

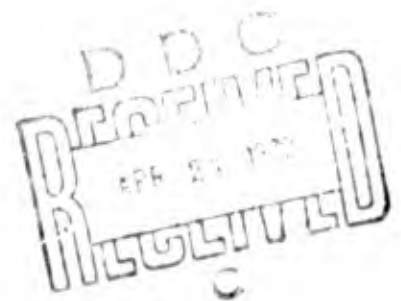
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FOCCPAC TR-46

APRIL 1970

# ALLIED ROUTING INDICATOR PUBLICATION MAINTENANCE SYSTEM (ACP-117)

PROJECT NO. F12C001



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FOR PUBLIC RELEASE AND SALE;  
ITS DISTRIBUTION IS UNLIMITED.

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FLEET OPERATIONS CONTROL CENTER  
U. S. Pacific Fleet  
FPO San Francisco 96617

DSD:C3C2:fy  
5231  
Ser 791  
15 April 1970

From: Commanding Officer, Fleet Operations Control Center, U. S.  
Pacific Fleet  
To: Distribution List  
Subj: FOCCPAC TR-46, Allied Routing Indicator Publication Maintenance  
System (ACP 117); forwarding of  
Encl: (1) FOCCPAC TR-46 of April 1970

1. Enclosure (1) is forwarded for information and retention.
2. FOCCPAC TR-46 supercedes FOCCPAC TR-4 which is hereby canceled.

*O. V. Clark*  
O. V. CLARK  
By direction

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## PREFACE

The Allied Routing Indicator Publication (ACP 117) Maintenance System was developed at ~~Fleet Operations Control Center, Pacific~~ to provide an automated system capable of maintaining the ACP 117. The program proved highly advantageous by reducing manual labor, transcribed errors, and delays in effecting changes to the basic publication. ↖

The initial concept and program were devised by LTJG Claude CARPENTER, USNR, for the IBM 1401 computer and the program was placed in an operational status for delivery of computer printed pages to local commands in December 1962.

The current version adapted to CDC 1604/160A computers, was written by LTJG James ESTES, USNR. This document supersedes FOCCPAC TR-4 of March 1964 which is hereby canceled.

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ACP 117 MAINTENANCE SYSTEM

SECTION I

PROGRAMMER/USER MANUAL

## SECTION I

### GENERAL DESCRIPTION

#### 1.1 PROGRAM FUNCTIONS

Program F12C001, Allied Routing Indicator Publication (ACP 117) Maintenance System, was developed to automate the manual process of generating, updating and editing the ACP 117. Basically, the system generates printed pages for the entire publication for distribution to all local users. Changes are then processed weekly and copies of only those pages on which such changes have been made are sent to the same users as replacement pages for their ACP 117 publication. In essence, one change serves all users. Fundamentally, ACP consists of two elements:

1) ACP 117 MASTER. This file, a reproduction on magnetic tape of the entire ACP 117, consists of approximately 550 records, each record containing 48 lines (one page) of the publication.

#### 2) ACP 117 Program

Phase 1 (Control). This section of the program interprets control fields and assigns inputs to Phase 2 or Phase 3.

Phase 2 (Update). This section accepts change cards and processes them against the ACP 117 file.

Phase 3 (Edit). This section can, as requested, print either the entire file or only those pages to which changes have been made.

#### 1.2 SOURCE LANGUAGE

F12C001 is a 1604A computer program written in JOVIAL J-3, a compiler language developed for use on the OPCON computer system.

#### 1.3 CLASSIFICATION OF PROGRAM

All data used and the program are unclassified.

#### 1.4 EQUIPMENT USED

The program operates on a 1604A computer modified for the OPCON center system and the tapes generated are printed on a 160A computer similarly modified. The following peripheral devices are used for the purpose indicated:

<u>DEVICE</u>	<u>FILE NAME</u>	<u>DESCRIPTION</u>
1402 Card Reader	CARD	Input Change Cards
Magnetic Tape	OLDACP	Input ACP 117 File Tape
Magnetic Tape	NEWACP	Output ACP 117 File Tape
Magnetic Tape	USERTAPE	Output Change Tape
Magnetic Tape	MASCHG	Master Edit Tape
Magnetic Tape	USECHG	User Edit Tape
Magnetic Tape	ACPPRG11	Binary Program Tape

ACP 117 MAINTENANCE SYSTEM

SECTION II

PROGRAMMER/USER MANUAL

## SECTION II

### PROGRAMMER/USER MANUAL

#### 2.1 PROGRAM DESIGN

2.1.1 The ACP 117 Maintenance System consists of the ACP 117 publication on a tape against which transactions are made in the form of change cards. Through the use of control cards, a control program determines type of runs and outputs required. Changes are entered in the form of input change cards. The permissible options are as follows, where run mode is used only as a designating term for each allowable combination:

<u>MODES</u>	<u>FUNCTIONS</u>
MODE 1	UPDATE
MODE 2	ADDPAGE
MODE 3	EDIT

2.1.2 The ACP 117 program is divided into three separate phases:

PHASE 1 - - - Control and input processing  
PHASE 2 - - - Update  
PHASE 3 - - - Edit

PHASE 1 (Control). The purpose of PHASE 1 is to read all changes and edit cards, store them in the appropriate table and sort the change cards.

PHASE 2 (Update). The purpose of PHASE 2 is to process all change cards against the master file and produce the new updated master.

PHASE 3 (Edit). The purpose of PHASE 3 is to edit the master file onto MASCHG. This phase puts the heading and page numbers on each page. The new master is edited onto MASCHG or USECHG depending on the control card.

#### 2.2 FILE TAPE FORMAT

The ACP 117 file tape is composed of five sections numbered 0 to 4, with each section having a different format except for columns 1 - 6. In all sections, the record number is contained in columns 1 - 7 in the following manner:

<u>COLUMNS</u>	<u>DATA</u>
1	Section number
2-4	Page number within the section
5	A if needed in adding pages
6-7	Line number

The remaining information in each section is as follows:

SECTION 0

8-9	Blank
10-76	Any required information

SECTION 1

10-16	Routing indicator
19-77	Station and location
78-79	Change number

SECTION 2

10-46	Location - Activity - Formation
47-49	Facility
52-57	Normal routing
60-66	Crypto routing
69-76	Special routing
78-79	Change number

SECTION 3

14	Geographical area code
21-32	Air Force routing indicators
39-49	Army routing indicators
59-70	Navy routing indicators
78-79	Change number

SECTION 4

8-17	Short title
19-52	Long title and geographical location
53-59	Normal routing
61-67	Crypto routing
69-76	Special routing
78-79	Change number

2.3 CARD FORMATS

2.3.1 Input Change Card. The basic input to F12C001 is the change card. Its purpose is to change records on the master file and its composition is identical to the ACP 117 file formats described in paragraph B above. The record number (first six columns) is the key item for each record and determines the record that is to be changed. The new information to be inserted is punched in columns 8 - 80 in accordance with paragraph B above. The input change cards do not have to be sorted prior to loading since PHASE 1 of the ACP Program sorts all input. To delete a record, only the record number is punched; the remainder of the card is blank.

2.3.2 Edit Control Card. The EDIT card is used to control output, when listing the publication or change pages. The following format is used:

<u>COLUMNS</u>	<u>DATA</u>
1	UPDATE
2	ADDPAGE
3	USERPUB
4	MASTERPUB
5	CLEANUP
6	DELETE PAGE
7	AUTODIN

2.3.3 MC/SSEC Control Cards

a. The Master Control/Sub-System Executive Control (MC/SSEC) system used in the FOCCPAC Computer Center requires additional control cards to run any program, namely, JOB (J), TASK (T), and FILE (F) cards. The contents of these cards are listed below: (PHASE 1 MC/SSEC only):

<u>COLUMNS</u>	<u>DATA</u>
<u>JOB CARD</u>	
1	J
3-4	(Priority 21)
5	U
7-12	ACP 117
15-21	F12C001
23-27	(Requestor's name)
29-32	1M01

TASK CARD

1	T
3-12	(Any task name)
25-30	101030

<u>FILE CARDS</u>	<u>COLUMNS</u>								
	<u>1</u>	<u>3-4</u>	<u>5-7</u>	<u>9</u>	<u>15-16</u>	<u>20</u>	<u>27-39</u>	<u>49-50</u>	<u>62-63</u>
1	F	01	MTP	U		P	ACP117PROGRM01		
2	F	03	MTP	U			ACP117MASTR908		
3	F	04	MTO	U			ACP117MASTR908		30
4	F	05	MTO	U	MM		ACP117MASCH908	02	
5	F	06	PRS	U	MM		ACP117USECH908	02	
6	F	12	MTO	U			ACP117USETP908	02	07
7	F	02	CRI	U	08		ACPCARDINPUT		
8	F	13	CRI	U	08		ACP1170102/908		
9	F	08	CRI	U			ACP1170101/908		

## M AND E CARDS

Following the file cards are the beginning and end of file cards for the CRI (card reader) file cards. The following is the format and order of these cards:

	<u>COLUMNS</u>
1-8	16-30
.....	MACP1170101/908 (control card here)
.....	EACP1170101/908
.....	MACP1170102/908 (blank card)
.....	EACP1170102/908

## 2.4 DESCRIPTION OF JOVIAL TABLES

### 2.4.1 TABLE TYPERUN

Length - 1 entry  
Phase Created - PHASE 2  
Phase Used - PHASE 3

Description - Table is used in processing the information in the query card. It controls the type of run to be made.

### 2.4.2 TABLE UPDATE

Length - Variable: maximum of 999 entries; NENT set at construction  
Phase Created - PHASE 1  
Phase Used - PHASE 2

Description - Contains all change cards. This table is created, sorted and is used in processing against the master file in the UPDATE process.

### 2.4.3 TABLE PUBPAGE

Length - 49 entries  
Phase Created - PHASE 2  
Phase Used - PHASE 1

Description - This table is used when processing the changes in Table UPDATE with the master file. This table will contain one record of the master file.

### 2.4.4 TABLE WHATONE

Length - 40 entries  
Phase Created - PHASE 2  
Phase Used - PHASE 3

Description - This table is used when publishing the MASCHG, USECHG, or USERTAPE. It contains the new master file.

2.4.5 TABLE PAGESNEW

Length - 20 entries  
Phase Created - PHASE 2  
Phase Used - PHASE 3

Description - This table is used when publishing each new page in the new master.

2.4.6 TABLE HDINGS

Length - 13 entries  
Phase Created - PHASE 2  
Phase Used - PHASE 3

Description - This table is used to set up and put out the proper headings for the required publication.

2.5 PROCEDURES CALLED IN PROGRAM

2.5.1 PROCEDURE SORTEM

Type - Close subroutine

Function - Procedure SORTEM sorts the change cards in Table UPDATE. The key item is RECORD NUMBER.

Phase used - PHASE 2

2.5.2 PROCEDURE CONTROL

Type - Close subroutine

Function - Procedure control reads the contents of the query card into table TYPERRUN

Phase used - PHASE 1

2.5.3 PROCEDURE PAGEADD

Type - Close subroutine

Function - Adds new pages, blank, when records overflow a given page of output.

Phase used - PHASE 2

2.5.4 PROCEDURE READACP

Type - Close subroutine

Function - Reads the old ACP master into table PUB PAGE.

Phase used - PHASE 1

2.5.5 PROCEDURE UPMASER

Type - Close subroutine

Function - Updates the old master with the data submitted

Phase Used - PHASE 2

2.5.6 PROCEDURE ADDREC

Type - Close subroutine

Function - Adds the record to the ACP master.

Phase Used - PHASE 2

2.5.7 PROCEDURE PUBLISH

Type - Close subroutine

Function - Publishes the new master

Phase Used - PHASE 3

2.5.8 PROCEDURE HEADER

Type - Close subroutine

Function - Puts proper headers on new ACP master

Phase Used - PHASE 3

2.5.9 PROCEDURE FILECHECK

Type - Close subroutine

Function - Checks for EOF.

Phase Used - PHASES 2 and 3

2.5.10 PROCEDURE BOMBOUT

Type - Close subroutine

Function - Processes abnormal terms

Phase Used - PHASES 1, 2, or 3

## 2.6 PUBLICATIONS CLERK FUNCTIONS

2.6.1 The Publications Clerk at FOCCPAC is responsible for the following (see page 1-1):

- 1) Maintenance of the ACP 117 File (data base)
- 2) Maintenance of records outlined in paragraph G.2 below.
- 3) Transforming changes promulgated by ALCOM message into cards punched in accordance with format described in paragraph B.
- 4) Submission of change cards, edit cards, and all control cards to the Computer Center (see paragraph C for formats).
- 5) Checking of all printed changes for accuracy.

2.6.2 Recovery Procedure. In order to recover from a machine malfunction, the Publication Clerk must maintain the following records:

1) Production Log. The production log provides a history of each computer run made against the file. Each entry will include:

- (1) Date run submitted
- (2) Serial number of run
- (3) Tape number of the old file (ACPXX11).
- (4) Tape number of the new file (ACPYY11).
- (5) Comments as required.

2) MCS On-Line Printouts. A file of MCS on-line printouts, each marked with the serial number of the run, shall be maintained for reconstruction of updating events.

To prevent the total destruction of the ACP 117 File, four successive sets of the master file (ACP117MASTR908) shall be saved. A master file tape accidentally destroyed can be reconstructed by performing a routine update with the most recent of the four ACP 117 tapes.

ACP 117 MAINTENANCE SYSTEM

SECTION III

OPERATORS MANUAL

### SECTION III

#### OPERATORS MANUAL

- 3.1. Classification: UNCLASSIFIED
- 3.2. Equipment: 1402 Card Reader  
1604A  
160A  
6 Tape Drives (excluding system master tapes)
- 3.3. Files Used

<u>File Name</u>	<u>FCN</u>	<u>Device</u>	<u>Description</u>
QUERCARD//900	08	1402 CR	Input Change/Edit Cards
ACP117MASTR908	03	Mag Tape	Input ACP 117 File
ACP117MASTR908	04	Mag Tape	Output ACP 117 File
ACP117USECH908	06	Disc Print	Output changes
ACP117USETP908	06	Mag Tape	Output if modes 2 or 5 used
ACP117MASCH908	05	Disc Print	Output changes (including record number
ACP1	01	Master Disc	Binary Program Tape

#### 3.4. Description of Input

Card input is used for changes and edits. The old ACP 117 File (ACPXX11) is input from magnetic tape. The input card deck will be composed of the following cards:

Beginning-of-file  
EDIT or EDITMS (Optional)  
Change Cards  
End-of-file

#### 3.5. Description of Output

The output is in OPCON.