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81-10077

EW-LO-00701  
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CR-160871

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## Early Warning and Crop Condition Assessment

September 1980

### LIMITED AREA COVERAGE/HIGH RESOLUTION PICTURE TRANSMISSION, LAC/HRPT TAPE CONVERSION PROCESSOR USER'S MANUAL

S. O. O'Brien

(E81-10077) LIMITED AREA COVERAGE/HIGH  
RESOLUTION PICTURE TRANSMISSION, LAC/HRPT  
TAPE CONVERSION PROCESSOR USER'S MANUAL  
(Lockheed Engineering and Management) 14 p  
HC A02/MF A01 CSCL 05B G3/43

N81-15433

Unclass  
J0077

Lockheed Engineering and Management Services Company, Inc.  
Houston, Texas 77058



NASA



Lyndon B. Johnson Space Center  
Houston, Texas 77058

1. Report No. JSC-16373; EW-L0-00701	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle Limited Area Coverage/High Resolution Picture Transmission, LAC/HRPT Tape Conversion Processor User's Manual		5. Report Date August 1980	
		6. Performing Organization Code	
7. Author(s) S. O. O'Brien Lockheed Engineering and Management Services Company, Inc.		8. Performing Organization Report No. LEMSCO-15325	
		10. Work Unit No.	
9. Performing Organization Name and Address Lockheed Engineering and Management Services Company, Inc. 1830 NASA Road 1 Houston, Texas 77058		11. Contract or Grant No. NAS 9-15800	
		13. Type of Report and Period Covered Procedures document	
12. Sponsoring Agency Name and Address National Aeronautics and Space Administration Lyndon B. Johnson Space Center Houston, Texas 77058 <i>J.D. Erickson, Tech. Mem.</i>		14. Sponsoring Agency Code	
		15. Supplementary Notes	
16. Abstract The program, LACSEG, converts LAC/HRPT data tapes to the JSC defined Universal format. The Universal formatted data tape is then processed the normal way by the FAS IMDACS system.			
17. Key Words (Suggested by Author(s)) Convert LAC/HRPT data tapes Universal Format IMDACS		18. Distribution Statement	
19. Security Classif. (of this report) Unclassified	20. Security Classif. (of this page) Unclassified	21. No. of Pages 14	22. Price*

\*For sale by the National Technical Information Service, Springfield, Virginia 22161

EW-LO-00701  
JSC-16373

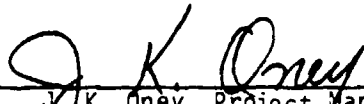
LIMITED AREA COVERAGE/HIGH RESOLUTION  
PICTURE TRANSMISSION, LAC/HRPT  
TAPE CONVERSION PROCESSOR USER'S MANUAL

Job Order 73-368

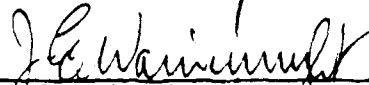
PREPARED BY

S. O. O'Brien

APPROVED BY



J. K. Oney, Project Manager  
Early Warning Project Office



J. E. Wainwright, Manager  
Development and Evaluation Department

LOCKHEED ENGINEERING AND MANAGEMENT SERVICES COMPANY, INC.

Under Contract NAS 9-15800

For

Earth Observations Division  
Space and Life Sciences Directorate  
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
LYNDON B. JOHNSON SPACE CENTER  
HOUSTON, TEXAS

August 1980

LEMSCO-15325

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LIMITED AREA COVERAGE/HIGH RESOLUTION PICTURE TRANSMISSION,  
(LAC/HRPT) TAPE CONVERSION PROCESSOR

1. GENERAL INFORMATION

1.1 SYSTEM NAME

LACSEG Processor

1.2 PRIMARY USER

Early Warning/Crop Condition Assessment Project Personnel

1.3 DEVELOPING ORGANIZATION

Lockheed Engineering and Management Services Company, Inc. - S. O. O'Brien

1.4 COMPUTER FACILITY

This processor runs on a JEC PDP 11/70 computer system with the IAS operating system. It is implemented on the USDA FAS computer facility in Houston, Texas.

1.5 REFERENCES

1.5.1 NOAA Polar Orbiter Data (Tiros II) Users Guide Preliminary Version - January 1979.

1.5.2 PHO-TR543 Universal Data Tape Format

1.5.3 DEC-11-LMFUA-B-D Fortran IV Users Guide

## 2. SYSTEM DESCRIPTION

### 2.1 PURPOSE

The purpose of the LACSEG processor is to convert the LAC/HRPT data tapes to Universal formatted data tapes which can be processed by IMDACS.

### 2.2 USAGE

The LACSEG processor is set up as a batch run. The input to the processor will be the multi-reel LAC/HRPT tapes and control cards. The output will be a Universal formatted image tape consisting of the data lines and pixels requested on the control cards. Both input and output tapes will be 1600 bpi. The 10 bit input pixel data will be scaled to 8 bit data as follows: For channels 1 and 2, all pixel values greater than 255 will be reset to 255; for channels 3 and 4, all pixel values will be divided by 4. No data will be output for channel 5.



### 3. INPUT

#### 3.1 TYPES OF INPUT

##### 3.1.1 TAPE

LAC/HRPT tapes. See reference 1.5.1.

##### 3.1.2 DISK

None

##### 3.1.3 CARD(S)

The processor requires the following cards for system control and input data. See sample deck setup in Figure 1.

Col 1:

+

\$JOB ERLYWARW2 LACSEG 300

\$MOUNT/FOR/DENSITY:1600 MM: TAPEIN XX1:

\$MOUNT/FOR/DENSITY:1600 MM: TAPEOUT XX2:

where TAPEOUT is a scratch tape to be saved.

\$ASSIGN XX1: 1

\$ASSIGN XX2: 2

\$RUN LACSEG

N = 1 digit file number for input processing

M = 1 digit file number for output processing

XXXXX = 5 digit line start number, i.e. 00001 for starting with the first line (right justified)

X:XXX = 5 digit line ending number, i.e. 09999 to process entire tape

XXXXX = 5 digit pixel start number, i.e. 00001 to start with first pixel on starting line (right justified)

XXXXX = 5 digit pixel stop number, i.e. 02048 to process entire scan line (right justified)

\$DISMOUNT XX1:

\$DISMOUNT XX2:

SE0J

```

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
$EOJ
$DISMOUNT XX2:
$DISMOUNT XX1:
    0
    0
    0
    0
02048
00001
09999
00001
1
1
$RUN LACSEG
$ASSIGN XX2: 2
$ASSIGN XX1: 1
SMOUNT/FOR/DENSITY:1600 MM: TAPEOUT XX2:
SMOUNT/FOR/DENSITY:1600 MM: TAPEIN XX1:
$JOB ERLYWARN 2 LACSEG 300

```

Figure 1  
Sample Deck Setup  
3-2

#### 4. PROCESSING

##### 4.1 INTERACTIVE

Not applicable.

##### 4.2 BATCH

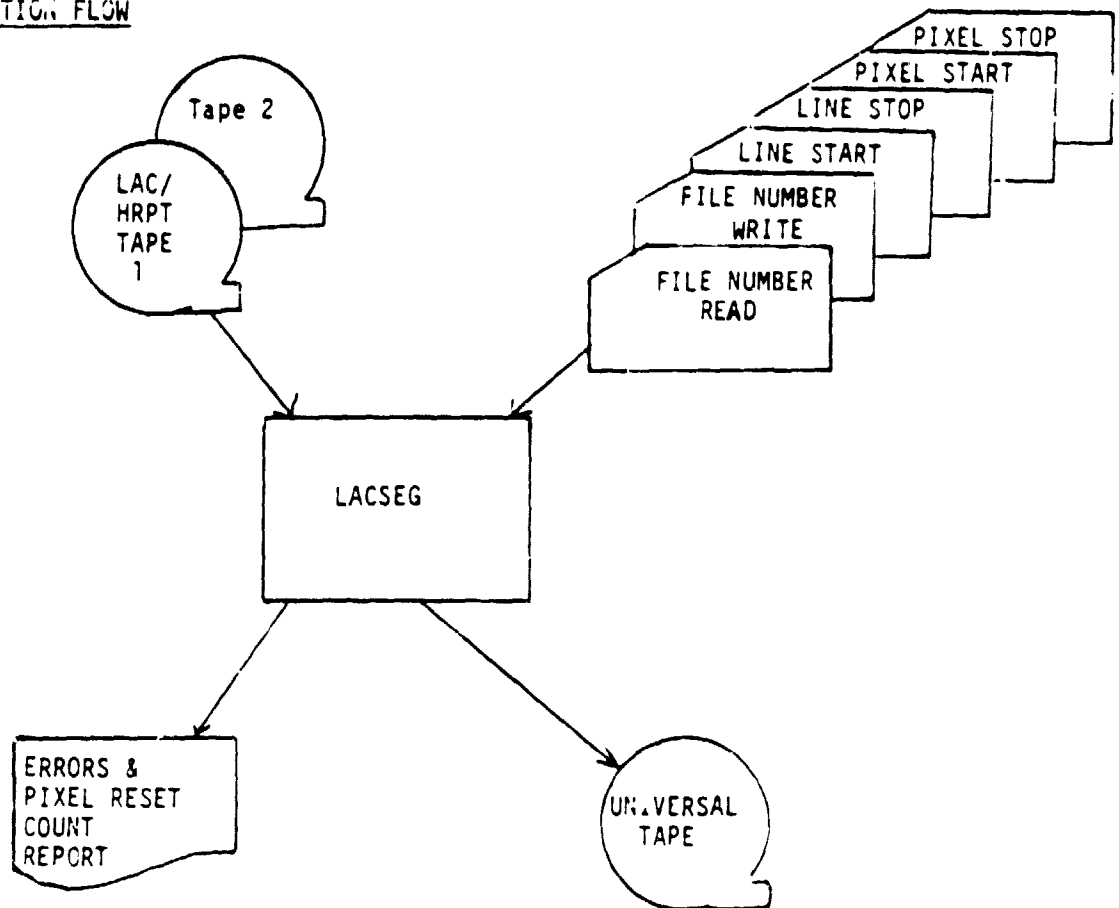
The user must submit the deck of cards as described above with a Batch Job Request form. An example of the request form follows:

BATCH JOB REQUEST	NAME: S. O'Brien	DATE SUBMITTED 7-17-80
REQUEST INSTRUCTIONS: Mount "INPUT 1" tape on one drive Mount "OUTPUT" tape with Write Ring on other drive Run Job Message will appear on TTO requesting: Replace "INPUT 1" with "INPUT 2" Type C to complete job.		
COMPLETION DATE	OPERATOR	

PARS-104 (1-79)

MAGA-5

4.3 EXECUTION FLOW



6

## 5. OUTPUT

### 5.1 TYPES OF OUTPUT

#### 5.1.1 TAPE

Universal Output Tapes, see ref. 1.5.2 for general format information. The header as written by this processor will contain all zero fill except for the following:

<u>Byte #</u>	<u>Data</u>
81-84	Active Channel Bits
90	Number of Channels = 4
91	Number of bits in pixel = 8
92-93	Address of start of video data = 1
96-97	Number of Pixels per channel per scan
100-101	Physical record size for data records = multiple of 180
102	Number of channels per physical record. This field refers to the second and subsequent records of a data set.
103	Number of physical records per scan per channel
104	Number of records ot make a data set
105-106	Length of ancillary block = 70
108-109	Scan start = 1
110-111	Scan end - number of pixels per channel per scan
753	word size = 16 bits
1778	Number of data sets per physical record
1785-1786	Number of channels in first record of data set
1787-1788	Total number of bytes per scan per channel - same as bytes 96-97

#### 5.1.2 DISK

Not applicable.

### 5.1.3 PAPER

A report of any tape processing errors and a count of the number of pixels on channels 1 and 2 reset to 255 will be printed on the line printer.

Example:

2722003 PIXELS ON CHANNEL 1 WITH VALUES OVER 255. THESE WERE RESET TO 255  
2430702 PIXELS ON CHANNEL 2 WITH VALUES OVER 255. THESE WERE RESET TO 255.

## 6. SPECIAL INSTRUCTIONS OR RESTRICTIONS

The job normally runs approximately 1-1/2 hours. However, run time will depend on system loading.