SECURITY SUMMARY & SPECIAL HANDLING REQUIREMENTS

The title of this application is: L3 Communications Tactical Common Data Link (TCDL)

The overall classification of this application is: **UNCLASSIFIED**

The following Special Handling summary lists the applicable markings for the printed page(s). It is your responsibility to place all Special Handling markings on the cover page of the application.

If an Entire Application was printed, the following Special Handling summary lists the applicable markings for the Entire Application.

If an Individual Page (TX, RX, ANT, etc.) was printed, the following Special Handling summary lists the applicable markings for the printed page. It is your responsibility to make certain that any Special Handling markings that are unique to the Individual Page are also reflected on the cover of the Entire Application.

If the "!" code is shown below, the "SEE REMARKS" refers to the REMARKS block on the applicable page.

Refer to your Security Manual for further guidance.

No Application Level Special Handling
No Page Level Special Handling

SECURITY SUMMARY & SPECIAL HANDLING REQUIREMENTS

The title of this application is: L3 Communications Tactical Common Data Link (TCDL)

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If the "!" code is shown below, the "SEE REMARKS" refers to the REMARKS block on the applicable page.

Page Type:	Page #:	Classification:	Special Handling Requirement:
DoD Page	1	UNCLASSIFIED	
Transmitter Page 1	2	UNCLASSIFIED	
Transmitter Page 2	3	UNCLASSIFIED	
Receiver Page 1	4	UNCLASSIFIED	
Receiver Page 2	5	UNCLASSIFIED	
Antenna Page 1	6	UNCLASSIFIED	
Antenna Page 2	7	UNCLASSIFIED	
Antenna Page 3	8	UNCLASSIFIED	
NTIA Page	9	UNCLASSIFIED	
MCEB Guidance Page	10	UNCLASSIFIED	
MCEB Overflow	11	UNCLASSIFIED	
Note to Holders 1	12	UNCLASSIFIED	
NTIA Admin Page	13	UNCLASSIFIED	
Administrative Page		UNCLASSIFIED	

APPLICATION FOR EQUIPMENT FREQUENCY ALLOCATION	CLASSIFICATION **UNCLASSIFIED**	DATE 02/18/1999	J/F 12/07834
			Page 1 of 13 Pages

DOD GENERAL INFORMATION

TO AF Frequency Management Agency
AFFMA/SCOE
2461 Eisenhower Ave., Suite 1203
Alexandria, VA 22331-1500

FROM AF Materiel Command (ASC 1999-16/17)
AFMC CSO/SCSC
4225 Logistics Avenue, Suite 20
Wright Patterson AFB, OH 45433-5759

1. APPLICATION TITLE (U) L3 Communications Tactical Common Data Link (TCDL)

2. SYSTEM NOMENCLATURE (U) L3 Communications Tactical Common Data Link (TCDL)

3. STAGE OF ALLOCATION (U)
- [ ] a. STAGE 1 CONCEPTUAL
- [ ] b. STAGE 2 EXPERIMENTAL
- [X] c. STAGE 3 DEVELOPMENTAL
- [ ] d. STAGE 4 OPERATIONAL

4. FREQUENCY REQUIREMENTS
- **a. FREQUENCY(IES)** (U) 15.15 GHz - 15.35 GHz 14.4 GHz - 14.83 GHz
- **b. EMISSION DESIGNATORS** (U) (See Remarks)

5. TARGET STARTING DATE FOR SUBSEQUENT STAGES

a. STAGE 2 (U) NA	b. STAGE 3 (U) NA	c. STAGE 4 (U) NAvail

6. EXTENT OF USE (U) Intermittent use up to 24 hours/day

7. GEOGRAPHICAL AREA FOR
- **a. STAGE 2** (U) NA
- **b. STAGE 3** (U) China Lake, Ca; Salt Lake City, UT (See Remarks)
- **c. STAGE 4** (U) Worldwide (Specific Locations Not Yet Available)

8. NUMBER OF UNITS

a. STAGE 2 (U) NA	b. STAGE 3 (U) 5	c. STAGE 4 (U) 200

9. NUMBER OF UNITS OPERATING SIMULTANEOUSLY IN THE SAME ENVIRONMENT (U) 4

10. OTHER J/F 12 APPLICATION ID(S) TO BE (U)
- [ ] a. SUPERSEDED
- [X] b. RELATED J/F 12/06534

11. IS THERE ANY OPERATIONAL REQUIREMENT AS DESCRIBED IN THE INSTRUCTIONS FOR PARAGRAPH 11? (U)
- [X] a. YES
- [ ] b. NO
- [ ] c. NAVAIL

12. NAMES AND TELEPHONE NUMBERS (U)

a. PROGRAM MANAGER Mr Walt Hartman, AFRL/IFGD	(1) COMMERCIAL 927-255-4957	(2) DSN 785-4947
b. PROJECT ENGINEER M4 Roger Swanson, AFRL/IFGD	(1) COMMERCIAL 937-255-4947	(2) DSN 785-4947

13. REMARKS (U)

Item 4b, Emission Designator: 800KG1D, 8M00G1D, 21M4G1D, 45M0G1D, 64M0G1D

Item 7b, Geographical Area: Rancho Bernardo, CA; El Mirage, CA; Patuxent River NAS, MD; Edwards AFB, CA; Ft Huachuca, AZ; and Fallon NAS, NV.

Item 11, Operational Requirement: Equipment interfaces with other existing DoD Common Data Link systems in the same frequency band.

DOWNGRADING INSTRUCTIONS

J/F 12/07834

CLASSIFICATION **UNCLASSIFIED**

TRANSMITTER EQUIPMENT CHARACTERISTICS

1. NOMENCLATURE, MANUFACTURER'S MODEL NO.
(U) None Assigned (Surface Transmitter)

2. MANUFACTURER'S NAME
(U) L3 Communications

3. TRANSMITTER INSTALLATION
(U) Ground or Ship Terminal

4. TRANSMITTER TYPE
(U) Digital Communications

5. TUNING RANGE
(U) 15.15 MHz - 15.35 MHz

6. METHOD OF TUNING
(U) Crystal Controlled Synthesizer

7. RF CHANNELING CAPABILITY
(U) 15.15 GHz, 5 MHz Steps

8. EMISSION DESIGNATORS
(U) 800KG1D (U) 8M00G1D (U) 21M4G1D

9. FREQUENCY TOLERANCE
(U) 0.03 ppm

10. FILTER EMPLOYED
(U) [X] a. YES [ ] b. NO

11. SPREAD SPECTRUM
(U) [X] a. YES [ ] b. NO

12. EMISSION BANDWIDTH
[ ] CALCULATED [X] MEASURED

a. -3 dB	(U) 354 KHz	(U) 3.5 MHz	(U) 9.4 MHz
b. -20 dB	(U) 2.1 MHz	(U) 21.4 MHz	(U) 57.4 MHz
c. -40 dB	(U) NAvail	(U) NAvail	(U) NAvail
d. -60 dB	(U) 108 MHz	(U) 181 MHz	(U) 219 MHz
e. OC-BW	(U) 8.6 MHz	(U) 44 MHz	(U) 64 MHz

13. MAXIMUM BIT RATE
(U) 400 Kbps

14. MODULATION TECHNIQUES AND CODING
(U) BPSK and OQPSK.
Direct Sequence Spread Spectrum.
(See Remarks)

15. MAXIMUM MODULATION FREQUENCY
(U) 22.5 MHz

16. PRE-EMPHASIS
(U) [ ] a. YES [X] b. NO

17. DEVIATION RATIO
(U) NAvail

18. PULSE CHARACTERISTICS

a. RATE	(U) NA	(U) NA	(U) NA
b. WIDTH	(U) NA	(U) NA	(U) NA
c. RISE TIME	(U) NA	(U) NA	(U) NA
d. FALL TIME	(U) NA	(U) NA	(U) NA
e. COMP RATIO	(U) NA	(U) NA	(U) NA

19. POWER

a. MEAN	(U) 2 W	(U) 2 W	(U) 2 W
b. PEP	(U) NA	(U) NA	(U) NA

20. OUTPUT DEVICE
(U) Solid State

21. HARMONIC LEVEL

a. 2nd	(U)	-65 dB
b. 3rd	(U)	-65 dB
c. OTHER	(U)	-80 dB

22. SPURIOUS LEVEL
(U) -80 dB

23. FCC TYPE ACCEPTANCE NO.
(U) NA

24. REMARKS (U)

```
Item 8/12, Emission Designators & Emission Bandwidth:
                                        45M0G1D       64M0G1D
                                - 3 dB  39.3 MHz      28 MHz
                                -20 dB  80.6 MHz     101 MHz
                                -60 dB  294  MHz     274 MHz
                            Occupied BW:  76  MHz     90 MHz

Item 10, Filter Employed:  3 Pole Chebyshev and RF Waveguide.

Item 14, Modulation Techniques and Coding: 200 kbps, R=1/2 BPSK.
                                            2 Mbps, R=1/2 OQPSK.
                                        10.71 Mbps, R=1/2 QPSK.
                                           45 Mbps, R=1/2 QPSK.
200 kbps, R=1/2 BPSK, Direct Sequence Spread Spectrum @ 32 MChips/sec.
```

TRANSMITTER EQUIPMENT CHARACTERISTICS

1. NOMENCLATURE, MANUFACTURER'S MODEL NO.
(U) None Assigned (Surface Transmitter)

2. MANUFACTURER'S NAME
(U) L3 Communications

3. TRANSMITTER INSTALLATION
(U) Airborne Terminal

4. TRANSMITTER TYPE
(U) Digital Communications

5. TUNING RANGE
(U) 14.4 GHz - 14.83 GHz

6. METHOD OF TUNING
(U) Crystal Controlled Synthesizer

7. RF CHANNELING CAPABILITY
(U) 14.4 GHz, 5 MHz Steps

8. EMISSION DESIGNATORS
(U) 800KG1D (U) 8M00G1D (U) 21M4G1D

9. FREQUENCY TOLERANCE
(U) 0.03 ppm

10. FILTER EMPLOYED
(U) [X] **a. YES** [ ] **b. NO**

11. SPREAD SPECTRUM
(U) [X] **a. YES** [ ] **b. NO**

12. EMISSION BANDWIDTH
[ ] **CALCULATED** [X] **MEASURED**

a. -3 dB	(U) 354 KHz	(U) 3.5 MHz	(U) 9.4 MHz
b. -20 dB	(U) 2.1 MHz	(U) 21.4 MHz	(U) 57.4 MHz
c. -40 dB	(U) NAvail	(U) NAvail	(U) NAvail
d. -60 dB	(U) 108 MHz	(U) 181 MHz	(U) 219 MHz
e. OC-BW	(U) 8.6 MHz	(U) 44 MHz	(U) 64 MHz

13. MAXIMUM BIT RATE
(U) 400 Kbps

15. MAXIMUM MODULATION FREQUENCY
(U) 22.5 MHz

14. MODULATION TECHNIQUES AND CODING
(U) BPSK and OQPSK.
Direct Sequence Spread Spectrum.
(See Remarks)

17. DEVIATION RATIO
(U) NAvail

18. PULSE CHARACTERISTICS

a. RATE	(U) NA	(U) NA	(U) NA
b. WIDTH	(U) NA	(U) NA	(U) NA
c. RISE TIME	(U) NA	(U) NA	(U) NA
d. FALL TIME	(U) NA	(U) NA	(U) NA
e. COMP RATIO	(U) NA	(U) NA	(U) NA

16. PRE-EMPHASIS
(U) [ ] **a. YES** [X] **b. NO**

19. POWER

a. MEAN	(U) 2 W	(U) 2 W	(U) 2 W
b. PEP	(U) NA	(U) NA	(U) NA

20. OUTPUT DEVICE
(U) Solid State

21. HARMONIC LEVEL
a. 2nd (U) -65 dB
b. 3rd (U) -65 dB
c. OTHER (U) -80 dB

22. SPURIOUS LEVEL
(U) -80 dB

23. FCC TYPE ACCEPTANCE NO.
(U) NA

24. REMARKS (U)

```
Item 8/12, Emission Designators & Emission Bandwidth:
                                        45M0G1D       64M0G1D
                                - 3 dB  39.3 MHz      28 MHz
                                -20 dB  80.6 MHz     101 MHz
                                -60 dB  294  MHz     274 MHz
                            Occupied BW:  76  MHz     90 MHz

Item 10, Filter Employed:  3 Pole Chebyshev and RF Waveguide.

Item 14, Modulation Techniques and Coding: 200 kbps, R=1/2 BPSK.
                                            2 Mbps, R=1/2 OQPSK.
                                        10.71 Mbps, R=1/2 QPSK.
                                           45 Mbps, R=1/2 QPSK.
200 kbps, R=1/2 BPSK, Direct Sequence Spread Spectrum @ 32 MChips/sec.
```

RECEIVER EQUIPMENT CHARACTERISTICS

1. NOMENCLATURE, MANUFACTURER'S MODEL NO.
(U) None Assigned (Surface Receiver)

2. MANUFACTURER'S NAME
(U) L3 Communications

3. RECEIVER INSTALLATION
(U) Ground or Ship Terminal

4. RECEIVER TYPE
(U) Dual Conversion Superheterodyne

5. TUNING RANGE
(U) 14.4 GHz - 14.83 GHz

6. METHOD OF TUNING
(U) Crystal Controlled Synthesizer

7. RF CHANNELING CAPABILITY
(U) 14.4 GHz, 5 MHz Steps

8. EMISSION DESIGNATORS
(U) 800KG1D (See Remarks)

9. FREQUENCY TOLERANCE
(U) 10 ppm

10. IF SELECTIVITY

	1st (U)	2nd (U)	3rd (U)
a. -3 dB	200 MHz	90 MHz	NA
b. -20 dB	450 MHz	300 MHz	NA
c. -60 dB	1500 MHz	850 MHz	NA

11. RF SELECTIVITY
[X] CALCULATED [ ] MEASURED

a. -3 dB	(U)	430 MHz
b. -20 dB	(U)	500 MHz
c. -60 dB	(U)	750 MHz
d. Preselection Type	(U)	Waveguide

12. IF FREQUENCY

a. 1st	(U)	3570 MHz
b. 2nd	(U)	680 MHz
c. 3rd	(U)	NA

13. MAXIMUM POST DETECTION FREQUENCY
(U) 90 MHz

14. MINIMUM POST DETECTION FREQUENCY
(U) NA

15. OSCILLATOR TUNED

	1st (U)	2nd (U)	3rd (U)
a. ABOVE TUNED FREQUENCY			
b. BELOW TUNED FREQUENCY	X	X	
c. EITHER ABOVE OR BELOW THE FREQUENCY			

16. MAXIMUM BIT RATE
(U) 45 Mbps

17. SENSITIVITY

a. SENSITIVITY	(U)	- 109.4 dBm
b. CRITERIA	(U)	10 x -8 BER
c. NOISE FIG	(U)	3.7 dB
d. NOISE TEMP	(U)	NA

18. DE-EMPHASIS
(U) [ ] a. YES [X] b. NO

19. IMAGE REJECTION
(U) 85 dB

20. SPURIOUS REJECTION
(U) 85 dB

21. REMARKS (U)

```
Item 8, Emission Designators: 8M00G1D    21M4G1D    45M0G1D    64M0G1D

Item 17a, Sensitivity       -99.4 dBm   -92.1 dBm  -85.9 dBm  -109.4 dBm
```

RECEIVER EQUIPMENT CHARACTERISTICS

1. NOMENCLATURE, MANUFACTURER'S MODEL NO.
(U) None Assigned (Airborne Receiver)

2. MANUFACTURER'S NAME
(U) L3 Communications

3. RECEIVER INSTALLATION
(U) Ground or Ship Terminal

4. RECEIVER TYPE
(U) Dual Conversion Superheterodyne

5. TUNING RANGE
(U) 15.15 GHz - 15.35 GHz

6. METHOD OF TUNING
(U) Crystal Controlled Synthesizer

7. RF CHANNELING CAPABILITY
(U) 15.15 GHz, 5 MHz Steps

8. EMISSION DESIGNATORS
(U) 800KG1D (See Remarks)

9. FREQUENCY TOLERANCE
(U) 10 ppm

10. IF SELECTIVITY

	1st (U)	2nd (U)	3rd (U)
a. -3 dB	200 MHz	90 MHz	NA
b. -20 dB	450 MHz	300 MHz	NA
c. -60 dB	1500 MHz	850 MHz	NA

11. RF SELECTIVITY
[X] CALCULATED [ ] MEASURED

a. -3 dB	(U)	200 MHz
b. -20 dB	(U)	410 MHz
c. -60 dB	(U)	560 MHz
d. Preselection Type	(U)	Waveguide

12. IF FREQUENCY
a. 1st (U) 3570 MHz
b. 2nd (U) 680 MHz
c. 3rd (U) NA

13. MAXIMUM POST DETECTION FREQUENCY
(U) 90 MHz

14. MINIMUM POST DETECTION FREQUENCY
(U) NA

15. OSCILLATOR TUNED

	1st (U)	2nd (U)	3rd (U)
a. ABOVE TUNED FREQUENCY			
b. BELOW TUNED FREQUENCY	X	X	
c. EITHER ABOVE OR BELOW THE FREQUENCY			

16. MAXIMUM BIT RATE
(U) 45 Mbps

17. SENSITIVITY

a. SENSITIVITY	(U)	- 109.2 dBm
b. CRITERIA	(U)	10 x -8 BER
c. NOISE FIG	(U)	3.9 dB
d. NOISE TEMP	(U)	NA

18. DE-EMPHASIS
(U) [ ] a. YES [X] b. NO

19. IMAGE REJECTION
(U) 85 dB

20. SPURIOUS REJECTION
(U) 85 dB

21. REMARKS (U)

```
Item 8, Emission Designators: 8M00G1D    21M4G1D    45M0G1D    64M0G1D

Item 17a, Sensitivity       -99.2 dBm   -91.9 dBm  -85.7 dBm  -109.2 dBm
```

ANTENNA EQUIPMENT CHARACTERISTICS

1. (U) [ ] **a. TRANSMITTING** [ ] **b. RECEIVING** [X] **c. TRANSMITTING AND RECEIVING**

2. NOMENCLATURE, MANUFACTURER'S MODEL NO.
(U) None Assigned (Surface Antenna)

3. MANUFACTURER'S NAME
(U) L3 Communications

4. FREQUENCY RANGE
(U) 14 GHz - 15.35 GHz

5. TYPE (U) Parabolic Reflector

6. POLARIZATION
(U) Right-Hand Circular

7. SCAN CHARACTERISTICS

a. TYPE (U) MECHANICAL

b. VERTICAL SCAN (U)

(1) Max Elev (U) +85 deg

(2) Min Elev (U) -5 deg

(3) Scan Rate (U) 10 degrees/second

c. HORIZONTAL SCAN (U)

(1) Sector Scanned (U) 360 degrees

(2) Scan Rate (U) 10 degrees/second

d. SECTOR BLANKING (U) [ ] **(1) YES** [X] **(2) NO**

8. GAIN

a. MAIN BEAM
(U) 40 dBi

b. 1st MAJOR SIDE LOBE
(U) 21 dBi @ 2.3 deg

9. BEAMWIDTH

a. HORIZONTAL
(U) 1.7 deg

b. VERTICAL
(U) 1.7 deg

10. REMARKS (U)

ANTENNA EQUIPMENT CHARACTERISTICS

1. (U) [ ] a. TRANSMITTING [ ] b. RECEIVING [X] c. TRANSMITTING AND RECEIVING

2. NOMENCLATURE, MANUFACTURER'S MODEL NO.
(U) None Assigned (Surface Antenna)

3. MANUFACTURER'S NAME
(U) L3 Communications

4. FREQUENCY RANGE
(U) 14 GHz - 15.35 GHz

5. TYPE (U) Dipole

6. POLARIZATION
(U) Vertical

7. SCAN CHARACTERISTICS

a. TYPE (U) NA

b. VERTICAL SCAN (U)

(1) Max Elev (U) NA

(2) Min Elev (U) NA

(3) Scan Rate (U) NA

c. HORIZONTAL SCAN (U)

(1) Sector Scanned (U) NA

(2) Scan Rate (U) NA

d. SECTOR BLANKING (U) [ ] (1) YES [X] (2) NO

8. GAIN

a. MAIN BEAM
(U) 3 dBi

b. 1st MAJOR SIDE LOBE
(U) NA

9. BEAMWIDTH

a. HORIZONTAL
(U) 360 deg

b. VERTICAL
(U) 42 deg

10. REMARKS (U)

ANTENNA EQUIPMENT CHARACTERISTICS

1. (U) [ ] a. TRANSMITTING [ ] b. RECEIVING [X] c. TRANSMITTING AND RECEIVING

2. NOMENCLATURE, MANUFACTURER'S MODEL NO.
(U) None Assigned (Airborne Antenna)

3. MANUFACTURER'S NAME
(U) L3 Communications

4. FREQUENCY RANGE
(U) 14 GHz - 15.35 GHz

5. TYPE (U) Biconical Dipole

6. POLARIZATION
(U) Vertical

7. SCAN CHARACTERISTICS
a. TYPE (U) NA
b. VERTICAL SCAN (U)
(1) Max Elev (U) NA
(2) Min Elev (U) NA
(3) Scan Rate (U) NA
c. HORIZONTAL SCAN (U)
(1) Sector Scanned (U) NA
(2) Scan Rate (U) NA
d. SECTOR BLANKING (U) [ ] (1) YES [X] (2) NO

8. GAIN
a. MAIN BEAM
(U) 3 dBi
b. 1st MAJOR SIDE LOBE
(U) NA

9. BEAMWIDTH
a. HORIZONTAL
(U) 360 deg
b. VERTICAL
(U) 41 deg

10. REMARKS (U)

APPLICATION FOR SPECTRUM REVIEW	CLASSIFICATION **UNCLASSIFIED**	PAGE 9

NTIA GENERAL INFORMATION

1. APPLICATION TITLE (U) L3 Communications Tactical Common Data Link (TCDL)

2. SYSTEM NOMENCLATURE (U) L3 Communications Tactical Common Data Link (TCDL)

3. STAGE OF ALLOCATION (U)

- [ ] **a. STAGE 1 CONCEPTUAL**
- [ ] **b. STAGE 2 EXPERIMENTAL**
- [X] **c. STAGE 3 DEVELOPMENTAL**
- [ ] **d. STAGE 4 OPERATIONAL**

4. FREQUENCY REQUIREMENTS

a. FREQUENCY(IES) (U) 15.15 GHz - 15.35 GHz 14.4 GHz - 14.83 GHz

b. EMISSION DESIGNATORS (U) (See Remarks)

5. PURPOSE OF SYSTEM, OPERATIONAL AND SYSTEM CONCEPTS **(WARTIME USE)** [X] **a. YES** [ ] **b. NO**

(U) Line of sight (LOS) transmission of intelligence, surveillance, and reconnaisance imagery data from an airborne platform to a ground control station. (See Remarks)

6. INFORMATION TRANSFER REQUIREMENTS (U) 0.2 & 2 Mbps, R=1/2 BPSK; 10.71 & 45 Mbps QPSK; 200 Kbps, R=1/2, DSSS @ 32 Megachips/sec

7. ESTIMATED INITIAL COST OF THE SYSTEM (U) $200,000/surface terminal; $50,000/airborne terminal

8. TARGET DATE FOR

a. APPLICATION APPROVAL	b. SYSTEM ACTIVATION	c. SYSTEM TERMINATION
(U) ASAP	(U) ASAP	(U) NAvail

9. SYSTEM RELATIONSHIP AND ESSENTIALITY (U) Essential for passing imagery and other reconnaisance data from an airborne platform to a ground control station. System interfaces with existing Army and Navy wideband RF data link systems.

10. REPLACEMENT INFORMATION (U) None

11. RELATED ANALYSIS AND/OR TEST DATA (U) None

12. NUMBER OF MOBILE UNITS (U) 5

13. GEOGRAPHICAL AREA FOR

a. STAGE 2 (U) NA

b. STAGE 3 (U) China Lake, CA; Salt Lake City, UT; (See remarks)

c. STAGE 4 (U) Worldwide, (Specific locations not yet determined)

14. LINE DIAGRAM (U) **See Page(s)** 10

15. SPACE SYSTEMS (U) **See Page(s)** NA

16. TYPE OF SERVICE(S) FOR STAGE 4

(U) Aeronautical Mobile

17. STATION CLASS(ES) FOR STAGE 4

(U) FA MA

18. REMARKS (U)

```
Item 4b, Emission Designator: 800KG1D, 8M00G1D, 21M4G1D, 45M0G1D, 64M0G1D
Item 13b, Geographical Area:  Rancho Bernardo, CA; El Mirage, CA;
Patuxent River NAS, MD; Edwards AFB, CA; Ft Huachuca, AZ; and
Fallon NAS, NV.
```

DOWNGRADING INSTRUCTIONS

J/F 12/07834

CLASSIFICATION **UNCLASSIFIED**

UNCLASSIFIED
MILITARY COMMUNICATIONS ELECTRONICS BOARD (MCEB)
EQUIPMENT FREQUENCY ALLOCATION GUIDANCE

Military Department: Air Force AND NAVY
Equipment: L3 COMMUNICATIONS TACTICAL COMMON DATA LINK (TDCL)
Stage: 3, Developmental

Section 1: ENCLOSURE

Enclosure Number: 1
Description: J/F 12/7834
Dated: 18 February 1999

Section 2: OPERATING CHARACTERISTICS FOR WHICH SUPPORT IS CERTIFIED

Frequency (GHz): 14.4 - 14.83, 15.15 - 15.35
Emissions: 800KG1D, 8M00G1D, 21M4G1D, 45M0G1D, 64M0G1D
Power (Mean): 2 Watts
Type of Services: Aeronautical, Mobile
Operating Location: El Mirage, Rancho Bernado, Edwards AFB, and China Lake, CA; Hondo, TX; Patuxent River NAS, MD; Fallon NAS, NV; and Fort Huachuca, AZ

Section 3: MCEB GUIDANCE

1. The subject system is approved for developmental use at the locations listed above subject to the following guidance:

2. For the intended use in the Aeronautical Mobile service, the subject system is in conformance with the National Tables of Frequency Allocations, noting the mobile service has primary status only in the 14.7145-15.1365 MHz band. Outside of the US, the band 14.4-14.5 GHz can not be used for aeronautical mobile operations.

3. Based on the information provided, the equipment does not comply with the requirements of NTIA manual standard section 5.2 part 5.2.2.2. for unwanted emissions. In any instance of harmful interference caused by nonconformance with these provisions, the responsibility for eliminating the harmful interference normally shall rest with the agency operating in nonconformance.

4. The subject equipment complies with the transmitter spurious and harmonic attenuation level requirements of MIL-STD-461E.

5. Operation of the equipment must be coordinated in accordance with ACP 190
US SUPP-1(D), Guide to Frequency Planning.

6. NTIA/SPS coordination was accomplished per SPS-12712 with the following recommendations:
a. Air Force ensure that 800KG1D, 8M00G1D, 21M4G1D, 45M0G1D and 64M0G1D transmissions are brought into compliance with Section 5.2.2.2 of the

NTIA Manual.

b. Air Force take all practicable steps to utilize 14.7145-14.83 GHz where mobile service is primary and to protect the radio astronomy service in the band 14.47-14.5 GHz. Coordinating assignments in the 14.4-14.71445 and 15.15-15.35 GHz bands may be difficult.

c. Air Force ensure that personnel are protected from radiation levels that exceed generally accepted exposure criteria.

Steering Member
J-12 Working Group
MCEB Frequency Panel

Signature:...; Date: 02 MAY 2001

IRAC DOC.: 31842
SPS#: 12712
Downgrading Instructions: NA

Distribution: J-12 Holders

MCEB J-12 Number: J/F 12/7834/1
UNCLASSIFIED

MILITARY COMMUNICATIONS ELECTRONICS BOARD
WASHINGTON, DC 20301

UNCLASSIFIED 5 MAR 2003
NH J/F 12/7834/1
(Agenda Item No. J-12)

NOTE TO HOLDERS
OF
J/F 12/7834/1

L3 Communications Tactical Common Data Link (TCDL)

Holders of subject Air Force document, dated 2 MAY 2001, are requested by the Navy to note the following changes:

Military Department: Add "NAVY".

Steering Member
ESG Working Group
MCEB Frequency Panel

cc: MCEB ESG Distribution List

UNCLASSIFIED NH J/F 12/7834/1

ADMINISTRATIVE INFORMATION PAGE

1. SYSTEM IDENTIFIER: (U) C

2. EQUIPMENT FUNCTION: (U) CD C SQ SV IM PP

3. EQUIPMENT NOMENCLATURE: (U) L3 COMM TACT COMM DA LK (U)
(U) TCDL (U)
(U) (U)
(U) (U)

4. ECI CODE: (U)

5. MCEB USE: (U) D **(C:CONCEP; E:EXPER; D:DEVELOP; O:OPER; N:NOTED)**

6. MCEB LOCATIONS: (U)

COUNTRY	STATE	CITY
USA	CA	EL MIRAGE
USA	CA	RANCHO BERNADO
USA	CA	EDWARDS AFB
USA	CA	CHINA LAKE
USA	TX	HONDO
USA	MD	PAX R. NAS
USA	NV	FALON NAS
USA	AZ	FT. HUACHUCA

7. HOST COUNTRY:

COUNTRY	DATE	MESSAGE DTG
(U)		
(U)		
(U)		
(U)		
(U)		
(U)		
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(U)		
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8. NOTE-TO-HOLDER:
(U) 03-05-2003
(U)
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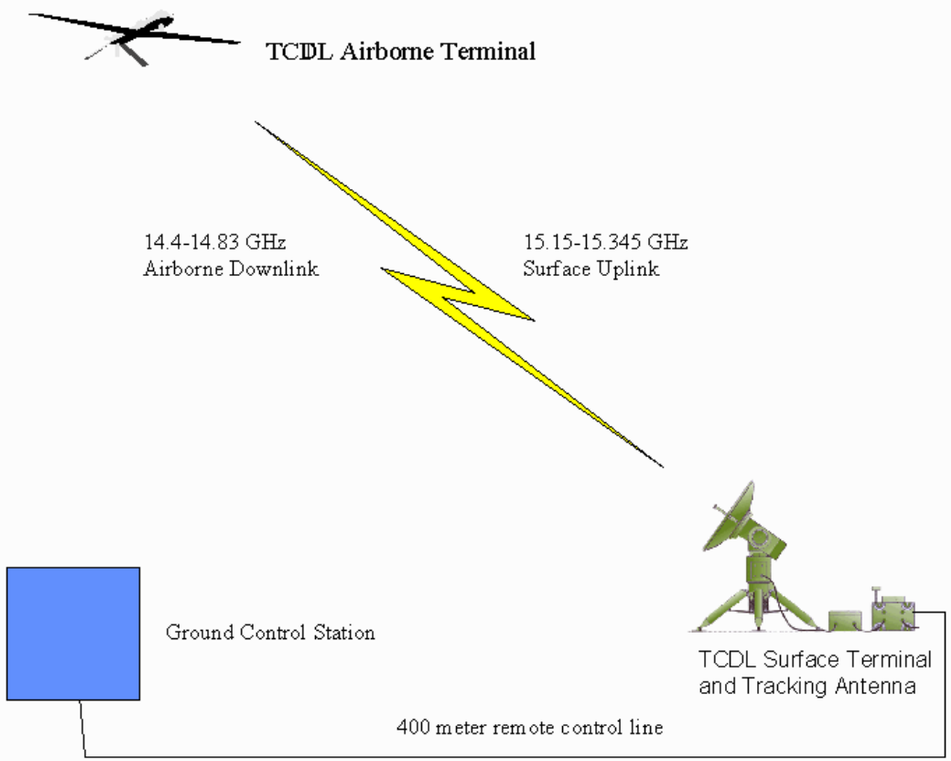
(U)

9. JSC MEMO DATE: (U) 05-02-2001

10. USING AGENCIES: (U) **1:** AF **2:** N **3:**

11. PROCURING AGENCY: (U) AF

12. APPLICATION STATUS: (U) 1 **(1:APPROV; 2:CANCEL; 3:SUPERSE; 4:NOTED; 5:WITHDR; 6:PEND)**

Line Diagram for the L3 Communications Tactical Common Data Link (TCDL)