

DIST:- RANLO DP SE SSE SER AGR FILE(30/4/42)

DSD	FILE	FOLIO
30	4	42 36

RR [REDACTED]

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RR [REDACTED]

DE [REDACTED] 00049 2750405

ZNY MMNSH

[REDACTED]
R 010404Z OCT 80

FM DSD

TO [REDACTED]

INFO DEFNAV CANBERRA

ZEM

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DEFNAV FOR DCPD

AIKEN MULTICOUPLER

REFS: A. [REDACTED] 100350Z AUG 79

B. DSD 150920Z MAY 80

C. [REDACTED] 120711Z SEP 80

— F 31
— F 32
— F 34

1. VIDE REF A AN AIKEN MULTICOUPLER WAS FORWARDED FOR INVESTIGATION OF SECOND ORDER INTERMODULATION PERFORMANCE. REF B ADVISED THAT DUE TO OTHER WORK COMMITMENTS, IT WAS NOT POSSIBLE TO CONDUCT TESTS. REF C REQUESTS CURRENT STATUS OF INVESTIGATION.

2. A PRELIMINARY INVESTIGATION HAS REVEALED THAT THE MULTICOUPLER IS UNSERVICEABLE. UNSERVICEABILITIES FOUND INCLUDE FAULTY POWER SUPPLY, TWO OF THE FOUR DISTRIBUTION AMPLIFIERS ARE FAULTY AND A TRANSISTOR IS MISSING FROM ONE OF THE DISTRIBUTION AMPLIFIERS. CONSENSUS IS THAT MULTICOUPLER PROBLEM IS PROBABLY DUE TO FAULTY OR MISMATCHED TRANSISTORS. REPAIR OF THE MULTICOUPLER WAS CONSIDERED BUT HAS BEEN DISCOUNTED BECAUSE NO HANDBOOKS OR SPARE

TRANSISTORS ARE HELD, LEADTIME TO OBTAIN TRANSISTORS IS QUOTED AT 12 WEEKS ARO AND, ON PRESUMPTION THAT TRANSISTORS SHOULD BE DYNAMICALLY MATCHED, REASONABLE QUANTITIES (10-12) OF TYPES 2N5161 AND 2N5090 WOULD BE NEEDED AT UNIT COSTS OF \$10.94 AND \$12.31 RESPECTIVELY. IN THE CIRCUMSTANCES, IT WAS CONSIDERED UNWISE TO ATTEMPT REPAIRS WHICH WOULD NECESSARILY INCUR FURTHER LENGTHY DELAYS. THEREFORE ARRANGEMENTS ARE NOW BEING MADE TO RETURN THE MULTICOUPLER.

3. SUGGEST THAT INVESTIGATION OF THE MULTICOUPLER PERFORMANCE BE DEFERRED UNTIL NECESSARY DSD TECHNICAL EFFORT IS AVAILABLE (WHICH WILL BE SOME TIME OFF) OR ALTERNATIVELY YOU MAY WISH TO CONSIDER OTHER ARRANGEMENTS. PLEASE NOTE THAT SPECIAL TEST ARRANGEMENTS ARE NECESSARY TO INVESTIGATE INTERMODULATION PROBLEMS IN DEPTH BECAUSE OF THE DISTORTION PRODUCTS USUALLY PRESENT IN THE OUTPUT OF SIGNAL GENERATORS.

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