

+++ building guidance Ranger (standard) of JetCom +++ table of contents: Side: Parts list 2 overview of the provided frames and accessories 2 assembly of the bearing areas 3 working on the trunk parts 3 installation of the ailerons and Servos into the bearing area 8 installation of the rudders 10 assembly of the fuselage center section with the bearing area 12 working on elevator 13 installation of the turbine 14 installation of the tank 15 suggestion on the interior fittings (Akkus, receiver etc..) 16 defaults for emphasis and rudder deflections 24 accessory recommendation of 24 spare parts 25 conditions: January 2007 page 1 of 25 +++ building guidance Ranger (standard) of JetCom +++ part of No. material intended purpose 1 12 mm of multiplex plate nose gear wheel frame 2 6 mm of Pappelsperrholz turbine frame 3+4 4 mm of Pappelsperrholz tank frames 5 5 mm beech plywood landing flap 6 4 mm beech plywood nose frame for Akku 7+8+9+10 4 ea.. Kunststofferteile servo framework 11 18 ea.. Hinges rudder linking 12 4 ea.. Ball yokes rudder linking 13 4 ea.. Threaded rods rudder linking 14 2 ea.. Round timber surface peg 15 6 ea.. Impact sleeves trunk/surface connection 16 4 ea.. Socket-head cap screws tail arm attachment 17 4 ea.. Socket-head cap screws elevator attachment 18 2 ea. of round timber parts of tail arm attachment 19 2 ea.. Beech plywood tail arm attachment 20 2 ea. beech plywood tail arm attachment 21 2 ea. beech plywood tail arm attachment 22 4 ea.. GRP - Rudder horns rudder linking 23 2 ea.. Socket-head cap screws trunk/surface connection 24 2 ea.. Wearing parts trunk/surface connection 25 GRP - fabric surface connection overview of the provided frames and accessories: Page 2 of 25 +++ building guidance Ranger (standard) of JetCom +++ assembly of the bearing area putting it the bearing area halves into the lower female form, so that the surfaces lie cleanly in it. Lay now on the wurzelrippe of the left and right surface halves long-term resin on, and you push both halves together. Fix the wings in such a way that these lie cleanly together. You should wipe outpouring resin away. After hardening still the enclosed gewebeband must be attached around the junction point. You should attach this also with long-term Epoxyd. After hardening you must cut out still the fabric at the servo cutout and the landing flap cutout and sharpen something. Work on the trunk parts central trunk: Mill out the openings from the fuselage center section to be seen as in the following pictures: Put now the turbine frame NR. 2, on the fuselage end section and marks themselves you the inside diameter. Afterwards you mill out the diameter from GRP. Stick now the frame with 40 minutes of Epoxyd resin on the inside of the rear trunk part and fix the frame entschprechend: Page 3 of 25 +++ building guidance Ranger (standard) of JetCom +++ contemporaneous know you the wood for the front surface on name and the surface screw connection in resins: The rumpfspitze was already separated. That frame NR. the nose gear wheel and/or the mechanics are to take up 2. Resins it the frame from the inside into the trunk. Make sure that that becomes frame only the half entering physician, so that the rumpfspitze can be installed later onto it: Stick frame NR. 6 on the face of frame NR. 2. They should attach still two woods on the left and on the right for reinforcement: Page 4 of 25 +++ building guidance Ranger (standard) of JetCom +++ at the point of frame NR. 6 must attach you now still another M3 nut/mother, in order to be able to fasten after perforating the

rumpfspitze this with a M3 screw: Tail arm: The two tail arms must become still with the bearing area groups. The bearing areas already are entschprechend bored. Bolt the elevator with the two trunk arms around the correct distance to manufacture. Measure at the bearing area the drilling distance and note the mass. Put the tail arms on the bearing area and align them these accurately. Consider here also the lateral distance. Transfer the noted mass of the drillings, to the lower surface of the tail arms. Mill out on the lower surface on each marking an opening. If you did not meet exactly the center of the drillings, you can now correct this. The openings on the lower surface should terminate after be so large that the parts of NR. 18 fit in. In this pin the screws are sunk attached later: In the arms become on the inside, both on the top side and on the lower surface, the felling trees hurry NR. 19, 20 and 21 attached. Respect page 5 of 25 +++ building guidance Ranger (standard) of JetCom +++ it on the fact that the parts are not equivalent large. The smaller ones are bonded in front, the larger ones in the back: Sharpen the parts with the NR. 18 on the face so on that these from the length on the lower surface part of NR. 19 rest upon. If the screws go now without too hakeln through the drillings, you can bond the sockets with Epoxyd resin. If the sockets should project still somewhat on the lower surface, then you sharpen these with the GRP surface evenly. It is important that the screw heads are sunk in the trunk part. Page 6 of 25 +++ building guidance Ranger (standard) of JetCom +++ boring it now by the trunk and the surface (those to be again aligned should) the drilling into the upper felling trees hurry of the tail arms. Do not pay attention to it too deeply to bore, so that you do not bore inadvertently by the top side through tail arms. Into the arm on the top side inside M5 impact sleeves are then attached for bolting and entering physician: After hardening you can bolt the parts for a test with one another. Make sure here that the screws are not to for a long time (the enclosed screws are from you to still shorten), otherwise damage you the top side of the arms. Page 7 of 25 +++ building guidance Ranger (standard) of JetCom +++ installation of the ailerons and Servos into the bearing area for the attachment of the ailerons worked satisfactorily the installation of four hinges. Distribute the hinges evenly over the length of the rudder and mark you these: Cut in the places in the surfaces and in the rudders the appropriate slots, around the hinges in resins, marked by you. Make sure with a resins of the hinges that the joints remain resin-free (with something oil or silicone to possibly moisten), so that the mobility of the hinges is not impaired. For safety reasons you should the hinges additionally pin, so that these cannot separate in the flight. Bore for this with a 2 mm of drills in the places, at which the hinges sit, one hole each by the bearing area and the rudder, and you stick these together with according to shortened Zahnstochern. Sand any supernatant parts of the Zahnstochers with the surface and/or the rudder the servo frameworks are attached to the kit. The reaming are present in the bearing area as well as in the elevator. Stick now the framework into the opening. Fasten afterwards the servo with the framework cover: Page 8 of 25 +++ with the servo by a 3 mm of connecting rod to connect to be able, they still another rudder horn in the extension of the servo arm in the rudder should attach building guidance Ranger (standard) of JetCom +++ around the rudder: Connect

now the servo with linking in the rudder, and you adjust it according to the defaults (rudder deflections): Page 9 of 25 +++ building guidance Ranger (standard) of JetCom +++ landing flap on the lower surface of the bearing area is already the reaming for the landing flap appropriate. The landing flap (part of NR. 5) is attached to the kit likewise. They must fasten the flap only with hinges to the bearing area: Afterwards you should bond the servo framework into the appropriate opening on the surface lower surface. Fasten the servo on the framework cover and bolt you these with the servo framework. Fasten in the landing flap still another rudder horn, and you connect the whole with the servo by a M3 threaded rod: Rudder: Linking of the rudders is not compellingly necessary. If you liked to link the rudders nevertheless, consider that, in order to keep the correct Schwerpunkt more counterweights (lead) in the Rumpvorderteil are needed. Page 10 of 25 +++ building guidance Ranger (standard) of JetCom +++ cuts it the rudder fins as out in the picture to see: Around the rudder and the fin more stability to give and the hinges fasten you must this box. Proceed for the attachment of the hinges as inclusive with the aileron, the locating. The Seitenruderservos sits in the rudder fins. We use one Hitec each HS 125 mg with the hatchet-lying Sevoeinbaurahmen. Cut from the rudders the appropriate openings out, so that the framework fits in with the servo: Bolt now the servo framework in the rudder. Stick afterwards the rudder horns into the rudder sheets, in order to connect the whole by 2 mm a connecting rod with the Servos. Page 11 of 25 +++ building guidance Ranger (standard) of JetCom +++ locking it the servo afterwards with the enclosed servo cover. Assembly of the fuselage center section with the bearing area putting it fuselage center section so on the bearing area that you can work from the upper and lower surface on it. Align the trunk on the bearing area. By the drillings in the bearing area you mark the position at the trunk. By the canopy opening you can the marking for the pins at the bearing area attach and afterwards bore. After that a resins and hardening of the surface pins you can attach the impact sleeves for the attachment of the bearing area: Page 12 of 25 +++ building guidance Ranger (standard) of JetCom +++ working on elevator the elevator is carcass finished. They must attach only the servo framework and the hinges. For the attachment elevator worked satisfactorily the installation of four hinges. Distribute the hinges evenly over the length of the rudder and mark you these: Cut in the places in the surfaces and in the rudders the appropriate slots, around the hinges in resins, marked by you. Make sure with a resins of the hinges that the joints remain resin-free (with something oil or silicone to possibly moisten), so that the mobility of the hinges is not impaired. For safety reasons you should the hinges additionally pin, so that these cannot separate in the flight. Bore for this with a 2 mm of drills in the places, at which the hinges sit, one hole each by the fin and the rudder, and you stick these together with according to shortened Zahnstochern. Sand any supernatant parts of the Zahnstochers with the surface and/or the rudder the servo frameworks are attached to the kit. The reaming are already present in the elevator. Stick now the framework into the opening. Fasten afterwards the servo with the framework cover: Page 13 of 25 +++ with the servo by a 3 mm of connecting rod to connect to be able, they still another rudder horn in the

extension of the servo arm in the rudder should attach building guidance Ranger (standard) of JetCom +++ around the rudder: Connect now the servo with linking in the rudder, and you adjust it according to the defaults (rudder deflections): Installation of the turbine turbines with a maximum thrust performance can be inserted by 10 kg. The following data refer to the installation of a FunSonic telex 60/70. In order to arrange the structure Ranger simple, the turbine is accommodated in the back in the tail. Thus the cardan shaft housing and thus additional weight are void. You already milled out the turbine frame entering physician and the inside. The provided aluminum angles serve the turbine for the attachment. Bore on the short side of the angles two drillings with the diameter 4 mm. Page 14 of 25 +++ building guidance Ranger (standard) of JetCom +++ installing it the angles to the turbine clip. Make sure here that the angles at the bearing surface are concise to the frame: Transfer the drillings of the angles (with installed turbine) to the face from frame NR. 2. Bore a 3 each mm of drilling by the markings. Attach now from the inside of the trunk M3 impact sleeves. Now you can screw the angles to the trunk. Installation of the tank the drillings of the frames (No. 6 + 7) are to be up-milled according to the diameter of your tank. The frames cannot be exchanged due to the position with the later installation into the model among themselves. With different tank diameter you must absolutely pay attention therefore to the correct arrangement: Page 15 of 25 +++ building guidance Ranger (standard) of JetCom +++ the moreover must sit the tank in the emphasis (see defaults for emphasis). Mark the correct position of the frames in the trunk and stick yourselves you these then with thickened resin. Depending upon used turbine we recommend a tank volume from 1,5 to 2 l. pushing you the tank now into the frames and fasten you to these in such a way that it cannot separate during the flight. Suggestion on the interior fittings (Akkus, receiver etc..) The interior fittings are naturally always taste thing. Everyone makes what it regards as the best. Here we can make only suggestions. In the following one you find however some pictures of our demonstrating machine. Perhaps other idea for you participates for you or: Page 16 of 25 +++ building guidance Ranger (standard) of JetCom +++ page 17 of 25 +++ building guidance Ranger (standard) of JetCom +++ page 18 of 25 +++ building guidance Ranger (standard) of JetCom +++ page 19 of 25 +++ building guidance Ranger (standard) of JetCom +++ page 20 of 25 +++ building guidance Ranger (standard) of JetCom +++ page 21 of 25 +++ building guidance Ranger (standard) of JetCom +++ page 22 of 25 +++ building guidance Ranger (standard) of JetCom +++ page 23 of 25 +++ building guidance Ranger (standard) of JetCom +++ defaults for emphasis and rudder deflections the emphasis sits 210 mm of the surface front edge to the rear measured: Aileron deflections: maximally +12 mm/-12 mm of elevator deflections: maximally +13 mm/-13 mm (70 % Expo) rudder: as much as possible landing flaps: 1. Do 25 mm (based on the rear edge) gradate 2nd stage 50 mm (based on the rear edge) of accessory recommendation? Behotec chassis: C 36 (nose gear wheel for front assembly)? INTAIRCO wheels (76 mm in diameter) and brakes No. IAC 2004? Turbine: FunSonic telex 70? HS 5645 mg or HS 645 mg (height and/or ailerons)? HS 85 mg (rudders)? Miniservos (with mechanical chassis valve and brake)?

Servo framework for rudders of Conrad (No.: 220437-17) page 24 of 25 +++
building guidance Ranger (standard) of JetCom +++ page of 25 of 25 spare parts
fuselage center section GRP order No.: Ran001 tail arm left/right GRP order No.:
Ran002 bearing area Styro/Balsa order No.: Ran003 elevators Styro/Balsa order
No.: Ran004 canopy order No.: Ran005 frame set order No.: Ran006 building
guidance order No.: Ran007 of small articles