

Interphone Equipment AN/AIC-2, an airborne multiplace interphone system operating on 24 volts d.c., is designed for use in medium and heavy bombardment aircraft. It provides for interphone communication between crew positions and switching facilities for partial control of three radio sets and one additional radio receiver. Interphone Amplifier AM-26/AIC provides adjustable gain control and power output levels adequate for operation of as many as 15 headsets at altitudes up to 40,000 feet.

Based on extensive laboratory and flight tests, it was determined that for an interphone amplifier to be used at 35,000 feet in conjunction with a carbon oxygen mask Microphone ANB-M-C1 and a low impedance Headset HS-38, the over-all voltage gain should be approximately 30 db for the best articulation results. Furthermore, with this gain provided, it was found that the amplifier should have a power output capability of at least 200 milliwatts per headset to prevent distortion of speech peaks.

As a result of these tests, AM-26/AIC was designed to provide sufficient gain and power output to compensate for these natural losses in the levels of speech, thereby increasing the ease and intelligibility of interphone communications at high altitudes. The new amplifier has a power output up to 4 watts and an increase in voltage gain of 16 db over that of Interphone Amplifier BC-347-C. It is provided with an initial gain of approximately 16 db, and provision for obtaining 16 db. additional gain in three steps, each step corresponding roughly to the gain required for the different altitudes. The settings on the gain control is left to the discretion of the crew but the suggested settings of the gain control switch for various altitudes are given on the amplifier.

AM-26/AIC is being introduced in medium and heavy bombardment type aircraft as part of Interphone Equipment AN/AIC-2 to replace Interphone Equipment RC-36. In addition to the new amplifier, the AN/AIC-2 equipment includes Microphone Switch SA-26/U, which mounts on machine guns and other convenient parts of equipment that are used by the navigator, radio operator, etc.

Interphone Amplifier AM-26A/AIC is the same as AM-26/AIC except that it contains Automatic Gain Control C-158/AIC and incorporates several minor mechanical and electrical changes.

Test equipment required for maintenance includes general purpose test equipment such as multimeters and tube testers.

Army Supply Program requirements as of 26 December 1944 were for 39,567 for the calendar year 1944, and 20,306 for 1945.

POWER INPUT	30 WATTS @ 28 VOLTS D.C.
POWER OUTPUT	AM-26/AIC 4 WATTS MAX.
FREQUENCY	AUDIO
TYPE OF SIGNAL	VOICE

TUBE COMPLEMENT			
NO.	TYPE	NO.	TYPE
2	12J5GT	2	12A6



Interphone Amplifier AM-26/AIC

INTERPHONE EQUIPMENT AN/AIC-2

TOTAL WEIGHT 22 LBS.

Component	Nomenclature	Size	Weight
Interphone Amplifier	AM-26/AIC	5" x 5" x 10"	8 Lbs.
Mounting	MT-28/ARN-5	2" x 5" x 10"	2 Lbs.
Remote Gain Control	C-97/AIC-2	3" x 3" x 2"	1 Lb.
Jack Box	BC-1366 (10 each)	5" x 4" x 3"	1 Lb.
Microphone Switch	SA-26/U (5 each)	3" x 1" diam.	1 Lb.
Dynamotor	DM-32-A	5" x 3" x 3" (mounted on AM-26/AIC)	3 Lbs.

and includes plugs, cordage and jacks.
March 1945