MAINTENANCE MANUAL BYPASSING MAPPING MODULE

ROA 117 2277

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SPECIFICATIONS

Bypass Mapping	24 Channels
Split System Operation	Bypass/Non-Bypass
Connectors J1 J2	50 Pin 6 Pin
Switches	S1, S2 & S3

NOTE

Repairs to this equipment should be made only by an authorized service technician or facility designated by the supplier. Any repairs, alterations or substitution of recommended parts made by the user to this equipment not approved by the manufacturer could void the user's authority to operate the equipment in addition to the manufacturer's warranty.

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DESCRIPTION

Bypass Mapping Module ROA 117 2277 establishes a bypass buss and provides a simplified method of establishing and testing split system operation in GPS Simulcast system. The split system function is accomplished using switches S1-S3 to select which channels are to be used in bypass mode.

This module mounts to GPS Simulcast Transmit Rack Interface Panel 19D903881P2. This panel mounts in the rear of the Transmit Site transmit rack.

SYSTEM ARCHITECTURE

Reset lines (*Per Station Reset*) and bypass lines (*Per Station Bypass*) for each channel (*CH01-CH24*) connect by cable from the Bypass Mapping Module, connector J1 to Station Cross Connect Panel B404, connector J23 to (*Figure 1*). The even numbered pins of J1 connect all

bypass lines together to form a single bypass buss. This buss connects to connector J2, Pins 2 & 3. The odd numbered pins of J1 (*Per Station Reset lines*) connect through switch packages S1, S2 & S3 to a common Split System line connected to connector J2, Pins 4 & 5. A cable carrying the Bypass buss and Split System lines connects between J2 and Alarm Cross Connect Panel B403, J46. These signal lines are routed through the Alarm Cross Connect from connector J21 to connector J46. A cable further connects these lines from Sync Shelf T800 connector J23 to J21. The Synch Shelf connects the Bypass buss and Split System line to the Bypass Module plugged into slot #19.

Bypass and Split System Enable signals originate on the Bypass Module in the Sync Shelf and flow to the Bypass Mapping Module then to the Station Cross Connect panel (*Refer to Sync Shelf Maintenance Manual AE/LZB 119 1903 R1A*).



Figure 1 - Bypass Mapping Module (GPS Simulcast Transmit Site, Simulcast Rack)

CIRCUIT ANALYSIS

The Bypass signal (active low) enters the Bypass Mapping Module on connector J2, Pins 2 & 3 and is bussed to all even numbered pins on connector J1 (*refer to Schematic Diagram*). The Split System signal enters the board on J2, Pins 4&5 and is bussed to switches S1, S2 and S3. Closing switch positions on S1, S2 and S3 passes the Split System signal to odd numbered pins of J1.

ENABLING SPLIT SYSTEM

Split system operation is enabled by placing switch S1 (SPLIT SYS), on the front panel of the Sync Shelf Bypass Module, in the ENBL position. This lights the yellow SPLIT SYSTEM ENABLED INDICATOR DS8. Though enabled, split system operation will not become active (i.e., J1 C16 Split System enable will not go low) until the module is in the bypass mode. When S1 SPLIT SYS is in the ENBL position, and bypass is active, open collector inverter U1, Pins 2&4 both are logic high and J1, Pins C16 and C26 are low. This low is passed on to the Mapping Module.



Figure 2 - Bypass Module Signal Generation

CONFIGURING SPLIT SYSTEM

Split system programming is accomplished by programming station GETC's. However, switches S1 through S3 on the Bypass Mapping Module allow the split system configuration to be designed, set up and tested manually for each transmit site before programming each station GETC. Switch S1 controls channels 1 through 8. Switch S2 controls channels 9 through 16 and switch S3 controls channels 17 through 24 (*Figure 3*). Set the

switches for channels to be used in bypass operation. The remaining channels will not be used in bypass. Once the desired configuration has been achieved, program the Station GETC's. Then open the Split Sys Enable switch on the Bypass Module (i.e. place switch in the DISABLE position).



Figure 3 - Split System Switches

PARTS LIST

Symbol	Part Number	Description
S1 thru S3	RMF 356 004/08	SWITCHES
J1 J2	RPV 403 143/050 RNV 403 04/6	CONNECTORS 50 Pin Header. 6 Pin Telephone Modular Jack.



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