

DYNAMOTORS AND HAND GENERATORS FOR THE EXPERIMENTER

(EQP) MARKII	Hand crank 10 watt generator 1945 Input is 50-70 rpm - 60 rpm nominal Output: 162 vdc @ 60 ma & 3.1v @ 300 ma Dimensions: 6" x 6" x 5"H
(MOT) 101985	Delco / RCA rotary transformer converts 12 vdc @ 9 amps or 24 vdc @ 4.5 amps to 265 vac @ 120ma and 540 vac @ 26ma. from 1950's. Input: 12 vdc - 24 vdc Output: 265 vac @ 120 ma & 540 vac @ 26 ma Dimensions: 9"L x 5" max width x 4"H Weight: 11 lbs
21215A	input 12vdc RU-18 receiver
21441	input 24vdc RU-19 receiver
21531	ARA receiver
21626	ATA transmitter
21724	ATB transmitter
21881B	input 12vdc, output 400vdc, 225vdc TCS transmitter and receiver
2A	input 12vdc, output 300vdc, -150vdc, 6vdc TR1143 original English version of the SCR-522
34SI 392	Winco Wincharger Corp. Dynamotor Type 34SI 392 Motor , NSN: 6125-00-635-8229 , Collins P/N: 231 0047 00. Temperature Rise: 45 degrees C R.P.M.: 9500 Input: 27.5 V, 12 Amps. Duty Cycle: 10 minutes at 430 V, 0.035 Amps and 220 V, 0.28 Amps and/or 5 minutes at 400 V, 0.28 Amps and 210 V, 0.28 Amps
3H1514-22	RBM receiver
5053	input 28vdc@1.4a, output 250vdc@0.060a A.G. REDMOND
51S1	input 26vdc, output 1500vdc@200ma 330vdc 100ma
5820-99-114-3390 (NSN)	Hand Generator for Clansman backpack radios PRC-344, PRC-351, PRC-352, PRC-320. Clips on between the radio and the battery. Cranked to generate 24 VDC for charging set's 24V battery. Radio may be used while charging. Indicator lamp lights at correct speed. NSN: 5820-99-114-3390.
5D21NJ3A	input 27vdc, output 115vac@485W 400hz 1ph
B-19	input 12vdc, output 275vdc@110ma, 500vdc@50ma
BD-77	input 14vdc, output 1000vdc@350ma BC-191 transmitter
BD-87-F	input 14vdc, output 330vdc
BD-AG-83	input 14vdc SCR-J-183 BC-229 receiver, BC-230 transmitter
BD-AO-83	input 14vdc@6.5a, output 375vdc@150ma
CLG-20144,	TBY transceiver vibrator
COL-211330-A	input 12/28vdc TCS transmitter and receiver
D-10(14V)	input 14vdc ARC type 12
D-10(28V)	input 28vdc ARC type 12
D-101 /A	input 28vdc, output 166vdc@90ma RAX-1 CG-46115 receiver
D-10A(14V)	input 14vdc ARC type 12
D-10A(28V)	input 28vdc ARN-30
D-201	input 28vdc, output 166vdc@90ma RAX-1 CG-46116 receiver
D-301	input 28vdc, output 166vdc@90ma RAX-1 CG-46117 receiver
D-401	12VDC in, 400V 180mA ? measured 12.6V in/430V@205mA out and 13.2V in/457V@216mA out ? 4000RPM?
DA-29A	input 25vdc@19.5a, output 600vdc@500ma Bendix
DAG-33	input 18vdc, output 450vdc@60ma

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DM-10	input 14vdc and 28vdc ARC-60
DM-17	Dynamotor, Used with BC-314.
DM-17	input 14vdc BC-312
DM-20	input 14vdc SCR-280, BC-431 radio compass
DM-21	13V 230V / 85MA
DM-21	Dynamotor, Used with BC-314.
DM-21	input 14vdc, output 235vdc@90ma BC-312- * , BC-314- *
DM-21 DM-21-B	Dynamotor for the BC-312 or BC-314 Radio Sets. RPM: 5400. Input Volts: 14 VDC @ 3.3 Amp. Output Volts: 235 Volts @ 0.090 Amps. Weight 5Kg
DM-21X	input 28vdc BC-312-HX, BC-312-NX
DM-23350	input 27vdc, output 285vdc@75ma
DM-24	Dynamotor, 14 VDC @ 2.45A in, 220 VDC @ 70 ma, 12% regulation, Used with BC-224.
DM-25	input 12vdc, output 250vdc@50ma
DM-28	Dynamotor, 28 VDC @ 1.23A in, 220 VDC @ 70 ma, 12% regulation, Used with BC-348.
DM-32	Dynamotor, 28 VDC input, 250 VDC @ 100 ma output, Used with ARC-5/SCR-274N Receivers.
DM-32 /A	28V 250V / 100MA
DM-32A	Dynamotor, 28 VDC input, 250 VDC @ 100 ma output, Used with ARC-5/SCR-274N Receivers.
DM-33	Dynamotor, 28 VDC input, 400 VDC @ 250 ma output, Used with ARC-5/SCR-274N Transmitters.
DM-33	input 28vdc, output 540vdc@250ma SCR-274N transmitter
DM-33 /A	T-16,MD7 28V 400V / 250MA
DM-33A	Dynamotor, 28 VDC input, 400 VDC @ 250 ma output, Used with ARC-5/SCR-274N Transmitters.
DM-34	12V for SCR 508 , 608
DM-34D	input 12vdc, output 220vdc 80ma BC-603 or BC-683 receiver
DM-35	12V for SCR 508 , 608
DM-35D	input 12vdc, output 600vdc BC-604 or BC-684 transmitter
DM-36	26V for SCR 508 , 608. 250V
DM-36	28 VDC Dynamotor for BC-603 / BC-683
DM-36D	input 24vdc, output 220vdc@80ma BC-603 or BC-683 receiver
DM-37	24V for SCR 508 , 608. 250V
DM-37D	input 24vdc, output 600vdc BC-604 or BC-684 transmitter
DM-40	Dynamotor, 12 VDC input, 275 VDC @ 100 ma output, Used with BC-652.
DM-40 /A	12v 275v / 100ma
DM-40A	Dynamotor, 12 VDC input, 275 VDC @ 100 ma output, Used with BC-652.
DM-41	Dynamotor, 24 VDC input, 275 VDC @ 100 ma output, Used with BC-652.
DM-41	input 12vdc BC-652 receiver
DM-41 /A	24v 275v / 100ma

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DM-41A	Dynamotor, 24 VDC input, 275 VDC @ 100 ma output, Used with BC-652.
DM-42	Dynamotor, 12 VDC input, 460 VDC @ 260 ma and 925 VDC @ 220 ma output, Used with BC-653.
DM-42	input 12vdc, output 515/1030vdc@215/260ma, 2/8vdc BC-653 transmitter
DM-42 /A	12v 460v / 260ma , 925v / 220ma
DM-42A	Dynamotor, 12 VDC input, 460 VDC @ 260 ma and 925 VDC @ 220 ma output, Used with BC-653.
DM-43	Dynamotor, 24 VDC input, 460 VDC @ 260 ma and 925 VDC @ 220 ma output, Used with BC-653.
DM-43	input 24vdc, output 515/1030vdc@215/260ma, 2/8vdc BC-653 transmitter
DM-43 /A	24v 460v / 260ma , 925v / 220ma
DM-43A	Dynamotor, 24 VDC input, 460 VDC @ 260 ma and 925 VDC @ 220 ma output, Used with BC-653.
DM-47	26V for SCR 808
DM-47	Dynamotor, 24 Volt, Used with BC-924.
DM-53	input 24vdc@1.4a, output 220vdc@80ma
DM-53-12	DM-53AZ 12 Volt Dynamotor with base. Input 14 vdc 2.8 a, output 220 vdc 80 ma. Used with BC-733
DM-53A	28V 220V 60MA
DM-64	12V for SCR 808
DM-64	Dynamotor, 12 Volt, Used with BC-923.
DM-64A	input 12vdc BC-925
DM-65	12V for SCR 808
DM-65	Dynamotor, 12 Volt, Used with BC-924.
DM-65A	input 12vdc BC-924 receiver
DM-66	26V for SCR 808
DM-66	Dynamotor, 24 Volt, Used with BC-923.
DMX 310	input 24vdc Type 12 receivers
DV-14	ARN-59input 13/26vdc, output 125vdc@100ma, 13vac@800ma 100hz replacement for P-14A
DY-1	ARR-2X 14V 250V / 100MA
DY-1 /ARC	12v 250v / 85ma
DY-1/ARC	Dynamotor, Receiver, 12 VDC in, 250 VDC @ 85 ma output, Part of ARC-5.
DY-10	ARC-1 14V 360V / 400MA
DY-10/ARC-4	Dynamotor, 28 VDC in, 360 VDC out, Part of ARC-4.
DY-100/G	Dynamotor, Part of VRC-6 and VRC-19 .
DY-100/U	VRC19Y 6 VOLTS 210-250
DY-105	input 24vdc, output 580vdc@100ma, 105vdc@45ma, 6.3vdc@2a, 1.4vdc@500ma, 6.3vdc@575ma RT-77/GRC-9
DY-105 /	GRC-9X 24V
DY-107	Dynamotor Power Supply (cased unit) for ARC-44 radio. Output 138 VDC 140 ma. 310 VDC 30 ma, & 27 V 400 Hz 3 0 10 VA; input 27 VDC 3 amps. 5x9x3 inches.
DY-107	input 27vdc, output 138vdc@140ma, 310vdc@30ma, 27vac 400hz 3ph 10va ARC-44

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DY-107/AR	ARC-44,45 27.5V 150v 85ma & 300v 125ma & 27vac 400Hz
DY-107/ARC	Dynamotor, 28 VDC in, 150 VDC @ 85 ma, 300 VDC @ 125 ma and 27 VAC @ 400 Hz, Part of AN/ARC-44.
DY-108	ARR-36 28V
DY-118	ARC-38 28V 30a or 115VAC 400CPS INPUT, 115, 18 & 6.3VAC 400cps, -50--65v, +250 v 150ma & +600V 550ma OUTPUTS
DY-118	input 28vdc, output 600vdc@550ma, 250vdc@150ma, -28vdc, -50vdc, -65vdc ARC-38 , RT-311 -594
DY-118/ARC-38	Dynamotor, 28 VDC @ 30 A in, 600 VDC @ 550 ma & 250 VDC @ 150 ma & -50-65 VDC, Used with RT-311 and RT-594, Part of AN/ARC-38.
DY-12	ART-13 14V @ 44Amps
DY-12/ART-13	Dynamotor, 12 VDC in, 400 VDC @ 225 ma & 1200 VDC @ 250 ma output, Part of AN/ART-13.
DY-128	ARC-48 28V 1.6A
DY-150	INPUT 26.5 VDC 2.2 AMP, OUTPUTS 125 VDC 0.10 AMP, 13 VAC 0.8A, 100 CPS, 1 PH
DY-150/ARN	AIRCRAFT DYNAMOTOR, ARC TYPE 18335, C.E.CO. DMDEX310TR, CONTINUOUS DUTY RATING, INPUT 26.5 VDC 2.2 AMP, OUTPUTS 125 VDC 0.10 AMP, 13 VAC 0.8A, 100 CPS, 1 PH, AIRCRAFT RADIO CORPORATION
DY-17	ART-13 28V 400V / 400MA & 1150 / 750V 325MA
DY-17	output 400vdc, 750vdc ART-13 transmitter
DY-17/ART-13	Dynamotor, 28 VDC in, 400 & 1200 Volts out, Part of ART-13.
DY-17A/ART-13	Dynamotor, 28 VDC in, 400 & 1200 Volts out, Part of ART-13.
DY-19	ARC-4X 14V 360V / 400MA
DY-2	ARC-2 28v / 250v / 100ma
DY-21	ARC-3 28V 400V / 325MA
DY-21	input 28vdc@7a, output 410vdc@325 ma ARC-3 transmitter
DY-21/ARC-3	Dynamotor, 28 VDC in, 410 VDC @ 325 Ma, Part of ARC-3, ARC-36 and ARC-49.
DY-22	ARC-3 28V 210V / 125MA
DY-22	input 28vdc@1.8a, output 210vdc@125ma ARC-3 receiver
DY-22/ARC-3	Dynamotor, 28 VDC in, 210 VDC @ 125 Ma, Part of ARC-3, ARC-36 and ARC-49.
DY2A	ARC-5 RECEIVE 24v 250v / 85ma
DY-2A	input 28vdc ARC-5 receiver, ARR-2 receiver
DY-2A/ARR-2	Dynamotor, Receiving, 24 VDC in, 250 VDC @ 85 ma output, mounts on each AN/ARC-5 receiver, Part of AN/ARC-5, Can be replaced by PP-2792.
DY-31	ARC-2
DY-31	ARC-2 28V 500 & 250V
DY-34	ARR-15
DY5A	ARR3A 28V
DY-5A	ARR-3
DY-66	input 24vdc ARN-14
DY-76	For AIC-10 intercom. 27V 9.2 lbs (note the AIC-10A is solid state and the dynamotors are not used for it)
DY-77	DY-77/AIC-10 27VDC input for AIC-10 intercom set. 4.2 lbs (note the AIC-10A is solid state and the dynamotors are not used for it)
DY-79	input 24vdc R-395

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DY-8	ARC5,T16,MD7 28v 400v / 250ma
DY-8	input 28vdc ARC-5 transmitter
DY-8/ARC-5	Dynamotor, Transmitting, Mounts on MD-7 modulator to power modulator and transmitter, Part of AN/ARC-5.
DY-84	input 26vdc, output 250vdc ARN-14A
DY-86	ARN-30 28v 250v / 100ma
DY-86	input 28vdc, output 250vdc@85ma ARN-30, ARC-60
DY-86/ARN-30	Dynamotor, 28 VDC in, 250 VDC @ 100 ma out, Part of ARN-30 * , Replaced by PP-2792.
DY-88	Dynamotor bare DM from DY-88 PSU Motor Speed 6000 RPM. Input Voltage: 7.2 Volts DC or 24.5 Volts DC or 29 Volts DC. Input Current: 22 Amps @7.2VDC or 11 Amps @24.5VDC or 5.5 Amps @29VDC. Output Voltage: 580 Volts. Output Current: 100 mA.
DY-88	input 6/12/24vdc, output 580vdc@100ma, 105vdc@45ma, 6.3vdc@2a, 1.4vdc@500ma, 6.3vdc@575ma RT-77/GRC-9
DY-88 (PSU)	Dynamotor Power Supply Powers BC-1306 and RT-77/GRC-9 Radios from 6 VDC @29 Amp, 12 VDC @14 Amp or 24 VDC @6.7 Amps. Outputs 580 V @100ma, 105 V @45ma, 6.3 V @2A, 1.4 V @500ma, 6.3 V @575ma.
DY-89	input 14vdc ARC type 12
DY-9	ARC-1 input 28V output 360V / 400MA
DY-90	input 28vdc ARC type 12
DY-91	input 14vdc ARC type 12
DY-93	input 12vdc, output 380vdc@180ma, 225vdc@45ma, -25vdc@5ma T-208, T-278, T-417 transmitter
DY-93/G	Dynamotor, 14 VDC in, Part of VRC-6X.
DY-93/U	VRC-6 12V-14v
DY-94	GRC-10 26V
DY94 / GRC - 10	Combination power supply and dynamotor: Input: 115v / 230 vac, 50-60 Hz or 26 vdc Output: 550 vdc for 4X150A , 220 vac @ 225ma, 257 vac @ 130ma, 26.4 vac @ 1.35 amps, 26.4 vac @ 1.7 amps, 175 vac @ 85ma Internal blower Weight: 57 lbs
DY-98	input 24vdc@7a, output 405vdc@270 ma VRC-6 VRC-19
DY-98/G	Dynamotor, 28 VDC in, Part of VRC-19 and VRC-6.
DY-98/G	VRC6 24V
DY-9B/ARC-1	Dynamotor, 28 VDC in, 360 VDC out, Part of ARC-1.
GN-35	input hand crank, output 350vdc@60ma, 8vdc@2.5a
GN-45	input hand crank , output 500vdc@100ma, 6vdc@3a BC-654
GN-58	Field Hand Crank Generator for use with BC-1306 and GRC-9 radio sets. Outputs 425 VDC @115ma, 105 VDC @32ma, 6.3 VDC @2.5A, 1.4 VDC @465ma. Supplied with Hand Cranks, Legs and Seat. Unit is cranked by hand while seated.
INV-750	ROTARY INVERTER, output 115 VAC 400 Hz 1 phase 750 VA from 28 VDC 60 amp input; Leland or equal mfg. 12x9.5x7, 42 lbs
MG-149	input 24vdc, output 115vac@500W 400hz 1ph, 26vac@250w 400hz 1ph
MP-10	input 24vdc, output 1000vdc@400ma, 230vdc
MP-288	TA-12 tx, unit also includes modulator
MP-5A24	input 24vdc, output 225vdc@70ma RA-1B receiver
P-13	input 115vac, output 24vdc, 250vdc SCR-274N bench psu

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P-14A	input 13/26, output 125vdc@100ma, 13vac@800ma 100hz ARN-59 replaced by solid state DV-14
PE-101	input 13/26vdc, output 400vdc@135ma, 800vdc@20ma, 9vac@1.12a
PE-103	input 6/12vdc BC-654
PE-104	input 6/12vdc vibrator pack BC-654
PE-109	115vac 400hz
PE-120	input 6/12/24vdc BC-620, -659.
PE-133	Dynamotor PE-133 Input 12 VDC 2.3 A, Output 230 VDC .090 MA Size 4 X 7 X 6.5 inches. This dynamotor is the same size as the BC-348/BC-224 DM-28 24v or DM-24 12V dynamotors. (there were many modifications to rewire the 24 v BC-348 to 12VDC input) This dynamotor does not have the base plate like the DM-24 or DM-28.
PE-206	input 28vdc, output 80vac@800hz
PE-218	input 28vdc, output 115vac@1500va 400hz
PE-237	input 6/12/24vdc, output 1.4vdc, 105vdc, 6.3vdc, 105vdc BC-1306 vibrator
PE-55	input 12vdc, output 500vdc@400ma SCR-245 BC-223 transmitter
PE-73	input 28vdc, output 1000vdc@350ma BC-375 transmitter
PE-86-A	input 28vdc, output 250vdc@60ma RC-36 interphone BC-347 amp, BC-366 box
PE-94	input 28vdc SCR-522 BC-624 rx, BC-625 tx
PE-97	BC-620/BC-659
PE-98	14V Dynamotor for SCR-522 Radio,
PE-98	SCR-512 12V
PP-109	input 12vdc RT-66, RT-67, RT-68
PP-112	input 24vdc RT-66, RT-67, RT-68
PP-114	input 6/12/24vdc BC-1000 vibrator
PP-1398	input 28vdc ARR-39A.
PP-2684	input 6vdc, output 75-260vac GRC-109 RT-3 T-784 R-1004 RR-2
PP-351	input 120/240vac, output .9-1.8vdc@1.5a, 2.5-8.6vdc@1.5a, 22.5-150vdc@100ma, 22.5-150vdc@100ma PRC-8, PRC-9, PRC-10 SCR-510, SCR-610, BC-1000
PP-352	input 28vdc, output 115vac@1.4kw 400hz 3ph 1ph sine TRC-75 transmitter
PP-3700	input 110vac PRC-41
PP-380	input 110vac TCS transmitter receiver
PP-6109	input 110vac PNH-7.
PTAD-101	input 110/220vac, 11-32vdc URC-100-112.
PU-14	input 24vdc, output 115vac@100va 400hz 1ph
PU-385(XW-1)	input 110vac FRC-44
SS688	Motor Generator for GRC-106. Input 27.5VDC 24 Amps. Output 115VAC 60Hz 3.48 Amps. Continuous duty. 3600 RPM. 12x6.5x12, 47 lbs
WS19 MK III	Wireless Set 19 MKIII Power Supply with internal dynamotor
ZA/USA 0515	input 12/24vdc, output 500vdc@50ma

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ZA/USA 0516	input 12/24vdc, output 275vdc@110ma
ZA20733	input 11.5 vdc, output600vdc@250ma RF Amplifier No.2
ZDM-17	13V in, 230V / 85MA out

This research document has been prepared as an aid to the experimenter in the hope of listing as many dynamotors as the lucky experimenter may find. No doubt some have been omitted because they are obscure or were rarely used and didn't make it into the equipment listings published by the various communications companies and war departments. Certainly, many machines used in old 2-way mobile business and police radios have been forgotten and for this the researcher apologize to Link, Motorola, RCA, GE, and others. In cases where information from different publications disagrees, both sets of information were presented for completeness. The ratings are generally stated on the nameplate. It was decided to include human-powered dynamos because the researcher considers them to be a significant component of mobile power conversion systems. The information compiled herein was researched from many sources and lists that have been published, but no single resource was found to contain more than a fraction of this information. The researcher is grateful to those entities enumerated in the reference section. The material is provided by fair use for educational purposes. This list may be copied and distributed freely but never sold or bundled with information for sale.

Q. Why use a dynamotor?

A. The dynamotor is a wonderful precision instrument

A. It's electrically very tough compared to a solid state inverter.

A. It makes a cool sound spinning up

A. As it spins up, it brings your voltages up smoothly. The original soft-start.

A little advice: Dynamotors rotate at 3,000 to 15,000 RPM. When finding a dynamotor and contemplating its use, be aware it may have been sitting un-used for decades. Even if it is "new old stock", it is likely the grease in the bearings has gone bad and dried up. Most dynamotors were made before the advent of oil-less or permanently lubricated bearings. Operating the machine with dry bearings, even for a short time, can permanently damage it. Do not energize the unit until after the machine has been disassembled and the bearings repacked or oiled, as required. If you are unsure what to do, consult a professional motor rebuilding company or experienced motor technician. Bearings should be relubricated every year, or immediately if any noises are heard..

Secondly, even a small receiver-type dynamotor is a deadly instrument capable of producing a few hundred volts DC and very large currents. Unlike some power supplies, a dynamotor will deliver a huge overcurrent into a fault load (that load would unfortunately be the careless experimenter). The dynamotor can easily do this because of the inertia of its rotating parts. Think of it as trying to stop a small motor connected to a large and heavy flywheel once it is up to speed. The rotating mass has a great deal of kinetic energy stored in its rotation and it will deliver this in the form of electricity to a fault load. A dynamotor is rarely more than 60% efficient and therefore 1/3 of the input energy is used to turn it. Think of that as the machine's stored energy at any given instant. Perhaps that isn't much, but multiply it by the dividend of the output voltage over the output impedance

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and the figure grows very large. Always use a fuse or other protective circuit element in the input and output sides of each dynamotor voltage. Be aware that starting currents can be two to eight times the running current so a time delay breaker or slow fuse should be used on the input side. Sometimes a step-start is worthwhile, such as a 0.2 to 0.5 Ohm 50W resistor for the larger units. Normal fuses should be used on the output. A well-maintained dynamotor will have a lower starting surge than one that has not been taken care of because it will spin more freely.

Thirdly, never operate a dynamotor at an input voltage above its design. Most of them (some exceptions would be the ones that generate AC voltage at a particular frequency) have no means of governing their speed and the instrument can be irreparably damaged. The output voltage is proportional to the input voltage, so over-volting an AC generator will only result in too much voltage and much accelerated governor contact wear. They don't make them any more, so take care of what you have. With a little care, the dynamotor can last another 50 years, or more.

References:

U.S. Military	multiple technical manuals
Australian Military	multiple technical manuals
Canadian Military	multiple technical manuals
British Military	multiple technical manuals
A.R.C Corporation	multiple aircraft radio manuals
Collins Radio Company	multiple technical manuals
Ray Robinson	http://www.shlrc.mq.edu.au/~robinson/
Bill NJ7P	http://hereford.ampr.org/
Fair Radio	https://www.fairradio.com/
Surplus Sales of Nebraska	http://www.surplussales.com/
Toronto Surplus & Scientific	http://www.torontosurplus.com/
Army Radio Sales Co.	http://www.armyradio.com/
KA1UNW	http://pages.cthome.net/okmunwurx/