual (GH20-0788-2) and TNL GN20-2781.
CALL-OS Terminal Command Language Reference Card (GX20-1830)

Object program load modules, a macro library, a procedure library, a
source statement library, and a change library are available on one
9-track, 2400 foot reel of tape at 800 or 1600 bpi; or one 7-track,
2400 foot reel of tape at 800 cpi (Data Conversion Feature required).
Refer to the Program Directory for a description.

If you ordered the Optional program material, it consists of:

Optional machine readable material consisting of a listing of
the combined cross reference tables of all CALL-OS Executive
and Utilities modules on one 7-track 800 cpi (Data Conversion
Feature required) 2400 foot reel of magnetic tape or one 9-track
800 or 1600 bpi Distribution Tape Reel (DTR). (Refer to the
Program Directory for further information).

Any discrepancy between the material received and the material
ordered, or any errors in reproduction, should be reported to the
Manager of the Program Library providing your programming systems.

Enclosures

CALL-OS Executive and Utilities Program

(360A-CX-42X)

PROGRAM DIRECTORY

This directory contains information concerning all available material associated with the subject program. This material consists of basic program items in the form of reference manuals, load modules, source modules, macros, and job control language (JCL) procedures; and optional material in the form of a system manual.

The purpose of this directory is to assist the recipient of CALL-OS program material in understanding what he has received and in locating specific items of interest.

TABLE OF CONTENTS

Application Program Documentation.	1
Reference Material	4
Basic Machine-Readable Material	9
Optional Machine-Readable Material	12
Programming Systems.	14
Program Dependencies	15
Additional Considerations	16
Minimum Machine Configuration.	18
Engineering Change Level Requirements.	25
Statement of Maintenance Procedures.	27
Maintenance Information.	28

APPLICATION PROGRAM DOCUMENTATION

A list of manuals published in support of the CALL-OS Executive and Utilities Program follows. The first five of these are included in basic program material. The last is additional program support material.

CALL-OS System Description Manual

(GH20-0673)

This manual defines the scope of applicability of CALL-OS for customer executives, system analysts, and programmers. It is the first manual that should be read by anyone unfamiliar with CALL-OS.

The manual includes a general discussion of the CALL-OS system configuration, terminal processing, system structure and control, system support and maintenance facilities, and an introduction to the language processors supported. The CALL-OS Batch Interface (COBI) option is presented. The CALL-OS terminal command language is summarized for terminal users.

CALL-OS Executive and Utilities Program Description Manual

(GH20-0786)

This publication describes the facilities provided by CALL-OS to installation personnel who are responsible for the selection, evaluation, and implementation of the system. The intended audience includes system engineers, system programmers, marketing representatives, and customer systems personnel.

The concepts and organization of the system are explained. The CALL-OS Batch Interface (COBI) facility is described, and directions for including it in a CALL-OS system are provided. Procedure-oriented information necessary to design, build, and initialize a CALL-OS system, to create and maintain the data base (particularly, use of CALL-OS utility programs), and to maintain the system itself is provided. Diagnostic aids are reviewed briefly. For system messages and abnormal termination codes, the reader of this manual should refer to the CALL-OS Operator's Manual (see below).

CALL-OS Terminal Operations Manual

(GH20-0787)

Three types of terminal units can be used with the CALL-OS time-sharing system: the IBM 2741 Communications Terminal (Correspondence or EBCD), the Teletype Unit, Type 33, and the Teletype Unit, Type 35. This manual is intended for the individual terminal user, and describes characteristics, operations and maintenance of these terminals, as relevant to CALL-OS. CALL-OS user libraries, shared libraries, edit capabilities, and paper tape facilities are described. The CALL-OS terminal command language is explained in detail. System messages that may be printed at the user's terminal are listed and explained alphabetically.

CALL-OS Operator's Manual

(GH20-0788)

This publication describes the operating procedures for the CALL-OS system as performed by computer center operator personnel responsible for day-to-day system operation.

Subjects discussed in this manual include startup procedures and operations, runtime operating techniques, and shutdown and restart procedures. The CALL-OS operator command language, which the CALL-OS command console operator uses to communicate with the system, is explained in detail. System messages and abnormal termination codes, as they appear on the OS/360 system console, CALL-OS command console, CALL-OS communications console, and OS/360 system printer, are listed and explained.

CALL-OS Terminal Command Language Reference Card

(GX20-1830)

This reference card provides a functional summary of the CALL-OS terminal command language, for easy reference by the user at his terminal. Procedures for typing correction (2741 and Teletype) and program statement correction are also described.

CALL-OS Executive and Utilities System Manual

(GY20-0795,
GY20-0796, GY20-0797, GY20-0798)

This publication is addressed to system programmers and IBM program system representatives who require a detailed knowledge of the CALL-OS system. It is structured as four volumes. Volume I contains introductory information, programming conventions, a general description of the CALL-OS executive, and detailed descriptions of the modules and subroutines included therein. Volume II explains CALL-OS utilities.

Volume III contains appendices covering control block formats, system macros, and other supplemental information. Volume IV contains all flowcharts for system modules.

REFERENCE MATERIAL

Following is a list of publications which contain information relating to the IBM Operating System (OS). Both IBM and user personnel concerned with CALL-OS system operation and CALL-OS interface with OS should have access to this documentation.

IBM System/360 Operating System Introduction (GC28-6534)

This publication describes the general organization, function, and application of IBM Operating System (OS).

IBM System/360 Operating System Concepts and Facilities (GC28-6535)

This publication describes the basic concepts of the IBM Operating System (OS) and guides the programmer in the use of its facilities.

IBM System/360 Operating System System Generation (GC28-6554)

System generation is a process that generates an IBM Operating System adapted to both the machine configuration and the data processing requirements of an installation. This publication provides information on the machine and operating system requirements for system generation, initialization of system volumes and data sets, macro instructions used in specifying system generation, methods of including user-written programs in the operating system, restart procedures, and sample programs used to test the new system. IBM provides a starter operating system that can be used for the first system generation. The procedures required to initialize the starter system are also described in this publication.

IBM System/360 Operating System Storage Estimates (GC28-6551)

This publication contains instructions, formulas, and tables to be used in estimating the main and auxiliary storage requirements of any configuration of the IBM Operating System. This publication is intended for three types of users: sales personnel, who will use the

introduction to evaluate the feasibility of using the configurations; system programmers, who will use the publication to plan the storage requirements of a new system and to determine the amount of storage available to the problem programmer; and the problem programmer, who will use the dynamic storage section to estimate the requirements of his jobs.

IBM System/360 Operating System Job Control Language User's Guide (GC28-6703)

This publication contains tutorial information on job control language (JCL) for programmers. Special emphasis is placed on how to perform specific functions using a subset of the JCL statements rather than on describing the full facilities of each statement.

IBM System/360 Job Control Language Reference (GC28-6704)

This publication contains information necessary to code specific job control language (JCL) statements. It is intended for review and reference by programmers who are familiar with IBM System/360 Operating System Job Control Language User's Guide (see above) or who have experience in using JCL.

IBM System/360 Operating System MFT Guide (GC27-6939)

This publication provides information concerning Version II of Multiprogramming with a Fixed Number of Tasks (MFT) for installation personnel who are responsible for selection, evaluation, and implementation of IBM Operating System configurations. The information is presented in two major categories: Concepts and Considerations. These sections describe the principles of operation of MFT II and how they influence application and operation of the system.

IBM System/360 Operating System MVT Guide (GC28-6720)

This publication describes the multiprogramming with a variable number of tasks (MVT) configuration of the IBM Operating System control program. It contains introductory material for programmers not familiar with MVT, planning information, storage estimates, information on optimizing performance, and a section on options and facilities available with MVT.

IBM System/360 Operating System Assembler Language (GC28-6514)

Part I of this publication describes the IBM Operating System Assembler Language (Levels E and F). Part II describes an extension of the assembler language -- the macro language -- used to define macro instructions.

IBM System/360 Operating System Assembler (F) Programmer's Guide (GC26-3756)

This publication complements the IBM System/360 Operating System Assembler Language publication. It provides a guide to program assembling, linkage editing, executing, interpreting listings, assembler programming considerations, diagnostic messages, and object output cards.

IBM System/360 Operating System System Programmer's Guide (GC28-6550)

This publication consists of self-contained chapters, each of which provides information on how to modify, extend, or implement capabilities of the IBM Operating System control program. It is designed primarily for system programmers responsible for maintaining, updating, and extending the operating system features.

IBM System/360 Operating System Linkage Editor and Loader (GC28-6538)

This publication provides programmers and system analysts with the information necessary to make effective use of the linkage editor of IBM Operating System. Included are descriptions of the functions performed automatically by the linkage editor as well as those performed in response to control statements prepared by the programmer.

IBM System/360 Operating System Supervisor and Data Management Services (GC28-6646)

This publication describes the services and facilities available in the IBM Operating System when using supervisor and data management macro instructions. It also describes the linkage conventions established for use in the operating system. Macro instructions used for graphics or teleprocessing are included in separate publications

(as indexed in IBM System/360 and System/370 Bibliography, Form GA22-6822).

IBM System/360 Operating System Supervisor and Data Management Macro Instructions (GC28-6647)

This publication defines and describes the supervisor and data management macro instructions available in the IBM Operating System. The macro instruction descriptions and definitions apply to the three main configurations of the operating system: systems with the primary control program; systems that provide multiprogramming with a fixed number of tasks (MFT); and systems that provide multiprogramming with a variable number of tasks (MVT).

Descriptions and definitions applying to graphics or teleprocessing are included in separate publications (as indexed in IBM System/360 and System/370 Bibliography, Form GA22-6822).

IBM System/360 Operating System Messages and Codes (GC28-6631)

This publication lists and explains the system completion codes, wait state codes, and messages produced by all IBM-supplied components of the IBM Operating System. The codes and messages are presented in alphameric order.

IBM System/360 Operating System Operator's Reference (GC28-6691)

This book tells how to run the IBM Operating System. After summarizing how the system works, it describes the three major system types: systems with the primary control program (PCP); systems that provide multiprogramming with a fixed number of tasks (MFT); and systems that provide multiprogramming with a variable number of tasks (MVT). The remote job entry facility is described. Instructions tell:

- ‡ How to start, stop, and restart the operating system
- ‡ How to control input and output
- ‡ How to control jobs through commands and statements
- ‡ How to understand messages

General operating techniques as well as the meanings of many technical terms are discussed.

This publication discusses the IBM Operating System utility programs and the control statements used with each program. These programs are used by programmers responsible for organizing and maintaining operating system data.

Three types of utility programs are discussed: system utilities and data set utilities, which are used indirectly with the IBM Operating System; and independent utilities, which operate outside the operating system. System utilities deal with operating system control data. Data set utilities manipulate data sets at the record level and above. Independent utilities initialize, dump, and restore direct access volumes.

BASIC MACHINE-READABLE MATERIAL

The basic program material in machine-readable form consists of the load modules, source modules, and macros required to build and maintain the CALL-OS system. Also included are the job control language (JCL) procedures necessary to build a system. This material is supplied on one 9-track, 2400-foot reel of tape @ 800 or 1600 bpi; or one 7-track, 2400-foot reel of tape @ 800 cpi. This tape was prepared by the OS utility IEHMOVE and is in unloaded format.

The basic program material tape contains the following data sets.

1. RTOSPROC

This data set contains the JCL procedures for a system build and the creation of a data base; and execution time, resident module lists. It is a partitioned data set with unblocked 80-byte records. It contains ten members.

2. OSRTS.EXEC.MODLIB

This partitioned data set contains, in load module form, all of the modules which comprise the Executive and Utilities components of the CALL-OS system. It has a maximum block length of 7294 bytes with an undefined record form. It contains 102 members.

3. OSRTS.EXEC.MACLIB

This partitioned data set contains the Executive and Utilities macros. It has a block length of 3360 bytes and a record length of 80 bytes. It contains 58 members.

4. OSRTS.EXEC.SOURCE

This partitioned data set contains the Executive and Utilities source modules. It has a block length of 3360 bytes and a record length of 80 bytes. It contains 158 members.

5. OSRTS.EXEC.CHANGE

This partitioned data set contains changes to the Executive and Utilities source modules and macros that were used to create

Version 2, Modification Level 0 of the CALL-OS Executive and Utilities Program, from Version 1, Modification Level 1 of the program. It has a block length of 3360 bytes and a record length of 80 bytes. It contains 79 members. If this data set is to be used, the member identified as INFO should be listed to obtain information concerning the contents of the data set.

OSRTS.EXEC.MODLIB (see 2, above) contains single load modules and composite load modules, formed by link editing several modules. If any of the modules listed below are reassembled because of subsequent PTF's or installation modifications, appropriate link edits must be performed. Additional information concerning these link edits and sample JCL can be obtained from the CALL-OS Executive and Utilities Program Description Manual.

1. Composite load module RTOS1
 entry point: M#LINIT
 T#GTAB and C#CPID (or C#CPIDV) should be the first two modules of the composite load module. It includes:

T#GTAB	M#DISP	M#OVLY	S#DFMSG	S#QEMSG
C#CPID	M#ENTR	M#RDY	S#EQSH	S#RERDP
I#NEAPP	M#ERMSG	M#SRTB	S#EQUV	S#RESET
I#PCIAPP	M#FBLD	M#SSVC	S#FBRS	S#RPOT
I#DINT	M#ISRD	M#SYSB	S#GDSK	S#SRTR
M#ABOR	M#ISWP	M#TTMR	S#GPOT	S#SSK
M#CLEAN	M#LISO	N#LINIT	S#IOMSG	S#SWERT
M#CLR	M#MALC	S#BLDR	S#LDSP	S#SYSR
M#CMDA	M#OSWP	S#CHNAM	S#MESSG	T#ATT
M#DISK	M#OUTB	S#DALC	S#OUTR	T#RPT

For a system that includes COBI, the following modules must also be included in the composite load module: C#IORFO, C#NOTFY, M#QIOR, M#CBIO, M#VTBL, S#INDXQ, S#PARM, and S#ONOT. (See "Step III - Link Editing the System" in CALL-OS Executive and Utilities Program Description Manual.)

2. Composite load module DIBCADBU
 entry point: DIBINIT
 members: DIBINIT
 DIBTERM
 DIBINTER
 DIBUTT
 DIBGDSK
 DIBDISK
 DIBSUB
 DIBMESG

DIBTTOT

3. Composite load module DIBDELETE
entry point: DIBDELT1
members: DIBDELT1
DIBDELT2
4. Composite load module DIBINSRE
entry point: DIBINPUT
members: DIBINPUT
DIBPUTDK
5. Composite load module U#UTIL1
entry point: U#UTIL
members: U#UTIL
U#FRMT
U#COMP
U#VAL
6. If DIBNAMES or DIBRDR is reassembled, its load modules should be marked REENTERABLE, REFRESHABLE, and REUSABLE.
7. If U#5COBI is reassembled, its load modules should be given the following alias':
U#5CBXPN
U#5INIT
U#5PURGE
U#5RINIT

OPTIONAL MACHINE-READABLE MATERIAL

CALL-OS optional program material is in machine-readable form and consists of a listing of the combined cross-reference tables of all CALL-OS Executive and Utilities modules. The material is supplied on one 9-track Distribution Tape Reel (DTR) at 800 or 1600 bpi, or one 7-track 800 cpi (Data Conversion Feature required) 2400 foot reel of magnetic tape. It consists of one sequential data set containing 435 pages of printable output. The first 306 pages are the cross-reference table for CALL-OS Executive modules; the last 129 pages are the cross-reference table for CALL-OS Utilities modules. The following JCL can be used to print the data set:

```
//GENER      EXEC PGM=IEBGENER
//SYSPRINT  DD      DUMMY
//SYSUT1    DD      UNIT=2400,DISP=OLD,LABLE=(,NL),VOL=SER=OUTSET,
//          DCB=(RECFM=FBM,LRECL=121,BLKSIZE=3388)
//SYSUT2    DD      SYSOUT=A,SPACE=(CYL,(10,5)),
//          DCB=(RECFM=FBM,LRECL=121,BLKSIZE=3388)
//SYSIN     DD      DUMMY
```

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PROGRAMMING SYSTEMS

The procedures for installing and operating the distributed program require the IBM Operating System with either the Multiprogramming with a Fixed Number of Tasks (MFT) or the Multiprogramming with a Variable Number of Tasks (MVT) control program. The OS system generated must include the following optional control program features:

Storage Protection
Interval Timer
A Type I SVC (200-255) for CALL-OS

CALL-OS utilization requires the ordering and inclusion of at least one of the following language programs:

CALL-OS BASIC	360A-CX-44X
CALL-OS PL/I	360A-CX-45X
CALL-OS FORTRAN	360A-CX-46X

A CALL-OS user who already has one or more of the CALL-OS language processors, Version 1 Modification Level 1, need not order these programs. The current language processors will run under CALL-OS Version 2. A CALL-OS user who has only Version 1 Modification Level 0 of these programs should order Version 1 Modification Level 1.

All of the modules are written in OS Assembler Language. All disk input/output routines are coded at the EXCP level.

To install CALL-OS, the user's MFT or MVT system must include an OS Assembler, the Linkage Editor (F), and the OS utilities IEHPROGM, IEHMOVE, and IEBUPDTE.

PROGRAM DEPENDENCIES

CALL-OS requires at least OS Release 20.0 for proper execution. If the CALL-OS Batch Interface (COBI) facility is to be used, MFT systems must be SYSGENed with ATTACH and the following MFT Superzaps applied.

1. APAR #44603 OC5 abend in STAE abend exit routine.
2. APAR #46456 Work area not freed by link during ATTACH.
3. APAR #47856 Two DEB's are removed from DEB chain by CLOSE during STAE exit I/O purge routine. Bypass is to allocate a one-track data set on SYSRES volume with DSN=PASSWORD.

There are no special MVT requirements.

ADDITIONAL CONSIDERATIONS

A user installation cannot perform an OS system generation when the system startup deck contains a DD statement for SYS1.SYSJOBQE as required when the CALL-OS COBI option is to be utilized. Therefore, if system generation is necessary, it should be performed when CALL-OS with the COBI option is not running.

The CALL-OS system build process is outlined in detail in the CALL-OS Executive and Utilities Program Description Manual. Nine disk cylinders must be available for an online JOBLIB, thirteen cylinders for the executive and utilities macro library (OSRTS.EXEC.MACLIB), eight tracks in SYS1.PROCLIB for system build procedures (assuming a blocking factor of 1), and one track in SYS1.SVCLIB for the device-dependent error routine. The space available within this primary allocation is sufficient to permit addition of the CALL-OS compiler load module libraries (OSRTS.PLI.MODLIB, OSRTS.BASIC.MODLIB, and OSRTS.FORTRAN.MODLIB) to the JOBLIB; and addition of the CALL-OS compiler macro libraries (OSRTS.PLI.MACLIB, OSRTS.BASIC.MACLIB, and OSRTS.FORTRAN.MACLIB) to the executive and utilities macro library. Space is not provided within this primary allocation for other system maintenance activity.

The CALL-OS data base is structured as system group data sets, which contain systemwide information, and user group data sets, which contain information available to specific users or groups of users. The user number SYSLIB is associated with the system group; this number cannot be changed. A default password is associated with a newly created system group. To ensure security of system group data sets, a system programmer must issue the PASSWORD terminal command from the command console to assign an installation-selected password to the system group. This password should be changed periodically. The password is not required to sign on as a command console user, but it is required to access system group data sets by means of the CALL-OS data base utility.

When the CALL-OS COBI option is used, the CALL-OS COBI module DIBRDR attaches the OS reader IEFIRC to read submitted jobs from the COBI SYSINA or SYSINB data set into the OS job stream. Normal OS procedures apply if IEFIRC is unable to read the complete file. These procedures usually include printing of an error indication and of a message asking whether another disk drive should be used. If the error cannot be corrected, an I/O error message is printed, and IEFIRC is terminated.

The OS operator should enter an OS command to display the names of jobs in the appropriate OS job queue and compare those names against the list of job names printed by DIBRDR before transferring to IEFIRC. The user numbers associated with any jobs that were not read successfully by IEFIRC can be determined from WTO messages or from a printout created by the *COBI DSSTATUS, SYSINx command (where x is A or B, as appropriate).

Installations which run CALL-OS under either ASP or HASP should contact their IBM representative for information concerning the use of CALL-OS in these environments.

MINIMUM MACHINE CONFIGURATION

The minimum central processing unit (CPU) on which CALL-OS can be executed is any one of the following:

- System/360 Model 50HG
- System/370 Model 145H (393K) with:
 - 3345 Main Storage Frame
 - 4901 Main Storage Frame Adapter
 - 3046 Power Storage
- System/370 Model 155HG

The minimum peripheral equipment required for on-line operation with each of these CPU's is shown below.

- System/360 Model 50HG:
 - One selector channel
 - One IBM 2314 Storage Control Model A1
 - One IBM 2312 Disk Storage Model A1
 - One IBM 2702 or 2703 Transmission Control
 - Two terminal consoles (see below)
- System/370 Model 145H (393K, as defined above):
 - One IBM 2319 Disk Storage Facility Model A1
 - One IBM Integrated File Adapter feature (#4650)
 - One IBM 2702 or 2703 Transmission Control
 - Two terminal consoles (see below)
- System/370 Model 155HG:
 - One block multiplexer channel
 - One IBM 2314 Disk Storage Control Model A1
 - One IBM 2312 Disk Storage Model A1
 - One IBM 2702 or 2703 Transmission Control
 - Two terminal consoles (see below)

The two terminal consoles are used for system communication. One serves as a command console from which the operator issues special

operator commands. The other serves as a communications console for recording system error messages and activity. The OS system console is used to initialize CALL-OS and may serve as the communications console, thus reducing to one the number of terminal consoles required.

Depending on the utility functions to be utilized, additional peripheral equipment may be needed. This equipment includes:

- One printer output unit, OS-supported, with 120 print positions and graphics equivalent to the PN print arrangement
- One punched output unit (See OS minimum system requirements)
- One card input unit (See OS minimum system requirements)
- One OS-supported magnetic tape unit (any model)

CALL-OS can use additional selector channels and any appropriate 2314 Direct Access Storage Facility A or B Series configuration. The 3330 Disk Storage subsystem is not supported by CALL-OS.

2702 Configuration

<u>Type</u>	<u>Model or Feature</u>	<u>Description</u>
2702		Transmission Control Unit
2741 Related Features	4615 9684 8055 3233 9696	IBM Terminal Control Type 1 Selective Speed 2741 Break Feature Data Set Line Adapter-1 per line Terminal Control Base
		The above 2702 configuration can be expanded to handle up to 15 2741 lines by adding one 3233 per line.
TTY 33/35 Features	7912 RPQ-E62920 3233 RPQ-E54838 RPQ-EA3120 9697	Telegraph Terminal Control Type II CR interrupt on TTY To go to 15 TTY on 2702, add 1 3233 per TTY line. Immediate End (for paper tape) TTY II X-OFF Modification Terminal Control Base
To go beyond 15 lines	7955	31 line expansion - to allow expansion from 15 to 31 lines.
Allow mix of 2741 and TTY	7935	Terminal Control Expansion

2703 Configuration

<u>Type</u>	<u>Model or Feature</u>	<u>Description</u>
2703		Transmission Control Unit
2741	7505	Start/Stop Base 1
Related	4619	IBM Terminal Control Base
Features	4696	IBM Terminal Control Type 1
up to	8055	2741 Break Feature
eight	4878	Line Speed Option (134.5)
lines	3205	Data Line Set
TTY	7905	Telegraph Terminal Control Base
Related	7505	Start/Stop Base 1
Features	7912	Telegraph Terminal Control Type II
Up to 8	4877	Line Speed Option (110)
lines	3205	Data Line Set
	RPQ-E62376	CR interrupt on TTY
	RPQ-Z16087	Immediate End (for paper tape)
To	3206	Data Line Set Expander
expand	3205	Data Line Set. For each set of
from 8		8 lines beyond first 8, add for
to 88		first 8 additional lines a 3206,
		for next 8 (lines 17-24) a 3205.
		This Alternation (3206, then
		3205) continues to 88 lines.
To expand	1440	Basic Expansion
beyond	7505	Start/Stop Base Type 1
88 lines		additional Alternate 3205-3206
		as above.
		To mix Teletype and 2741,
		combine the features specified
		above.

Terminals

CALL-OS supports the following terminals:

- IBM 2741 Communications Terminal (Correspondence or EBCD)
- Teletype Units, Type 33 or 35

Any of the above terminals can be used as a user terminal, a command console, or a communications console. Not more than 255 terminals (including the command and communications consoles) can be simultaneously on-line with CALL-OS.

Although no special hardware features are associated with either the command or communications console, they serve special purposes during CALL-OS execution. Commands not available to the ordinary terminal user (*commands) are initiated from the command console. A minimum of one command console is required; two terminals may be specified for use as command consoles if desired. Either or both may be operated as user terminals after the initial startup of the system. The communications console is used to record all CALL-OS system messages and activity. The OS system console can be used as the communications console if desired.

2741 Terminal Components-Correspondence Line Code

<u>Type</u>	<u>Model or Feature</u>	<u>Description</u>
2741	1	Communications Terminal (Correspondence)
	3255 (see notes)	Dial Up
	4708	Interrupt
	9104	Character Spacing; 10/inch
	9114 (see notes)	Data Set Attachment
	9435	Line Feeding: 6/inch
	RPQ-S30006 (see notes)	Printing Element and Keyboard Arrangement (RPQ)
	98XX	Line Voltage as appropriate

2741 Terminal Components-EBCD Line Code

<u>Type</u>	<u>Model or Feature</u>	<u>Description</u>
2741	1	Communications Terminal (EBCD)
	3255 (see notes)	Dial Up
	4708	Interrupt
	9104	Character Spacing; 10/inch
	9114 (see notes)	Data Set Attachment
	9435	Line Feeding: 6/inch
	RPQ-S30021	Printing Element and Keyboard
	(see notes)	Arrangement (RPQ)
	98XX	Line Voltage as appropriate

Notes:

1. For dial-up lines, feature #9114 is required. See the IBM Data Communications Handbook (ZZ20-1939) for the appropriate modem (dataset).
2. Use of a leased line for the command and communications consoles is recommended. A four-wire IBM Line Adapter may be used. The Dial Up feature (#3255) is not required. Any one of several appropriate IBM Line Adapter feature codes may be specified. Compatible features must be included on the 2702 or 2703. If other than IBM line adapters are used, feature code #9115 must be specified. See the IBM Data Communications Handbook (ZZ20-1939) Section 20 Area 6 for further information.
3. The RPQ number is sufficient identification. No additional feature code to specify keyboard type is required.

If a 2741 Communications Terminal having all above features except RPQ S30006 or RPQ S30021 is currently installed, field conversion of the terminal can be performed. A CALL-OS Printing Element with

- Part No. 1167087 for the 2741 (Correspondence) or
- Part No. 1167643 for the 2741 (EBCD)

should be obtained. Terminal Character Decal GX20-1806 is desirable.

Teletype Units

Teletype units, Types 33 and 35, are standard units. Either terminal may be selected in any of three models: RO (Receive Only), KSR (Keyboard Send-Receive), and ASR (Automatic Send-Receive). RO terminals can be used only for output. KSR and ASR terminals can be used for keyboard input as well as output. In addition, ASR terminals provide capability for input of source programs, data, and terminal commands via punched paper tape. The Reader Control Arrangement feature is required if paper tape input is to be restarted automatically.

If a Teletype unit is used for either the command or communications console, the Type 35 is recommended. The Type 35 RO can be used only as a communications console. A Type 35 KSR or ASR can be used for either. With any model, use of a leased line for the command and communications console is recommended.

ENGINEERING CHANGE LEVEL REQUIREMENTS

Engineering Change Levels (EC's) and several RPQ's are important to CALL-OS hardware:

- Any IBM 2703 used in the CALL-OS environment must be at Engineering Change Level 307695 or higher. This provides "Enable Latch Reset" for telephone line security on disconnect.
- Similarly, any IBM 2702 used in the CALL-OS environment must be at Engineering Change Level 307575 or higher.
- For an IBM 2703 with attached Model 33/35 Teletype units, the Telegraph Terminal Control Type II (#7912) requires RPQ E62376. This RPQ causes the terminal control to recognize carrier returns and control X characters instead of X-ON and X-OFF, respectively.
- Similarly, for an IBM 2702 with attached Model 33/35 Teletype units, the Telegraph Terminal Control Type II (#7912) requires RPQ E62920. This RPQ modifies the terminal control to recognize two pluggable characters (carrier return and control X).
- To utilize the ASR paper-tape feature of any attached TTY in TAPE mode, RPQ E54838 for the 2702 or RPQ Z16087 for the 2703 is required to modify the Telegraph Terminal Control Type II on the transmission control unit. For the 2702, RPQ EA3120 is required to inhibit interrupt on X-OFF if the TAPE ALL command capabilities are to be used.

CALL-OS is designed to operate with either the high-resolution (13.02 microsecond resolution) or standard (16.667 millisecond resolution) interval timer available on the System/360 Model 50 or 65, or the standard interval timer available on the System/370 Models 145, 155, and 165 (3.3 millisecond resolution).

Time-slice values, controlling time allotments for compilation and execution of user programs, are established by a user installation at system initialization time and then interpreted and applied during system operation by CALL-OS and OS timer routines. Since the execution of a job may be fragmented into many small pieces, some of which may be less than 16 milliseconds duration, use of the standard interval timer on the System/360 Model 50 or 65 could lead to failure to record such fragments during some executions. Therefore, use of the high-

resolution interval timer (RPQ E15092 for the Model 50 or RPQ E43528 for the Model 65) is recommended for repeatable program execution times and most accurate accounting.

STATEMENT OF MAINTENANCE PROCEDURES

This program is maintained through the use of serially numbered modification and version change letters. The initial availability of the program was Version 1, Modification Level 0. A subsequent modification was identified as Version 1, Modification Level 1. The current release is Version 2, Modification Level 0. Any subsequent modification will raise the modification level by 1. If the nature or number of changes makes a replacement version of the program advisable, the version number will be raised by 1 and the modification level will be reset to 0.

Letters announcing the availability of a new modification level are sent to all previous recipients of the program. New recipients receive program material updated to the latest modification level. A notice of availability of a new version is sent to all previous recipients of the program. A version or modification level is current from the date of its initial availability through the IBM Program Information Dept. until three months after the availability of the next version or modification level. The new version or modification level must be ordered if continued maintenance is desired.

The CALL-OS program is assigned programming service classification A. Customers should contact IBM Field Engineering on error conditions associated with the program and for submission of APAR's.

MAINTENANCE INFORMATION

Executive APAR's - Closed

This section lists and describes each Executive APAR (Authorized Program Analysis Report) that has been closed but is not corrected in this release of the system.

DPA3141 EXECUTIVE

After the data set for a hard-wired line was busied out in response to message 'DIBEX001 etc.', execution of a *STATUS command indicated the user number still active on that line. The user is still being charged for connect time.

DPA5522 EXECUTIVE

M#SUB, when writing WTO message in the attached SYSIN data set, in certain cases, destroys the contents of R8. This causes unknown data to be used as the WTO messages. The utility (DIBRDR) also abends with a SD23.

DPA5523 EXECUTIVE

*REPORT counters for the # DSN OPENS, SCAN DS OUT LINES, SCAN JCL OUT LINES, and MAX SUB QUEUE are not being counted.

DPA5524 EXECUTIVE

M#SUB obtains the system buffer before updating the catalog record. If for any reason, an abort of the submit occurs after this, M#SUB gives control to M#ABSUB without releasing the system buffer. This locks the system.

DPA5525 EXECUTIVE

System responds with message 'SYSTEM PROBLEM, RETRY' when user has been scanning a SYSOUT data set and then attempts to switch to scanning the JCL data set associated with his COBI job.

DPA5527 EXECUTIVE

When scanning a variable-record data set containing X'01' and X'15', the records are not printed correctly, and the scan does not terminate with the last record.

DPA5530 EXECUTIVE

CALL-OS accepts the parameter "LCSRES=JCSOPBUDGJCSOPBUDG" and initializes. Duplicate character checking and length checking are not done for this parameter.

DPA5531 EXECUTIVE

User abend 1419 occurred when reading a 2-track CBJCL data set. Initialization, contrary to the documentation, has a built-in minimum of one cylinder.

DPA5532 EXECUTIVE

A 'SYSTEM PROBLEM, RETRY' message is sent if prior to a SUBMIT, SCRATCH, or CANCEL command, a command is issued which modifies L#CURDS in the UTT. Commands which do this are commands which work with other DCB's. For example, if a command uses the ***Directory, L#CURDS is modified to point at a different DCB.

DPA5534 EXECUTIVE

Two jobs are submitted. The first job fills its last SYSIN block except for the last 80-byte area. SUBMIT places in this area a (/*) card. It normally follows the (/*) card with a null card (//). However in this case it does not. The second job starts in the next block. If the second job is cancelled, (***) are placed at the beginning of the job card, which effectively flushes the job, except in this case, it causes a JCL error on the first job.

DPA5537 EXECUTIVE

Jobs are submitted on to one SYSIN data set until that data set becomes full; an automatic switch takes place when the next job that will not fit is submitted. An error of two instructions reversed in sequence caused the job that would not fit to be written into the second block of the new data set instead of the first block. The first block still contained the 'EOF ' message, and therefore, when the DIBRDR was started, it indicated that no data was on the data set.

DPA5540 EXECUTIVE

Extent violations for non-scan commands are not giving any disk error message on communications console.

DPA5541 EXECUTIVE

Attention key on log command can lock up terminal.

DPA5542 EXECUTIVE

1. The header line for 'JOBSTATUS' or 'DSSTATUS' has a delay before carrier return. This time-delay should be removed.
2. The '*COBI DSSTATUS,userid,...' command prints out the userid twice when his first COBI job has no scannable data set and the following job has scannable data sets.

DPA5543 EXECUTIVE

Parentheses not accepted for single value initialization parameters.

DPA5545 EXECUTIVE

Object program initialization not setting proper pointer for PL/I DATE function.

DPA5546 EXECUTIVE

Starting DIBRDR with a specific JOBNAME does not list WTO's for a subsequent job.

DPA5547 EXECUTIVE

RUN processing of OPEN and APPEND slowing response time to other commands.

DPA5549 EXECUTIVE

CALL-OS initialization in MFT with a split partition can go into a wait state and can not be cancelled from the console. This is due to insufficient core available for an SVRB for a WTO.

DPA5550 EXECUTIVE

Simultaneous need for sort buffer causes conflict between terminal users. This fix sets a flag in the COBI global table to indicate whether the sort buffer is allocated.

DPA5558 EXECUTIVE

Periodic replacement of backspace with carrier return while using 'PUT SKIP (negative value)' function in FORTRAN or PL/I.

DPA5561 EXECUTIVE

No explanatory message is sent to the communications console when a 'SYSTEM PROBLEM, RETRY' message is issued to the user's terminal during a SCAN command.

DPA5562 EXECUTIVE

OC1 abend caused by M#FBLD being activated by I#NEAPP while M#FBLD still active.

DPA5563 EXECUTIVE

CALL-OS ends with an OC1 system abend. If M#JCL is resident, and the SVC34 (RESET) is in execution, and level 1 or level 2 tasks are in execution, R15 gets set to zero, which eventually causes the OC1.

DPA5565 EXECUTIVE

For MFT system, the 'START DIBRDR' command from the submit process always uses 'START DIBRDR.S' The (.S) is not friendly. If the partition chosen is too small, the DIBRDR abends. RDRPAR=Pnn is a new parameter for the CALL-OS start-up deck. Default is (.S), however, the user may insert a choice, where nn is a one- or a two-digit number representing the requested partition.

DPA5566

EXECUTIVE

'DSSTATUS' command. A user has submitted only one job with JCL, P1, P2, and P3 options. While 'JOBSTATUS' runs correct, 'DSSTATUS' outputs the status of job's data sets and also the message, 'USER ID AAAnnn HAS NO COBI INDEX RECORD'.

Executive APAR's - Corrected in Release

This section lists and describes each Executive APAR (Authorized Program Analysis Report) that has been corrected in this release of the system.

DPA1263 EXECUTIVE

If a program which contains a GOTO pointing to a non-existing statement number, is renumbered, the GOTO will point to the END statement. No error indication is given.

DPA1265 EXECUTIVE

Abend-User 005.

DPA1274 EXECUTIVE

Modified CALL-OS program gets OCI PGM CK. in M#CAT due to L#PARM being clobbered. Suspect a problem with break.

DPA1279 EXECUTIVE

OC5 abend when the command console command '*STATUS NN' is given where NN is a line number which has a 2741 EBCD terminal.

DPA1280 EXECUTIVE

System messages are hard coded so that when sent to a 2741 EBCD terminal, some characters are not printed properly (i.e., cent sign instead of underline for backspace/attention; 'LINE NOISEG RETYPE' instead of 'LINE NOISE, RETYPE'; etc.).

DPA1981 EXECUTIVE

CALL-OS abends with OF1 system abend because of overlapping CCW's built by M#OSWP.

DPA1986 EXECUTIVE

CALL-OS was up for a period of time extending past the end of 1970. Elapsed time was 2.57 hours. *REPORT printed elapsed time of 34231 seconds, which should have been approximately 9239 seconds.

DPA1990 EXECUTIVE

Module I#NEAPP does not recognize a LINE DELETE X'19' character. At statement #1733, if the test for not equal fails, the code falls through to a test for TAPE ALL mode, thus ignoring the X'19' character.

DPA2138 EXECUTIVE

M#ACCT program check OC6 because of improper interface with M#LOG. Failed to release the system buffer after the message 'ERROR IN MODULE M#ACCT, CODE 1' appeared on the communications console. The problem occurs when the accounting time is set very small and there is a lot of user logon/off activity.

DPA2139 EXECUTIVE

The rewind library subroutine used by all of the compilers (RESET, \$RESET, REWIND) does not reset the end-of-file bit for a running program. This sometimes produces the end-of-file message on input after a rewind before the actual end of the file. M#SSVC should clear bit.

DPA2144 EXECUTIVE

Abend OC5 in M#CAT due to a bad branch. It appears that location 27F534 (outside of core) was branched to, using R1 + R3 + Displ 316, or using R1 + R15 + Displ 316. Where it branched from is uncertain. However, R15 points to M#CAT.

DPA2146 EXECUTIVE

CALL-OS abends with user code 0005 when running in compliance with circumvention suggested in EWS APAR #PA1261.

DPA2154 EXECUTIVE

CALL-OS abended 0C5 in M#CAT due to bad address in register 10. M#CAT references the system buffer at offset 530 with a CLI instruction. However, the REG was never initialized properly since system buffer is not allocated to routine at this point. User had issued a FILE command with an illegal character in the filename, i.e., FILE WEEK1/AC. System buffer must be acquired prior to STMNT 1409 in M#CAT.

DPA2161 EXECUTIVE

Error message lost under OS release 20 if OS console used as CALL-OS communications console. Problem caused by changes in IECCUUM DSECT displacements.

DPA2162 EXECUTIVE

BASIC-language large program renamed and executed gives message 'PROGRAM EXCEEDS MAXIMUM MEMORY'. Original program runs correctly.

DPA3145 EXECUTIVE

In module C#CPID when he is modifying the TCB Chains he does not have code to support 'MFT with SUBTASKING'. If the last TCB in the chain does an ATTACH, after C#CPID has stored a value in LASTTCB, it is possible to have all the TCBs chained in a loop. This causes unpredictable results at the OS level.

DPA3158 EXECUTIVE

MFT system. Attempt to run CALL-OS in split partition. 80A abend when CALL-OS tries to open RESMODS. IGC0191I does GETMAIN for buffers in Hierarchy 0.

DPA3163 EXECUTIVE

I#NEAPP, at statement 2587, displacement 155A, compares a '00' with OS location 0014, to see if OS is tracing. The following instruction (statement 2588) branches around the trace routine if location 0014 is zero. The trace routine should be skipped if location 0014 is non-zero. This code is located between symbols 'HIOTRACE' and 'TRANVT'.

DPA3171 EXECUTIVE

The DCB pointer in the IOB points into a POT, resulting in a 400 abend when EXCP was issued by M#DISK.

DPA3180

EXECUTIVE

If two users are signed on with the same user number, and user '1' runs a program using a data file that he does not close at the end of the program, then user '2' does not have access to that data file. If user '1' closes the file in the program, user '2' has access to it.

Utilities APAR's - Closed

This section lists and describes each Utility APAR (Authorized Program Analysis Report) that has been closed but is not corrected in this release of the system.

DPA5521 UTILITIES

The CALL-OS utility program DIBWTR does not reject ITIME=0. According to the manuals, a parameter value of zero is to be rejected.

DPA5526 UTILITIES

User abend 893 on an insert or replace function of the data base utility when input or 'FROMUSER' is a *Directory that has more than one record, and the second record must be read.

DPA5529 UTILITIES

DELETE with FROMUSER=AAAN00 and COMMAND=PURGE, the *DIR and **DIR entries are pulled regardless of user number.

DPA5533 UTILITIES

Incorrect error messages. Messages DIBDB731 and DIBDB739 appear for range cards which are actually valid. Message DIBDB791 is printed on the correct occasions, but the characters 'DIBDB7' are missing from the message.

DPA5538 UTILITIES

Garbage on the tape or a user abend 893 results when the TAPE function is performed on a single file specified by NAME.

DPA5539 UTILITIES

Files are sometimes lost or skipped when INSERT/REPLACE is attempted from a backup/archive tape.

DPA5544 UTILITIES

The COBI INCLUDE card for the CALL-OS nucleus link edit did not contain the necessary module name M#QIOR.

DPA1111 UTILITIES

The DELETE function of the data base utility incorrectly checks the parameter for user range when purging for a single file name.

DPA5557 UTILITIES

After using the INSERT/REPLACE function of the DIBCADBU utility to save or pool programs, an attempt to pool or save from the terminal may cause the end-of-file indicator in the directory or catalog referenced by the utility to be lost. Results include "garbage" catalog or directory listings, I/O errors, and 'SYSTEM PROBLEM, RETRY' message to the terminal with CODE 2 messages from M#DISK to the communications console.

DPA5559 UTILITIES

DIBWTR does not verify the first record of the COBI index. Also it will skip available JCL records if the job does not request output of the JCL. These records are not available during the remainder of the DIBWTR execution. However, if the DIBWTR is stopped, and then started again, the space can be used.

DPA5564 UTILITIES

On an INSERT or REPLACE function of the CALL-OS DIBCADBU utility, an invalid SPACE parm value does not terminate the current processing.

Utilities APAR's - Corrected in Release

The following APAR's were submitted against the CALL-OS Version 1 Modification Level 1 utility U#INITLD. The described conditions were corrected when U#INITLD was replaced by DIBCADBU:

DPA0745
DPA1278
DPA1983
DPA2132
DPA2137
DPA2166
DPA3161

Asia Program Library
IBM Japan, Ltd.
Kohwa Building No. 22
1-8, Roppongi 3-Chome
Minato-ku
Tokyo 106, Japan

Canadian Program Library
IBM Canada, Ltd.
Department 960
5 Yorkland Boulevard
Willowdale, Ontario
Canada

European Program Library
IBM France
23, Allée-Maillasson
F.92-Boulogne-Billancourt
France

Société Anonyme Au Capital de
620.256.000 F-R.C.
(Seine 55B-11 846)

Program Information Dept.
IBM Corporation
40 Saw Mill River Road
Hawthorne, New York 10532
United States

South American
Program Library
IBM do Brasil, Ltda.
Avenida Presidente
Vargas 642, 4 Andar
Caixa Postal 1830-ZC-00
Rio de Janeiro, Brazil

South Pacific
Program Library
IBM Australia, Ltd.
Box 3318 G.P.O.
Sydney, N.S.W.
Australia

March 1972

Memorandum to: Recipients of CALL-OS Executive and
Utilities Program, 360A-CX-42X

Subject: Version 2, Modification Level 0
Programming Temporary Fix (PTF) Tape

The subject tape is being forwarded to you with this memorandum.
There are 395 800-byte blocks on the tape. The fixes on the tape
are mandatory for proper system build and execution of CALL-OS.
The permanent corrections for the PTF will be included in the
next release of the CALL-OS Executive and Utilities Program.
See Attachment 1 for details.

Programming Temporary Fix

FIX RELEASE

V2,M1

PTF

360A-A5574-013

DATE

March 30, 1972

MODULES

LIBRARY

STATUS INFO

COMPONENT

360A-CX-42X

See Attachment 1.

APPLICABLE RELEASE(S)

V2,M0

SUPERSEDES

None

APARS FIXED

See Attachment 1

EXTERNAL STORAGE REQUIRED

____ TRACKS

ENVIRONMENT

PROBLEM DESCRIPTION:

See Attachment 1.

COMMENTS:

Attachment 1

PTF 360A-A5574-013

A Programming Temporary Fix (PTF) tape has been created for CALL-OS Version 2 Modification Level 0 to correct a number of APAR'd problems. The fixes are available as load modules or source and macro changes in two partitioned data sets as described below. The modules affected and the Authorized Program Analysis Report (APAR) to which each fix corresponds are indicated. This material is supplied on one 9-track DTR at 800 or 1600 bpi, or one 7-track DTR at 800 bpi (Data Conversion feature required). The DTR was prepared by the OS utility IEHMOVE and is in unloaded format.

1. OSRTS.LEXEC.PTFLIB

This partitioned data set contains load module changes that replace respective members currently in OSRTS.LEXEC.MODLIB. The replacements must be made before the CALL-OS system is built. If a changed module is a member of a composite link edit, the composite load module is supplied. The members of this data set are:

Member	Changed Module	APAR Reference
DIBCADBU	DIBSUB	DPA5539
DIBDELET	DIBDELT1	DPA5529,DPA5548
DIBDKIN	DIBDKIN	DPA5526,DPA5528
DIBINSRE	DIBINPUT	DPA5528,DPA5564
	DIBPUTDK	DPA5528,DPA5539,DPA5557, DPA5569
JIBRDR	DIBRDR	DPA5546
DIBRECON	DIBRECON	DPA5533
DIBTAPE	DIBTAPE	DPA5538
DIBTPIN	DIBTPIN	DPA5539
DIBWTR	DIBWTR	DPA5521,DPA5559
M#ABSUB	M#ABSUB	DPA5524
M#ACCT	M#ACCT	DPA3165
M#CANCL	M#CANCL	DPA5532,DPA5534,DPA5571
M#CBST	M#CBST	DPA5542,DPA5566,DPA5568
M#ISCAN	M#ISCAN	DPA5523,DPA5525
M#ISUB	M#ISUB	DPA5523,DPA5532
M#JCL	M#JCL	DPA5550
M#LOG	M#LOG	DPA5541

M#RUN	M#RUN	DPA5572
M#SCAN	M#SCAN	DPA5527,DPA5560,DPA5561, DPA5570
M#SCR	M#SCR	DPA5532,DPA5567
M#SUB	M#SUB	DPA5522,DPA5524,DPA5537, DPA5550,DPA5565
M#VTBL	M#VTBL	DPA5573
M#BLDTBL	M#BLDTBL	DPA5574
M#INIT	M#INIT	DPA5530,DPA5543,DPA5565
M#OPENUG	M#OPENUG	DPA5531
RTOS1	I#DINT	DPA5540
	M#DISK	DPA5545
	M#BLD	DPA5562
	M#SYSL	DPA5547
	M#LINIT	DPA5549
	S#FURS	DPA5562
	S#MLSSG	DPA5523,DPA5558
	S#SWERT	DPA5574
	T#ATT	DPA5563
U#UTIL2	U#UTIL2	DPA5544

This data set as it exists in unloaded format on the tape has a block length of 800 bytes and a record length of 80 bytes. After the data set has been loaded to a disk pack, it has a maximum block length of 7294 bytes and an undefined record format. The data set should be loaded to disk using the ILHMOVE utility and JCL similar to that used for OSRTS.LEXEC.MODLIB except that a different file (first instead of second) and a different data set name should be specified. The JCL is shown under "building the System" in the CALL-OS Executive and Utilities Program Description Manual.

After the data set has been loaded, it should be merged into the OSRTS.LEXEC.MODLIB data set using the ILBCOPY utility with the replace option. Representative JCL is:

```

//COPY      EXEC PGM=ILBCOPY
//DD1      DD  DSN=OSRTS.LEXEC.PTFLIB,DISP=OLD,
              UNIT=2314,VOL=SER=volid1
//DD2      DD  DSN=OSRTS.LEXEC.MODLIB,DISP=OLD,
              UNIT=2314,VOL=SER=volid2
//SYSUT4   DD  UNIT=SYSDA,SPACE=(1700,(400,50))
//SYSPRINT DD  SYSOUT=A
//SYSIN    DD  *
/*          COPY      OUTDD=DD2,INDD=((DD1,R))

```

where

valid1 is the volume identification of OSRTS.LXEC.PTFLIB
valid2 is the volume identification of OSRTS.LXEC.MODLIB

2. OSRTS.LXLC.PTFSRC

This partitioned data set contains the source changes that must be used to update source modules and macros of OSRTS.LXEC.SOURCE. The updates should be performed whenever the modules are reassembled, either for installation changes or subsequent PTF's. The updates reflect the module changes in OSRTS.LXEC.PTFLIB. The members of this data set are:

<u>Member (Modules)</u>	<u>APAR Reference</u>
DIBDELT1	DPA5529,DPA5548
DIBDKIN	DPA5526,DPA5528
DIBINPUT	DPA5528,DPA5564
DIBPUTDK	DPA5528,DPA5539,DPA5557,DPA5569
DIBRDR	DPA5546
DIBRECON	DPA5533
DIBSUB	DPA5539
DIBTAPE	DPA5538
DIBTPIN	DPA5539
DIBWTR	DPA5521,DPA5559
I#DINT	DPA5540
M#ABSUB	DPA5524
M#ACCT	DPA3165
M#CANCL	DPA5532,DPA5534,DPA5571
N#CBST	DPA5542,DPA5566,DPA5568
M#DISK	DPA5545
M#FBLD	DPA5562
M#ISCAN	DPA5523,DPA5525
M#ISUB	DPA5523,DPA5532
M#JCL	DPA5550
M#LOG	DPA5541
M#RUN	DPA5572
M#SCAN	DPA5527,DPA5560,DPA5561,DPA5570
M#SCR	DPA5532,DPA5567
M#SUB	DPA5522,DPA5524,DPA5537,DPA5550,DPA5565
M#SYSB	DPA5547
M#VTBL	DPA5573
M#LLDTBL	DPA5574
N#INIT	DPA5530,DPA5543,DPA5565
N#LINIT	DPA5549
N#OPENUG	DPA5531

S#FBRS	DPA5562
S#MESSG	DPA5523,DPA5558
S#SWERT	DPA5574
U#UTIL2	DPA5544

<u>Member (Macro)</u>	<u>Module Affected</u>	<u>APAR Reference</u>
Z#EGTAB	M#SUB,N#INIT	DPA5565
Z#MTAB	T#ATT	DPA5563

This data set as it exists in unloaded format on the tape has a block length of 800 bytes and a record length of 80 bytes. After the data set has been loaded to a disk pack, it has a block length of 3360 bytes and a record length of 80 bytes. The data set should be loaded to disk using the IEMOVL utility and JCL similar to that used for OSRTS.LXEC.MACLIB except that a different file (second instead of third) and a different data set name should be specified. The JCL is shown under "Building the System" in the CALL-OS Executive and Utilities Program Description Manual.

Each member of the OSRTS.LXEC.PTFSRC data set begins with a ./ CHANGL statement for use with the IEBUPDTE utility. All subsequent PTF's for CALL-OS executive and utilities components will be distributed in source form and will specify these source updates as prerequisites. If an installation desires to retain the source library in its original form, a procedure which performs a temporary source update followed by an assembly and link edit should be used. A card file of update cards for these PTF's and any subsequent PTF's can be maintained.

APAR REFERENCE

Executive APAR's Corrected

This section lists and describes each Executive APAR corrected by a PTF available on either OSRTS.LEXEC.PTFLIB or OSRTS.LEXEC.PTFSRC.

DPA3165 EXECUTIVE

Negative accounting value created for sign-on time on a heavily loaded system.

DPA5522 EXECUTIVE

M#SUB, when writing WTO message in the attached SYSIN data set, in certain cases, destroys the contents of RS. This causes unknown data to be used as the WTO messages. The utility (DIBDR) also abends with a SD23.

DPA5523 EXECUTIVE

*REPORT counters for the # DSN OPENS, SCAN DS OUT LINES, SCAN JCL OUT LINES, and MAX SUB QUEUE are not being counted.

DPA5524 EXECUTIVE

M#SUB obtains the system buffer before updating the catalog record. If for any reason, an abort of the submit occurs after this, M#SUB gives control to M#ABSUB without releasing the system buffer. This locks the system.

DPA5525 EXECUTIVE

System responds with message 'SYSTEM PROBLEM, RETRY' when user has been scanning a SYSOUT data set and then attempts to switch to scanning the JCL data set associated with his COMI job.

DPA5527 EXECUTIVE

When scanning a variable-record data set containing X'01' and X'15', the records are not printed correctly, and the scan does not terminate with the last record.

DPA5530 EXECUTIVE

CALL-OS accepts the parameter "LCSRES=JCSOPBUDGJCSOPBUDG" and initializes. Duplicate character checking and length checking are not done for this parameter.

DPA5531 EXECUTIVE

User aLend 1419 occurred when reading a 2-track CBJCL data set. Initialization, contrary to the documentation, has a built-in minimum of one cylinder.

DPA5532 EXECUTIVE

A 'SYSTEM PROBLEM, RETRY' message is sent if prior to a SUBMIT, SCRATCH, or CANCEL command, a command is issued which modifies L#CURDS in the UTT. Commands which do this are commands which work with other DCB's. For example, if a command uses the ***Directory, L#CURDS is modified to point at a different DGB.

DPA5534 EXECUTIVE

Two jobs are submitted. The first job fills its last SYSIN block except for the last 80-byte area. SUBMIT places in this area a (/*) card. It normally follows the (/*) card with a null card (//). However in this case it does not. The second job starts in the next block. If the second job is cancelled, (***), are placed at the beginning of the job card, which effectively flushes the job, except in this case, it causes a JCL error on the first job.

DPA5537 EXECUTIVE

Jobs are submitted on to one SYSIN data set until that data set becomes full; an automatic switch takes place when the next job that will not fit is submitted. An error of two instructions reversed in sequence caused the job that would not fit to be written into the second block of the new data set instead of the first block. The first block still

contained the 'LOF' message, and therefore, when the DIBRDR was started, it indicated that no data was on the data set.

DPA5540 EXECUTIVE

Extent violations for non-scan commands are not giving any disk error message on communications console.

DPA5541 EXECUTIVE

Attention key on log command can lock up terminal.

DPA5542 EXECUTIVE

1. The header line for 'JOBSTATUS' or 'DSSTATUS' has a delay before carrier return. This time-delay should be removed.
2. The '*COBI DSSTATUS,userid,...' command prints out the userid twice when his first COBI job has no scannable data set and the following job has scannable data sets.

DPA5543 EXECUTIVE

Parentheses not accepted for single value initialization parameters.

DPA5545 EXECUTIVE

Object program initialization not setting proper pointer for PL/I DATE function.

DPA5546 EXECUTIVE

Starting DIBRDR with a specific JOBNAME does not list WTO's for a subsequent job.

DPA5547 EXECUTIVE

RUN processing of OPEN and APPEND slowing response time to other commands.

DPA5549 EXECUTIVE

CALL-OS initialization in MFT with a split partition can go into a wait state and can not be cancelled from the console. This is due to insufficient core available for an SVRB for a WTO.

DPA5550 EXECUTIVE

Simultaneous need for sort buffer causes conflict between terminal users. This fix sets a flag in the COBI global table to indicate whether the sort buffer is allocated.

DPA5558 EXECUTIVE

Periodic replacement of backspace with carrier return while using 'PUT SKIP (negative value)' function in FORTRAN or PL/I.

DPA5560 EXECUTIVE

On a forward scan of a variable data set, invalid characters may be printed as part of the output for records at the end of the blocks. Problem most frequently occurs on full-track-blocked data sets.

DPA5561 EXECUTIVE

No explanatory message is sent to the communications console when a 'SYSTEM PROBLEM, REPLY' message is issued to the user's terminal during a SCAN command.

DPA5562 EXECUTIVE

OC1 abend caused by M#FBLD being activated by I#NEAPP while M#FBLD still active.

DPA5563 EXECUTIVE

CALL-OS ends with an OC1 system abend. If M#JCL is resident, and the SVC34 (RESET) is in execution, and level 1 or level 2 tasks are in execution, R15 gets set to zero, which eventually causes the OC1.

DPA5565 LXCUTIVL

For MFT system, the 'START DIBDR' command from the submit process always uses 'START DIBDR.S'. The (.S) is not friendly. If the partition chosen is too small, the DIBDR abends. RDRPAR=Pnn is a new parameter for the CALL-OS start-up deck. Default is (.S), however, the user may insert a choice, where nn is a one- or a two-digit number representing the requested partition.

DPA5566 EXECUTIVE

'DSSTATUS' command. A user has submitted only one job with JCL, P1, P2, and P3 options. While 'JOBSTATUS' runs correct, 'DSSTATUS' outputs the status of job's data sets and also the message, 'USER ID AAAANN IAS NO COBI INDEX RECORD'.

DPA5567 EXECUTIVE

After the message 'DATA SET EMPTY OR LACKS END OF FILE' followed by a question mark (?) was received while in SCAN mode, SCR was entered. The system responded with 'INVALID SCRATCH REQUEST'.

DPA5568 EXECUTIVE

The command "*COBI DSSTATUS,user id,..." does not print "user id" under the header line when the first job number of the specified user has one or more scannable data sets. The "user id" is printed when the user's first job number has no scannable data sets.

DPA5570 LXCUTIVL

When scanning a variable-record data set, (1) a system abend may occur or (2) data which is not in the data set being scanned may be printed.

DPA5571 EXECUTIVE

The CANCEL command failed to cancel a catalog entry when it was the first item in the catalog record. An 'Error Code 2' message was produced.

DPA5572 LXCUTIVL

Consecutive STORE commands with the same program name cause printing of a cumulative CPU time. Proper accounting is not effected.

DPA5573 LXCUTIVL

Scanning a variable-record data set may result in the freeing and reallocating of another user's "user core" which, in turn, may cause this other user's compilation or program execution to program check and issue the 'TEMPORARY MALFUNCTION' message.

DPA5574 EXECUTIVE

CALL-OS abends system 0C5 in module S\$SWERT during normal or abnormal termination due to the wrong terminal type being used when a switch is made between MCD and LBCDIC terminals.

Utilities APAR's Corrected

This section lists and describes each Utilities APAR corrected by a PTF available on either OSRTS.EXEC.PTFLIB or OSRTS.EXEC.PTFSRC.

DPA5521 UTILITIES

The CALL-OS utility program DIBWTR does not reject ITIME=0. According to the manuals, a parameter value of zero is to be rejected.

DPA5526 UTILITILS

User abend 893 on an insert or replace function of the data base utility when input or 'FROMUSER' is a *Directory that has more than one record, and the second record must be read.

DPA5528 UTILITIES

After using the INSERT/REPLACE function of the DIBCADBU utility to copy a stored object code program from one user number to another (disk input), program cannot be run from the terminal (message: 'PROGRAM EXCEEDS AVAILABLE MEMORY'). Also a spurious message may be generated on an INSERT/REPLACE operation with tape input.

DPA5529 UTILITIES

DELETE with FROMUSER=AAAN00 and COMMAND=PURGE, the *DIR and **DIR entries are pulled regardless of user number.

DPA5533 UTILITIES

Incorrect error messages. Messages DIBDB731 and DIBDB739 appear for range cards which are actually valid. Message DIBDB791 is printed on the correct occasions, but the characters 'DIBDB7' are missing from the message.

DPA5538 UTILITIES

Garbage on the tape or a user abend 893 results when the TAPE function is performed on a single file specified by NAME.

DPA5539 UTILITIES

Files are sometimes lost or skipped when INSERT/REPLACE is attempted from a backup/archive tape.

DPA5544 UTILITIES

The COBI INCLUDE card for the CALL-OS nucleus link edit did not contain the necessary module name M#QIOR.

DPA5548 UTILITIES

The DELETE function of the data base utility incorrectly checks the parameter for user range when purging for a single file name.

DPA5557 UTILITIES

After using the INSERT/REPLACE function of the DIBCADBU utility to save or pool programs, an attempt to pool or save from the terminal may cause the end-of-file indicator in the directory or catalog referenced by the utility to be lost. Results include "garbage" catalog or directory listings, I/O errors, and 'SYSTEM PROBLEM, RETRY' message to the terminal with CODE 2 messages from M#DISK to the communications console.

DPA5559 UTILITIES

DIBWTR does not verify the first record of the COBI index. Also it will skip available JCL records if the job does not request output of the JCL. These records are not available during the remainder of the DIBWTR execution. However, if the DIBWTR is stopped, and then started again, the space can be used.

DPA5564 UTILITIES

On an INSERT or REPLACE function of the CALL-OS DIBCADBU utility, an invalid SPACE parm value does not terminate the current processing.

DPA5569 UTILITIES

OC1 Abend occurred while running the DIBCADBU utility program with the INSERT/REPLACE function to input a data file.

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October 24, 1972

MEMORANDUM TO: Users of CALL-OS, 360A-CX-42X

SUBJECT: Transmittal of Version 2, Modification
Level 0 of 360A-CX-42X

Enclosed with this memorandum are the program materials you have ordered.

The Basic program material consists of:

1. A Program Directory updated to Version 2, Modification Level 0.
2. Revised editions of the following manuals:

CALL-OS System Description Manual (GH20-0673-4)
CALL-OS Executive and Utilities Program Description
Manual (GH20-0786-3) and TNL GN20-2780.
CALL-OS Terminal Operations Manual (GH20-0787-2)
and TNL GN20-2782
CALL-OS Operator's Manual (GH20-0788-2) and
TNL GN20-2781

New terminal command language reference card for the user at his terminal:

CALL-OS Terminal Command Language Reference Card
(GX20-1830)

Any discrepancy between the material received and the material ordered, or any errors in reproduction, should be reported to the Manager of the Program Library providing your programming systems.

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