

TABLE OF CONTENTS**CHAPTER 1 INTRODUCTION**

1.1 Manual Overview	1-1
1.2 Safety	1-1
1.3 Maintenance	1-2
1.4 Material Return Procedure	1-2
1.5 Warranty for Broadcast Products – Limited One-Year Warranty	1-3

CHAPTER 2 SYSTEM DESCRIPTION

2.1 420A System Overview	2-1
2.1.1 Exciter Section	2-1
2.1.2 Upconverter Section	2-2
2.1.3 Amplifier Section	2-2
2.1.4 Bandpass Filter Assembly	2-3
2.1.5 Operational Voltages	2-3
2.1.6 Configuration of the Power Entry Module AC Input	2-3
2.1.7 Control and Status	2-4
2.1.8 Input and Remote Connections	2-7

CHAPTER 3 INSTALLATION AND SETUP PROCEDURES

3.1 Site Considerations	3-1
3.2 Unpacking the Cabinets and Trays	3-4
3.3 Installation of the Trays Not Supplied With the Cabinet	3-5
3.4 Setup and Operation Procedures	3-7

CHAPTER 4 DETAILED ALIGNMENT PROCEDURES

4.1 Alignment of the 420A Transmitter	4-1
4.1.1 Baseband Section	4-1
4.1.2 IF/Converter Section	4-2
4.1.3 Amplifier Section of the Tray	4-2
4.1.4 Linearity Corrector Adjustment	4-3
4.1.5 IF Phase Corrector Adjustment	4-3
4.1.6 Calibration of the Output Power Level	4-4
4.2 Board Level Alignment Procedures	4-5
4.2.1 (Optional) 4.5 MHz Composite Input Kit	4-5
4.2.2 Delay Equalizer Board	4-5
4.2.3 Composite 4.5 MHz Filter Board	4-6
4.2.4 (Optional) 4.5 MHz Bandpass Filter Board	4-5
4.2.5 IF Carrier Oven Oscillator Board	4-6
4.2.6 Sync Tip Clamp/Modulator Board	4-6
4.2.7 Aural IF Synthesizer Board, 4.5 MHz	4-8
4.2.8 ALC Board (Part 1 of 2)	4-9
4.2.9 IF Phase Corrector Board	4-10
4.2.10 ALC Board, NTSC (Part 2 of 2)	4-10
4.2.11 Channel Oscillator Board	4-11
4.2.12 x4 Multiplier Board	4-11

TABLE OF CONTENTS (continued)

4.2.13 Filter/Mixer Board	4-11
4.2.14 Filter/Amplifier Board, High Output	4-12
4.2.15 High-Band Amplifier Boards	4-12
4.2.16 Frequency Adjustment of the High Band Amplifier Boards	4-12
4.2.17 Overcurrent Protection Board	4-13
4.2.18 Visual/Aural Metering Board	4-13
4.2.19 +12 VDC/-12 VDC Power Supply Board	4-13
4.2.20 Output Coupler Board	4-13

APPENDICES

APPENDIX A ASSEMBLY DRAWINGS
APPENDIX B SUBASSEMBLY SCHEMATICS

LIST OF FIGURES

3-1	1 kW Minimum Ventilation Configuration.....	3-4
3-2	Chassis Trak Cabinet Slides	3-5
3-3	Cabinet Mounting Diagram	3-6
4-1	Waveform.....	4-7

LIST OF TABLES

2-1	Meters.....	2-5
2-2	Switches.....	2-6
2-3	Adjustments	2-6
2-4	Control Indicators.....	2-7
2-5	Status Indicators	2-7
2-6	Samples	2-7
2-7	Remote Interface Connections	2-8
4-1	ALC Board LEDs	4-9