Table of Contents

Navigation ii

Table of Contents iii

Tables vi
Figures vi

1 Introduction 1

The MP2128^{LRC2} System 1
Order Options 1
Software Requirements 1
Remote Unit 2
LRC Base (Ground Unit) 2
Contents of the Full LRC Package 3
MP2128^{LRC} System Concept 3
Priority of Control 4

2 LRC Remote Unit - Installation 7

Mounting 7
Weights and Overall Dimensions 8
IMU Location 9
Power 9
MP2128$^{LRC2/Duo}$ Remote Unit 9
Remote Current 9
AGL Power 10
Servo Power input 11
Connecting your LRC2 Remote 11
MP2128 LRC2 12
Connectors 13
Front Harness 14
Rear Harness 16
Relay Outputs & ADC Inputs 16
High Current Drivers (Relays) 16
ADC Inputs 19

3 LRC Base Unit 21

Weight and Overall Dimensions 21
Power 22
Connectors 22
Connecting the LRC Base Unit 22
Caution ! Trainer Cable 25

4 LRC Base Configuration 27

Before you Start 27

Mixing 27
Arcade Mode Not Always Usable with Earlier Firmware 28
Switching Between Arcade Mode & CIC-UAV Mode 28
Other Notes 29
Configuring the LRC Base using the LRC Base Unit Configuration Plugin 30
LRC Base Microcontroller Baud Rate Setting 32
Secondary Port Configuration 33
Using an External Base Modem 34
Accessing Internal Modems for Programming 34
Configuring your LRC Transmitter / Controller 35
LRC Transmitter CH5 Pulse Width 35
Restore Normal Base settings 38
Check the CIC/PIC Switching 38
RC Transmitter CH5 Pulse Width 39
Configuration for MP2128^{HELI} LRC 40

5 Communicating with Your LRC Remote 43

Communicating Directly with the Autopilot by Serial Cable 43
Communicating Over Modems, Using the LRC Base 43
Using HyperTerminal 43
Using HORIZON^{mp} 45

6 LRC Remote Configuration 47

Configuring your MP Autopilot for LRC Operation 47
Failure Response Modes 49
Configuring the LRC Remote unit 49
Configuration Settings 51
Modems 52

7 Operation 53

Control Modes 53
Priority of PIC Control & other Control Methods 53
LRC Status Monitoring 54
Base Radio Modem Status LEDs 55
MP2128^{LRC2} Remote Status LEDs 56
Pre-flight Checks 57
Horizon LRC Status 58

8 Advanced Topics 63

Auxiliary Serial Port(s) 63
Configuring the Auxiliary Serial Ports 64
General Purpose I/O Port 65
Using an MP-Dayview Camera with the MP2128^{LRC2} 66
Connect the MP-Dayview 66
Using a BOB Video Overlay Board with the MP2128$^{LRC/2}$ 66
Enabling Video Overlay Data on the GPIO Connector 66
Connecting a Video Overlay Board to Your MP2128^{LRC2} 68
Using an MP Novatel Remote GPS Receiver with the MP2128^{LRC2} 68
Loading Autopilot Firmware 69

9 Appendix 70

Compass 70
RC Transmitters 71
CH5 Pulse Width 71
Failsafe Receivers 72
DSC/Trainer Cable Adapters 72
Length of the DSC/Trainer Cable 72
PPM Encoder 72
Other Information 73
Technical Support 73
Troubleshooting 73
HyperTerminal Communication 73
LRC Remote 73
Troubleshooting LRC-PIC control 74
HORIZON^{mp} 75