

10 APR. 1963

TM 11-5040

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TECHNICAL MANUAL

POWER SUPPLIES PP-281/GRC, PP-281A/GRC, PP-282/GRC, PP-282A/GRC, PP-448/GR, AND PP-448A/GR

TM 11-5040 }
CHANGE No. 4 }

HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON 25, D.C., 11 February 1960

TM 11-5040, 29 November 1950, is changed as indicated so that the manual also applies to the following equipment:

Nomenclature	Order No.	Serial No.
Power Supply PP-448A/GR...	39170-PP-58	1-55

Change the title of the manual to: **POWER SUPPLIES PP-281/GRC, PP-281A/GRC, PP-282/GRC, PP-282A/GRC, PP-448/GR, AND PP-448A/GR.**

Page 1, chapter 1, note (page 1 of C 2). Add the following to the note: Power Supply PP-448A/GR is similar to Power Supply PP-448/GR. Information in this manual applies to both power supplies unless otherwise specified.

Add "and PP-448A/GR" after "Power Supply PP-448/GR" in the following places:

Page 1, paragraph 1a, line 4.

Paragraph 3a, line 2.

Paragraph 4, line 6.

Paragraph 4, line 10.

Page 2, paragraph 6, line 5.

Paragraph 7, line 2.

Page 3, figure 2, caption.

Page 4, title of chapter 2.

Page 5, paragraph 10, title.

Page 6, paragraph 11, line 8.

Page 7, figure 4, caption.

Page 9, paragraph 18, line 6.

Page 10, figure 5, caption.

Page 11, paragraph 21, line 2.

Page 1, paragraph 3. Add the following after subparagraph b.

c. Power Supply PP-448A/GR has 175-volt B+ output and is designed primarily for use with Field Strength Meter AN/URM-89. It should never be used as an interchangeable power supply

with the PP-448/GR for use in the standardized series (Radio Receivers R-108/GRC, R-109/GRC, and R-110/GRC).

Page 1, paragraph 4, line 14. Add the following:
Power Supply PP-448A..... 4.9 amperes max.

Page 5, paragraph 9. Subparagraph d is superseded.

d. The values of current-limiting resistor R-2 and buffer capacitor C-4 differ from those of the corresponding parts in Power Supply PP-282/GRC. Capacitor C-5 is not needed in this unit because of the lower input voltage used. Connector X-1 is wired differently to apply the proper operating voltage to an associated radio set. The straps are connected between pins 2, 3, and 5 of X-1; the battery input is also made available to the radio set from pins 2 and 5 of X-1.

Note. Capacitor C-5 is used in power supplies procured on Order No. 42913-Phila-57; accordingly, the second sentence in the above paragraph does not apply.

Page 10, paragraph 18b, chart. Add the following:

Power supply	M-1 Input (volts)		M-2 Input (amperes)		M-3 Output (volts)	
	Min	Max	Min	Max	Min	Max
PP-448A/GR	6.2	6.4	3.9	4.8	165	180

Figure 5, chart. Add the following:

Power supply	Nominal batt. voltage	Meter range M-1	Meter range M-2
PP-448A/GR.....	6 V	0-10 V	0-10 A

*These changes supersede C 1, 12 December 1951.

Page 11, paragraph 19, chart is superseded.

Point of measurement	Normal reading (ohms)			Probable trouble
	PP-281/GRC	PP-282/GRC	PP-448/GR	
Term. 3 to 7 on X-1	Infinity	Infinity	Infinity	Defective C-1.
Term. 3 on X-1 to term. 1 on X-3	1 (approx.)	2 (approx.)	Zero*	Defective L-1, R-2, or T-1.
Term. 3 on X-1 to term. 6 on X-3	1 (approx.)	2 (approx.)	do	Defective L-1, R-2, or T-1.
Term. 3 on X-1 to term. 4 on X-3**	20	Zero*	do	Defective R-4.
Term. 3 on X-1 to term. 3 on X-3	50	Infinity	do	Defective R-3.
Term. 7 on X-1 to term. 3 on X-2	15K to 30K	15K to 30K	15K to 30K	Defective C-3 or C-2.
Term. 8 on X-1 to term. 3 on X-2	155	155	155	Defective L-2 or L-3.
Term. 2 to 5 on X-3	76	62	68 *	Defective T-1.
Across R-1	1,800	1,800	1,800	Defective R-1.

*Reading too small to be discernible.

**Not applicable in power supplies PP-281A/GRC and PP-282A/GRC.

* 95 ohms in PP-448A/GR.

Paragraph 20, chart is superseded.

Point of measurement	Normal reading (volts)				Probable trouble
	PP-281/GRC	PP-282/GRC	PP-448/GR	PP-448A/GR	
From term. 3 to 7 on X-1	12.6	25.2	6.3	6.3	Defective C-1.
From term. 8 to 7 on X-1	135	135	135	175	Defective C-2, C-3, L-2, or L-3.
From term. 3 of X-2 to term. 7 of X-1	155	155	155	195	Defective T-1, R-1, or C-4.

Page 13, table I. Add the following:

Power supply	Battery (volts)	Load (ohms)	Output (volts)	Battery current (amperes)
PP-448A/GR	6.3	1, 150	175 ± 5	4.9

Table II. Add the following:

Power supply	Battery (volts)	Output load* (ohms)	Output voltages (volts)
PP-448A/GR	6.3	1, 150	175 ± 5

Pages 15 and 16. Delete appendix I.

Pages 23 and 24. On figures 8, 9, and 10, so much as reads "(X-2)" is changed to read "(X-2)"
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 and so much as reads "(X-2)" is changed to read "(X-2)".
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By Order of *Wilber M. Brucker*, Secretary of the Army:

L. L. LEMNITZER,
General, United States Army,
Chief of Staff.

Official:

R. V. LEE,
Major General, United States Army,
The Adjutant General.

Distribution:

Active Army:

USASA (2)	USAINTC (2)	7-25 (2)	17-37 (2)
Def Atomic Spt Agcy (5)	USAAMC (Ft Sill) (300)	7-26 (2)	17-45 (2)
CNGB (1)	USA Ord Msl Comd (3)	7-27 (2)	17-46 (2)
Tech Stf, DA (1) except CSigO (18)	USASSA (15)	7-31 (2)	17-51 (2)
Tech Stf Bd (1)	USASSAMRO (1)	7-32 (2)	17-52 (2)
USA Arty Bd (1)	USA Sig Pub Agcy (8)	7-37 (2)	17-53 (2)
USA Armor Bd (1)	USA Sig Engr Agcy (1)	7-95 (2)	17-55 (2)
USA Inf Bd (1)	USA Comm Agcy (3)	7-96 (2)	17-57 (2)
USA AD Bd (1)	USA Sig Eqp Spt Agcy (2)	9-65 (2)	17-62 (2)
USA Abn & Elet Bd (1)	USA Sig Msl Spt Agcy (13)	9-66 (2)	17-65 (2)
USA Avn Bd (1)	WRAMC (1)	9-67 (2)	17-66 (2)
USA ATB (1)	AFIP (1)	11-7 (2)	17-67 (2)
USCONARC (5)	AMS (1)	11-16 (2)	17-85 (2)
US ARADCOM (2)	Ports of Emb (OS) (2)	11-32 (2)	17-86 (2)
US ARADCOM Rgn (2)	Trans Terminal Comd (2)	11-55 (2)	17-87 (2)
OS Maj Comd (5)	Army Terminals (2)	11-57 (2)	17-115 (2)
OS Base Comd (5)	OS Sup Agcy (1)	11-68 (2)	17-116 (2)
Log Comd (5)	Yuma Test Sta (2)	11-85 (2)	17-117 (2)
MDW (1)	USA Elet PG (1)	11-86 (2)	17-125 (2)
Armies (5) except First US Army (7)	Sig Lab (5)	11-98 (2)	17-126 (2)
Corps (2)	Sig Fld Maint Shops (3)	11-117 (2)	17-127 (2)
Div (2)	USA Corps (Res) (1)	11-155 (2)	39-61 (2)
Ft Detrick (2)	JBUSMC (2)	11-500 (AA- AE) (2)	39-71 (2)
Ft Belvoir (5)	Units organized under following TOE's:	6-315 (2)	44-35 (2)
USATC (2)	5-15 (2)	6-316 (2)	44-36 (2)
Svc Colleges (5)	5-16 (2)	6-325 (2)	44-37 (2)
Br Svc Sch (5) except USASCS (25), USAIS (245)	5-215 (2)	6-326 (2)	44-446 (2)
USMA (5)	5-217 (2)	6-535 (2)	51-2 (2)
Gen Dep (2) except Atlanta Gen Dep (none)	5-218 (2)	6-537 (2)	52-2 (2)
Sig Sec, Gen Dep (10)	5-600 (2)	6-545 (2)	55-27 (2)
Sig Dep (17)	5-605 (2)	6-558 (2)	55-47 (2)
Army Pictorial Cen (2)	5-617 (2)	7-2 (2)	55-75 (2)
Engr Maint Cen (1)	6-100 (2)	7-11 (2)	55-76 (2)
	6-125 (2)	7-12 (2)	55-77 (2)
	6-126 (2)	7-14 (2)	55-78 (2)
	6-200 (2)	7-15 (2)	55-500 (AA- AE) (2)
	6-300 (2)	7-16 (2)	57-5 (2)

NG: State AG (3); units—same as Active Army except allowance is one copy to each unit.

USAR: None.

For explanation of abbreviations used, see AR 320-50.