



MEDIUM AND LARGE BIRD TRANSMITTERS

Transmitter Number	Type	Battery	Dimensions LxWxH (cm)	Mounted Weight* (grams)	Pulse Width (ms)	Pulse Rate (ppm)	Peak Current (ma)	Antenna Length 218 MHz (cm)	Power Output (dBm)	Battery Life (days)	Typical Species
HLPB-31100	3 Stage	3.5 v 13.5 ah Li	10x4.1x4.5	350-360	35	70	15	30.5 whip	+10 to +13	801	condor, eagle, vulture
HLPB-31100A	3 Stage	3.5 v 13.5 ah Li	10x4.1x4.5	350-360	35	60-120	15	30.5 whip	+10 to +13	625	condor, eagle, vulture
HLPB-21100M	CMOS 2 Stage	3.5 v 13.5 ah Li	10x4.1x4.5	290-300	30	70 (150)	15	30.5 whip	+7 to +10	938	condor, eagle, vulture
HLPB-21100AM	CMOS 2 Stage	3.5 v 13.5 ah Li	10x4.1x4.5	290-300	30	60-120 (200)	15	30.5 whip	+7 to +10	732	condor, eagle, vulture
HLPB-21100B	CMOS 2 Stage	3.5 v 13.5 ah Li	10x4.1x4.5	290-300	20-60	40-120	15	30.5 whip	+7 to +10	806	condor, eagle, vulture
HLPB-3140	3 Stage	3.5 v 5.2 ah Li	9.2x3.8x3	95-105	25	55	15	28 whip	+8 to +10	550	goose, turkey, eagle
HLPB-3140A	3 Stage	3.5 v 5.2 ah Li	9.2x3.8x3	95-105	25	45-90	15	28 whip	+8 to +10	451	goose, turkey, eagle
HLPB-2140M	CMOS 2 Stage	3.5 v 5.2 ah Li	9.2x3.8x3	95-105	25	55 (150)	11	28 whip	+5 to +7	753	goose, turkey, eagle
HLPB-2140AM	CMOS 2 Stage	3.5 v 5.2 ah Li	9.2x3.8x3	95-105	25	45-90 (150)	11	28 whip	+5 to +7	617	goose, turkey, eagle
HLPB-2140B	CMOS 2 Stage	3.5 v 5.2 ah Li	9.2x3.8x3	95-105	20-60	40-120	11	28 whip	+5 to +7	426	goose, turkey, eagle
HLPB-3380	3 Stage	3.5 v 3.6 ah Li	8.0x3.3x2.5	85-95	25	55	15	28 whip	+8 to +10	436	condor, owl, vulture
HLPB-3380A	3 Stage	3.5 v 3.6 ah Li	8.0x3.3x2.5	85-95	25	45-90	15	28 whip	+8 to +10	357	condor, owl, vulture
HLPB-2380M	CMOS 2 Stage	3.5 v 3.6 ah Li	8.0x3.3x2.5	85-95	25	55 (150)	11	28 whip	+5 to +7	596	condor, owl, vulture
HLPB-2380AM	CMOS 2 Stage	3.5 v 3.6 ah Li	8.0x3.3x2.5	85-95	25	45-90 (150)	11	28 whip	+5 to +7	489	condor, owl, vulture
HLPB-2380B	CMOS 2 Stage	3.5 v 3.6 ah Li	8.0x3.3x2.5	85-95	20-60	40-120	11	28 whip	+5 to +7	272	condor, owl, vulture
HLPB-3124	3 Stage	3.5 v 2.6 ah Li	7.9x3.4x1.8	75-85	25	55	15	28 whip	+8 to +10	258	goose, turkey, crane
HLPB-3124A	3 Stage	3.5 v 2.6 ah Li	7.9x3.4x1.8	75-85	25	45-90	15	28 whip	+8 to +10	211	goose, turkey, crane
HLPB-2124M	CMOS 2 Stage	3.5 v 2.6 ah Li	7.9x3.4x1.8	75-85	25	55 (150)	11	28 whip	+5 to +7	352	goose, turkey, crane
HLPB-2124AM	CMOS 2 Stage	3.5 v 2.6 ah Li	7.9x3.4x1.8	75-85	25	45-90 (150)	11	28 whip	+5 to +7	289	goose, turkey, crane
HLPB-2124B	CMOS 2 Stage	3.5 v 2.6 ah Li	7.9x3.4x1.8	75-85	20-60	40-120	11	28 whip	+5 to +7	199	goose, turkey, crane
HLPB-3180	3 Stage	3.5 v 1.8 ah Li	8x2.2x2	45-55	20	50	11	28 whip	+3 to +5	320	goose, turkey, eagle
HLPB-3180A	3 Stage	3.5 v 1.8 ah Li	8x2.2x2	45-55	20	45-90	11	28 whip	+3 to +5	241	goose, turkey, eagle
HLPB-2180M	CMOS 2 Stage	3.5 v 1.8 ah Li	8x2.2x2	45-55	20	50 (150)	11	28 whip	0 to -3	327	goose, turkey, eagle
HLPB-2180AM	CMOS 2 Stage	3.5 v 1.8 ah Li	8x2.2x2	45-55	20	45-90 (150)	11	28 whip	0 to -3	245	goose, turkey, eagle
HLPB-2180B	CMOS 2 Stage	3.5 v 1.8 ah Li	8x2.2x2	45-55	20-60	40-120	11	28 whip	0 to -3	136	goose, turkey, eagle
LPB-3160	3 Stage	3.5v 1600 mah Li	5x2x.8x1.5	34-40	20	50	11	28 whip	+3 to +5	235	
HLPB-3150	3 Stage	3.5 v 1.3 ah Li	6.4x2x1.7	33-43	20	50	11	28 whip	+1 to +3	235	grouse, pheasant, crane
HLPB-3150A	3 Stage	3.5 v 1.3 ah Li	6.4x2x1.7	33-43	20	45-90	11	28 whip	+1 to +3	177	grouse, pheasant, crane
HLPB-2150M	CMOS 2 Stage	3.5 v 1.3 ah Li	6.4x2x1.7	33-43	20	50 (150)	11	28 whip	-3 to -5	240	grouse, pheasant, crane
HLPB-2150AM	CMOS 2 Stage	3.5 v 1.3 ah Li	6.4x2x1.7	33-43	20	45-90 (150)	11	28 whip	-3 to -5	179	grouse, pheasant, crane
HLPB-2150B	CMOS 2 Stage	3.5 v 1.3 ah Li	6.4x2x1.7	33-43	20-50	40-100	11	28 whip	-3 to -5	119	grouse, pheasant, crane
HLPB-3800	3 Stage	3.5 v 850 mah Li	7.5x2.5x2.3	24-30	20	50	11	28 whip	0 to +2	154	heron, pheasant, owl
HLPB-3800A	3 Stage	3.5 v 850 mah Li	7.5x2.5x2.3	24-30	20	45-90	11	28 whip	0 to +2	116	heron, pheasant, owl
HLPB-2800M	CMOS 2 Stage	3.5 v 850 mah Li	7.5x2.5x2.3	24-30	20	50 (150)	11	28 whip	-5 to -7	157	heron, pheasant, owl
HLPB-2800AM	CMOS 2 Stage	3.5 v 850 mah Li	7.5x2.5x2.3	24-30	20	45-90 (150)	11	28 whip	-5 to -7	117	heron, pheasant, owl
HLPB-2800B	CMOS 2 Stage	3.5 v 850 mah Li	7.5x2.5x2.3	24-30	18-45	40-100	11	28 whip	-5 to -7	86	heron, pheasant, owl
LPB-3700	3 Stage	3.5 v 750 mah Li	3.5x2x1.5	18-30	20	50	10	22 whip	0 to -3	152	falcon, parrot, cow bird
LPB-3700A	3 Stage	3.5 v 750 mah Li	3.5x2x1.5	18-30	20	45-90	10	22 whip	0 to -3	114	falcon, parrot, cow bird
LPB-2700M	CMOS 2 Stage	3.5 v 750 mah Li	3.5x2x1.5	18-30	20	40 (100)	10	22 whip	-6 to -8	192	falcon, parrot, cow bird
LPB-2700AM	CMOS 2 Stage	3.5 v 750 mah Li	3.5x2x1.5	18-30	20	40-80 (150)	10	22 whip	-6 to -8	130	falcon, parrot, cow bird
LPB-2700B	CMOS 2 Stage	3.5 v 750 mah Li	3.5x2x1.5	18-30	18-45	30-90	10	22 whip	-6 to -8	93	falcon, parrot, cow bird

*Mounted weight may vary, depending on materials used.

BlueSky Telemetry

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The medium and large bird transmitters shown in this table are meant only as examples of typical applications for multivibrator two-stage circuitry. The table in no way exhausts the many combinations of transmitter type, weight, peak current, pulse width, pulse rate, battery, and mountings available. Bluesky Telemetry will custom-build according to the researchers specifications.

The efficient multivibrator-pulsed circuits, used in Bluesky Telemetry. large and medium bird transmitters, offer a clear, chirp-free signal that is easy to tune and hear in receiver noise. Multivibrator-pulsed transmitters permit greater flexibility in customizing for optimum output and duty cycle. Because pulse rate and pulse width remain virtually constant throughout the life of the battery, transmitter performance is more predictable than that of older designs.

Surface mounting techniques enhance miniaturization by allowing more chip components to be placed on a smaller, flatter circuit board. The low-profile, rugged components also greatly improve reliability in punishing environments.

To minimize weight and provide packaging strength, transmitters are waterproofed with a tough acrylic or epoxy resin conformal coating.

The Behavior Circuit can be built into the transmitter (indicated by .B. at the end of the Transmitter Number on reverse) to change the transmitter.s pulse rate gradually as the bird.s level of activity increases. When a bird is at rest, the behavior circuitry.s pulse rate is approximately 30 pulses per minute; the pulse rate increases to 120 pulses or more per minute when the bird is engaged in vigorous activity like running or flying.

The optional Activity Switch (indicated by .A. at the end of the Transmitter Number) varies pulse rate according to the position or movement of the bird.

The Mortality Switch option allows the researcher to detect lack of movement in the bird. This lack of activity triggers a customer-specified increase or decrease in pulse rate. The time delay before indication of mortality can be programmed to be any period from a few seconds to over 12 hours. During normal activity in live birds, the mortality timer circuit is continually reset so that no mortality is indicated. The Mortality Switch is listed with an .M. at end of the Transmitter Number.

Combined Activity/Mortality features can be built into a transmitter, as indicated by .AM. at the end of the Transmitter Number.

Exact output of the listed transmitters may vary, depending on the transmitter.s antenna length and the frequency range used. Available crystal frequencies include, but are not limited to, 40-50 MHz, 148-155 MHz, 160-165 MHz, and 216-222 MHz.

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Each transmitter's signal range will be influenced by tracking conditions. Signal range can be diminished by rugged terrain, natural obstacles such as mountains and timber, dense vegetation, swamps and fog, along with large concrete structures. Best signal range occurs in flat, open country, in line-of-sight conditions. Air-to-ground radio monitoring also enhances the received signal.

Clients should contact our facility by telephone, mail, fax or e-mail. Detailed written specifications and drawings allow us to recommend the best possible combinations of options for a particular study.

Contact us for warranty information. If refurbishing is required so that a transmitter can be used in a different study, we will provide a conversion estimate after inspecting the transmitter.

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