

CONTENTS

1. Introduction	5
2. System Functionality	5
2.1 Echo Cancellation	5
2.2 Central Office Balance	6
3. Requirements	7
3.1 Transmission Performance	7
3.1.1 Delay Distortion	7
3.1.2 Attenuation Distortion	7
3.1.3 Group Delay	7
3.1.4 Transmission Delay	7
3.2 Echo Canceler Performance	8
3.2.1 General	8
3.2.2 Steady State Residual and Returned Echo Level	8
3.2.3 Convergence	8
3.2.4 Performance Under Conditions of Double Talk	9
3.2.4.1 Double Talk Detector Tolerance	9

5.4 Control of Nonlinear Processor Activation 14

5.4.1 Introduction 14

5.4.2 Static Characteristics of Activation Control 15

5.4.3 Dynamic Characteristics of Activation Control 15

3.2.4.2 Double Talk Detector Sensitivity and Speed	9
3.3 Leak Rate	10
3.4 Infinite Return Loss Convergence	10
3.5 Stability	10
4. Tone Disabler	11
4.1 General	11
4.2 Disabler Characteristics	11
4.3 Tone detection	11
4.4 Guard Band Characteristics	12
4.5 Holding Band Characteristics	12
4.6 Operate Time	12
4.7 False Operation Due to Speech Currents	13
4.8 False Operations Due to Data Signals	13
4.9 Release Time	13
5. Nonlinear Processor	13
5.1 Introduction	13
5.2 Limitations	14
5.3 Suppression Threshold	14