Graupner

to Ind. No. 4219

AMIGO II

R/C Installation-Plan

Instructions page 2

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The installation of digital proportional VARIOPROP R/C equipment

The GRAUPNER R/C installation plan RC 73 printed on transparent paper shows the installation of GRAUPNER/GRUNDIG digital proportional R/C equipment VARIOPROP.
Material for such an installation (variant 1 or 2) is neither contained in the kit nor available as a set of materials. It should be selected from the GRAUPNER range of materials. The list of materials lists the required parts.
Place the R/C installation plan over the plan proper in such a manner that the outlines of the fuselages are properly superimposed.
The ensuing table lists various variants of VARIOPROP R/C equipment combinations for AMIGO II.
Channel allocation is a matter of personal preference. If desired channel allocations other than those specified in the table may be used.
The model may be equipped with simpler R/C equipment, such as 2-channel gear, if preferred, but instructions are not provided for its installation.
It is important that you study building instructions and R/C installation instructions RC 73 carefully before commencing with the installation–and be sure to read those R/C installation plan texts, too!

variant	receiving system	controls	proposed channel allocation	control servos	ind. No.
1	VARIOPROP	rudder elevator (up & down)	1–2 7–8	VARIOPROP MICRO servo 05 **or** VARIOPROP MICRO servo C 05	3830 3833
2	VARIOPROP	rudder elevator (up & down)	1–2 7–8	VARIOPROP servo	3765

Installation of R/C gear in the fuselage
Variant 1

VARIOPROP R/C equipment with VARIOPROP MICRO servo 05, No. 3830, or VARIOPROP MICRO servo C 05, No. 3833

The rudder (53) is hinged to the fin by a length of polyamide ribbon (A). The elevator (74) is hinged to the stabilizer in the same manner. The two VARIOPROP MICRO servos 05 or C 05 are mounted on the servo panel (B) with two lenticular head countersunk bolts. The nuts are cemented with either UHU plus "endfest 300" or STABILIT-express. The servos are unscrewed again after the cement has thoroughly set. Panel (B) is then cemented into the fuselage atop the appropriate mouldings, as per plan. After the cement has set the two servos are installed and screwed fast again. The cutout in former (3) must be enlarged, as per plan (see R/C installation plan, upper right corner). The cutout of former (J) is wider. For that reason part (J) is made of 1/8" plywood and replaces part (41) (see Quick build plan). Former (K) of 3/64" plywood serves as a loose cover.
The rudder linkage is assembled from parts (M), (T), (U), (Q), (V), (W), (X) and, optionally, (Z). Threaded rod (Q) and wire linkage (T) are bent, as per plan.
The elevator linkage is assembled next, with threaded rod (R) and wire linkage (S) bent as per plan. When you fashion the linkages be sure to follow the instructions supplied with No. 3504.
File slots for the passage of threaded rods (Q), (R) at appropriate stations of the fuselage aft end.
Attach control surface horn, consisting of parts (Y1), (Y4), (Y5), plate on right side, to

the rudder, as per plan. The elevator horn is attached to the latter, as per plan, with the plate on the left side. This requires insertion of a wedge (Y3). The ensuing steps of the installation of the linkages are shown in the plan. **Important notice:** When mounting the linkages be sure to install them freely movable and to provide unrestricted full travel over the entire range, plus trim, unobstructed by mechanical restraints.
The power supply pack. Nos. 3607 or 3609, is mounted between formers (2) and (3). The power supply pack is inserted **aft** of former (J) and moved forward.
The switch, ex No. 3606, is positioned between former (3) and (J); screw it fast **after** the power supply pack has been installed.
The receiving set, installed between formers (J/K) and (4), and the power supply pack are crash-proof mounted (use foam rubber or rigid foam plastic for padding).
Recess part (46) to suit the receiver. The antenna may either be mounted inside the fuselage or dangle from the latter as a trailing antenna.
In the latter case the antenna should be lead out of the fuselage right at the receiver. This type of antenna layout offers improved reliability and safe long range operation. Follow instructions and hints on antenna layout in prospectus RC P.
As a final step adjust the control linkages and make sure that all controls are properly hooked up, with control stick and control surfaces moving in the right direction.

Variant 2
VARIOPROP R/C gear with VARIOPROP servo, No. 3765

The installation of two VARIOPROP servos No. 3765 is shown in the upper right corner of the R/C installation plan.
Cement mouldings (D), (E), (F), (G) and (H) to servo panel (C), then mount the two servos as per plan. Cement nuts with UHU-plus "endfest 300" or STABILIT-express. Then cement servo panel with mouldings in the fuselage, as per plan. Finally install the servos and screw them fast. The two linkages (O) and (P) must be shortened to suit for this installation variant.
For the ensuing steps of the installation of control linkages, receiver and power supply pack incl. leads and antenna in the fuselage refer to description of variant 1 installation.

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List of materials R/C installation AMIGO II

Variant 1
VARIOPROP R/C equipment with VARIOPROP MICRO servo 05, No. 3830 or VARIOPROP MICRO servo C 05, No. 3833.

Variant 2
VARIOPROP R/C equipment with VARIOPROP servo, No. 3765.
Material for the installation is not contained in the kit and must be selected from the GRAUPNER range of materials.
A set of materials is not available.
Subject to change. The list below should be considered as a recommendation; other installations are possible, but are left to the modeller's ingenuity.

Part No.	Designation	Amt. req'd Var.1	Amt. req'd Var.2	Material	Dimensions in inches	ex Ind. No.
A	hinge	13	13	polyamide ribbon	19 11/16×19/32, all	110/1
B	servo panel	1	–	plywood	1 55/64×2×5/64	500/2
C	servo panel	–	1	plywood	5 5/16×1 1/2×6/64	500/2
D	moulding	–	1	pine	2 9/32×1/4 sq.	510/6×6
E	moulding	–	1	pine	2 41/64×1/4 sq.	510/6×6
F	moulding	–	1	pine	2 51/64×1/4 sq.	510/6×6
G	moulding	–	1	pine	2 1/4×1/4 sq.	510/6×6
H	moulding	–	2	pine	1 1/8×13/32×13/64	510/6×6
J	former	1	1	plywood	1/8, a. t. p.	500/3
K	former	1	1	plywood	3/64, a. t. p.	500/1
L	linkage	1	–	balsa	22 27/32×5/16 sq.	661/8×8
M	linkage	1	–	balsa	17 9/32×5/16 sq.	661/8×8
O	linkage	–	1	balsa	20 27/32×5/16 sq.	661/8×8
P	linkage	–	1	balsa	19 13/16×5/16 sq.	661/8×8
Q	threaded rod	1	1	iron, zinc-plated	7 7/8, a. t. p.	3504
R	threaded rod	1	1	iron, zinc-plated	5 1/8, a. t. p. (shorten)	3504
S	threaded rod, bent	1	1	iron	4 3/4, a. t. p. (shorten)	3504
T	threaded rod, bent	1	1	iron	3 15/16, a. t. p. (shorten)	3504
U	sleeve	4	4	plastic	comm. item	3504
V	nut	2	2	brass	M 2	3504
W	forked coupling, with springsteel shanks	2	2	steel, nickel-plated	comm. item	3504
X	safety clip	2	2	plastic	comm. item	3504
Y1	control surface horn, plate right	1	1	plastic	comm. item	3649
Y2	control surface horn, plate left	1	1	plastic	comm. item	3649
Y3	wedge	1	1	plastic	comm. item	3649
Y4	contra plate	2	2	plastic	comm. item	3649
Y5	lenticular head bold	4	4	brass	M 1.7×9 (shorten)	3649
Z	safety tube (optional)	2	2	plastic	19/32×13/64 OD, 1/8 ID	1325/2
AA	elastic	1	1	rubber	3/64×3/64×1 9/16 ∅	ex 1116/3
BB	glass head pin	1	1	glass, steel	comm. item	638
CC	tube	1	1	aluminum	5/64×1/8 OD, 3/32 ID	515/2

a.t.p. = according to plan; true dimensions of part(s) in question must be derived from the R/C installation plan.

Also required:
foam rubber for wrapping-receiver and power supplies ex No. 730/3. Receiver and power supplies can be crashproof mounted in hard foam plastic (cut to suit from receiver packing material).

For fastening the servo nuts:
UHU-plus "endfest 300", No. 950/7 or
STABILIT-express, No. 960/30

For glueing the servo panel and the former:
UHU-hart No. 534/11 or RUDOL-hart No. 611/11

Recommended receiver equipment (available 1973)
Variant 1
1 6-, 8- or 12-channel VARIOPROP digital receiver (see prospectus RC P)
2 VARIOPROP MICRO servos 05, No. 3830
or VARIOPROP MICRO servos C 05, No. 3833
1 power supply pack for receiver, No. 3607
or No. 3609
1 quadruple core power supply cable No. 3606

Variant 2
1 6-, 8- or 12-channel VARIOPROP digital receiver (see prospectus RC P)
2 VARIOPROP servos No. 3765
1 power supply pack for receiver No. 3607
or No. 3609
1 quadruple core power supply cable No. 3606
Subject to changes serving technical progress!

R/C installation plan RC 73 texts AMIGO II

(1) mount receiver and power supply pack crashproof (in foam rubber or plastic)
(2) power supply pack compartment (Nos. 3607 or 3609)
(3) fit servo panel into fuselage; mark hole positions for servos
(4) switch, ex No. 3606
(5) holes and slot for switch in left fuselage side
(6) trailing antenna dangling from fuselage optional
(7) receiver compartment
(8) recess part (46) to suit receiver
(9) variant 1 with VARIOPROP MICRO 05 servos No. 3830 or VARIOPROP MICRO C 05 servos No. 3833
(10) shorten
(11) place R/C installation plan over Quickbuild plan in such a manner that the outlines of the fuselage are properly superimposed
(12) mount antenna straight in the fuselage; tape fast
(13) double pointed arrows indicate the direction of the grain of the wood, in the case of plywood that of the outer layers
(14) part (75) not required for R/C model
(15) subject to changes serving technical progress
(16) mate panel to fuselage
(17) variant (2) with VARIOPROP servos No. 3765
(18) cut out
(19) view A
(20) sectional view A-A
(21) aluminum tube
(22) elastic
(23) antenna
(24) proposed antenna layout
(25) opening in bottom of fuselage
(26) glasshead pin
(27) sectional view B-B
(28) select hole position for desired control surface deflection
(29) retain by tube (Z); optional
(30) polyamide hinge
(31) rudder linkage
(32) elevator linkage