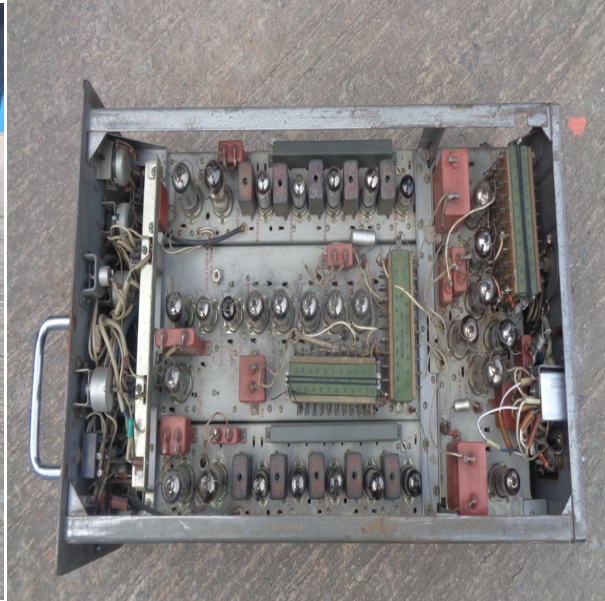


UNIT-27(PTPC AMPLIFIER)

1	Nomenclature/ Part No./ GIG No	Unit-27 / ZHG2.068.014 SP/ 123289
2	Year of Procurement/Source	1980/ OEM (Ex-Russia)
3	Fleet/ Sub system/ Weapon system	P-18 Radar/ MTI/ P-GW
4	Technical Applicability/ Broad Purpose	Pulse to pulse cancellation and amplification of echo signal for MTI processing and Amplitude channel processing.
5	Technical specifications	As Attached
6	Publication Details	TD of P-18 Radar
7	Photograph of equipment	As attached
8	Brief description	Pulse to pulse cancellation and amplification of echo signal for MTI processing and Amplitude channel processing. Facilitates checking of various parameters of complete MTI system.
9	Classification of Equipment- LRU/Testers/Ground Equipment/Role Equipment (Electrical/Electronics/Mechanical/Software based etc.)	Electronics based
10	Previous repair history	06 in last 02 years. 05 MOG repairs other than core equipment.
11	Criticality (Priority I/II/III)	Critical
12	Requirement: Repair or Indigenization or both	Repair & Indigenization both
13	Quantity required (one time/annual)	(01 (Prototype)+03)/--
14	Sample Availability	Yes
15	Scale/ Deficiency	Nil
16	If deficient- How deficiency is being plugged?	N/A
17	Draft QTS with major testing	
18	SPOC details item/fleet wise	SPE ISC, 7BRD, AF
19	Any other relevant information.	High failure rate.



UNIT-27

TECHNICAL SPECIFICATIONS OF UNIT-27

(PULSE TO PULSE CANCELLATION AMPLIFIER)

SL NO	PARAMETER	REQUIREMENT	REMARKS
1	Input circuit resonance frequency, MHz MFA-I MFA-II With input circuit, bandwidth, KHz, min. MFA-I MFA-II Gain factor, times, min.: MFA-I MTI MTI+NPJS MFA-II	 6 ± 0.03 6 ± 0.03 250 250 30,000 50,000 50,000	
2	Minimum reference voltage, V, min.	5	
3	Gain factor of the 1 st video preamplifier, times, min.	20	
4	Gain factor of the 2 nd video preamplifier, times, min.	20	
5	CLUTTER GATE pulse minimum duration, μ s	0 to 33	

6	CLUTTER GATE pulse maximum duration, μs	1500 \pm 200	
7	Window Gate pulse shaping	Shapes the WINDOW GATE pulses when signals with duration of 25 \pm 10 μs are applied to the unit input.	
8	Amplitude of test pulses at input I and II of tube 1, V (U1)	U1	
9	Amplitude of test pulses at input I and II of tube 2, V (U2)	2U1	
10	Amplitude of test pulses at output of coherent channel, V, min.: MTI MTI+NPJS	5 5	
11	Long duration pulse droop, %	15	
12	Test pulse suppression factor, times, min.: T-I+ T-II T-I T-II	60 8 12	
13	Non-synchronous jamming signal suppression factor, times, min.: MTI MTI+NPJS coherent channel MTI+NPJS	10 10 10	
14	Coherent channel noise level variation, %, max	20	
15	All zone noise clipping	Noise equalization over the entire zone when changed from MGC to NAGC and vice versa.	
16	Switching of output signal	Correct switching of output signal	
17	Potentiometer margin, degrees	$\pm 20^0$	Potmeter Controls: PHASE, COHERENT OUTPUT, NSJS COMPENSATION, MFA-I, INPUT TUBE-II, INPUT TUBE-I,

			NAGC LEVEL, AUTO GATE MIN. LIMIT
18	Trigger pulse amplitude	60V min. 150 max	
19	Supply voltage variation	Should withstand ±10% variation	
20	Input supplies:	6.3 V AC +300V +200V -150V	Filament
22	Connectors:		
	SHA 1	1 - chassis 2 - 6.3V AC 3 - 6.3V AC 4 - +200V 5 - +300V 6 - TEST PULSES 7 - 150V 8 - 6.3V AC 9 - 6.3V AC 10 - MODE OF OPERATION 11 - MODE OF OPERATION	Blade-type connector (Part No. UTS3.656.001SP)
	SHA 2	1 - chassis 2 - OUTER ZONE MODE 3 - MONITORING SIGNAL 4 - - ECHO SIGNAL 5 - +ECHO SIGNAL 6 - INPUT FROM PHASE DETECTOR 7 - E-L 8 - +ECHO (OUTPUT) 9 - TRIGERRING 10 - BLANK 11 - CLUTTER GATE	Blade-type connector (Part No. UTS3.656.001SP)
	F1 F2 F3	CLUTTER GATE VIDEO SIGNAL TO 1 ST TUBE MFA SIGNAL	F2, F3, F5 & F6 BNC female connectors (Part No. SR-50-

	F4 F5 F6	FROM 1 ST TUBE REFERENCE SIGNAL MFA SIGNAL FROM 2 ND TUBE VIDEO SIGNAL TO SECOND TUBE	73FB) F1, F4 Blade connectors (Part No. UTS3.640.039 SP)
23	Dimension: LXBXH Front Plate LXB Thickness	55 Cm X 15 Cm X 27.5 Cm 35 Cm X 17.2 Cm 3 mm	
24	Material	Aluminum	
25	Colour	Silver (Metallic)	