electronics for models

JETI model®

CATALOGUE 2008/2009

DUPLEX 2.4 GHz

The DUPLEX system is primarily designed for the full range operation of radio control models. DUPLEX operates in the 2,4 GHz band. DUPLEX is not a traditional radio control system using FM transmitters and receivers operating in the 35 MHz, 40 MHz, etc. bands, but it is a new advanced system for the smooth control and monitoring of the model, with information feedback from the model (audible signals and visual display for the pilot).

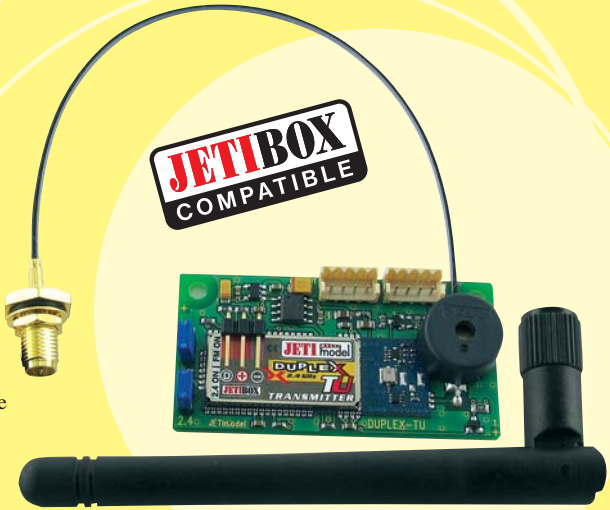
In designing the DUPLEX system, our aim has always been to improve on what is offered by radio control systems currently on the market (we have worked hard to avoid all shortcomings of existing systems operating in the 2.4 GHz band currently offered on the market). Problems with interference and frequency control will become history, and the transmission of telemetry data from the model in real time will change your approach to radio control forever.

The transmission of telemetry data in real time

The big advantage of the DUPLEX system is the support of full two–way communication. All receivers and transmitter modules of the DUPLEX system are designed for the transmission of telemetry data in real time. The DUPLEX system allows any combination of receiver and transmitter module to transmit the receiver voltage in real time. An audio alert can be set which is activated when the receiver battery voltage falls below the preset limit. The most useful features come when attaching the JETIBOX to the transmitter module which then displays the data sent back to the transmitter module from the receiver, or other sensors that are attached to the receiver. All receivers in the DUPLEX system will accept a telemetric sensor connected directly, or up to 8 sensors through the extension module. The sensors can also be connected directly to a JETIBOX, for example, connecting the MUI sensor produces a voltmeter and ammeter.

Main advantages of the DUPLEX system

- no crystals used – no frequency checks required
- you do not have to buy a new transmitter
- easy and reliable pairing of receivers to transmitters (you can use endless numbers of receivers with every transmitter)
- high interference rejection provides safe operation – even in an interference rich environment
- digital data transmision ensures distortion free transfer of information to the model
- maximum safety
- can be used with all types of models (aircraft, boats, cars)
- two way communication between receiver and transmitter



- telemetric data transfer to the model operator in real time
- high sensitivity of receivers and high output of transmitters ensures visibility limit range
- self–correcting coding of information
- the DUPLEX system can be extended up to 16 output channels with the use of two receivers
- two antennas receivers ensure continuous control of models in any position, and eliminate blind spots caused by signal reflection
- quality plotting of transmission channels and antenna position at start up, providing a low probability of transmission on busy or interference rich channels

  immediate response of the receiver output to changes in transmitter controls
- transmitter modules are fitted with an alarm triggered by the receiver in dangerous situations (low receiver battery voltage, poor reception, etc.)
- the DUPLEX system provides simultaneous operation of more than one receiver on the same transmitter (listening–in)
- real time data display and easy programing using the JetiBox
- failsafe with adjustable time delay.
- transmitters channels can be assigned to any receiver output
- all of the receivers allow the setting of mixers, servo reverse, ATV, servo slow for each output on the receiver, even with the simplest of transmitters
- standard equipment of transmit module is the sound output to start alarm, when the voltage decrease under the set limit

Basic parameters DUPLEX

Receivers DUPLEX Rx

Specifications	DUPLEX R4	DUPLEX R5 (R5 indoor)	DUPLEX R6	DUPLEX R8
Dimensions	35 x 20 x 7 mm	42 x 20 x 8 mm	45 x 24 x 12 mm	50 x 30 x 12 mm
Weight	5 g	5 g (4 g)	11 g	15 g
Antenna length	2 x 100 mm	2 x 100 mm (2x 45 mm)	2x 100 mm	2x 200 mm
Active antenna length	30 mm	30 mm	30 mm	30 mm
Number of output channels	4	5	6	8
Operating temperature range	– 10 to + 85° C	– 10 to + 85° C	– 10 to + 85° C	– 10 to + 85° C
Supply voltage	3,2 – 8,4V	3,2 – 8,4V	3,2 – 8,4V	3,2 – 8,4V
Average current	39 mA	39 mA	40 mA	48 mA

Other Specifications	DUPLEX R4	DUPLEX R5 (R5 indoor)	DUPLEX R6	DUPLEX R8
Channel hopping	✓	✓	✓	✓
Range	out of sight	out of sight	out of sight	out of sight
Channel coding	15 bit	15 bit	15 bit	15 bit
Number of systems that can be in use simultaneously	up to 120	up to 120	up to 120	up to 120
Number of receiver antenna	2	2	2	2
Transfer of telemetric data in real time	✓	✓	✓	✓
Dual comunication Rx and Tx	✓	✓	✓	✓
Programmable FailSafe	✓	✓	✓	✓
Operation of two receivers	✓	✓	✓	✓
Programming	JETIBOX	JETIBOX	JETIBOX	JETIBOX
Wireless programming	✓	✓	✓	✓
Maximal output power	6 dBm	6 dBm	20 dBm	20 dBm
Receiver sensitivity	–98 dBm	–98 dBm	– 100 dBm	– 106 dBm

DUPLEX 2.4 GHz Tx modules

Transmitter / Module	TU	TF	TG	TG internal
Futaba: 7U, 8U, 8J, 9C,9Z, FN, T10C, 3PK, 3PJ, FC-18, FC-28	✓	✓	-	-
Futaba: FC-16, FC-18 JUNIOR, T6EXHP, 12FG, 12Z, 14MZ, FX-18, FX-14	✓	-	-	-
Hitec: Optic 6, Eclipse 7, Prism 7	✓	✓	-	-
Hitec: Laser 4, Laser 6, Optic 6 sport	✓	-	-	-
Graupner/JR: X-347, X-388, X-9303, MX-22, X-3810 ADT, PCM-10S, PCM-10X	✓	-	✓	-
Graupner/JR: FM-6014, MC-17, MC-18, MC-20, MC-24	✓	-	-	✓
Graupner: MC-10, MC-12, MC-14, MC-15, MC-16, MC-19, MC-22, MC-16-20, MX-12, MX-16s, MX24s	✓	-	-	-
Multiplex: Serie 7,9,12, Cockpit SX, Profi 3000, 4000	✓	-	-	-
Other transmitters	✓	-	-	-

Specifications	DUPLEX TU	DUPLEX TF	DUPLEX TG (TG Internal)
Dimensions	55 x 28,8 x 9 mm	59 x 37 x 20 mm	60 x 44 x 21 mm
Weight	15 g	40 g	50 g
Antenna	2 dBi	2 dBi	2 dBi
Stage beeps	✓	✓	✓
Number of input PPM channels	16	16	16
Operating temperature range	– 10 to + 85° C	– 10 to + 85° C	– 10 to + 85° C
Supply voltage	3,5 – 16V	3,5 – 16V	3,5 – 16V
Average current consumption	38 mA	38 mA	38 mA
Output power	20 dBm	20 dBm	20 dBm

Accessories for the DUPLEX system

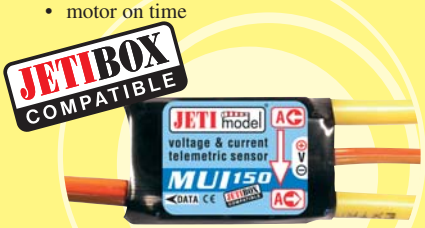
Additional modules and equipment with which you can easily monitor important operational data during flight.

MUI

The MUI module is a clever sensor for current and voltage. Primarily intended for sensing the current and voltage of power batteries in electric power systems, the MUI module can also be used in models with internal combustion engines.

Measures:

- voltage (0 to 60 V) – with a record of max and min voltage
- current (0 to 75A / available is the option for 30A and 150A) – with a record of max current
- used battery capacity
- motor on time



MT 125 and MT300

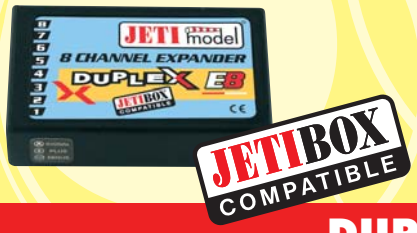
The MT125 module senses temperature in the range of –55° to 125° C and MT300 to 300° C. The MT module reads the current temperature, and keeps a record of the maximal and minimal values.

MGPS

The MGPS module monitors the GPS location of the model. The MGPS module can also measure the distance from the point of take off, and indicate climb or descent. At the same time, it is possible to monitor the height and speed of the model.

EXPANDER E8 + E4

The Expander E8 and Expander E4 allow up to eight (four) sensors to be used with a single DUPLEX receiver. The Expander can be set so that the JETIBOX displays only those values that are required.



JETIBOX

JETIBOX is a universal communication terminal, which can be used with any JETI products that are marked JETIBOX Compatible (JBC). JETIBOX Compatible products use powerful software to allow easy setup and reading of data using a simple menu driven display on the JETIBOX terminal.

There are now a number of JETI model JBC products for use with the JETIBOX, which due to its features and simplicity is gaining a large number of supporters around the world, and this support in turn is creating demand for an even greater range of JETI model JBC products.

JETIBOX operates as a two–way terminal, showing all data stored in the JBC product. With the use of four buttons, the user can browse the menu and set the selected values to take advantage of the full capability of JBC products.

It is currently possible with the use of the JETIBOX to program controllers in the SPIN series; the CAR Sensor 3000; REX JBC receivers, and the new transmitter modules, receivers and all accessories in the DUPLEX system. With the JETIBOX connected to DUPLEX transmitter modules, it is possible to have continuous wireless communication with any JETIBOX compatible device in the model.

The JETIBOX may be used on its own for:

- Measuring the pulse width from the receiver – displaying the pulse width in milliseconds along with the receiver voltage
- Pulse generation – this feature is useful for initial servo setup in the model, without the need to use transmitters and receivers
- Servo cycling – this can be used to check the operation and reliability of servos
- Servo speed measurement – the time taken for the servo to move from one position to another.

FM RECEIVERS

REX receivers are designed to receive frequency modulated signals from all FM transmitters, including synthesized frequency transmitters. REX receivers are available for use in all model control bands, and are suitable for all types of model.

The channel of all Jeti REX receivers can be changed using standard size plug in receiver crystals. The use of JETI model brand crystals is recommended, although it is possible to use standard receiver crystals from Futaba, Graupner and Hitec.

Possible variation in quality and specification of crystals from other producers may adversely affect the functioning of the receiver. When used with suitable crystals, REX receivers offer high sensitivity, excellent selectivity and maximum suppression of unwanted signals.

Futaba, Graupner/JR and Hitec plugs are all suitable for connecting the receiver battery and servos to all Jeti receivers.

General principles

- Wrap the receiver in soft foam and place it as far away as possible from interference generating sources (servos, electric flight motors etc).
- We recommend not making any modifications to the aerial.
- The receiver is sensitive to aerial placement, and the aerial should be kept away from metal components and conductors (avoid the aerial being placed parallel to bowden cables and servo cables).
- It is best to leave the aerial flying free behind the model or to use a whip aerial positioned upright in relation to metal conductors in the model. When using whip aerials on carbon fuselage, the aerial must be isolated from the fuselage.

Offered types of FM receivers

Receivers REX	Number of output channels	Decoder	Intelligent decoding	Fail safe	Setting
REX JBC	4, 6, 8	Microprocessor	Yes	Yes	JETIBOX
REX MPD	4, 5, 7	Microprocessor	Yes	Yes	Transmitter
REX Plus	4, 5, 7	Analog	No	No	–

REX JBC

(**J**eti **B**ox **C**ompatible)

REX JBC receivers are designed to receive FM signals in the 27, 35, 35B, 36, 40, 41 and 72 MHz bands. REX JBC receivers have microprocessor decoding and are capable of communicating with the JETIBOX universal terminal – this significantly extends the capability of the receiver. The new „JBC“ receivers were developed as a result of our long–term experience and offer the maximum possible performance – outstanding in this category of receiver. One of the main REX JBC receiver features is digital signal processing for excellent interference rejection. JBC receivers (when used with the JETI BOX) allow many control adjustments that were only previously possible with expensive transmitters. When used with programmable transmitters, JBC receivers allow many previously impossible combinations of mixes to be used. A clear advantage of JBC receivers is that all model setups can be stored in the receiver, and cannot be affected by changes made to the transmitter; for example, the maximum servo deflection (ATV) can be set in the receiver that it would be impossible to crash the servo output into the end stops as a result of poor incoming signals.

JETIBOX COMPATIBLE

Specifications	Supply voltage [V]	Sensitivity [µV]	Antenna length [mm]	Number of output channels	Dimensions [mm]	Weight [g]
REX 4 JBC	3,5 – 8,4	8	800	4	35 x 20 x 7	6
REX 6 JBC	3,5 – 8,4	6	1000	6	45 x 24 x 12	13
REX 8 JBC	3,5 – 8,4	5	1000	8	50 x 30 x 12	17

REX MPD

(Microprocessor Pulse Decoding)

REX MPD receivers are designed to receive FM signals in the 27, 35, 35B, 36, 40, 41 and 72 MHz bands.

Rex 4 MPD and Rex 5 MPD recievers are small and lightweight, and suitable for use in small and medium sized model aircraft. Rex 7 MPD receivers can be used to larger models. Futaba, Graupner/JR and Hitec plugs are all suitable for connecting the receiver battery and servos to Jeti Rex MPD receivers.

The main advantage of the new MPD receivers is the application of intelligent decoder technology which provides some similarity to the operating characteristsics of PCM receivers.

The MPD technology allows the elimination of short term signal losses, as well as servo buzzing and servo jitter. If signal loss intervals increase, the processor generates internal servo control pulses – the result of analysis of the last valid input pulses and pulses stored in the processor memory during the operating period of the receiver. This method of operation resembles the Fail Safe function in PCM receivers, but is much more efficient with negligible time delay before full control is restored.

Specifications	Supply voltage [V]	Sensitivity [µV]	Antenna length [mm]	Number of output channels	Dimensions [mm]	Weight [g]
REX 4 MPD	3,5 – 8,4	8	500	4	35 x 20 x 7	6
REX 5 MPD	3,5 – 8,4	8	500	5	31 x 17 x 9	8
REX 7 MPD	3,5 – 8,4	5	800	7	50 x 30 x 12	17

REX PLUS

REX PLUS are the basic receivers offered by Jeti Model. REX PLUS receivers are reliable, and have been popular with modellers for many years.

The analog decoder immediately responds to movement of the transmitter sticks. The channel of all Jeti REX plus receivers can be changed using standard size plug in receiver crystals. The receiver is equipped with a circuit to control servo jitter if the transmitter is switched off before the receiver.

Specifications	Supply voltage [V]	Sensitivity [µV]	Antenna length [mm]	Number of output channels	Dimensions [mm]	Weight [g]
REX 4 Plus	3,5 – 8,4	8	500	4	31 x 24 x 14	9
REX 5 Plus	3,5 – 8,4	8	500	5	31 x 17 x 9	8
REX 7 mini	3,5 – 8,4	5	800	7	50 x 30 x 12	17

CRYSTALS

We recommend the use of genuine JETI model crystals with Jeti REX receivers. Jeti crystals are standard size, and offered for use in the 35, 35 B, 36, 40, 41 and 72MHz frequency bands.

OPTIC 8

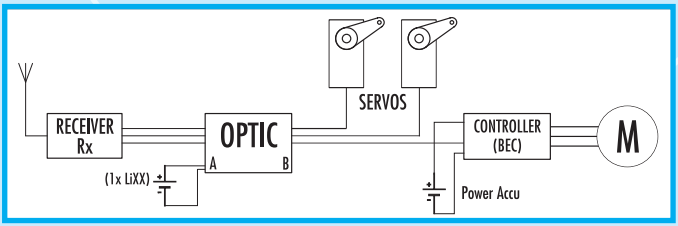
OPTIC 8 provides absolute isolation of the RC receiver from other electrical equipment in the model.

The OPTIC 8 prevents unwanted signals moving along conductors from servos, speed controllers, and other devices connected to the on–board electrical system.

Using the OPTIC 8 allows greater flexibility over receiver placement in the model. The main influence on the quality of incoming signals is the direct contact of the receiver with cables and other electrical equipment – which when using the OPTIC 8 is completely electrically isolated.

OPTO isolation of the receiver (using the OPTIC 8) is recommended when using five and more servos; for ELECTRIC drive, more then 50A and greater than 10s NiXX or 4S LiXX cells using Switch Mode (Switching) BEC circuits.

An example of connecting the OPTIC in the model and the use an internal voltage stabilizer (BEC) of speed controller



Basic parameters	Number of channels	Supply voltage [V]	Max input current [mA]	Dimensions [mm]	Weight [g]
OPTIC 8	8	3,9 – 9	8 x 0,2	40 x 30 x 13	11

SPEED controllers

Speed controllers are available in 2 main types; for brushed motors (DC – commutator) and for brushless motors BLDC. Other factors in the selection of the controller are the voltage range of the drive batteries, current demands of the motor, and the method used to power the receiver and servos.

Jeti speed controllers normally provide thermal protection, protection of the battery against low voltage (LVC), and over current protection. BEC (Battery Eliminator Circuit) controllers include an integrated circuit to provide a stabilized power supply to power the receiver and servos. Controllers that do not have BEC are marked OPTO, and require the use of a receiver battery (4 or 5 x NiXX), or an external BEC (Jeti MAX BEC is recommended for use with up to 12 cell NiXX, 3S LiPo, or 4S A123). OPTO controllers are designed to provide complete electrical isolation of the power supply from the radio system. OPTO controllers are recommended when BEC circuits are not sufficient for your needs because of a high servo count, the use of digital servos, or for models with high current consumption or high operating voltage.

General principles

- Read the instructions carefully prior to use
- only use new connectors of good quality, which must be soldered properly to the controller cables (remove any flux remaining on the connectors)
- cables to the flight battery can be extended to a maximum length of 20 cm
- maintain maximum distance between all cables and the receiver aerial and receiver
- **connect the flight batteries to the flight power system shortly before take off and disconnect them immediately after landing**
- **always disconnect all flight batteries when the model is not in use**
- prevent the possibility of reverse polarity connection of the controller and batteries (use polarized connectors)
- do not connect the controller to power supplies other than a suitable battery (with appropriate input voltage and current capability)
- prevent possible injuries caused by moving parts of the model (motor, gear box etc.); always bear in mind that the motor may start without warning
- before every operation, check the controller and receiver circuitry, and the transmitter frequency
- position the controller in the model within the cooling air flow and provide air passage openings of adequate size (inlet and outlet)

Series of controllers	Types according to current	Types according to voltage	BEC	Setting parameters	Designed for motors
ECO	12 - 25	5 - 16 V	linear	Jumper	BLDC
ADVANCE	4 - 90	5 - 42 V	linear	Prog Card	BLDC
MASTER	4 - 195	5 - 42 V	linear	Prog Box	BLDC
SPIN	11 - 200	5 - 59 V	switched	JETIBOX	BLDC
JES	6 - 45	4 - 15 V	linear	Jumper	DC

SENSOR 3000

The Sensor 3000 controller is intended for use with brushless (BLDC) as well as direct current (DC) motors. The Sensor 3000 benefits from the culmination of knowledge and experience gained during many years of motor control development at our company. Sensor 3000 meets the high demands of users and offers surprising adaptability as a result of its powerful software. The Sensor 3000 is normally supplied with the JETIBOX programming device which enables the user to program a large variety of controller settings quickly and easily.

When connected to the CAR sensor 3000, the JETIBOX can read out controller data which has been continuously measured and collected in the controller memory during operation. Among the useful data collected is the controller temperature, supply voltage, average current, motor operation time, maximum vehicle speed and average speed.

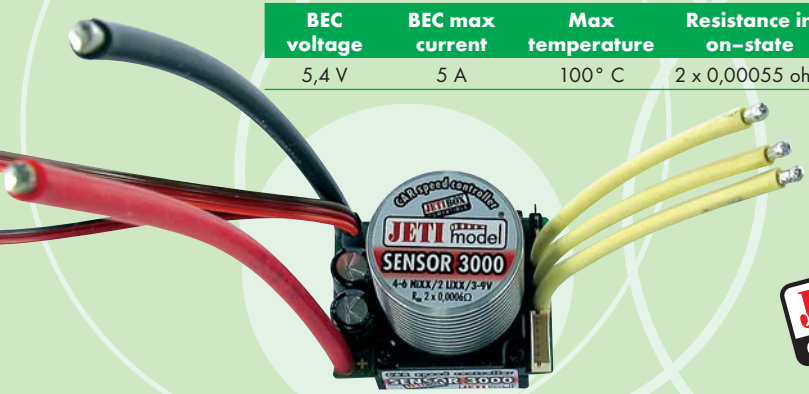
The CAR sensor 3000 controller is designed to control alternating current (brushless BLDC) motors with SENSORS (i. e. only motors which are equipped with rotor position transducers like Hall device sensors or optical sensors) as well as for direct current (DC) motors. As the controller is able to recognize the type of the BLDC motor, its sensor type, and mechanical advance settings, any type of brushless motor with sensors, from any manufacturer, can be connected to it.

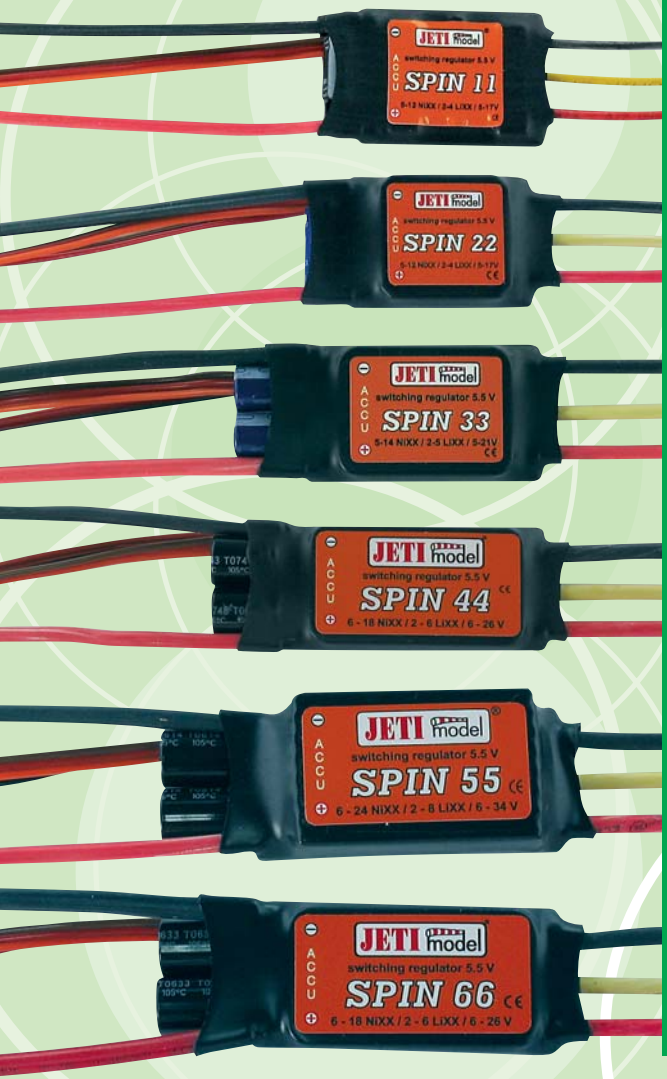
As standard, the CAR sensor 3000 features over temperature protection; low voltage protection for the batteries; overcurrent limiting; optional reverse rotation; a programmable brake, and a high level of durability combined with water and dust proof design.

Specifications of Car Sensor 3000

Dimension	Weight with conductors	Nominal current/ max 30 s	Input power	Number of accumulators cells
41 x 31 x 37	80 g	60 A / 100 A	3 - 9 V	1-2 LiXX / 4-7 NiXX

BEC voltage	BEC max current	Max temperature	Resistance in on-state	Setting parameters
5,4 V	5 A	100° C	2 x 0,00055 ohm	JETIBOX





SPIN

BRUSHLESS MOTORS

SPIN is a top end series of controllers for brushless motors. SPIN controllers can work with all type of batteries – NiCd, NiMh, Li–Pol, Li–Ion, and LiFe (A123). As a result of the legendary Jeti reliability and wide of possible programing options for all categories of flight, including helicopters, Jeti SPIN controllers are the standard equipment of the majority of top competition pilots.

In the development of new brushless speed controllers, we have tried to more than comply with the requirements of users, together with simplicity and ease of use, which we currently offer.

All standard SPIN controllers include a new type of voltage stabilizer for receiver and servo power, the so called switching BEC with an output voltage of 5.5 V. The use of this feature opens the way to the use of BEC for models operating at higher voltages. A significant factor is that the BEC circuit maintains its full current capability right up to the maximum voltage.

The SPIN series of controllers can be programed using the JETIBOX. Connecting a SPIN controller and JETIBOX allows a nearly unlimited range of programing options to help optimise the power system for any model.

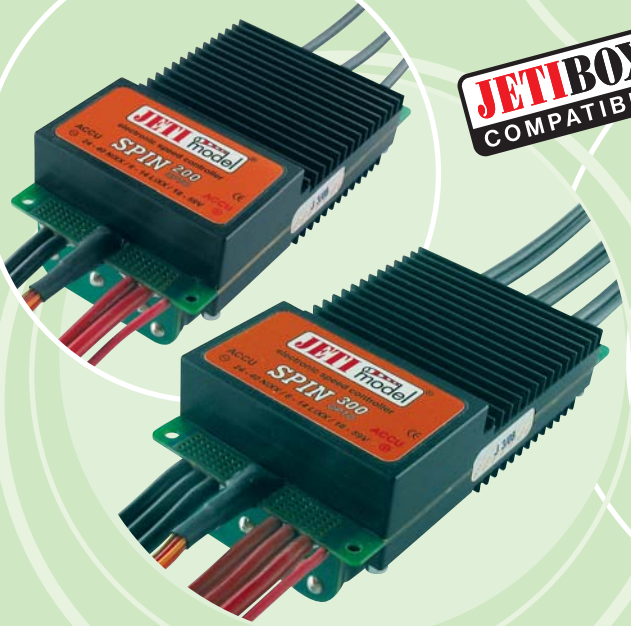
JETIBOX COMPATIBLE

ESC type	Nominal current [A]	Number of accumulator cells NiXX/ LiXX/ voltage	Max. current BEC [A]	Max. number of servos	Dimensions [mm]	Weight [g]
SPIN 11	11	5-12/2-4/5-17V	2,5	6	32 x 23 x 6	12
SPIN 22	22	5-12/2-4/5-17V	2,5	6	32 x 23 x 7	26
SPIN 33	33	5-14/2-5/5-21V	3	7	42 x 23 x 7	32
SPIN 44	44	5-18/2-6/5-26V	5	8	52 x 25 x 10	44
SPIN 55	55	5-24/2-8/5-34V	5	8	52 x 25 x 12	60
SPIN 66	70	5-18/2-6/5-26V	5	8	52 x 25 x 12	56

SPIN OPTO

The SPIN OPTO controllers have electrically isolated input and output, and it is therefore necessary to use a separate power supply for the receiver and servos – this minimizes interference to the receiver.

SPIN controllers are easy program without a computer, all you need is JETIBOX. SPIN controllers record operating data during operation, which allows you to examine the data and fine tune the settings of your aeroplane or helicopter. The controller collects data on the temperature of the controller, the maximum and minimum current during the flight, motor speed, and a number of other readings are stored by the controller, and can be read by the JETIBOX immediately after the flight. This will allow you to set the changes and fly again – you can immediately see the results. Fine–tuning your power system has never been easier.

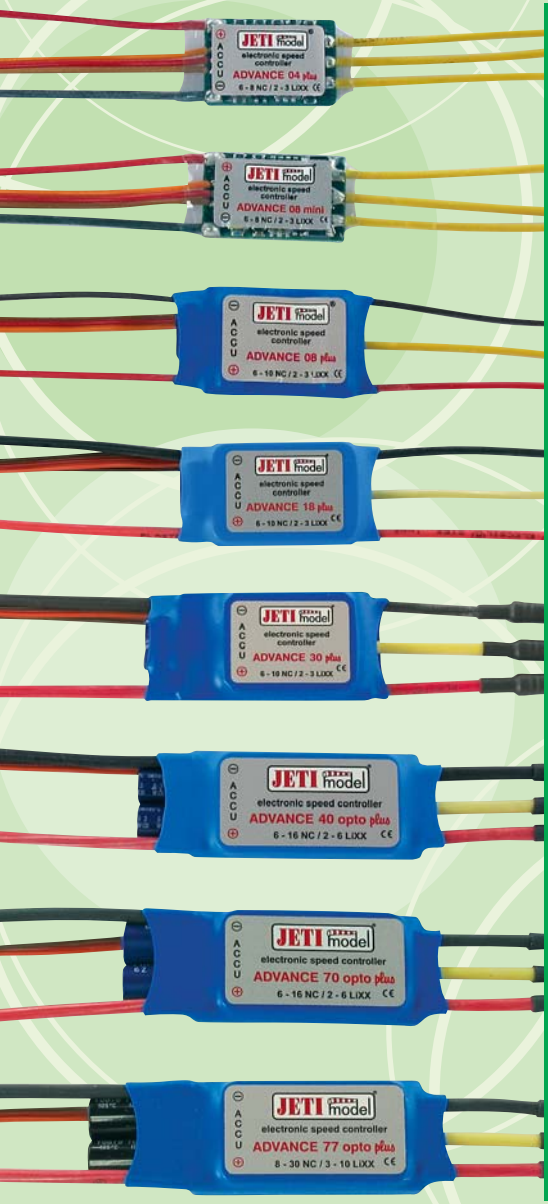


JETIBOX COMPATIBLE

ESC type	Nominal current [A]	Number of accumulator cells NiXX/ LiXX/ voltage	Dimensions [mm]	Weight [g]
SPIN 44 OPTO	44	6-18/2-6/6-26V	52 x 25 x 10	35
SPIN 48 OPTO	48	14-30/4-10/12-42V	52 x 25 x 12	45
SPIN 66 OPTO	70	6-18/2-6/6-26V	52 x 25 x 12	45
SPIN 75 OPTO	75	14-30/4-10/12-42V	52 x 25 x 15	55
SPIN 77 OPTO	77	14-36/4-12/12-50V	65 x 55 x 17	110
SPIN 99 OPTO	90	14-36/4-12/12-50V	65 x 55 x 17	110
SPIN 200 OPTO	170	24-40/6-14/18-59V	63 x 120 x 27	326
SPIN 300 OPTO	220	24-40/6-14/18-59V	63 x 120 x 27	360

ADVANCE PLUS

SPEED CONTROLLERS FOR BRUSHLESS MOTORS



Universal controllers optimized for all types of brushless motor. Jeti plus controllers are suitable for use with NiCd, NiMh, Li–Pol and Li–Ion batteries. The throttle range is automatically set at start up. Brake with hard motor cut off for gliders, or no brake with soft motor cut off can be easily set.

Advance plus controllers can be programmed using a single movement of the RC throttle stick, or by using the Jeti PROG CARD programming card.

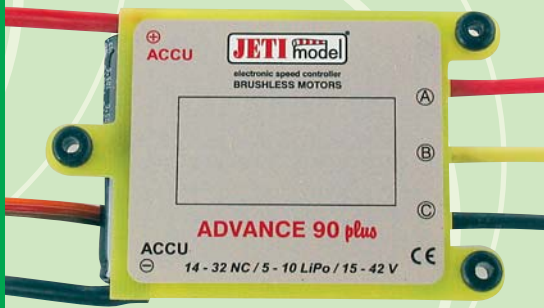
Programming options when using the PROG CARD:

Brake: on/off

- Timing: for conventional brushless/inrunner, or for outrunner motors.
- Throttle curve: linear / logarithmic
- Type of batteries: NiCd, NiMH / Li–Pol, Li–Ion
- Two pre–set levels for the start of low volts cut–off for each type of drive battery
- Two types of cut off – slow down/sudden motor cut off

Advance Opto controllers have Opto isolation of the power system from the radio system to minimize possible radio interference. You must use a separate power supply for the receiver and servos when using OPTO controllers.

Advance Plus regulators are also available for model helicopters. These Controllers are marked HELI and are suitable for all type models requiring precise management of motor speed. Advance plus HELI controllers are supplied with the Heli Prog Card (easy to use programing card).

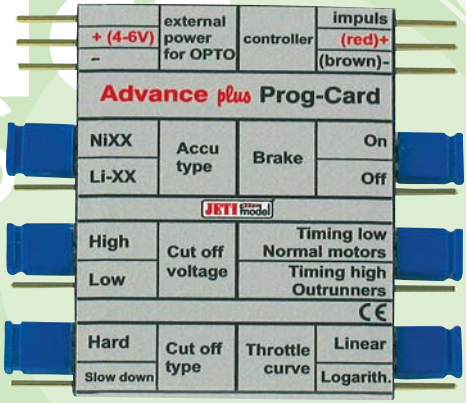


ESC type	Nominal/ Peak current [A]	Number of accumulator cells	Max. BEC current [A]	Max. number of servos	Dimensions [mm]	Weight [g]
ADVANCE 04 Plus	4/6	6-8/2-3/5-13V	2	4	25 x 17 x 4	6
ADVANCE 08 mini	8/10	6-8/2-3/5-13V	3	4	25 x 17 x 5	7
ADVANCE 08 Plus	8/10	6-10/2-3/5-15V	3	4	32 x 23 x 6	9
ADVANCE 12 Plus	12/14	6-10/2-3/5-15V	3	4	32 x 23 x 6	10
ADVANCE 18 Plus	18/20	6-10/2-3/5-15V	3	4	32 x 23 x 7	21
ADVANCE 30 Plus	30/33	6-10/2-3/5-15V	3	4	42 x 23 x 7	28
ADVANCE 40 Plus	40/44	6-12/2-3/5-15V	5	5	52 x 25 x 10	35
ADVANCE 70 Plus	70/75	6-12/2-3/5-15V	5	5	52 x 25 x 12	38
ADVANCE 40 OPTO Plus	40/44	6-16/2-6/5-25V	-	-	52 x 25 x 8	35
ADVANCE 45 OPTO Plus	45/50	8-24/3-8/7-35V	-	-	52 x 25 x 10	38
ADVANCE 70 OPTO Plus	70/75	6-16/2-6/5-25V	-	-	52 x 25 x 10	38
ADVANCE 75 OPTO Plus	75/85	8-24/3-8/7-35V	-	-	52 x 25 x 12	40
ADVANCE 77 OPTO Plus	77/85	8-32/3-10/7-42V	-	-	52 x 25 x 12	40
ADVANCE 90 OPTO Plus	90/100	14-32/4-10/12-42V	-	-	65 x 55 x 17	90

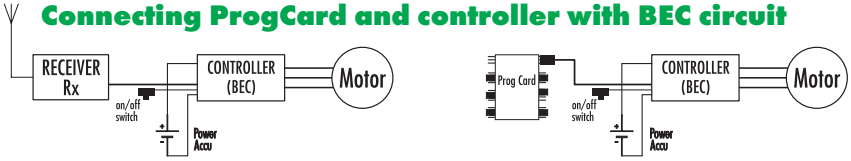
* Max peak current for 30 second

PROG CARD ADVANCE PLUS

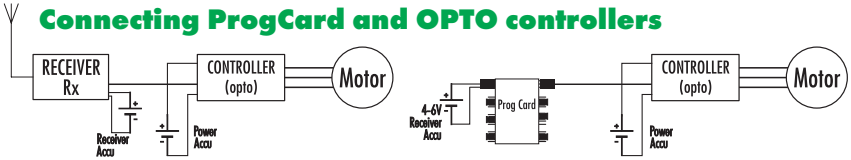
The Jeti PROG CARD is designed to quickly and simply change the settings of ADVANCE plus series controllers.



Connecting ProgCard and controller with BEC circuit



Connecting ProgCard and OPTO controllers



ADVANCE CAR

ADVANCE CAR CONTROLLERS ARE DESIGNED FOR USE IN RC MODEL CARS, AND THEY CAN ALSO BE USED IN RC MODEL BOATS

Basic features of Advance CAR controllers:

- Suitable for use with NiMH / NiCd / Li–Po and Li–Ion batteries
- Proportional brake, with automatic brake in the neutral position
- Adjustable current limit at 4 degrees
- 50% power limit in reverse
- 3A BEC circuit.
- rugged and water resistant construction

Advance CAR controllers are supplied with the CAR Prog Card (easy to use programing card).

ESC type	Number of accumulator cells NiXX/LiXX	Resistance in on–state [ohm]	Dimensions [mm]	Weight [g]
ADVANCE CAR sport	5-8/2-3	2 x 0,001	56 x 27 x 17	70
ADVANCE CAR race	5-8/2-3	2 x 0,0006	56 x 27 x 17	70

ADVANCE 50 NAVY

FOR BOATS MODELS

Special speed controller designed for brushless motors, and equipped with water cooling system.

- Suitable for use with all types of batteries (NiCd, NiMh, Li–Pol, Li–Ion)
- The BEC circuit to power the receiver and servos can operate with an input voltage up to 17V
- OPTO isolation of the receiver if the BEC circuit is not used
- Water cooling
- Water resistance
- Two modes of operation (forward – stop or forward – stop – reverse)
- Supplied with the Navy Prog Card (easy to use programing card)

ESC type	Nominal current [A]	Number of accumulator cells with BEC NiXX/ LiXX	Number of accumulator cells without BEC circuit NiXX/ LiXX	Max BEC current [A]	Dimensions [mm]	Weight [g]
ADVANCE 50 NAVY	50	6-10 / 2-3	6-16 / 2-6	5	65 x 26 x 15	48

ECO

UNIVERSAL CONTROLLERS OPTIMIZED FOR ALL TYPES OF BRUSHLESS MOTOR

The Jeti ECO controllers have gained wide popularity because of their reliability and simplicity of use. All ECO series have efficient BEC circuits to power receivers and servos, standard protection systems, and automatic motor timing.

ECO series controllers were designed to be very simple to set up, and changes are made by the single jumper at one end of the controller. Other adjustments are made automatically by the controller. You can quickly and easily change the controller to operate in one of the four modes.

Mode 1: NiXX – Br. OFF – brake off, battery type NiCd or NiMH, cut off slow down at 5V or 0,7V per cell

Mode 2: NiXX – Br. ON – brake on, battery type NiCd or NiMh, cut off sudden at 5V or 0,7V per cell

Mode 3: LiXX – Br. OFF – brake off, battery type Li–Ion or Li–Polymer, cut off slow down. Minimum voltage 6V for a 2 cell pack, and 9V for a 3 cell power pack.

Mode 4: LiXX – Br. ON – brake off, battery type Li–Ion or Li–Polymer, cut off slow down. Minimum voltage 6V for a 2 cell pack, and 9V for a 3 cell power pack.

ESC type	Nominal/ peak current [A]	Number of accumulator cells NiXX/ LiXX/voltage	Max BEC current [A]	Max number of servos	Dimensions [mm]	Weight [g]
ECO 08	8/10	- /2-3/5-12,6V	2,5	4	27 x 17 x 5	7
ECO 12	12/14	6-10/2-3/5-12,6V	3	4	32 x 23 x 6	10
ECO 18	18/20	6-10/2-3/5-12,6V	3	4	32 x 23 x 7	21
ECO 25	25/30	6-10/2-3/5-12,6V	3	5	32 x 23 x 8	28

*) Max peak current for 30 second

JES

FOR BRUSHED MOTORS

JES controllers are for DC motors, and feature automatic throttle setup using any transmitter. All JES controllers have efficient BEC circuits to power receivers and servos and have standard protection systems. JES controllers have very powerful features designed into the software, but are very simple to operate.

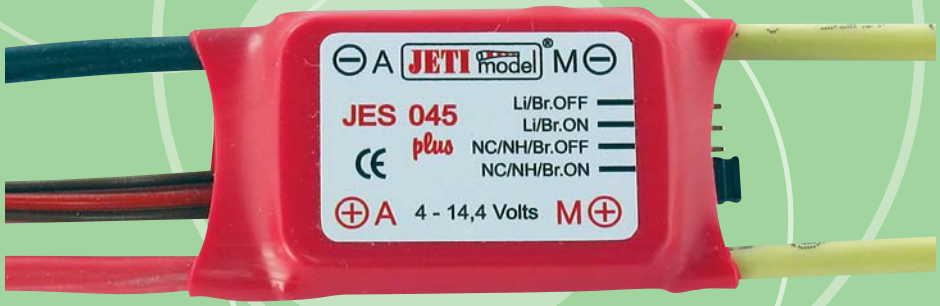
JES controllers have been designed to be very simple to set up, and changes are made by the single jumper at one end of the controller. Other adjustments are made automatically by the controller. You can quickly and easily change the controller to operate in one of the four modes.

Mode 1: NiXX – Br. OFF – brake off, battery type NiCd or NiMH, cut off slow down at 5V or 0,7V per cell

Mode 2: NiXX – Br. OFF – brake on, battery type NiCd or NiMh, cut off sudden at 5V or 0,7V per cell

Mode 3: NiXX – Br. OFF – brake off, battery type Li–Ion or Li–Polymer, cut off slow down. Minimum voltage 6V for a 2 cell pack, and 9V for a 3 cell power pack.

Mode 4: NiXX – Br. OFF – brake off, battery type Li–Ion or Li–Polymer, cut off slow down. Minimum voltage 6V for a 2 cell pack, and 9V for a 3 cell power pack.



ESC type	Nominal/ peak current *[A]	Number of accumulator cells NiXX/ LiXX/ voltage	Max BEC current [A]	Max number of servos	Dimensions [mm]	Weight [g]
JES 006	6/8	4-8/2/4-12V	2	3	18 x 14 x 5	6
JES 012 plus	12/15	4-12/2-3/4-14,4V	3	5	29 x 19 x 8	15
JES 020 plus	20/22	4-12/2-3/4-14,4V	3	5	29 x 19 x 8	20
JES 030 plus	30/35	4-12/2-3/4-14,4V	5	6	33 x 25 x 8	26
JES 045 plus	45/50	4-12/2-3/4-14,4V	5	6	33 x 25 x 8	26

* Max peak current for 30 second

JES 600 NAVY

SPECIAL CONTROLLER FOR BRUSHED MOTORS WITH THE OPTION OF WATER COOLING

The JES 600 NAVY controller can be used with a wide voltage range, and has OPTO isolation of the receiver. This controller offers high load capability over long periods, and water resistance.

JES 300 CAR

THE JES 300 CAR CONTROLLER IS DESIGNED TO CONTROL BRUSHED MOTORS RUNNING IN EITHER DIRECTION

The Jes 300 Car is a popular controller among RC CAR enthusiasts mainly due to its ease of use and excellent reliability.

Specifications:

- constant current capacity: 35A – forward / 20 A – in reverse
- BEC: 5V
- Number of cells in power battery: 5 – 7 NiXX cells
- Proportional brake
- Power limited to 70% for reverse operation
- Automatic current limitation for forward and reverse operation
- Thermal protection
- The motot shuts down at low battery voltage
- Dimensions: 36 x 30 x 15 mm
- Weight: 35 g

MAX BEC

POWER SUPPLY FOR RECEIVERS AND SERVOS IN MODELS

MAX BEC is designed to power the receiver and servos in the model. MAX BEC is a linear voltage stabilizer with an adjustable output voltage. The output voltage is set using a jumper and in one of four positions: 5.0V, 5.4V, 5.7V or 6.0V. MAX BEC can be powered using NiXX and Li–XX cells. MAX BEC also gives an indication of used capacity of the battery with four LEDs.

Part of MAX BEC is an electronic switch, which uses a highly efficient type of MOSFET transistor.

The main benefits of the MAX BEC include a high voltage rating rating (to 12 cells NiXX) and low current in the off state (170 µA). The analog voltage stabilization does not contribute to radio interference.

Technical data	MAX BEC	MAX BEC 2
Recommended input voltage	5.5 – 8.4 V	5.5 – 8.4 V
Max. input voltage	16 V	16 V
No. of inputs (accu)	1	2
Output voltage	5.0 V / 5.4 V / 5.7 V / 6.0 V	5.0 V / 5.4 V / 5.7 V / 6.0 V
Peak current	12 A	20 A
Continuous current	5 A	12 A
Idle current	170 µA	170 µA
Max. power loss	7 W	20 W
Max. temperature	130°C	130°C
Weight	25 g	85 g
Dimensions	50 x 25 x 10 mm	100 x 29 x 16 mm

SP 05

DESIGNED FOR SWITCHING ON/OFF AUXILIARY FUNCTIONS IN AIRCRAFT, BOAT AND CAR MODELS

SP switch 05 is designed for switching auxiliary functions in model aircraft, boats and cars, such as switching different lights etc. The point of switching is indicated by the green LED. SP 05 can also reverse the channel – like some transmitter functions. The maximum continuous current rating for the SP05 is 5A, and it operates with a wide range of input voltage. SP05 can switch any voltage from virtually zero to 15V.

MOTOR PHASOR

A 6–pole rotor and the use of neodymium magnets provide high torque for these top quality motors. These powerful motors are designed for direct drive without the need for a gearbox. All Phasor motors have a 5 mm diameter shaft, and are supplied with G3.5 connectors.

Motor type	Input supply voltage [V]	RPM/volt [min^{-1}]	Max. current [A]	Number of turns	Resistance [ohm]	Dimensions (diameter x length) [mm]	Weight [g]
PHASOR 15/3	6 - 13 V	2050	35	3	0,0125	36 x 37	136
PHASOR 15/4	7 - 14 V	1600	32	4	0,022	36 x 37	135
PHASOR 30/3	8 - 17 V	1050	35	3	0,017	36 x 52	220
PHASOR 45/3	12 - 23 V	700	38	3	0,022	36 x 67	305

BATTERIES
POWER ION

Power Lithium batteries have been in use with modellers for a number of years, offering care free and safe operation with long life.

Advantages of Power Ion cells:

- Metal case (high resistance to physical damage)
- Guaranteed against explosion
- Safety fuse to protect against short circuit (activated with a current of more than 150A / cell)
- Safeguard against overcharging (activated at a voltage greater than 5V / cell)
- No cell balancer is required
- Packs are assembled using only selected cells
- Virtually zero self discharge
- No so–called `memory effect` packs can be recharged from any state of charge

When used within voltage and current limits the loss in capacity with use is no more 10% after 250 charge/discharge cycles.

Standard packs available: 2S1P, 2S2P, 3S1P triangle, 3S1P flat, and 3S2P.

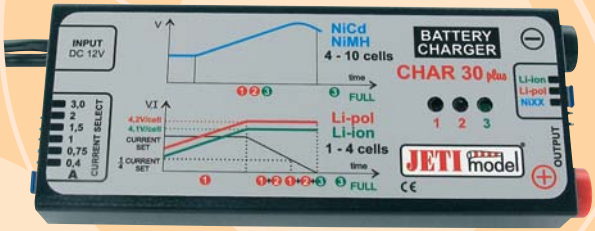
We can produce special battery packs to order of up to 10S5P. All types of POWER ION cells have a diameter 18 mm and a length of 65 mm.

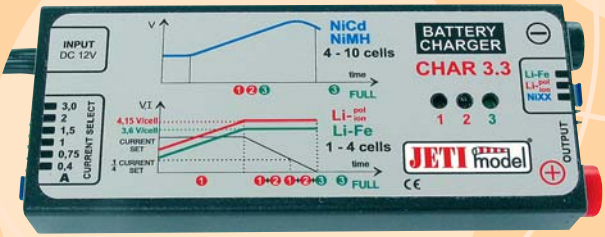
Batteries POWER ION	Nominal capacity [Ah]	Voltage of charged cell [V]	Nominal/ peak current (30sec.) [A]	Charging current [A]	Weight [g]
POWER ION 1100 – Standart type	1,1	4,1	11 / 16	3	41
POWER ION 1300 – High current type	1,3	4,1	19 / 25	3	44
POWER ION 1600 – High capacity type	1,6	4,2	10 / 16	2	44

CHARGER

CHAR 30 PLUS AND CHAR 3.3

The universal and automatic CHAR chargers are made for model use. CHAR chargers are designed to be powered from a car battery, and have rugged construction (with an extruded alloy case). The chargers use delta peak detection at the end of the charge, along with audible and optical signs of the state of charge. The 3.3 CHAR charger can also charge Li–Fe (A123) cells.





Charger	Charging current [A]	Power supply current	Type of charged cells	Number of charged cells
CHAR 3.3	0,4/ 0,75/ 1/ 1,5/ 2/ 3	Pb accumulator 12V (min. capacity 12Ah) stab. supply 11–13,8V/5A	Li–Ion, Li–Pol, Li–Fe, NiMH, NiCd	6–10 NiXX/ 1–4 LiXX
CHAR 30 plus	0,4/ 0,75/ 1/ 1,5/ 2/ 3	Pb accumulator 12V (min. capacity 12Ah) stab. supply 11–13,8V/5A	Li–Ion,Li–Pol, NiMH, NiCd	6–10 NiXX/ 1–4 LiXX

DISCHARGER

DIS 10/16

- automatic discharge
- prevents memory effect
- discharge current up to 10 A
- automatic end of discharge

WWW.JETIMODEL.CZ

JETI model®

electronics for models

JETI model s.r.o.
Lomená 1530
742 58 Příbor
Czech Republic
telefon: +420 556 810 708
tel./fax: +420 556 802 092
E-mail: jeti@jetimodel.cz

Your Dealer:

The contents are subject to change without prior notice due to product improvements and specifications changes.