

# Model APS-105 OptoLinx Command Set

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## **Communication parameters:**

DATA RATE: 9600 BPS  
START BITS: 1  
DATA BITS: 8  
PARITY: NONE  
STOP BITS: 1  
MODE: Half Duplex - TTL

## **CI-V Address:**

Unit will internally set for an interface address of 98 hex.

## **Command Set Summary:**

### Primary Commands:

03h - Read Manual Center Frequency  
05h - Program Manual Center Frequency

### Secondary Commands:

7Fh 00h - Initiate Sweep  
7Fh 80h - Abort Sweep  
  
7Fh 01h - Pause Sweep  
7Fh 81h - Resume Sweep  
  
7Fh 02h - Program Sweep Start Frequency  
7Fh 82h - Read Sweep Start Frequency  
  
7Fh 03h - Program Sweep Stop Frequency  
7Fh 83h - Read Sweep Stop Frequency  
  
7Fh 04h - Program Sweep Rate  
7Fh 84h - Read Sweep Rate  
  
7Fh 05h - Enable Battery Charger  
7Fh 85h - Disable Battery Charger

### MISC Commands:

7Fh 06h - FUTURE  
7Fh 07h - Read Analog to Digital Converter Voltages  
7Fh 08h - FUTURE  
7Fh 09h - Request Identification Information

# Model APS-105 OptoLinx Command Set

## *Command Set Details:*

### **SET MANUAL FREQUENCY - Program the Center Frequency**

Structure: FE FE Radr Tadr 05 bcd3 bcd2 bcd1 bcd0 FD

BCD3 - BCD0 REPRESENT THE FREQUENCY IN MHz

EX:

PROGRAM - 550 MHz  
FE FE Radr Tadr 05 00 05 05 00 FD

PROGRAM - 1000 MHz  
FE FE Radr Tadr 05 01 00 00 00 FD

Response:

OK: FE FE Radr Tadr FB FD  
ERR: FE FE Radr Tadr FA FD

### **READ MANUAL FREQUENCY - Read the Center Frequency**

Structure: FE FE Radr Tadr 03 FD

Response:

OK: FE FE Radr Tadr bcd3 bcd2 bcd1 bcd0 FB FD

BCD3 - BCD0 REPRESENT THE FREQUENCY IN MHz

Example:

FE FE Radr Tadr 00 05 05 00 FD  
550 MHz

FE FE Radr Tadr 01 00 00 00 FD  
1000 MHz

ERR: FE FE Radr Tadr FA FD

# Model APS-105 OptoLinx Command Set

## ***Command Set Details:***

### **INITIATE SWEEP - Enables Sweep Process starting from the start frequency**

Structure: FE FE Radr Tadr 7F 00 FD

Response:

OK: FE FE Radr Tadr FB FD

ERR: FE FE Radr Tadr FA FD

### **ABORT SWEEP - Aborts Sweep Process and returns unit to the Manual Entry Mode**

Structure: FE FE Radr Tadr 7F 80 FD

Response:

OK: FE FE Radr Tadr FB FD

ERR: FE FE Radr Tadr FA FD

### **PAUSE SWEEP - Temporarily PAUSES Sweep Process**

Structure: FE FE Radr Tadr 7F 01 FD

Response:

OK: FE FE Radr Tadr FB FD

ERR: FE FE Radr Tadr FA FD

### **RESUME SWEEP - Resumes Sweep Process from last Frequency**

Structure: FE FE Radr Tadr 7F 81 FD

Response:

OK: FE FE Radr Tadr FB FD

ERR: FE FE Radr Tadr FA FD

# Model APS-105 OptoLinx Command Set

## *Command Set Details:*

### **SET START FREQUENCY - Program the Sweep Start Frequency**

Structure: FE FE Radr Tadr 7F 02 bcd3 bcd2 bcd1 bcd0 FD

BCD3 - BCD0 REPRESENT THE STARTFREQUENCY IN MHZ

EX:

PROGRAM - 10 Mhz

FE FE Radr Tadr 7F 02 00 00 01 00 FD

PROGRAM - 100 Mhz

FE FE Radr Tadr 7F 02 00 01 00 00 FD

Response:

OK: FE FE Radr Tadr FB FD

ERR: FE FE Radr Tadr FA FD

### **READ START FREQUENCY - Read the Sweep Start Frequency**

Structure: FE FE Radr Tadr 7F 82 FD

BCD3 - BCD0 REPRESENT THE START FREQUENCY IN MHZ

Response:

OK: FE FE Radr Tadr bcd3 bcd2 bcd1 bcd0 FB FD

Example:

FE FE Radr Tadr 00 00 01 00 FB FD

10 Mhz

FE FE Radr Tadr 00 01 00 00 FB FD

100 MHz

ERR: FE FE Radr Tadr FA FD

# Model APS-105 OptoLinx Command Set

## *Command Set Details:*

### **SET STOP FREQUENCY - Program the Sweep Stop Frequency**

Structure: FE FE Radr Tadr 7F 03 bcd3 bcd2 bcd1 bcd0 FD

BCD3 - BCD0 REPRESENT THE STOP FREQUENCY IN MHZ

EX:

PROGRAM - 900 Mhz  
FE FE Radr Tadr 7F 03 00 09 00 00 FD

Response:

OK: FE FE Radr Tadr FB FD

ERR: FE FE Radr Tadr FA FD

### **READ STOP FREQUENCY - Read the Sweep Stop Frequency**

Structure: FE FE Radr Tadr 7F 83 FD

BCD3 - BCD0 REPRESENT THE STOP FREQUENCY IN MHZ

Response:

OK: FE FE Radr Tadr bcd3 bcd2 bcd1 bcd0 FB FD

Example:

FE FE Radr Tadr 00 09 00 00 FB FD  
900 MHz

ERR: FE FE Radr Tadr FA FD

## Model APS-105 OptoLinx Command Set

### *Command Set Details:*

#### **SET SWEEP SPEED - Program the Sweep Speed**

Structure: FE FE Radr Tadr 7F 04 bcd0 FD

Where bcd0 represents:

00	1 Mhz/Sec
01	10 Mhz/Sec
02	100 Mhz/Sec

Example:

PROGRAM - 10 Mhz/Sec  
FE FE Radr Tadr 7F 04 01 FD

Response:

OK: FE FE Radr Tadr FB FD  
ERR: FE FE Radr Tadr FA FD

#### **READ SWEEP SPEED - Read the Sweep Speed**

Structure: FE FE Radr Tadr 7F 84 FD

Response:

OK: FE FE Radr Tadr bcd0 FB FD

Where bcd0 represents:

00	1 Mhz/Sec
01	10 Mhz/Sec
02	100 Mhz/Sec

Example:

FE FE Radr Tadr 02 FB FD  
100 MHz/Sec

ERR: FE FE Radr Tadr FA FD

## Model APS-105 OptoLinx Command Set

### *Command Set Details:*

#### **ENABLE BATTERY CHARGER – Turn ‘ON’ the Battery Charger**

Structure: FE FE Radr Tadr 7F 05 FD

Response:

OK: FE FE Radr Tadr FB FD

ERR: FE FE Radr Tadr FA FD

#### **DISABLE BATTERY CHARGER – Turn ‘OFF’ the Battery Charger**

Structure: FE FE Radr Tadr 7F 85 FD

Response:

OK: FE FE Radr Tadr FB FD

ERR: FE FE Radr Tadr FA FD

# Model APS-105 OptoLinx Command Set

## *Command Set Details:*

### **REQUEST IDENTIFICATION INFORMATION**

Structure: FE FE Radr Tadr 7F 09 FD

Response:

OK: FE FE Radr Tadr Id Sv Rv Iv FB FD

Where:

Id = Unique Product Identification ID ( 75 hex for the APS105)

Sv = Current Software Revision (ex. 20 = Software Revision 2.0)

Rv = Current Board Revision (ex. 10 = RF Board Revision 1.0)

Iv = Current Interface Revision( N/A in the APS105 – always 0)

ERR: FE FE Radr Tadr FA FD