



100 Cattlemen Road
Sarasota, FL 34230
941-377-0811

communications
Aviation Recorders

2017 CUSTOMER TRAINING COURSES

L-3 Communications, Aviation Recorders (L-3AR) is pleased to announce the following training courses to be held at L-3's Sarasota, Florida facility. All courses are also available to be presented at a customer's location.

Recorder Operation

Recorder Maintenance

ROSE Database Development

Accident Investigation

Iridium Operation



"This document consists of L-3 Aviation Recorders, general capabilities information that does not contain controlled technical data as defined within the International Traffic in Arms (ITAR) Part 120.10 or Export Administration Regulations (EAR) Part 772."



General Information

L-3 AR Sarasota Training Location

100 Cattlemen Road
Sarasota, FL 34230

Class Schedule

8:45 AM	Lobby sign-in	
9:00 AM	Class begins	Course materials are provided.
12:00 – 1:00 PM	Lunch	Students must leave the premises during lunch as there is no dining facility in the building.
4:00 PM	Class ends	

Important: Required Documentation

ALL students must provide **current** citizenship documentation on the first day of training.

U.S Citizens – U.S. Identification

Non-U.S. Citizens – Passport

Language

Personnel must be proficient at reading and speaking English.

Point of Contacts

Registration Information

Gilberto Loyola

Phone: (941) 379-1662

Email: Gilberto.Loyola@L-3com.com

Purchase Order Information

Laurie Wheatley

Phone: (941) 371-0811 Ext 5744

Email: Laurie.Wheatley@L-3com.com

Payment Information

Lawanna Hall

Phone: (941) 371-0811 Ext 5142

Fax: (941) 377-5587

Email: Lawanna.Hall@L-3com.com

Service Agreement Information

Simone Totti

Phone: (941) 377-5581

Email: Simone.Totti@L-3com.com



Table of Contents

General Information	2
Course Details and Prices	4
Training Course Dates	4
Course Descriptions	
Recorder Operation	5
Recorder Maintenance	6
ROSE Database Development	7
Accident Investigation	8
Iridium Operation	9
Maps	10
Sarasota Preferred Hotels	12
Payment Options	13
Purchase Order Instructions	14
Example Purchase Order	15
Enrollment Information	
Enroll in a Course	16
General Enrollment Information	17
L-3AR Training Enrollment Form	
Page 1	18
Page 2	19



Course Details and Prices			
Training Location: Sarasota, Florida			
Class Size: Minimum 5 / Maximum 13			
Course P/N	Course Title	Tuition Per Person *	Course Duration
17TES1100	Recorder Operation	\$1,500	2 days / 12 hours
17TES1150	Recorder Maintenance	\$5,000	2 days / 12 hours
17TES1200	ROSE Database Development	\$5,000	4 days / 24 hours
17TES1300	Accident Investigator Course	\$1,500	3 days, 18 hours
17TES1400	Iridium Operation	\$2,500	2 days / 12 hours
Training Location: Customer Site **			
Class Size: Minimum 8 / Maximum 13			
Course P/N	Course Title	Tuition Per Person *	Course Duration
17TES1101	Recorder Operation	\$5,000	2 days / 12 hours
17TES1151	Recorder Maintenance	\$10,000	2 days / 12 hours
17TES1201	ROSE Database Development	\$10,000	4 days / 24 hours
17TES1401	Iridium Operation	\$4,000	2 days / 12 hours

* Prices valid through March 01, 2017

** The customer will pay for all instructor travel and lodging expenses when training is presented at the customer site. Due to limited resources and previous commitments our staff has to carefully plan our activities for travel and the need to support our customer programs. Scheduling must be planned in order to provide the best service. Therefore, all on-site training will be arranged with the registrar on a case-by-case basis.

Training Course Dates		
Course P/N	Course Title	Date
17TES1200	ROSE Database Development	03-06 April 2017
17TES1100	Recorder Operation	10-11 April 2017
17TES1150	Recorder Maintenance	12-13 April 2017

Registration Deadline: March 1, 2017

Advance payment is mandatory in order to secure a spot in the training class.



Course Descriptions

Recorder Operation

TOPICS COVERED

FA2100, FA5000 recorders' functional theory of operation, equipment configuration, real-time data monitoring, data download, operation of specialized GSE (RAU), and Portable Interface unit

DURATION

2 days (6 hours per day / 12 hours total)

PART NUMBER

17TES1100

OBJECTIVES

- Monitor real time flight data
- Download flight and audio data from the recorders
- FA2100 and FA5000 recorders return to service procedures

CUSTOMER PREREQUISITES

- Avionics Technicians or Engineers
- Operate L-3 recorders
- Active Software License Agreement if using ROSE

REFERENCE DOCUMENTATION

- FA2100 Installation & Operation Manuals
 - FA2100 CVR P/N: 165-E1846-00
 - FA2100 FDR P/N: 165-E1845-00
 - FA2100 CVDR P/N: 165-E1847-00
- FA2100 Component Maintenance Manual
 - FA2100 CVR P/N: 165-E1689-00
 - FA2100 FDR P/N: 165-E1688-00
 - FA2100 CVDR P/N: 165-E1690-00
- FA5000 Installation & Operation Manuals
 - FA5000 CVR P/N: 165-E5327-00
 - FA5000 CVR P/N: 165-E5327-11
 - FA5000 FDR P/N: 165-E5327-10
 - FA5000 CVDR P/N: 165-E5327-01
 - FA5000 CVDR P/N: 165-E5327-04

TRAINING AIDS *

- Portable Interface (PI): P/N 17TES0043
- ROSE Analysis Unit (RAU): P/N 17TES0060/63/68
- ROSE Software: P/N 17TES0321 Can be part of the RAUs

* When training is presented at the customer site, the practical portion will be conducted using only the customer-provided training aids and recorders.



Recorder Maintenance

TOPICS COVERED

FA2100 FDR, CVR, CVDR recorders' functional theory of operation, equipment configuration, removal/replacement, open box repair, and Return-to-Service Testing, operation of specialized GSE (ROC/7-RAU), and Portable Interface Units

DURATION

2 days (6 hours per day / 12 hours total)

PART NUMBER

17TES1150

OBJECTIVE

- Operate the FA2100 FDR, CVR, and CVDR recorders
- Repair the FA2100 FDR, CVR, and CVDR recorders
- Return to Service the FA2100 FDR, CVR, and CVDR recorders

CUSTOMER PREREQUISITES

- Avionics Technicians or Engineers
- Operate L-3 recorders
- Own the ROC/7
- Active Software License Agreement
- Completed Recorder Operation training course (P/N: 17TES1100)
- Attend training courses, Recorder Operation (P/N: 17TES1100) and Recorder Maintenance (P/N: 17TES1150) every two years

REFERENCE DOCUMENTATION

- FA2100 Installation & Operation Manuals
 - FA2100 CVR P/N: 165-E1846-00
 - FA2100 FDR P/N: 165-E1845-00
 - FA2100 CVDR P/N: 165-E1847-00
- FA2100 Component Maintenance Manual
 - FA2100 CVR P/N: 165-E1689-00
 - FA2100 FDR P/N: 165-E1688-00
 - FA2100 CVDR P/N: 165-E1690-00

TRAINING AIDS *

- Portable Interface (PI): P/N 17TES0043
- ROSE Analysis Unit (RAU): P/N 17TES0060/63/68
- Read-Out Center/7 (ROC/7): P/N 17TES0700
- ROSE Software: P/N 17TES0321 Can be part of the RAUs or ROC
- CVR Automated Station software (CATS): included with the ROC

- * When training is presented at the customer site, the practical portion will be conducted using only the customer-provided training aids and recorders.



ROSE Database Development

TOPICS COVERED

Development and maintenance of aircraft parameter databases, creation of engineering reports, and downloading aircraft flight data using the L-3AR ROSE software

DURATION

4 days (6 hours per day / 24 hours total)

PART NUMBER

17TES1200

OBJECTIVES

- Develop and maintain aircraft parameter databases
- Build engineering reports
- Download flight data from the recorders
- Monitor real time flight data
- Display previously downloaded flight data

CUSTOMER PREREQUISITES

- Avionics Technicians or Engineers
- Purchase for ROSE software
- Active Software License Agreement

REFERENCE DOCUMENTATION

- ROSE Installation & Operation Manual P/N: 165-E1696-04

TRAINING AIDS *

- ROSE Analysis Unit (RAU): P/N 17TES0060/63/68
- Ethernet cable: RJ-45
- Optional ROSE Software: P/N 17TES0321 installed on a personal computer and either Option A or B
 - Option A**
 - Computer Interface Communication Cable 2: P/N 17TES0070
 - Computer Interface Communication Cable: P/N 17TES0071
 - Computer Interface Communication Cable: P/N 17TES0072
 - Computer Printer Cable: IEEE-1284 Compliant
 - Option B**
 - Computer Interface Communication Cable 3: P/N 17TES0075

* When training is presented at the customer site, the practical portion will be conducted using only the customer-provided training aids and recorders.



Accident Investigation

TOPICS COVERED

L-3AR recorders memory structure theory of operation, uploading firmware into the Readout Chassis, data retrieval, operation of specialized GSE (ROC/7-RAU), and Portable Interface units

DURATION

3 days (6 hours per day / 18 hours total)

PART NUMBER

17TES1300

OBJECTIVE

- Recover data from L-3 AR's FA2100, LDR, and FA5000 recorders
- Better Understanding of L3 Solid State Recorder Configurations
- Knowledge of Crash Protected Memory Units:
 - Structure / Assembly
 - Memory Configurations
 - Module Identification
 - Knowing the Tools and Procedures
 - Recommended Data Retrieval Techniques

CUSTOMER PREREQUISITES

- Employed by official government investigation agencies

REFERENCE DOCUMENTATION

- FA2100 Installation & Operation Manuals
 - FA2100 CVR P/N: 165-E1846-00
 - FA2100 FDR P/N: 165-E1845-00
 - FA2100 CVDR P/N: 165-E1847-00
 - LDR CVDR P/N: 165-E4866-00
 - F1000 P/N: 165-E2350-01
- FA2100 Component Maintenance Manual
 - FA2100 CVR P/N: 165-E1689-00
 - FA2100 FDR P/N: 165-E1688-00
 - FA2100 CVDR P/N: 165-E1690-00
 - LDR P/N: 165-E4866-02
 - F1000 P/N: 165-E0503-00
- FA5000 Installation & Operation Manuals
 - FA5000 CVR P/N: 165-E5327-00
 - FA5000 CVR P/N: 165-E5327-11
 - FA5000 FDR P/N: 165-E5327-10
 - FA5000 CVDR P/N: 165-E5327-01
 - FA5000 CVDR P/N: 165-E5327-04
- Procedure for Information Retrieval
 - FA2100, MADRAS P/N: 905-E1436-22
 - LDR P/N: 905-E4866-22
 - FA5XXX P/N: 905-E5389-22
 - F1000 P/N: 165-E1447-00

TRAINING AIDS

- Portable Interface (PI): P/N 17TES0043
- ROSE Analysis Unit (RAU): P/N 17TES0060
- Read-Out Center/7 (ROC/7): P/N 17TES0700
- ROSE Software: P/N 17TES0321 Can be part of the RAUs or ROC
- FA5XXX AIK Software P/N: 883-E5765-03
- FA2100 AIK Software P/N: 883-E2253-04
- CICC Interface Software P/N: 883-E1827-20

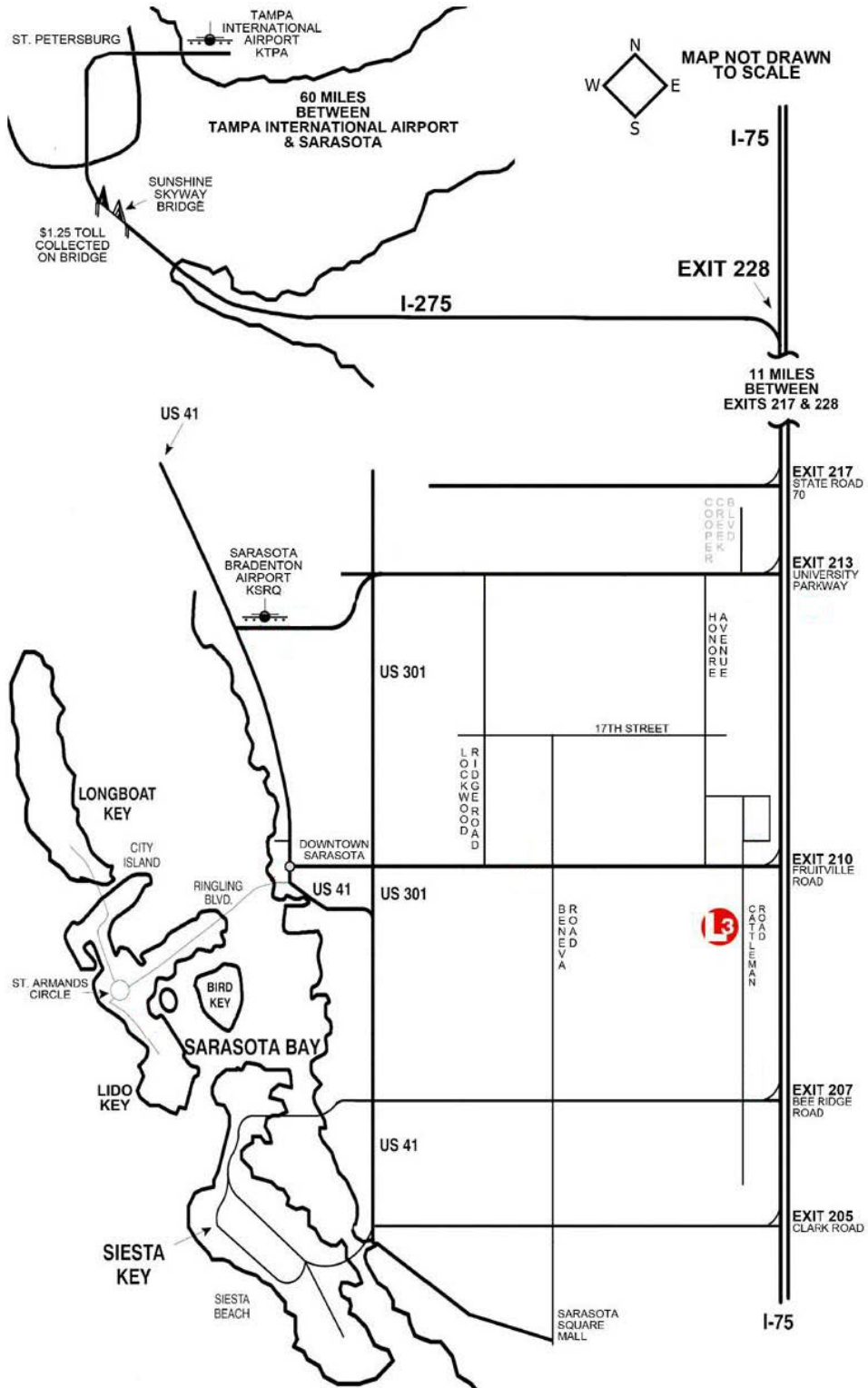


Iridium Operation
<p>TOPICS COVERED Iridium SDU and SCM functional theory of operation, equipment configuration, file downloading, and system component removal/replacement Note: This system is a Level 1 repair only. All units must be returned to the factory for repair.</p>
<p>DURATION 2 day (6 Hours per Day / 12 Hours)</p>
<p>PART NUMBER 17TES1400</p>
<p>OBJECTIVES</p> <ul style="list-style-type: none">• Operate the L-3AR Iridium System• Download Data• Upload files into the Satellite Data Unit• Configure the Owner Requirements Table(ORT)• Configure the User Access Table(UAT)• Configure the Address Book (ADB)• Install the SIM card into the SDU• Configure the Module SCM
<p>CUSTOMER PREREQUISITES</p> <ul style="list-style-type: none">• Avionics Technicians or Engineers• Operate L-3 Iridium system
<p>REFERENCE DOCUMENTATION</p> <ul style="list-style-type: none">• Iridium Welcome Package P/N: 165-E5733-20• Iridium Installation & Operation Manual P/N: 165-E5733-00• Iridium Component Maintenance Manual P/N: 165-E5733-10
<p>TRAINING AIDS *</p> <ul style="list-style-type: none">• Computer with an Ethernet port.• Ethernet cable: RJ-45

* When training is presented at the customer site, the practical portion will be conducted using only the customer-provided training aids and recorders.

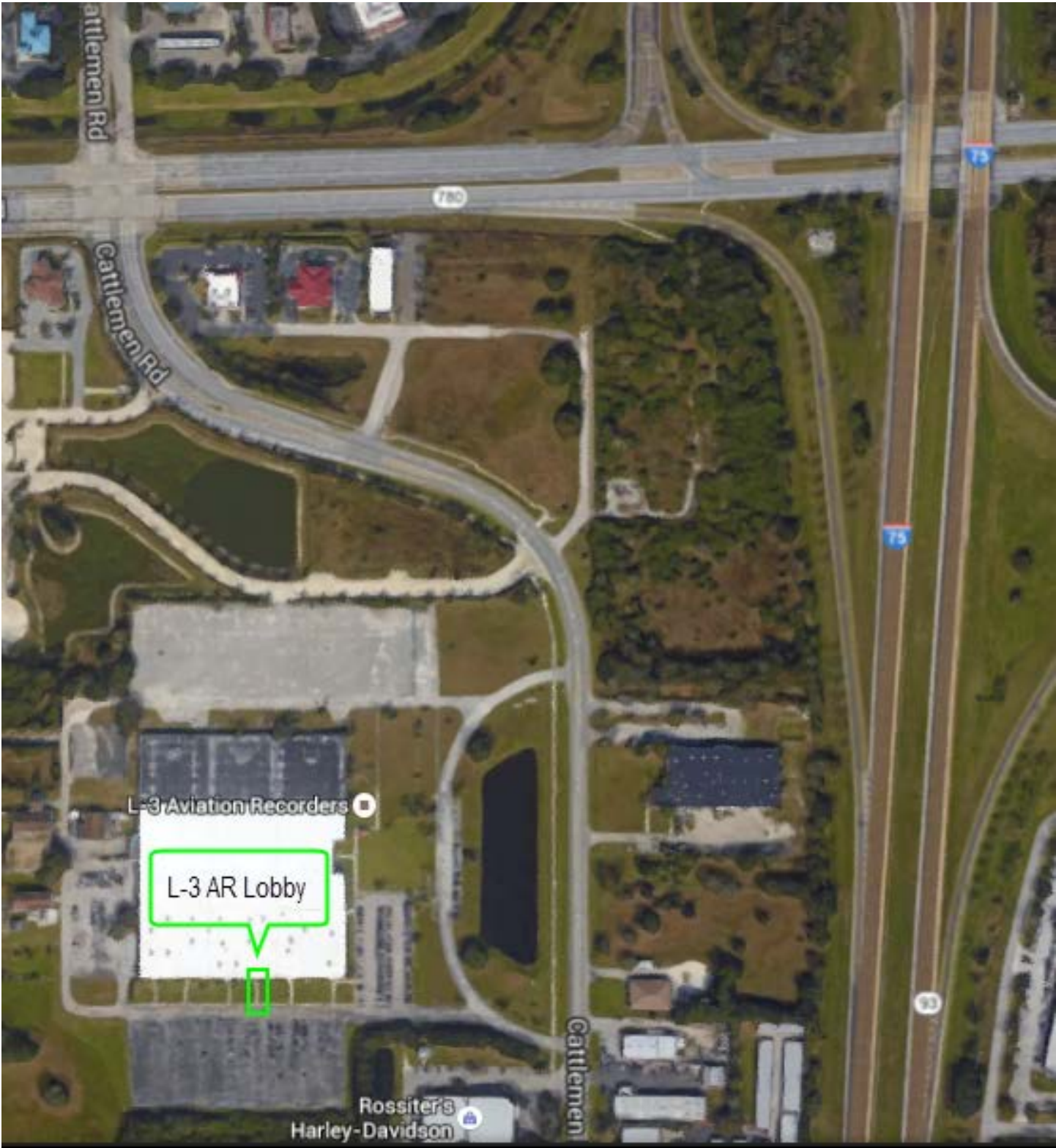


Maps





Maps





Sarasota Preferred Hotels

1.	Hyatt Regency Sarasota Tel: (941) 953-1234	1000 Boulevard of the Arts Sarasota, FL 34236
2.	Homewood Suites by Hilton Tel: (941) 365-7300	3470 Fruitville Road Sarasota, FL 34232
3.	Hampton Inn (Cattleridge) Tel: (941) 371-1900	5995 Cattleridge Road Sarasota, FL 34232
4.	Holiday Inn Express Tel: (941) 925-0631	5730 Gantt Road Sarasota, FL 34233
5.	Hampton Inn & Suites Tel: (941) 355-8140	975 University Parkway Sarasota, FL 34243
6.	Courtyard Sarasota University Park Tel: (941) 360-2626	8305 Tourist Center Dr., Sarasota, FL 34201



Payment Options

Option 1 - Pay by Check, Money Order, Wire Transfer, or ACH

1. Complete A, B, C, or D

A. Check or Money Order

Mail to:
L-3 Communications Aviation Recorders
Chicago Lock Box #22156
22156 Network Place
Chicago, IL 60673-1221

B. Domestic ACH Payments

Send to:
JPMorgan Chase Bank N.A.
ABA/ROUTING # **071000013**
For L-3 Communications Aviation Recorders
Account Number 1057611
22156 Network Place
Chicago, IL 60673-1221

C. International Wire Transfer

Send to:
JPMorgan Chase Bank N.A.
ABA/ROUTING # 021000021
For L-3 Communications Aviation Recorders
Account Number 1057611
22156 Network Place
Chicago, IL 60673-1221
Swift Code: CHAS US 33

D. Domestic Wire Transfer

Send to:
JPMorgan Chase Bank N.A.
ABA/ROUTING # **021000021**
For L-3 Communications Aviation Recorders
Account Number 1057611
22156 Network Place
Chicago, IL 60673-1221

2. Notify L-3 of Payment

Lawanna Hall
Phone: (941) 371-0811 Ext 5142 / Fax: (941) 377-5587 / Email: Lawanna.Hall@L-3com.com

Option 2 - Pay by Credit Card (Visa, MasterCard, American Express, Discover)

1. Complete the Following

Today's Date Credit Card Type

Card Holder Name Security Code

Credit Card Number Expiration Date

PO Number Sales Order Number

Amount to be Charged: USD \$
2% charge if over \$1,000.00 USD
Fed Tax Id. 13-3937436

2. Contact L-3 for Payment Processing

Lawanna Hall
Phone: (941) 371-0811 Ext 5142 / Fax: (941) 377-5587 / Email: Lawanna.Hall@L-3com.com



Purchase Order Instructions

If Questions, Contact

- Laurie Wheatley
Phone: (941) 371-0811 Ext 5744
Email: Laurie.Wheatley@L-3com.com

All POs must contain the following information:

- Purchase Order Number and PO Date
- Sold To/Bill To information (name, address, phone, etc.)
- Course Location (vendor address)
- Item Description and Part Number
- Quantity of attendees and names of attendees
- Dates of course
- Price each
- Contact Name and Phone Number

Payment type ([On Page 13](#)) --- Payment must be received prior to the registration deadline to secure a seat in the class

For an example of a Purchase Order please see [Page 15](#)



Example Purchase Order

COMPANY NAME

Street Address
 City, State, Country, Zip Code
 Telephone

Purchase Order 12345

Date: 7 JAN 2016

VENDOR:

L-3 Communications Aviation Recorders

100 Cattlemen Road
 Sarasota, FL 34230
 941-377-0811

Item	Commodity	Person	Each	Total
1	Course P/N : 17TES1100 Recorder Operation Course 2 days, 12 Hours 8-9 Feb 2016 Attendees : John Doe and Mike Blue	2	\$1,500.00 USD	\$3,000.00 USD
2	Course P/N : 17TES1150 Recorder Maintenance Course 2 days, 12 Hours 10-11 Feb 2016 Attendees : John Doe and Mike Blue	2	\$5,000.00 USD	\$10,000.00 USD
3	Course P/N : 17TES1200 ROSE Database Development 4 days, 24 Hours 8-9 Feb 2016 Attendees : John Doe and Mike Blue	2	\$5,000.00 USD	\$10,000.00 USD
= special provisions= Payment by Wire Transfer				

PO Issued by:
 John Doe



Enrollment Information

Please follow the guidelines below to help us reduce trainee no-shows, and maximize customer participation.

Enroll in a Course

1. Complete both pages of L-3AR Training Enrollment Form for each student attending a course.
2. Email the L-3AR Training Enrollment Form to the Training Registrar
Gilberto Loyola
Phone: (941) 379-1662
Email: Gilberto.Loyola@L-3com.com
3. Create a Purchase Order. Be sure to include the payment types on the Purchase Order.
4. Email the Purchase Order to
Laurie Wheatley
Phone: (941) 371-0811 Ext 5744
Email: Laurie.Wheatley@L-3com.com

Note: Payment must be made prior to the registration deadline on [Page 3](#), to guarantee admittance into a course.

5. Email, Fax, or Call to make a Payment to:
Lawanna Hall
Phone: (941) 371-0811 Ext 5142
Fax: (941) 377-5587
Email: Lawanna.Hall@L-3com.com
6. The L-3AR Training Registrar will provide final confirmation of enrollment by email once the Enrollment form, Purchase Orders, and Payment are received and processed.



Enrollment Information

General Enrollment Information

1. Follow the steps in ["Enroll in a Course"](#).
2. Reproduced copies are acceptable. All inquiries will be acknowledged.
3. Enrollment requests are accepted on a first come, first served basis.
4. L-3AR may postpone or cancel a course due to unforeseen circumstances, or if minimum class size is not met. We will normally provide a notification within one week after the course registration end date.
5. If enrollment requests exceed space available, enrollments will be accepted based on the date and time the Enrollment form, Purchase Orders, and Payment are received. Class size is limited to 13 students.
6. L-3AR may limit the number of students from a single customer or agency, depending on the number of other students.
7. Attendance is normally limited to customers or aircraft manufacturers using L-3AR products. For more information, contact the L-3AR Training Registrar.
8. If it becomes necessary for a registered student to withdraw from a course, please advise the Training Registrar by the course registration end date so students on standby status can be enrolled, and the tuition is refunded. **All cancellations must be in writing.**
9. Due to the high demand for courses, any student withdrawals after the course registration end date are subject to full tuition charges. We ask for your cooperation so that we may better serve all of our customers.
10. All study materials provided are "FOR TRAINING PURPOSES ONLY" and are not under revision/update control.
11. A Software License Agreement (SLA) allows an operator to use our ROSE, CATS, ADLP software.
12. A Service Agreement allows an operator to perform Level 2 repairs in house.
13. Limitations on the reproduction or further distribution of training materials may be identified on the training documents. Non-U.S. citizens may be asked to sign a Letter of Assurance that is a part of the Visitor's Authorization Form where required by U.S. export law (recipient of data agrees not to make data available to citizens of designated countries).



L-3AR Training Enrollment Form

Page 1

Print or type. Complete all required fields (outlined in red) on both pages.

Last Name		First Name: (Legal Name)		Job Title	
Company		Passport or U.S. Official ID Number *		Issuing Authority	Citizenship
Company Street Address					
City		State/Province	Country	Zip/Postal Code	
Company Phone	Extension	Company Fax (Optional)	Company Email		

* A passport is required for non-U.S. Citizens. U.S. Citizens may use a passport or an Official ID.

COURSES

Check appropriate course, provide PO number, and course start date:

X	Course Title	Part Number	Purchase Order Number	Course Start Date
	Recorder Operation	17TES1100		
	Recorder Maintenance *	17TES1150		
	ROSE Database Development ***	17TES1200		
	Accident Investigation **	17TES1300		
	Iridium Operation	17TES1400		

* **Recorder Maintenance requires a service agreement with L-3AR** and completion of Recorder Operation course

** Course is restricted to government accident investigation agencies only

*** An Active Software License agreement is required in order to register and attend course PN 17TES1200

SOFTWARE LICENSE

Software	Serial Number	Version	Last SLA Renewal Date *
ROSE			
CATS			
ADLP			

* See General Enrollment Informant number 11

Service Agreement *

* See General Enrollment Informant number 12



L-3AR Training Enrollment Form

Page 2

CUSTOMER CATEGORY

Check appropriate box and provide information required

X	Customer Category	Additional Information	
	Airline		
	Government Agency (Military, FAA, DOT, NTSB)		
	L3AR Authorized Service or Repair Center		
	Original Equipment Manufacturer		
	Avionics Dealer/Distributor	Dealer/Distributor Number	
	General Aviation/Agriculture	Aircraft Type	
	Other	Specify	

CANCELLATION POLICY

If it becomes necessary for a registered student to withdraw from a course, please advise the Training Registrar before or on the course registration end date so students on standby status can be enrolled, and the tuition refunded. All cancellations must be in writing.

CONFIRMATION SIGNATURE

I have read, understand, and agree to the L-3AR Training Tuition and Enrollment Process and Cancellation Policy.

Name of Management Representative authorized to approve this student's attendance:

Name (Please print or type): _____ Date: _____

Signature: _____