

TABLE OF CONTENTS

CHAPTER 1 ID LABEL/LOCATION INFO

1.1 Front Panel FCC Label	1-1
1.2 Rear Panel Manufacturer's Label	1-1
1.3 Front view, complete Axcera-LU500ATD Transmitter	1-2
1.4 Rear view, complete Axcera-LU500ATD Transmitter	1-3
1.5 Rear view, Axcera-LU500ATD Transmitter w/FCC and Manuf. Label	1-4

CHAPTER 2 EXTERNAL PHOTOS

2.1 Front view, Axcera-LU500ATD Transmitter.....	2-1
2.2 Rear view, Axcera-LU500ATD Transmitter	2-2
2.3 Side view, Band-pass Filter	2-3

CHAPTER 3 SCHEMATICS

CHAPTER 4 TEST REPORT

4.1 RF Power Measurements	4-1
4.2 Modulation Characteristics	4-2
4.3 Error Vector Magnitude (EVM) and Signal to Noise Ratio (SNR)	4-3
4.4 Frequency Response and Group Delay.....	4-4
4.5 Peak to Average	4-4
4.6 Phase Noise	4-5
4.7 Occupied Bandwidth	4-6
4.8 Conducted Spurious Emissions	4-7
4.9 Radiated Emissions.....	4-10
4.10 Frequency Stability	4-12
4.10.1 Pilot Frequency Measurement.....	4-14
4.11 Test Equipment	4-15

CHAPTER 5 USER'S MANUAL

CHAPTER 6 INTERNAL PHOTOS

6.1 Front view, Chassis Assembly (Exciter)	6-1
6.2 Side view, Digital Modulator Assembly (Exciter)	6-1
6.3 Side view, IF Processor Assembly (Exciter)	6-2
6.4 Side view, VHF/UHF Upconverter Assembly (Exciter)	6-2
6.5 Side view, Control / Power Supply Assembly (Exciter)	6-3
6.6 Side view, Power Amplifier Assembly (Exciter)	6-3
6.7 Front view, Chassis Assembly (Power Amplifier Assembly)	6-4
6.8 Side view, Power Amplifier Assembly (Power Amplifier Assembly)	6-4
6.9 Side view, Power Supply Assembly (Power Amplifier Assembly).....	6-5
6.10 Side view, 4-Way Combiner Assembly (Power Amplifier Assembly)	6-5

CHAPTER 7 PARTS LIST/TUNE-UP INFO

7.1 Parts List	7-1
7.2 Tune-up Information	7-1
7.2.1 Exciter/Amplifier Chassis Assembly	7-1
7.2.2 DM8 - Digital Modulator Module Assembly	7-1

7.2.3 IF Processor Module Assembly	7-2
7.2.4 Linearity Correction Adjustment	7-2
7.2.5 Frequency Response Delay Equalization Adjustment	7-3
7.2.6 Calibration of the Transmitter Forward Output Power Level	7-4
7.2.7 Calibration of the Transmitter Reflected Output Level	7-4
7.2.8 Bandpass Filter Assembly	7-4

CHAPTER 8 OPERATIONAL DESCRIPTION - MODEL Axcera-LU500ATD

8.1 General Description	8-1
8.2 Technical Specifications.....	8-1
8.3 Performance Specifications	8-1
8.4 System Overview	8-2
8.4.1 Exciter Tray / External Amplifier Tray.....	8-2
8.4.1.1 DM8 - Digital Modulator Module (Exciter).....	8-2
8.4.1.2 IF Processor Module (Exciter).....	8-2
8.4.1.3 VHF/UHF Upconverter Module (Exciter)	8-3
8.4.1.4 Control & Monitoring / Power Supply Module (Exciter)	8-4
8.4.1.5 Power Amplifier Module (Exciter)	8-4
8.4.1.6 Power Amplifier Module (External Power Amplifier)	8-5
8.4.1.7 Power Supply Module (External Power Amplifier)	8-6
8.5 Control and Status	8-7
8.5.1 Exciter Tray.....	8-7
8.5.2 External Power Amplifier Tray	8-10
8.6 Input and Remote Connections	8-12
8.6.1 Remote Interface Connections (Exciter Tray)	8-12
8.6.2 Remote Interface Connections (External Power Amplifier Tray)	8-12
8.7 AC Input	8-12
8.7.1 Exciter Tray.....	8-12
8.7.2 External Power Amplifier Tray	8-13
8.8 System Operation	8-13
8.8.1 Principles of Operation	8-13

CHAPTER 9 CERTIFICATION OF TEST DATA

TRAK SYSTEMS MODEL 8821 DATASHEET	SHEET 1
TRAK SYSTEMS MODEL 8821 DATASHEET	SHEET 2
CRYSTEK CORP. DATASHEET	SHEET 1