Secret [redacted]

8/14/62 Dix

120 - 121 COMMAND SYSTEM OPERATION

Operation of the command system is best understood by referring to the Command System diagram for 120 and 121.

For added reliability, two independent command receivers are used operating on frequencies separated by at least 100 KCS. Each receiver output is connected to four series tuned filters. Receiver #1 supplies a signal to filters A, B, C, and D. Receiver #2 supplies a signal to filters E, F, G, and H. F G E H

The amplitude modulated command carrier is detected in the receiver, and after passing through the selective filter, the audio signal is rectified, amplified, and applied as a forward bias on the relay drive transistor. Each relay drive transistor will accept a signal from either command receiver through its associated selective amplifier.

The following table summarizes the command system operation:

Tone or tone sequence	System activated
A or F	ARM relay ON, Xmtr #1 and #2 ON, TIMER ON 7
2395 — (A) or F, then B or G	ARM, Xmtrs, (I) & II ON 10, 11 (1W, 2W)
A or F, then C or E	" " II & III ON 11, 12 (2W, 1W)
A or F, then D or H	" " III & IV ON 12, 13 (1W, 2N)
A or F, then B or G, then C or E	" " (I) & III ON — 10, 12 (1N, 1W)
A or F, then C or E, then D or H	" " II & IV ON 11, 13 (2W, 2N)
A or F, then B or G, then D or H	" " (I), II, III & IV ON 10, 11, 12, 13 (1N, 2W, 1W, 2N)
A or F, then B or G, then C or E, then D or H	" " (I) & IV ON 10, 13 (1N, 2N)
	ARM, Xmtrs, I, II, III & [illegible]
B & C chopped	ARM, Xmtrs, I, II, III, & IV OFF and telemetry Xmtr ON
E & G Chopped	ARM, Xmtrs, I, II, III, & IV OFF and telemetry Xmtr ON
D or H → 2300	Telemetry Xmtr OFF (If A or E has not been sent!)

01A (5) 120 { I = B.244 136.318 30mw; 2 = C.843

01B (4) 121 { 1 = B.444 136.890 100mw; 2 = C.844

1860 Van Allen 2W

Track
5/1 I = D = #1N = BN
7/3 II = B = #2W = BW
5/1 III = A = #1W = BW
IV = C = #2N = CN

B-4	26	32	2	27
B-2	320	480	320	390
B-1	192	257	115	200
B-3	570	720	510	[illegible]